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FACILITY-WIDE GROUNDWATER MONITORING PROGRAM RVAAP-66 FACILITY-WIDE GROUNDWATER MONITORING WELL INSTALLATION REPORT

RAVENNA ARMY AMMUNITION PLANT RAVENNA, OHIO

October 11, 2012

GSA Contract Number GS-10F-0293K Delivery Order W912QR-11-F-0266

Prepared for



U.S. Army Corps of Engineers 600 Martin Luther King Jr. Place Louisville, Kentucky 40202

Prepared by



Environmental Quality Management, Inc. 1800 Carillon Boulevard Cincinnati, Ohio 45240

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CONTRACTOR'S STATEMENT OF INDEPENDENT TECHNICAL REVIEW

Environmental Quality Management, Inc. (EQM) has completed the *Draft Facility-Wide Groundwater Monitoring Program RVAAP-66 Facility-Wide Groundwater Monitoring Well Installation Report*. Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project. During the independent technical review, compliance with established policy, principles, and procedures, utilizing justified and valid assumptions, was verified. This included review of technical assumptions, methods, procedures, and materials to be used, and whether the product meets customer's needs consistent with law and existing U.S. Army Corps of Engineers policy.

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10/8/12

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1 2		LIST OF GENERAL ACRONYMS
3	amsl	Above Mean Sea Level
4	AOC	Area of Concern
5	APP	Accident Prevention Plan
6	ASTM	American Society for Testing and Materials
7	bgs	Below Ground Surface
8	CERCLA	Comprehensive Environmental Response Compensation and Liability Act
9	CHMM	Certified Hazardous Materials Manager
10	cm	Centimeter
11	CME	Central Mine Equipment
12	CPG	Certified Professional Geologist
13	CR	Compliance Restoration
14	CRJMTC	Camp Ravenna Joint Military Training Center
15	CRJMTC/ENV	Camp Ravenna Joint Military Training Center/Environmental
16	DFFOs	Director's Final Findings and Orders
17	dia.	Diameter
18	DLA	Defense Logistics Agency
19	DO	Dissolved Oxygen
20	DoD	Department of Defense
21	DOT	Department of Transportation
22	EIS	Environmental Investigation Services
23	EM	Engineering Manual
24	EQM	Environmental Quality Management, Inc.
25	EPA	Environmental Protection Agency
26	FCR	Field Change Request
27	Frac	Fractionation
28	Frontz	Frontz Drilling Inc.
29	FS	Feasibility Study
30	ft	Feet
31	FWSAP	Facility-Wide Sampling and Analysis Plan
32	FWSHP	Facility-Wide Safety and Health Plan
33	gal	Gallon
34	GOCO	Government Owned, Contractor Operated
35	gpm	Gallons per Minute
36	GSA	Government Services Administration
37	I.D.	Inner Diameter
38	IDW	Investigation-Derived Waste
39	in.	Inch
40	IRP	Installation Restoration Program
41	lb	Pound
42	MEC	Munitions and Explosives of Concern
43	MR	Munitions Response
44	NAD83	North American Datum of 1983
45	NAVD88	North American Vertical Datum of 1988
46	NGB	National Guard Bureau

1		LIST OF GENERAL ACRONYMS
2		(continued)
3 4	NGVD29	National Geodetic Vertical Datum of 1929
5	No.	Number
6	O&M	Operations and Maintenance
7	OHARNG	Ohio Army National Guard
8	OTAKNO OZ	Ounce
9	%	Percent
10	PBA	Performance Based Acquisition
11	PCB	Polychlorinated Biphenyl
12	PID	Photoionization Detector
13	PIKA	PIKA International
14	PPE	Personal Protective Equipment
15	PVC	Polyvinyl Chloride
16	RI	Remedial Investigation
17	ROD	Record of Decision
18	RVAAP	Ravenna Army Ammunition Plant
19	RVAAI RVAAP-66	Facility-Wide Groundwater AOC
20	SAIC	Science Applications International Corporation
21	sec	Second
22	SSHP	Site Safety and Health Plan
23	SVOC	Semivolatile Organic Compound
24	TCLP	Toxicity Characteristic Leaching Procedure
25	TOC	Total Organic Carbon
26	USACE	United States Army Corps of Engineers
27	USAEC	United States Army Environmental Center
28	USATHAMA	United States Army Toxic and Hazardous Materials Agency
29	USGS	United States Geological Survey
30	USP&FO	United States Geological Survey United States Property and Fiscal Officer
31	UXO	Unexploded Ordnance
32	VOC	Volatile Organic Compound
<i>J</i> <u></u>	, 00	Volume Organic Compound

1		LIST OF AREA OF CONCERN ACRONYMS
2		
3	ASY	Atlas Scrap Yard
4	B12	Building 1200
5	CBL	C Block
6	CBP	Central Burn Pits
7	CP	Cobbs Pond
8	DA2	Demolition Area #2
9	EBG	Erie Burning Grounds
10	FBQ	Fuze and Booster Quarry
11	FWG	Facility-Wide Groundwater
12	LNW	Landfill North of Winklepeck
13	LL	Load Line
14	MBS	Mustard Burial Site
15	NACA	National Advisory Committee for Aeronautics
16	NTA	NACA Test Area
17	RQL	Ramsdell Quarry Landfill
18	SCF	Sharon Conglomerate Formation
19	WBG	Winklepeck Burning Grounds
20		

EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers (USACE), Louisville District, is performing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) closure at the former Ravenna Army Ammunition Plant (RVAAP) near the Town of Ravenna in the northeastern portion of Ohio. The USACE, under a Government Services Administration (GSA) Performance Based Acquisition (PBA) contract, retained Environmental Quality Management, Inc. (EQM) to obtain a signed Record of Decision (ROD) for the Facility-Wide groundwater (RVAAP-66) at the former RVAAP. This Remedial Investigation/Feasibility Study (RI/FS) is being conducted by USACE pursuant to the Ohio Environmental Protection Agency (EPA) Director's Final Findings and Orders (DFFOs) requiring publication of a ROD and to satisfy the legal requirements for a RI under CERCLA.

Past Department of Defense (DoD) activities at the RVAAP date to 1940 and include the manufacturing, loading, handling, and storage of military explosives and ammunition. Although no longer an active munitions manufacturing facility, the RVAAP has historically handled hazardous wastes and operated several waste management units in support of its previous operations. A significant amount of work has already been conducted at RVAAP surrounding various Areas of Concern (AOCs) including remedial investigations, human health risk evaluations, feasibility studies, interim remedial measures, groundwater monitoring, etc.

As part of the Facility-Wide groundwater RI, EQM installed 38 groundwater monitoring wells to provide additional information in support of hydrogeologic and fate-and-transport models, evaluate potential exit pathways, evaluate vertical contaminant distribution and/or particle inflow/outflow through the central portion of the facility, and assess potential groundwater impacts from Compliance Restoration (CR) sites. Note that 38 wells were installed at RVAAP during the course of this RI. Under the Facility-Wide Groundwater Addendum, an additional unconsolidated well was scheduled for installation in Demolition Area 2 (DA2); however, there was only 3.5 feet of unconsolidated material present at the selected location. Consequently, the unconsolidated well was not installed.

This report details monitoring well installation and field change requests executed in accordance with the *Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Addendum* (EQM, January 2012).

SECTION 1 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Louisville District, is performing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) closure at the former Ravenna Army Ammunition Plant (RVAAP) near Ravenna, Ohio. CERCLA closure is occurring under the Installation Restoration Program (IRP). Activities include monitoring of an extensive network of groundwater monitoring wells, which are presented in Plate 1. The USACE, under a Government Services Administration (GSA) Performance Based Acquisition (PBA) contract, retained Environmental Quality Management, Inc. (EQM) (Contract No. GS-10F-0293K – Delivery Order W912QR-11-F-0266) to obtain a signed Record of Decision (ROD) for the Facility-Wide groundwater (RVAAP-66) at the former RVAAP. This Remedial Investigation/Feasibility Study (RI/FS) is being conducted by USACE pursuant to the Ohio EPA Director's Final Findings and Orders (DFFOs) requiring publication of a ROD and to satisfy the legal requirements for a RI under CERCLA.

This Monitoring Well Installation Report provides a summary of activities associated with the installation of 38 groundwater monitoring wells as part of the RI for Facility-Wide groundwater at RVAAP. Specifically, wells were installed to provide additional information in support of hydrogeologic and fate-and-transport models, evaluate potential exit pathways, evaluate vertical contaminant distribution and/or particle inflow/outflow through the central portion of the facility, and assess potential groundwater impacts from Compliance Restoration (CR) sites. Further information regarding the rationale for this investigation, as well as the sampling procedures for accomplishing this task, are provided in the *Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Addendum* (EQM, January 2012), which includes three parts: Part I) Environmental Investigation Services Addendum (EIS Addendum), Part II) Quality Assurance Project Plan Addendum, and Part III) Site Safety and Health Plan Addendum. This document was approved by the Ohio Environmental Protection Agency (EPA) on January 24, 2012. This report details monitoring well installation and field change requests executed in accordance with the EIS Addendum.

1.1 Facility Description

Past Department of Defense (DoD) activities at the RVAAP date to 1940 and include the manufacturing, loading, handling, and storage of military explosives and ammunition. Until 1999, the RVAAP was identified as a 21,419-acre installation. The property boundary was resurveyed by the Ohio Army National Guard (OHARNG) over a 2-year period from 2002 to 2003 and the actual total acreage of the property was found to be 21,683.289 acres. As of February 2006, a total of 20,403 acres of the former 21,683-acre RVAAP have been transferred to the United States Property and Fiscal Officer (USP&FO) for Ohio for use by the OHARNG as a military training site. The current RVAAP consists of 1,280 acres in several distinct parcels scattered throughout the confines of the OHARNG Camp Ravenna Joint Military Training Center (CRJMTC). The RVAAP and CJRMTC are collocated on contiguous parcels of property, and the CRJMTC perimeter fence completely encloses the remaining parcels of the

RVAAP. The RVAAP is currently used as a military training site; no manufacturing operations are conducted at the facility.

The CRJMTC is located at 8451 State Route 5 in northeastern Ohio within Portage and Trumbull Counties, approximately 4.8 kilometers (3 miles) east-northeast of the city of Ravenna and approximately 1.6 kilometers (1 mile) northwest of the city of Newton Falls (Figure 1-1). The RVAAP portions of the property are solely located within Portage County. The CRJMTC (inclusive of the RVAAP) is a parcel of property approximately 17.7 kilometers (11 miles) long and 5.6 kilometers (3.5 miles) wide bounded by State Route 5, the Michael J. Kirwan Reservoir, and the CSX System Railroad on the south; Garret, McCormick, and Berry roads on the west; the Norfolk Southern Railroad on the north; and State Route 534 on the east (see Figures 1-1 and 1-2). The CRJMTC is surrounded by several communities: Windham on the north; Garrettsville 9.6 kilometers (6 miles) to the northwest; Newton Falls 1.6 kilometers (1 mile) to the southeast; Charlestown to the southwest; and Wayland 4.8 kilometers (3 miles) to the south. When the RVAAP was operational CRJMTC did not exist and the entire 21,683-acre parcel was a government-owned, contractor-operated (GOCO) industrial facility. The RVAAP IRP encompasses investigation and cleanup of past activities over the entire 21,683 acres of the former RVAAP, and, therefore, references to the RVAAP in this document are considered to be inclusive of the historical extent of the RVAAP, which is inclusive of the combined acreages of the current CRJMTC and RVAAP, unless otherwise specifically stated.

Various historical industrial operations at the RVAAP have been identified as potential sources of contaminants. These operations included the load lines, sewage treatment plants, wastewater treatment plants, vehicle maintenance areas, storage tanks, waste storage areas, equipment storage areas, and furnaces and evaporation units. Landfills at the RVAAP were used to bury wastes from industrial operations and sanitary sources. Settling and retention ponds at the site collected wastewater from munitions wash-down operations at various facilities. Additionally, the RVAAP includes several areas associated with the burning, demolition, and testing of various munitions. These burning grounds and demolition areas are located at several large areas or in abandoned quarries at the RVAAP. Strategic ores and other materials were stockpiled at several locations at the site; subsequent to removal by the Defense Logistics Agency (DLA), the residual materials may have left various contaminants in place. Potential contaminants at the site include, but are not limited to: primary explosives, secondary explosives, propellants, metals, polychlorinated biphenyls (PCBs), pesticides, waste oils, sludge from load lines, various laboratory chemicals, sanitary waste, mustard agent, and petroleum products.

1.1.1 Physiographic Setting

The RVAAP is located within the Southern New York Section of the Appalachian Plateau physiographic province (USGS, 1968). This province is characterized by elevated uplands underlain primarily by Mississippian- and Pennsylvanian-age bedrock units that are horizontal or gently dipping. The province is characterized by gently rolling topography with incised streams having dendritic drainage patterns. The Southern New York Section has been modified by

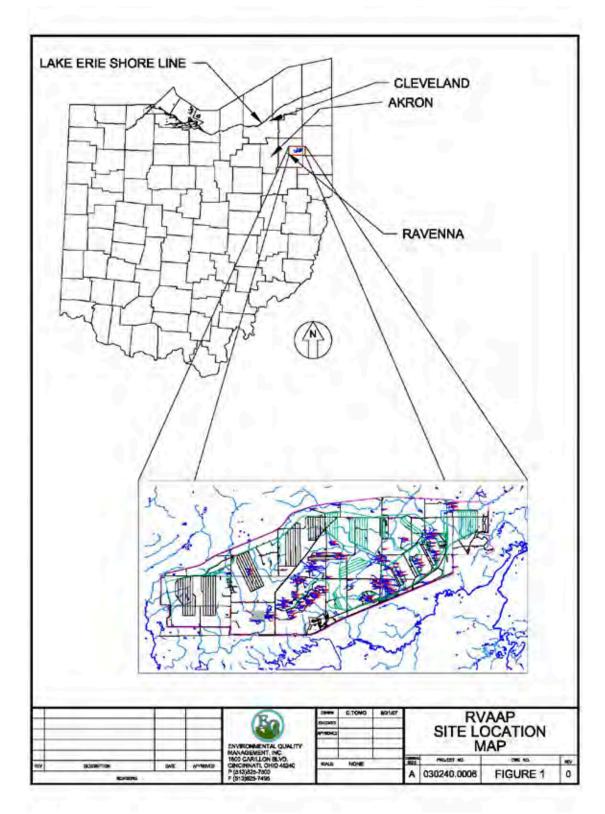


Figure 1-1. RVAAP General Location Map

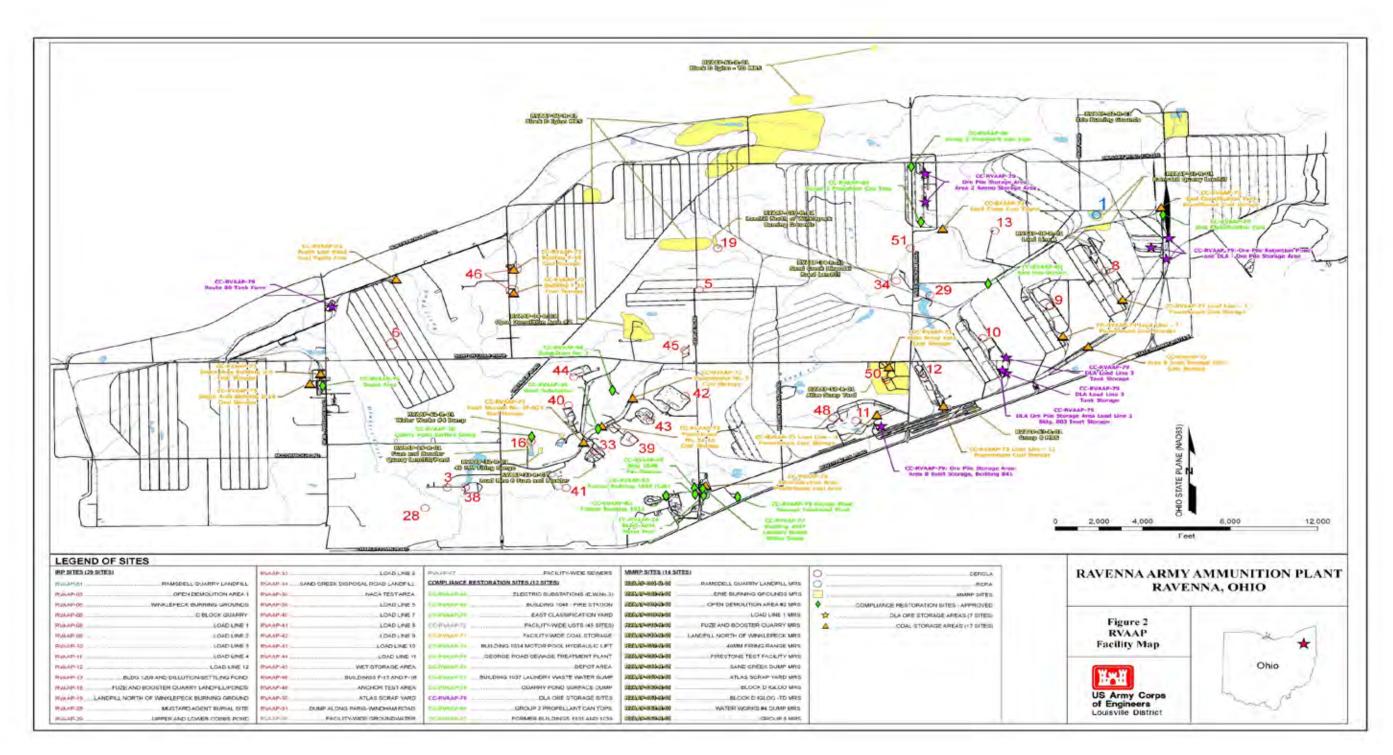


Figure 1-2. RVAAP Facility Map

glaciations, which rounded ridges, filled major valleys, and blanketed many areas with glacially-derived unconsolidated deposits (i.e., sand, gravel, and finer-grained outwash deposits). As a result of glacial activity in this section, old stream drainage patterns were disrupted in many locales and extensive wetland areas were developed.

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Locally, a pre-glacial buried valley potentially exists in the central portion of the facility, oriented in a southwest-northeast direction. This valley is filled with glacial outwash comprising poorly-sorted clay, till, gravel, and silty sand. The presumed thickness of glacial deposits within the valley ranges from 100 to 200 feet. However, bedrock outcrops have been documented in the same area, so the existence of a buried valley had not been physically confirmed (Winslow, *et al*, 1966). During the course of this RI, glacial deposits ranging from 88- to more than 130-ft-thick were encountered in the central portion of RVAAP (wells LL11mw-012 and NTAmw-119, respectively), which provides further evidence for the existence of this pre-glacial valley.

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1.1.2 Site Geology

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The regional geology at RVAAP consists of horizontal to gently dipping sedimentary bedrock strata of Mississippian- and Pennsylvanian-age overlain by varying thicknesses of Pleistoceneage unconsolidated glacial deposits. Water and associated environmental contamination in fine-grained glacial and alluvial materials travel down from the surface to underlying groundwater aquifers principally through fractures (termed secondary porosity) and flow between the grains (termed primary porosity).

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1.1.2.1 Unconsolidated Deposits

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Bedrock at RVAAP is overlain by deposits of the Wisconsin-aged Lavery Till in the western portion of the facility and the younger Hiram Till and associated outwash deposits in the eastern two-thirds of the facility. Unconsolidated glacial deposits vary considerably in their character and thickness across RVAAP, from zero (0) in some of the eastern portions of the facility to an estimated 46 meters (150 feet) in the south-central portion. The glacial till found at RVAAP was deposited as a more or less uniform sheet covering the bedrock surface as a ground moraine. Where the bedrock is reasonably level, the surface of the till cover is smooth and gently undulating. Where the bedrock surface has more relief, the till cover produces a masked erosional topography. There is some evidence that varved clays, indicative of lake deposits, exist in some of the deeper bedrock valleys (USACE, 1970). The Hiram Till is the most extensive till in northeast Ohio and covers approximately the eastern two-thirds of RVAAP. It is material from which the silty-clay loam and clay-loam soil of much of the northern part of northeastern Ohio is derived. The Hiram Till is the most clay-rich till of northeastern Ohio and is only sparsely pebbly with boulders and cobbles rarely found. The Hiram Till is characteristically thin with a median thickness of 5 feet in the eastern portion of RVAAP. The Lavery Till is a surface till that is found in a large portion of central Portage County. It is comprised of a clayey-silt that contains approximately 28 percent sand and 30 percent clay. The Lavery Till contains few pebbles and only a few cobbles and boulders in marked contrast to earlier tills found in this area. In the subsurface, below the Hiram Till, the Lavery Till is almost

always present with maximum thicknesses up to 40 feet in the western portion of the facility; although, its median thickness is only 4 feet. The Lavery Till can be found exposed across the western third of RVAAP. The till is reported to be somewhat impermeable, with hydraulic conductivities greater than 10⁻⁶ cm/sec.

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It is unclear whether the glacial outwash deposits located in the northeast corner of RVAAP are of the Hiram, Lavery, or another glacial episode in origin. No gravel deposits of Hiram age have been positively identified in Portage County. Likewise, Lavery outwash is scanty and inconspicuous. Only the most meager gravel deposits were formed in this age.

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In addition to the glacial deposits, other unconsolidated deposits include alluvium associated with the surface drainages that may or may not be continuous with the surrounding glacial tills.

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1.1.2.2 Bedrock

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The bedrock underlying the glacial deposits comprises sedimentary deposits, predominantly Pennsylvanian in age, with minor deposits of Mississippian-age rocks. According to the Preliminary Assessment for the Ravenna Army Ammunition Plant (USACE, 1996), the bedrock units at RVAAP display a gentle southward dip of 5 to 10 ft/mile. In the bedrock below the glacial deposits, earlier erosion has exposed progressively older bedrock units in an eastern direction across RVAAP. The Installation Assessment of Ravenna Army Ammunition Plant (USATHAMA, 1978) provides a map that illustrates the subsurface geology at RVAAP. The youngest bedrock unit found on RVAAP is the Homewood Sandstone Member (Homewood) of the Pottsville Formation. The Homewood comprises coarse- to fine-grained clay-bonded micaceous sandstone with thin shale lenses. The Mercer Member of the Pottsville Formation directly underlies the Homewood and consists of gray to black micaceous shale, thin sandstones, and coal. The Connoquenessing Sandstone Member underlies the Mercer Member and comprises coarse- to fine-grained sandstone and silty to sandy shale. The Sharon Member Shale unit (Sharon Shale) consists of gray to black sand and micaceous shale with thin coal and separates the Connoquenessing Sandstone Member from the underlying Sharon Conglomerate (Sharon). Comprised of tan, coarse- to fine-grained orthoguartzite sandstone, the Sharon is loosely cemented and is the most important aquifer found at RVAAP. The Mississippian bedrock units found in the eastern portion of RVAAP comprise the Meadville Shale, a blue-gray shale, and the Berea Sandstone, a massive, moderately hard, medium- to fine-grained sandstone.

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In general terms, the Homewood is the shallowest bedrock to the west, and the Sharon is the shallowest bedrock to the east at RVAAP (i.e., the Homewood is missing in the eastern half of the site). There is a small potential that the shallowest bedrock unit to be encountered in the western portion of RVAAP may be the Mercer Member or the Connoquenessing Sandstone, which are exposed on the flanks of pre-glacial valley walls. As mentioned above, these two units are depositionally between the Homewood and Sharon.

1.1.3 Site Hydrogeology

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1.1.3.1 Groundwater in Unconsolidated Deposits

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Groundwater in the unconsolidated deposits is limited to sandy lenses in the glacial tills, saturated lake clays and outwash material, and the alluvium deposits associated with the numerous surface drainages at RVAAP. Groundwater is also present at the glacial till-bedrock contact. Outside of the facility boundaries, unconsolidated deposits can be an important source of groundwater, as many of the domestic wells and small public water supplies located near the facility obtain reasonable quantities of water from wells completed in unconsolidated deposits. There is evidence that a buried valley tributary to the Mahoning River is present in the westcentral portion of RVAAP (USATHAMA, 1978). Although buried valleys can be important aquifers, there is no evidence to support the occurrence of significant water-bearing material in this buried valley tributary. The main buried valley aquifer associated with the Mahoning River does not yield significant quantities of water (USATHAMA, 1978). Because the buried valley aquifer that may be found at RVAAP is a tributary, finer-grained sediment would be expected in this stream valley compared to the main buried valley aquifer, culminating in potentially lower water yields in the tributary sediments. Water production wells previously drilled in the area (Barnes, 1950) also support the insignificance of a buried valley aquifer at RVAAP. Plate 2 shows the potentiometric surface of unconsolidated sediment at the facility from October 2011. Groundwater in the unconsolidated aquifer predominantly flows in an eastward direction; however, the unconsolidated zone shows numerous local flow variations influenced by topography and drainage patterns. The local variations in flow direction suggest: (1) groundwater in the unconsolidated deposits is generally in direct hydraulic communication with surface water; and (2) surface water drainage ways may also act as groundwater discharge locations. In addition, topographic ridges between surface water drainage features act as groundwater divides in the unconsolidated deposits.

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1.1.3.2 Groundwater in Bedrock Deposits

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The principle water-bearing aquifer at RVAAP is the Sharon Conglomerate. Depending on the existence and depth of overburden, the Sharon ranges from a confined to a leaky artesian aquifer. Water yields from area wells completed in the Sharon range from 30 to 400 gallons per minute (gpm) (USATHAMA, 1978). Well yields of 5 to 200 gpm were reported for on-site bedrock wells completed in the Sharon (Kammer, 1982). Other local bedrock units capable of producing water include the Homewood Sandstone, which is generally thinner and only capable of well yields less than 10 gpm, and the Connoquenessing Sandstone. The Connoquenessing Sandstone is a good aquifer where it occurs, but it is less productive than the Sharon Conglomerate (Kammer, 1982).

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Plate 3 shows the potentiometric surface of bedrock groundwater at the facility from October 2011. The bedrock potentiometric map shows a regional eastward flow direction that is not affected by local surface topography. For much of the eastern half of RVAAP, the bedrock potentiometric surface is higher than the overlying unconsolidated potentiometric surface, thus indicating an upward hydraulic potential. This evidence suggests that there is a confining layer

that separates the two aquifers. In the far eastern area, the two potentiometric surfaces are approximately at the same elevation, thus suggesting that hydraulic communication between the two aquifers is occurring.

1.2 Project Description

 The primary objective of the new RI wells is to provide additional information to complete hydrogeologic system modeling and to conduct contaminant fate-and-transport modeling for a facility-wide groundwater approach. In addition, wells were installed to further evaluate potential exit pathways, especially along the southern and eastern borders, assess potential groundwater impacts from CR units, and evaluate vertical contaminant distribution and/or particle inflow/outflow through the central portion of the facility.

Borehole drilling and monitoring well installation were completed in compliance with the requirements, guidance, and methods presented in the *Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Addendum* (EQM, January 2012) and approved field change requests.

1.3 Report Organization

In accordance with the *Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Addendum* (EQM, January 2012), EQM is issuing this report to provide details of the installation of 38 monitoring wells at the site. Results of groundwater monitoring activities will be provided in separate quarterly monitoring reports. This report is organized into five main sections including an introduction with background, field activities, field change requests, investigation-derived waste handling and characterization, and references.

SECTION 2 FIELD ACTIVITIES

As mentioned previously, 38 wells were installed at RVAAP during the course of this RI. Under the Facility-Wide Groundwater Addendum, an additional unconsolidated well was scheduled for installation in Demolition Area 2 (DA2); however, there was only 3.5 feet of unconsolidated material present at the selected location. Consequently, the unconsolidated well was not installed.

Prior to mobilization, EQM marked the proposed well locations using painted wood slats. Subsequently, EQM showed the locations of the proposed wells to the stakeholders for verbal approval. A few wells (specifically, wells FWGmw-001, B12mw-013, FWGmw-004, LL6mw-008, LL6mw-009, LL11mw-011, LL11mw-012, and FWGmw-014) were nominally field adjusted based on stakeholder input. In addition, prior to commencement of field activities, all materials to be used during field activities including filter pack, bentonite grout, and potable water were approved for use by USACE.

The RI wells were installed during two mobilizations: 31 wells were installed between February 27 and April 17, 2012, and seven wells located within three Munitions Response (MR) areas [DA2, Winklepeck Burning Grounds (WBG), and Erie Burning Grounds (EBG)] were installed between May 29 and June 27, 2012. Upon mobilization to the site, drilling and support equipment were visually inspected to ensure all equipment were in operable condition and free of leaks. This visual inspection and test of functioning switches was documented on the Drill Rig Operational Checklist for RVAAP AOC-Specific Investigations. This full checklist was completed on a weekly basis.

The primary objective of the wells was to provide additional information in support of hydrogeologic and fate-and-transport models. In addition, twelve (12) of these wells (LL1mw-086, EBGmw-131, LL1mw-087, LL12mw-247, LL3mw-244, FWGmw-002, FWGmw-004, FWGmw-007, FWGmw-011, FWGmw-012, FWGmw-015, and FWGmw-016) were installed to further evaluate potential exit pathways, especially along the southern and eastern borders. Thirteen (13) of the new wells (FWGmw-001, FWGmw-003, FWGmw-004, FWGmw-005, FWGmw-008, FWGmw-009, FWGmw-010, FWGmw-011, FWGmw-012, FWGmw-013, FWGmw-014, FWGmw-015, and FWGmw-016) were placed in the vicinity of current CR sites to secondarily assess potential groundwater impacts from these units. One stainless steel well (LL12mw-182ss) was installed to assess whether the occurrence of bis(2-ethylhexyl)phthalate is the result of leaching from polyvinyl chloride (PVC) well materials. Lastly, placement of many of the new wells within the RVAAP was proximate to AOCs to evaluate vertical contaminant distribution and/or particle inflow/outflow through the central portion of the facility. Table 2-1 provides justification for the placement of the new wells. Figures 2-1 through 2-3 show the well locations in reference to current site features and existing well locations.

Table 2-1. Justification for New Wells

New Well Number	Vertical Delineation	Horizontal Delineation	Used in Groundwater Model	Exit Pathway	CR Site Evaluation	First- water Bearing Zone Well	Bedrock Well	Initial Investigation of GW Quality at AOC/Area	Permeability Testing
LL1mw-086	X		x	X			a		
EBGmw-131	X		х	х			Sharon		X
LL1mw-087		X	х	X		X			
LL12mw-247		X	х	X		X			X
LL4mw-201	Х		х				Sharon		X
LL3mw-244	Х	X	х	X			Sharon		X
LL3mw-245	Х	X	х				Sharon		X
CBPmw-009	Х		х				Sharon		X
FWGmw-001			x		CR-79, CR-80	X		x	
B12mw-013		X	х				Sharon		
FWGmw-002	X		х	х			a		
FWGmw-003			Х		CR-73	X		X	
WBGmw-018		X	Х			X			Х
WBGmw-019	Х		Х				Sharon		Х
WBGmw-020	Х		Х				Sharon		Х
WBGmw-021	X		х				Sharon		Х
DA2mw-114	Х		Х				Sharon		Х
DA2mw-115	Х		Х				Sharon		
FWGmw-004			Х	х	CR-83	X		X	
FWGmw-005			Х		CR-73, CR-76	X	Homewood	X	
FWGmw-006			Х			X		X	
FWGmw-007			х	х		X		X	
FWGmw-008			х		CR-73, CR-76	X		X	
FWGmw-009			х		CR-73, CR-76	X		X	Х
NTAmw-119	X		х				a		
LL6mw-008		X	х			X			
LL6mw-009	X		x				Homewood		X
LL11mw-011		X	x			X			
LL11mw-012	X		x				Sharon		X
FWGmw-010			х		CR-79	X		X	
FWGmw-011			X	X	CR-70, CR-73	X		X	
FWGmw-012			X	X	CR-70, CR-73		Sharon	X	Х
FWGmw-013			X		IRP-45		Sharon	X	
FWGmw-014			X		CR-79	X		X	
CBLmw-005		X	X				Homewood		Х
FWGmw-015			x	X	CR-69, CR-73, CR-74, CR-77, & CR-83	X		x	x
FWGmw-016			X	X	CR-69, CR-73, CR-74, CR-77, & CR-83		Sharon	X	х
LL12mw-182ss			x			X			

a Completed in second water-bearing zone within deep overburden instead of bedrock as proposed.

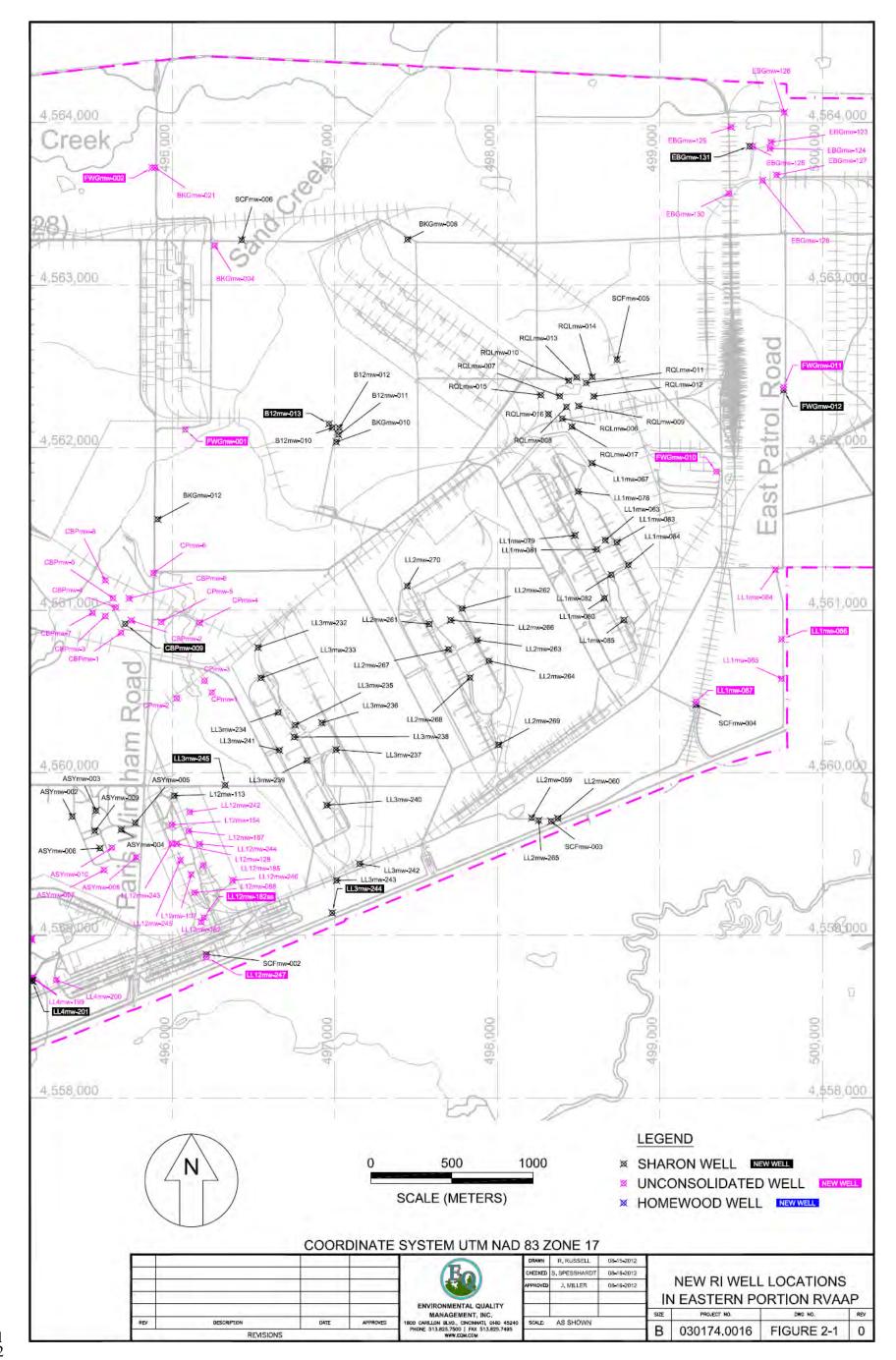


Figure 2-1. New Well Locations in Eastern Portion of RVAAP

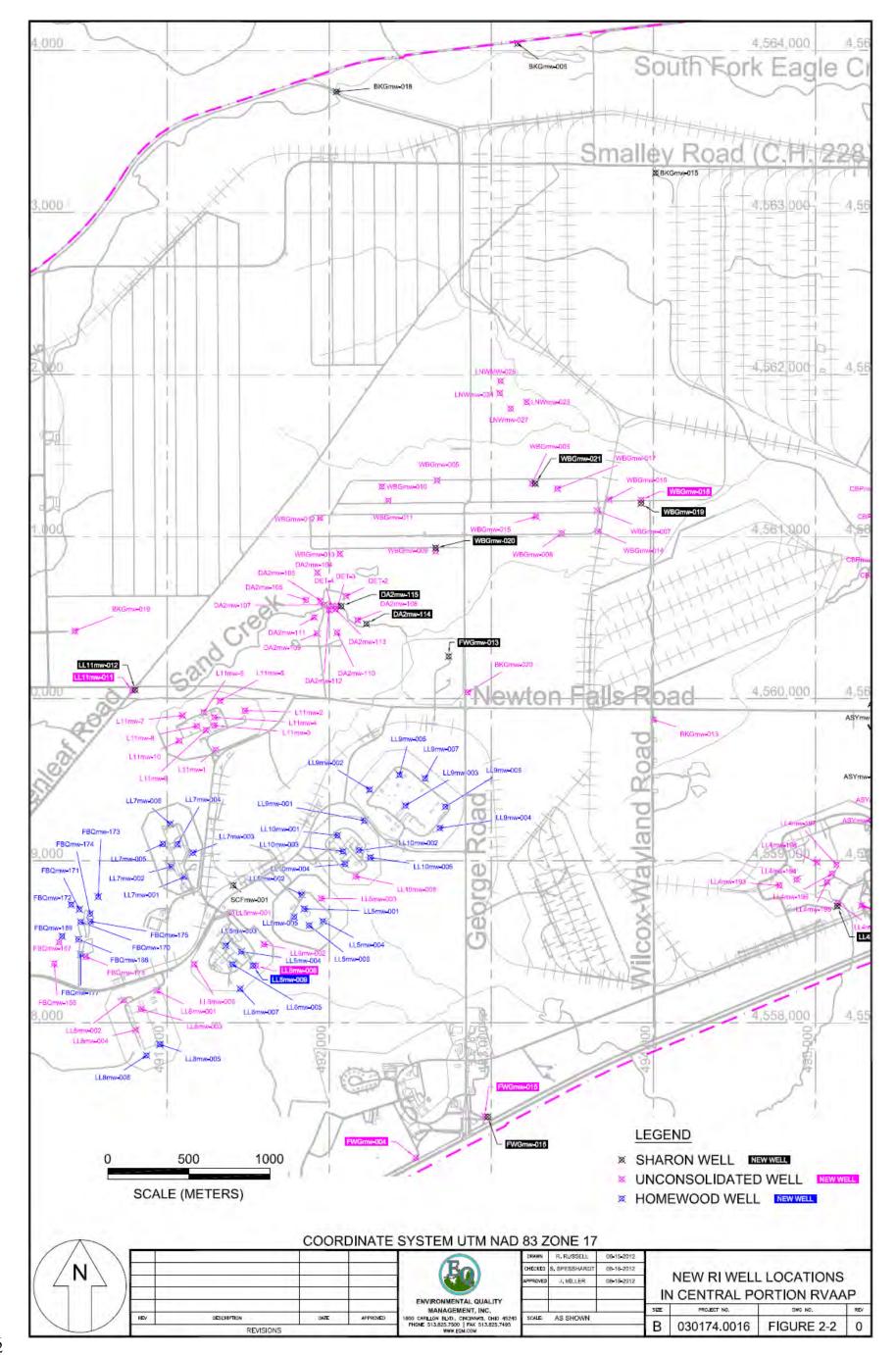


Figure 2-2. New Well Locations in Central Portion of RVAAP

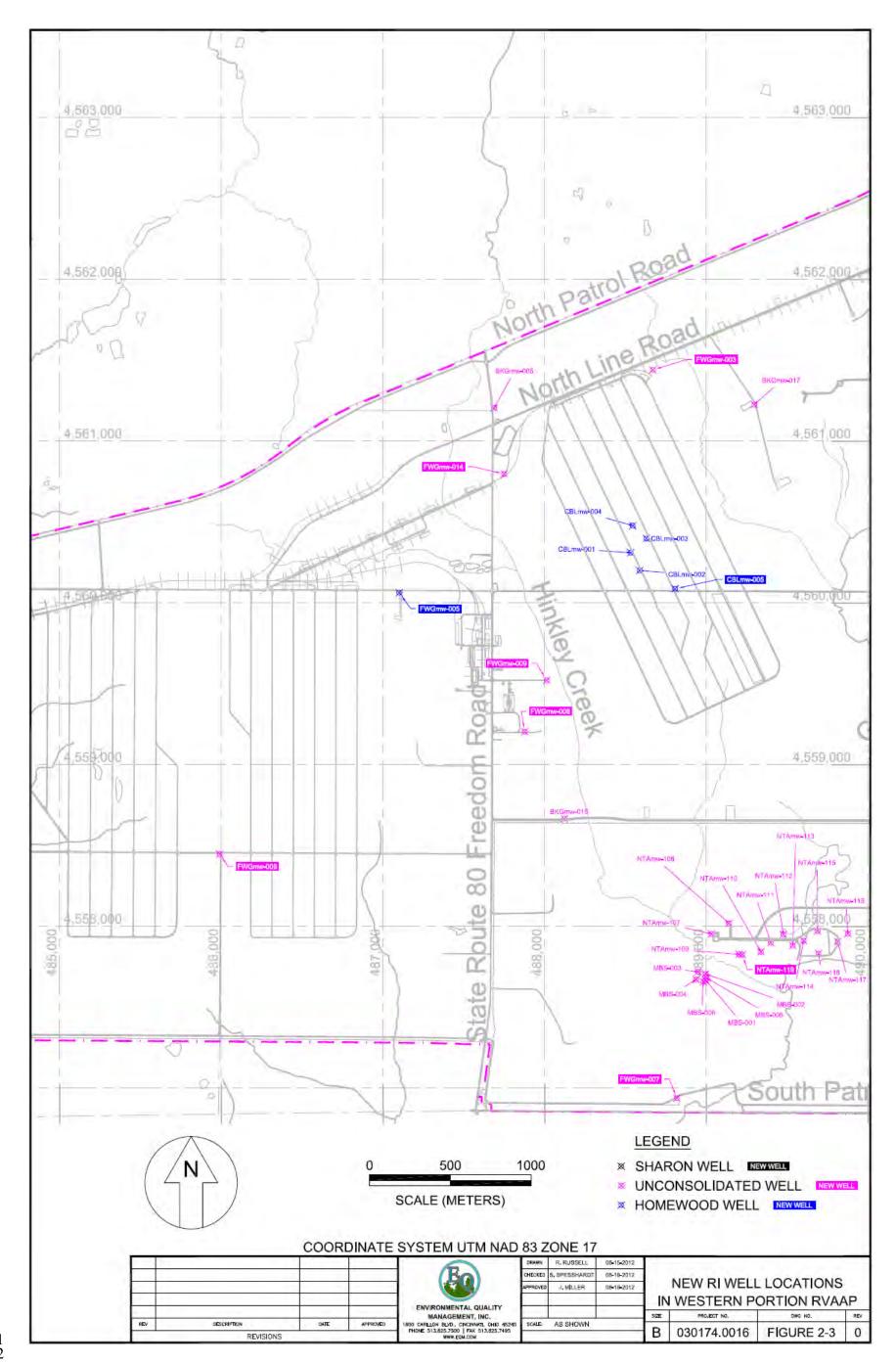


Figure 2-3. New Well Locations in Western Portion of RVAAP

Page 13

- 1 Wells were installed by Frontz Drilling, Inc.
- 2 (Frontz), under the supervision of Mr. Scott
- 3 Spesshardt and Ms. Colleen Lear of EQM
- 4 with support from Ms. Amanda Trenton of
- 5 Science Applications International
- 6 Corporation (SAIC). Two drill rigs were
- 7 used for the majority of the well installation
- 8 activities: a Central Mine Equipment (CME)
- 9 55 track-mounted unit and a CME 75 all-
- 10 terrain rig. At two locations, NTAmw-119
- and LL11mw-012, a rotary sonic rig was 11
- 12 used to penetrate the thick overburden.
- 13 Additional detail regarding the use of the
- 14 rotary sonic rig is presented in Sections 3.2 15 and 3.3.



Photo 1. Rotary Sonic Rig

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2.1 **Utility and UXO Clearance**

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In a letter dated January 20, 2012, EQM requested utility clearance in writing to the RVAAP Operation and Maintenance (O&M) Contractor, OHARNG Environmental Coordinator, and the RVAAP Installation Manager. In addition, EQM met with the RVAAP O&M Contractor and OHARNG Environmental Coordinator and visited each well location to discuss potential utility clearance issues, if any. Due to overhead electric lines at well pair LL11mw-011/012, these wells were field adjusted to provide additional clearance from this low voltage line.

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At each of the proposed MR sites, an unexploded ordnance (UXO) subcontractor (PIKA International, Inc.) completed a visual and instrument-assisted ground surface survey of the proposed drilling locations to ensure that the areas were free of munitions and explosives of concern (MEC). A PIKA UXO technician cleared the boreholes to a depth of 10 feet or bedrock refusal using a SchonstedtTM Magnetic Locator. This clearance confirmed that no ferrousbearing metals or utilities were within the immediate vicinity of the boring. Surface clearance and borehole clearance for UXO was performed in accordance with Appendix B the Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Accident Prevention Plan (APP, EQM, January 2012).

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2.2 **Clearing and Grubbing**

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Several well locations were located in portions of the property that were overgrown with small trees and underbrush. Consequently, access to these locations required minimal clearing and grubbing (e.g., branch trimming, brush-hogging, consolidating gravel stockpiles). EQM coordinated all brush/vegetation clearing with OHARNG personnel. Where a brush-hog, tractor, or backhoe was needed to clear an area or path, EOM subcontracted Frank's Maintenance.

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- Minor branch trimming or removal of undergrowth generally was performed by EQM. No trees 45 greater than 6-in.-diameter were removed during these activities. 46

2.3 Drilling Methods and Well Installation

Nineteen (19) wells were completed in the unconsolidated overburden, which was the first waterbearing zone encountered. However, three of these wells (FWGmw-002, LL1mw-086, and NTAmw-119) were completed in the second water-bearing zone within the deep overburden. It was originally intended that these three wells would be completed in bedrock. However, due to the thickness of the overburden (greater than 70-ft-thick), the presence of clay till between the first and second water-bearing zones in the overburden, and the predicted communication between these deeper overburden strata and the upper portion of the bedrock aquifer, it was concluded that the second water-bearing zone at these locations should be evaluated. In addition, a 20th well – stainless steel well LL12mw-182ss – was also completed in the first water-bearing zone to mimic the well completion characteristics of the PVC well LL12mw-182. Eighteen (18) wells were completed in bedrock with 15 of these completed in the Sharon Member (Sharon) and three (LL6mw-009, CBLmw-005, and FWGmw-005) completed in the Homewood Member. (Note that well FWGmw-005 was originally completed in the overburden at the top of bedrock, but it did not yield water after about 3 weeks and was subsequently abandoned and replaced with a first water-bearing bedrock well.)

2.3.1 Overburden Wells

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Drilling through the overburden was accomplished using 4.25-in.-inner diameter (I.D.) or 8-in.-I.D. hollow stem augers. The larger diameter augers were used for borings requiring installation of steel casing. [Note that well NTAmw-119 was drilled and sampled using rotary sonic methods below 88 feet due to auger refusal on a sand, gravel, and cobble layer at approximately 84 feet below ground surface (bgs.)] In general, soil samples were collected continuously from the surface to the total depth of the boring or bedrock by driving a clean 2-in. by 24-in. splitspoon sampling device in advance of the auger string using a 140-lb drop hammer [American Society for Testing and Materials (ASTM) Method D-1586]. For those wells paired with existing monitoring wells, soil samples were collected every 5 feet (i.e., 0-2 ft, 5-7 ft, 10-12 ft, etc.) to the depth of the paired well, and then continuously to depth. At NTAmw-119, 10-ft-long soil cores were collected and extruded into a clear plastic sleeve for viewing beginning at 90 feet below grade. Upon retrieval of the sampling device, the percentage of recovery was recorded, the core was photographed, and the onsite geologist logged and described the soil cores on a Soil Boring Log as the boring was advanced. A portion of the soil core was placed in a zipper-sealed bag for screening of gross volatile organics in the headspace using a photoionization detector (PID). The headspace screening results were also recorded on the Soil Boring Log. Copies of the Soil Boring Logs are presented in Appendix A.

As mentioned previously, one well (FWGmw-005) that was completed to the top of bedrock yielded no water after 25 days. Consequently, a replacement well (also FWGmw-005) was installed at this location by drilling approximately 12.5 feet into weathered sandstone using 8-in.-I.D. hollow-stem augers. Since the auger rig was able to penetrate into bedrock and the overburden was dry, no overburden casing was installed at this location, and no rock cores were collected during drilling. The original overburden well was abandoned by extracting the polyvinyl chloride (PVC) well using the drill rig winch and then overdrilling using 8.25-in.-I.D.

hollow-stem augers. The borehole annulus was filled with Portland cement/bentonite grout to within 1 foot of ground surface and topped with a soil cover.

2.3.2 Bedrock Wells

Except as noted above, wells completed into bedrock were advanced from the top of the bedrock surface using rock coring and air rotary methods. In general, the upper 3 to 5 feet of bedrock were drilled, and a 6-in.-dia. steel surface casing extending from the ground surface to the bottom of the borehole was installed. [Due to the limited amount of overburden (i.e., less than 5 feet) at locations B12mw-013 and DA2mw-114, permanent casing was not installed at these two locations.] The annulus between the casing and borehole was sealed by pressure or tremie grouting using a grout mixture comprising Portland cement and 6 percent bentonite. After the seal had cured for a minimum of 12 hours, drilling of the bedrock portion of the borehole was completed. The surface casing remained in place following installation of the monitoring well. Each of the bedrock well borings was cored using an "N" series or 2-in.-diameter core to assess the lithologies and the degree and nature of weathering and fracturing in bedrock. N-series coring was performed prior to reaming the borehole using air rotary methods to install the well. Overdrilling of the borehole was accomplished with air rotary drilling using an all-terrain vehicle-mounted air rotary rig. The rig advanced a tricone roller bit to the required drilling depth.

Rock cores were collected in 10-ft intervals and stored in covered wooden core boxes to preserve their relative position by depth. Intervals of lost core were noted in the core sequence. Boxes were marked on the inside cover and on the ends to provide borehole number, cored interval, date collected, and box number. The core within each completed box was photographed using a 35-mm digital camera after the core surface had been cleaned and wetted. Each photograph documented the project name, well/borehole number, core box number, cored depths, and date. The cores were placed on wood pallets and stored on a shelf in Building 1047 at the site. The onsite geologist recorded the lithologic description of each core on the boring log. Descriptions of the rock cores are included on the Soil Boring Logs in Appendix A.

During drilling activities all solid material from drilling returns (soil cuttings, rock chips) were containerized in 55-gal drums, which were moved to pallets for staging near Building 1036. Trash was bagged and placed in a temporary roll-off box located near Building 1036. Formation fluids were captured during drilling activities and containerized in Department of Transportation (DOT)-approved 55-gal drums or 350-gal poly tanks. The containerized fluids were transferred via sump or trash pump to two fractionation tanks (one 10,000-gal and one 21,000-gal tanks) temporarily staged on site. Between borehole locations, all downhole equipment was decontaminated using a pressurized hot water wash at a temporary decontamination pad located near Building 1036. Decontamination fluids were transferred to a 2,450-gal poly tank located immediately adjacent to the decontamination pad. Additional information concerning the characterization and disposal of the Investigation-derived Wastes (IDW) is discussed in Section 4.

2.3.3 **Geologic Findings**

During installation of the new RI monitoring well borings, the unconsolidated deposits were found to be variable and ranged from silty clay tills to outwash sands and gravels. The thickness of the unconsolidated deposits varies across the site in general response to site topography (e.g., thinner on hilltops and thicker in buried valleys). For example, at B12mw-013 the thickness of the unconsolidated veneer is less than 1-ft-thick; however, the ground surface elevation at this location is at least 15 to 20 feet higher than the other new wells installed in the eastern portion of the site. Near Sand Creek, which flows on top of shale bedrock, the overburden thickness is less than 4-ft-thick near the valley floor (DA2mw-114). Conversely, several new wells were

apparently installed in buried valleys as reflected by



Photo 2. Overburden at 90-100 ft bgs (NTAmw-119)

the presence of thicker unconsolidated deposits ranging from 71-ft-thick at FWGmw-002 to more than 130-ft-thick at NTAmw-119. In particular, wells LL12mw-012 and NTAmw-119 provide physical evidence that a buried valley exists in the central portion of the site as the overburden thickness ranges from 88 feet to more than 130 feet, respectively, in these two wells. Photograph 2 shows the glacially-derived soils encountered from 90 to 100 feet below grade at well NTAmw-119.

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The westernmost portion of the RVAAP facility is more than 200 feet higher in elevation than the easternmost portion of the study area with ground surface elevations ranging from 1181.40 feet above mean sea level (amsl) at FWGmw-006 to 937.5 feet amsl at LL1mw-086. Consequently, the stratigraphic sequences encountered during well installation reflect these elevation differences in that members of the upper Pottsville Formation are absent in the eastern portion of the site either due to non-deposition or glacial erosion. The Homewood Member was encountered in wells FWGmw-005, CBLmw-005, and LL6mw-009 in the western portion of the

site. The Homewood comprises fine-grained sandstone ranging in color from vellowbrown to red-brown with iron-oxides along fractures and bedding planes to light gray with thin dark laminae. In the latter case, the light gray sandstone of the Homewood was comparable to the Sharon Member identified in the central portion of the site with the primary difference being the elevation in which they occurred indicating that these units were deposited in similar environments.

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The Sharon Shale was encountered in the central portion of the study area and



Photo 3. Homewood Member (CBLmw-005)

comprised gray to dark gray to black, micaceous, clay-bounded shale with occasional sand lenses. The shale was first encountered in the central portion of the site at well boring LL11mw-012; it was absent in the easternmost wells (e.g., EBGmw-131 and FWGmw-012), and the western wells were not drilled deep enough to penetrate this unit.

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The underlying Sharon Conglomerate ranged from light gray fine-grained sandstone with thin dark gray laminae and occasional shale lenses or partings to silica-cemented, coarse-grained, orthoquartzitic sandstone with occasional pebbles. The Sharon Member was typically weathered and fractured in the upper several feet of core.

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Photographs 3 through 9 show some of the various lithologies encountered during installation of the RI wells from west to east across RVAAP.

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Photo 6. Sharon Conglomerate (WBGmw-020)



Photo 7. Sharon Conglomerate (FWGmw-016)





Photo 9. Sharon Conglomerate (EBGmw-131)

2.3.4 Monitoring Well Installation

In general, monitoring wells were constructed of new, 2-in.-diameter Schedule 40 PVC casing and screen. However, a 2-in.-diameter stainless steel well was installed at location LL12mw-182ss to assess whether the presence of bis(2-ethylhexyl)phthalate in groundwater at Load Line 12 is an artifact from the PVC wells. The well screens were commercially fabricated with 0.010-in. slotted openings. The well screens were 10 feet in length and flush-threaded to the solid casing. (The screen interval for well CBLmw-005 was shortened to 8 feet in length so as not to penetrate the underlying shale bedrock.) Granular filter pack (Global Supply No. 5 or No. 7 sand) was inserted into the annular space around the screen and extended 1.5 to 3 feet above the top of the screen interval. In general, approximately 3 to 6 inches of filter pack was placed under the bottom of the well screen to provide a firm footing.

Typically, at least 1.5 feet of granular bentonite holeplug was placed atop the filter pack and hydrated with 2 or more gallons of potable water. The bentonite seal was allowed to hydrate and swell for a minimum of 1 hour prior to inserting a grout mixture of cement and 6 percent bentonite to within 1 foot of the ground surface. Surface completion is described in Section 2.5. Table 2-2 contains well construction specifics for monitoring well construction. Appendix A includes copies of the well construction diagrams.

2.4 Permeability Testing

2.4.1 Shelby Tubes

At six of the proposed overburden well locations, 3-in.-I.D. by 24-in.-long, thin-walled Shelby Tube samples were collected from the approximate center of the water-bearing zone to be monitored. The Shelby Tube was attached to the sampling rods and hydraulically pushed the length of the tube. The thin-wall sampler was extracted through the auger string, immediately sealed with wax, and capped at both ends upon retrieval pursuant to ASTM Method D-1587. The tube was labeled and marked to orientation (i.e., top of core). The Shelby Tubes were

Table 2-2. Well Completion Summary Ravenna Army Ammunition Plant, Ravenna, Ohio

RVAAP Well ID	Completion Date	Ohio State Plane Easting ^a	Ohio State Plane Northing ^a	Surface Elevation NGVD 1929 ^b	TOC Elevation NGVD 1929 ^b	Surface Elevation NAVD 1988 ^b	TOC Elevation NAVD 1988 ^b	Depth to Bedrock (ft bgs)	Bottom of 6" I.D. Overburden Casing (ft bgs)	Total Drilled Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Dominant Lithology across Screened Interval
LL1mw-086	3/7/2012	2380437	561714	938.00	940.63	937.50	940.09	77.2	NA	75	64.5	74.5	Sand & Gravel
EBGmw-131	6/13/2012	2379666	571655	947.50	950.08	947.00	949.54	50.1	53.5	71	60.5	70.5	Sharon SS
LL1mw-087	3/1/2012	2378732	560375	941.80	944.32	941.30	943.78	NA	NA	17.5	7	17	Silt
LL12mw-247	3/1/2012	2368932	555141	981.30	984.25	980.80	983.71	18.25	NA	20.5	10	20	Silty Clay Till
LL4mw-201	4/4/2012	2365417	554607	975.90	978.02	975.40	977.48	42	47	67	56.5	66.5	Sharon SS
LL3mw-244	3/12/2012	2371456	556033	986.20	988.78	985.70	988.24	17.7	21	45	34.5	44.5	Sharon SS
LL3mw-245	4/2/2012	2369249	558573	978.70	981.24	978.20	980.70	24.5	29	47	36.5	46.5	Sharon SS
CBPmw-009	3/28/2012	2367174	561797	969.90	972.48	969.40	971.94	44	47	65	54	64	Sharon SS
FWGmw-001	3/14/2012	2368321	565739	953.60	956.62	953.10	956.08	16	NA	17.5	7	17	Sand
B12mw-013	4/6/2012	2371221	565904	1001.80	1004.48	1001.30	1003.94	1.2	NA	22	11.5	21.5	Sharon SS
FWGmw-002	3/22/2012	2367606	571015	970.60	973.10	970.10	972.56	71	NA	71	57	67	Sand & Gravel
FWGmw-003	3/8/2012	2344042	563118	1129.40	1131.96	1128.90	1131.42	NA	NA	19	8.5	18.5	Silty Clay Till
WBGmw-018	6/14/2012	2361302	562659	990.50	991.45	990.00	990.91	NA	NA	24	13.5	23.5	Sand & Gravel
WBGmw-019	6/15/2012	2361304	562645	989.30	990.25	988.80	989.71	30	33.83	50	39.55	49.55	Sharon SS
WBGmw-020	6/27/2012	2357161	561623	1043.40	1044.31	1042.90	1043.77	24	26.1	43.25	32.9	42.9	Sharon SS
WBGmw-021	6/25/2012	2359106	563009	1010.00	1010.92	1009.50	1010.38	24.1	27	42.5	32.5	42	Sharon SS
DA2mw-114	6/22/2012	2355785	560109	1029.50	1031.90	1029.00	1031.36	3.5	NA	19.5	9.16	19.16	Sharon Shale
DA2mw-115	6/21/2012	2355269	560459	1035.40	1038.08	1034.90	1037.54	14.25	19	44	33.75	43.75	Sharon SS
FWGmw-004	3/12/2012	2356970	549319	1034.50	1037.15	1034.00	1036.61	16	NA	20	9.5	19.5	Clayey Silt/Shale
FWGmw-005	4/2/2012	2338973	558510	1167.50	1170.10	1167.00	1169.56	17	NA	29.5	19.25	29.25	Homewood SS
FWGmw-006	3/5/2012	2335421	553142	1181.90	1184.33	1181.40	1183.79	NA	NA	18	7.5	17.5	Sand
FWGmw-007	3/9/2012	2344785	548356	1072.80	1075.41	1072.30	1074.87	NA	NA	30	19.5	29.5	Interbedded Till
FWGmw-008	3/6/2012	2341569	555735	1109.00	1111.61	1108.50	1111.07	NA	NA	21	10.5	20	Interbedded Till
FWGmw-009	3/7/2012	2341998	556784	109.50	1102.14	1099.00	1101.60	NA	NA NA	18.5	8	18	Interbedded Till
NTAmw-119	4/10/2012	2346013	551286	1077.40	102.14	1076.90	1079.53	NA NA	NA NA	130	90	100	Sand & Gravel
LL6mw-008													
	3/20/2012	2353616	553154	1121.30	1124.15	1120.80	1123.61	17.5	NA 10.5	17.8	7.2 29	17.2 39	Clayey Sand
LL6mw-009	4/12/2012	2353604	553149	1121.40	1123.75	1120.90	1123.21 1079.66	17.5	19.5	39.5	7.8		Homewood SS
LL11mw-011	3/21/2012	2351119	558680	1077.40	1080.20	1076.90		NA oo	NA	18.5		17.8	Sand Sharon Shale
LL11mw-012 FWGmw-010	4/17/2012	2351125	558691	1077.90	1080.36	1077.40	1079.82	88 N A	95.5	115	104.5	114.5	
	3/2/2012	2379060	565077	959.50	962.15	959.00	961.61	NA	NA 20	17.3 40	6	16	Sand
FWGmw-012	3/20/2012	2380389	566790	938.90	941.39	938.40	940.85	17.5	20 NA		29.5	39.5	Sharon SS
FWGmw-011	3/13/2012	2380390	566801	939.00	941.61	938.50	941.07	17.5	NA 15	17.5	6 24	16	Sand
FWGmw-013	4/9/2012	2357460	559483	1057.10	1059.51	1056.60	1058.97	11 NA	15 NA	34.5	24 8 25	34 19 25	Sharon SS
FWGmw-014	4/4/2012	2341064	560957	1135.00	1137.57	1134.50	1137.03	NA	NA 15	18.5	8.25	18.25	Sand & Gravel
CBLmw-005	4/10/2012	2344572	558686	1155.60	1158.10	1155.10	1157.56	9 NA	15 NA	31	22	30	Homewood SS
FWGmw-015	3/13/2012	2358353	550179	1012.10	1014.51	1011.60	1013.97	NA	NA	26	13.5	23.5	Silty Clay Till
FWGmw-016	4/16/2012	2358364	550171	1011.90	1014.39	1011.40	1013.85	36.8	40	65	54.5	64.5	Sharon SS
LL12mw-182ss	3/15/2012	2368867	555897	982.30	985.02	981.80	984.48	38	NA	36	25.25	35.25	Interbedded Till

^a Horizontal control in North American Datum (NAD) 1983, Ohio State Plane (OSP) Rectangular Grid Coordinate System, North Zone, 3401.

^b Elevations are in feet above mean sea level (amsl), National Geodetic Vertical Datum (NGVD) 1929 and North American Vertical Datum (NAVD) 1988. bgs = below ground surface

All wells were installed with an above grade completion.

SS = sandstone

submitted to Terracon Consultants, a geotechnical laboratory, for permeability testing using ASTM Method D-5084, "Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter." The well locations subjected to Shelby Tube testing included LL12mw-247, WBGmw-018, WBGmw-020, FWGmw-009, LL6mw-009, and FWGmw-015. (Note that the Shelby Tube samples from well LL6mw-009 and WBGmw-018 comprised sand or sand and gravel and fell apart at the laboratory; as a result, the permeability test could not be performed on these two samples.) The four overburden samples that were analyzed comprised clayey sandy silt to sandy lean clay with permeability values ranging from 1.3 x 10⁻⁷ to 8.5 x 10⁻⁸ cm/sec. Porosity values ranged from 21.47 to 31.75 percent in these four overburden samples. Table 2-3 summarizes the Permeability, Porosity, and Total Organic Carbon (TOC) Results for the Shelby Tube samples. The geotechnical laboratory reports are presented in Appendix B.

2.4.2 Rock Cores

Fourteen (14) field-selected rock core segments from the well screen interval were removed and submitted to a geotechnical laboratory for permeability testing using ASTM Method D-5084. The selected core segments ranged from approximately 0.67 to 1.8 feet in length. Two of these cores were obtained from wells completed in the Homewood Member (LL6mw-009 and CBLmw-005), and the remaining 12 cores were obtained from wells completed in the Sharon Formation (CBPmw-009, DA2mw-114, EBGmw-131, FWGmw-012, FWGmw-016, LL3mw-244, LL3mw-245, LL4mw-201, LL11mw-012, WBGmw-019, WBGmw-020, and WBGmw-021). The cores were labeled and marked for orientation, secured in bubble wrap, and placed in a protective map cylinder. The cylinder was sealed at both ends and secured with packing tape. The outside of the cylinder was labeled with the core information. The packed core was then transported to the geotechnical laboratory for permeability testing. The cores generally comprised sandstone, although the core sample from DA2mw-114 was shale. Permeability values for the rock core samples ranged from 1.3 x 10⁻⁸ to 1.5 x 10⁻⁴ cm/sec, and porosity values ranged from 5.20 to 17.14 percent in the rock cores. The lower permeability value was from the shale core. Table 2-3 summarizes the hydraulic conductivity values for the rock core samples. The geotechnical laboratory reports are presented in Appendix B.

2.4.3 Total Organic Carbon

The Shelby Tube sample from WBGmw-018 and the rock cores from LL4mw-201, WBGmw-019, DA2mw-114, and LL3mw-245 were analyzed for total organic carbon (TOC) content. Following completion of the permeability tests, Terracon submitted the selected cores to ALS Laboratory in Cincinnati, Ohio, for TOC analysis. The TOC results ranged from 0.039 to 0.36 percent in the five samples analyzed; the highest value was identified in the shale sample. Table 2-3 summarizes the TOC sample results. The laboratory reports are presented in Appendix B.

Table 2-3. Permeability, Porosity, and Total Organic Carbon (TOC) Results
Remedial Investigation, RVAAP, Ravenna, Ohio
February through June 2012

Well Location	Sample ID	Sample Depth (ft bgs)	Sample Description	Average Permeability (cm/sec)	Porosity (%)	TOC (%)
LL12mw-247	FWGLL12sb-247-0001-GT	14 to 16	Gray clayey sandy silt	2.6E-07	26.84	NT
WBGmw-018	FWGWBGsb-018-0002-GT	18 to 20	Brown sand and gravel	$\mathbf{NT}^{\mathbf{a}}$	NT^{a}	0.11
WBGmw-021	FWGWBGsb-021-0003-GT	40.67 to 42	Gray sandstone	8.3E-06	11.51	NT
FWGmw-009	FWGFWGsb-009-0004-GT	8 to 10	Gray sandy lean clay w/ trace gravel	8.5E-08	29.48	NT
LL6mw-009	FWGLL6sb-009-0005-GT	12 to 12.75	Sand w/ some clay	\mathbf{NT}^{a}	NT^{a}	NT^a
FWGmw-015	FWGFWGsb-015-0006-GT	16 to 18	Gray sandy lean clay w/ trace gravel	1.3E-07	31.75	NT
WBGmw-020	FWGWBGsb-020-0007-GT	37.33 to 38.1	Gray sandstone	8.3E-06	10.09	NT
EBGmw-131	FWGEBGsb-131-0008-GT	65.5 to 67.17	Gray sandstone	2.6E-05	9.9	0.053
LL4mw-201	FWGLL4sb-201-0009-GT	57 to 67	Gray sandstone	1.5E-04	7.88	NT
LL3mw-244	FWGLL3sb-244-0010-GT	38.5 to 39.7	Gray sandstone	2.2E-05	7.04	NT
CBPmw-009	FWGCBPsb-009-0011-GT	61.7 to 63.2	Gray sandstone	9.3E-05	15.81	NT
WBGmw-020	FWGWBGsb-020-0012-GT	15 to 17	Gray sandy lean clay w/ gravel	5.3E-08	21.47	NT
WBGmw-019	FWGWBGsb-019-0013-GT	41.43 to 42.58	Tan sandstone	3.9E-05	17.5	0.039
DA2mw-114	FWGDA2sb-114-0014-GT	16.5 to 17.1	Gray shale	1.3E-08	5.77	0.36
LL3mw-245	FWGLL3sb-245-0015-GT	39.58 to 41.1	Gray sandstone	4.9E-05	8.03	0.14
LL6mw-009	FWGLL6sb-009-0016-GT	27 to 28	Gray sandstone	1.5E-04	10.89	NT
LL11mw-012	FWGLL11sb-012-0017-GT	113.5 to 114.25	Gray siltstone	4.0E-08	5.20	NT
FWGmw-012	FWGFWGsb-012-0018-GT	31.05 to 32.6	Gray sandstone	1.3E-04	10.14	NT
CBLmw-005	FWGCBLsb-005-0019-GT	24.1 to 25.3	Tan sandstone	1.1E-04	13.90	NT
FWGmw-016	FWGFWGsb-016-0020-GT	60 to 61.8	Tan sandstone	1.1E-04	17.14	NT

NT = not tested.

a = sample fell apart at laboratory.

2.5 Well Completion and Demobilization

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Wells were completed at the surface with a locking 5-in. or 6-in.-diameter steel protective casing set in a concrete pad measuring approximately 30-in. square by 4-in. thick. The bedrock wells were typically completed with the 5-in.-diameter protective covers, which were installed inside the 6-in.-diameter overburden casing. However, at well LL3mw-244, a 6-in.-diameter protective cover was welded onto the overburden casing; and, since wells FWGmw-005, B12mw-013, and DA2mw-114 were installed without overburden casing, a 6-in.-diameter protective cover was used at these locations. Since the four new WBG wells were completed with 1-ft protective covers (see Section 3.5), the overburden casing was extended 1 foot above grade and fitted with a locking cap. All of the overburden wells were finished with the 6-in.-diameter steel protective cover. A fine sand filter pack was installed to approximately 6 inches below the top of the well casing inside the protective cover to stabilize the casing. Except for the four new WBG wells, the protective casings extend approximately 3 feet above the ground surface and are protected by three steel bollards placed 4 feet radial to the well. The bollards were set in cement 2 feet below grade; they were filled with sand and capped with cement to form a watertight seal. The protective well casings and bollards were painted yellow, and the well number was stenciled onto the outside of the well casing. Well completion specifications for the four wells in WBG were modified at the request of the OHARNG; this field change is described in Section 3.5.

Frontz repaired any drainage swales damaged during well installation activities using a Bobcat. Well installation activities were completed and all equipment and field staff demobilized by June 29, 2012.

2.6 Well Development

The monitoring wells were developed in accordance with the *Facility-Wide Sampling and Analysis Plan* (FWSAP; SAIC, 2011). Prior to well development, the depth to water and well depth was measured using a decontaminated water-level indicator. Monitoring well development was accomplished using a submersible whale pump. The pump was raised and lowered throughout the screened interval during development activities to ensure the entire screened interval was thoroughly developed. Development proceeded until:

- The sediment thickness in the well was less than 1% of the screen length or <3.0 cm (0.1 ft);
- A minimum of five times the standing water volume in the well was purged; and
- Indicator parameters (pH, temperature, and specific conductance) stabilized according to procedures presented in Section 4.1.1 of the *Facility-Wide Groundwater Monitoring Program* (USACE, 2004) over three consecutive readings. Groundwater parameters were obtained using a combination meter (Horiba U-10 or equivalent) designed to measure these parameters.
- If the water was not clear after 10 well volumes had been removed, but the indicator parameters were within +/- 10 percent of the stability measurements, then the well was considered properly developed. In addition, any unrecovered water used during well installation was also removed.

Field data was entered into an electronic database at the time of well development (i.e., in the field). Field measurements and records are recorded using field-durable laptop computers in conjunction with the use of standard logbooks. The data is direct loaded into a Microsoft AccessTM database, which performs check-routines for correct loading and verifies when field parameters have stabilized. Copies of the Well Development Logs are presented in Appendix C.

All well development water was containerized, characterized, stored, and disposed of pursuant to Section 4 herein.

2.7 Well Survey

A topographical survey for horizontal and vertical locations has been prepared for all new wells. The survey was conducted by Mr. Don Trocchio of Vista Sciences Corporation. Mr. Trocchio is a registered surveyor in the State of Ohio (#6445). Ground surface and top-of-casing elevations were surveyed to the nearest 0.01 feet, and horizontal control was established to within 1.0 feet of the North American Datum of 1983 (NAD83), Ohio State Plane Rectangular Grid Coordinate System, North Zone, 3401. Control monuments at RVAAP are tied to the North American Vertical Datum of 1988 (NAVD88); however, several existing wells were installed prior to the establishment of this system and were originally surveyed relative to the National Geodetic Vertical Datum of 1929 (NGVD29). As a result, the ground surface and top-of-casing elevations for the new wells were surveyed relative to both systems. Table 2-2 presents the Northing-Easting coordinates and top-of-casing and ground surface elevations, and Figures 2-1 through 2-3 show the well locations based on the survey data. Appendix D presents the professional surveyor report.

SECTION 3 FIELD CHANGE REQUESTS

All monitoring wells were installed in accordance with the EIS Addendum and supplemental appendices with the exceptions noted in the field change requests (FCRs) discussed below. Copies of the signed FCRs, where applicable, are included as Appendix E.

3.1 Use of #5 Sand for Placement around Well Screens

Pursuant to the approved EIS Addendum, a fine-grained filter pack of Global Supply No. 7 sand was to be used around the well screen. However, during installation of the first few wells as part of this RI, it was observed that the No. 7 filter pack tended to float on the water column and subsequently bridged within the auger string. On March 7, 2012, EQM requested approval of a slightly coarser No. 5 sand to place around the well screens. Approval was granted by USACE and the Ohio EPA. This was not considered a technical change order as Section 5.4.2.2.2 of the FWSAP indicates that Global Supply No. 5 sand is acceptable with approval from USACE and Ohio EPA if conditions warrant.

3.2 Installation of NACA Well in Second Water-Bearing Overburden Zone

As presented in the RVAAP-66 Facility-Wide Groundwater Sampling and Analysis Plan for Environmental Investigation Services Addendum (EQM, 2012), the well to be installed in the National Advisory Committee for Aeronautics (NACA) area was proposed as a bedrock well (NTAmw-119) that was to be paired with an existing unconsolidated well. During drilling, the hollow-stem auger rig encountered a sand-and-gravel layer with cobbles at approximately 84 feet below surface grade, which it could not penetrate. A track-mounted rotary sonic rig was brought in to continue sampling to the top of bedrock. However, after sampling to a depth of 130 feet below grade, bedrock had still not been encountered. During sampling, the geologist noted two discrete water-bearing zones within the overburden. The first water-bearing zone comprised unconsolidated sands and ranged from about 6 to 42.5 ft bgs. The second water-bearing zone comprised sand and gravel from approximately 84 to 100 ft bgs. Below 100 feet was approximately 20 feet of dense, dry, clay till, followed by 10 feet of alternating layers of sand and gravel and silty clay till. Between the two water-bearing units was a confining layer of dry, silty clay from 42.5 to 70 ft bgs followed by 16 feet of intermittent beds of sand and silty clay.

Following discussions with USACE, EQM recommended installing a well from 90 to 100 ft bgs within the second water-bearing strata to monitor this deeper zone rather than complete the well in bedrock since it was becoming increasingly uncertain as to which bedrock formation would be encountered and at what depth. The borehole was filled with granular bentonite from 104 to 130 feet bgs and hydrated. Filter sand pack was installed as a base from 100 to 104 ft bgs. Remaining well construction was completed as previously described in Sections 2.3 and 2.5.

3.3 Use of Rotary Sonic Drilling to Install Overburden Casing through Thick Overburden at Load Line 11 Location

In order to determine the depth to bedrock, preliminary sampling activities at location LL11mw-012 were performed using 4.25-in.-I.D. hollow stem augers. Weathered shale bedrock was encountered at a depth of 88 feet bgs, and additional samples were collected to a depth of 98 feet. Since Frontz did not have sufficient 8.25-in.-I.D. auger string to overdrill and set casing beyond 75 feet, a rotary sonic rig was used to complete this task. No samples were collected using the rotary sonic method at this location. The overburden casing was installed through the 9-in.-dia. sonic drill stem and pressure grouted in place. The CME 75 drill rig was then used to core, air rotary drill through the casing, and set the well at this location. Although not officially a technical change, the EIS Addendum (EQM, 2012) did not make provision for use of rotary sonic drilling during the RI. Consequently, its use is mentioned herein for completeness.

3.4 Preparation of Accident Prevention Plan for MMRP Well Installations

Prior to installing monitoring wells at three MR sites at RVAAP (i.e., Winklepeck Burning Grounds, Demolition Area #2, and Erie Burning Grounds), the USACE requested EQM to prepare an APP. The objective of the APP is to present a comprehensive plan to control safety and health hazards that may be associated with planned site activities (e.g., well installation, surveying, and groundwater sampling) in these areas. The APP was developed to meet USACE requirements as outlined in Section 01.A.09 of the USACE Engineering Manual (EM) 385-1-1, Safety Manual.

 The APP is an addendum to the overall Facility Wide Sampling & Analysis Plan (FWSAP; SAIC, 2011), Facility-Wide Safety and Health Plan for Environmental Investigations (FWSHP; SAIC, 2011), and Site Safety Health Plan (SSHP) Addendum (EQM, 2012). The APP places an emphasis on identifying who will be responsible for each of the specific Safety and Health responsibilities, and how and when each of the applicable requirements will be performed. Preparation of the APP was not originally specified in the PBA scope of work; nevertheless, this document was prepared by EQM, and reviewed and approved by the USACE and the Ohio EPA prior to remobilization.

3.5 Modification to Surface Casing Completion at Winklepeck Wells

At the request of the OHARNG, the above-ground completion of the four new wells at the Winklepeck Burning Grounds must be finished in such a fashion as to prevent potential ricochets during firing range activities. To meet this requirement, two options were evaluated: 1) flushmount wells or 2) short above-ground stickups protected by soil berms instead of bollards. Since flush-mount wells are susceptible to surface water accumulation around the wellhead and can be difficult to find under certain conditions (e.g., snow cover, foliage), EQM submitted a technical change order on February 15, 2012, recommending completion of the well with a short stickup (about 1 foot above grade) coupled with a soil berm for protection. Specifically, the top of the PVC well casing was extended approximately 8 inches above ground surface, and the 6-in.-dia.

overburden casing was extended 1 foot above grade. The cement/bentonite grout was inserted to within approximately 12 inches of the ground surface, and the protective cover was set within a concrete pad as described in Section 2.5. A minimum 2-ft-high crescent-shaped soil berm was placed on the west or north side of the well facing the firing range. Soil used to complete the berm was obtained from a large soil stockpile located on the west side of WBG with approval from OHARNG. On June 28, 2012, Frank's Maintenance installed the berms using a small backhoe.

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SECTION 4 IDW GENERATION AND DISPOSAL

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All solid and liquid IDW were containerized for proper characterization and disposal. Sanitary waste, including personal protective equipment (PPE), was placed in a hazardous waste roll-off box for offsite disposal as sanitary trash.

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4.1 Soil Cuttings

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Soil and bedrock cuttings were removed from the borehole during drilling via augering or highpressure air. In the latter case, the drill cuttings were directed into a diverter and then through a discharge vent directly into a container next to the borehole. Soil and rock cuttings were containerized in DOT-approved 55-gal drums, labeled, and staged on pallets near Building 1036 with the approval of the RVAAP Environmental Coordinator. EQM collected composite samples in three batches: 1) from the initial 23 drums generated between February 27 and March 8, 2012; 2) from the 98 drums generated between March 12 and April 17, 2012; and 3) from the last group of 28 drums generated between May 29 and June 27, 2012. Prior to sampling, any accumulated water on the lid of the drum was decanted, and the bung was opened to obtain a headspace screening measurement using a PID. The headspace value was recorded on a drum log, which also included the drum sample number, generation date, and well location from which the soil was generated. New, disposable nitrile gloves were donned prior to each sample event. A decontaminated trier was then used to obtain a grab sample through the bung hole from each drum of soil associated with the batch. The recovered soil was placed in a clean stainless steel bowl for homogenization. A composite sample was collected from the mixture using a gloved hand and placed in labeled glass jars provided by the laboratory. The used gloves were discarded appropriately after each event. After the jars were filled, they were sealed with Teflon-lined lids and placed in a cooler with ice for shipment to the analytical laboratory for analysis of the RVAAP full suite totals analysis and Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 4-1. For the volatile organic compound (VOC) analysis a discrete sample was collected from the drum with the highest headspace screening value. Stainless steel bowls and triers were decontaminated in accordance with Section 2.13 of the EIS Addendum after collection of each composite sample.

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For each batch, a Soil IDW Letter Report was submitted to USACE, Ohio EPA, and the RVAAP Environmental Coordinator for review and approval. Based on the waste characterization results, the letters recommended disposal of the drums as non-hazardous waste. Copies of the letter reports with the associated analytical results and summary tables are present in Appendix F. Once approved, EQM contracted Emerald Environmental, a licensed waste disposal contractor, to haul the manifested drums offsite to Vexor Technology, a nonhazardous waste treatment facility located in Medina, Ohio, for treatment and disposal.

Table 4-1. Summary of Analytical Suite of Chemicals

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium,	EPA Method SW-846 1311/6010B
cadmium, chromium, lead, and selenium)	
TCLP semivolatile organic compounds	EPA Method SW-846 1311/8270C
(SVOCs)	
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
рН	EPA Method SW-846 9040B
Polychlorinated biphenyls (PCBs)	EPA Method SW-846 8082
Pesticides	EPA Method SW-846 8081A
Base/Neutrals and Acids (SVOCs)	EPA Method SW-846 8270C
Volatile Organic Compounds (VOCs)	EPA Method SW-846 8260B
Nitroguanidine (Propellant)	EPA Method SW-846 8330 modified
Nitroaromatics & Nitramines (Explosives)	EPA Method SW-846 8330
Nitrocellulose as N (Propellant)	General Chemistry (WS-WC-0050)
Nitrate/Nitrites	General Chemistry (353.2)1
Metals (Magnesium, Manganese, Barium,	EPA Method SW-846 6010B
Nickel, Potassium, Silver, Sodium,	
Vanadium, Chromium, Calcium, Cobalt,	
Copper, Arsenic, Lead, Selenium)	
Metals (Antimony, Iron, Beryllium,	EPA Method SW-846 6020
Thallium, Zinc, Cadmium, Aluminum)	
Mercury	EPA Method SW-846 7470A

¹ EPA Methods for Chemical Analysis of Water and Waste

4.2 Wastewater

Two types of wastewater were generated during this project: groundwater recovered during installation of bedrock and deep overburden wells and decontamination fluids. The two types of wastewater were containerized in separate vessels and characterized separately. Wastewater samples were collected by gently lowering a new, disposable Teflon bailer attached to new polypropylene rope into the holding vessel. The bailer has a bottom check valve that seats over the bottom opening during retrieval, thereby keeping the water within the bailer column as the bailer is withdrawn from the poly tank or drum. Water collected in the bailer was transferred directly from the bailer to a decontaminated 3- to 5-gal glass container for homogenization. Water from the container was then transferred into the appropriate sample containers. The bailer was lowered into the tanks several times, and to different depths, to collect a sufficient representative sample of the water to submit to the laboratory for waste characterization analysis in accordance with the disposal facility's characterization requirements. New, disposable nitrile gloves were donned prior to each wastewater sample event. The used gloves, bailer, and rope were discarded appropriately after each event.

4.2.1 Decontamination Fluids

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Downhole drilling and sampling equipment was steamed clean over a temporary decontamination pad staged near a 2,450-gal poly tank located in a gravel lot north of Building 1036. The location of the tank was approved by the RVAAP Environmental Coordinator. The tank was placed inside a secondary containment structure comprising liquid tight polypropylene sheeting material secured around the tank with metal L-shaped brackets. Decontamination fluids (i.e., wastewater) were pumped directly from the pad to the holding tank using a sump pump. Waste characterization results were submitted in an IDW letter to USACE, the Ohio EPA, and the RVAAP Environmental Coordinator. A copy of the letter is included in Appendix F. Upon approval, the decontamination water was discharged to the ground. The water was filtered with a 100-micron filter prior to land application. Discharge was performed to avoid ponding and surface runoff of water. On June 6, 2012, EQM began land treatment; however, during discharge some suds began to develop at the end of the hose, and the water began to show evidence of filter breakthrough. Consequently, EQM ceased land application operations and decided to contract with EnviroServe of Cleveland, Ohio, to transport and dispose of the remaining decontamination fluids and sediment to Vexor Technology. On August 8, 2012, the remaining decontamination fluids and residual sediment (an estimated 515 gal) were removed using a vacuum truck. The tank was removed from the site on August 9, 2012.

4.2.2 Purge Water

Development water from newly installed wells, purge water, and groundwater recovered during drilling of bedrock and deep overburden wells was temporarily placed in 55-gal drums and transferred to two fractionation (frac) tanks (one 10,000-gal and one 21,000-gal) placed in the gravel lot north of Building 1036. Both tanks were placed in similar secondary containment structures as described in Section 4.2.1. Following waste characterization, the purge water was

also discharged to the ground through a 100-micron filter as described in Section 4.2.1 with approval of Ohio EPA. EQM completed discharge of the purge water from the 10,000-gal tank on June 6, 2012, and from the 21,000-gal tank on July 26, 2012. Residual sediment and liquid (approximately 1,800 gal) remaining in the bottom of the 21,000-gal tank was removed using a vacuum truck by EnviroServe on August 8, 2012, for transport and offsite disposal as non-hazardous waste to Vexor Technology. During waste removal, EnviroServe cleaned the interior of the tank by pressure washing.

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The last frac tank was removed from RVAAP on August 15, 2012.

1 **SECTION 5** 2 REFERENCES 3 4 5 ASTM (American Society of Testing and Materials). ASTM D1586-08a. Standard Test Method 6 for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils. ASTM International. 7 West Conshohocken, Pennsylvania. 8 9 ASTM. ASTM D1587-08 (2008). Standard Practice for Thin-Walled Tub Sampling of Soils for 10 Geotechnical Purposes. ASTM International. West Conshohocken, Pennsylvania. 11 12 ASTM. ASTM D5084-10. Standard Test Methods for Measurement of Hydraulic Conductivity 13 of Saturated Porous Materials Using a Flexible Wall Permeameter. ASTM International. West 14 Conshohocken, Pennsylvania. 15 16 Barnes, G.E. 1950. A Report on Water Conservation and Development at the Ravenna Arsenal, 17 Apco, Ohio. Consulting Engineer. Cleveland, Ohio. 18 19 EQM (Environmental Quality Management, Inc.). January 2012. Final Facility-Wide 20 Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Addendum. 21 22 EQM. January 2012. Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 23 Facility-Wide Groundwater Sampling and Analysis Plan for Environmental Services Addendum. 24 25 EQM. January 2012. Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 26 Facility-Wide Groundwater Quality Assurance Project Plan Addendum. 27 28 EQM. January 2012. Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 29 Facility-Wide Groundwater Site Safety and Health Plan Addendum. 30 31 EQM. May 2012. Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 32 Facility-Wide Groundwater Accident Prevention Plan. 33 34 Kammer, H.W. 1982. A Hydrologic Study of the Ravenna Arsenal, Eastern Portage and 35 Western Trumbull Counties, Ohio. Master Thesis, Kent State University. 36 37 Ohio EPA (Environmental Protection Agency). June 2004. Director's Final Findings and 38 Orders in the Matter of United States Department of the Army, Ravenna Army Ammunition 39 Plant. 40 41 SAIC (Science Applications International Corporation). February 2011. Final Facility-Wide 42 Sampling and Analysis Plan for Environmental Investigations, Ravenna Army Ammunition Plant, 43 Ravenna, Ohio. 44 45 SAIC. February 2011. Facility-Wide Safety and Health Plan for Environmental Investigations

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- 18 USGS (United States Geological Survey). 1968. Mineral Resources of the Appalachian Region.
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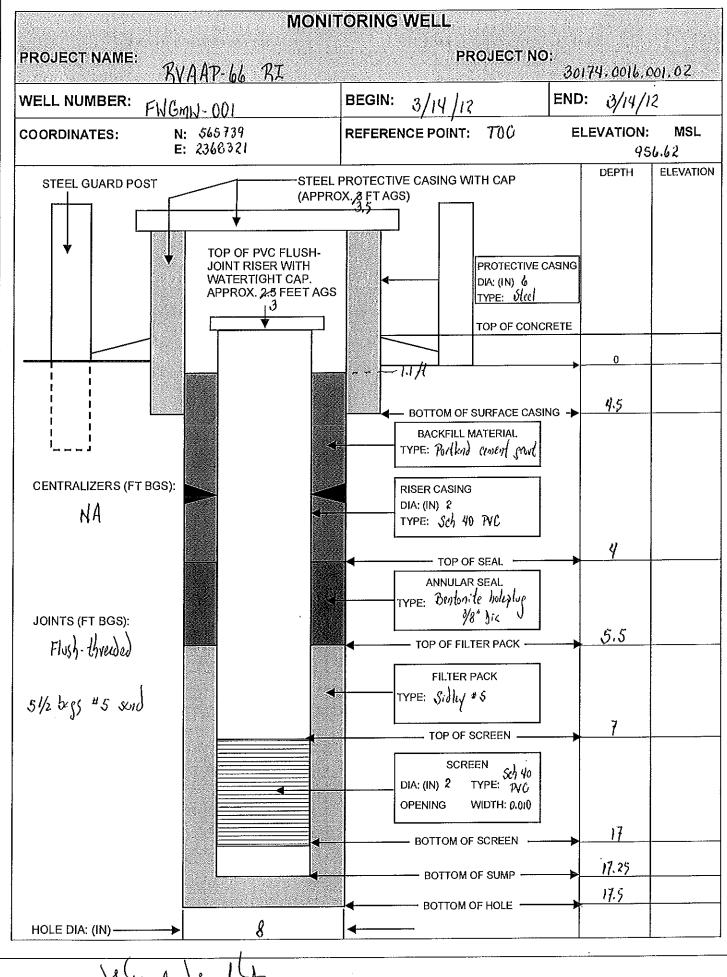
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17	APPENDIX A
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19	SOIL BORING LOGS AND
20	WELL CONSTRUCTION DIAGRAMS
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ELEVATION	DEPTH (Feet)	uscs	CLASSIFICATION O	F MATER	RIALS		ONITORING PPM/CPM)	1	REMARKS /Depths/Core Box/Etc.
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		ML	Remainder Silly sendy cky, by moist, med-gained sen	6 1	lew small pravel	2-3		/	
			moist med-plained sx	u) c	rumbly U	2-3 R= 15/24			
				-,	7				
	¥ 2-4	CL	Uprel 8" Silly cks ben w/	ta)	red-bin motlles	2-4-		2.4/1:	1624
	2-4		Upper 8" Silly cky, but w/ few send gasel, dem Remainder Silly dayey send,) Moc). st.//	5-6			
		SC	Renainel Silly older send	ha	dem rumbly	5-6 B= 19/24			
		70	1ew sixtly gavel	<u> </u>	1, 40.7				
			700 9000						
	18'	SA	Und 3" SHI delet son	s cho	10	5-9-		4-6/t;	1634
	18° 4-6	40	2001 10/ Sel 6 coul Hole	, J o	Set dods	11-5		 ` • / ° / 	/
		Gr	Upper 3" Sitty clayer send, co Remainder Send exert, It ber loose, dex	/, /a	3 0176, 751714	B= 12/24			<u>· ·</u>
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			No. 2" Mills a \ / oc ()		- H	9.3		6-8 H;	1/28
	6-8		Upper 2" Clayer send repease), Renkinder Silty clay, every w/	wet,	307(#1 / ()	2-2-		1 4 7 C ,	10.30
	18/	CL	Kenkinder virty chy, ercy wy c	b(n m	olles, jew xno,	3.3			
			Wet, killy soft			15° /24			
-			c \ (1)/s	1	١ ١٠ ١١٠			0 .0 11	<u></u>
	8-10	SP	Sand, gray w/ brown notllix	(' 	all Sill, In-Med	1-1-		8-10/6	1040
			gkines, wet			7, 14/24			
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	10-12	SP	12nd, gray w/ brown motti-f.	, 140	e sitt formed	1-2-		10-12 /l;	1454
			Sind, gray w/ brown mothing, present wet, 1/2" gravel	61	•	1-2 R=17/24			
			7			K = 1/24			
	28								
	12-14	SP	Upper 7" Send, as above		· · · · · · · · · · · · · · · · · · ·	1-1-		12-H/L	1659
		CL	Love 10" Sitty clay, gray, W	let i	sticly, fairly soft,	2-4 R=1/24		,	
			Upper 7" Jand, as above Lower 10" Sitty clay, gray, w		1'' / ''	R=1/24			
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1. COMPANY NAME 2. DRILLING SUBCONTRACTOR Frontz Drilling SHEET 23 0F 3	HTRW DI	RILLIN	G LO	G (continued)	DISTRI	CT ~ Louisville			BOREHOLE NUMBE	
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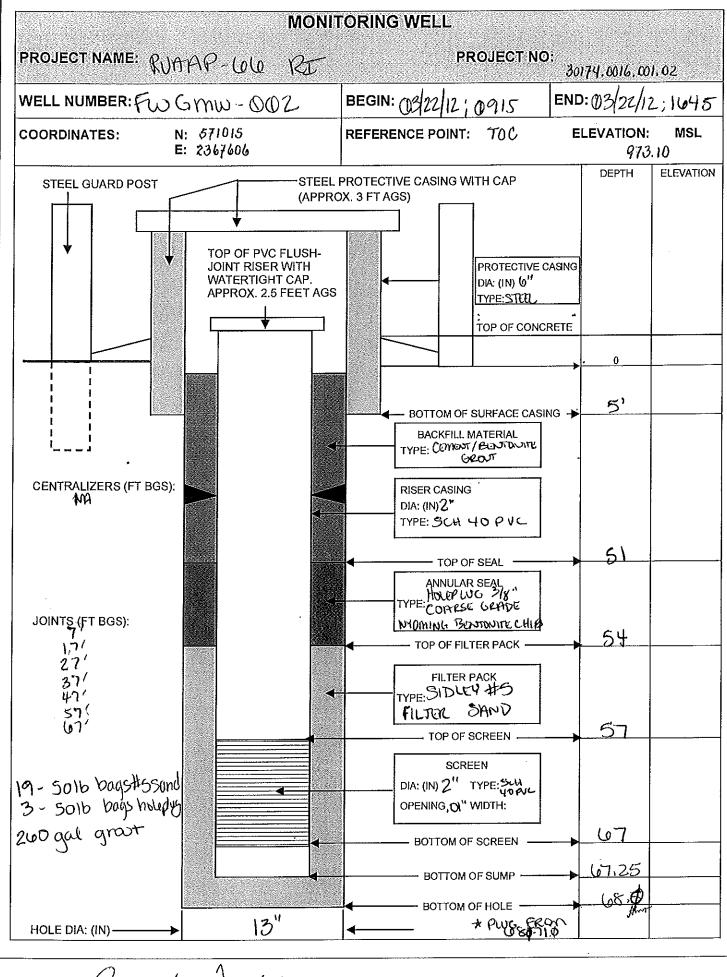
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	.,,,,,,,,	1701110740	1011011071	*********	.,.,		ļ	ļ	ļ		ļ	1	ļ	ļ	ļ	ļ	ļ		ļ		ļ	├ ──-}						ļ
			·····	4*********		,,,,,,,,,,,						<u></u>											,.,,,,,,,,	\				•
ROJECT					Ll		<u> </u>	1	<u> </u>			<u> </u>	GEO	OGIS	SIGN	ATUR	₹ E/DAT	: <i>t~-</i> C Ę	(A) (<u>.</u>	12/	/	BORE	HOLE	NUME	ER		<u>. </u>
	٠. ٠.) 01		7	> . I∨	- >^}	ρ	۱ ۸	1 ^	ر ک	_)	^	de	(/	b.	1-1	/ (/(מוכנ	112	0	. h ^		SER W~(^^	7
TW(WGWMP- RVAAP-LOLE RT								,		11 13	m	an	WA		XII	me	~	~		けてし	U (3 m	W~	$\mathcal{O}(\mathcal{O})$			

TRW DE	ZILLIN	GLO	G (continued)	DISTRIC	CT			BOREHOLE NUMI	
			• (continued)		- Louisvão			14MQM	<u>w - DD2</u>
OMPANY NA	ME SY	71	_	Frontz D	LING SUBCONTRACTOR			SHEET 2	of 4
PROJECT K	WAF	1P-1	ul RI		4. LOCATION RVAAP	3451 State Rou			
IAME OF DRI		ARI			6, DIRECTION OF BOREHOLE	<u> </u>	VERTICAL .	INCLINED	DEGREES
OTES PID	MAKE/MOD	EL: M	IVIRAE 2000		PID SERIAL#: $11\phi - \phi \phi$	5816	Colors fro	om Munsell Soil Cold	or Chart, Rev
WAT	TER LEVEL	MAKE/MC	DDEL;		WATER LEVEL SERIAL#:			<u> 2000</u>	Rev (D)
LEVATION	DEPTH	USCS	CLASSIFICATIO	ON OF MATER	IALS	SPT DATA	MONITORING		EMARKS
	(Feet)		(20)			(0.5 Feet)	(PPM/JPM)		epths/Core Box/Etc.)
		ML	(0.0'-1.1') Gravelly S			15/20	14·Φ.Φ	Aifmbi	
			gravel, blue concrete (10) (1) <u>- (1)</u>	tragments throughost	15/20 0-2 6 7 9/11	M. D.C.	TI- HEUU	Space PID
		\	organics troots, some sar and to soft.	nd Silt:	is loyey's brown	60lo	110		<u> </u>
			l .1			2:4	H: 0.1		
	5	CL	(1.1'-7.1') CLAY (CU); brown 254614, 11944,	clipicish t	Drown Ittle 104/24/1	3/11/7/14			<u> </u>
			BH 2.51 COLOR IS LOTENIS	porno m	tace 1048812	4-10	H 1.0		
	7		brown 25 Colf light ye desk gray; CM; medium Shift; in BH 251 Color is lovey 12 Very pale brown along cracks OH'STIFF @67	Wille SI	nale fragments, block	19/27/23/20			
			(7.1'-14.7) SAND (SU			6-8	H 0.0		
			dense; non plustic; loy	(R5)4 4	ellowish brown	2/2/4/3	V 0.0		
	10	ಮ	@8.2' wet.			1.6/2.0	H 0.7		. <u>.</u> .
							A 0.0		
			•			1.7/2.0	H 0.0		
						4/4/3/4			
						2.0/2.0			
	15	5M	(14.7 - 16.4) SIUT + SF	AND (SM) wet loose.	1/1/2			
			wet, lore 314 yellowish by	NOWN)		2.0/20	100		
	16	•	111 11 1610 6 60		Italy as west P.	1/2/2/1			
		ಽಀ			ı –		H OV		
	18	ML	of sit, loveyle dark ye	Trongsh	DADMY : more; 10026		A O.O		
	20 20	1,000	46.8 Gray 2.545/1			1/1/3/3	1(0,0		
		GP			(m), stiffichy	18.20	4		
			104R5/4 yellowsh brown, 10.			1/3/3/3	A Q.Q		
			(18.8'-24.0) Sunangular exted wet loose, took	313 ank	tSand(GP) poorly brown +7154R5/le	•	H 1.2	`	
			Shing brown			3335 1.5/2.0	A 60.00		
			124-24,9) 104R5/3 b	•	,	22-24	H W.8		
	25		(24.9-25.2) Grave 150		•	2.0/2.0	Α Φ.Φ		
		SW	(25.2 - 25.91) Midum q		•	24-24	H 0, 6		
			Grand 7.54 R414 She	eng braw	n; wet; 258 famp	3/5/11/12	A O.O		
			(25,9'-26,2') CLAY(CL)-Som	Sit : trace fre Grad	26.28	H 0.2		
		my	loges 14 yellaish born.	dy, shitt	f	1 2-1-	Α ΦιΦ		
	30	-	(36.2-33.0) SILT(MU) S ON 108511 DIVISH Gray			1.5/2.0 28.30	H9.7		

HTRW DRILLING LOG (continued)					CT - Louisville			FLUC) - OO2
1. COMPANY NA	ME			ļ	LING SUBCONTRACTOR			·	•••	· ·
SAIT				Frontz (Drilling			SHEET	3	of 4
3. PROJECT R	UAA	P-60	6 KI		4. LOCATION RVAAP	8451 State Roule	5 Ravenna,	OH 44266		
) MACKEY		6. DIRECTION OF BOREHOLE	(ERTICAL	INCLINE	0	DEGREES
			INIRAT 2000		PID SERIAL#: // Ø- ØØ	5816		m Munsell So		
	ER LEVEL	-			WATER LEVEL SERIAL#:	حـ	2	000	REV	ED
ELEVATION	DEPTH	USCS	CLASSIFICATION OF	MATER	NALS	1 1	AONITORING		REMAR	RKS
	(Feet)					<u> </u>	(РРМ(СРМ)	(Sample	IDs/Depths	/Core Box/Etc.)
			~31' Sittier (little Cla	4)		23519	1 B.O_			
				'		1.5/2.0	4 6.8			<u>-</u>
			(33,0') SIUT (MU) (VEN)	tife	fidny low plasticity	12/10/25/33	A 0.0			
		W	(33.0') SIUT (MU); venj:	gro	ively.	L 15472.O L	H10.6			
	35		134.2'-41.00) SIJ/mu). to	510 f	a ly face Sand:	9/20/21/23				
			(34.2'-47.0) SIUT (mu) to dry; dense / shot; 10485/	IOX	74	1.3/2.0	1179			
		. 1	J			8/14/10/24	Λ Φ.Φ			
		MV				1.4/2.0	_			
						1 1	A O.O			
	40		(39.0'-39.4') moist			1700				
	40				1 11 ()		H 1, 6			<u> </u>
			(41.4'-42.5') Addition	ot	little Clay	3/8/11/19				
						40-42	44.1			
						21/2/31/32	HOO		 	
			(44.2'-47') WET SICT	(SP	(A)	42-44	425			
	45					2/5/6/10	0.0 A			
		/	(47.0'-50') SAND (SW);	WE	Titrace subrando	117120	1.8			
	114		(5 Mue)			15/17/23/23	A 0.0			
	47	CW	48' condonent's pebble in	spli	+ 5poon	2.0/2.0				
		>v	es to lace magners			77.0	A 0.0		•	
	50		(50'- 5) 0') SUT (m)).1	.++10	· South Same	0.25/0.15	10,2			
		ML	(50'-51.9') SICT (MU); 1			18/12/5/32				
		۲,۰	Sond lenses; day; lorks		/ Chustichs	1.4/2.0	142			
			(51.9'-52.05') New grains	<u>لاب</u> ز	WIO Seum	50.52	40.0			
		(0	(52.05-55,8') Fine grained	<u>ال</u> ال المار	rid wy little Oravel	1 21 25 11 2 11	1			
50 throughout; little med grant throughout; very densel/					"(WY)	52-54	٨			
						11/28/34/20	1 .			<u></u>
			(55.8'-58.0') SILT (ML) 11 Shiff: low plantity, little little Sortel W alph; dry by Se.25	DYRY	111 dark gray, wet;	54-56	18,3			
		MV	Similar Sond Wallan;	race	Fre gravel	37/17/53	Αφφ			
		١,	dry by 54.25		· · · · · · · · · · · · · · · · · · ·	1.25/1.25 5(0-58	H 0.6			
		612	(58.0'-W5) Fre groine	<u>.d S</u>	sand (SW); some	12/50	A 0.0			
	60	٠,٧٠	1/2"-1,5" Gravel, wet; go	au	hard dunse	58-60 58-60	10.2			
ROJECT		L			GEOLOGIST SIGNATURE/DATE	2.2	122/12	BOREHOLE		~ ~~
FWG	N/W	P-1	ZUHARLOLO RI		amanda)	rentin	\	tw6	s)Mv	-002

HTRW	DRILLIN	G LO	G (continued)	DISTRI	CT - Louisväe			BOREHOLE NUMBE	er w- Φ0Z
1. COMPAN				ļ	LING SUBCONTRACTOR		· <u>- , , , , , , , , , , , , , , , , , , </u>	SHEET 24	,
2 DPO IECT	SAIC		O	Frontz [T	8451 State Rout	e 5. Revenna.	OH 44286	
			LE RET		6. DIRECTION OF BOREHOLE		VERTICAL	L INCURED	DEGREES
1			N MACKEY		I			m Munsell Soll Color	Charf. Rev
			linirate 2000		PID SERIAL#: \\ \D- \O\D\5	21 W	I .	2000 R	
	WATER LEVEL		CLASSIFICATION OF	MATEO	WATER LEVEL SERIAL#	SPT DATA	MONITORING		MARKS
ELEVATIO	N DEPTH (Feat)	USCS	CLASSIFICATION OF	, WHICH	IACO	(0.5 Feet)	(PPM/CPM)		pths/Core Box/Etc.)
			(60.0'-645') SAND WI SO	Λ (Gawels hard	50	A 0.0		
			(SAA)	100	Staget That's	0.4/0.41	H 0.9		
		Sign	(Othr)			 	A 0.0		
			3 (1) 1 · · · · · · · · ·			017/09	H 1.8		
			Cut'-moist			37/50	A Ø.0		
	6 5	GP 1	64.5'-64.7') SS Fragi	verr	12: Sanci Wigiami	013/014			
			dense/hard			0191019 04-140	<u>₩₩,₩</u>	•	
			(66,-18,) NO SPLIT	SPC	<i>>>></i>		A		
						110-108	<u>H</u> /		
		58	(68'-70.5') SAND W/ S	<u> </u>	ravel/cobbus	3 636	Aoro		
	70		dry; light gray			0,25/025	H 0.2		
		13	(70,5'- 70,75) white Sand	: d	ni: hard	30/59	A O.O		
		6	71' SANDSTONE; AUGE	R	refusal	018/0178 70-72	H:0.6		
			BORING TORMINATED	·	T TIPT BGS	4			
		/							
	75						,		
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	G o								
PROJECT					GEOLOGIST SIGNATURE/DATE	V 03	124/2	FW6 M	:R :> = (M/D/2
fw	Cmm	P	2UAAP-lele RI		11 Amanda ne	intr		LMP WA	



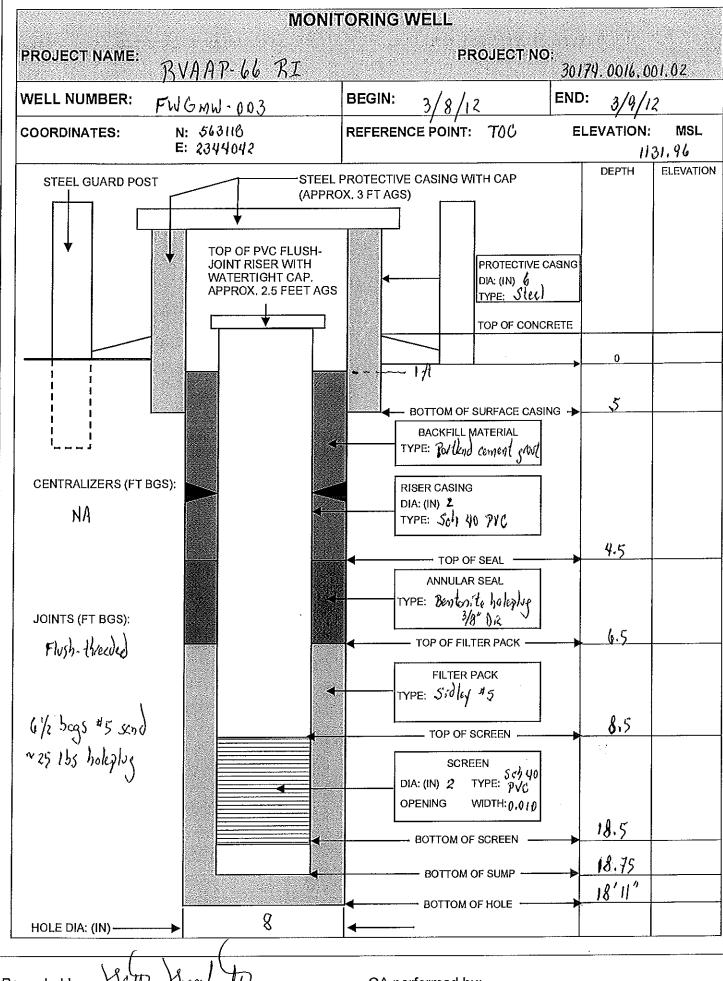
Recorded by: Amanda Thenton

QA performed by:__

	DISTRICT										BORE	HOLE	NUM	BER		
HTRW DRILLING LOG	USACE -	- Lou	isville	Θ								FW	Gmi	J-00)3	
1. COMPANY NAME	2. DRILLING	SUBC	ONTR	ACTO	R			•								
EQM	Frontz Di											EET		OF		
3. PROJECT RVAAP-66 RI		4. LO					8451	Stat	e Ro	ute (5 Ra	venn	ıa, O	H 44	266	
5. NAME OF DRILLER JOE Tele/		6. MAI					CM	£ 5	5						-	
7, SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BO				N '	PW-	12	No	1th.	Line	Rd	<u> Cozl</u>	Tis	le A	(ll
4/4" IS HSA		9. SUF							9.41							
2" x 24" 571.1 57001		10. DF							8/12)	COM	PLETE	D:	<u> 3/8</u>	/12	
						TER E				10	<u>/{</u>				1	
12. OVERBURDEN THICKNESS		16. DE	PTH T	O WA		LAPSI	ED TIM	E AFT	ER BO	OREHO	LE CC	MPLE	TION			
13. DEPTH DRILLED INTO BEDROCK 13. DEPTH DRILLED INTO BEDROCK		17. OT	HERV	WATE	R LEV	EL ME	ASURE	MENT	S (INE	.CL.UD	E DATI	E/TIME	:)			
14. TOTAL DEPTH OF BOREHOLE						NA										
	DISTURBED	: 1	NA			19. TO	1.JATC	UMBE	R OF	CORE	BOXE	s	NA			
The state of the s	NA	OTHE							21. T	OTAL (CORE	RECO	VERY	%	NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/8/	12				DATE	COM	PLETE	D/ABA	NDON	ED: (3/9/	12			 	
BACKFILL TYPE: GROUT BENTONITE	TEMP(ORAR	Y WEL	L POII	NT		V	MONI	TORIN	IG WE	LL					
23. NOTES BKG; ≤Background BGS; Below Ground Surface		CPM:						PPM	Part	s per l	Million					
1	tic Water Le					Not Ap	plicat	ole								
								l								
LOCATION SKETCH/COMMENTS						<u></u>		SCA	\LE:		Non	θ	. 	,		7
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PROJECT	GEOL	ogist	SIGN	ATURE	E/DAT	Ë.					BORE	HOLE	NUME	3ER		
RVAAP-66 BI	-1λ	Sett) }	วักเร	Sha	Đ		3/8,	/12			FW (Эм w	1-00	3	

LITOW DOLL				DISTRIC	ЭТ			BOREHOLE NUI	
HTRW DRIL	LLING	LUG	(continued)	-	- Louisville			FW6	5mW-003
1. COMPANY NAME EQM				2. DRIL	LING SUBCONTRACTOR			SHEET 2	2 OF 3
	RVAAP	. 41.	RT	1	T	8451 State Route	5, Ravenna,	OH 44268	
. NAME OF DRILLE		oe Te			6. DIRECTION OF BOREHOLE	₽ ^F	RTICAL	INCLINED	DEGREES
. NOTES PID MAI			Sicius MSA		PID SERIAL#: 42-1861		Colors fro	m Munsell Soil Co	for Chart, Rev
-	LEVEL MAK			••••	WATER LEVEL SERIAL#:				
ELEVATION D	EPTH US	scs	CLASSIFICATION OF	MATER	IALS	SPT DATA M	ONITORING	F	REMARKS
((Feet)					(0.5 Feet) (РРМ/СРМ)	(Sample IDs/	Depths/Core Box/Etc.)
C)-2 C	۱ ا	upper 5" Silty clay, dr be	ln, s	some prevel, coal,	3-6-	0	0-2/1;	1440
		- 1	€0075 Moist 1			8-4			
	Ċ	7	Next 4" Sand glavel, but Lower 5" Clayer gravel, bin	, de	η	R= 14/24			
		5C _	lower 5" Claser erasel bon	, S):	with connected dams				
	5		17 8	1). / - / - /				
2	-4 C	L	Topo 6" Sitty clay, every u/	ho w	alles some 1/2 reade)	3 .5-	()	2-4 /1:	1449
			Mosel Levi Soft		0	4-4			
			10131, 1211 de de de la constante]	R = 14/24			
		/	Next 2" Sitty day, dk gray,	וכיט <u>א.</u> 	All of 14/1/51).	12 / 57			
	18'		last 6" Silly cky, early	0(1 "	TO KIES, ST. ATICKY 31.604				<u></u>
			<u>Moist</u>						
			ed. J. 11 . (/).)	N. 1 11	1.2	^	n./ H.	105/
4	-6 C	١	Difty Clay, Dive-gray w/ Sin	1-1/	ies, KMZ, 1es	1-3-	0	4-6/2;	/100
			Small gradel, moderally s	t #	Jecoming moist,	4.5			
			Sitty clay, blue-gray u/ brn Small gravel, modektely s Killy soft u/ increasing	ארא <i>ל</i> מ י	d in lower 3"	R = 18/24			
,	18'							//	
6	-8 C	4	Silly day Till, bon W/ gray	1 4/0	y vertical frat.,	3.5-	0	6-8 ft;	1505
			wet in upper 3", then	moist	<u> </u>	5.5			
	-		,, ,			R= 20/24			
7	-10 C	ر ا	Silly cky till; bun-gray, o	CM3	nod, stiff	3-4-	0	8-10 H	1510
. 8	-10		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	,	, . ,	5-4			
						5-4 R=1/24	•		
									-
1/	0-12 C	1	Sity day till, braggay, we	ol	sall cabble in stoe	1-6-	0	10-12 ft	1517
	25°	· \ \	and and and and and	· · / -	ory Caron Torre		-	- 1	,
	-					7-5 7-5/24			
						7 /-1			
1	ء اير د	<u>, .</u>	1-10" S. I be all.	<u>J</u> .	10 all sof	4-8-	()	12-14 A	1577
	2-14 5	rl	lowy 9" Sand, bra, silly, lowy 9" Silly clay, gray, t damy, mod stiff	77-1	as pisined wer		<u> </u>	14 77 / 6	, 1020
	<u> </u>	<u> </u>	and it willy clay, eray, t	<i>ill</i>	THE STOCK PROJECT,	10-11 R= 24/24			
ROJECT	કર્ત		OCMZ, MOD Stiff		GEOLOGIST SIGNATURE/DATE/	5º /24		BOREHOLE NUI	MBER
	10 11	24	•		Sato Syssha	An 2/0	/,,	FILA	MW-003
7 VH.	AP-66	٨٨			I Naw Myrina	<u> </u>	14	1100	MW VVJ

HTRW D	RILLIN	G LO	G (continued)	DISTRI	CT - Louisville			BOREHOLE NUME FNGM	
1. COMPANY N					LING SUBCONTRACTOR				J 0F ,3
3. PROJECT	<u>QM</u>		0 T	Frontz I		8451 State Rou	te 5 Ravenna,	OH 44266	
5. NAME OF DE	RVAAP		•		6. DIRECTION OF BOREHOLE		VERTICAL	INCLINEO	DEGREES
	· ·	Joe			PID SERIAL#: A2-1861		Colors fro	m Munsell Soil Colo	r Chart, Rev
7. NOTES PIE			Sirius MSA		- WATER LEVEL SERIAL#:		35,6,6 115		
ELEVATION	DEPTH	USCS	CLASSIFICATION C	E MATER		SPT DATA	MONITORING	RE	MARKS
LECTATION	(Feet)	0000	05,001,077,077	,,,,,,,,		(0.5 Feet)	(PPM/CPM)		pths/Core Box/Etc.)
	14-16	CL	Silty clay Till, every, demp,	nod.	sł.#	5.7-	0	14-16 A;	1531
			7-7-7-01, 1,		//	7.8			
						3= 16/24			
	35	CL_	Sitty cky Till evas demp.	mod.	stif Idle	5-17-	0	16-18 /1;	1537
	16-18		Sitty cky Till gray, demp,			8-7	:	, ,	
			()			R= 1/24			<u></u>
	48								
	≱ 8								
-									
	564								
				····					
	<i>58</i> 5								
	,60							DODELIOL CANDO	
PROJECT RVI	1AP-66	RT			GEOLOGIST SIGNATURE/DATE (Ab 3/		BOREHOLE NUMB	
./ 1 //	111 40	(1)			1. Owo . Approco	~~ ~	-/		<u></u>



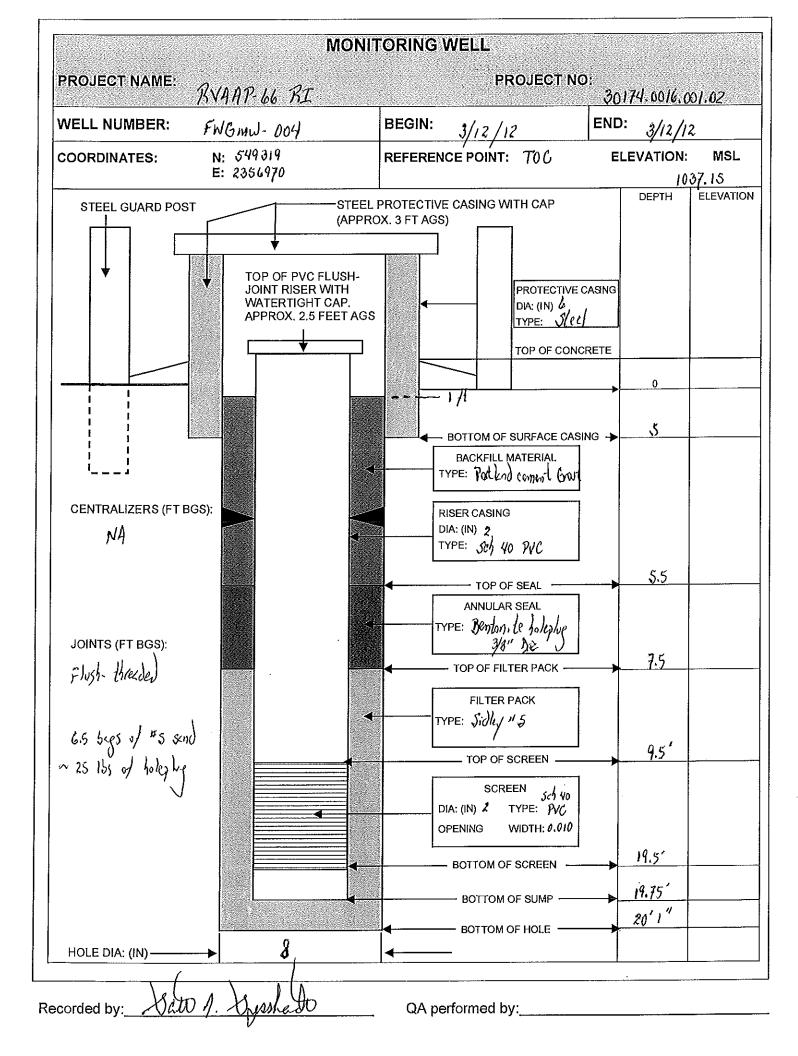
Recorded by: \(\sum_{\chi} \tag{\chi} \tag{\chi} \)

QA performed by:_

											DIST	RICT										BOR	EHOLE	NUM	3ER		
HTRW	DR	LL	IN	G L	.00	3	,=	**		•	USACE - Louisville												F	1Gn	1W - O	04	
1. COMPANY NA	ME										2. DF	RILLING	3 SUB	CONT	RACTO	R											
EQM	}										Fro	ntz D	rillin	g								SH	EET	1	OF	3	
	RVA	AP-	lala	RI									4. LC	CATIC	N	RV	4AP	8451	Stat	eR	oute :	5 Ra	venr	na, C	H 44:	266	
5. NAME OF DRII	LLER		e 7								6. MAKE/MODEL OF DRILL CME 55																
7. SIZES AND TY		SAMI	PLING	EQUIF							8. BOREHOLE LOCATION PW-20 500									South	ses{	o/ f	dmin	mal	S. 7	Y mil	
4/4' 2"X	' I)	HSI	7														N/DATI	JM		<u>34.</u>	50						
2"X	24"	531:	lv	2001	•								1		ATE/T		STAR		3/1				PLETE	D;	3/12	<u>//2</u>	
			,	,															NTER			4.5	$/\ell$				
													16. D	EPTH	TO WA	ATERV			AE AFT	ER B	OREHO	OLE CO	MPLE	HON			
12. OVERBURDE					16	<u>/l</u>							1- 6	TUES	\ 	D L EU	N	<i>H</i>	EMENT	C (1)	CHID	C DAT	CHIN	=1			
13. DEPTH DRILL					4 /	<u>(</u>							17.0	HHER	WAIE	K LEV	EL ME			5 (IIV	LCEOD	EDAI	E) I HAR	-)			
14. TOTAL DEPT				2(• ***					1 /			140 T	NA	NUMBE	P OF	CORE	BOXE	S	N/			
18. GEOTECHNIC						STUR		NA				URBEC		NA			19. 1	JIALI			OTAL					. (1)	
20. CHEMICAL S. 22. DISPOSITION			15		CHE		NΑ		RAD;		NA		OTH	ER:		2476		N ETC	D/ABA	1						N4_	
		KENU			DATE	STAF				3/1	4/14 =				LL POI		; COMI		MONI			•	715				
BACKFILL TYPE: 23. NOTES		<u> </u>	GRO			<u> </u>		ONITE			<u> </u>	TEME					ulo	IV			ts per						
23.110123		: ≤Ba	-				: Belo	w Gro				latar I		1: GOU	nts pe		มเฮ Not Ar	nfleak		. Fall	ra hei	IVIIIIOI	1				
	$\overline{}$: Fire	st wa	ter En	count	erea				: 51	HIC VV	ater L	evei			INA:	NUL AL	рясач	010				•				
LOCATION	SKET	'CH/	COM	IMEI	STV														SCA	\LE:	•	Nor	e				
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PROJECT					-					— "	_	GEOL	.ogis	T SIGN /	IATUR	E/DAT	E/_					BOR	:HOLE	NUM	s⊨K		
RVA	AP-	66	RI									$ \lambda $	3 at	D /	Vy	ssh	10		3/12	2/12	2		FNC	mu	- 00	<u>\</u>	

ПТБ/// РЕ	211 1 1817	2100	G (continued)	DISTRIC	TC	-	:1	BOREHOLE NL		! !
			(continued)	-	- Louisväe	· .		FWGI	MW - 0	
1. COMPANY NAM				2. DRILL	LING SUBCONTRACTOR Milling			SHEET	2	or \mathfrak{z}
EQM 3. PROJECT		7 11	Q1	1 L	T	8451 State Roule	5, Ravenna, C	OH 44266		
5. NAME OF DRIL	<u>RVAAT</u>				6. DIRECTION OF BOREHOLE			INCURED		DEGREES
		Joe 7		<u></u>	PID SERIAL#: A2-1861			m Munsell Soil C	Color Cha	art, Rev
7. NOTES PID N			Sirius MSA		WATER LEVEL SERIAL#:					
ELEVATION	DEPTH	USCS	CLASSIFICATION OF	MATER		SPT DATA	MONITORING		REMAR	KS
SEEVATION	(Feet)	JJU03	GENOGII ION NOTO	.,.,=11		(0.5 Feet)	(PPMCPM)		e/Depths/	/Core Box/Etc.)
	0-2		Und 7" Silly cks torsoil d	18 60	1, moist draics	1-3-6	0	0.2 H	; 101	16
	~ ^	(1)	Beneinder Silly cky to 75011, d Beneinder Silly cky son w/ g few sond, few grayel, mo	yel e	long vertical lar	B= 20/24		·		
		٠.	that scad has accord Ma	ist:	1 one 3" then donn					<u> </u>
			was still	~ ~ `	· 11 · · · · · · · · · · · · · · · · ·					•
	,5°		mov: vty/							
	2-4	CL	Sity day, 319, tew inos o	אליאו	, few smell	4-6-	0	2-4/1	10	24
	μ-¥	رد	of to day of the	1/004	Jeant del ust	11-11		,	, <u> </u>	
			gasel e top, damp a	() +	1.00(010)	3= 19/24				
	, ,		11 ((18)11 , 3(17)			''-/^/				
	4-6	<u></u>	SHight has all as do	10 10	to deed but	5-8-	0	N- L 11	; 10	24
		CL	Sity chy, son w/ gray alon	7 14	or place, ory,	15-18	Ų.	10/0,	/ '	
			15.10			R=21/24				<u></u>
						 11 - /44 				
						22-20		1-011	, 1V	37
	6-8		Danall La Isa)1	40 11 11	28-27	0	6-8/(,	, <u>, , , , , , , , , , , , , , , , , , </u>	~/
	18	ML	Clayer Sitt Bin, few smc	11 84	ever, ory, 1510,	R= 20/24				
			Stiff		-	n 724		<u> </u>		
				<u> </u>	Task in 1	<u> </u>		Q 10 14	, .	กผบ
	8-10	CL	Sitty cty, son, few gray	Clary	o gractiles, glis	6-11-	_ 0	8-10/t	<u>, f</u>	v 1 <u> </u>
			sing Il grayel, had,	5ts¥\$		14-20				
	28		*			B = 24/24		. <u>.</u>		
			a) 11 1 1	1	1. 1			14 /		460
	10-12	ML	Chyly sitt bin w/ gray 4.	long;	HICTLES, JES	4-8-	φ_	10-12 fe	(, 	100D
			Ckyly silt ben w/ pray and sing sing, very kny, so	<u>iψ</u> ν	1776 12" Securing	10-12 8=24/24				
			(KL), VU, KN), SO	o/te/	in lower 12" V	18 2 4724				
	25		/						1/	
	12-14	ML	Clayer Silt, gray, day, s	<u>lipli</u>	ly glixble, few	5-9-	_0	12-14/	<u>(</u>	100
			Smell presel	/	-	11-13				
			0			B = 23/24				
	20				Topos porem elevis			BOREHOLE N	<u>OMBEO</u>	
PROJECT			٥.		GEOLOGIST SIGNATURE/DATE	A 1	, f			!
	VAAP-	66	<u>KI</u>		Sott Sysses	W 3/14	2/12	FNG,	7W-C	<i>00Y</i>

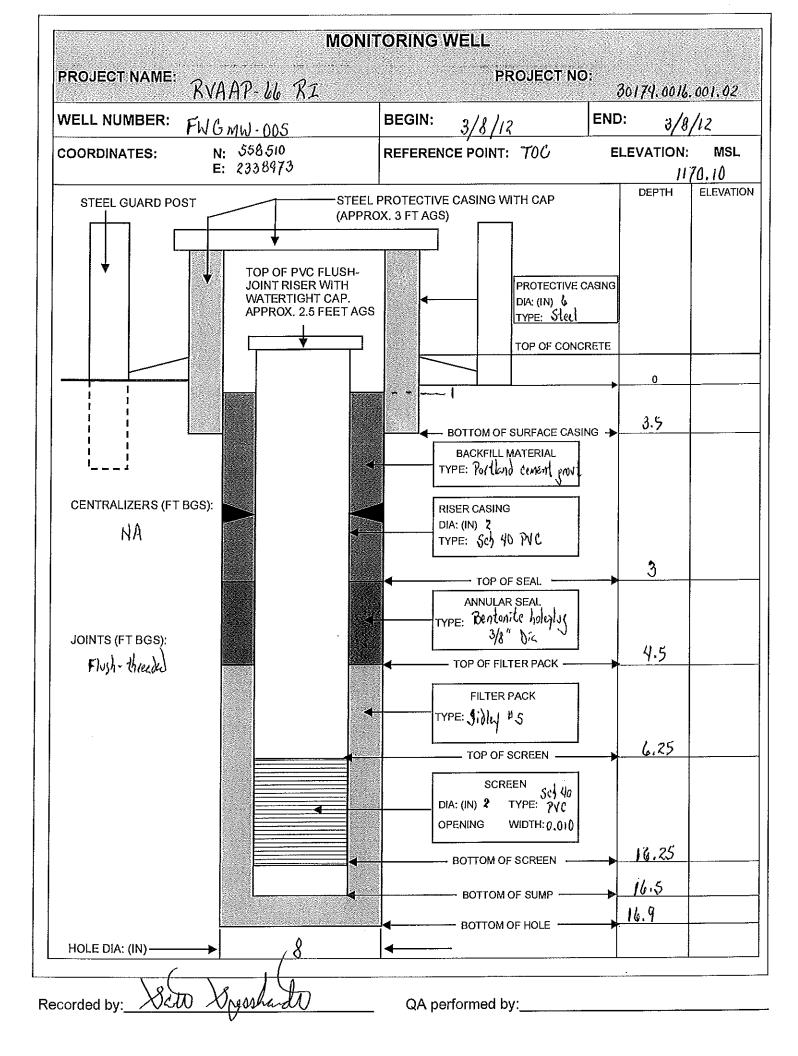
USACE - LOUISVIES 1. COMPANY NAME 2. DRILLING SUBCONTRACTOR Frontz Drilling 3. PROJECT RVAAP-66 RT 4. LOCATION RVAAP 8451 State Route 5 Ravenna, C 5. NAME OF DRILLER JOE RTC 7. NOTES PID MAKE/MODEL: SIGNS MSA WATER LEVEL MAKE/MODEL: WATER LEVEL SERIAL#: Colors fron	FNGMU - 004 SHEET Z 3 OF 3 DH 44266 INCLINED DEGREES IN Munse'll Soil Color Chart, Rev REMARKS (Sample IDs/Depths/Core Box/Etc.) 14-16 / 1 1/07
3. PROJECT RVAAP-66 RI 5. NAME OF DRILLER JOE TETE/ 7. NOTES PID MAKE/MODEL: SIGNS MSA 4. LOCATION OF BOREHOLE VERTICAL 6. DIRECTION OF BOREHOLE VERTICAL Colors from	DH 44266 INCURED DEGREES In Munsell Soil Color Chart, Rev REMARKS (Sample IDs/Depths/Core Box/Etc.)
5. NAME OF DRILLER JOE TETE/ 7. NOTES PID MAKE/MODEL: SIGNS MSA PID SERIAL #: A2-1861 Colors from	INCLINED DEGREES In Munseil Soil Color Chart, Rev REMARKS (Sample IDe/Depths/Core Box/Etc.)
7. NOTES PID MAKE/MODEL: SIGNS MSA PID SERIALIR: A2-1861 Colors from	n Munse'l Soil Color Chart, Rev REMARKS (Sample IDs/Depths/Core Box/Etc.)
ייטויי טיווייט	REMARKS (Sample IDs/Depths/Core Box/Etc.)
WATER LEVEL MAKE/MODEL: WATER LEVEL SERIAL#:	(Sample IDs/Depths/Core Box/Etc.)
	(Sample IDs/Depths/Core Box/Etc.)
ELEVATION DEPTH USCS CLASSIFICATION OF MATERIALS SPT DATA MONITORING (Feet) (0.5 Feet) (PPM/CPM)	14-16 A: 1107
14-16 ML Upper 5" Clayer Sill, every, 25 above 3-11- 0	
SC Next 7" Clases send 300 vet, 2" of veithered 13-8	
Sudstone @ tox of this zone R=2924	
CL Lower 8" Silty clay, gray, style lags o bottom	
35 / / / /	N 0 11 217
	16-18 ft; 1117
11-20 11-20 11-20	
18-20 SH Weathered style grad moist kills brills 6-11- 0	18-20 H. 1123
APP SH Weathered style, gray, moist, filly brille 6-11- 0	10 407(112)
10 h	
7 729	
45	
.eo	
58'	
PROJECT GEOLOGIŞT SIGNATURE/DATE	BOREHOLE NUMBER
RVAAP-64 RI South Syntato 3/12/12	FNGMW-004



								DISTRICT										BOF	EHOLE	NUM	BER	,					
HTR	W	DRI	LL	INC	3 L	.00	3					US	ACE	- Lou	livait	le							FW	Gм	W - DC)5	
1. COMPA	NAN YN	ΛE								-		2. DF	RILLING	3 SUBC	CONTR	RACTO	R				·	01	HEET	4	OF	2	
	EQN	1										Fro	ntz D	rilling	g							Si	1561	1	Ur	<i>1</i>)	
3. PROJEC		RVA	AP- 0	66 7	BI							•	•	4. LO					845	Sta	te Rout	e5R	avenr	na, C	H 44	266	
5. NAME C				e Te										1		ODEL (15 3							
7. SIZES A			SAM	LING	EQUIF		•							1		LE LO			Ŷ		: Nev	ston 1	Z/15 .	Rd y	IUM	<u>54 Y</u>	<u>) </u>
	4 /4 2")	" []	1/	5A										1		E ELEV				114	7.50						
	2")	(24	"S	13	<i>5</i> 70	0/								į		ATE/T			RTED:		7/12	CON	4PLETE	D;	<u>3/8/</u>	12	
														1						INTER	ER BORE	4/6	OMOLE	TION			
12. OVER	BURDE	N THIC	KNESS	3	N	۸								16. D	EPIN	10 00		NA	וו טפט	NC AIT	IEN BONL	110111	Omi Et.				
13. DEPTH						<u>н</u> NA					-			17.0	THER	WATE		EL ME		EMEN	rs (INLCL	UDE DA	TE/TIME	≣)			
14. TOTAL	DEPTH	OF B	OREHO	OLE		16'1	"							1					NA								
18. GEOT	ECHNIC	AL SAI	MPLES	}			STURE	BEO:	N	A		DIST	URBEC);	NA			19. 1	OTAL	NUMB	ER OF CO			NA			
20. CHEMI	ICAL SA	MPLES	3			CHE	4:	NA	.,	RAD:		NA		OTHE							21. TOT/			VERY	% N	4	
22. DISPO	SITION	OF BO	REHO	LE		DATE		_	NSTAL	LED:	3/	7/12					DATE	COM	PLETE	O/ABA	NDONED	: 3/8	/12				
BACKFILL	TYPE:		厂	GROU	JT		F	BENT	ONITE	€		'_		ORAR	RY WEI	LL POI	NT		V	МОИ	ITORING	WELL					
23. NOTES	3	вкс	≤Ba	ckgrou	Jnd		BGS	: Belo	w Gro	ound S	urfac	θ		СРМ	: Cou	nts pe	r Min	ute		PP₩	: Parts p	er Millio	n				
		\bigvee	: Fire	st Wat	er En	count	ered			Y	: Sta	atic W	ater L	evel			NA:	Not A	pplica	bie							
LOCAT	ION S	SKEI	CH/	COM	ME	NTS														sc	ALE:	No	ne				
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PROJECT	ī				•	•		t	•			·	GEOL	LOGIS	T SIGN	IATUR	E/DAT	É/.				BOF	REHOLE	NUM	BER		
•	RVA	Δ D.	1.1.	P	7								\	8/11	n)	1/1	رکم	Ar)	3/	7/12		FNG:	Mil -	0n5		
	1) 4 /	TII '	VV	/	^_									برنباذ		~ (y yr ru	/ W/			-/				- ~ ~		

HTRW DRIL	LING L	.OG (continued)	DISTRIC	T Lou⁄sy™e		BOREHOLE NUME	BER W-005	
1. COMPANY NAME	.			NG SUBCONTRACTOR				
EQN	V		Frontz Dr	li≅ng			SHEET 2	of 3
		P-66 RI		4. LOCATION RVAAP	8451 State Roule		OH 44268	
5. NAME OF DRILLER		Toe Tetel		6. DIRECTION OF BOREHOLE	₽ v	ERTICAL	INCURED	DEGREES
7. NOTES PID MAKI		Sirius MSA		PID SERIAL#: A 2-1861		Colors from	m Munsell Soil Colo	r Charl, Rev
WATERL	EVEL MAKE	E/MODEL:	,	WATER LEVEL SERIAL#:				
	PTH US	CS CLASSIFICATE	TION OF MATERIA	NES	''	ONITORING (PPM/CPM)		:MARKS epihs/Core Box/Etc.)
· · · · · · · · · · · · · · · · · · ·	eet)		1	1 , 1.	WE of	·		
0.	-2 CI	Remainder Sitty clay, dis Remainder Sitty clay, bin along frecture zones.	orn, mois	(<u>/00(</u> 5	1 1	0.1_	0-2/1;	1614
		Kemsinder Vilty Clay, Sin	1 W/ graf r	NOTHING WOOD OXIDES	1-3 R= 21/24			
		along frectule Zones.	<u> 11 100 x 1</u>	liff w/ few swell	K2 /24			
		prodet in lower 6";	obewise,	moist & Kirly soft				
	8'		- 1	· · · · · · · · · · · · · · · · · · ·	-		. 11	
2-	4 CL	. Sitty clay, but u/ gray	glong vert	. fractles, lilles	9-11-	00	2-4/1;	1620
		INDI OXIDES for SMK	d Verwel	dy stiff	12-12			<u></u>
		Sign Oxides, feel six becoming brille and	daws in la	me/ 3"	R= 24/24			
		J J	/					
4	o Ma	L Claser Sitt bin till ?	tew smill	ersvel dans	7.9-	_0_	4-6/6;	1627
4.	-6	L Clayey sitt, bin, till, , mod. stiff		0 , //	9-11		, ,	
		7100.007			R = 20/24			
	-8	Note: the spoon was full	Lit the	200/ 12" look)	3-5-	Ó	6-8/1;	1635
<u>َ فَا</u> المر		like wet sloveh	001 678 0	178 12 100100	4-5	- 0	- 	1000
		1 () 1	cll h.	he sail	B: 12/24			
	M	L LOWER 12 CHAPEN XNOY O	11 / 2/1	1ew ONKI	1. /21			
		gavel, "Moist, "Colu	un bly					
		<u> </u>	/		. 0	^	0 10 11.	+1112
	-10 M	L Upper 7" Clayet sond Sil	1t, 45 46	<u>m√l</u> 1 1 1	4-9-	0	8-10/t;	1640
24	e Sh	1 From 7-10" Vilty sknd,	1, 61/1, 1)	et, compacts easily	15-18 B= 22/24			
	<u> CL</u>	. Lower 12" Sitty olky, son	dany to	dry, gravel to	B = 724			
		L Upper 7" Clayer sonds sil 1 From 7-10" Silty sand, Lower 12" Silty clay, son 1/2" dic, subrounded	J, Mod. S	tif				
10	-12 CL	Sity cky, bra, few	sand .	small eravel,	10-19-	0	10-12/1	0858
24	6	John failly Stiff	/	V	21-26 R=24/24			
		1, , , , , , , , , , , , , , , , , , ,			R= 24/24			
						,		
12.	-14	Upper 14" Het brn slo P From 15-17" for sand gra Remainder Silly Chy, Sca, for	Net - much	ζ	27-30	0	12-14/1	0909
- /^	A	P From 15-17" for sent 1 011	cyll but	Lilly court moid	27-31			
34	a VI	Personal Sill 1 All Was de	as soul	occided programmed of the	B=24/24			
PROJECT	<u> </u>	· I NOME MAY VILLY CAY, WITH TE	1 V2110.	GEOLOGIST SIGNATURE/DATE	<u>, · · · / ~ · · · ·</u>		BOREHOLE NUME	BER
RVAA7-66				Scio Spessha	th 3/8	1/12	FWGMI	J-00S
/(1/// 00				7		<i>'</i>		

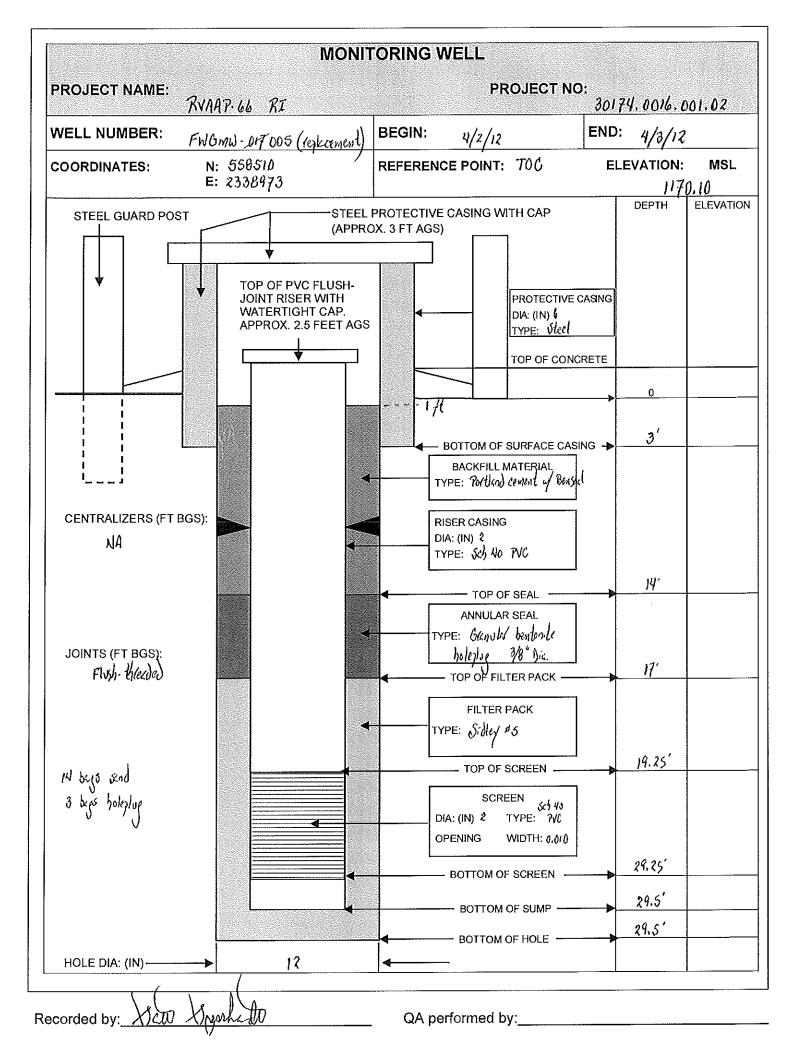
HTPW D	DILLING	210	G (continued)	DISTRI	CT		BOREHOLE NUMBER	
		<u> </u>			- Louisv∄e		***	FWGMW-005
1. COMPANY N				2. DRIL	LING SUBCONTRACTOR Drilling	,		SHEET $z3$ OF 3
3. PROJECT	RVAA	P- 66	RT	L	4. LOCATION RVAAP	8451 State Rou	te 5 Ravenna,	OH 44266
5. NAME OF DE		Joe 7			6. DIRECTION OF BOREHOLE	(VERTICAL	INCLINED DEGREES
7. NOTES PIO			Silius MSA		PID SERIAL#: A2-1861		Colors fro	m Munsell Soil Color Chart, Rev
	ATER LEVEL N	MAKE/MO			- WATER LEVEL SERIAL#:			
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATER	NALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14-16	SW	Sind but little gover	Maí	st can had	50/3	0.1	14-16 A: D918
	1,,,,,,	<u> </u>	Sind, buff, little govel water guesting e bottom	1 0	boar	.4/24	F-1-	7-7
. ,			~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		()	/		-
	16-18	SS	Bed/ock			50/1		16-18/1: 0950
	25	V				R= 0/24		,- ,
						,		
- .	200							
	15							
	<u> </u>							
	50		. HILA ALL					
-								
	,85							
				.				
	.60							
ROJECT	1 1				GEOLOGIST SIGNATURE/DATE			BOREHOLE NUMBER
<u> R</u> VA	AP-66	R	7		Saw Symbar	to 3/	18/12	FWGMW-005



				.							DISTR	RICT										BORE	HOLE	NUM	BER	, (05 ((q
HTRW I	DRI	LL	IN	G L	.OC	j				Į	JSA	CE ·	- Lou	iisvill	ө								FN	Gm	J-D1	7	((9
1. COMPANY NAM	ЛE									2	. DRI	LLING	SUBC	ONTR	ACTO	₹										•	
EOM										F	ron	ıtz D	rilling)								SH	EET	1	OF	2	
	RVA.	AP-	1.6 1	RI						L			4. LO	CATIO	V	RVA	AP 8	3451	Stat	e Ro	ute !	5 Ra	venr	a, O	H 44	266	
5. NAME OF DRIL	LER		e Te										6. MA	KE/MC	DEL O	F DRI	Lt.	CME	55								
. SIZES AND TY	PES OF	SAME	PLING	EQUIP	MENT					-	8. BOREHOLE LOCATION RIGHT WGMW-005											005	Neu	Iton i	zik w	est of	1848
8 1/4"	HSA								^				9. SU	RFACE	ELEV	ATION	N/DATU	M		167.							
8 '/4" 2"×	24"	ski	500	30/)									10. DI	RILL D	ATE/TI	ME	STAR	TED:	4/2	/12		COM	PLETE	D:	4/2/	/12	
		7	* */*	, . ,									15. D	EPTH (ROUN	AWD!	TER E	NCOU.	NTERE	D	18	H					
							• • •						16. D	EPTH 1	O WA		LAPSE	D TIM	E AFT	ER BC	REHO	OLE CO	MPLE	TION			
2. OVERBURDE	THIC	KNESS	3		17	A											JA										
3. DEPTH DRILL	ED INT	O BED	ROCK	(12.	5 /t							17. O	THER	VATER	R LEVE	EL ME/		MENT	S (INL	.CL.UD	E DAT	E/TIME)			
4. TOTAL DEPTH	OF BO	OREHO	OLE		29.	5/1											NA										
8. GEOTECHNIC			;		UNDI	STURE	BED:	N	A		STU	IRBED);	NA			19. TC	TAL N					۸.	A			
O. CHEMICAL SA					CHE		NA		RAD:		NΑ		OTHE	R:									RECO	VERY	[%] λ	4	
2. DISPOSITION	OF BO	RÉHO	LE		DATE	STAR	TED/II	NSTAL	LED:	4/2/1							COMF						12				
BACKFILL TYPE:		j	GRO	JT		Γ	BENT	ONITE	<u> </u>			TEMP	ORAR	Y WEL	L POI	٧T			MONI								
3. NOTES	BKG:	: ≤Ba	ckgro	und		BGS:	Belo	w Gro	und S	urface			CPM	: Cour	nts per	Minu	ıte		PPM:	: Parts	s per	Millior	1				
	∇	: Firs	st Wal	ter En	count	ered			V	: Stati	c Wa	ter Le	evel			NA: N	Not Ap	plicat	ole								
OCATION S	SKET	CH/	COM	IMEN	NTS														SCA	۱LE:		Nor	ıe				
1 1	}	:	:		:	<u>:</u>	:			1	:		:	<u>:</u>	- 1	:			 	<u> </u>	:	;	1	i	ŀ	;	ì
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ROJECT	1,,,,,,,,,,,		<u> </u>					<u> </u>	3	-		GEOL	ogjs1	SIGN	ATURE	/DAT	E						HOLE			_	
ROJECT RYAAP-]]	10						<u> </u>	i			GEOL	OGIST	SIGN	ATURE	/DAT	e An		21/0	1/12					3ER 00(- 01)	5	.1.

HTRW DRILLING LOG (continued)	DISTRICT USACE - Louisville DISTRICT BOREHOLE NUMBER 605 FUG mu - 047	(data.
. COMPANY NAME	I2. DRILLING SUBCONTRACTOR	
EOM	Frontz Drilling	2
PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266	
NAME OF DRILLER JOE TELE!	6. DIRECTION OF BOREHOLE F VERTICAL INCLINED DEGR	EES
NOTES PID MAKE/MODEL: SIGNS MSA	PID SERIAL#: A2~1861 Colors from Munsell Soil Color Chart, Rev	
WATER LEVEL MAKE/MODEL:	WATER LEVEL SERIAL#:	
ELEVATION DEPTH USCS CLASSII (Feet)	FICATION OF MATERIALS SPT DATA MONITORING REMARKS (0.5 Feet) (PPM/CPM) (Sample IDs/Depths/Core Bo)	x/Etc.}
0-17 See Well log to FI	NGMW-005	
17-20 SS Yellaw-bln send, a		
SS Yellas-din send, fn-m 20-22 weethered sends to	ne gained, well vorted, wet, 50/2 20-22 ft; 1450	
22-29 SS Mellow-by sond, for	men prined, weathered undstone 22-29 ft (from cui	th so)
18'		
756		
20		

25		
30	GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER	

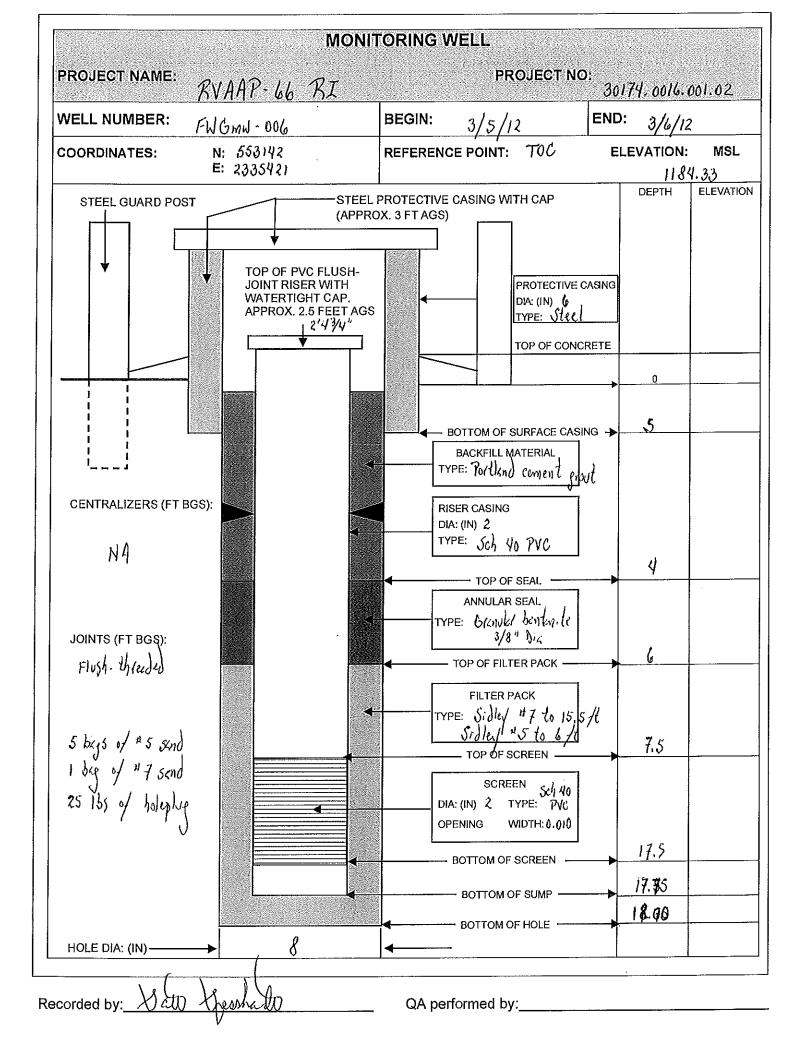


	DISTR	ICT									£	BORE	HOLE	NUME	BER		
HTRW DRILLING LOG	USA	CE -	- Lou	isville	€								FW	Gm	M- 0	06	
1. COMPANY NAME	2. DRII	LLING	SUBC	ONTRA	ACTOR	ł						01.10		4	OF	2	
EOM	Fron											SHE					
3. PROJECT RVAAP-66 RI				OITAC						e Rou	ite 5	Rav	/enn	a, 0	H 442	266	
5. NAME OF DRILLER JOE TELE			1			- DRILL	,	<u>CM</u> :	<u> 5</u>	5		·		, _		10	A de
7. SIZES AND TYPES OF SAMPLING EQUIPMENT			ì		E LOC			$B \alpha$		(PV		<u>)</u> ,	Wes	(51	de 07	/3/	447
4 /4° HSA ,			<u> </u>			ATION/				<u>81,91</u>					<u> </u>		
2" x 24" 57 11 6 57001					ATE/TIN		TART			5/12		COMP	LETE); <u> </u>	/5/1	2	
			ŀ			DWATE					0/6		LIDI E	TION			
			16. DE	PTH T	O WAT			O TIM	E AFT	ER BOR	KEHUL	.E COi	MPLE	HUN			
12. OVERBURDEN THICKNESS			47.07	uro 1	UATED		NA	el tor	3.4C k17	S (INLC	HINC	DATE	/TIME	`			
13. DEPTH DRILLED INTO BEDROCK N/A			17.01	HEK V	VAIER	LEVEL	.wex.		(WE)N I	S (INLC	LODE	DAIL	J I LIVILA	,			
14. TOTAL DEPTH OF BOREHOLE					-	17			IUMBE	R OF C	ORF B	ROXES		N/	1		
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA 20, CHEMICAL SAMPLES CHEMICAL SAMPLES CHEMICAL SAMPLES	DISTU			<u> NA</u>			3. 10	17.2.1		21. TO						IA	
7/1	NA «//a		OTHE	K:		DATE C	OHO	FTC		NDONE					^	//1	
Ditte direction theres. W	•	~~! IO	OBADI	w saren i						TORING	•	,	ζ.				
BACKFILL TYPE: GROUT BENTONITE 23. NOTES RKG: < Rackground RGS: Below Ground Surface					L POIN	Minute		<u> </u>		: Parts				-			
BINO, Ebbongistand Book Bolon of Sant Tanian				Coun						. Fallo	het ivi	IIIIOII					
: First Water Encountered : St	atic Wa	ter re	evei		-	NA: No	n App	лсас	ЛО								
LOCATION SKETCH/COMMENTS									SCA	ALE:	1	None	9	_			
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PROJECT	ľ		\ /	ſ	ATURE/	1	1	1									
RVAAP-66 RI			X_c	10	X	yord	wi	W	3	/5/12	<u> </u>	FI	N G	Mh	1-00	6	

HTRW	DRILLIN	G LO	G (continued)	DISTRIC USACE	CT - Louisville		BOREHOLE NUM FWGA	ber 1W - 006	
1, COMPANY			4 4444	2, DRILL	LING SUBCONTRACTOR			SHEET 2	of 3
	<u>EQM</u>			Frontz D	1	0454 Okt 1 Okt 1	- F. Davisson /	011 44000	
3. PROJECT	<u> </u>		6 BI			8451 State Rout	e 5, Ravenna, C VERTICAL	INCLINED	DEGREES
5. NAME OF	DRILLER		oe Tetel		6. DIRECTION OF BOREHOLE	<u>-</u>		BIOCHED	
7. NOTES F	PID MAKE/MOD	EL;	Sirius 484		PID SERIAL#: 12-1861 -		Colors from	m Munsell Soil Cok	or Chart, Rev
	WATER LEVEL				WATER LEVEL SERIAL#:	SPT DATA	MONITORING	RE	EMARKS
ELEVATION	N DEPTH (Feat)	USCS	CLASSIFICATION OF	MATER	MALS	(0.5 Feet)	(PPWCPM)		epihs/Core Box/Etc.)
	0-2		Upper 3" Clayer Sitt topsoil, a	ds 61	on roots, little and	4-6-	0.2	0-2/1	: 1449
		U	moist next 7" sitty or few send : remainder sit	ly, b	orn w/ back /ags,	4-5			
			few send : remainded sit	ly elo	of bin uf sing	B = 20/			
			mottles teilly soft mois	II, in	keesing sill	/28			
	محر			1	<u> </u>				
	2-4	CL	Sitty clay Son of gry Sitt of few black oxides damy	clo.y	vertical frectues,	3-4-	0	2-4/1;	1454
			few black oxides, damy, 1	MOD.	st.#	6-8		,	
						B= 22/24			
					1 / 1 . / .	ll a	n	11 11.	10° . A
	10°	CL	Sity day, ben is peris alo- iron oxides, mod. lstiff,	y Ve/	1. 1(xclxe) 100)	4.7-	0	4.6 /1;	1510
	'		'Hon' Oxides, mod. (st.ff,)	J mais	11 1 15/14 Soft in	8-1			
			Joily 2"		<u> </u>	R: 24/24			
	1 0	زور	CH. J. L. L. M.		1 12"	10-10	0	6-8 H.	15.24
	18	CL	Sity chy, ben, tew graf in	אללי ו	(12) (CA)	11-12		10 7t 7	1024
						R= 24/24			
						10 /29			
	8-10	14	SHIALL Chara human	.	(a la 10/ 2"	3-5-	0.1	8-10/1:	1525
	6-10		Sitty clay, as above, becoming) <u>uci</u>	, tr ₁ 10000 =	6-8	V:.I	* 12/*)	
	28		ω/ /cω υσιο · · · · · · · · · · · · · · · · · · ·			R = 21/24			
	1					 ' 			
<u>. </u>	10-12	c)	Unel 8" Sitts che beaut	الدار	Wet	1-3-	0	10-12 ft	1530
	10,7	SM	Upper 8" Sitty clay ben w/ Remainder Sitty would, ben si	onle c	casel wet		_		
T-012		V: 1_	1 0 - 19 0 1 1	0) '''	6-8 R-17/24			
	25								
	12-14	SM	Silly sand bear become of	al in	n lower 5" W/	10-16-	D	12-14/1:	1540
	1		Sandstone trus wet	Silt	ly cky o 7-4"	24.28 R= 24/24		· ,	
12-14 SM Sitt, vand, Son Becoming sandstone frans, well;					<u> </u>	R- 2/4			
30								noncuo e la un	nea
PROJECT			0-		GEOLOGIST SIGNATURE/DATE	4		BOREHOLE NUM	
<u> </u>	VAA P-	66	ኧ፯		Sato Don	www_	3/5/12	FWGM	W-006

HTRW DRILLING LOG (continued)				DISTRIC	CT - Louisville		BOREHOLE NUMBER FNGMW-006				
1. COMPANY N				2. DRILI	LING SUBCONTRACTOR					OF 3	
3. PROJECT	EQM BUA	10.41	RI	Frontz D	1	8451 State Route	5 Ravenna, (OH 44268			
5. NAME OF DR			Tele/		6. DIRECTION OF BOREHOLE		RTICAL	INCLINED		DEGREES	
7. NOTES PIE	D MAKE/MOD		51/1US MSA	u	PIO SERIAL#: 42-1861		Colors from	m Munsell Soil Co	lor Chart	, Rev	
WA	ATER LEVEL				- WATER LEVEL SERIAL#:						
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION O	F MATER	IALS	i I	ONITORING PPM/CPM)	F (Sample IDs/	EMARK Depths/C		to.)
<u></u> .	14-16	SP	Sand upper 8" bra form	ncd u	/ few Us sond	47-15-	0.1	14-16/6	15	47	
			few sill net	/	, , ,	48.50/					
			Sand, upper 8" bra, fn-n few silt wet Remainder Sand, gray, fn-	med,	wet, few sill	R = 23/24					
	36		Box fagments, wet - in	Shoe		50/1		16-18 H.,	162	 20	
	16-18		July July 171, viet 17	<u> </u>		R : 1/24					

	48'										
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	48										
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	<i>,</i> 58°										
_	55								44-14		
	-										
		1					-				
	560'										
ROJECT	1	1			GEOLOGIST SIGNATURE/DATE	<u> </u>		BOREHOLE NUN		· · · · · ·	
\mathcal{K}_{V}	AA7-6	6 1	KI		Sito Engraphic	W 3/5	/12	FNGmi	1-00	6	



	DISTRICT BOREHOLE NUMBER
HTRW DRILLING LOG	USACE - Louisville FWGmW - 007
1. COMPANY NAME	2. DRILLING SUBCONTRACTOR
EQM	Frontz Drilling SHEET 1 OF 4
3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266
5. NAME OF DRILLER JOE Tele!	6. MAKE/MODEL OF DRILL CME 55
7. SIZES AND TYPES OF SAMPLING EQUIPMENT	8. BOREHOLE LOCATION PW-23: Southwest cornel stay S. Felimetel Ro
474" IS HSA	9. SURFACE ELEVATION/DATUM 1072.80
2"x 24" 571.7 570015	10. DRILL DATE/TIME STARTED: 3/9/12 COMPLETED: 3/9/12
	15. DEPTH GROUNDWATER ENCOUNTERED 23 /
	16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION
12. OVERBURDEN THICKNESS	NA NA
13. DEPTH DRILLED INTO BEDROCK	17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME)
14. TOTAL DEPTH OF BOREHOLE 30	NA NA NAMERO DE CORP. PONTO
	DISTURBED: NA 19. TOTAL NUMBER OF CORE BOXES NA 19. TOTAL CORE RECOVERY % NA
	NA OTILA:
	79/12 DATE COMPLETED/ABANDONED: 3/9/12
BACKFILL TYPE: J GROUT J BENTONITE	TEMPORARY WELL POINT MONITORING WELL
23. NOTES BKG: ≤Background BGS: Below Ground Surface	·
: First Water Encountered : Sta	latic Water Level NA: Not Applicable
LOCATION SKETCH/COMMENTS	SCALE: None
3 <u> </u>	H Woods
N	. Landa and the second and the secon
Land Annual Wash	
	Patri Pri
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William Comments	
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	GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER
	Sto Spesshato FN6 MW-007
RVAAP-66 RI	Xetto Xyesshatto FN6 MW-007

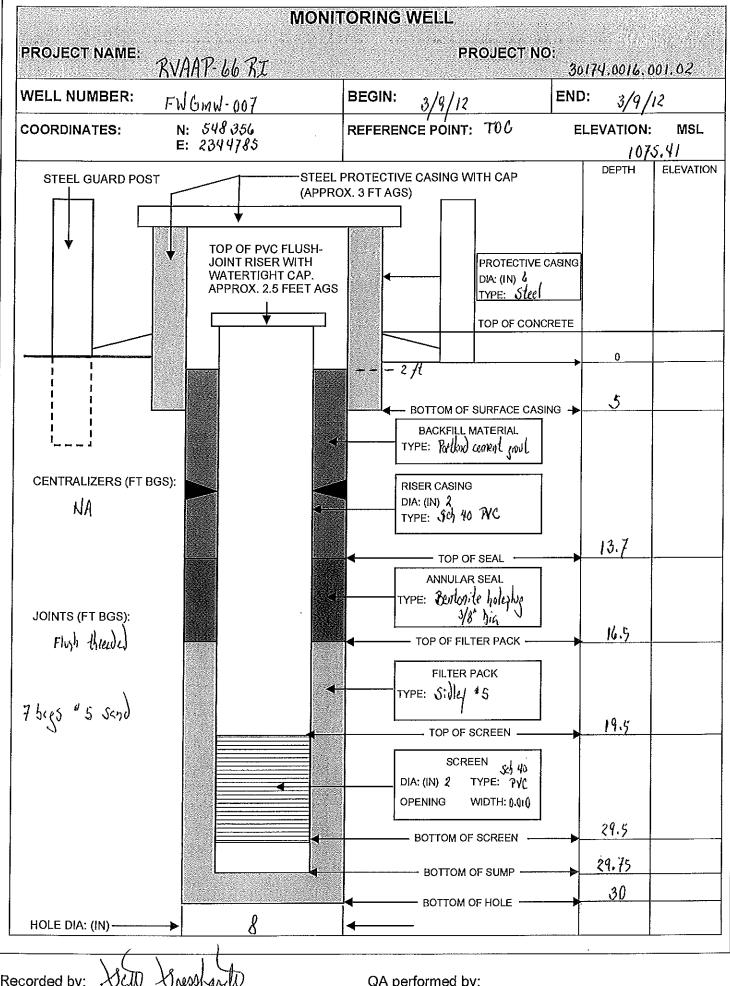
HTRW D	RILLIN	G LO	G (continued)	DISTRICT USACE - Louisville	, WAREN		BOREHOLE NUM	18ER 9W - 007
1. COMPANY NA	ME	••		2. DRILLING SUBCONTRACTOR	· · · · · · · · · · · · · · · · · · ·		SHEET 2	
EQM	1			Frontz Drilling				· Y
3. PROJECT	RVAAT	7-66	BZ	4. LOCATION RVAA	5, Ravenna,			
6. NAME OF DRI		Joe 7		6. DIRECTION OF BOREHOLE	ERTICAL	INCLINED	DEGREES	
7. NOTES PID			Sicius MSA	PID SERIAL#: 12-1861	Colors fro	m Munsell Soil Col	for Chart, Rev	
WAT	ERLEVEL	MAKE/MO	DDEL:	WATER LEVEL SERIAL#:				
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATERIALS		MONITORING (PPM/CPM)		EMARKS Depths/Core Box/Etc.)
	0-2		Upper 2" topsoil of ben s	sity clay moist	1-3-	0	0-2/1;	1037
		ise CL	Remainder S: HI Clay, ben w/	eal mottles few smill	4-5			
		cΣ	Renainder Sity clay, ben w/ gravel (1/8"), damp, mod.	st. #	R= 20/24			
	5⁄ 2.4	XISC.	Silty day, bon w/ goc/ don small presel, dry, Stiff	, vert factures few	6-8-	ρ	2-4 fl;	1043
	2-4	CL	Sept of Still		10-12		, ,	
			J. 13. 17, 3. 1/		R= 18/24			
	4-6	M)	11201/10" March 511. 810 W	ers Avellas bro mattles	4-8-	ρ	4-6/1;	1051
	10	13_	Upper 10" Clayer sitt, ben up mod. stiff slightly plicable, Remainder sitty clay, den up gre	Jem	8-10			
		r1	Revalated Still clay 20 11/00	all who be mother	8-10 R= 22/24			
		ر در	dy, mod. stiff	1	1,-,-,-,-,			
	b-8	CL	Akted Sell box Les vellas	has nother in lase	8-10-	0	6-8/1;	N)59
	15	0	Ckjey sill, brn, few yellow 4", few small gravel (to	1/2")	10-14		* '/ '/	
			4 , 700 SML1 (10	74 / , 014	R= 24/24			
	0 . 0	c)	Moule ell es hale sel no	della L. De . Allee	3-7-	0	8-10 ft;	1104
	8-10	ربر	Clayed 5:14, 25 above w/ no	YCHOW - OIM MOLLIE)			0.10/6	1101
	 20		CRYEY XNDY SITE TELLS IND	א וויאן, אין און און אין און און און	11-14 R=24/24			
					15- 724			
	10-12	CL	Clayer sill, bin, fill, few mad. still	SMALL PROVEL AND	3-7-	٥	10-12 H;	1109
			mon still	0 , ,	1 ' 1	,		
			160.00		9.9 P: 24/24			
	25				/			
	12-14	CL	Class Sill by Jost iron ox	ide skins (tendish)in	8-10-	0	12-14/1	1115
	A	~~	Jacol 4" incleding son	W/ 1/2" Liet Zone D	10-14			
			Clayey sitt, bro, few iron ox lower 4", incleasing send a 8", dam, mod. stiff	7 12 000000	R= 21/24			
	30′							
ROJECT		ŀ		GEOLOGIST SIGNATURE/DATE			BOREHOLE NUM	BER
RUM	<u> 17-66</u>	PT		Sow Spensa	An of		FWBm	w- 007

HTRW DRILLING LOG (continued)	DISTRICT USACE - Louisv∄e		BOREHOLE NUMBER FNGMW-007
COMPANY NAME	2. DRILLING SUBCONTRACTOR		SHEET & 3 OF U
EQM	Frontz Drilling		7 7
PROJECT RVAAP-66 RI	4, LOCATION RVAAP 8451 Stat	e Route 5 Raveni	na, OH 44266
NAME OF DRILLER JOE TETEL	6. DIRECTION OF BOREHOLE	(VERTICAL)	INCLINEO DEGREES
NOTES PID MAKE/MODEL: SILIUS MOA	PID SERIAL#: A 2- 1861	Colors	from Munsell Soil Color Charl, Rev
WATER LEVEL MAKE/MODEL:	WATER LEVEL SERIAL#:		
ELEVATION DEPTH USCS (Feet)	CLASSIFICATION OF MATERIALS SPT D. (0.5 Fc		
14-16 CL Clayer 5:16 bin	yellow by don vert teachers few 5-7	. 0	14-16 ft; 1121
Swill place	, yellow by don vert feeties, few 5-7 (to 1/2"), dy, mod. stiff 8-9	3	
- Japan Ville	Re 2	1/24	
28 11 11 11 11 11 11 11	silt bin w/ oral mottles, dil 8-10	. 0	16-18/1: 1128
16-18 (2)			10 10/1 11/2
SP Next 4 Ond,	es sil, gray, few bry moilles, dry, R= 18	<u>/</u>	
CL (ower 10" Clay	ey Sill, stay, tew big mother, ory, Pri	24	
Mod. Stig	/ •		
18-20 CL U774 4" Sitty	cky, 1/4, w/ 1/2" sity send - wet; 1-3-	0	18-20 ft; 1137
cky is mor	st / kirly soft 7-		, <u> </u>
ML Renkinder clayer	cky, 1/4) w/ 1/2" sity sond - wet; 1-3- st 1 / /2:1/4 soft 7-1 sitt, gray, dry, few smell grant, 12:23	/24	
mad. St.	<i>y</i>		
26 CL Silly clay, gray	till du 3.5.	- 0	20-22 /t: 1145
20-22 0 0,10 0,10	6-8		1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
	\mathcal{B}^{z}	<u>//</u>	
		/ 44	
			02 24 11 1152
22-24 ML Clafey Sill, gra	y, damp to very moist, mod, stif, 6-6-	E .	22-24 /t; 1153
slightly 7):	able while moist 8-9	 	
CL Lower 4" Sity	clay, gray-bin, till, tew send 1 R= 24	24	
Small gra	y, damp to very moist, mod. st./, 6-6- able whe moist 8-9 clay, gray-bin, till, few sand t R=24/ wel, damp, mod. stiff		
24-26 ML Upper 8" Clayey	S.It, east, few bin modiles, wel, 1-8.	0	24-26/1: 1208
58 Killy So)	1 stally akstic 12-1	4	,
GC Renzialet Silly	S:1t, grey, few bro modles, wel, 1-8- 1, stightly pkstic 12-1 ckyed send of greyel, son, ext, R=15/10011 to 1/2"	24	
mark	W/1 10 1/2"		
Supplied to			
21.29 CM 1km/ 11 15.16	1010 NO May - 115 1101 Same City 4.5-1.	12 0	26-28 H; 1220
68' MI 12 10" () 11	KNDY SIH, SKLY, WEL, FELD PICKED, SIGHTLY LIGHTER R=21/2	<u> </u>	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
OJECT MIT (OTAL 10 NOTE)	• • • • • • • • • • • • • • • • • • • •		BOREHOLE NUMBER
RVAAP-66 RI	Sato Syntato 3	3/9/12	FWGMW-007
איןקן שט אב	1 xim xiporano	1116	1 100110 001

HTRW DRILLING LOG (continued)					CT		BOREHOLE NUMBER FWGMW-007				
1. COMPANY					- Louisville LING SUBCONTRACTOR		·——				
I	Jan			Frontz D				SHEET	24 OF 4		
3. PROJECT	RVAAP	-66 7	U		4. LOCATION RVAAP	8451 State Rout	e 5 Ravenna,	OH 44266			
5. NAME OF D	DRILLER (Toe	rele/		6. DIRECTION OF BOREHOLE	(VERTICAL	INCLINED	DEGREES		
7. NOTES F	PID MAKE/MOD		Sirius MSA		PID SERIAL#: 12-1861		Colors fro	m Munsell Soil Co	of Chart, Rev		
ν	VATER LEVEL				WATER LEVEL SERIAL#:						
ELEVATION	N DEPTH	USCS	CLASSIFICATION OF	F MATER	IALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)		REMARKS 'Depths/Core Box/Etc.)		
	28-30	N	Unrel 10" Sittle class till olas	wet		7-9-	D	28-30/1	. 1239		
		GC	Uppel 10" S: Hy clay f: 11, play Lowel 8" Sand t glevel, born, angular - Subangular gre	vel	. Some clay.			7	7		
			angular - Subangular erk	vel t	0 1/2"	18-26 R=18/2	ı				
			0 0								
*	28										

		•						-			

	48'										
	28'										
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									. H		
	59'										
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	687				,						
ROJECT					GEOLOGIST SIGNATURE/DATE	1		BOREHOLE NUM	BER		
	AA7-66	RI			Scto Spoole Li	7 3/9/	12	FWGM	W-007		



Recorded by: Sitt Systanto

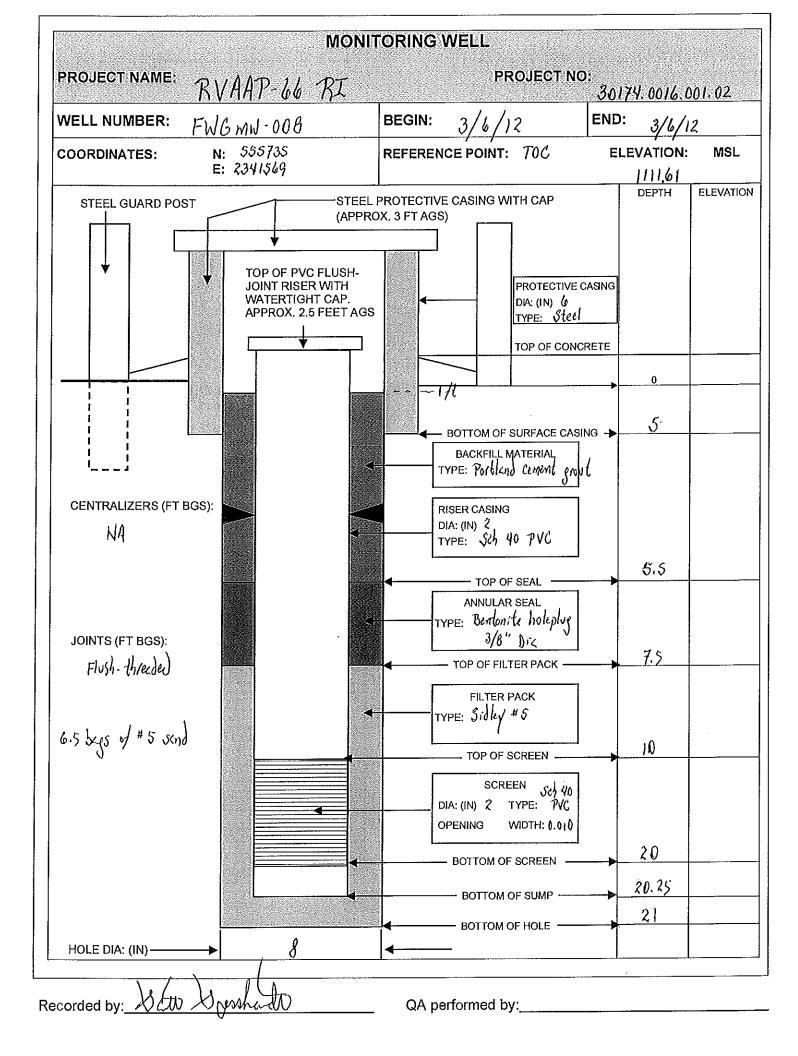
QA performed by:

	DISTRICT				BOREHOLE NUMBE	R
HTRW DRILLING LOG	USACE -	- Louisville			FWGMW	- 008
1. COMPANY NAME	2. DRILLING	SUBCONTRACT	OR			
EOM	Frontz Dr	rilling			SHEET 1	OF 3
3. PROJECT RVAAP- 66 RI		4. LOCATION	RVAAP 8451	State Route	Ravenna, OH	1 44266
5. NAME OF DRILLER JOE Tele!		6. MAKE/MODEL	OF DRILL ()	1E 55		
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOLE LO	OCATION F	W-24; RT	, BO TKAK FKYA	N
41/4" ID HSA		9. SURFACE ELE	EVATION/DATUM	1109.60		
2" x 24" Split spoon		10. DRILL DATE/		3/6/12	COMPLETED: 3/	6/12
	- 1		UNDWATER ENCOL	IUUR	I zone Q 3 H;	14 /L UT
		16. DEPTH TO W	/ATER/ELAPSED TIN	ME AFTER BOREHO	ILE COMPLETION	
12. OVERBURDEN THICKNESS NA			NA	PLIPLITA WY ALLIA	E DATESTINE!	
13. DEPTH DRILLED INTO BEDROCK		17. OTHER WAT	ER LEVEL MEASUR	EMENTS (INLCLUD	a DATE/TIME)	
14. TOTAL DEPTH OF BOREHOLE 21		- 18	NA In total	NUMBER OF CORE	POVES . I.A	
18. GEOTECHNICAL SAMPLES UNDISTURBED:	DISTURBED		19. TOTAL		BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD:		OTHER:				NA
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/6	•			D/ABANDONED:	• •	
BACKFILL TYPE: GROUT BENTONITE		ORARY WELL PO		MONITORING WE		
23. NOTES BKG: ≤Background BGS: Below Ground Surface		CPM: Counts p		PPM: Parts per l	AIIIIOLI	
: First Water Encountered : Sta	atic Water Le	evei	NA: Not Applica	DIE		
LOCATION SKETCH/COMMENTS				SCALE:	None	
				(\$0m)markeman		
				\$		***************************************
				*		***************************************

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A.C. CV						
Ma-Cormick		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Tarrens Communication of the C	
PROJECT	GEOL	OGIST SIGNATUI	RE/DATE	······································	BOREHOLE NUMBE	iR .
RVAAP-66 RI		sto X	ressharto	3/6/12	FWG MW	- 00 &
17111 - 0 1/2		, , , <u>, , , , , , , , , , , , , , , , </u>	V	- / ' - ' -	<u> </u>	

HTRW DR	ILLIN	G LO	G (continued)	DISTRICT USACE - Louisville	z = 1		BOREHOLE NUM	GMW-008
, COMPANY NAM				2. DRILLING SUBCONTRACTOR			SHEET 2	
<u> </u>	<u> </u>		1	Frontz Drilling				
. PROJECT	RV/	AP-6	6 BI	4. LOCATION	RVAAP 8451 State Route 5,			
NAME OF DRIL	ER.	Toe	Tete/	6. DIRECTION OF BOREH	HOLE F VER	TICAL.	F INCLINED	DEGREES
NOTES PID M	AKE/MOD	EL:	Sirius MSA	PID SERIAL#: 12-16	361	Colors fro	m Munsell Soil Co	or Chart, Rev
WATE	RLEVEL	MAKE/MC		WATER LEVEL SERIAL#		<u></u>		
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	·	(0.5 Feet) (P	NITORING PMCPM)	ļ	EMARKS Depths/Cora Box/Etc.
	0-2		Upper 3" Topsoil, dk brn, s. Nort 9" Gravel /:ll limeston Lower 4" Sitty clay, brn, o	the day w/ greet 100	ls 2-24-	0	0-2';	1335
			Nort 9" Gravel /ill limeston	e des les clas	18-12		<u> </u>	<u> </u>
		CL	LOWEL 4" Sittle Class ben of	cm mod stiff compe	ede R: 18/24			
			0.4.	17, 100				
	5	CL	Sitted to be ul tel our	/ mattle (becausing	1-2-	0.3	2-4/1	1348
	5 2-4		Sitty clay, buy w/ few gra brn-gray in lower 2", 1 8-11", sitty	mid sad sear a	2-2			
			0111-114 11 1048 2	MOI) C OCHO OCEMI (V	R= 14/24			
			8-11, 3,16		1 /2]			
			A A A A A A A A A A A A A A A A A A A			Λ /	n 1 // ,	1252
	4-6	ML	Upper 12" Chaper Sill: Son-	play w/ fem rust oxi	des, 1-2-	0.6	4-6 /(;	1004
	100		dimy, filly soft	1 1 1 /	2-4			
		CL	Remainded Sifty clay, but w/	eral along rulical frac	Mules, R: 22/24			. <u> </u>
			Remsiade Sitty clay, but w/	A, no.yt				
	6-8	CL	Sitty clay, gray w/ brn mothly	of tew oxides in	1-2-	0.6	6-8 /t;	1400
	1 8		lister 10" Vely moist	till soft	2-3			
				1 ()	R = 15/24			
	2.in	XXX	Clayed sill, east w/ few born moist to wet in upper	mother les son	1-3-	0.6	8-10/t;	1415
	3-10	ML	Codes Oil C. Alex W. Jay Oil	10" the was still	1-2	v v	0 1-/ 1	11.
	าคร			10 , CHI MOD. SUIT,	3-2 R=18/24			
	28		d.M)		1/2/24			
		a 1	01.111 1 1	1 . 1 . 1		0 11	10 12 //) 1/122
	0-12	CL	Silty clay Till; bry fan) small sand a prevel,	4-5-	0.5	10-12/4) 1744
			dany, mod, stiff	· · · · · · · · · · · · · · · · · · ·	8-9 R=19/24			
			•		<u> </u>			<u> </u>
	28'	3.1						
	12-14	然	Clayer S:1t, Sin, few sand Sand, bin, wet, med	Jamy: lower 1/2"	7.9-	0.3_	12-14/t	; 1428
丁		ML	Sand bry wet med	ercined, silly	11-12			
				J ' /	R : 16/24			<u> </u>
		-						
	38′							
OJECT				GEOLOGIST SIGNATURE	M .		BOREHOLE NUM	BER
RVAA	P-11	, RT		X dd X	revoluto 3/6/	2	FWGM	N-008

2. DOBLING SUDDOMOTOR DOBLING E. D. E. D. S. PROJECT TOE TELLY A LOCATION NUMBER 25 SIZES BOARD 8 TRYPTER CHATSES I. NUMBER OF PRILET B. WARP - 16 RT T. NOTES PER MANEARODIE: STILLS MSA PROBERMA A 2-1861 TWISTER LEVEL MANEARODIE: STILLS MSA PROBERMA A 2-1861 TWISTER LEVEL MANEARODIE: STILLS MSA TWISTER LEVEL MANEARODIE: STILL	HTRW DRILLING LOG (continued)	DISTRICT USACE - Louisville		BOREHOLE NUMBER FNGMW-008
TOURISH STORY OF THE CONTROL STATE OF THE CONTROL S	1. COMPANY NAME			
S. MANE OF PORTER RYAMP LE ST. NOTES PROMORENCOM: WATER LEVEL SCIENCE WATER LEVEL SCIENCE UPPLY 1° LIET, SILLY SEAD, SEA, Seat May read THE REMARKS COLOR ST. HI-16 UPPLY 1° LIET, SILLY SEAD, SEA, SEAT MAJERIANS UPPLY 12° VELY SOFT LIET, SEAD, SEA, MASSIF, MASSI	EQM	Frontz Drilling		SHEEL 23 OF 5
S. MANG FOREILER R. R. MAPP. 46. 97. 1. NOTES PILO MANGROCORE: S. W. N. M. M. PILO SERVAN. A 2-1861 WATER FOR MANGROCORE: CLEVATION OWEN INC. 14-16 Upper 1" List Silly sind of goar pilo, vicine 14-16 IN Reviside Cleby Sill, sept but a filly made styl, made	3. PROJECT TOE Tete!	4. LOCATION RVAAP	8451 State Route 5 Ravenna,	OH 44268
NOTES PRIMARE NOTES PRIME NOTES PRIME PRIME NOTES PRIME PR	5. NAME OF DRILLER RVAIP- 66 PI	6. DIRECTION OF BOREHOLE	VERTICAL	INCLINED DEGREES
Note Note	•	PID SERIAL#: 12-1861	Colors fro	om Munsell Soil Color Charl, Rev
14-16 Upper 1" Wet Silly stand, 500, 500 mod groved 1-3: 0.8 14-16 fl; 1435 14-16 ML Restricted Clappe Silt, 2004 born of few years wells; 4-5 15-18 ML Nost 5" Claps Silt, 2004 born of few years wells; Most 5" Claps Silt, 2004, 400 Silf, Most 1 R: 00/24 16-18 ML Nost 5" Claps Silt, 2004, 401 few years 1-6	•	WATER LEVEL SERIAL#:		
19-16 19-16 19-16 19-16 19-16 10-18 10	! ! !	ASSIFICATION OF MATERIALS		
10-18 12 12 12 12 12 12 12	(Feet)	. 1 , 88 ,		
10-18 12 12 12 12 12 12 12	14-16 Upper 1" Wet 5:1ty	Sino, bla, Sout Med-eleined		14-16/1, 1438
10-18 12 12 12 12 12 12 12	ML Kenkindel Clayey Sil	t, graf. brn w/ few graf mottles,	4-5	
10-18 12 12 12 12 12 12 12	711, 713 sn	of such grevel, mod. Stiff, Muist	K: 1/21/	
SP lower b" Send, grey, fn - crs greine), wet, poorly she shewer for 1 18-20/l; 1527 18-20 30-120, 11-1111 5111 2-14 0,1 2-14				. 4 // unic
SP lewer b" Send, grey, fn - ers greine), wet, poorly we shrow by b' 18-20/l; 1527 18-20 18-20/l; 1527 2-4 0,1 R2 9/24 45 60	16-18 Upy 12" Very 50/	t wet silt, sand received - slough	1-6- 0.6	16-18/1: 1440
5P Lewer 6" Send, greet, med. ers, wet, few s.ll 20 SP Send, greet, fn. ers green, wet, poorly 38-20 SP Send, greet, fn. ers green, wet, poorly 30 Sorted, 1. Ille Sill 2. 4 O, 1 2. 9/24 45 60 60 60 60 60 60 60 60 60 6	ML Next 5" Clayey si	It, gray, till, for sond grave!	6-7	
59 Send, grey, In this original, well, poorly with Arison who is 18-20/l; 1527 18-20 Sorted, Italie Sitt 2-4 0,1 Ray 924 45 60 60 60 60 60 60 60 60 60 6	mod. stiff		R: 2/24	
59 Send, grey, In this original, well, poorly with Arison who is 18-20/l; 1527 18-20 Sorted, Italie Sitt 2-4 0,1 Ray 924 45 60 60 60 60 60 60 60 60 60 6	SP Lower 6" Sknd,	gref, med-crs, wet, few silt		
Solley, 1:40 8:14 2.4 0.1 R.2 924 1.45		′ 1		
Sorted 1 2-4 0,1 R: 924 45 60 60 60 60 60 60 60 60 60 6	SP Sknd, erky, In-	ers prined, wet poorly	Ut of hanner for 1'	18-20/6; 1527
45 60 65 65 66 60 ROJECT GEOLOGIST SIGNATURED/TE BOREHOLE NUMBER	Sorted, 1:4	le SiH	2.4 0.1	
60 55 60 60 ROJECT GEOLOGIST SIGNATUREDATE BOREHOLE NUMBER			R= 4/24	
60 55 60 60 ROJECT GEOLOGIST SIGNATUREDATE BOREHOLE NUMBER				
60 55 60 60 ROJECT GEOLOGIST SIGNATUREDATE BOREHOLE NUMBER				
60 GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER	45			
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60 ROJECT GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER				
ROJECT GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER	55			
ROJECT GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER				
ROJECT GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER				
ROJECT GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER				
ROJECT GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER				
ROJECT GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER	60			
RVAAP-66 RI Your Spendado 3/6/12 FWGMW-008	ROJECT	GEOLOGIST SIGNATURE/DATE		BOREHOLE NUMBER
	RVAAP 66 RI	Saw Spend	0 3/6/12	FW6mW-008

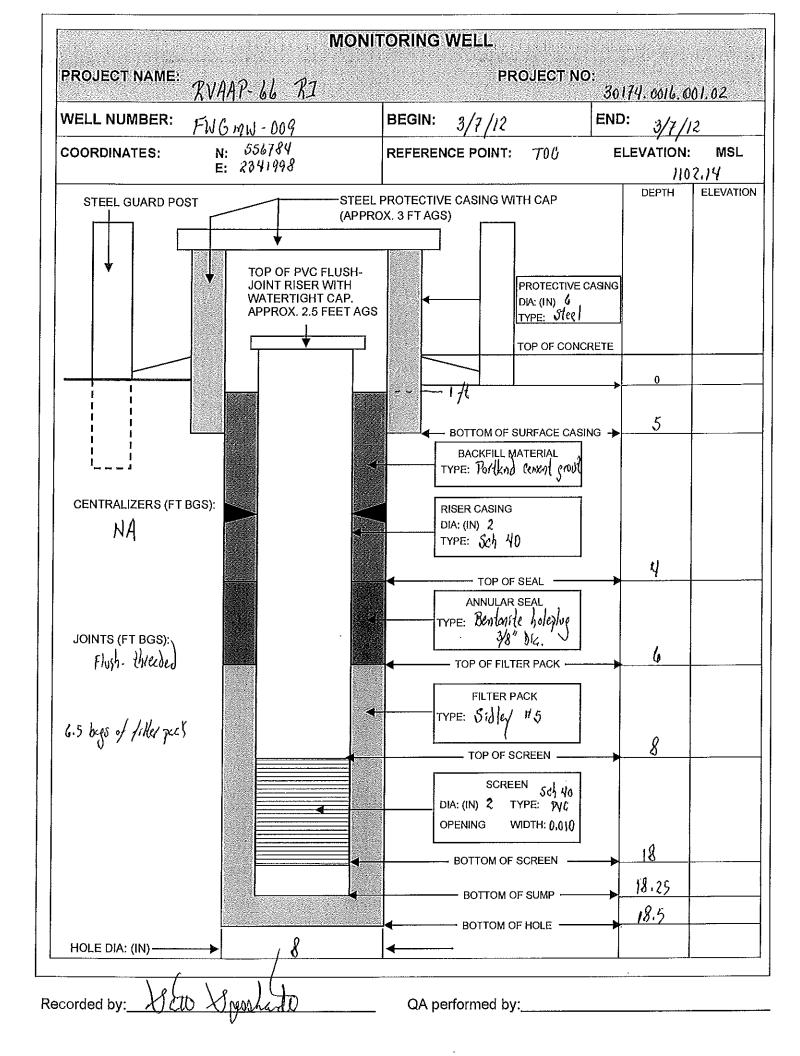


						DISTRICT							BOREHOLE NUMBER																
HTRW DRILLING LOG 1. COMPANY NAME								USACE - Louisville										FWGMW-009											
. COMP	'AN'	AAN Y	ΛE										2. DF	RILLING	SUB	CONTI	RACTO	R						SHEET 1 OF 3					
(E(MR											Fro	ntz D	rillin	g													
. PROJE			RV/	1AP	-66	RI										CATIC							oute	5 Ra	avenn	ıa, O	H 44	266	
. NAME				Š		Tele	/							8. BOREHOLE LOCATION PW-25 Rt &O Ent Film Alex															
SIZES							MENT								1	JREHO					PW-2	_			Zn!	(/2/	M	Alex	
			ν"	- 7	431	_										RILL D						109			D. 575		2/7	112	
		2 '	X 2	4"_	<u>871.</u>	1 0	7001)									EPTH			STAF			7/1 EB 1	<u>Z</u>	COM	PLETE	D;	7/1 /	<u>' [</u>	71
															1								OREH	∂ (0-/ OLE C	OMPLE OMPLE	TION'	<u>/t</u>	桜	_ }
2. OVER	₹BŲ	RDEN	1 THIC	KNES	3		ΙΛ							—	-				NA										
3. DEPT							IA NA								17. O	THER	WATE			ASUR	EMEN'	rs (iNi	CLUC	E DAT	E/TIME	:)			
. тота	\L D	EPTH	OF B	OREH	OLE	1,1	15 A	7							ł				N	A									
B. GEOT	TEC	HNIC	AL SAI	MPLES	3	10		STURB	ED:	S	T		DIST	URBEC	L);	NA					NUMB	R OF	CORE	ВОХ	S	NA			
. CHEN	/IC/	AL SA	MPLES	3			CHEN		NA		RAD:		NA		отне				1			21. T	OTAL	CORE	RECOV		%	NA	
2. DISPO	osi	TION	OF BO	REHC	LE		DATE	STAR		NSTAL	LED:	3/7	7/12					DATE	COM	PLETE	D/ABA	NDON	ED:	3/7	/12			<u> </u>	
AÇKFILI	L TY	YPE:		Γ	GRO	JT				ONITE		-71	Γ		ORAF	RY WE	L POI				MON				_				
3. NOTE	S	•	BKG:	: ≤Ba	ckgro	und		BGS:	Belo	w Gro	und S	urface	3		CPM	l: Cou	nts pe	r Minu	ıte		РРМ	: Part	s per	Million	1				
			\bigvee	: Fir	st Wal	er En	counte	ered			\blacksquare	: Sta	tic W	ater L	evel			NA: I	Vot Ar	plica	ble								
OCA	TIC	ON S	SKET	CH/	COM	MEN	NTS														sc	ALE:		Nor	1e				
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DECT									A	115				GEO	OGIST	SIGN	ATHER	/DAT						BORF	HOLE	NUMR	ER		
OUECT									A\$					GEOL	OGIS1	ESIGN	ATURE	E/DAT							HOLE				

HTRW DRILLIN	IG LO	G (continued)	USACE - Louisville			BOREHOLE NUM FWG 1	и <u>м - 009</u>
1. COMPANY NAME		*****	2. DRILLING SUBCONTRACTOR				
EQM			Frontz Drilling			SHEET 2	? OF 3
	AP-6	6 RI	4. LOCATION RVAA	P 8451 State Route		OH 44268	
. NAME OF DRILLER		Telel	6. DIRECTION OF BOREHOLE	A /	ERTICAL	L INCTINED	DEGREES
. NOTES PID MAKE/MO	DEL:	Sirius MSA	PID SERIAL#: A2-1861		Colors fro	m Munsell Soil Co	lor Charl, Rev
WATER LEVEL	. MAKE/MO	DDEL:	WATER LEVEL SERIAL#:				
ELEVATION DEPTH (Feet)	USCS	CLASSIFICATION	N OF MATERIALS		MONITORING (PPM/CPM)	į.	REMARKS Depths/Core Box/Etc.)
0-2		Fill: Sand 1 planel	ske ash ten sill a	6-11-	0.1	0-2/1	; 1004
		Fill; send of planel,	1805e	5-6		•	
		1, ,,, /		3-1/24			
<u>د</u>		16. 10" 11 . 1 .	17 17 1.11 J . J .	47	0.8	4)1 // .	1011
2-4		Upper 3" old soil honzon, w/ roots / few gave Remainder Sitty clay, earl w moderately stiff, few C 12-15" and 17-21	on orn crumply sill cay	5-7-	U+0	2-4 /1:	IN!
	CL	Resociated Sittle dell acel	I we willed down	7-7 B: 21/24		•	
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	moderally still tas	okvel. Wet clases sent				
		C 18-18 " and 17-21	n) !/				
10'							
4-6	GM	Uppel 12" Sand F elevel,	bin, med-cus picined,	3-2-	0.6	4-6/t;	1022
	MZ	Some fines, fiely Lower 7" Clayer Sit, be	100)e, well	B=19/24			
		gasel, slightly plas	lic Mod. stiff Till				
18		0 / 0 / /	, , , , , , , , , , , , , , , , , , , ,				
4-8	GM	Upper 10" Send of gravel, ben	, Some sitt, "mucky,"		0.2	6-8 /t;	1032
	847	Wet tilly loose, n Lower 14" Ckyly silt Till, snell gravel, slight	ned-cis knd	16-7 17-24/24			
	MZ	Lower 14 Chyer Site 1:11,	118 Toble Man Still	15- /29			
28'		- SMCII AIME!, DIETO	אין אויזיונג אוטטי טניין				
8-10		Shelby Tube		R= 18/24	سن	8-10 /l;	1127
			A STANLEY OF THE STAN				16FWGsb-
							009-10004 <u>-</u> G
28*	Cs.A	Dal W' Sillian 1	1. 10dly to 101	2.11.	0,3	10-12 fl	' 1137
28 10:12	I NY	Wind die 11 Sans	14 picus (0 picy,	2-4- 5-5	U ₁)	10-12/6	, 1105
		loux/2" wet	46 01 1/10 5 240	5-5 R= 20/24			
	CL	Upper 14" Sitty sknd, But missing fine by some lower 2", wet Lower 6" Sitty clay, gray stiff	, till, moist, mod.				
		\$1.#	•				
ROJECT	<u> </u>	•	GEQLOGIS V SIGNĄTURĖ/DATĘ	1		BOREHOLE NUM	IBER
RVAAP-1	1 1	l~	Sato Dessh	Un 2	17/12	. المراجع	mu < 009

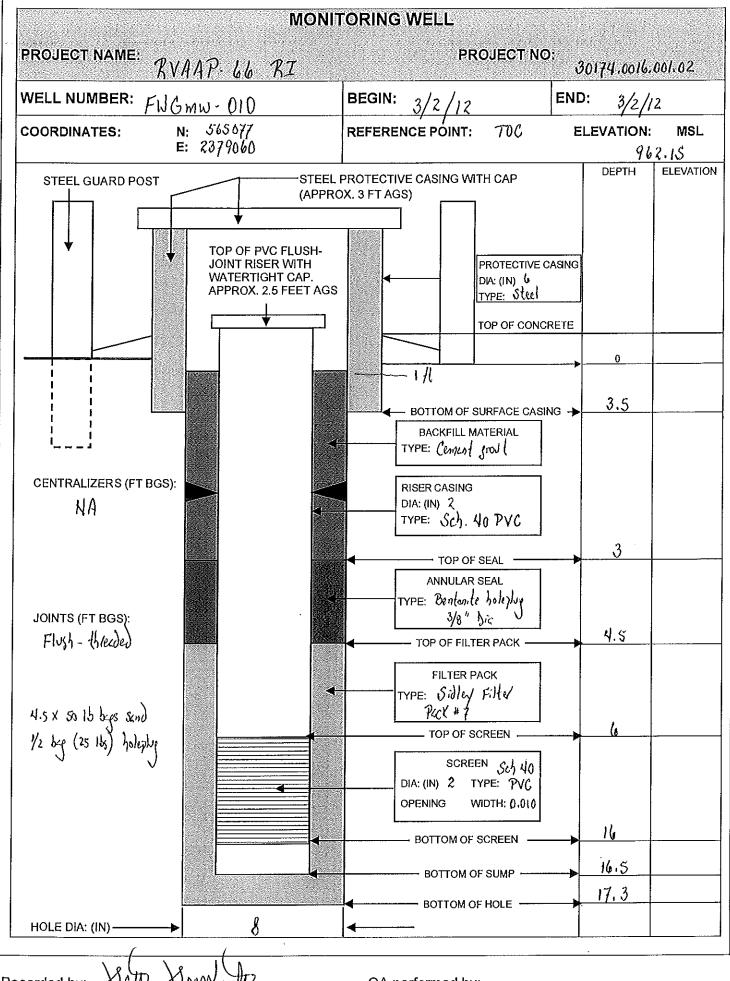
HTRW DRILLING LOG (continued)					CT - Louisville		BOREHOLE NUMBER FUG MW- 009				
1. COMPAN				1	LING SUBCONTRACTOR				of 3		
3. PROJECT	EQM T RVA	1D- 1	6 RI	Frontz I		8451 State Rou	rle 5 Ravenna,	OH 44268			
5. NAME OF			e Teles		6. DIRECTION OF BOREHOLE	(VERTICAL	INCLINED	DEGREES		
7. NOTES	PID MAKE/MOD		Signs MSA		PID SERIAL#: 72-1861		Colors fro	om Munsell Soll Color Chart, I	Rev		
,	WATER LEVEL	MAKE/MO			 WATER LEVEL SER≀AL#:						
ELEVATIO	ON DEPTH (Feet)	USCS	CLASSIFICATION OF	MATER	NALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Co			
	12-14	GM	Upper 5" Sand & pravel; b	kn,	wet fine-cis,	2-3-	0.4	12-14/1; 11.	53		
			7001/ Sotles, Some	si H		9-13 R=13/24					
		CL	Upper 5" Sand perasel; b 7001/1 volled, some lower 8" S:Hy Cky lill,	eky,	mod stiff, km						
	35		Uzzel 1" Send, forces, wet			3-6-	0.3	14-16/1: 12	200		
	14-16	CL	Next 8" Silty sendy clay ;	5 <i>]</i>]	Pry, wel, few	6-10		,			
			SIXI planel, mod. St.) / · · ·	B = 15/24					
		SM	Low L" Silly snd, gray	, we	t, some gavel,			:			
			conxectible /					· <u>-</u>			
	46	a .			,)	-	0.2	.1 0 11			
-	16-18	GC	Sind, grey, In-med in upper	5*	then cis send	4-5-	0.3	16-18-16; 120	<i>t</i>		
		CL	Lower 3" Sitty clay included Lower 3" Sitty clay, till, 1/2" dia counded gras	, WE 0/61	Det some	7-8 R= 21/24		-			
			1/2'- dia pounded epas	el'	, v. (.						
	AS		Ú								
	50ء										
	J-200							Western the Control of the Control o			
	:										
	55										
- .											
	.8 6										
ROJECT	1 ~~				GEOLOGIST SIGNATURE/DATE	[BOREHOLE NUMBER			
RV	<u> AAP-66</u>	RI	·		Saw Spenh	ido 3	3/7/12	FWG MW - C	109		

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	DISTRICT						BOR	HOLE	NUME	BER	
HTRW DRILLING LOG	USACE - Louisville							NGm	W - K	010	
1. COMPANY NAME	2. DRILLING	SUBCONT	RACTOR								2
EGM	Frontz D	rilling					SH	EET	1	OF	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route							a, O	H 442	266
5. NAME OF DRILLER JOE Teles		6. MAKE/M	ODEL OF DRI	LL (ME 5	5 TU	cK-mou	1			
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		<u> </u>	LE LOCATIO		PW-3						
41/4" ID HSA		i	E ELEVATION			959.5					
2" x 24" split spoon			DATE/TIME				COM	PLETE	D: 3	3/2/1.	2
		1	GROUNDWA			· ·	16_		TION		
		16. DEPTH	TO WATER/E		TIME AF	LEK BOKE	HOLE GO	MPLE	HON		
12. OVERBURDEN THICKNESS NA		17 OTHER	WATER LEV		IDEMEN	TS /INLCL	LIDE DAT	EMINE	· -		
13. DEPTH DRILLED INTO BEDROCK 14. TOTAL DEPTH OF BOREHOLE 17. 3. //		III. OINEK		NA)/LINEIA	i o firicor	002 0711		,		
17.0.70	DIOTHORS	<u> </u>			L NUMB	ER OF CO	RE BOXE	s	NA		
ONDIOTOROED: N/I	DISTURBE	OTHER:				21. TOT/			- 1	% N	<i>(</i>)
20. CHEMICAL SAMPLES CHEM: NA RAD: 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/2		OTTIER.	DATE	COMPLE	TED/AB/	NDONED	3/2/	12			1
BACKFILL TYPE: F GROUT F BENTONITE		ORARY WE				ITORING V	, ,	•			
23. NOTES BKG: ≤Background BGS: Below Ground Surfa			nts per Minu			: Parts p					-
1	static Water L		=	vot Appli		,					
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LOCATION SKETCH/COMMENTS					36,	ALE:	Nor	I U			
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PROJECT	GEOL	OGIST SIGN	i i VATURE/DATI	<u> </u>	1	<u> </u>	BORE	HOLE	NUME	<u> </u>	
RVAAP-66 RI		. [Spessl	1	3/	2/12		FNG	ענה כ	- 010)

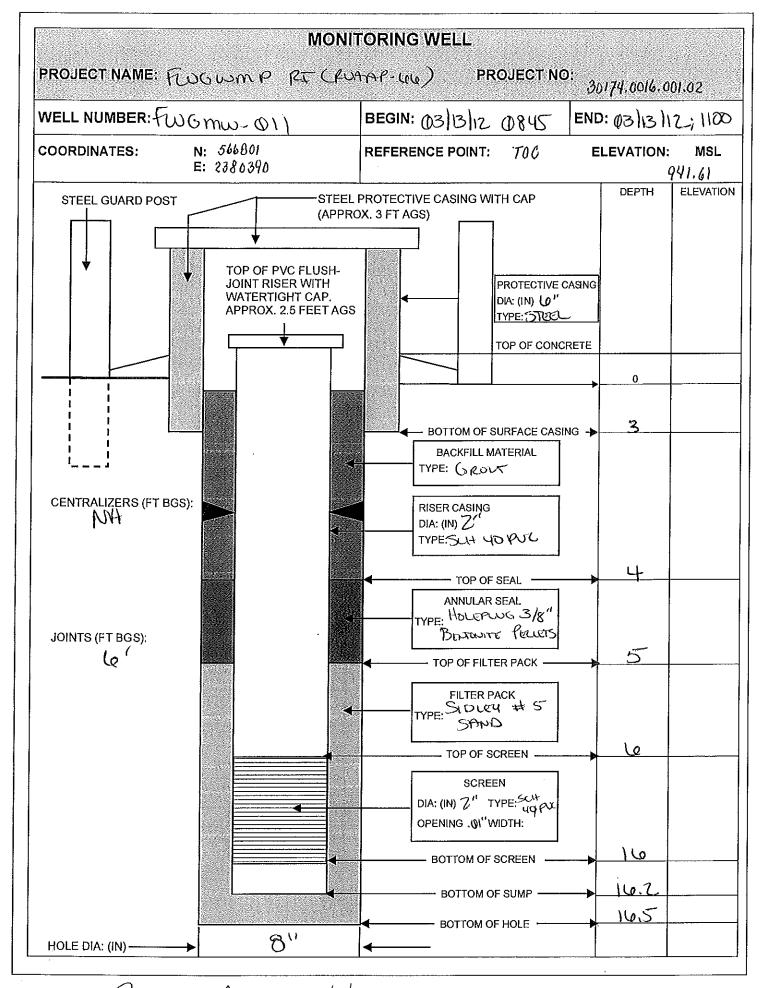
1. COMPANY NAME 2. DRILLING SUBCONTRACTOR SHEET 2 OF 2 Frontz Drilling	HTRW DI	RILLIN	G LO	G (continued)	DISTRIC	CT - Louisville		BOREHOLE NUMBER FWG MW - 010				
Product Color Product Color Product Color Product Color Product Ry/AP - 66 BI LOCATION PROJECT PROJE	1. COMPANY NA	AME				<u> </u>						2
D. SAME OF TREES AS DO TO TELLY ROTTED MELLIAMORANOCORI: NOTES MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: SITUS MAND ROTTED MELLIAMORANOCORI: ROTTED MELLIAMORANOCORI: ROTTED MELLIAMORANOCORI: ROTTED MELLIAMORANOCORI: ROTTED MELLIAMORANOCORI: ROTTED MELLIAMORANOCORI: ROTTED MANDANOCORI	EOn	<u>/) </u>		And the same of th	Frontz C	hilling			олеет			
Description of the series of t	3. PROJECT	BYAA	P-66	RI		4. LOCATION RVAAP						
NOTES AND MARKEDICIDEL: NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND MARKEDICIDE. NOTES AND	5. NAME OF DRI					6. DIRECTION OF BOREHOLE	, R	VERTICAL	INCUNE) 	ĐEG	REES
WHERE LEVEL IMMERICORIE: WELL PURE LANGE COLOURS OF MATERIAL STATES AND MONTHORNS (CORPUS) OPTIMISES (CASSIFICATION OF MATERIAL COLOURS (CORPUS) (CORPUS	7, NOTES PID	MAKE/MOD				PID SERIAL#: 42-1861		Colors from	n Munsell Soil	Color Ch	art, Rev	
0.2 Upp 3" 18 bin lassoi clesas sill of his see sevel 3.4- 0.2 Upp 3" 18 bin lassoi clesas sill of his see sevel 3.4- 0.2 0-2/1; 1036 CL roots, maist Next 16" sill of his see sevel 3.4- day hore facely, few order, lest 2" sin load 8.2 few faces gland, most 2.4 SM Silly send, tw. bin by his faces faces 31-32 fairly loose, some sensione faces 32-2/24 4.5 SM Silly send, It bin to belf, fa-gained, damp, 14-25-0.3 4-6/L; 1056 1901e cohisive 25-37 history faces faces 32-39 10-12 10-12 No Recovery 50/2 10-12/L; 1140 12-14 No Recovery 50/2 12-14/L; 1215 20 Only dailed to 17.3/L due to stift leeve 600 no faces faces 12-14/L; 1215 21 Only dailed to 17.3/L due to stift leeve 600 no faces faces 12-14/L; 1215 22 Only dailed to 17.3/L due to stift leeve 600 no faces faces 12-14/L; 1215 23 Only dailed to 17.3/L due to stift leeve 600 no faces faces 12-14/L; 1215 24 Only dailed to 17.3/L due to stift leeve 600 no faces faces 12-14/L; 1215 25 Only dailed to 17.3/L due to stift leeve 600 no faces faces 12-14/L; 1215 25 Only dailed to 17.3/L due to stift leeve 600 no faces faces 12-14/L; 1215 26 Only dailed to 17.3/L due to stift leeve 600 no faces faces 12-14/L; 1215 27 Only dailed to 17.3/L due to stift leeve 600 no faces faces 12-14/L; 1215 800 no faces faces faces faces 12-14/L; 1215 800 no faces faces faces faces 12-14/L; 1215 800 no faces faces faces faces faces 12-14/L; 1215 800 no faces faces faces faces faces 12-14/L; 1215 800 no faces faces faces faces 12-14/L; 1215 800 no faces faces faces faces 12-14/L; 1215 800 no faces faces faces faces faces 12-14/L; 1215 800 no faces faces faces faces 12-14/L; 1215 800 no faces faces faces faces 12-14/L; 1215 800 no faces faces faces 12-14/L; 1215 800 no faces faces faces 12-14/L; 1215 800 no faces faces 12-14/L; 1215 800 no faces faces 12-14/L; 1215 800 no faces faces 12-14/L; 1215 800 no faces faces 12-14/L; 1215 800 no faces faces 12-14/L; 1215 800 no faces faces 12-14/L; 1215 800 no faces faces 12-14/L; 1215 800 no faces faces 12-14/L; 1215	WA-	TER LEVEL	MAKE/MC			WATER LEVEL SERIAL#:						
0.2 Upy 3" X by tassoi! chaps sit of by son years! 3-4- 0.2 0-2/1; 1036 Q2	ELEVATION	1 1	uscs	CLASSIFICATION OF	MATER	ALS	1		(Sample I			ox/E(c.)
2-4 SM Silty send, led-sen' suff, for elevate, dear, 21-28. 2-4 SM Silty send, led-sen' suff, for elevate, dear, 31-32. 2-2/24 2-3-2-2-2-4 2-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-				Uprel 3" dx b/n tossoil claye	e/ s;	It of fax sn excel	3-4-	0.2	0-2/1	; 10.	36	
2-4 SM Silty send, led-sen' suff, for elevate, deep, 21-28. 2-4 SM Silty send, led-sen' suff, for elevate, deep, 21-28. SM Silty send, It bin to buff, for-elevated, deep, 14-25. 10-3 4-6/L; 1056 4-6 SM Silty send, It bin to buff, for-med gleined, 29-50/S 0.5 6-8/L; 1104 15			U	roots moist. Next 16" s	<u>illy </u>	day, but w/ gray			· · · · · · · · · · · · · · · · · · ·			
2.4 SM Silty Send, led. In buff, for existed, demy, 21-26. 0.3 2.4/l; 1042 2.4 SM Silty Send, led. In to buff, for existed, demy, 12-25. 0.3 4.6/l; 105\$ 4.6 SM Silty Send, lt ben to buff, for med graned, demy, 12-5. 0.3 4.6/l; 105\$ 4.8 SM Silty Send, lt ben to buff, for med graned, 29-50/s 0.5 6-8/l; 1104 12.14 No Recovery 12.14 No Recovery 12.14 No Recovery 12.14 No Recovery 28 Blind doiled to 17.3/t due to slight heave and no recovery— 29 Some sendstone these 20 Some sendstone these 20 Some sendstone these 21.20 O.3 2.4/l; 1042 25.37 R= 19/24 10.18 10				along horiz freetiles, few	Oxide	s, lest 2" 'sin lend,	R= 21/24				-	<u> </u>
		75′		to - Med glained, moist								<u></u> .
		2-4	SM	Sitty send led-byn t buff	10-	erkined dams	21-26.	0.3	2.4 /l	104	12	
3M Silty scal, It bin to buff, In-grained, damp, 14-25. 0.3 4-6/t; 1056 4-6 M Silty scal, It bin to suff, In-grained, 29-30/5 0.5 4-8/t; 1104 6-8 SM Silty scal, It bin to suff, In-med grained, 29-30/5 0.5 4-8/t; 1104 8-10 SM Silty scal, It bin to buff, In grained, 50/4 0.6 8-10/t; 1118 moist uset No Recovery 12-14 No Recovery 50/2 12-14/t; 1215 8= 9/24 Blind dailed to 17.3/t due to stight heave and no recovery - scal compresses restricting pencive in 1									•	, 		
mole cohisive 25-37				1 /		0	R = 22/24					
mole cohisive 25-37					7 ,		N 45		<u>, , , , , , , , , , , , , , , , , , , </u>		~ -	
8-10 SM Sitty send, It bin to buff, for med greined, 29-50/5 0.5 6-8/t; 1104 8-10 SM Sitty send, It bin to buff, for greined, 50/4 0.6 8-10/t; 1118 moist/wet B: 50/2 10-12/t; 1140 12-14 No Recovery 50/2 12-14/t; 1215 28- Blind dailed to 17.3/t due to slight neave and no recovery - send compresses restricting peneticting		4.6	SM	Silty send, It son to buff	', 1	n-grand sary,		0.5	4-6/1		<i>>•</i>	
6-8 SM Silty send, it bin to buff, for mid grand, 29-50/3 0.5 6-8/t; 1104 8-10 SM Silty send, it bin to buff, for grained, 50/4 0.6 8-10/t; 111/8 10-12 No Recovery 12-14 No Recovery 12-14 No Recovery 50/2 10-12/t; 1140 12-14 No Recovery 50/2 12-14/t; 1215 R= 9/24 81 in doiled to 17.3/t due to slight heave and no recovery - send compresses restricting penetralism.		more conside					1					. <u></u> ,
8-10 SM Sitty skind, It bin to buff, In grained, 50/4 0.6 8-10 ft; 1118 20 No Recovery 50/2 10-12 ft; 1140 12-14 No Recovery 50/2 12-14 ft; 1215 25 Blind doiled to 17.3 ft due to slight heave and no recovery - skind compresses restricting penetictinn geologist signature and a government of the number							1112 /21					
8-10 SM Sitty skind, It bin to buff, In grained, 50/4 0.6 8-10 ft; 1118 20 No Recovery 50/2 10-12 ft; 1140 12-14 No Recovery 50/2 12-14 ft; 1215 25 Blind doiled to 17.3 ft due to slight heave and no recovery - skind compresses restricting penetictinn geologist signature and a government of the number		4-8	SM	Sitty send it bin to bu	//.	In-med excined	29-50/5	0.5	6-8/1	: 11	04	
10-12 No Recovery 50/2 10-12/1; 1140 R= 9/24 12-14 No Recovery 50/2 12-14/1; 1215 R= 9/24 25 Blind divided to 17.3/1 due to slight heave Gard no recovery - send compresses restricting penetretian penetretian Penetretia				wet	/ 		. , .			<i>'</i>		
10-12 No Recovery 50/2 10-12/1; 1140 R= 9/24 12-14 No Recovery 50/2 12-14/1; 1215 R= 9/24 25 Blind divided to 17.3/1 due to slight heave Gard no recovery - send compresses restricting penetretian penetretian Penetretia				, , , , , , , , , , , , , , , , , , , ,	-//	, , ,	/ ·		- 1		0	
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QA performed by:

	ibist	TRICT									BOR	EHOLE	NUMB	ER		
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. COMPANY NAME	2. DI	RILLING	SUB	CONTR	ACTO	R										
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NAME OF DRILLER BYLLIA MILLIA			1			F DRILL			R,	\mathcal{X}						
SIZES AND TYPES OF SAMPLING EQUIPMENT			8. BO	REHOL	E LO	CATION	East				ór ð					
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			16. D	EPTH T	O WA		APSED TI	ME AF				OMPLE	TION			
2. OVERBURDEN THICKNESS 17.5 FT						٨	<u>IA</u>		*6 (1)	OULD	F F 5 5 T					
B, DEPTH DRILLED INTO BEDROCK			17. 0	THER	VATE	K LEVEL	MEASUR			LCLUD	E DAT	E/IIME	.)			
I. TOTAL DEPTH OF BOREHOLE 17.5 PT						14	9. TOTAL		190	CODE	BOAR	. 9				_
B. GEOTECHNICAL SAMPLES UNDISTURBED: WAS		TURBED		<u> </u>		<u>L'</u>	0. TOTAL	NOME					VERY 9	% . \		
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1. COMPANY NAME 3. PROJECT FUGWARP RT 5. NAME OF DRILLER BYLAN PHILLIPS 7. NOTES PID MAKEMODEL: MAIN RIFTE ZODD WATER LEVEL MAKEMODEL: ELEVATION DEPTH USCS CLASSIFICATION OF (Feel) (O.O'-5.2) SILTY CUPY (EY'); SOFT, dry (wet for CL Plasticity; Foragrics + 1 104K5/1 gray 1 wet 14 (GP); Some Sarchtone 104K5/1 gray whithe cork 104K5/1 gray whithe cork 104K5/1 gray whithe cork	6. DIRECTION OF BOREHO PID SERIAL#: 110- WATER LEVEL SERIAL#: F MATERIALS (CU); YRILLE FINE GRAVE MUSTALYRAIN) Med BOTS THOUSTON WAS SUBJECT GROWN SEAM FRAGINANT PROCESSION OF STANKE PROCESSION OF STANKE FRAGINANTS THOUSTON MED CLINK FRAGINANTS THOUSTON MED CLINK MED CLI	SPT DATA (0.5 Feet) (0.5 Feet) (1.7/2.0 0.2 S) 10 12 15 10 12 15 10 12 15 10 10 10 10 10 10 10 10 10 10 10 10 10	COLORS FOR COLORS FOR	OM MUNSEU SOIL COLOR CHART SOOD REW ED REMARKS (Sample IDS/Depths/C A: Ambient H: Headsef C1224	DEGREES , Rev S Core Bow/Etc.)
3. PROJECT FUGWIND RX 5. NAME OF DRILLER BYLLON PHILLIPS 7. NOTES PID MAKE/MODEL: MAIR RIFE 2000 WATER LEVEL MAKE/MODEL: ELEVATION DEPTH USCS CLASSIFICATION OF (Feet) (0.0'-5.2) SILTY CUPY (C'Y'); SOFT; CHY (WELFTON CL PLOSTICLY; FORWANICS + OF IDVINES/1 gray + 104RS 63:-5tiff 02.7'-55500 From 3-4' Gravel control (GP); Some Sandstone SMATERNISH GRAY WELT 1	4. LOCATION R 6. DIRECTION OF BOREHO PID SERIAL#: 110 - 1 WATER LEVEL SERIAL#: F MATERIALS F (CU); YOUR FINE GROW MAJER LEVEL SERIAL#: F MATERIALS F (CU); YOUR FINE GROW MAJER LEVEL SERIAL#: F MATERIALS	SPT DATA (0.5 Feet) WH 1 3 4 1.7/2.0 0.2 5 10 12 5 1.5/2.0 1/2 17 10 6 1/2 17 10 6 1/2 17 10 6 1/2 17 10 6 1/2 17 10 6 1/2 17 10 6 1/2 17 10 6 1/2 1/2 10 6 1/2 1/2 10 6 1/2 1/2 10 6 1/2 1/2 10 10 6 1/2 1/2 10 10 10 10 10 10 10 1	COLORS FOR COLORS FOR	OH 44268 TINCLINED OM MUNSEJ SOII COLOR CHARK ODD REW ED REMARK (Sample IDs/Depths/C A: Amb) Lint H: Headspf C1224	DEGREES , Rev S Core Box/Etc.)
5. NAME OF DRILLER BYLAN Phillips 7. NOTES PID MAKE/MODEL: MAIR PHE 2000 WATER LEVEL MAKE/MODEL: ELEVATION DEPTH USCS CLASSIFICATION OF (C'Y'); SOFT; CHY CUPY (C'Y'); SOFT; CHY (WELTON CL PLOSTICLY; POTOSONICS + 1 [OTREST 9 MY 1 104RS 5 C3.0'-SS + From 3-4' Gravel contactore (GP); Some Sandstone SMATRENISH AVM WELT 14	6. DIRECTION OF BOREHO PID SERIAL#: 110- WATER LEVEL SERIAL#: F MATERIALS (CU); YRILLE FINE GRAVE MUSTALYRAIN) Med BOTS THOUSTON WAS SUBJECT GROWN SEAM FRAGINANT PROCESSION OF STANKE PROCESSION OF STANKE FRAGINANTS THOUSTON MED CLINK FRAGINANTS THOUSTON MED CLINK MED CLI	SPT DATA (0.5 Feet) WH 1 3 4 1.7/2.0 0.2 5 10 12 5 1.5/2.0 1/2 17 10 6 1/2 17 10 6 1/2 17 10 6 1/2 17 10 6 1/2 17 10 6 1/2 17 10 6 1/2 17 10 6 1/2 1/2 10 6 1/2 1/2 10 6 1/2 1/2 10 6 1/2 1/2 10 10 6 1/2 1/2 10 10 10 10 10 10 10 1	COLORS FOR COLORS FOR	OM MUNSEU SOIL COLOR CHART SOOD REW ED REMARKS (Sample IDS/Depths/C A: Ambient H: Headsef C1224	s PID
TOTAL PID MAKEMODEL: WATER LEVEL MAKEMODEL: ELEVATION DEPTH USCS CLASSIFICATION OF (Feet) (0.0'-5.2) SILTY CLASSIFICATION OF (LAY'); SOFT; CAY (LURETFOR DESTINATION OF (LAY'); SOFT; CAY (LURETFOR DESTINATION OF (LAY'); SOFT; CAY (LURETFOR DESTINATION OF (LAY'); SOFT; CAY (LURETFOR DESTINATION OF (LAY'); SOFT CATTER CONTROL CONTRO	PID SERIAL#: 110-1 WATER LEVEL SERIAL#: " F MATERIALS F (CU); YRILL FINE GYAU MUNGALYRAIN) Med DOTS THOUGHOUTEN DOS SUPERIOR GYAU FREGURAL TO LITTLE GRAU FREGURAL TO CLANS MED CLA	SPT DATA (0.5 Feet) (0.5 Feet) (1.7/2.0 0.2 S) 10 12 15 10 12 15 10 12 15 10 10 10 10 10 10 10 10 10 10 10 10 10	Colors for 20 MONITORING (PPMOPM) H: (0.0) H: (0.1) A: (0.0) H: (0.1) A: (0.0) H: (0.1)	om Munsell Soil Color Chart DDD RW ED REMARK: (Sampla IDs/Depths/C A: Ambient H: Headspf C1224	s PID
ELEVATION DEPTH USCS CLASSIFICATION OF (Feel) (0.0'-5.2) SILTY CUPY (c'y'); SOLT, CAY (wetfor) (c'y'); SOLT, CA	water level serial. " F MATERIALS (CU); trave fine grave Mourfact travels show Followish brow Fragment ent 1 to little Gravel Fragment Trayment travels Trayment trayment Trayment to dense	SPT DATA (0.5 Feet) WH 1 3 4 1.7/2.0 0.2 5 10 12 15 NOT 1.2/2.0 4 7 12 16 1 2 17 10 1 2 17 10 1 2 17 10 1 2 17 10	26 MONITORING (PPMOPM) A: (D.O) H: (D.I) A: (D.O) H: (O.O) H: (O.O)	REMARK: (Sample IDS/Depths/C A: Amblent H: Headspf C1224	s Core Box/Etc.)
ELEVATION DEPTH USCS (GOO' -5.2) SILTY CUPY (24'); SOLT; CAY (WELTERY (24'); SOLT; CAY (WELTERY (24'); SOLT; CAY (WELTERY (24'); SOLT; CAY (WELTERY (24'); SOLT; CAY (WELTERY (24'); SOLT; CAY (25'); SOLT; CAY (25'); SOLT; CAY (26'); SOLT;	FMATERIALS (CU); trace fine grave Merchandrain) med bots Throughout. To yellowish who guilar grower scam- Fragment ent T to little Grav Hed Growel + Sono Magnents Thoughout med dlink to dense	SPT DATA (0.5 Feel) (0.5 Feel) (1.7/2.0 0.2 5/10/2/5 2-4 4/7/12/10 15/2.0 1/2/17/10	MONITORING (PPMOPM) A: (D.O) A: (D.O) A: (D.O) A: (D.O) A: (D.O) A: (D.O) A: (D.O)	REMARK (Sampla IDs/Depths/O A: Ambient H: HEADSPF C1224	S Core Box/Etc.)
(c'y'); soft; dry (wet for (c'y'); soft; dry (wet for (c'y'); soft; dry (wet for (c'y'); soft; dry (wet for (cor); soft @ 2.71 socon (cor); some control (cor); some sandstone (cor); some sandstone	neurfaulrain) med bots Troughout. To yellowish bro gular growel scam Fragment ent I to little Grow ted Growel + Sono Tragments Thoughous	(0.5 Feet) WH 1/3/4 1.7/2.0 0.2 5/10/12/18 1.2/2.0 2-4 4/7/12/16 1/5/2.0 1/2/17/10	(PPMOPM) H: (O.O) H: (O.I) H: (O.I) H: (O.I) A: (O.O) H: (O.I) A: (O.O)	(Sample 1Ds/Depths/C A: Ambient H: Headspf C1224	Core Box/Etc.)
(c'y'); soft; dry (wet from CL plasticity; introduction of the property of the control of the co	nsurfaulrain) med bots Troughout. To yellowish bro isolar grower scam Fragment ent I to little Grow ted Grower + Sono Magnents Thoughous med dense to dense	1.7/2.0 0.2 5/10/2/5 2-4 4/9/12/10 15/2.0 4-6 1/2/17/10	H. O.1 H: O.1 H: O.0 H: O.0 H: O.2	H: HEADSPF C1224 C1235	PID the PID
5 Plashery impropries + 10 10+185/1 gray + 10+185 5 C3.01-SS + From 3-4' Graves control (GP); Some Sandstone Sugreenish gray wet 14	bots Troughout. To yellowish brows regiment ent I to little Grav ted Gravel + Sunce Tragments Troughout med dlink to dense	1.7/2.0 0.2 5/10/2/5 2-4 4/9/12/10 15/2.0 4-6 1/2/17/10	H. O.1 H: O.1 H: O.0 H: O.0 H: O.2	H: HEADSPF C1224 C1235	ACE PIÈ
5 Plashery impropries + 10 10+185/1 gray + 10+185 5 C3.01-SS + From 3-4' Graves control (GP); Some Sandstone Signeralish gray wet 14	bots Troughout. To yellowish brows regiment ent I to little Grav ted Gravel + Sunce Tragments Troughout med dlink to dense	112/17/10 112/20 112/17/10 112/17/10	H: 0.1 A: 0.0 H: 0.2	C1224 C1235	
(GP); Some sandstone	ent 1 to 1146 Gravel red Gravel + Sono fragments Thoughow ned dling to dens	1/2/17/10	A: 0.0 H: 0.2	C1235	
(GP); some sandstone	ent 1 to 1146 Gravel red Gravel + Sono fragments Thoughow ned dling to dens	1/2/17/10	Hoa	"I"	
(GP); some sandstone	ent 1 to 1146 Gravel red Gravel + Sono fragments Thoughow ned dling to dens	1/2/17/10	·	"I"	
(GP); some sandstone sarrenish gray wet 1 m	. Tragnerts Thrushon ned dense to dens	1.51/2.0	14 ° W. ().	r.i	
Sarrenish gray wet ir	ned dense to dens	ا جائزا الح			
		1			
" (0.0'-45/xard+3/5/5m)		- 1 Malan		_	
$1 \circ 1 \circ 1 \circ 1 \circ 1 \circ 1 \circ 1 \circ 1 \circ 1 \circ 1 \circ$	silla la estat	5-10 8-10	4,00	.01233	
I IIII I last		1.7/2.0	H: 10.7	CAZITY O	
(4,5'-89,7) SAND (8P)		8 12/017	<u>α. ο ο</u>	C1300	
Trace downward : sut		15/20	H M 7	: C1318	
	COTENT I DI REPTIL	U 8/10/13			
15 (13/9,7'-9,8') Grove) (9,8'-10,2') Sand (fine	1w/8/+ (cm).			@1332	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	blussh and class				
little Gravel; 1085/1 Crumbly; Sand+gravel	1 content of whole	1.25/2	H: W.I	55017.5'	
(10.2'-120') Sut (m)	norry h done gran	10-10	<u> </u>	3001110	
20 1 CM; medium shift low p	Vasticity	1'			
\$ (12.0' - 13.2') SAND+G					
104R4/1 dark gray, me	dum doose				
(13.2-13.4) Fine Son	rely 104R6/3 brown	met			
(13,4' - 14,8') SILT (m					
26 medum graned sand line	es Troughout; dryil	1044/1			
(14.8'-17.5) SAND (ST					
Gravel (subminded); Le					
transport; dry to dame					
@ He introduction of wear	•		<u> </u>		
30 Fining downword, @			noe of	solut spoor	`
FUGUMP RI (RUAPAP-106)	GEÖLÖGIST SIGNATURE/D/	ATE		ROKEHOLE NUMBER	



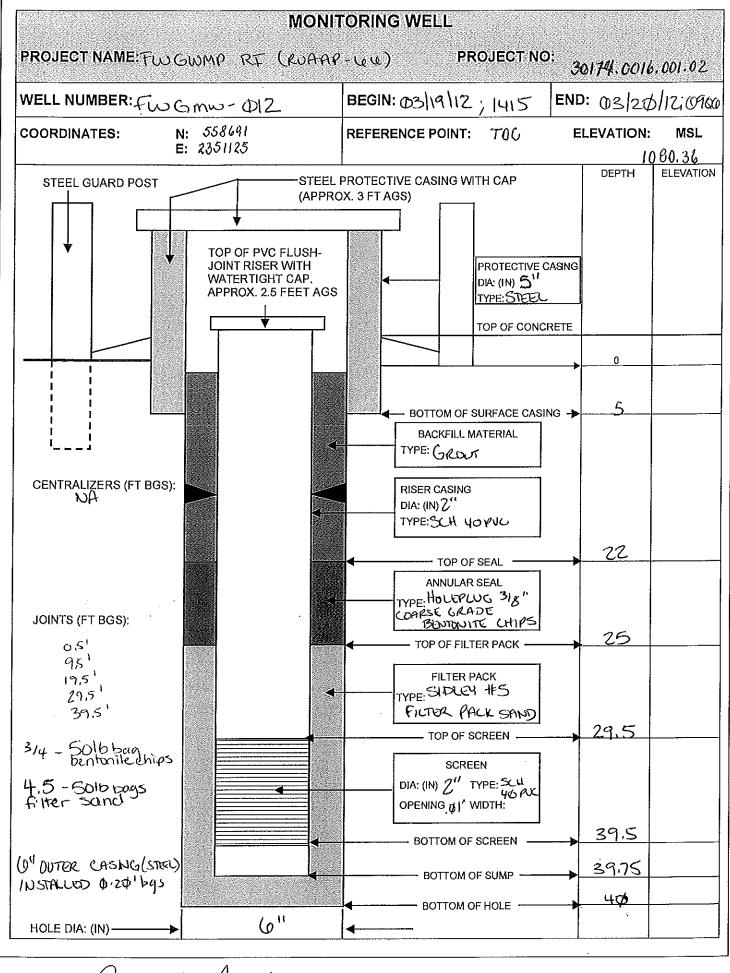
Recorded by: Amanda Inentin 03/13/12 QA performed by:

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	tic												Fro	ntz D															
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7. SIZ	FS AN	ID TY	ES OF	RY1	PLING	EOUII	MENT	JPS.	/AA	Por	> M	ACK	EY		1		LE LO			بر الالار	<u> </u>	7.5	D /	X.	H		ي ر		
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<u> </u>					1011 0841		817								10. D	RILL D	ATE/T	IME	STAI	RTED:	031	13/12	2	COM	PLETE	D: (f)	3/20	Dliz	
-					RICE				رجع	E S	>∂m	IPLO	K.		15. D	EPTH (GROU	NDW	TER E	ENCOU	NTER	ED 5	12						
						1-	<u> </u>								16. D	EPTH	TO W	\TER/i	LAPS	ED TIN					MPLE	TION			
12.0) F								47.0	TUCO	WATE	ים ו בזי	el Me	ASURI	_	2 FT			e/TOME				
13. DE						1	22.								''.0	IUEK	WALE	K LCV	CL ME	ASUN		VA	OEODE	_ 0/(1)	-7 [[[[] [-,			
18. G							40 HMDI		BEDt	201	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		- DIST	LIRBEI	<u> </u>				19. T	OTALI			CORE	BOXE	s 🤊				
18. GEOTECHNICAL SAMPLES UNDISTURBED: COREDISTURBED: 19. TOTAL NOMBER OF COREDISTURBED: 21. TOTAL NOMBER OF COREDISTURBED: 21. TOTAL NOMBER OF COREDISTURBED: 21. TOTAL NOMBER OF COREDISTURBED: 21. TOTAL NOMBER OF COREDISTURBED: 21. TOTAL NOMBER OF COREDISTURBED: 21. TOTAL NOMBER OF COREDISTURBED: 21. TOTAL NOMBER OF COREDISTURBED: 21. TOTAL NOMBER OF COREDISTURBED: 22. TOTAL NOMBER OF COREDISTURBED															% 9	59) D												
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLEO: 3/13/12 DATE COMPLETED/ABANDONED:																													
васк	FILL T	YPE:		ŗ	GROU	JT		j	BENT	ONITE	Ē	•	Ţ	TEME	ORAR	Y WE	LL POI	NT		V	MON	TORIN	G WEI	LL					
23. NO	TES		BKG	: ≤Ba	ckgro	und		BGS	: Belo	w Gro	ound S	Surfac	е		CPM	: Cou	nts pe	r Min	ute		PPM	: Parts	per N	Million					
			\bigvee	: Fin	st Wat	er En	count	ered			Y	: St	atic W	ater L	evel			NA:	Not A	pplica	ble								
LOC	ATI	ON S	SKET	гсн/	CON	ME	NTS														sc	ALE:		Non	e				
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PROJE	CT.						<u> </u>		<u> </u>	<u> </u>	į	<u> </u>	<u> </u>	•	CC(Y	•	ATUR	E/DAT	E	<u> </u>	<u> </u>			BORE	HOLE	NUME	<u>i</u> BER		<u>!</u>
_			_	_	_	_	•							l	_						_4							w	
	W	VPH	2-1	<u> </u>	7	T									M	<i>lly</i>	W o	1)/	ur	<u>Ur</u>			1.(<u>~\</u>	m	<u>ه - ۱</u>	11 G	

HTRW DRILLING LOG (continued)					ICT E - Louksv™e		BOREHOLE NUMBER FW6mW-012			
I. COMPANY NAME					LING SUBCONTRACTOR			1.000		
SAIC	•			Frontz I			···	SHEET	2	^{of} 3
. PROJECT \mathcal{R}	MA	P-6	ole RI				te 5, Ravenna,	OH 44266		<u></u>
. NAME OF DRILLE		ARC	ON MACKEY/BRYANPH	KLIPS	6. DIRECTION OF BOREHOLE	प	VERTICAL	L BUCLINE	0	DEGREES
NOTES PID MA	KE/MOD	1/1	IMIBAE 2000		PID SERIAL#: 11 Ø - ØØ5	8/6	Colors fro	om Munsell So	II Color Cha	ırt, Rev
WATER	LEVEL	MAKE/MC	Links to the state of the state		WATER LEVEL SERIAL#:		2	000	REV	ED
ELEVATION [EPTH	USCS	CLASSIFICATION O	F MATER	RIALS	SPT DATA	MONITORING		REMAR	KS
	(Feet)				G. (scoul (dul))	(0.5 Feet)	(PPM/CPM)	(Sample	(Ds/Depths	/Core Box/Etc.)
			(0.0'-512') Silty CLAY(CU) soft; dry (wet from Sur little organics troots Trougho	tace)	medium dasticity	See wa				
			104K 616 yellowish brown	<i>بد</i> . ال	ovics / grey, +	10 110	+ recove	<u></u>		
		CL	2.27' Subangular Gravel SI @3.0' SUDASTONE Fragment	eam		data		,		
			@310 SondStone fraguent							
	5		From 3'4' Groves conter	1. 1	to Little Graves					
		0۔ن	(5.2-6.0) Pacity sorted 6 (5.2-6.0) SS tragments 1 wet; medium classe to class	ravel	1+ Sand (GP), some					
	161	VX V	wet; medium dense to dense	inough	not, greenish gray					
	917	134	(10.0' - 10.5') SAUD + SILT (5) Plasticity; schrated, 1048511	arky	en soft low					
			12	9						
		58	((15'-97') SAND (SP); IH ((15'-97') SAND (SP); IH	<u>cik gr</u>	my, sut content? W de	ptn_				
	10	5M	(9.7'-9&') Growel. (9.8'-10:2') SAND (how) W)	Silt	(Sm); little Gravel					
	}	Z	(9.8'-10.2') SAND (fine) W/ 10BS/1 Whish gay; day; can content of w/ depan	Apjd?	sand+gravel					
	12 ML (10,2'-12,0') SICT (MC); 1 12 ML (10,2'-12,0') SICT (MC); 1 12 ML (10,2'-13,2') SICT (MC); 1			V 23 V I I	ו ארא אוא אוא וו					
				P), U	net, loury/idane					
			(13.2-13.4) Fire Sand Sean							
	45									
	15	MU	(13.4'-14.8') SICT (MV); So mudium grained Sound Lense	s thi	LONDON CHAT 1815A)					<u> </u>
			(1418,-17.21) SUMD (CM) LINE					-		
		SM	(2npionorgy): 16 usrs occasion	<u> </u>	and thoughout, during					
	17,5		(Subjected); lenges ofcoors dy 10 damp (Dille Introduction of SS Grave);	tio	ing downword					
			"17,5" SANDSTONE; day; hard							
	20		AUGOR ROWSM #20/1N	STAL	L CASING		AMERENT			
			(200'- 40.0') WHITE			•	(1). (b)	201-3	010	3/19/12
		رر	wellow homen comes -	المار الماريخ	Me lose Willowh		PPM	6.151/10	0' 6	2 1240
			yellow brown; some of few pubbles moughout;	الا المام سلومارور	y, resincepin			10000.	Foll OU	3/19/12 9, 1240 t-only to 20 1.5)
			ten brooms Munding,	DVET				11	0.15/1.	.5)
			0,0010		- () ()	}		10	70	/
	25		By 25 SHOUSTONE 1	5 W1	HITE (NO Kellowbrawn	/				
			26.6-27.0' FEW PART	NGS					1	11
					0.0	265	<u> 365'</u>	03/19/12 @1315		
						ppm	10.01/	0,01	<u>(F1313</u>	
							,			
	30		@30' few white Subnanded	l ne	bbles					
OJECT	[<u>.</u>	COU TEN WHITE JOHN COL	· V	GEOLOGIST SIGNATURE/DATE Amanda In		119/12	BOREHOLE	NUMBER	<i>2</i> . 4 =
RVAAR	01	ol.	RT		(Imanda In	entr	1.1116	FW	Gmw	1-01Z

HTRW DRILLING LOG (continued) 1. COMPANY NAME					ICT E - Louisvi∃e			FW6			12
1. COMPANY N	AME				LING SUBCONTRACTOR						
SAST	,			Frontz	Drilling			SHEET	3	OF	
3. PROJECT	AULI	7 /	VIDE GROUNDWATER RI	`	4. LOCATION RVAAP	8451 State Ro	ite 5 Ravenna,	OH 44266			
5. NAME OF DR	LLER /	MRO	N MACKEY		6. DIRECTION OF BOREHOLE		VERTICAL	INCLINE	D	DEC	GREES
7. NOTES PID			MINIRAE 2000		PID SERIAL#: 11 0-0058	16	4	m Munsell So	_		
WA	TER LEVEL		` !		WATER LEVEL SERIAL#:		20	200	Rev	ET)	
ELEVATION	DEPTH	USCS	CLASS/FICATION OF	MATER	RIALS	SPT DATA	MONITORING		REMA	VRKS	
	(Feet)		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			(0.5 Feet)	(РРМСРМ)			hs/Core B	
		55						PERME			TEST
								1200	Ka	92E	2N/ (
								Rema	.ΨS Jen F	7.54 RUN	.φω`) Δ\×)
										-	
	35		C35,75 PAYENNG								
			35.8 - FEN WHITE PEBI	BLE	·\$		36540	36.51	- 40	0'	
							365'40' O.O	2.79	51/3	5'	
			~37 Ft WHITE + UGAT G	PAY	IN COLUZ		PAM	03/19/	112 (d. 13	30
				, , , , ,				<u> </u>	,,,,	<i>2</i>	
	40										
	-		Brance Transcor		- 110 67 1010						
			BORING TERMINATED	#7	907/6W						
					/_				-		
	45										

	50										
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	55										
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		ŀ									
ROJECT	60		• • • • • • • • • • • • • • • • • • • •		GEOLOGIST SIGNATURE/DATE	19/12	BOREHOLE NUMBER				
RUHAF	Partecto	D	•		GEOLOGIST SIGNATURE/DATE	1 - 1 .	1110	FW			012
WOLLTA	"WW	117			Umanua -	wher		,	- •••		



Recorded by: <u>Amanda</u> <u>Inentin</u>

QA performed by:_____

	DISTRICT							BOREHOLE NUMBER			
HTRW DRILLING LOG	USACE -	- Louisville	•				F	WGn	w l	113	
1. COMPANY NAME	2. DRILLING	SUBCONTR/	ACTOR				T		l		
EDM	Frontz D	rilling					SHI	EET 1	OF	3	
3. PROJECT RVAAP WW R.I		4. LOCATION	1111	AAP 8	451 Stat	e Route	5 Ra	venna,	OH 44	266	
5. NAME OF DRILLER JUE TETER		6. MAKE/MOI	DEL OF DR	ILL CM	E550	1_					
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOL	E LOCATIO	™ PW3	34 @ l	Jet St	oraa	e			
4.5.4.5.4		9. SURFACE	ELEVATIO	N/DA I UI	™ /()57.10	1				
21/2199		10. DRILL DA	TE/TIME	START	ED:3.20	12	COMP	PLETED:	04 lu	9/12	,
N SERIES ROUL LORE SAMPLUR		15. DEPTH G	ROUNDWA	ATER EN	ICOUNTERI	Ched (W)	160	MPI ETION	J		
12. OVERBURDEN THICKNESS		lo. DEI III I	0 1111/2/0			-		,,,,	•		
13. DEPTH DRILLED INTO BEDROCK 23.5 FT		17. OTHER W	VATER LEV	EL MEA	SUREMENT	S (INLCLUD	E DATE	E/TIME)			
14. TOTAL DEPTH OF BOREHOLE 34.5		1									
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA	DISTURBED); -		19. TO		R OF CORE			1		
20. CHEMICAL SAMPLES CHEM: RAD:	NA	OTHER: -				21. TOTAL			٠.	35	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3.20	12		DATE	COMPL	LETED/ABA	NDONED:	04/4	09/12	; 16	15	
BACKFILL TYPE: GROUT FENTONITE	TEMP	ORARY WELL	POINT		МОМ 🔼	TORING WE	LL				
23. NOTES BKG: ≤Background BGS: Below Ground Surface)	CPM: Count				: Parls per	Mililon				
: First Water Encountered : Sta	tic Water Le	evel	NA:	Not App	olicable						
LOCATION SKETCH/COMMENTS			sc	ALE:	Non	е					
			l						1		
1 1 2	<u></u>	haman house h			Z			****************	***************************************	······	/14*14**
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				L.L.			 		ل	'	
				/					MC 1		
	7+1	contra	nce/					100UM	4		
PROJECT	GEOL	OGIST SIGNA	TURE/DAT	E.			BORE	HOLE NUM	IBER		
RVACAPLY RI	Q	m anc	la	Tres	tna	4/09/12	1	WO	mu	2-02	<u>'3</u>
						•		$\varphi \in \mathcal{N}_{\mathcal{F}}$	· 1/2	;	

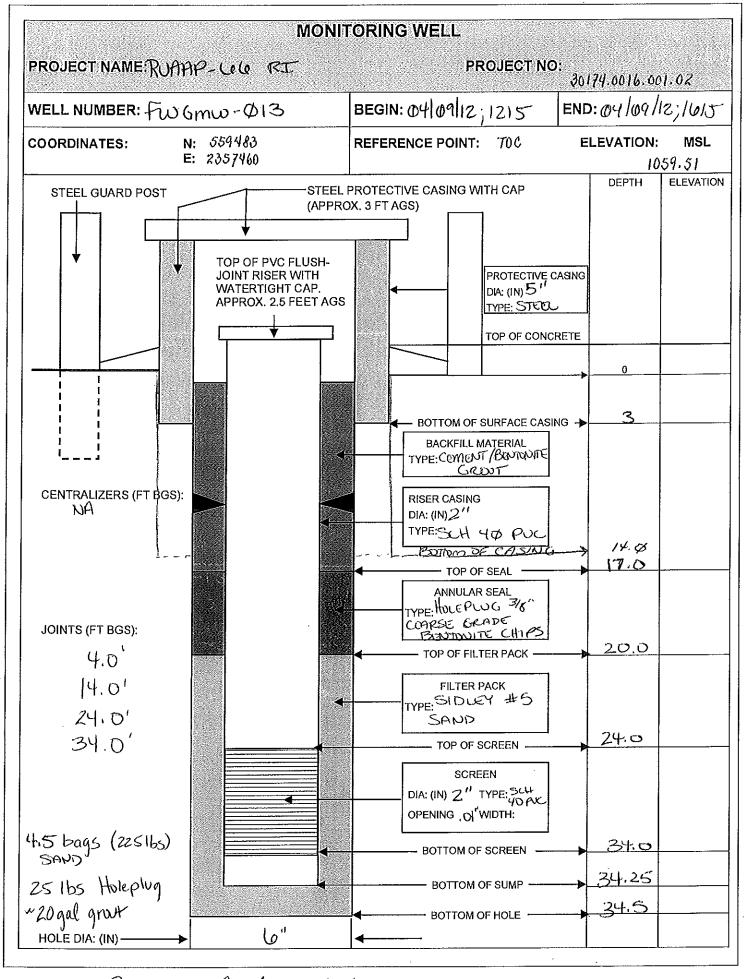
HTRW	DRILLIN	G LO	G (continued)	DISTRI	CT - Louisville			BOREHOLE N	IMBER へ かかし	0013
1. COMPAN	Y NAME			├	LING SUBCONTRACTOR				<u> </u>	
EQM	Λ			Frontz [Oriting			SHEET	2	°5
	RVAAPL	olo R]	8451 State Route		OH 44266		
5. NAME OF	DRILLER DE	TOTAL	/ AARON MA		6. DIRECTION OF BOREHOLE	ANT OYDINI	RTICAL	L INCTINED		DEGREES
7. NOTES	PID MAKE/MOD	EL:SIR	MAKKET ONLOWN INS MSA/MINI RAE 2000		PID SERIAL#: 12-1841 1)	\$-00581C	Octors fro	m Munsell Soil C	olor Cha	rt, Rev
-	WATER LEVEL				WATER LEVEL SERIAL#:					
ELEVATIO	N DEPTH	uscs	CLASSIFICATION OF	MATER	IALS		ONITORING	Anber (Sample ID	REMARI	රී
	(Feet)) I				ерм)срм)			
			topsoil top 4" remain Silty Clay Frace Woltheolo SAME trace roots@top dec. Me	ine		2,3,5,1	, 0	0.2ft	اعال	<u> </u>
	48.00	a	Sity Clay Frace Mottedo	<u>jai</u>	1 lowplasticity	2=14/24				
			trace roots@ top dec. Me	ttle	uldepth	१८,१८/५		<u> </u>	-,	1622
			- ·	•	•	R=21/21	<u></u>			
·	5		Sandy lay grange brown to	^QC(1	ralifragments must	4,5,7/4	0,5	4-66	+	1630
			hardtoo. @20 sandseambine	Pres	namiler Sandyckun	P-33/34				
		80		na l	oroun tracerockfrag	9,9,0,10	0.2	6-84	7	1639
) -	MIST INC 824 W CLOTH D	a Han	15" Wonawlar graves	R=24/24				
		8C	Sandy Clay orange brown;			2350	0	8-10F	· ·	1645
	10	41)	Soft pottom 4" = Sand loose	<u>است</u> اسک	nothed clay + sai	18= Ku			•	
		3.0	0. 1 k 11 Ch 4 can also 1.	<u> </u>	was INTIP 310	31128,5°C	10	10-12	FJ.	1656
			Santy Suly Clay orange brown fre	<u>regie</u>	hard i			101-		1000
			12"bottom weathered shate b	utt (rgiay or time gray-no	40-5%		12-14 4		1005 (4/5/12)
			Stile, gray, dajey, brittle			R= 8/24		_14-17/	<u>, , , , , , , , , , , , , , , , , , , </u>	1000 (XQ14)
	15		100 1 100 2) CHAIR	1000	\		O.O	15'-20	, ,	14/09/12
	15		(15.0'-18.3) SHALE	(<u>></u> +1	1) Micacions	1	mbent	Days a	<u>. (</u>	7/50
•		SH	gray to tan; tew i	6/1/2	MINO DILLA	35		<u> </u>		11/210
			gray to tan; few?	<u> 185</u>	is Drille Walph			<u> </u>	<u>- 7000.</u> 78 j	
			106.5 - 24.4) (XiYK)	100	17711167				,	
-		SH	micricas; day com	<u> 40</u>	etent; wit ~20'b	ا در				.1
	20		N20 SS+ SH INTERS	<i>छ)</i> ऽ	, WET	4	O.O	20'-30	?, b,	410912
						[1]	molecti (<u>अ।कड्ड</u>	7.	41/10/01
					, , , , , , , , , , , , , , , , , , ,	,				
_	25									
						-				
						·				
	29	4				.			_	
	30 8	53	(29.4' -34.5') SANDS	SUTT	(ss) 14ht gray: For	SH DOULY	795 : 84	·et		
PROJECT			(29.4' -345') SANDS		3-20-12 CULL ASE	20-121		BOREHOLE NU	MBER	013
RVAAP	lele RI				O4109112 amanda	Irento		TWU	mw	010

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HTRW	DRILLIN	IG LO	G (continued)	DISTRI	CT - Louisville		FWG mw - 013				
1. COMPAN	Y NAME				LING SUBCONTRACTOR						
SALT	ر			Frontz [Orilling	· · · · · · · · · · · · · · · · · · ·		SHEET 3 OF 3			
3. PROJECT	RUAP	rp- 6	16 RI		4. LOCATION RVAAP		rte 5 Ravenna,	OH 44266			
5. NAME OF	DRILLER A	ARAK) MACKEY		6. DIRECTION OF BOREHOLE	(,	VERTICAL	INCLINED DEGREES			
7. NOTES	PID MAKE/MOL	DEL:JVI	MIRAE 2000		PID SERIAL#: 11 \$\phi - 00.5			om Munsell Soll Color Chart, Rev			
Į.	WATER LEVEL				WATER LEVEL SERIAL#:						
ELEVATIO	ON DEPTH	USCS	CLASSIFICATION OF	MATER	NALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)				
			cont from pa 2				0.0	30.0'-34,65			
			(29.4'-34.5") SANO	570	NE (SS):		Ambiert	04/09/12 @1142			
			light day four shale	۰٬۰۰۰	rtions must		THOULT	04109112@1142			
			light gray; few shale	- μ	ar migs wer			1,071.0			
	35 34	Ĭ	BORING TERMINATED Y	^	211 = 65 20.5						
			DAYING LEKIMINMED I	41	3413 11-1203						

	40										
	45										
	50										
_											
	55										
				<u>.</u>			_				
	60										
PROJECT					GEOLOGIST SIGNATURE/DATE	<u> </u>	109/12	BOREHOLE NUMBER			
RUA	AP-6	le k		GEOLOGIST SIGNATURE/DATE 04/09/12 BOREHOLE NUMBER FWG mw- \$\Phi\$							

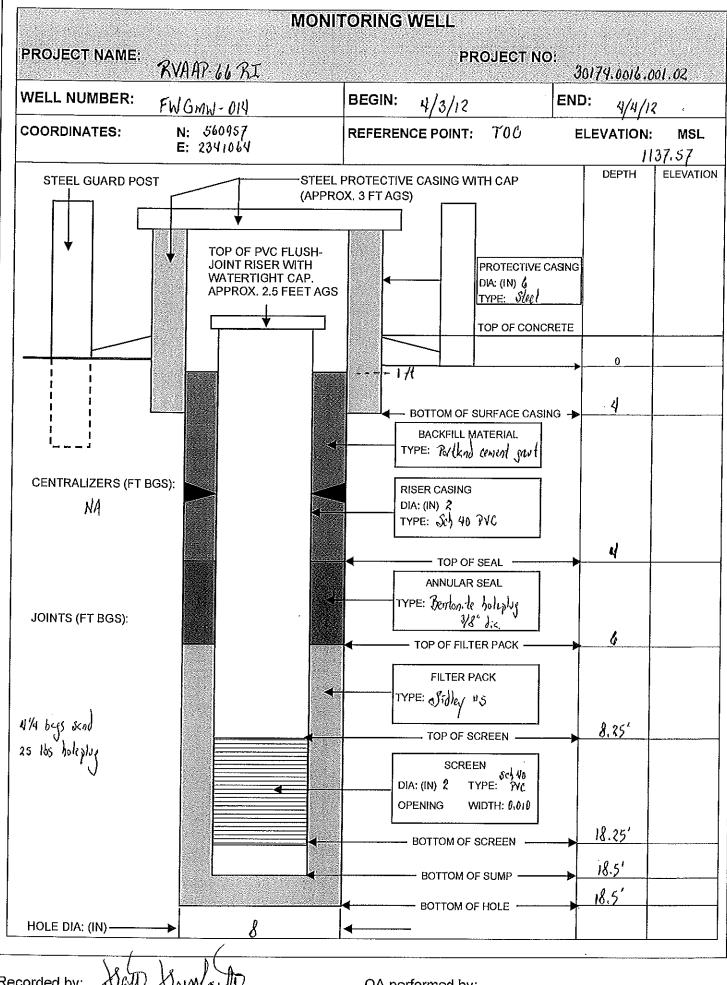


Recorded by: amanda Irenton 04/07/12 QA performed by:_

	DISTRICT BOREHOLE NUMBER
HTRW DRILLING LOG	USACE - Louisville FWG MW - DIV
1. COMPANY NAME	2. DRILLING SUBCONTRACTOR
EAM	Frontz Drilling SHEET 1 OF 3
3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266
5. NAME OF DRILLER JOE TOLV	6. MAKE/MODEL OF DRILL CME 55
7. SIZES AND TYPES OF SAMPLING EQUIPMENT	8. BOREHOLE LOCATION PW-35, worth of blind Monete useds
4/4" IS 454	9. SURFACE ELEVATION/DATUM 1/35.00
2" × 24" 57.4 57001	10. DRILL DATE/TIME STARTED: 4/3/12 COMPLETED: 4/3/12 15. DEPTH GROUNDWATER ENCOUNTERED Q //
	16. DEPTH GROUNDWATER ENCOUNTERED 8 // 16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION
12. OVERBURDEN THICKNESS	NA
13. DEPTH DRILLED INTO BEDROCK	17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME)
14. TOTAL DEPTH OF BOREHOLE 18.5 //	NA
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA	DISTURBED: 19. TOTAL NUMBER OF CORE BOXES N/
20, CHEMICAL SAMPLES CHEM: AAD:	NA OTHER: 21. TOTAL CORE RECOVERY %
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 4/	· —
BACKFILL TYPE: GROUT BENTONITE	☐ TEMPORARY WELL POINT ☐ MONITORING WELL
23. NOTES BKG: ≤Background BGS: Below Ground Surface	
: First Water Encountered : S	Static Water Level NA: Not Applicable
LOCATION SKETCH/COMMENTS	SCALE: None
	A CONTRACTOR OF THE PROPERTY O
	A American American American American American American American American American American American American
	Alexandra Alexandra Alexandra Alexandra Alexandra Alexandra Alexandra Alexandra Alexandra Alexandra Alexandra A
	1 \$ 1 / 1 / wellend
	The state of the s
PROJECT	GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER
RVAAP-66 RI	Seto Spendedo 4/3/12 FNGmw-014

HTRW DE	RILLIN	G LO	G (continued)	DISTRI	CT - Louisville			BOREHOLE N	umber G MW - 014
1, COMPANY NA	1/5				LING SUBCONTRACTOR	<u></u>		IN	
	JM			Frontz E			_	SHEET	2 OF 3
3. PROJECT	RVAA	P-66	RI		4. LOCATION RVAAP	8451 State Route		OH 44266	
5. NAME OF DRII			Telel		6. DIRECTION OF BOREHOLE	_V 둭	ERTICAL	r inclined	DEGREES
, NOTES PID	MAKE/MOD		51/ius MSA		PID SERIAL#: A2-1861		Colors fro	om Munsell Soil (Color Chart, Rev
WAT	ER LEVEL	MAKE/MO	DDEL:		WATER LEVEL SERIAL#:				
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATER	<i>i</i> als	"	ONITORING		REMARKS
	0-2		Next 5" Fill, blk, skp, dry, Lower 10" Sand, yellow- brn, s	, Uv	nsly	3-11-		0-2 ft	; 1317
			Next 5" Fill, blk, skp, dry,	CA)ds	10-6			
		SN	Lower 10" Sand yelland bry s	xadsle	ne trees, day,	R= 18/24			
			med-picined						
	/ 8′		0						
	2-4	ડા	Und 2" Wet sad I/ sadstone	Jac.	soft yellas. bis	4-6-		2-4/1:	1333
		n	Uper 2" Wet sand w/ sandstone Remainder Sitty cky, beg wy fe Smill gravel, dang, mod.	en ele	w molles les	6-7			
			Soull excel deals mad	SIGH	, , ,	R: "/24			
			(1) (1) (1) (1)	 //					
	18	CL	Sitioks beaut act notles		ou swill acres	3-5-		4.6/2;	1343
	4-6		Silly chy, ben w/ gray mother) , / `	Jan Jan Jan Jan Jan Jan Jan Jan Jan Jan	4.7		, , , , , , , , , , , , , , , , , , , ,	
			<u> </u>			R= 24/24			
						7-7	*****		
	6 -8	01	Silly cky, as above, lock in	Shoe		6-6-		6.8/1:	1348
	<u>4.0</u> 8ر	L.C.	1) 17 CEY 23 GUOVE , 10EY 19	<i>970</i> C		8-11		, , , , , , , , , , , , , , , , , , , 	10.0
						B: 5/24			
						11 /29			
	8-10	(بر	Wales beaut	0(c) n	adles des end	2-6-		8-10-12	1358
	טורס	CC	e sull result that sold		101(1) 1 2 2 10	T		0 10/6	
-	28	0.14	Upper 8" Silly clay, bry usly of small gravel, vet, soft laver 7" Silly send of gravel gravel	1	not bac	14-14 R= 15/24			
		OM	LOUSE I DIRY SENO PRIVEL	<u>O(V)</u>	, we (, 711-ce)	1 /29			
			9K111ED, 70011Y DOTCED						
		A . A	c l l l l l l l l l l l l l l l l l l l			2.0		10.12 11	+ 1//AG
	10-12	GM	Sand, but, forces gained, s	onte	grover, few sitt,	3-10-		10-12 A	/ /403
	95/	1.41	Wet		. // ,) .	0-19/20			-
	25	ML	hase 2" Endy sitt, gray, i	JET ,	Soft, for granes sand	η· /44			
	12-14		Used 13" Sem 15 holde	ر مرد ا	xbly cells down	10-11-		12-14 /1	: 1412
	17 1	Mζ	lower 11" Sill handed to	101	the sent tills			, ,	
			Upper 13" Sond, as befole, Lower 11" Silt, ben-graf, w	··· ,	1-10 8010	7-21 R= 24/24			
	36′		<u> </u>						
ROJECT	-				GEOLOGIST SIGNATURE/DATE		1 1 2000	BOREHOLE N	JMBER
210	AP- 66	ЯТ			Saw Gunha	Ho W	3/12	FWGM	ius - 014

HTRW D	RILLIN	G LO	G (continued)	DISTRI	CT - Louisviile		BOREHOLE NUMBER FWG MW . 014				
1. COMPANY N	VAME				LING SUBCONTRACTOR						
	QM			Frontz (Dri≅ng			SHEET 🗡 3 OF 3			
3. PROJECT	RVAA	7-66	31		4. LOCATION RVAAP	8451 State Rou	te 5 Ravenna,	OH 44268			
5. NAME OF DR		Voe			6. DIRECTION OF BOREHOLE		(ERTICAL)	INCLINED DEGREES			
7. NOTES PIE	D MAKE/MOD		Sirius MSA		PID SERIAL#: 42-1841		Colors fro	m Munsell Soll Color Chart, Rev			
W	ATER LEVEL		•		WATER LEVEL SERIAL#:						
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATER	IALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)			
	14-16	SP	Und 8" Send bla to-cls a	(aine)	few acrel wel	5-14-		19-16 /6: 1425			
		GM	Renkindel Sind & daulet dal	914	vel to 2", some						
_			Renkinder Sind, bin, forces of Renkinder Sind of gradel, graf Silt, wet	, 0	·	27-28 3=20/24					
								 			
	38 16-18	SP	Uper 8" send, bra as above	l		10-12-		16-18 ft; 1441			
	10.10	GM	Next 10" Sitty gravel, gray,	<i>];{</i> [[e	send, wet, gavel	24-41					
			to 2"		,	B= 22/24					
•		GP	Uper 8" sind, ben, 25 chover Next 10" Sitty gravel, graf, to 2" Lower 4" sind gravel, graf, 1	æł,	med-cus send						
	40				1 - 101-10						
								1.0.1.			
	AS										
			1. ANALONIA -								
	,60°										
						1					
·	55		Anna								
	-										
	50										
ROJECT $\mathcal{R}^{ec{\gamma}}$	VAAP-	46	RI		GEOLOGIST SIGNATURE/DATE	(do 4		FNGMU-014			



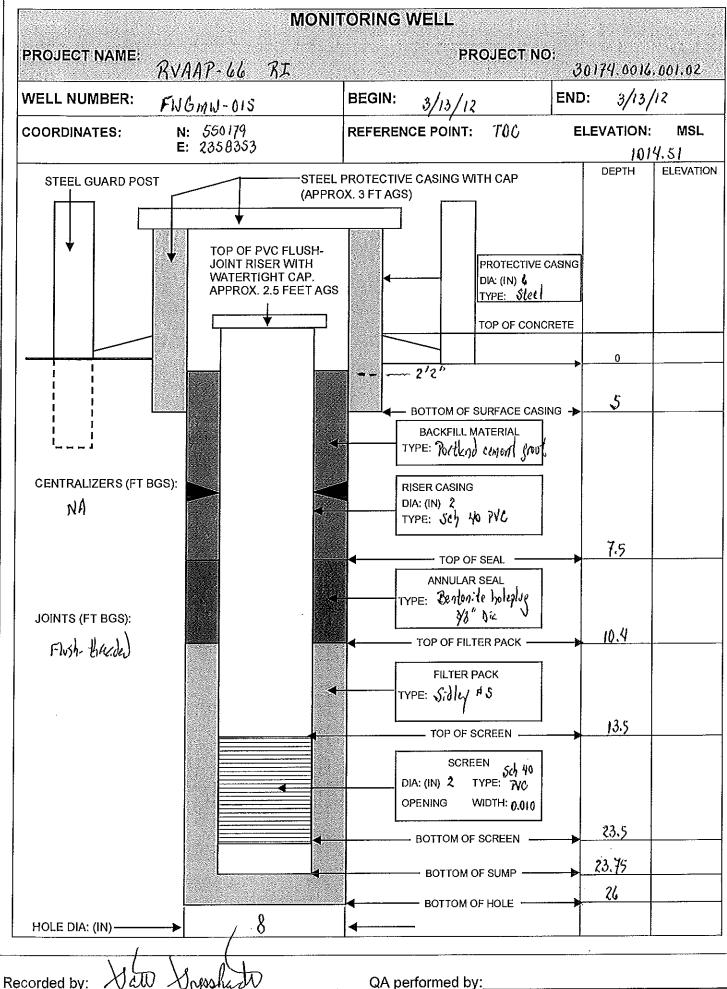
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QA performed by:___

HTRW DRILLING LOG 1. COMPANY NAME EQM 3. PROJECT RVAAP-66 RT 5. NAME OF DRILLER JOL TOLV 7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 14 13 45A 2" X 24" S7 1:1 57000 12. OVERBURDEN THICKNESS 13. DEPTH DRILLED INTO BEDROCK 14. TOTAL DEPTH OF BOREHOLE 18. GEOTECHNICAL SAMPLES LINDISTURBED: ST	USACE 2. DRILLING Frontz D	4. LOCAT 6. MAKE/ 8. BOREF	TRACTO TON MODEL HOLE LO	RV						BORE)15			
1. COMPANY NAME EQM 3. PROJECT RVAAP-66 RI 5. NAME OF DRILLER JOE TEN 7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4'/4" IN HSA 2" X 24" S7 1:1 S7000 12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE 246	2. DRILLING	4. LOCAT 6. MAKE/ 8. BOREF	TRACTO TON MODEL HOLE LO	RV							FV	1Gn	2W-6)15			
EQN 3. PROJECT RVAAP-UC RI 5. NAME OF DRILLER TOL TOW 7. SIZES AND TYPES OF SAMPLING EQUIPMENT U'/4" IN HSA 2" X 24" S7 1: U S7000 12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE		4. LOCAT 6. MAKE/ 8. BOREF	TON MODEL I	RV										FWGMW-015			
3. PROJECT RVAAP-UG RI 5. NAME OF DRILLER JOL TOW 7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4 IN HSA 2" X 24" S7 1:1 S7000 12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE 246	Frontz D	4. LOCAT 6. MAKE/ 8. BORES 9. SURFA	MODEL I			454				l su	EET	1	OF	3			
5. NAME OF DRILLER JOE TOW 7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4 IN HSA 2" X 24" S7 1:1 S7000 12. OVERBURDEN THICKNESS 13. DEPTH DRILLED INTO BEDROCK 14. TOTAL DEPTH OF BOREHOLE 246		6. MAKE/ 8. BOREF 9. SURFA	MODEL I			454			. ,		N		<u> </u>	·-			
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4/4" I) HSA 2" X 24" S71: (S7001) 12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE		8. BOREF	OLE LO	OF DR				e Ro	ute 5	Ra	venr	na, C	H 442	66			
12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE 24		9. SURFA		CATIO		_	55		,1	1 1	1	52	<i>.</i>				
2" X 24" S7 1:1 S7001 12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE 246			CE ELE			<u>) N</u> М	<u>-37</u>	012.	<u>5t o</u>	<u>/ ()</u>	<u>1410</u>	TW	(1				
12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE		10, DRILL	DATE/T		STAR		3/1			COME	PLETE	D:	3/13/1				
13. DEPTH DRILLED INTO BEDROCK 14. TOTAL DEPTH OF BOREHOLE 24		15. DEPT	H GROU	INDWA	TER E	ICOU	٠, ٠	<u> </u>	14	-			7.07.				
13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE 24		16. DEPT	H TO W	ATER/E		D TIM	E AFT	ER BC	REHO	LE CO	MPLE	TION					
14. TOTAL DEPTH OF BOREHOLE 24					N/1												
4.10		17. OTHE	R WATE	RLEV			MENT	S (INL	.CLUDI	E DATE	E/T(ME	<u>:</u>)					
		<u> </u>			N <i>H</i> 19. TO		JUMBE	R OF	CORE	BOXE	S	- λΛ					
ORDIOTORBED.	DISTURBED	OTHER:			13. 10	17161			OTAL O			VERY	% N	<u> </u>			
20. CHEMICAL SAMPLES CHEM: NA RAD: 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/13	NA 3/12	OTHER:		DATE	COMP	LETE							14	' !			
BACKFILL TYPE: GROUT BENTONITE	r	ORARY W	ELL PO						IG WE	•	, ,						
23. NOTES BKG: ≤Background BGS: Below Ground Surface	· <u>·</u>	CPM: Co	ounts pe	er Minu	ıte		PPM	Parts	s per l	dillion							
: First Water Encountered : Sta	tic Water Le	evel		NA: i	Not Ap	olicat	ole										
LOCATION SKETCH/COMMENTS							scA	\LE:		Non	е						
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RVAAP-66 BI	GEOL	OGIST SIG	NATUR	1	1					BORE	HULE	NUME	3EK				

		DISTRICT		BOREHOLE NUMBER				
HTRW DRILLING LOG (continued) USACE - Loutsville				FWGMW-015				
. COMPANY NAME		2, DRILLING SUBCONTRACTOR	·					
EOM		Frontz Driffing		2				
PROJECT RVAAP-66		4. LOCATION RV.	AAP 8451 State Roule 5, F					
. NAME OF DRILLER 701	Tele/	6. DIRECTION OF BOREHOLE		CAL INCLINED DEGREES				
NOTES PID MAKE/MODEL:	Sirius MSA	PID SERIAL#: 12-1861	'	Colors from Munsell Soil Color Chart, Rev				
WATER LEVEL MAKE/N		WATER LEVEL SERIAL#:						
ELEVATION DEPTH USCS	CLASSIFICA	TION OF MATERIALS	f I	ITORING REMARKS				
(Feet)				M/CPM) (Sampla IDs/Depths/Core Box/Etc.				
0-2 CL	Silty clay, dx bin w/ 10 Sinkly gravel, led stiff	ools in upper 4", ten		0 D-2/t; 0831				
	Sight pravel few	eray modles dam, mod.	B= 19/24					
	st://0	<u> </u>						
	"							
کتر	that 4" not soll is	Situ des de bo	3.7.	2.4/1: 0839				
2-4 CL	Revised Sillian Sea	Sitty clay, IK beg w/ gray along vertical freet, well gravel	5.9					
	Achiented Orles Con Ors	W HAY KIND VOC VER FINCE.	5-9 R= 19/24					
	1 11 VI 1 1 1 1 SI	KII IKWEI *	<u> </u>					
			5-9-	0 11 11 11 11 11 11				
4-6 CL Sitty clay, bon is/ fee		eral mothes 2100 vert.		0 4-6/1: 0846				
4-6 CL Sity clay, bon is/few six.	player, dry, stiff	12-17						
	,	<u> </u>	R= 21/24					
0-8 CL	Sitty chy, bon w/ kw	graf alono vert. fractives,	15-19-	0 6-8/1: 0851				
	the inn oxides of	1. 5(.)	21-22					
18	, ,		R = 23/24					
8-10 CI	Sty del de ul del	-61 does will deat los	5-7-	0 8-10/1. 0903				
8-10 CL Sitty ck/, bry w/ fe)	Original Constitution	1 (5.4)		<u> </u>				
	014, St. / - MCRES	1)	11-13 R=20/24					
			17- /24					
28'		. 1, 1 //		0 10 11 11 0010				
10-12 ML Chypy sitt, sra, few of	124, 814, stiff		0 10-12/4; 0910					
		7-8 R= ²⁴ /24						
		R= 1/24						
12-14 ML Clayer Sitt, Day Jew gray		slong flectures few in	9-11- () 12-14 /l; 0916				
12-14 ML Cleyey Sitt, Son, Jew gr. Oxides, dry, stiff	0'	15-16						
	// // //		75-16 3: 24/24					
20								
ROJECT		GEOLOGIST SIGNATURE/DA	<u> </u>	BOREHOLE NUMBER				
Q1/100 11 0-		Seto Spent	An also	2 FNGMW-015				
RVAAP-66 RI		1 2/200 2/1000	www 3/13/1	K WOMP DIO				

HTRW DRILL	NG LC	OG (continued)	DISTRICT			BOREHOLE NUMBER		
USACE - LOUISVING			2. DRILLING SUBCONTRACTOR			FWGMW-015		
EQM Frontz Drilling					SHEET 2/3	OF 3		
	AP- 66	RI	4, LOCATION RVA	NP 8451 State Route 5	Ravenna,	OH 44286		
5. NAME OF DRILLER VOL Tele/			6. DIRECTION OF BOREHOLE	6. DIRECTION OF BOREHOLE (ERTICAL)				
7. NOTES PID MAKE/N		Sivius MSA	PID SERIAL#: 42-1861		Colors fro	m Munsell Soil Color C	hart, Rev	
WATER LEV	EL MAKE/M		WATER LEVEL \$ERIAL#:					
ELEVATION DEPT	H USCS	CLASSIFICATIO	ON OF MATERIALS	SPT DATA MO	ONITORING	REMA	VRKS	
(Feet	· .			(0.5 Feet) (F	PPM/CPM)	(Sample IDs/Depti		
14-16 ML Upper 16" Silt, bro, wet		, killy soft jew cky	2-4-	<i>D</i>	14-16 A;	0931		
14-16 ML Upper 16" Silt, bro, wet Lower 8" Chyley silt, gray	- bin day mod stipl	6-8						
	, , , , , , , , , , , , , , , , , , ,	R= 24+/24						
:								
38		Shelby Tube		R= 24/24	_	16-18/t; 10	11.3	
16-18				Shelby Tube				
						FWG FNGS!		
18.2	Λ M)	Chiles off and when	well in word 2" borner	2-2-	Ø	18-20 ft; 1	10.28	
18-20 ML Chaper Sill gray w/ 300	Carde one play by on	1. 1. d.	3-7	~	10 30/0, 1			
	graf, Singhily 31160	16 101) [R= 18/24					
			17- /27					
	41		111 / 1 //	Nt 3/ 1/2MAN - 2-3-5		22 11.	.A27	
20-22 CL Sity day, gray, moist,		Ditty Cly, gray, moist, 7	oliable, feitly soft		0	20-22 ft;	1007	
		, , , ,		R = 23/24				
185								
22.20	1 CL	Sity day, gray, few for	send, moist, stightly	2-4-	0	22-24 ft; 1	043	
		Acable, failly sof	<u> </u>	4-6 R=21/24				
			R=2/24					
24-26 CL Sity clay eray little for-	new send moist pliable	3-2-		24-26 ft 1	131			
	teilly soft		3-5		, ,			
		B= 17.5/24						
58	-							
				 -				
ROJECT			GEOLOGIST SIGNATURE/DATE			BOREHOLE NUMBER	<u> </u>	
	1 0-							
RVA AP-6	6 1/		Scto Synte	W 3/13/	77	FNGMW-	VIO	

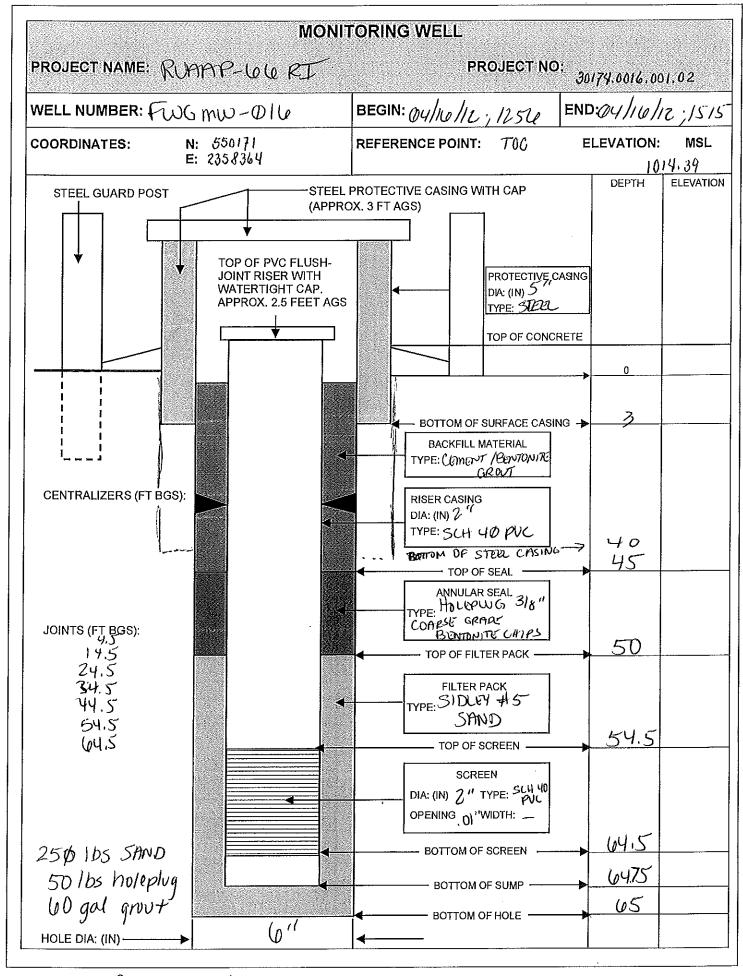


Recorded by:__

HTRW DRILLING LOG								DIST	RICT						***				BOR	HOLE	NUM	3ER						
HTR'	W I	DR		IN	G L	.00	3					US	ACE	- Loi	livaiu	ю							Fi	<i>ن</i> (> m	w-	ϕ I	6
1. COMPAN	VY NAI	ΛE										2. DR	RILLING	SUB	CONTR	RACTO	R										_	
SA												Fro	ntz D	rilling	g								SH	EET	1	OF	<u>ک</u>	
3. PROJEC	TPC	AA	P-10	0(0	RI									1	CATIO				8451	Stat	le Ro	oute	5 Ra	venr	1a, O	H 44	266	
5. NAME O	F DRIL	LERY	MR	0N	m	AU	ረደዓ)							KE/M(M	₹ _	150	<u> XC</u>						
7. SIZES AI	ND TY	ES Ó	SAM	PLING	EQUIF	MENT								8. BC	REHO	LE LO	CATIO	N A	dm			<u>rea</u>						
	2"	× 2	, ,	SP	JT	SF	200	<u>7</u>						l	IRFACI						011.							
	හ	74"	ID	, H	5A	15									RILL D											4/10	<u> </u>	<u>'</u>
							OR	E SI	ስነነነ	UE	R				EPTH													
														16. D	EPTH	TO WA	ATER/E	ELAPSI	ED TIN			OREHO	DLE CC	MPLE	HON			
12. OVERB					<u>30.</u>												5151	=() ()*	101101	N		CLUC	F D&7	CHUI				—
13. DEPTH					2	8.	<u>2'</u>							17.0	THER	WAIE	K LEV	EL ME.		_		,CLOD	E DAT	E/ HMG	=)			
14. TOTAL					65	5_			. ,					<u> </u>				10 T		NA		CODE	BOXE	<u> </u>				
18. GEOTE	CHNIC	ALSA LEN	Mbres Wbres	; ;;(:1)	ب			BED: (ØD ·				URBEC					19. 1	OIALI	VOINDE					<u>_</u> VERY	% /	. () (7.
20. CHEMIC 22. DISPOS				1 C		CHE				RAD:		NA		OTH	ER: _		D/		01.555	D/4.5.*	l					ų.	940	
		Or BC				DATE		TED/II			4/1	4/14				1 50.		COM			NDON ITORIN		. ,	,,,	-	2) 19 (0	vere	a)
BACKFILL 1 23. NOTES				GRO			<u> </u>	BENT				J	TEMP		RY WEI				IV				LL. Millior					
23, NOTES			: ≤Ba	•				: Belo	w Gro				_11		i; Gou	nts pe			nliaal		; Part	s per	IVIIIIUI	1				
		<u>V</u>	: Fire	st Wa	er En	count	ered				: 50	atic W	ater L	evei			NA: I	Not Ap	opiicai	ле								
LOCATI	LOCATION SKETCH/COMMENTS																SCA	ALE:		Nor	ıe							
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PROJECT		•											GEOL	OGIS'	TSIGN	ATUR	E/DAT	E	,		ı	1.	BORE	:HOLE	NUME	3ER	/ الماسم	
RIM	bar	1-1	alo	P+	/								[[]	m	am	da	$\langle \ \rangle$	100	tr	~ (ИK	9/12	17	$\mathcal{O}($	mı	<i>V</i> -1	μl	0
<u> </u>	MAP-lele RI									LV	, , U	ov i ci	/VV \	<u> </u>	<u> </u>		_											

HTRW DRILLING LOG (continued)	DISTRICT USACE - Louisy#e			FWGmu	
1. COMPANY NAME	2. DRILLING SUBCONTRACTOR Frontz Drilling			SHEET 2	of 3
	<u> </u>	AP 8451 State Route	5, Ravenna, (OH 44266	
14-011111 0200 12-1	6. DIRECTION OF BOREHOLE	, b √	ERTICAL	INCLINED	DEGREES
5. NAME OF DRILLER APRON MACKEY	PID SERIAL#: 110 - 0		Colors from	m Munsell Soil Color Ch	art, Rev
7. NOTES PID MAKE/MODEL: MI OIRHE 2000	WATER LEVEL SERIAL#: -		73	DOD REV	ED
WATER LEVEL MAKE/MODEL: CLASSIFICATION OF		SPT DATA M		REMA	
ELEVATION DEPTH USCS CLASSIFICATION OF	TINE COLOR		(РРМ/СРМ)	(Sample IDs/Depth	s/Core Box/Etc.)
SEE BORELY FOR FU	UG MW-015 FOR			PID MEASI	Jeonanis:
SOIL DESCRIPTION/PIE				A=Ambie	
FOR 0.0'-24.0',				H= Heads	<u> </u>
5					
10			,		
			<u> </u>		
15				<u></u>	
				<u> </u>	
20					
			hm		
			<u> </u>		
(24.0'- 285) Silty (UK soft damp; high plasho	ay (cu); clk gray joyi	eul)	<u> </u>		
25 SOP+ damp; high plasho	ity ,		A 0.0		
CL @ 26; stiffer; trace Gra	wel	1.1/2.0	H 0.5	C08H	
100 CEW, 3111111, 11,112 CIE		12/2/11	A 0.0		
6851-3087 GOOD (G	m): Subangular 4"-		H Q,4	@ 0 818	
WI Silty + Fire Sand mat	104R4) dark gr	2/4/4/8	$\Lambda \omega \omega$		
285'-30.8) GRAVELG WI SITY + Fire Sand mat +1048313 dark brown; a 1 little shale fragments	ory, mailon wille,	1.0/2.0	H 0.4	@ @848 BOREHOLE NUMBE	
PROJECT	GEOLOGIST SIGNATURE/DA	ATE	mil.	BOREHOLE NUMBE	R
RUMAP-66 RI	GEOLOGIST SIGNATURE/DA	nertm	21/0/12	1 twomi	w-016
		,			

HTRW DI	RILLIN	G LO	G (continued)	DISTRI USACE	CT - Louisv⊠e			BOREHOLE NUM	nw-014
1. COMPANY NA	ME			2. DRIL	LING SUBCONTRACTOR			SHEET 2	
_SP	FC			Frontz (Prilling			5	<u> </u>
3. PROJECT	RUMY	7P-1	ele RI		4. LOCATION RVAAP (3451 State Route	5 Ravenna,	OH 44266	
6. NAME OF DRI	LLER A	HEO	N MACKEY		6. DIRECTION OF BOREHOLE		ERTICAL	INCLINED	DEGREES
NOTES PID	MAKE/MOE	DEL: M	linirat 2000		PID SERIAL#: // 0 - 005	814		om Munsell Soil Cok	
WAT	ER LEVEL	MAKE/MC	DDEL:		WATER LEVEL SERIAL#:			2000 K	evea
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATER	IALS	1	ONITORING		EMARKS epths/Core Box/Etc.)
	4		C30' Fining down warr	d		3/7/8	7 0.0	C026 B0710	m Few OUT
			(30,8 '- 33,0") Fre to ve		rearried SAND	30-32	H 0.4	@ . 09 0 0	
		Sw				9/13/23/29			
			(SW); Saturated; 104Ry medium clense; nor plus	112 V	xe gradionormin	20/26		C-0905	
	35		(32.9 - 33.01) GRAVE SI					C_{0}	
		ML	(33,01-36,8) SILT (m. slightly micaceous; dy; some shall fragments	U) ; S	Some Graver;	7/17/25/28 1.3/2.0 34-36		0.0029	
			Some Shale fragments	1	the for San Vishit	34-36	H 0,2	@0928	
			33.8-34.0' SHALE - Frag	gmen	+	31/37/翌 1	2 0.0		
	 ,		C34' Shale content 4	ocre	asis w/ depth	13/13	H 011		
	·	/SH	(34.81-37,31) WOATH	EREL	SHATE (SH)				
	40					Ŋ	tneedaf	40-60	00925
			dy; prittle-more con		-		(O) (Q	3.21/10	
			AUGER TO 40 + SET (-		Lost	nole core-
			(40.0' - 47.9) SHALE;	_				I CIL	/ OK) ICC
			(40,0 2 4 1, 1) Shree,	uwi io	ging, org, prince				
	45	SH							
	40								
	ų.		(47.9'-65') SANDS	pre	E; very light				11.77
			gray; wet; frew subroun	ded	Grands			04/16/17	. C 0975
	50		7			l¥	Imbent	50-58.1	1125 . C. 0975 . I Jilo
	•		(050) producina water	<u> </u>			0).0	6.41/8	
			C50' producing water 50'-52' Nery Fractured				W) V		1 V
			CO OF YARA TRUCIONED			-			
		-55							
	E F		Intl miletable is	۱٫۰۰۱	1.00			.1 1	- 01
	55		(54' - 54.5') interbedded		1		·, · i	04/16/	1201220
-			(55.51-56.51) Interb		ł	[-]		58.61-6	
			@ Sto.5' Coarser gro	lipe	1 SS		0.0	6.4/6	4
			J					CORE REM	rour <u>o</u>
								FROM GO.	routed wability
	60		Promoa terminator	0	LOS FT YOUS.			testing	
ROJECT			Boring terminated		GEOLOGIST SIGNATURE/DATE	QH)	16/12	BOREHOLE NUME	BER
RUMA	0-10	(0 12	工		amanda 1	rento		FWGn	nw-014



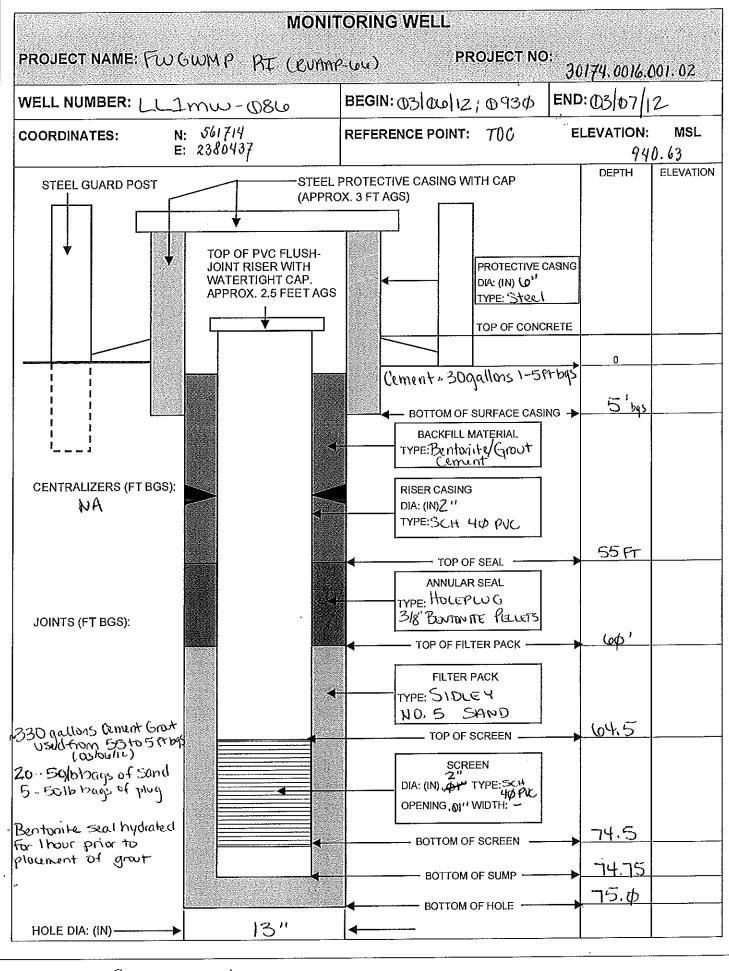
Recorded by: amanda Sentim 04/10/12 QA performed by:

	DISTRICT				BOREHOLE NUMBER	
HTRW DRILLING LOG		- Louisville			LL1mw-08	66
COMPANY NAME	2. DRILLING	SUBCONTRACTOR			SHEET 1 OF L	
SAIC	Frontz D	_			<u>'</u>	
PROJECT FUGUMP RT (RUAAP-UL		4. LOCATION	RVAAP 84	51 State Route :	Ravenna, OH 44266	
NAME OF DRILLER HARDN MACKEY		6. MAKE/MODEL OF	DRILL CN	1E 750X		7.
SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOLE LOCA	ATION FAC		NORTH OF LLIMW	-Ori
2' x 2" Split Spoon 8'4"ID HSAs		9. SURFACE ELEVA		100.00		
8 W"ID HSAS		10. DRILL DATE/TIM	TE STARTE	D: 02/28/12	COMPLETED: (03) (04)	2_
		15. DEPTH GROUN	DWATER ENC	OUNTERED 13,4	l - coupi = ziou	
				TIME AFTER BOREHO		د.ا.ء
OVERBURDEN THICKNESS 77.3 FT					5.0 bgs on oslo	whe
DEPTH DRILLED INTO BEDROCK TOTAL NA		17. OTHER WATER	LEVEL MEAS	UREMENTS (INLCLUD	E DATE/TIME)	
TOTAL DEPTH OF BOREHOLE 77.3 FT		Produced and the second of		W	TROVES	
GEOTECHNICAL SAMPLES UNDISTURBED: NA		: NA	19. TOTA	AL NUMBER OF CORE	BOYES NA-J	
CHEMICAL SAMPLES CHEM: NA RAD:	NA	OTHER: NA			CORE RECOVERY %	
DATE STARTED/INSTALLED: C	12/28/12/1	3 0 0 [DATE COMPLE	ETED/ABANDONED: (03106/12 Crottop off on 03/0	nja
	TEMP			MONITORING WE	ILL O'CO' AND AND AND AND AND AND AND AND AND AND	
NOTES BKG: ≤Background BGS: Below Ground Su		CPM: Counts per	Minute	PPM: Parts per	Million	
: First Water Encountered	: Static Water L	evel	NA: Not Appl	icable		
OCATION SKETCH/COMMENTS				SCALE:	None	
		Popa				ļ
	The state of the s	Por				<u>.</u>
N1	X			1		
		5			Agriculture (marini ferrance)	1
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	5 1	& 12 E	8 0 A 0 2 0 4			and the second content of the second content
	5 11	© LOGIST SIGNATURE	200 A		BOREHOLE NUMBER	

						-	DISTRIC	r				BOREHOLE	NUMBER		1 -
HTRW DRIL	LING	LO	continue (d)				Louisviile			<u></u>	<u> </u>	1mu	<u>)~ (</u>	186
1. COMPANY NAME					• **		2. DRILLI	NG SUBCONTRACTOR				SHEET	2	OF	4
SATO							Frontz Dr								
	ატს	me	RI	(RUP	1-91A	(D)		4. LOCATION	RVAAP 8	3451 State Rout					
5. NAME OF DRILLER	Λ	160		AULE	{			6. DIRECTION OF BOREH	OLE.		VERTICAL	INCLINE	.0	DEG	REES
7. NOTES PID MAK			liniRy					PID SERIAL#: \\\ \ \ -	фφ	5814		m Munsell So			
WATER	LEVEL M.				 			WATER LEVEL SERIAL#:			4	$2\phi\phi$ t) Rev	E	>
ELEVATION DI	ЕРТН	uscs			CLASSIFIC	CATION OF	MATERIA	ALS		SPT DATA	MONITORING		REMAR		
(1	Feet)					0.) (None .	- 46 G	12.0	(0.5 Feet)	(РРМ)СРМ)		IDs/Depths	-	,
			۵۱- '۵.۵) <u>'خ.ه-'۵</u>	`;20{- 4	11/12 11/12	17/30	1) 12	me organics from strong	54.	2/1/3/5	A: (0.Q	A=Am			
			little SX	かんりんかんかん りんとせい	r gravi Naca	ひとし	0150 0150	7: 169K516 yel	WW.	0-2		14-16	adspa	uPI	D (ppn
			dry, me	dium 8	Justic	cht.		3 3		Shirthdis	A: 0.0				
							$\frac{1}{\sqrt{1+\lambda}}$	14 v 1100	sh		H: 0.0				
	5	<u> </u>	PYC NU	147 W	10 107	ROIT	aven	OYR514 yellowi' 1;3tiff.		4/7/9/10					
										1.5/2.0	u: 00 0				
	-		37.0'Tn	troducti	00 of	THILE	Jae	Sand+ Increa Ing. 618 reddish Y	se h	15/13/25/30	1.00				
			Some	60006	55) <u> V (</u>	enjst	144) (1y	<u></u>	1.1/2.0	11 · 0 · 0				
			G.8.01.	TUPLEGOS	<u>xpool</u>	1,116	15 YR	618 reddish Y	ellow	6-18-8	H: (1) .(1)				
-						 -				Sulph.	H: WW				
	10		(10,5'-	13.41):	SICTLY	mO_{i}	som	e Clayitr	ave	8-10	H: 0.1				
			Sand (content	sullis	rd : (vc	 hte 3	urangular fin n plasticity	e Çau	418176	A: 0.0				_
	- 1	ML	NS OF	oy; St	1-44; d	47,70	radion	n plasticity		0.8/2.0	D.0 :4				
	- -										A: (b. 0		 "		
13	'Y'	/	dense:	104K41	<u>1700 -</u>	<u> 1010)</u> C 0,701	1: 0): wet; meduc garsening dov	more	2.0/2.0	H; O. C				
			Lo OF	nedisc	2 gra	Meni	45/200	<u> </u>		12-14 WHWHWH					
	15		315.51 i	ntochic:	ام مدد	-1×8U	الح ب	xangular Gra	it	1.0/2.0	N: 0.5				
		'سَرَ			יט יטויי			J J							
	-	<i></i>								2/2/2/2					
			Bu 181 1	ess Gr	avel:	medi	WW (A	rained Sand		14/2.0	H: 0.1				
			 	- 			V)		wt/1/1/1	A: 0.0				
	20	1 4 1	(10, 11, 3	2 m/1 C	irlmi) who is	54.	not : vani satu	hoto	1.6/2.0	8. O. H				
		hΓ	1042411	70/5015	A; gev	50F	; fru	od ; <u>ven</u> satu	Tri en	2/1/1/2					
				<u>J</u> .	<u> </u>					1/1/2.0	71 (71%				
	22	·	(02 01 7	7,47) =	(no //	the	anc	1+511+ (5m)) ;	20-22		†			
			126.00 16	489.70	305¢ : 1	OYKH	119	Mr dunt zou	ne	2.0/2.0	A: 0.0				
		حہا	lenses	24 IVCLS	<i>wsu</i> (1)	with				22-21	H. O.	 -			
	25	SM								WHWH2/2	A: 0.0				
										24-26	H: 1.2				
	1	/	(<u>agrin</u>) -	3991) S	lut (m	(); SC	2me	tine to very h 27.14, 104R Jum Plaghert Shiffness W	ر آو	21314/4	A: 0.0				
		11.1	gack of	Mey Mey	rivery	2064	mic	Two plasticit	У.	20/2.0	H: 0.	1			
		ML	moist	Wir COD	lent de	mich	5m.	Shiftings Two (Abir	101012	A: 0.0	1			
			-							113/2.0	H: 0.7	02/48	112-0	gre one	lucte or has
- 1	30							GEOLOGIST SIGNATURE	E/DATE	28-30	14 . Or]	OZZ 28 CONIC BOREHOLI	UMBER	009	1 09
PROJECT			_	,					٨		- , l	1			
FWGW	mp	PA	CRUA	49-Lel	<u>) </u>			amanda	ل	rento	<u> (02/28/1</u>	4	<u>+m</u>	<u>v) - (</u>	1,010

ים יאוסדון		G I O	G (continued)	DISTR				BOREHOLE N		40.
ILIKAA DI	IXILLIN	G LU	o (continued)		- Louisville			LLIM	<u>س ۳</u>	<u> 486 </u>
1. COMPANY NA					LING SUBCONTRACTOR			SHEET	3	0F 4
SAI				Frontz	1	AE1 State Book	e 5 Ravenna, ()H 44288		
3. PROJECT (P BI (RUAAP-Lele)				vertical)	INCLINE		DEGREES
5. NAME OF DR	ILLER A	MPC	IN MACKEY		6, DIRECTION OF BOREHOLE	, `~•	the same of the sa			
7. NOTES PID			liniRAE 2400		_PID SERIAL#: \ \ φ - 0 0 5	V187		m Munsell Soil ンせったハ		
WA:	TER LEVEL				WATER LEVEL SERIAL#:			<u> </u>	<u> </u>	ED
ELEVATION	DEPTH	uscs	CLASSIFICATION OF	MATER	RIALS		MONITORING	40	REMA	
	(Feet)						(PPM/CPM)	(Sample I	us/Deptr	s/Core Box/Etc.)
			cont. SILT (ML); ver dark gray; wet ~30.	45	soft; 1048411	1/1/2/1	A: 0.0			<u></u>
			dark arm : wet =30.	· O' .		30-32	11:0.1			
			3 1			5131314	A: @ .@			
		_				2.0/2.0 32-34	H: 0.1			
	35	. 11				wt/wt/1/1				"
		ML				2.0/2.0 34-36			-	
	ļ									
	ļ					1/1/2/3	A. O. O.			
										
						11111	V: 0.0			
	40		(39.7'-40.2') Some Cla	4;5	shightly Stitter	38-40				
				•		111415	4: 0.0			
						40-42	H: 0.2			
			•			4101018				
<u> </u>			(43,51-43,71) Some Cla	uj; 5	slightly stiffer	1.8/2.0	H: 0,2			
	45	cı	(43.7' - 44.8') CLAY (CL)) '	me Silt little	3141514	A: 0.0			
		Vic.	(43.7' - 44.8') CLAY (CL) SUDANGULAR GRAYLI; 109RY ME GRAYMAR GRAYLI; 109RY	li de	one gray; dry	1.6/2.0	H: 0.0			
			(111 V' - C12) SIT (m)	7	and a stiff.	615/6/8				
			(41.18' - S1.3') SILT (mi	~/ 1	$\frac{1}{1}$	2.0/2.0	h: 0.0	,		
	<u> </u>	ML	<u> </u>				A. O.O			
	<u> </u>	6	49 1 Introduction of 1th	اه اه	DRY /4 Weak rec)	13/20	H: 0.2			
	50		49.1 Introduction of 1th				1			<u></u>
		1900	51.3'-51.4) Medium	deci	ned Sand layer	7 11 10 11	4: 0.0			
			(51.4'-53.8) Silty Cur grained Sand in Pattings 53.3' + 53.41; HOYRY Medwarto low prostication	۲۲(۵	1) little medium	(3)-52	H: 0.2	_		
		Cu	Orained Sand in Pattings	110	ack dear impisti	10987	A:0.0			
			mediunto los prosticit	4		1.3/2.0 52-54	4:0.2	.		
	55	<u> </u>	(53.8-63.8) Silly CLA	۲(در) :544/1 danc gray	21618/10	0.0 :A		_	
		1	1		J	1.0/2.0	H: 0.2			
	-	cu	Ory; stiff; high Plashcity		•	, ·	A: 0.0			
					ent	1 40 120	H: 0.2			
@58,01 50ft Cloy w 30					>111 ·					
						2.0/2.0	A: 0.0 H: 0.2	-	<u>-</u>	<u> </u>
PROJECT					GEOLOGIST SIGNATURE/DATE	58 60	10.71	BOREHOLE	NUMBE	R
			- 400000		Omanda	1	sloiliz	1		,- 08k
FW6	wma	> K	I (RUAAP-66)		Comanda	run	m	100-4	-,,,,,,	

LITEN/ D	DILLIN	GLO	G (continue	۳/		DISTRI	CT			BOREHOLE	NUMBER	
		G LO	Continue	م) 		USACE	- Louisville			111	<u>mw-</u>	086
1. COMPANY N						2. DRIL Frontz (LING SUBCONTRACTOR XeEng			SHEET	4	OF U
3. PROJECT	Fwe	mu	PRI	CRUP	AP-lele	>	4. LOCATION RVAAP	8451 State Rou	le 5 Ravenna	, OH 44268		
5. NAME OF DR			AM G				6. DIRECTION OF BOREHOLE	(VERTICAL) INCLIN	E O	DEGREES
7. NOTES PID			INRAG)		PID SERIAL#: 110-005	816	Colors fr	om Munsell Sc	il Color Cha	ert, Rev
	TER LEVEL						WATER LEVEL SERIAL#:	,	2	∞	Rev	ED
ELEVATION	DEPTH	USCS			CLASSIFICATION OF	MATER	IALS	SPT DATA	MONITORING	3	REMAR	ıks
	(Feet)							(0.5 Feet)	(PPM/CPM)	(Sample	IOs/Depths	/Core Box/Etc.)
			60'-51	Hier	ul deptr			1131315				
<u> </u>		u			· · · · · · · · · · · · · · · · · · ·			2.0/2.0 (00-62	H:0.0	4		
								7/9/15/12	0 0 A			
			(63.8'-	(pSS')	SILT (mc)	· 30	me Clay; sand	1.7/2.0	H:0,0			
	105	WL					vet; 104Kyll dark	2/2/3/8				
	(0.2	11.5	_		· · · · · · · · · · · · · · · · · · ·	111 1	JOHN THE	1.7/2.0		Carre	~ <<	se www on 3/1/1
		<u> </u>	gray;		•	٠	(cm)t.	19/17/21/25		CONCL	ياد علالا	
		Z.					(Sm), wet;	1 10				
		SM					the dense	40-68				
	100	1.	<u> (elei3' -</u>	<u>(089)</u>	4 ne grain	ed S	and; Some SH	3/6/9/14	A: 0. 0			
	10		dense:	wet: -	rau Crai	410	nses, 1048411	08-10				
		Şω	(48,0 ¹ -	70.0	Fre Grain	ied '	Sand; little Silt;	618/0/16	A:0.0			
			no Cla	4:10	18411; me	Jwa	dense, wet,	0,41/2.41 20-71	0.0 :H	<u> </u>		
				1	•	ı	of organ la	415/9/8	A:0.0			
_	/						sand w/ Gravel	1.5/2.0	H: 0,0			
	75	GP V	(JU/4/ -	74117 Pe	soch Socti	علاد	Uppounded Gravel		Α:0.φ			
	73		INICOM	4 200 1	10000000000000000000000000000000000000	<u>دد ت</u>	1: 1010 f. mad do aso	1.2/2.0	H:0.0			
		SID	~ 14.2 F	7 11 CT	was to we	Shi	1; Wet; med dense region granes sond . Wet; 104K411	27/44/50				
		1000				SW)	, Wet; 104K411	27/44/584 1.3/1.3 74-773	#: 0.00 U.a.a	Form	10 KO	2 + + + 1 ×
		GP)			<u>lense</u>	·		76.77.3	rt, w .w	WM IN	SE WIL	LSEF
	₩						1; coarsenng			WM IN	০০৫৪০	CD13x2
	\$0 \$0	65	d ownw	ard; 10	krylı Clark i	gray	; wet; dense.					
-			(77.2' -	<u> 11.3')</u>	SANDST	ONE.	(SS) WET;					
			BORING	TERM	TA COTTA III.	77	3 FT B6S					
	<u> </u>											
	86											_
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	200											
PROJECT							GEOLOGIST SIGNATURE/DATE	<i>\</i> \\?	102/12	BOREHOLE	NUMBER	
	1 100	· · ·	2- (0000			GEOLOGIST SIGNATURE/DATE	1. ~	1441C	111	М	087-
$1 \otimes 0$	W II	11	RI (LUMITH	~ (U)		umanda	YUN	m	4-	11W-	WOY

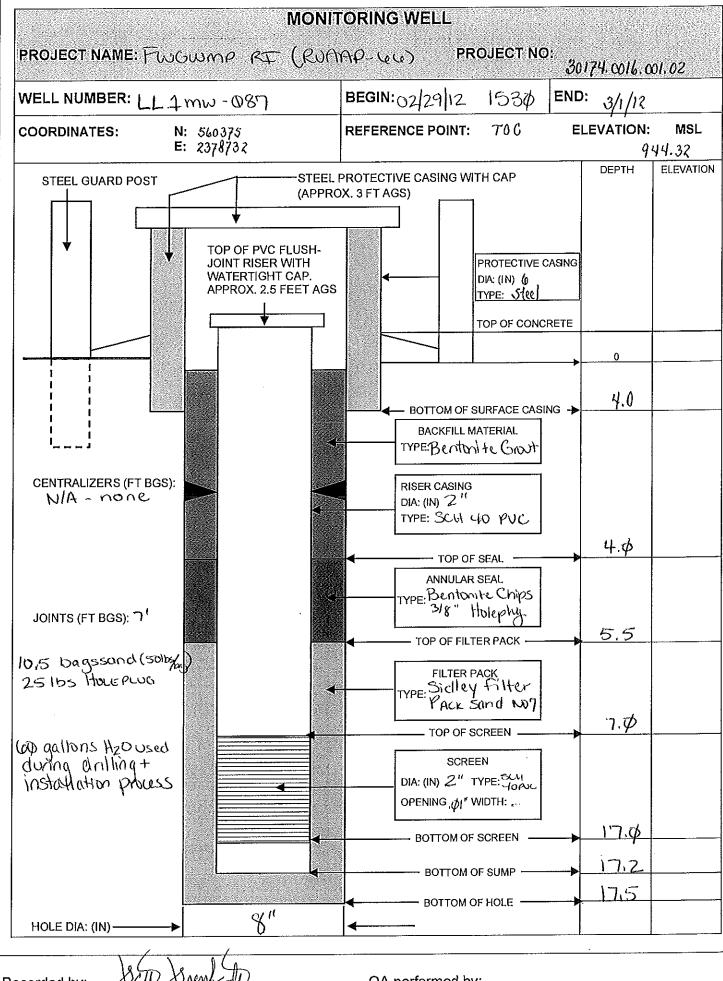


Recorded by: amanda henton

QA performed by:

,	DISTRICT										BORE	HOLE	NUM	BER		
HTRW DRILLING LOG	USACE	- Lou	ılsvill	е							L	_L	1 r	'nW	- O	87
1. COMPANY NAME	2, DRILLIN	G SUBC	ONTR	RACTO	R											-
SAIC	Frontz [ŞH	EET	1	OF	2	
3. PROJECT FWGWMP RI (RUMAP-66)		4. 1.0					3451	Stat	e Ro	ute (5 Ra	venr	na, O	H 44	266	
5. NAME OF DRILLER JOE TELE				DEL C				IE.								
7, SIZES AND TYPES OF SAMPLING EQUIPMENT		Ι.		LE LOC			P				mb - 6	<u> 1400</u>				
2" X 2' SPLIT SPOON		1		ELEV					41.							
4约"ID HSAS		10. Di	RILL D	ATE/TI	ME	STAR	TEO:	02/2	9/12	1125	COM	PLETE	D: (<u>03/0</u>	DI/12	2_
				GROU							21					
		16. Di	EPTH.	ŤO WA	TER/E			IE AFT	ER BO	OREHO	OLE CC)MPLE	TION			
12. OVERBURDEN THICKNESS \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		.					14			A						
13. DEPTH DRILLED INTO BEDROCK NA		17.0	THER'	WATER	R LEV	EL MEA	ASURE	EMENI			E DATI	#/	<u>:)</u>			
14. TOTAL DEPTH OF BOREHOLE 18 FT		<u> </u>			_					<i>Y</i> }		•				
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA	DISTURBE					19. 10	JIALI					s /		%		
20. CHEMICAL SAMPLES CHEM: NA RAD:	NA	OTHE	R: "a											70 44		
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: ①2												9//1	2			
BACKFILL TYPE: GROUT FENTONITE	TEM						<u> </u>			IG WE						
23. NOTES BKG: ≤Background BGS: Below Ground Surfac			: Cou	nts per					: Part	s per l	Milllon	İ				
: Steel : Stee	atic Water L	Level			NA: I	Not Ap	plical	ole •								
LOCATION SKETCH/COMMENTS								sc	ALE:		Non	е				
	1 1	1						-			1		l			
	·)		14+74+411			·····	å			***************************************	,	.	ļ	\$11,15.00 1
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BPOJECT	DEO.	LOGIST	SIGN	IATURI	=/DAT			<u>:</u>	<u> </u>	<u> </u>	BORF	HOLF	NUME	L 3ER	<u>!</u>	<u> </u>
PROJECT		7		. ,, o, a		1		, 0	2/2	7/12	,	, 1	bo.	BER	ንຮ°	7
FWGWMP RT (RUAAP-66)	-16	lm	an	da	_	no	int	m			14	4	.7710	√~ C	, ,	,

HTRW DI	RILLIN	G LO	G (continued)	DISTRI	ICT E - Louksville			BOREHOLE N		- 087
1. COMPANY NA	ME				LING SUBCONTRACTOR	.,,,		SHEET	2	of 2
	W6v	ump	PRI (RUAAR-LOW)		4. LOCATION RVAAP 8	1451 State Rout	5, Ravenna,	OH 44266		
5. NAME OF DRI					6. DIRECTION OF BOREHOLE	, A	ÆRTICAL	INCTIVED		DEGREES
			INTRAE 2000 PID		PID SERIAL#: 110-005	1816	Colors fro	om Munsell Soll	Color Cha	art, Rev
			ODEL:		WATER LEVEL SERIAL#:		2	2000	REV	6D
ELEVATION	DEPTH	uscs	CLASSIFICATION	OF MATER	RIALS	1	MONITORING		REMAR	į
	(Feet)	10.1	(mx (0,5)) SUT (mx) (1)#	le.Sor	od: Clay content	1 1 1	(РРМ/СРМ)			/Core Box/Etc.)
		M	(Od-0,5') SILT (mu); 11H i wi cloth; soft; dry organics Throughout; 104ki	113 t	llum plasticity;	12/201		I		PID (ppw) Le PID (1ppw)
<u> </u>		a	(0,31-3,71) STHY CLAY (رد) ا	some Silt; little	5/6/8/9		77 71 (0)	N. Jr. GI	a riz oppi
			(0.5'-3.7') Silty CLAY (Box supangular gravel; it layks/1 gray + 10/185/3 bm stiff; day; medium p	lasti	Soft to medium	1,7/2.0	a n n			
	5		1(3)1- 6,07 SICI (MC) 11	Hu C	lay; some very sravel war 130000	2/4/5/10	4:0.0	@1145	ı	
		MU	1048514 yellowish brown + 1041 By 5! Coloris 7,54018 b	ist an	ו דיוטו טיש שטוייץ יי	<u> </u>				
		ML	Inlive + little lovelell arey.	T (S	IAA)	5/5/5/5	A+ 70.00	@1152		
		Q	(6.8'-7.2') CLAY; SOM	Silt	ida: highe lashell	1.7/2.0	ti 0.2			
	&5 A		(7.2'-18.0') SILT(MU)	2.5	CU5/U + 10024/1 11/6/2	5141414	41 00	C1200		
	10	1	esticated Q Q2 . In	iach.	blush oral	2.0/2.0	H:0.3			
		١	ven soft; fluid; ven	wet	transitions	wt/vt/1/2	A: 0.0	@1211		
			Welph	1 1	J	7.0/2.0	1:0,2			
						1/3/3/4		@1224	>	
		ML					y: 0, 2			
	15					1/2/3/2		31228		
						1 10/2.0	H: 0.2			
						2/3/3/3	A: Ø .o	@ 1232		
	18					2.0/2.0	4:0.2			
	1.8		Solit Spoon terminate Holland Stem Augurs Commence Well installe in	to co	+ 18 ft bgs					
· · ·	20		Commence well installe 11	७१५						
										
				*	4					
	25							·		
.,,										
										-
	30			***				-		
PROJECT	<u></u>		-		GEOLOGIST SIGNATURE/DATE		. I	BOREHOLE N		
FWGW.	mp	RI	(RUAAP-66)		amanda her	the 02	129/12	LLI.	nw.	-08'/



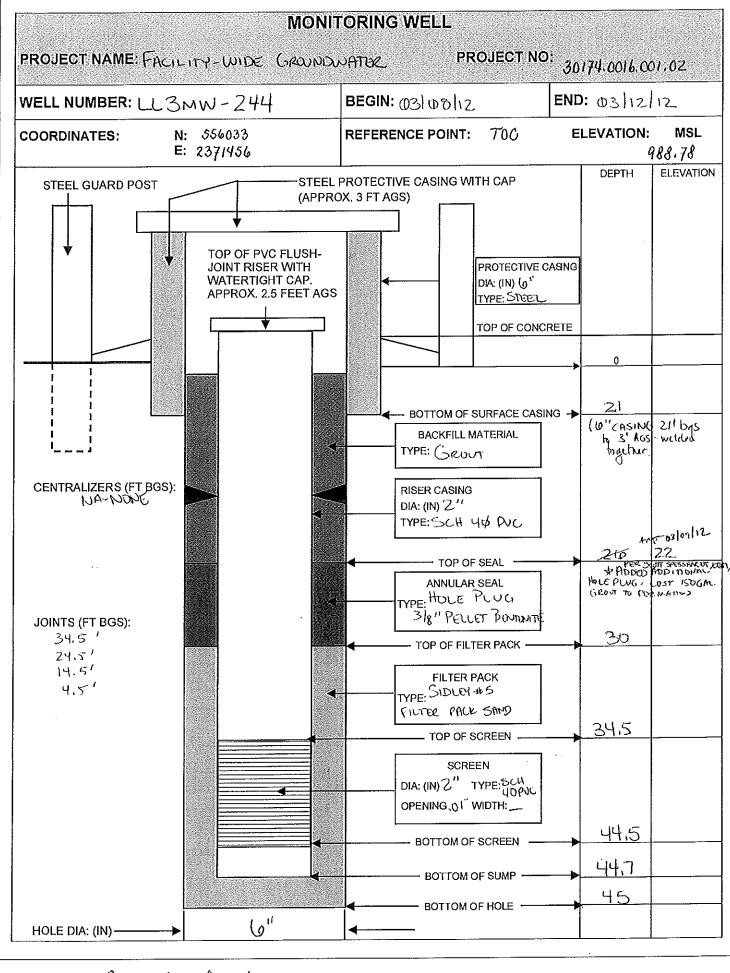
Recorded by:

QA performed by:_____

	DISTRICT				BOREHOLE	NUMBER	
HTRW DRILLING LOG	USACE	- Louisville			LL	3MW	-244
1. COMPANY NAME	2. DRILLING	SUBCONTRACTO	OR		OUCCT	4 05	- 2
SAIC	Frontz D	rilling			SHEET	1 OF	5
3. PROJECT FW GROUNDWATER RI		4. LOCATION	RVAAP 845	1 State Route	5 Ravenr	na, OH 4	4266
5. NAME OF DRILLER AARON MACKEY		6. MAKE/MODEL	OF DRILL C	ME 750	5×	- 2371 -1 52	7-17
7, SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOLE LO	DICATION SOUT	ME 154 + 02 LL3	mono	, 6 de	ED RO
2" × 2' SPLIT SPOON		9. SURFACE ECE	WATIOTEDATION	986.20			
864"ID HSA				1332	COMPLETE		
"U" CORE BIT		1	JNDWATER ENCO	ME AFTER BOREHO	0 4 15	,5 ' (OF	<u>s) </u>
N SERIES ROLK CORE SAMPLER		16. DEPTH TO W.	ATERVELAPSEU II	ME AFTER BUREAU	ILE COMPLE	TION	
12. OVERBURDEN THICKNESS ZOF FT Competent Bedral		47 OTHER WATE	ED LEVEL MEASUR	REMENTS (INLCLUD	E DATE/TIME	=1	
13. DEPTH DRILLED INTO BEDROCK 2557		- OTHER WAIL	TIVECATE MEVOOL	1) A	C 0111 C 1 1111	-,	
14. TOTAL DEPTH OF BOREHOLE 45 FT 18. GEOTECHNICAL SAMPLES UNDISTURBED: NA	DIOTUDDES	<u> </u>	119. TOTAL	NUMBER OF CORE	BOXES	7	
1014	DISTURBED	OTHER:			CORE RECO	The second	ঠি0%
20. CHEMICAL SAMPLES CHEM: NA RAD: 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: O2	NA	OTHER;	DATE COMPLETI	ED/ABANDONED: (00 W
BACKFILL TYPE: GROUT BENTONITE	•	PORARY WELL PO		MONITORING WE		,	
23. NOTES BKG: ≤Background BGS: Below Ground Surface		CPM: Counts p		PPM: Parts per l			
Bito, Ebaokgiodila Beel Bolon ofodila bellan	tatic Water L	-	NA: Not Applica	•			
, Trist Water Effections	tatio Traioi a				·		
LOCATION SKETCH/COMMENTS				SCALE:	None		
			02/22/12	21530 CONC	<u> </u>	Jud a	Jun 1 De
				TIBER STATE		W02/19/2	485.454.454
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PROJECT PLANCE Late	GFOI	LOGIST SIGNATUR	I I I I		BOREHOLE	NUMBER	<u> </u>
KU ITIF "CVU	1 _				{		2014
FACILITY-WIDE GROWNDWATER	1(1)	manda	nenter	~	ا للل ا	$\supset M M$	-244

ITRW DE	RILLIN	G LO	G (continued)	DISTRIC				BOREHOLE NUMBE	
COMPANY NA					- Louisville LING SUBCONTRACTOR		•		<u>u - 244</u>
SOMEANT NA	ATC	,		Frontz E				SHEET 2	of 3
PROJECT	CILIT	Y-W1	DE GEOUNDWATTOR RE		4. LOCATION RVAAP	8451 State Roule 5			
NAME OF DRI	LLER A	AROI	U MACKEY		6. DIRECTION OF BOREHOLE	Ø _{VER}	TICAL	INCLINED	DEGREES
NOTES PID	MAKE/MOD	EL: Mi	nirae 2000		PID SERIAL#: 11ϕ - 005	816	1	om Munsell Soil Color (
TAW	ER LEVEL	MAKE/MO	DEL;		WATER LEVEL SERIAL#:	-	<u> </u>	OOQ REO	
LEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATER	IALS ·	<i> </i>	NITORING PM/CPM)	,	ARKS ths/Core Box/Etc.)
	0.4	ML	(0.01-0.4') SICT (mc); H	lle C	LAUL Some creanics		Φ. <u>Φ</u> .		
			10483/2: soft moist from		. 1'	2/2/3/4 #	0.6		
					Silt; trace v. Fre	1.7'/2.0 A	Φ.Φ 2-4		, <u> </u>
		CL	Sand: 104R4/4 dk vellowish		\	2-4 H	Ø.1		
	5		little loves/3 brown; traus			3/1/19/4	Ø.0 4-10		,
			Shift me ilum plasticit			1.65 H	0.4		
	•		C5.2' Introduction of Fin	11	' '	4-6 A	0.0		
					ACOUNTY OF MACHINES	215151814	0.3		
		146	Color is primorily 104R4			1.5/2.0' A	0.0		
	10	100			1 clay; some	6-8 H	0,5 0,5		
	10	\vdash			yellowish brown		(0.00		
		\setminus	stiff dry medium plasti			14/12/16/17 A	10-12		
		//MU	thre Sand Content In dept		E 1	19/20 4	10-12		
			(8.3'-9.8') SILT; SML (11)	y; Sì	me subany gravel	11/18/27/23 A	0.0 J <u>2-1</u> 4-		
			104R4/Vdkyzllowish brown + 10	YR4/2	e dle grayish brown;	8-10 H	12-14		
A	15		Stiff: dry: low plasticity.	SSA	mul 9.8-9.9	3/14/17/16/A	17-12 (0:0)		
		Ku	(9.8-10.9') CLAY(W); SON	•		1.6/2.0 H	0 (1 14-16		
		111	gravel: SSFrage1051	MUR	1/2 brown w// the 210964	13/11/21/15	0.0	17.7-20 (SANOSTO NEI SUSANCO (SCA
	n	1111	dark gray, day; Stiff, mad	· · · · · ·	10380 h	19/2.0	0.2	CONTENING do	zunwardjwe
		lls.	(199'-11.1') sandstone any		210 Since	3 13 15 15 A	0.0	20 COMPER	A Bulaik
	20	1				1,4/2.0	(0.0)	Sangsign	WJ(SS)
		+H	(11.1'- 14.6) Sitty CLAY(CL)			12/20/20/21 1		1048/3brow	
		+	dark gray; stiff; daysonian	6/02	BC1p1	1 2.072.0711	201	RILL TO 21 SET CASI	NO NO
		1/8	@14.2 Moist syind segin	do)lFil	10 11 (- \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	14/5/22/501	μrτ	03/08/12/05	
			14.6-14.8') FINE SAND,			i		(21'-45') S WET SEEP	
		3	bluish gray; wet; medi		clense nonplashe	1.2/2.70			
	25	()	(14.8-15.5') SILT(MU)+SI	CUE	trace Clay larely	593 @s'/0.25 20-20,25	\		
		Go	dark yellowsh brown; littles	LIQIY.	na gravel day shift	20-20,25			
		NY	Sand content Tuldeptn) / ' '		¹ \	·	
			(15.5'-17.2) Supang Grau	10 +	Sund (GP) Holna		__		·
		1	downward; wet medium de	nse	: 104R514 IRlamsh				
	30	l l	brown (17.2'-17.7') Sand+S	SILT	sm): lithe anavel 10485/4	dry \			
ROJECT		RUA	AP-1010		GEOLOGIST SIGNATURE/DATE	0212	7/12	BOREHOLE NUMBE	
FACI	_ITY	-Wi	DE GROUDWATER R	I	amanda I	Untin	حديد . ړ .	LL3MV	v-244

HTRW D	RILLIN	G LO	G (continue	d)		DISTRI	CT - Loufsville		-	BOREHOLE N		-244
1. COMPANY NA	_					2. DRIL	LING SUBCONTRACTOR	***	:	SHEET	3	of 3
3. PROJECT (SAI		LA C. FINE	C. #2	×	Frontz	1	8451 State Route	e 5 Ravenna,	OH 44266		
5. NAME OF DRI	ILLER A	711 i	N MA	<u>CKOUNI</u>	W17 OC 71	4 <u>01</u>	6. DIRECTION OF BOREHOLE		ÆRTICAL	INCLINED	1	DEGREES
7. NOTES PID	MAKE/MOD	EL:	INT RATE	2000			PIO SERIAL#: Ø - OO	5816	Colors from	m Munsell Soil	Color Ch	nart, Rev
	TER LEVEL			2,440			WATER LEVEL SERIAL#:	_		$2\rho \Phi$	b R	EVED
ELEVATION	DEPTH (Feet)	USCS		Ci	ASSIFICATION OF	MATER	NALS	1 1	MONITORING (PPM/CPM)	(Sample II	REMAI Os/Depth	RKS s/Core Box/Etc.)
			(21:-4	5') Sh	anna Sa	inds	stra o (SS) water	<u> </u>				
		55	lion S	tainina t	man 21-1	29'	stone(SS); wet; ;-fractured	TILL STATE	lmbun	t Cor	- B	1 + X
			from 1	211-21	41				21-45	21	٠Φ′-	30.p'
									P. Ppc	m REZO	very:	7.1/9.01
	25 25			****								
	30°		Fractu	es trom	30'-31	<u></u>	con stoining					
			@31.5	1; fine	shall p	arti	ngs within 1					X # Z
			arau s	SINOSTAN	`		· · · · · · · · · · · · · · · · · · ·			301		45′
			<u> 3325</u>	Shale S	seam; ve	44	soft; black			Recov		
												816/00
	35									<u> 40-</u>	<u>45'</u>	3.5/5.0
			31.4-3	51.3 Inc	rease in	sha	ale pactings	-				
			<u> 373-3</u>	ns sha	<u>le Seam</u>	7 no	rd			PERMO		
										TESTIN		
				1 .	, ,							39.7/
	4.50		<u>@40'5</u>	MIR DE	m Hard					(Keme	12E 12E	from)
			/									
			144	/ \chock	shale	لايد	>					-
			SAK II	icreuse in	1 30 ME	Par	W(N) 2					
	55											
	-1.}		Boring	termine	tedat	45	ft bas					
-							J					
	5 50									noneria -		
ROJECT	R	WAA	P-66 GROUND	מיודאים	PI		GEOLOGIST SIGNATURE/DATE	03	108 12	BOREHOLE N		
1 HUIL	-114 V	JUDE	OKONAM	w 11 OC	<u>ΓΨ</u>		Comando)	unte-		Uzn	1 W -	-244



Recorded by: Amanda harton

QA performed by:_____

	DISTRICT	RICT √						BOREHOLE NUMBER						
HTRW DRILLING LOG	USACE -	JSACE - Louisville							LL3 MW-245					
1. COMPANY NAME	2. DRILLING	SUBCON	TRACTOR	₹				61		-				
EQM	Frontz Dr	rilling						SHE	:t.	1	OF L	.		
3. PROJECT RVAAP-66 BI	1	4. LOCA	TION	RVAAF	8451	State	Route	5 Rav	/enna	a, Ol	1 442	66		
5. NAME OF DRILLER JOE TELY / MARCO MACKET	n.	6. MAKE	MODEL O			16 55		'1						
7. SIZES AND TYPES OF SAMPLING EQUIPMENT	÷	8. BORE	HOLE LOC	ATION				1040	bel.	wegn	143	1212		
41/4" ID HSA				ATION/DA	TUM	4	78.70							
2" x 24" Split 57001				ME STA		3/15	/12	COMP			102	112		
NSTORIES POLK CORE SAMPLER				IDWATER			10/		/35	<u> </u>	}			
		16. DEP	TH TO WA	TER/ELAP	SED TIM	E AFTER	BOREH	OFE CO	MPLET	ION	₹.,			
12. OVERBURDEN THICKNESS 24				- 4 ***	_		(NII 65 V2	C DAT	FF 15 200					
13. DEPTH DRILLED INTO BEDROCK 23		17. OTH	ER WATER	R LEVEL M	EASURE	MENTS (INLCLUL	E DATE	J HME,)				
14. TOTAL DEPTH OF BOREHOLE 47				140	TOTAL A	IUMBER	OF CORE	BOXE						
18. GEOTECHNICAL SAMPLES UNDISTURBED:	DISTURBED			19.	TOTAL		. TOTAL				S = 2 /	160		
20. CHEMICAL SAMPLES CHEM: RAD:		OTHER:									<u>, Q</u>	1%		
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: (04) 6				DATE CO			_		12			·		
BACKFILL TYPE: GROUT BENTONITE	TEMP					MONITO								
23. NOTES BKG: ≤Background BGS: Below Ground Surface				r Minute NA: Not /			ario hei	raniiOi I						
: First Water Encountered : Sta	atic Water Le	vei		INA. NUL	-hhiirar	71 0								
LOCATION SKETCH/COMMENTS						SCAL	E:	Non	e					
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PROJECT	GEOL	OGIST S	IGNATUR	E/DATE	<u> </u>			BORE	HOLE	NUMB	ER I	<u> </u>		
	-													
RVAAP-66 RI				۸			-,-	<u> </u>	431	1W -	245			
	\mathcal{Q}_{l}	mar	relac	The	rtn	_ 0	4/0Z,	12						

HTRW DRILLING	LOG (continued)	DISTRICT USACE - Louisville			BOREHOLE NUMBER LL3 MW- 245
COMPANY NAME	Marie III.	2, DRILLING SUBCONTRACTOR			SHEET 2 OF
EQM		Frontz Drilling			,
PROJECT RVAAT	7.66 RI	4. LOCATION RVA	AP 8451 State Route 5,		-
NAME OF DRILLER	Joe Telel	6. DIRECTION OF BOREHOLE	∀ _{VER}	TICAL TICAL	INCLINED DEGREES
NOTES PID MAKE/MODEL:	Sitius MSA	PID SERIAL#: 42-1861		Colors fro	un Munsell Soil Color Chart, Rev
WATER LEVEL MAY	(E/MODEL:	WATER LEVEL SERIAL#:		<u> </u>	
ELEVATION DEPTH U	SCS CLASSIFICAT	TION OF MATERIALS		NITORING PM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.
0-2	Uppel 4" Silty clay tops	oil dx bro maist soft	1-2-	0_	0-2 /1 ; 1349
	loots		2-3		,
	Next 11" Fill, sitty day	1 w/ grafel, dK brn, moist,	R= 23/24		
Ser (few cinders, first	ly soft			
	1 Kencinder Sitty clay bin	fail iron exides			
	CKNIZ, FILLY VOTE	JEW HUN (XIDE)			
2-4 (I Sitty day bon w/ Real	slone vetical feactives	4-5-	0	2-4/1: 1355
	2 Sitty day, bon w/ gay	day mod stiff	7.9		
760		1, ,	R= 18/24		
		1 / 1 / 1 /			12 / // 110A
4-6 C	L Silly day, Sin w/ graf	clone flectules, few	10-11	0	4-6 fl: 1400
	SNGII GUNEL, OLY	, VKO, SUJ	R = 24/24		
78					
6-8 0	L Silty clay bon, few	sucil ervel, dis, mod.	9-13-	0	6-8 /1; 1405
	stiff, stightly plas	stic; from 3-5" wet, orn,	11-13 R= 20/24		, ,
	Silly sind, In-ma	sucil easel, dij, mod. slic; from 3-5" wel, bin,) eained	R= 20/24		
		·	(s) (i		0 10 11 1112
8-10	L Uppel 8.5" Silly clay, bro, IL Lower 7" Silt, gray, Iill	few small gravel mod. Stif	7-11-	0	8-10 ft; 1413
	12 COWE 1 VITE, 914, 171	is early off, mod. Sty	13-14 B= 15.5/24		
			7 /6		
10-12	4 Usper 10" Sittle chet bin w	of areal mottles wet soll	1-2-	0	10-12/1: 1419
28	I'lle send report	el			, ,
N	AL Rewainder Sitt, gray, S	one day, pliable, sticky,	7-7 R=24/24		· .
	L Upper 10" Sitty cky, brn w Nittle sand r gran AL Remainder Sitt, graf, s moist	(' '			
			7-0-11 10	O	12-14 A: 1426
12-14 A	16 Clayey Silt, gray, plasti	c, camp	7-9-11-10 R= 21/24	٧	12.11/6, 1124
OJECT		GEOLOGIST SIGNATURE/DAT	E 3/15		BOREHOLE NUMBER

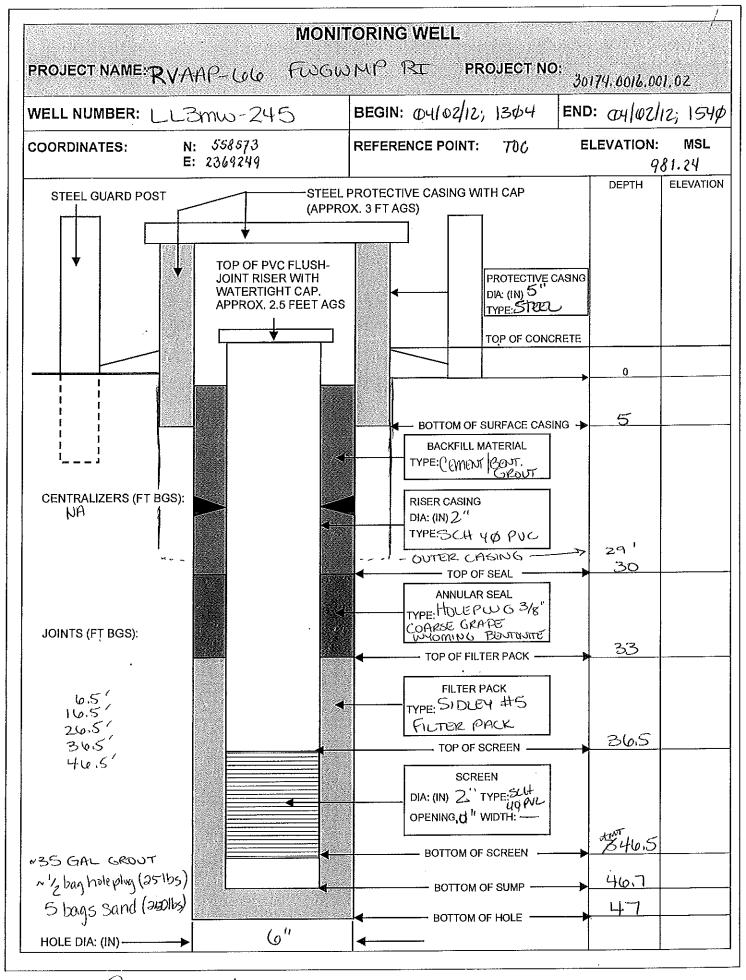
HTRW DI	RILLIN	G LO	G (continued)	DISTRICT USACE - Louisvēe	•		BOREHOLE NUMBE	
COMPANY NA	ME			2, DRILLING SUBCONTRACTOR	10 0 mm.			
E	2M	•		Frontz Drilling			SHEET Z 3	OF 🕂
PROJECT	RVAAT	P-66	RI	4. LOCATION RVA	AP 8451 State Route	5 Ravenna,	OH 44266	
NAME OF DRI	LLER	Joe	Tete/	6. DIRECTION OF BOREHOLE		ZERTICAL)	INCLINED	DEGREES
NOTES PID	MAKEAMOD	EL:	SIGUS MOA - 03/30/12 MiniRAE 2640	PID SERIAL#: 12-1861	וומ ביטיניב פיי		m Munsell Soil Color (had, Rev
			DDEL:	WATER LEVEL SERIAL#:		<u> </u>		
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REM (Sample IDs/Dept	ARKS hs/Core Box/Etc.
	14	ML	Clased sitt pred damp to	illy pliable for smill	2-3~	0	14-16/1;	1433
			Clayer sitt gray, damp, to		5-7	_		
					R" 18/24			
	16			1 1				
	34/3	ML	Clayey sill, gray, wet, plical	e, failly soft	5-7-	_0	16-18 /t;	1436
			'	'	6-6 R=24/24			
		.43	Alana" Araba		wt of hunnu- 2-3-6	Δ.	18-20/t;	1440
	18	ML SM	Upper 9" As above	" can colt and	R= 19/24	0	10-2076,	1177
	- Apr	MY		is, voine sin, well	17. /24			·
		514	Then 2" Sitt gray wet	are I Inclis				
		MY	Then " Silly send, wet, List 2" Silt, graf, wet,	fill soft				
	- h	1	10 × 0.0, 1000,	()				
	20	SP	Upper 12" Send, Son-grey, med	-cus, wet, few smill	1-2-	0	20-22/1;	1458
					2-3			
		SM	Next 3" Silly and bin-gay,	In-grained, wel	R = 24/24			
		ML	Lowel 9" clayer sill, graf, 71	igble, pailly soft, wet			<u>-</u> -	
	22		· · / / / /					
	The state of	SM	upper 2" Sand, eray, wet	med- picined, few sitt	3-4-	ρ	22-24 ft;	1514
		CL	Next 15" Sitty clay, orcy, dex	n, Jew send soci	6-8 B= 20/24			
			Next 15" Sitty clay, each dan gravel streptly stable Lower 3" Weathered Stale, 8% en	1	13 = 2724			
		SH	Lowel 3" Weathered style, dx en	af, damy, silly daf				
	214 px		-		0 14		A11. 21 11.	520
	THE STATE OF THE S		Upper 5" wet send, probably	CKKY DOWN	8-15-	0	24-26 ft;)	V47
		SH	Renxincel weathered state, dx gr clases, baid e tis	af, ban, tasely boille,	27-48 B= 18/24			
			Confirmation Split spoons		/ / /			
	2,8	SH	5" STALE (SH); day; vi	en dark arouse	50/5		28-307	0724
	28		Somewhat brittle; MICO	ceous drill to 29) - SET 6	casin	4 5 NO	BURRO
DJECT	P-66			GEOLÓGIST SIGNATURE/DATE HATO Syssia Amancia In	10 3/1:	i	BOREHOLE NUMBER	

1 2

Same of the

HTRW D	RILLIN	G LO	G (continued)	DISTRI			BOREHOLE NUMBER				
1. COMPANY N					- Louisville LING SUBCONTRACTOR		LL3MW-245				
SATA				Frontz C				SHEET 154 OF 4			
3. PROJECT R	UAPAP	-40	PT		4, LOCATION RVAAP	8451 State Rou	rte δ Ravenna,	OH 44266			
			in Mackey		6. DIRECTION OF BOREHOLE	···	VERTICAL	INCLINED DEGREES			
			nirae 2000		PID SERIAL#: 110 - 00 5	om Munsell Soll Color Chart, Rev					
			DEL;		WATER LEVEL SERIAL#:	_	20	500 Rev (D.			
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATER	IALS	SPT DATA (0.5 Feet)	MONITORING (PPM)CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)			
			(29-35,3') SHALE (SH)	;dn	1; brittle ven1	29'-39'	0.0	Portion of shale			
		CH	dark gray; trace gravel;	feis	sand partings	7,2/10,0	(Hinburit)	Core lost			
			141/C000002 ·					CORE BOX #1			
			(34.0-35.3') LESS	Ben	TLE			04/02/12@1110			
	35		135,3'- 47) SANDS	1OT c	JE(SS); wet;	*		29'-39'			
	353	<u>45</u>	grayish white; some	. SY	iale partings			7,2//10.01			
		<i>J</i> -									
	40	· · · · · · · · · · · · · · · · · · ·				39-47	0.0	CORE BOX #Z			
_			(41.3'-41.86') SHALE		EAM .	1.85/8.01	O.O Ambent)	04/02/12@1235			
			CIT. O TITLO					39'-47'			
_			(43,36-43,55') SHA	LE				7.85/8.01			
	45		(44.85-46,2') INTERMITT		SHALE LENSES						
-			(45.54) SHALE PARTIN								
			(46.23") SHALE PARTIN)(j				• .			
			(46.46'-46.66') SHA	NE;	GRAVEL W/DUPTH						
			BORING TOR MINATES	> Y	IT 47 FT BGS						
	50										
	55										
			1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.								
	60										
RUAA	P- (0	le f	<u> </u>		GEOLOGIST SIGNATURE/DATE	enton 1	04/02/12	BORFIGLE NUMBER MY LL3mw-245			
1 +	·				J. 7. 20	 	71				

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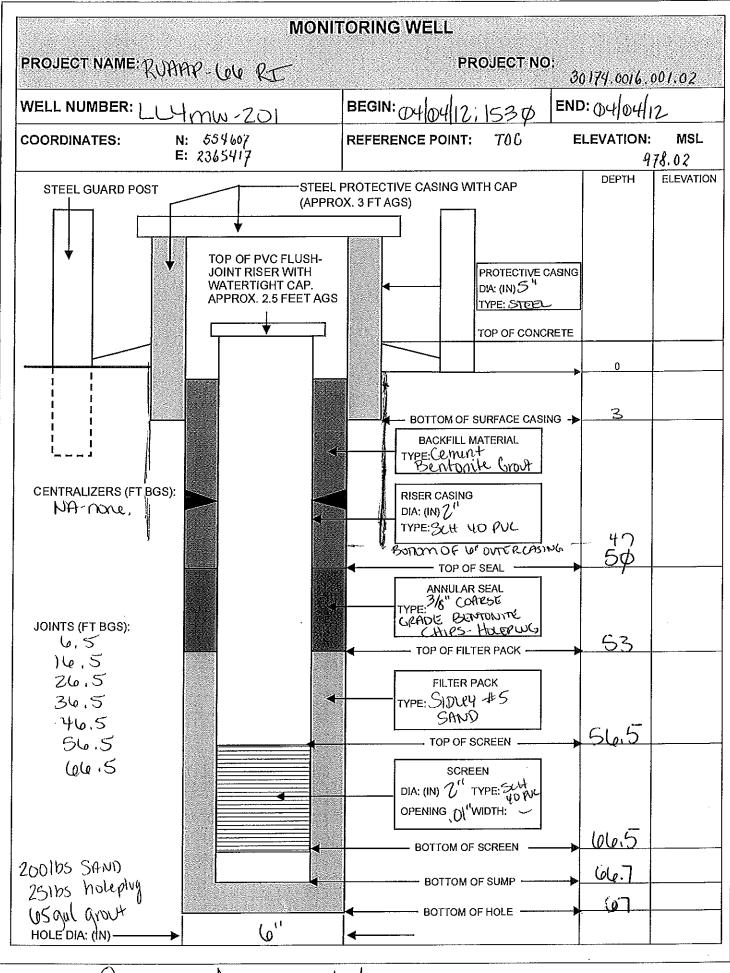
Recorded by: (manda Irento 04/02/12QA performed by:_

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LITPW DOLL INC. LOC	DISTRICT BOREHOLE NUMBER
HTRW DRILLING LOG	USACE - Louisville LL4mw201
1. COMPANY NAME	2. DRILLING SUBCONTRACTOR SHEET 1 OF 3
3. PROJECT WAD 1010 CT	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266
5. NAME OF DRILLER DO TOLLY	6. MAKE/MODEL OF DRILL CME55
7. SIZES AND TYPES OF SAMPLING EQUIPMENT	8. BOREHOLE LOCATION PW-5 LLY next to LLY mw199
414 IDHA	9. SURFACE ELEVATION/DATUM 975.90
2" XZY" Sputspoon	10. DRILL DATE/TIME STARTED: 3 19 12 COMPLETED: 04/04/12
N SPRIES ROCK CORE SAMPLER	15. DEPTH GROUNDWATER ENCOUNTERED 477 16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION
12. OVERBURDEN THICKNESS 44 FT	17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME)
13. DEPTH DRILLED INTO BEDROCK 14. TOTAL DEPTH OF BOREHOLE	17. OTHER WATER LEVEL MEASUREMENTS (INCOLODE DATE TIME)
18. GEOTECHNICAL SAMPLES UNDISTURBED: 57/67	DISTURBED: 19. TOTAL NUMBER OF CORE BOXES 2
20. CHEMICAL SAMPLES CHEM: NA RAD:	NA OTHER: NA 21. TOTAL CORE RECOVERY % 70%
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3	19 IV DATE COMPLETED/ABANDONED: 04/04/12
BACKFILL TYPE: GROUT BENTONITE	TEMPORARY WELL POINT WONITORING WELL
23. NOTES BKG: ≤Background BGS: Below Ground Surfac	·
: First Water Encountered : Sta	Static Water Level NA: Not Applicable
LOCATION SKETCH/COMMENTS	SCALE; None
IN	
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5m pond	<u> </u>
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PROJECT	GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER
	() 1 (1/104)
RVAAP-66 RI	(manda herton 4 LL4MW-20)

18. 24.

HTRW DR	ILLIN	G LO	G (continued)	DISTRI	CT - Louisville	-	******	BOREHOLE NUMBE	ER 1W-201
1. COMPANY NAV	!E		· Mary	2. DRIL	LING SUBCONTRACTOR			SHEET 2	OF :7
F	PON	-64	EQM	Frontz I	Orilling			VIII.	<u>°°3</u>
3. PROJECT	RVAA	ما جم	lo		4. LOCATION RVAAP	8451 State Rout		OH 44286	
5. NAME OF DRILL	ER (OE	Teter		6. DIRECTION OF BOREHOLE	, A	VERTICAL	INCLINED	DEGREES
NOTES PIDM	AKE/MOD	DEL: 511	RUS MSA		PID SERIAL#: 12-1861		Colors fr	om Munsell Soil Color	Chart, Rev
WATE	RLEVEL	MAKE/MO	ODEL:		WATER LEVEL SERIAL#:				
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATER	NALS	SPT DATA (0.5 Feet)	(РР)ИСРМ)	I DAMED BY DE	ARKS OPP IN- pths/Core Box/Etc.)
		サ	upper 3" Sully Clay tops	<u>.</u>	dkbm soff rods	3-3	HEAD	\$6-2-ft }	1117
			Nex+3" Fill Sond as	avc	brn maist	2-4			
			lest 3" Silty Clay is	_ጥ -	danin sold	R=15/24		3/3/2/	4 _
			1691 3 401 1101 13	1	-ctcusty fi				-
	5	u	Greenish Groy Sulfus	nd	Moist CL	2-1	Ø .	55-7ft	; 1127
			+rot at upper 6" (h	race	blkcoloning)	ا مغه			
			Nout 8" Greenish G	1100	1 Sulth Sand	R=24/24			
			Morst ML Soft.			' '			
			Remaider Sandys	elt	moist losse				
	10		Incaraincel Sand						
	fi		Blue Bray Sut Mois	10	aft too lo"	2-2	0 :	50-12	1136
			Bue Gray Silh Chy,	10d	dustry majet	2-4)
		-	Last 14 Bio Gran Coll	Meu.	and on the state of	R=13/24		-	
			Last 6" Ble Group / Solbe	KIN	MILE PRINCE	Ø			
7	15		Subround.	1 1	114 111 10/1	22	δ	35 15-17	· 1147
	-10	m	Blue Gray Staturstea		COT MC SOFF			33 137 7	<u>) ""/</u>
<u>, </u>						2-3			
						Q.19/24			
Maria Maria		:							
-			(C O h O	1.					
	20		Gray Sardy Sult 1908"	Ne	t tinewainedsand	3-2	0	\$ 20-22	25 1/56
			11) Silty Clay trace from	o gra	ived said 64				
	∇	M		1	imainder	R-1924		2.1	
			Blue Gray Sandy Self Sa	:hut	ited Soft Top8"	2-2-3-3	0	55 22-24	12/0
			Blue Groy SULIML SO	# 1	remainder	R=20/24			
	25	=	SAME	υ 		21,23	0	.SS 24-2(0, 1216
						R=201			
		MIL	Blue Groy SLIF ML SOFT	NO	s 10" mc. to MLCL	3776	٥	26-28	7228
		CH	Blue Gray Self ML Soft ul depth wet inc to con	toal	tweeth.	3776 R=13/24			
		~	bottom 3" Suty Clay grav	CON	pact plastic, wet	2361	0	28-20	1232
	30		SAME 194)		R=19/24			
ROJECT					GEOLOGIST SIGNATURE/DATE	,		BOREHOLE NUMBE	
RVAAP	(do	R1	[Carol Can 3/	11/12		LLYMU	v-201

ELEVATION DEPTH USCS CLASSIFICATION OF MATERIALS SPICATA MONITORING (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM) (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (Sample Dialityphistocoe Bowleto. (0.5 Feel) (F)VCPM (F)V
RADRED RUAD LOLD REMANDED TRUE PLACE LOLD S. NAME OF DRIVER ALLE ROLD TRUE LOLD S. NAME OF DRIVER ALLE ROLD TRUE CALL STANDS TO NOTES PID MANGEAUDOR: DRIVER AT 2 1861 Colors from Manual Soil Color Chief, Rov WATER LEVEL MANGEAUDOR: DRIVER AT 2 1861 Colors from Manual Soil Color Chief, Rov WATER LEVEL MANGEAUDOR: DRIVER AT 2 1861 Colors from Manual Soil Color Chief, Rov WATER LEVEL MANGEAUDOR: DRIVER AT 2 1861 Colors from Manual Soil Color Chief, Rov WATER LEVEL MANGEAUDOR: SIR DRIVER AT 2 1861 Colors from Manual Soil Color Chief, Rov WATER LEVEL MANGEAUDOR: SIR DRIVER AT 2 1861 Colors from Manual Soil Color Chief, Rov WATER LEVEL MANGEAUDOR: SPECIAL ROW WATER LEVEL STRUMB WATER LEVEL STRUMB WATER LEVEL MANGEAUDOR: SPECIAL ROW WATER LEVEL STRUMB WATER LEVEL MANGEAUDOR: SPECIAL ROW WATER LEVEL STRUMB SPECIAL ROW SILTY CHAY MARCH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS SILTY CHAY MICH, THE PROCESS AND STRUMB ROWS STRUMB ROWS SON STRUMB ROWS SO
S. PROJECT RVAR LOLD S. NAME OF DIRECT PLANCON MACKEY STAME DIRECTION OF BORBHOLE S. NAME OF DIRECT ADE TELEY ALARCA MACKEY STAME DIRECTION OF BORBHOLE S. NAME OF DIRECT ADE TELEY ALARCA PLANCE STAME DIRECTION OF BORBHOLE T. NOTES PID MAKEMODEL: WATER LEVEL MAKEMODEL: WATER LEVEL MAKEMODEL: WATER LEVEL MAKEMODEL: WATER LEVEL MAKEMODEL: MILL SILVEY AREAL PLASTIC GRAY WE COMPACT CH PLASTIC CLASSIFICATION OF MATERIALS SPID TATA MONTORINA (0.5 FEAT) FOR 37-24 CH PLASTIC CH PLASTIC CH PLASTIC SAME SILVEY LANG MAKEL PLASTIC GRAY WE COMPACT CH PLASTIC SAME SILVEY LANG MICL., THE FRICE MACKET THREE SILVEY LANG MICL., THE FRICE MACKET THREE SUPPLY AND THREE COMPACT WET SUPPLY LANG COMPACT SUPPLY LANG COMP
S. NAME OF DRILLER JOE TELEY /ARRON MACKEY STRING DIRECTION OF BORRHOLE 7. NOTES PID MAKEMODEL: SIR MAY WATER LEVEL MAKEMODEL: WAS PID SERIALR. AZ-18(U) WATER LEVEL MAKEMODEL: WAS PID SERIALR. AZ-18(U) WATER LEVEL MAKEMODEL: WAS PID SERIALR. AZ-18(U) WATER LEVEL MAKEMODEL: WAS PID MAKEMODEL: WATER LEVEL SERIALR. ELEVATION DEPTH USCS CLASSFICATION OF MATERIALS SPECIALR. AZ-18(U) OCH DIPTH USCS CLASSFICATION OF MATERIALS SPECIALR. AZ-18(U) OCH DIPTH USCS CLASSFICATION OF MATERIALS SPECIALR. AZ-18(U) SAME OF DIPTH USCS SPECIALR. AZ-18(U) OCH DIPTH USCS SPECIALR. AZ-18(U) REAL SPECIAL SERIALR. SPECIALR. AZ-18(U) OCH DIPTH USCS SPECIALR. AZ-18(U) REAL SERIALR. SPECIALR. AZ-18(U) REAL SERIALR. SPECIALR. AZ-18(U) SPECIALR. AZ-18(U) SPECIALR. AZ-18(U) SPECIALR. AZ-18(U) SPECIALR. AZ-18(U) SPECIALR. AZ-18(U) REAL SERIALR. SPECIALR. AZ-18(U) REAL SERIALR. SPECIALR. AZ-18(U) SPECIALR. AZ-
PID SERVATE A 2-186 COLOR FORM MARKEMODEL: WATER LEVEL MAKEMODEL: WATER LEVEL MAKEMODEL: WATER LEVEL MAKEMODEL: WATER LEVEL MAKEMODEL: WATER LEVEL SERVALE: SPITATA MONITORING (Sample Ibabaphitacion Boulita.) (CH DIOSTIC) SAME SILTY CAY MEEL PLASTIC GRAY WE comfact 1224 0 30-32 ft 1242 CH DIOSTIC SAME SILTY CAY MEEL MUST rever and trace to 34-10 0 32-34ft 1257 SILTY CAY MEEL MUST rever patrons from the 2-2/24 SULTY CAY GRAY THE trace red trace trace 34-10 0 34-36ft 1520 SULTY CAY GRAY THE Trace red travel trace 14-10 0 34-36ft 1520 SULTY CAY GRAY THE Trace red travel trace 14-10 0 34-36ft 1520 SULTY CAY GRAY THE Trace red travel trace 14-10 0 34-36ft 1520 SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRACE RED TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRAVEL GRAY THE TRAVEL THE TRAVEL TO 3-20 Mm SULTY CAY GRAY THE TRAVEL GRAY THE T
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to tongroup SAND + Warntham O Sandstone / Beltroch 1024 44 55655 0 35 42-444 163 44 GP RODULT SOFT OF SET ONTER CHSING 150 3' INTO SE PRODROULT HOURT ROUSING PID: Mini RATE 200 SET CASING SAT 47 BGS ON ONIOS/12 Ambient Serval #: 1100-405 (47'-67') Light Gray SANDSTONE (SS) 50 Some Short partings Throughout Few 9,251/10.00' 1425
44 GP ROOTH BOTH of FREQUENCY FIRM PROJECT ONTER CHSING 45 ANGER THROUGH SS TO SET ONTER CHSING 47 3' INTO SS PRODROUL THOGET ROUSEN SET CASING ST 47 BGS ON ONIO3/12 Ambient Serice #: 110-405 (47'-67') Light Gray SANDSTONE(SS) 50 Some Shall partings Throughout Few 9,25'/1P.0' 1425
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17 3' INTO SS PRODUCT HUGER ROUST PIDIMINIRATE 200 SET CASING ST 47 BGS ON 04/03/12 Ambient Serial #:110-405 (47'-67') Light Gray SANDSTONE(SS) 0.0 47'-57' 04/04/ 50 Some Shall partings Thoughout Few 9.25'/1P.0' 1425
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SET CASING SET 47 BGS ON 04103/12 Ambient Serial #:110-903 (47'-67') Light Gray SAND STONE(SS) 0.0 47'-57' 04104
(47'-67') Light Gray SANDSTONE(SS) 0.0 47'-57' 04104
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50 some short partings throughout the 9,251/10.0° 1425
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~56.5' Conglomeritic pebbles; subrarded 0.0 57-67 04/04)
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EVAAP 66 RI 44'-67' amanda haten 04/41/12 LL 4mw-201

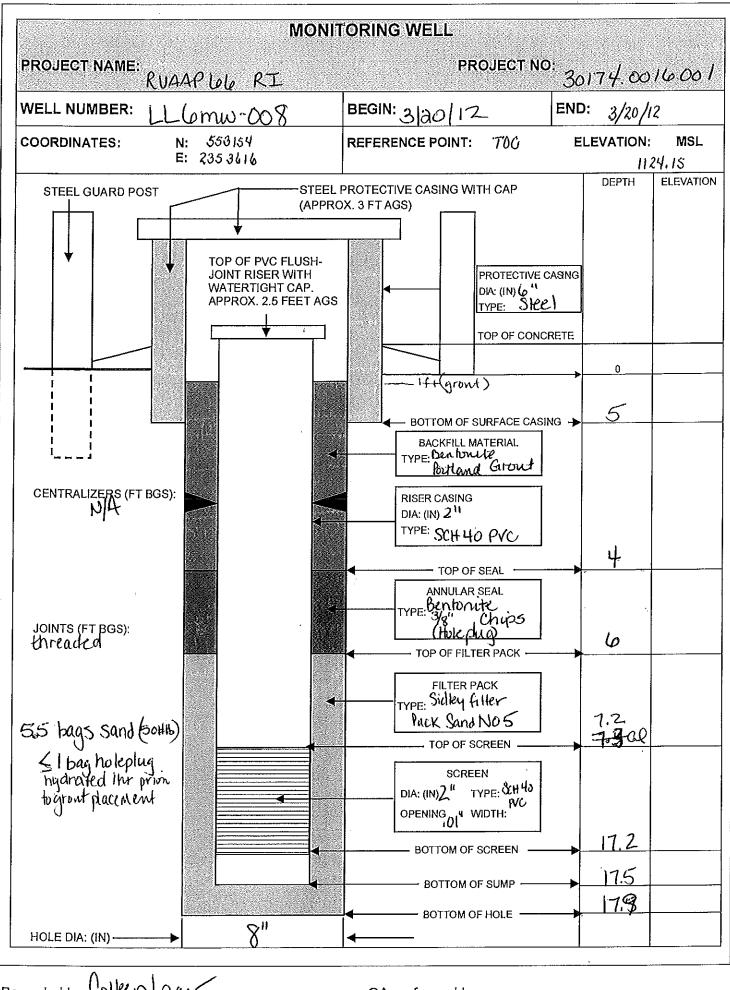


Recorded by: Comande In onto 04/04/180A performed by:

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ITRW DE	RILLIN	G LO	G (continued)	DISTRICT USACE - Louisville			BOREHOLE NUMBER しししい	w-009
COMPANY NA	ME			2. DRILLING SUBCONTRACTOR		· -	SHEET 2	0F Z
EOM				Frontz Driting			oncei Z	<u> </u>
PROJECT R	VAAP	66 6	21	4. LOCATION RVAA	P 8451 State Route !			
NAME OF DRII				8. DIRECTION OF BOREHOLE	₽ VE	RTICAL	INCLINED	DEGREES
			RIUS MSA	PID SERIAL#: AZ- 186	٥l	Colors fro	m Munsell Soll Çolor Cha	rt, Rev
WAT	ER LEVEL	MAKE/MO	DEL:	WATER LEVEL SERIAL#:				
ELEVATION	DEPTH (Feet)	USCS	GLASSIFICATION OF		SPT DATA MG (0.5 Feet)	ONITORING PPM CPM)	Ambient = (Sample IDs/Depths/	KS Core Box/Etc.)
			Topsoil , grass, trace 50	ind on tipd. brun	44.2.3 R=1/24	0	880-2ft;	1000
			Moist		R= 1914			
	•		Pushing Rock		8=0/24	0	0 88.5.1	F, 1004
			Augers turned: Brun S	HyClay trace sanda	COUREO		66-H-10f-	+ }
	5		Silty Clay brun gray M	sh sl ·	35,812	0	55 4-6ft	1012
	•		Moist semisoft		R=14/21			
		Cl	- Silly Clay trans low-no	plasticity moist-dru	9101215	0	55 6-8f1	1020
			and veint (trace) sm. tro	ice rock fragments	R-18/24			
		a	Silh Clay (Free Sand) tar	1613 plashory profisit	1891012	0_	55 8-10ft	- 1030
	10		sould vicins syntrace rock	tragment incl plastic	R-21/2	ч		
		SC	Sandy Clay tan trace mor		40413	0	SS10-12-F	1 1030
			morst trace rock frager	() ()	R=22/24			
	X /	7	Blayen Sand tanorange tro		1,13,11,11	0	SS 12-14f	t: 1042
			10/Clayer Sand (same) dec tomois	++ lowolash/bottom6" plash	R=24/24			
	15		Sand u Clayey and tary	monno L'satsand	9,8,13,45	0	5514-16;	1100
	•		remaining u) weathered beda		R=18/24	/	NO SHELBY D	HETO SS
		50 50	Sandtop & fine-med losses	Whenky Vellanns	24,505"	0	SS-16-18.	
	18 -	· • • • • • • • • • • • • • • • • • • •	fractured bedrock ujsance	as about for bottom in"	R=10124	,	,	
	<u> 10 -</u>		TERMINATED AUGER	A-7 17/10/				
	29/		-WELLINSTAL-17	10" xx fronting san	Istone hell	rak.	* hKe	Shellow
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ROJECT	/-	<u> </u>		GEOLOGIST SIGNATURE/DATE		.,,,,	BOREHOLE NUMBER	
RVAAP Lei	C 04				3-20-1	2	LLGMN-C	γQ

Gogranda 4



Recorded by: Olker law

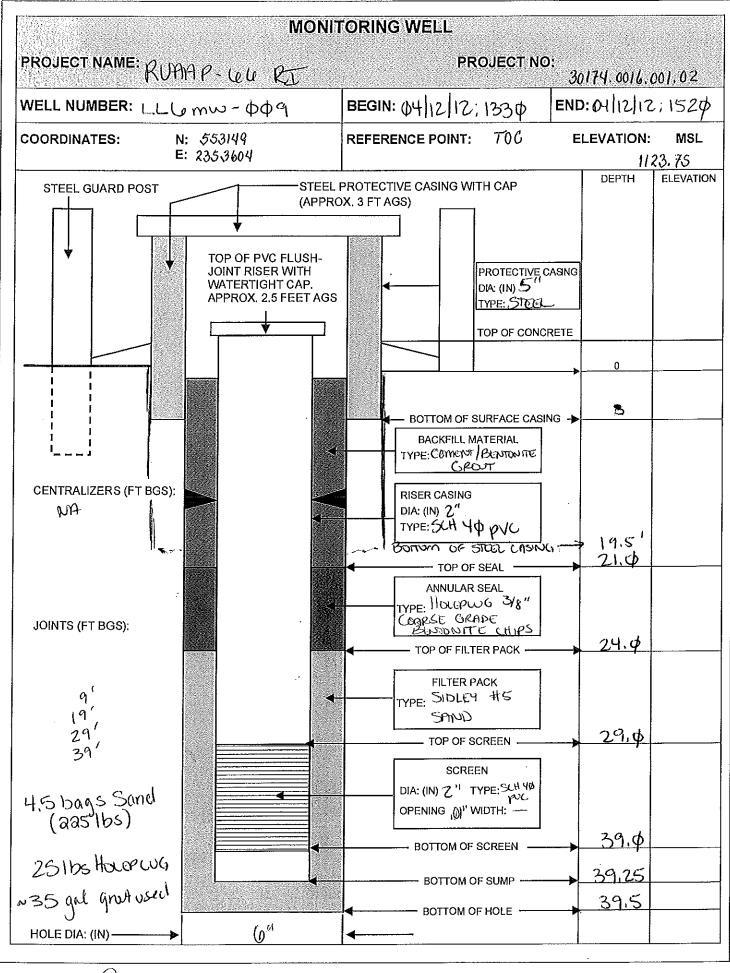
QA performed by:_

	DISTRICT			BOREHOLE NUMBER								
HTRW DRILLING LOG	USACE -	- Louisville		Llemw-DD9								
1. COMPANY NAME	2. DRILLING	SUBCONTRACTOR										
SATO	Frontz D	rilling		SHEET 1 OF 3								
3. PROJECT RIAAR-1010 RT		4. LOCATION RVA	AP 8451 State Route (5 Ravenna, OH 44266								
5. NAME OF DRILLER MAYCON MAYCLEY 7. SIZES AND TYPES OF SAMPLING EQUIPMENT		6. MAKE/MODEL OF DRILL CME 75 ØX										
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOLE LOCATION LOAD LINE G										
814"ID HSAS		9. SURFACE ELEVATION	1141-10									
N SERIES ROLL LORE SAMPUR		10. DRILL DATE/TIME	STARTED: 04/11/12	COMPLETED: 04/12/12								
		15. DEPTH GROUNDWAT	150									
		16. DEPTH TO WATER/E	APSED TIME AFTER BOREHO	DLE COMPLE HON								
12. OVERBURDEN THICKNESS		47 OTUGO MATERIEVE	L MEASUREMENTS (INLCLUD	E DATE/TIME)								
13. DEPTH DRILLED INTO BEDROCK 22.5		17. OTHER WATER LEVE	E MEASUREMENTS (INCOEUD	C ON LI (May								
14. TOTAL DEPTH OF BOREHOLE 39.5			19. TOTAL NUMBER OF CORE	BOXES 🚓								
18. GEOTECHNICAL SAMPLES UNDISTURBED: 37'-38'			21. TOTAL	CORE RECOVERY % 9402								
Of ICIN.		OTHER:	COMPLETED/ABANDONED:									
5///25///		PORARY WELL POINT	MONITORING WE									
BACKFILL TYPE: GROUT BENTONITE 23. NOTES BKG: ≤Background BGS: Below Ground Surface		CPM: Counts per Minu	<u> </u>									
DITO, ABRONGIOGIO BOO. BOIOT OTOTIO DELLA	∞ atic Water Le		ot Applicable									
, First Water Elizouniteled	allo Water Le											
LOCATION SKETCH/COMMENTS			SCALE:	None								
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N N												
		1/1	\									
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			X T									
				BOREHOLE NUMBER								
PROJECT	- 1	LOGIST SIGNATURE/DATE										
RUMAP-Lele RI	-16	Imanda !	Irento oylidi	Llemw-009								

HTR/// DI	RILIM	GLO	G (continued)	DISTRI		_	BOREHOLE NUMBER					
			- (continuou)		- Louisviii - Loui							
1. COMPANY NA				2. DRIL				SHEET	2	OF	<u>3</u>	
3. PROJECT		-(010	RT.		4. LOCATION RVAAP	9451 State Route						
			S MACKEY	·	6. DIRECTION OF BOREHOLE	VE ∇	RTICAL	T INCLINE	D	DEC	GREES	
			linikat 2000	·	PID SERIAL#: 110 - 005	816		from Munse'l Soil Color Chart, Rev				
	TER LEVEL		· · ·		WATER LEVEL SERIAL#:		2	2000 REV 63				
ELEVATION	DEPTH	uscs	CLASSIFICATION OF	F MATER	UALS		ONITORING	(Samala)	RKS	lov/Etc \		
	(Feet)		^				PPMCPM)	(Sample	IDS/Deptn	5/6010	MACIO.)	
	ļ		SEE LOG FOR LILEMU	<u>0~0</u>	08 for overburde	ρ			<u>-</u> -		<u> </u>	
			discription				<u> </u>				·	
			(0.0'-10.0') Silty (LA	Υ								

	5	cc							-	<u>.</u>		
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	10				A 1879							
		<u>50</u>	(10.0-12.01) Sandy C	LAY								
											<u></u>	
			(12.0'-16.0') Sand w	<u>50</u>	ne Clay; less							
		ട്യ	Clay w depth; wet									
	15											
						-					<u>. </u>	
			(16.0'-18.0') SAND W/ SON	re Si	3 fragmunts			,				
			(17.0'-19.5') AUGURED TO	SE	T CASING-AUGER	REFUSAL	<u>@10</u>	.5'	 .		··	
			(19.5'-29.5') SANDSTO									
	20		Wotimicaceais				(D.Q)	(19.51	-29.5	<u>s')</u>		
			from 19.5' - M21' Some	45/10	w brown staining	Y	mbunt	04/12			95	
		SS	from 19.5' - M21'; some increased amount of frac	ture.	<u>'s</u>			9.4'	/10	<u>.Φ'</u>		
		L	@21.8 YBruin claya						_		-	
			~23-23.5 Gray clayey		~.>							
	25		@25 Fracture due to) (₍	e rocks					. <u>.</u>		
	ļ <u> </u>		21 0/2 11	1/.	San Landon							
		ļ	27.5-28 fewdkyray+y	121101	DISTORY TOTALINGUAS			 			_	
			@29.0' fracture from co	<u></u>	od addition							
- 	30		CA TO THOUSE HOME CO									
PROJECT		1	1		GEOLOGIST SIGNATURE/DATE			BOREHOLE			40	
RUANE	? - (o t	OR	<u>. </u>		amanda In	estr 1	4/12/12	اللاه	mW	Φ·	<u>σ</u> ¬	

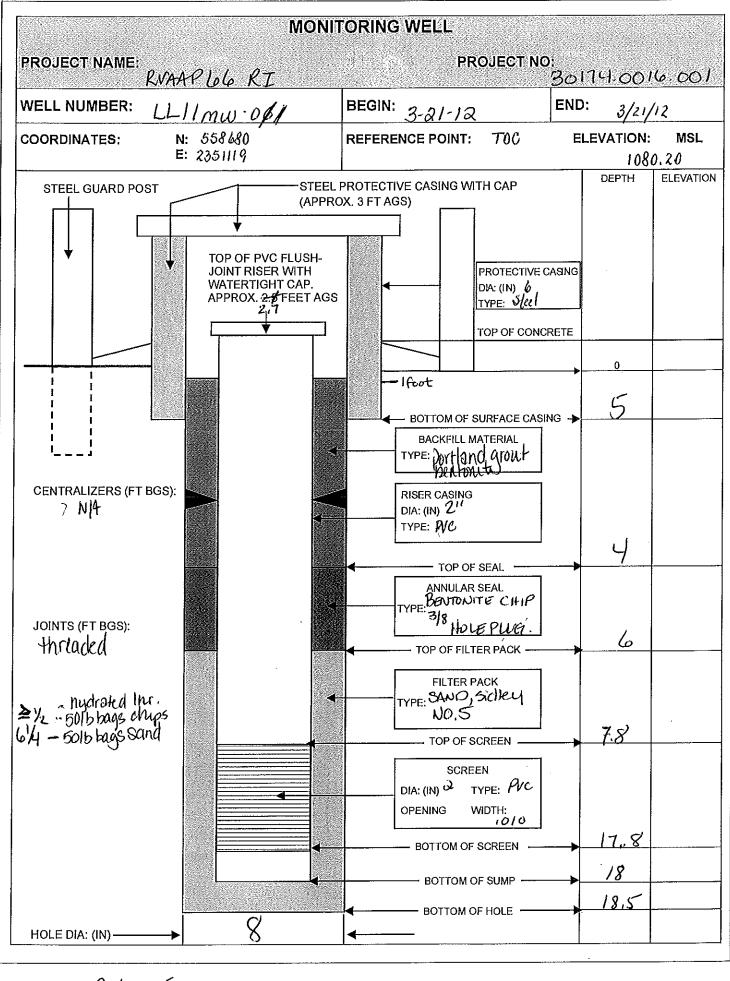
	•		A Section 2									
HTRW DI	RILLIN	G LO	G (continued)	DISTRI	CT Louisville	BOREHOLE NUMBER LLU mw - 009						
1, COMPANY NA	ME				LING SUBCONTRACTOR	SHEET 3						
SAI				Frontz [Orilling		311221 9	۰, ٦				
3. PROJECT	2UMA	P-1	ele RI		4. LOCATION RVAAP	8451 State Rou	te 5 Ravenna,	, OH 44266				
			on macicy		6. DIRECTION OF BOREHOLE	\subseteq	VERTICAL	INCLINEO	DEGREES			
7. NOTES PID					PID SERIAL#: 11Φ- Ø58	16	Colors fro.	m Munsell Soll Color (Charl, Rev			
WAT	TER LEVEL	MAKE/M	ODEL:		WATER LEVEL SERIAL#:		2	000 Ra	<i>∞</i>			
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION O	F MATER	NALS	SPT DATA (0.5 Feet)	MONITORING (PPMSPM)	G REMARKS (Sample IDs/Depths/Core Box/Etc.)				
			@30.0' FRACTURE FROM CO	70 T B	COGINGA COS		~					
			JOME DIER GRAY PARTINGS				Anternt	29,5'-3 04/12/12	(1300) (105)			
								9.41 /1	(), ()			
			~33.01 FRACTURES					<u> </u>				
	35	SS	@35.0'-35.5' FRACTURES TO	ion (CAMORA COS 320.							
								11000 1500 37.0-35.0	Jely -			
		-										
	:		38.0'-38.5' Few-Freduce	3;500	re datur pertings			Core for Permental	1			
			W Sklevik-1 pynte					12 lesto	\$			
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			Boring Terminated	න ද	39.5 A bas							
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	60											
PROJECT					GEOLOGIST SIGNATURE/DATE	4		BOREHOLE NUMBER	ا م م م			
RUAYA	P-(0	6 R	I		amanda I	entry	04/12/12	LLC mu	s-WO9_			



Recorded by: <u>Umanda</u> <u>Opentor WIZIZ</u> QA performed by:

	DISTRICT	DISTRICT									BOREHOLE NUMBER					
HTRW DRILLING LOG	USACE	- Loui	isville	Э							لِ ا	1	lm	N	01	
1. COMPANY NAME	2. DRILLIN	ING SUBCONTRACTOR												0.5	-	
Eam	Frontz [Orilling										EET	1		Z	
3. PROJECT RIAAP 1010 RI		4. LOC		4	RVA	AP 8	3451	Stat	e Ro	ute (Ra	venn	a, O	H 44	266	
5. NAME OF DRILLER JOE TETER		6. MAI	KE/MO	DEL O	F DRII	L C	ЧĒ	50	5 L	ب						
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOF	REHOL	E 1.00	ATIO	P	KK	29	<u>a</u>	ee	nlee	≯ {/	Ne	tus	<u>Fal</u>	15(5)
HSA 4.5		9. SUF	RFACE	ELEV.	ATION	I/DATU	M		10	77.4	10					
3" \$\$(2')		10. DR	RILL DA	ATE/TII	ME	STAR	TED:	<u>321</u>	12		COM	PLETE	D: 3 .2	1-12		
		15. DE	PTHO	ROUN	IDWA	TER E	4COU	NTER	^{ED} 7	<u>B'</u>						
		16. DE	РТН Т СО Х.	IO WA	TERVE	LAPSE #* B	ION)	E AFT	er bo	REHO	#€3 DECC	MPLE	HON			
12. OVERBURDEN THICKNESS 18.5 13. DEPTH DRILLED INTO BEDROCK 10 0		17 OT	HERV	VATER	LEVE	EL MEA	SUR	MENT	S (INL	CLUD	E DATI	E/TIME)			
		17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME)														
to O	DISTURBE	:n: • • i				19. TO			R OF	CORE	BOXE	s	1 4			
18. GEOTECHNICAL SAMPLES UNDISTURBED: N/A 20. CHEMICAL SAMPLES CHEM: N/A RAD:	NA	OTHE	A-	ıla.							CORE		/ERY	%	VA.	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3-2.1		OTTIE:	10. YO	1	DATE	COME) FTF	D/ARA	NDON	FD:	3/21	/12			44[
		PORAR	v WEI			00.111		MONI			/ /	רי)				
BACKFILL TYPE: GROUT BENTONITE 23. NOTES BKG: ≤Background BGS: Below Ground Surface		CPM:				ıte					Million					
BIG. Spackground Boot Bolon Ground Canada	atic Water I		Oour			lot Ap	olical			, po	,,,,,,,,,,,					
: First Water Encountered : Sta	allo Trato: L				11111	тост гр	piiou.	I								
LOCATION SKETCH/COMMENTS								SCA	\LE:		Non	e ——				
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PROJECT .	GEO	LOGIST	SIGN	ATURE	/DAT	=		<u> </u>	ī	<u>. </u>	BORE	HOLE	NUM	BER	<u>. </u>	i
		_	19				_	la e	/ . <u>-</u>		1	1 1	1.	A	ΔL)
RVAAP 66 RI	(3/21/12							1 4	<u>~ </u>	1 /V	11	v_{\perp}			

HTRW DRILLING LOG (continued)			DISTRIC	CT - Louisville		BOREHOLE NUMBER				
1. COMPANY NAME				- LOUISVEE		L. Ilmw. Oll				
EQM			Frontz C				SHEET 2	of 2		
3. PROJECT RVAAP GOR					4. LOCATION RVAAP	e 5, Ravenna,	OH 44256	<u> </u>		
5. NAME OF DRILLER JUE TETER					6. DIRECTION OF BOREHOLE	VERTICAL	INCLINED	DEGREES		
7. NOTES PID M					PID SERIAL#: A221861		Colors fro	om Munsell Soll Color Cl	nad, Rev	
WATE	ER LEVEL	MAKE/MC	DDEL;		WATER LEVEL SERIAL#:	,				
ELEVATION	DEPTH (East)	USCS	CLASSIFICATION (OF MATER	ALS		MONITORING (PPM/CPM)	Ambie 105/Depti	RKS - D ns/Core Box/E(c.)	
	(Feet)		Topsoid DLBran]"/next So	1gling	adon) trace	2,744		SS 0-291;		
		SN	ernaular gravel grange Brown	Votan	action that	R.20/24		300231	<u> </u>	
		Mill	Sith Clay Orange Soun,			उंगेड़,।	0	95 2-4ft	0942	
			trace rock tragment trace:	Sold 1	MAC STATE OF THE S	R=14/24		552 111) 	
	5	40	Same top 9 7 then Sandsec	JAM IYLA Xaray a	ti Med / remainds		ひ	35 4-6ft	: 0960	
		Met	Silfy Clay Org Brin soff hard,	shift d	er argustotte l'roc sil	R=14				
		Sno	Silta Sonds Claupy Sind uf 1"2	soudle	ROS IN LATEL	8912,13	O	856-8ft	· 0958	
-, :	2	\$c -	dense stiff silts "Soft clay up	doath doath	hallow 3" est assulcan			000		
UC	-		Character Suprandia	uepiii.	I" par in shoe	32,1,2,	0	SS &10	1004	
	10		Brum Saturated Sand go	uvezj	1 AUXHISIM	R=1/24)	
			8"Sovelloose sechulated brug	o frac		1,1,4,5	0	\$ 10-12	10/2	
			Stalla animai solt	trace	Sands .	R=17/2	4			
		-	Sandy Clay & Land 10" loss per	d hur 1	Utraco class	8994	0	SS 12-14	; 1014	
			remainder Sand 1982 ckns	Orar	ace brown Saturaka	R=24/2		•		
-	15	S. S.	C.		,	15010	1.0	5814-16	: 1025	
		52	Sand Sat fine-medgrain	I ora:	ral brown	R=12/24				
		1	poorly graded dense-ne	dden	se grave 10 base	1,35(0	0	85 16-18 -	1033	
	_16 \	SW	Sand graded dense the Sand Sat gray medicin, well graded trace gra - Set well @ 18	kv3	e-meddensi	R-12/24				
			well graded trace an	avel	- Auger 18.5		-	termina	te ·	
	60		- Setwell @ 1801	(200)	.)					
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PROJECT	<i>a</i>	70	00 -0 -		GEOLOGIST SIGNATURE/DATE			BOREHOLE NUMBER		
	+	\mathcal{P}_{Λ}	00 @ RVAAP-66 RI		Collan Lect	3/21/12		LLIIMW.	DII	
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Recorded by: C. Llux

QA performed by:___

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HTRV	V C	RI	LL	IN	G L	.00	3			. •				Lou									L	411	mu) - O	12	-
1. COMPANY		E										2. DR	ILLING	SUBC	ONTR	RACTO	R							CCT	1	OF	,	
₽Ó₩)											Fror	ıtz D	rilling	3								5⊓	EET	'	OF	Q	
3. PROJECT	QV/	no	Inl	· R -	7							<u>. </u>			CATIO		RVA	AP 8	3451	Stat	e Ro	ute (5 Ra	venn	a, O	H 44	266	
5. NAME OF I	DRILL	ER	10E	TO	<u></u> Ter	2	7	R. 1k	milt	01				6. MA	KE/MC	DEL C	F DRI	II CA	۸E	55	L	ر	1					
7. SIZES AND	TYP	ES OF	SAME	PLING	EQUIP	MENT	<u> </u>	<u>,,</u>	, 0					8. BO	REHO	LE LOC	CATIO	"PW	<u>න</u>	Gr	een	lea	£/i	Veu	stor	Fal	<u>llS</u>	
H544	125	5					•			**				9. SU	RFACE	ELEV	/OITA	I/DATU	М	_	107		<u>)</u>					
21851																ATE/TI		STAR	TED:?	yay	12		COM	PLETE): Or	<u> 147</u>	12	
Boles			- 6	set	CLS	·~								15. Di	EPTH	GROU	ADWA	TER E	4COU	NTERE	D B	30R	our	<u>= 10</u>	<u>0 84</u>	<u>r</u>		
Al sel	ies	cole	bx 6	tell :		U								16. Di	EPTH '	TO WA	TER/E	LAPSE	D TIN	IE AFT	ER BC	REHC	OLE CC	MPLE	HON			
12. OVERBUI	RDEN	THIC	KNESS	}	88	/(A. 10.		Ó (1)	OLUG.	FDAT	cauc				
13. DEPTH D					2	71	4							17. 0	THER	WATE	R LEVI	EL MEA	SURI	MENT	S (INL	GLOD	E DAT	E/TIME)			
14. TOTAL DI					119	<u>56</u>	<u>+ </u>											40.70	TAL	U II ADE	0.05	CODE	POVE					
18. GEOTECH				:		UND	STUR		N			OIST	JRBEC					19. 10	MACI	UMBE						% :2(30	
20. CHEMICA						CHE		<u>1/4</u>		RAD:		NA	<u></u>	OTHE	R: /	UA										% 70	16	
22. DISPOSIT	TION (OF BO				DATE					03/2							COMP		D/ABA				qu				
BACKFILL TY				GRO					ONITE				TEME			LL POII			<u> </u>	MONI								
23. NOTES			: ≤Ba	-				: Belo	w Gro		urface				: Cou	nts pe			. **		: Pans	s per i	Million	1				
		\bigvee	: Fire	st Wa	ter En	count	ered			Y	: Sta	tic W	ater L	evel			NA: I	Vot Ap	plica	016								
LOCATIO	ON S	KET	CH/	COM	MEN	NTS									,					sc	\LE:		Nor	ne				
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		*******				*********	4) !	1	11			(*************************************		•	1											į	
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PROJECT	İ		ì	i	<u>. </u>	<u> </u>	<u> </u>	:		:	<u>. </u>	·	GEO	OGIS	T SIGN	NATUR	E/DAT	E	•		•	1	ı	EHOLE				
RVI	AAP	- 1.1.	RT	-									\	ر 11 نهر	₂)	Sher		An		3/2	6/12)	1	111	Ww	J01	1	
1747	1111	VΨ	117										لک	<i>/</i> L/V	· · · · ·	`\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	· ·~(/	121/		7	/ ``							

HTRW DE	RILLIN	G LO	G (continued)	DISTRI	CT - Louisv⊠e			BOREHOLE NUMBE	
COMPANY NA	ME				LING SUBCONTRACTOR			SHEET 2	OF CO
		1 0 =	-	[FIGURE 1	1	3451 State Rout	e 5, Ravenna,	OH 44268	
PROJECT RV					6, DIRECTION OF BOREHOLE	, A	VERTICAL	L INCTINED	DEGREES
NAME OF DRI					PID SERIAL#: A2-1841	<u> </u>	Colors fr	om Munsell Soil Color	Chart, Rev
	ERLEVEL		JUS MS4		WATER LEVEL SERIAL#:				
ELEVATION	DEPTH (Feet)	uscs	CLASSIFICATION O	F MATER		SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	3 And REM (Sample IDs/Dep	MARKS 0.0 oths/Core Box/Etc.
	(reet)	<u> </u>	8: Hed hedd no 11 House Wa	منائ	Gang 3-71-12 142				
			Drilled based on LL11mw 20	111 100	From 5 21 1 13	,			
			brown branze ulgray	- ^/	nek				
			woun owne apaix	F (1)	0181				
		1.					•		
	5	Mr.	2.11. Marie 10 - 10						
		Įγν	Sily Clays + Sands brun + gray/green	$\neg r$					
			brun + gray/green	18K)				
			0 11						
	10		Sands + Silty Sandy Cl	ays					
			wet '						
		:	Soften			-,			
			Sand						
	15		WAF						
	<u></u>		0001			1			
	18	5m	Sand+gravel wat	CNO	ш				
	10	ShA	But Sand saturated go	W (ting loca tologe	13,55	0	18704	· 1510
			uldet was sand has are	a d	uldenth tongerly an	0 11/1		,,,,,,)
	20		ul depth inc sand fine gra	d des	m Cine 6" 4.	4446	****	20-224	. 1<10
			CONTROLLED STUDE OF THE	ייייייייייייייייייייייייייייייייייייי	Con Accord aray to	13/21		- W 2-4	·)
		WC.	ul death inc Sand fine and Silty Sond 3"grade to son mark Sand wellgraded rou Sand	XKK ().	buching J. Hall	7,10,12,14	}	72-246	4: 161
		W.	Dand Suran Suran Surah Giller	cm\	eam Wan Clal	R-20/2		an with	17 182
		SUN	73 16-18" Silt (Mr) Sundy Sult (1111)8	CHIT TIKI SVV	13,14,34,2	.3	24-26	Cr : 15 11
"		دنيم/1	Mayingsands SW		MOT8+	0.201		2120	17) 13 T
	25	MV	hand Salty Sands dikgray-tx Saltyfine Sands uf trace	otton	15 no Washuryugione	N= 124 212197		26-28	[+ ' ,=
		ML	Jallyfine Sands uf frace	4171	1el Morst Sitting	0-18/			
				<u> </u>		R= 18/24 15,36,38,3	2	Ambient	
		OW	Saturated Sands					28-30	<i>Jt</i>
						R 24/2	<u> </u>	1/-1	
	30		gravel-bkredbuff SS pieces in	leather	lorgrapher olevanisment	14243354	4	Amburg BOREHOLE NUMBE	
ROJECT			V		GEOLOGIST SIGNATUREDATE	- 11 (, _	WIM	
RVAM) 66	RI			ante	3-21-1	<u></u>	WILM	

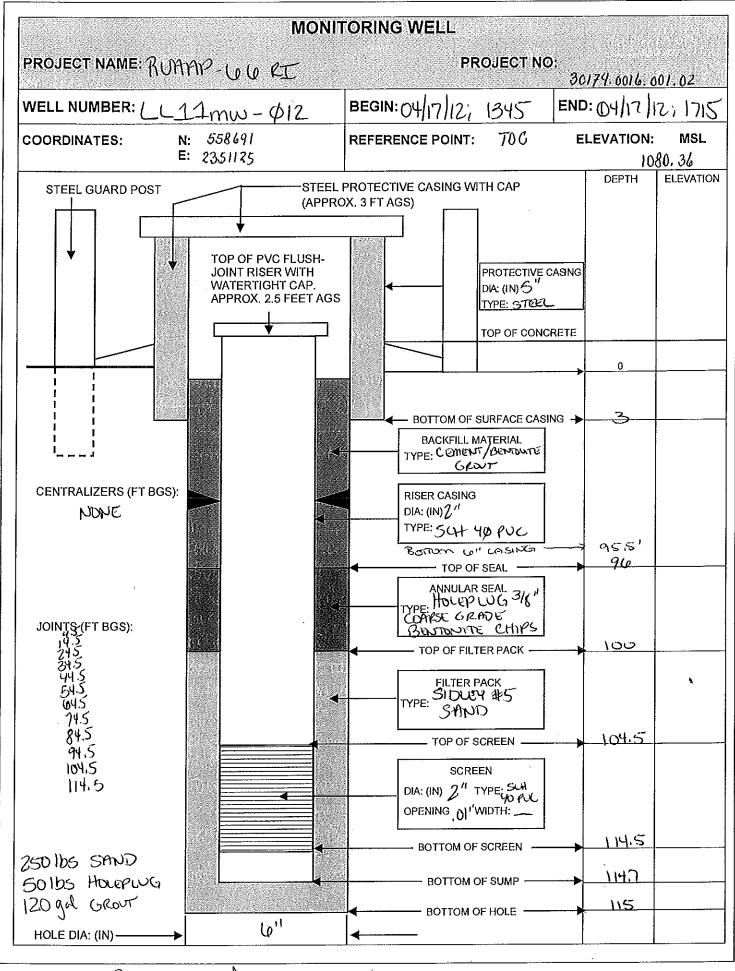
HTRW D	RILLIN	G LO	G (continued)			BOREHOLE NUMBER)12
1. COMPANY NA EQM	ME		f, , 2. DRILLING SUBCONTRACTOR Frontz Drilling			SHEET 3/3	OF 6
3. PROJECT R	VAAPU	6 RI	4, LOCATION RVAAP	8451 State Route	5 Ravenna,	OH 44266	
5. NAME OF DRI			6. DIRECTION OF BOREHOLE	χV	ERTICAL	INCLINED	DEGREES
7. NOTES PID	MAKE/MOD	DEL: \$1.0	MAN MSA PID SERIAL#: A2-186 1	-	Colors fro	om Munsell Soil Color Char	1, Rev
	TER LEVEL						
ELEVATION	DEPTH	uscs	CLASSIFICATION OF MATERIALS	SPT DATA A	IONITORING	Ambienta (Sample IDs/Depths/	§
	(Feet)			1 ' '_L	(PPM/CPM)	(Sample IDs/Depths/	Core Box/Etc.)
		SW	Saturated Sands (Oarse 8" gray sa - heave Sills ul trace gravel (The) 3" (gravel Sondstone)	16,24,33 50/4 ^H	0	30-32A	1610
		ML	Sills ul trace gravel (TILL) 3" (gravel sondstone)	R= 12/24			1:1
			(heaving sands) hairm	2,7,27,	0_	32-34;	1690
		ML	f ` ,	R=20/24			
· · · · · · · · · · · · · · · · · · ·	35		Mard Sulf till gray damp (heaving // recogn)	13.33	٥	34-36;	170
			()	0=16/24			
			hardnesstuldepth	212,27	0	36-38;	1726
				0-16/211			
			L' and L'an Della and Inc. and Arrive	G15,23,31	O	38-405	17 30
	40		inc wetness, inc softness dec gravel pieces trace BIKout (hearing=1/2 recovers)	20/		30 70	1100
	40	ML	frace BIKout (hearing= 1/2 recovery)	113241		110 110	17 001
:			, hele 4	50/5	0	40-42	17.394
neave			Theoredsond 8'overnight) wakerd=100ga	R=934		1 1 1 2	121
			16R=hearine Sints	161412	<u></u>	42-44 33:22	1045
			ER= ML Silt frace gravel Tue gray trated compact	R= 1/24			
	45	M	Sardy Sult top Situated bottom 16 hard	1433/15	0	44-46;	b59
		Sm	trace roundgravel, fine sand to med must compact	R=70/24			
heave			SAS hateredhole 2 50gals	1638	0	46484.	1108
1000			Lineary All in Will 2!	2- P4/24	3.	ţ.	
			blue gray + ax gray this silt a round grave hard	30/4	0	18-50A	1120
	50		sandistrill heaving (top 6") wet [desire	0 12/2	<u> </u>	100-11)	
:1			I (MATIMACO LE COLTECTO EN ALL LANGE AND MACE)	e, 4050/4	O	50-52A;	1140
			1 Christ Christ	R=19/24		000295	11 10
5			remaining darip Till aomm			82 BUD.	. 64
V.F.			hard drilling naximum down pressure	24,48 50/4	0	52-54ff	11.59
			Morst Tim (top 4"sanduet)	R=16/24		F11 5/ 0 :	
	55	SW	Sand coarse topud wet rounded gray 6" w round grave?	1338, "	<i>O</i>	54-56ftj	1209
		SM	Sardy & Hoten semonst & & LAJTIM 5"	R=16/a4			
			Sandy 814 Sat 2" Saft Til material remainer hard	15,47,80/	4 ()	56-58ft;	1350
			arns!	R=17/m		Amhiett O.	8->1406
		50)	Cardcours rudgray wet meddense los grow	× 24 1	60 O	58-60f	
-	60	511	Sandy Self uf Till bace Cay Low plasts	R=2/21	1/ 	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	7 111
PROJECT		U1.	GEOLOGIST SIGNATURE/DATE	10-10-11		BOREHOLE NUMBER	
RVAAG	sta z	2 (3-2.2	-12	WIImw-	Λ12 Z

overturning top (a" of spirt spoon & needed to clans.

HTRW DRILLIN	IG LO	G (continued)	DISTRIC USACE	CT - Louisyïlle, sasky,	<u> </u>		BOREHOLE NUMBER	012
1. COMPANY NAME			2, DRILI Frontz D	ING SUBCONTRACTOR			SHEET 14	of Le
3. PROJECT EVAR	010 0	2.1	1	LOCATION RVAAP	8451 State Rou	te 5 Ravenna	, OH 44266	
S. NAME OF DRILLER				6. DIRECTION OF BOREHOLE	×	/ERTICAL	INCLINED	DEGREES
. NOTES PID MAKE/MOI				PID SERIAL#: A2-1861		Colors fr	om Munsell Soil Color Cha	art, Rev
WATER LEVEL				WATER LEVEL SERIAL#:				
ELEVATION DEPTH	uscs	CLASSIFICATION	OF MATER	ALS	SPT DATA (0.5 Feet)	MONITORING	1 杯りれ り ほれたさ	IKS - /Core Box/Etc.)
		8" Silty Sand Sat. 7"	'S44 S	at Sand v. loose Sty		-40	60.62f+	1420
		8"hard Silty Tilldamp tro 6" Silly Sand Sat. Coa 6"hard Silty Till Sat 6"then buet Silty	ucigni	rel throughout	R=03/3	4		
		6" Sily Sand Sat. Coa	15e-1	led wet	636/4	0	102-10-19-1) 1445
		6" hard Solly lill	~~·		02/2/	24	() ()	
(0 \$3.5×		Satto then thet July	ful ha	urd	23HS,57	15-0	64-66ft	· 145
	-				R = 121 102035	49	11 201	
	, n	Salty Sand dec sand u	lacp11	- SUTUTATED	24/	10	(do-68)	F 1520
	M	acc www his acom-	ult,	Dark XIL Harching	X= /30 244050	/_ ^	1.8.71	1543
70	A 4.1	Silk marketime	un lan				100-10	1075
	MC	Sitts grayy-kugue Suts compact mon	OL-da	MODE CONFICENCE	132041 B	/ <u>/</u> //	70-72	1604
		Sus confuer not	- 37 °CU	74)	R=24/21	74 —	10.10	-1009
		Sofunck top: trace ro Fultcompact hout Sand Sandstone prece	urdedgi	ravel		4"0	72-74	1629
	ML	Siltcompact mout			R=19/21	<u> </u>		
· 1515		Sand Sandstone prece	<u>s </u>		4750/4	0	74-76	1654
		ROCK RUBIK BUFF			R=6/2		705.	
	L	Muckin Luger -	0	meddense looge than poorly graphe	0 22/11	0	5576-78+1	, 1036
rave signal	SP SO	Sutpet gray flowing	5 Dan	I tan poorly grane	20,22,25	79	3-23-12	11/24
eave of	\$0	alty Clay Tru rounded g	ענו או	ALCATANO A KATURI	~'	'	3:78-80ft	11704
89 50	ML					42	(20) (2-7) *	1/39
		Sitty Clay Tru dry Fight	1 57 11g	*	R=24/24		10.82	112
		swelling clay	ກ		12,21,38,	48	87-84"	1220
		Tin Bhegray dan		Hrace Shele moun varigated	, ,		02 - 1	
85 56		bluggay-dikaray Shty	<i>n</i> - <i>r</i>	- // · · ·	14,39,6	y	84-86;	1305
		Protate dry (Micacion	(57) (ilts vangatiel	R=12/24			
		Frisble dry Sulty/Lucace		dk	H8 50/4		86-88;	1340
					R=10/24		7	Ž
90								
OLAAD LL A-	~		ď	SEOLOGIST SIGNATURE/DATE	4.4 4.5		BOREHOLE NUMBER	012
RVAAP Lolo R	レ		(Jalja 3	<u>-23-12</u>	<u> </u>	- CII IVW	

		···		DISTRI	CT			BOREHOLE NUMBE	R
HTRW DI	RILLIN	G LO	G (continued)	USACE	- Louisville			LLII MI	1-012
1. COMPANY NA EQI		•		2. DRIL Frontz I	LING SUBCONTRACTOR			SHEET 2/5	OF (
3. PROJECT		166 7	R L		4. LOCATION RVAAP 8	3451 State Rou	te 5 Ravenna,	OH 44268	
5. NAME OF DRI	ILLER ("	Toe To	le HARON MALKEY		6. DIRECTION OF BOREHOLE		VERTICAL	INCLINED	DEGREES
7, NOTES PID			Picios MSA MiniRAE 201) b	PID SERIAL#: #2-1861	/110-005	%/(Colors fro	m Munsell Soll Color (Chart, Rev
WA*	TER LEVEL I			•	WATER LEVEL SER!AL#:				
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF			SPT DATA (0.5 Feet)	MONITORING (PPMCPM)		ARKS lhs/Core Box/Etc.)
*****			Wedhole Sheli Hickle (88	.0-8	8.7 /1)	29.5%	00	88-90-11;	0920
			Weethered Skli , frieble (88 Weethere) Skli , less weethered SKJ, crombly (88.7-8	201	K sal micaceous	B= 11/24		, ,	
			ACL CLIMBLY (82.7.8	8.9)	(37)				
	0-		(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	7					
	.35°		Weethered style, gray, moist	کہ	HI CONSI	40.5%	D	90-92/1:	1002
			WELVIGES O'EK, July, Maryo	/	77	R= 9/24	,	, , , , , , , , , , , , , , , , , , ,	
						· /			
_	92		Used 4" Sad See do me	12/12	wet	50/5	Q	92-94 /6;	1545
		•	Upper 4" Sand, Srn. In med of Remainder Weathered Skill, de South	15.160 16. 1	Bill Moid	50/5 R= 19/24	,		
	94 .40		Little	, Y	<i>vng, wis</i> t,)/-/			
	-		Unqu						
	94		Weetherd style, dark graf, br	:1110	Mart	50/3	Q	94-96/1;	1640
	11		Wizeld Ork, Out fry, or	, u, ic ,	700	50/3 B= 4/24	<u> </u>	10)	
	_					<u>.i) /*/</u>			
	98 48		Weather shale as above			50/3		96-98 A;	17M
			•			50/3 R= 5/24		'''''''''''''''''''''''''''''''''''''	
	0.0	OH	MIN CASING INSTALLED A) ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	1 /3			• • • • • • • • • • • • • • • • • • • •
	98		CHSA'-C NOSTRECOS H						
			USED TRICONE BIT			CT .			
	100		SH+LITTLE SS OBSERVE			11			
	200							Ø4117/12	@ 1110
			STAPTED PRODUCING ALO	Han.	E WARREST DOVI		Ambunt 0.0		
			(98'-100') Sandy S	1 1/10	LE JURY CHOIK		ω.ψ	7.21/10,0	
			gray, moist; slightly	104 1111	Sandaha (Harry)				<u> </u>
	105		(100-104') Interbedo + Shale; hard; harizont	(2 actives sixuation	م احدد	ac s Dag	2. 10h22.4h	
			(1011 - 108) SHALE (C)	14.7	raciones, wer to	<u>x., brit 11</u>	1163-3 1141	0,000	
			(104'-108') SHALE (S	3000	1, massive;				
						_ .			
			@1061-color is med						
	110,		Sand content in Smale	ح, ـ	THE COVERL MICHOL	<u> </u>			
ROJECT					GEOLOGIST SIGNATURE DATE		<u>. </u>	BOREHOLE NUMBE	R
R1	IAAP-	66 9	RI		Sato Sysshall amando Ine	D 3,	/26/12	LLIIMW	- 012
					amando Ine	entr	04/17/12		

	DISTRIC	ा			BOREHOLE NUMBER
HTRW DRILLING LOG (continued)	USACE -	- Louisville			LL11-mw-012
1. COMPANY NAME	2, DRILL	ING SUBCONTRACTOR		- "	SHEET G / M OF LA
SATO	Frontz D				
3. PROJECT RUMAP-LOLO RI		4, LOCATION RVAAP 8		le 5, Ravenna, (
5. NAME OF DRILLER HARON MACKLY		6. DIRECTION OF BOREHOLE		VERTICAL	INCLINED DEGREES
7. NOTES PID MAKE/MODEL: MINICHE 2000		PIO SERIAL#: 11 Φ - 005	816	Colors from	m Munsell Soll Color Chart, Rev
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:			And the second section of the section of t
ELEVATION DEPTH USCS CLASSIFICATION OF	F MATERI	ALS		MONITORING	REMARKS
(Feet)			(0.5 Feet)	(РРМОРМ)	(Sample IDs/Depths/Core Box/Etc.)
(108-110.3) SHALE: d	lanc T	gray, wet;		Ambient On oh	108-115
(110,3'-114')SHALE+	SAN	DOSTONE: laminate	d		6.21/7.01
from 113-114 increa					
115 (114'-115') graysh Die					
	7				
BORING TERMINATED	ne	HE FT ROS			
DOKNO TELIMOTION	+) \				
120					
123			<u></u>		
1 25					
1 30					
NAC					
1'35					
			_		
		8			
i ip		ICEOLOGIST SIGNATURE/DATE		1100100	BOREHOLE NUMBER
RUAMP-66 RI		GEOLOGIST SIGNATURE/DATE	hont	111112 h	LL17mw-012



Recorded by: amanda het 04/17/11QA performed by:

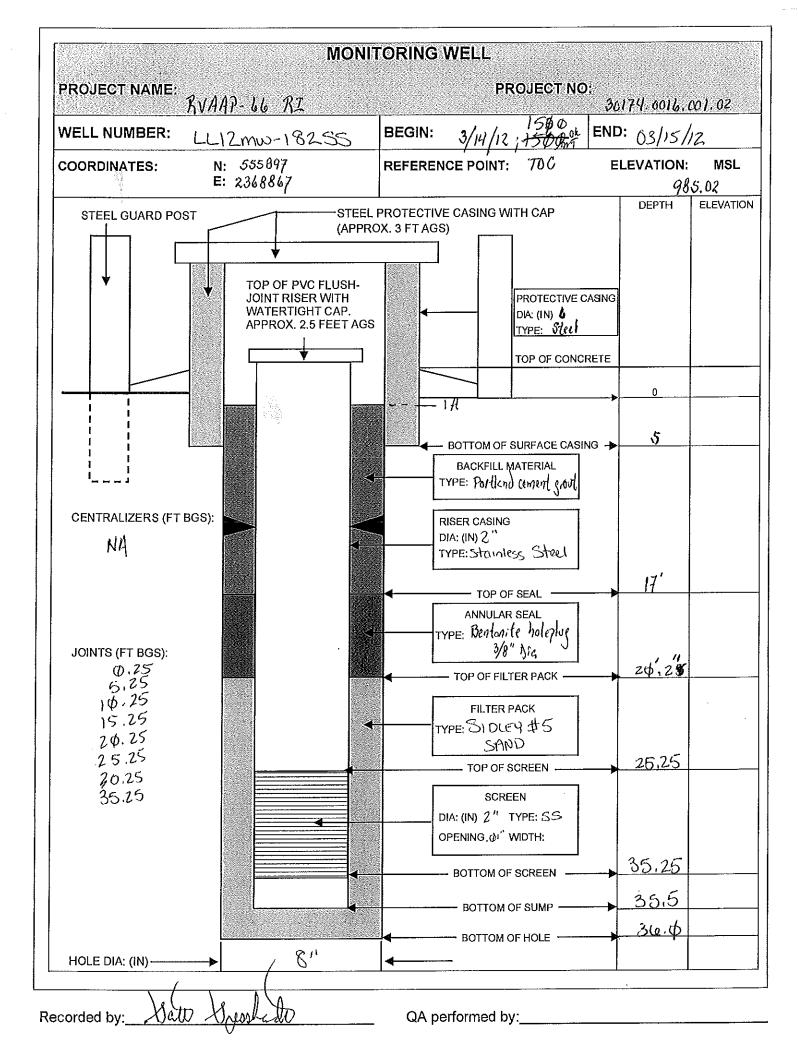
		DISTRICT							· · · · ·		BOF	REHOLE	NUM	3ER		
HTRW DRILLING	LOG	USACE									۷	121	۸W	~18	25	<u>26</u>
1. COMPANY NAME		2. DRILLING	G SUBC	ONTR	ACTOR										Am	7
SAIC		Frontz D	Prilling	j							Si	HEET	1	OF	12.	<u> </u>
3. PROJECT FWGWMP K	₹ ₩		4. LO	CATION	4	RVA	AP 84	151	Stat	e Rou	te 5 R	avenr	na, O	H 44	266	
5. NAME OF DRILLER JOE TO	TIPL		1		DEL OF				<u> </u>							
7. SIZES AND TYPES OF SAMPLING EC	QUIPMENT		8. BO	REHOL	E LOC	ATION	SOL	πН	0	^c L	L12	fi:	NCI	-611	NE	
4'2" ID HSA	5		1		ELEVA					2.30						
2" x 2' Spli-	r 800012				ATE/TIN	-	STARTE	D:Q	3 14	112,1	330 COM	APLETE	D: 02	<u> 5/15</u>	112	
										D ~	-					
			16. DE	:PTH T	O WAT	rer/el	APSED		EAFT }Y `	ER BOR	EHOLE C	OMPLE	:TION			
12. OVERBURDEN THICKNESS 3 8			17.01	THEO I	NATER	LEVE	MEAS			S (INI CI	LUDE DA	TE/TIM	E)			
13. DEPTH DRILLED INTO BEDROCK			ا''.	HER Y	MAILIN	, L.L., V L.1	- (HLAC		γA	D (1111201			-,			
14. TOTAL DEPTH OF BOREHOLE 2			1			14	9 TOT			R OF C	ORE BOX	ES	(VA)			
18. GEOTECHNICAL SAMPLES		DISTURBED									AL CORE		-		A	
20. CHEMICAL SAMPLES 22. DISPOSITION OF BOREHOLE	CHEM: NA RAD:	NA .	OTHE	K:		DATE	COMPL	rrcc): OE				1.	
	DATE STARTED/INSTALLED: 03		00010	V 18151						ORING) / / W		_		
BACKFILL TYPE: GROUT 23. NOTES BKG: CBackgroup	<u> </u>		PORAR								oer Millo					
pro, spackground	·			, Goun	nts per					raits	JC1 WINITE	.,				
: First Water	Encountered : Sta	itic Water L	evei			NA. IN	ot App	licab								
LOCATION SKETCH/COMM	IENTS								SCA	LE:	No	ne				
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NI	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ļ				17		,	*******				1		ķ	 !
I N	LOAD	<u> </u>	٠٠٠٠٠	2.15.		!			*********		,			·•	<u>.</u>	ļ

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14.2MW/182	= 1 (X)	<u> </u> 55													ļ	ļ
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			, 3						15791 (+117		4)24+21+[491414	7	100000	igoraensu.		Ī
	ามเลงด้วยเวลาราชุ้นรายแน้วแนะแน้วและเหมือนเราะ							ا ار				1	ifminen.	1	1	1
		<u> </u>	†						********				4	(\$1.,)	<u> </u>	1
		<u> </u>	1/-			h		"	·········				<u> </u>	100000	<u> </u>	\$10.000°
TI TI TI TI TI TI TI TI TI TI TI TI TI T	50014	DERV) IC	·····	PT	AI)		·		,			·\$	ş,	
PROJECT	1 1 1290 111	GEO	LOGIST	SIGN	ATURE	/DATE	i.				ВОР	REHOLE	E NUM	BER	<u>; </u>	:
	100000		າ ^ເ		,	,	1	1		no li	//2 LI	17~	، ر _{یاد}	- 187	255	S
FWGWMP RI	(KUMAY~UU)	14	mo	m	da		nei	ريار	٠	wjik	//Q	• 11	-			

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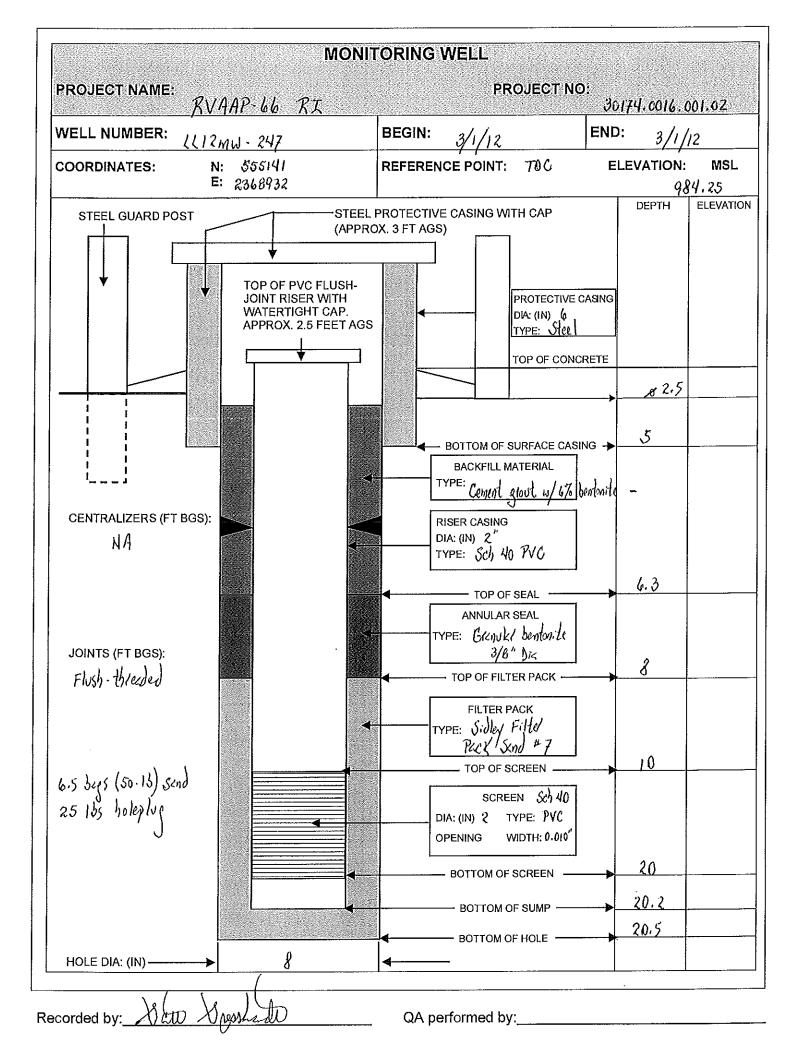
HTRW D	RILLIN	G LO	G (continue	d)	·	DISTRI				BOREHOLE NUMBE	
1. COMPANY N							- Louisville LING SUBCONTRACTOR				of Approx
SAT						Frontz i				SHEET 2	<u>°73</u>
			P RT	CRUA	AP-lele)	4. LOCATION RVAAP	3451 State Rou	le 5, Ravenna,	OH 44268	
5. NAME OF DR			TETEL	<u></u>	ir ir oc a.	·	6. DIRECTION OF BOREHOLE	Ŋ	VERTICAL	INCLINED	DEGREES
7. NOTES PID			ini RAE	2 rtdd			PID SERIAL#:)) Ø - 005	8/6	Colors fro	m Munsell Soil Color (Chart, Rev
	TER LEVEL			<u> </u>			WATER LEVEL SERIAL#: NA-		20	00 REV	ED
ELEVATION	DEPTH	USCS	10/1	- 	CLASSIFICATION O	F MATER		SPT DATA	MONITORING	REM	IARKS
	(Feet)	_			10,2100	Y	anics to a sale sub-	(0.6 Feet)	(РРМ/СРМ)	(Sample IDs/Dep	ths/Core Box/Etc.)
	6,4	SM	(0-0.4')	SAUV C	1048315 N	ent c	lark gray ish brown 25/8 Strong boown ock fragments	6733	A: 0.0	Original 1	og for
	2	GW	(0.61-2	91)55 G .01) NO	ravel; dry	7546 70 ~	25/8 Strong brown	0.7	H: 0.9	LUZ mw.	complete
							Soil description			Soil lith	01094
			.,							Split Spor	on Samples
	5	CL.	(5),7	41.2C	CLAYCO	7 : 1	MR4/3 bonno W	3/7/10/10	A: 0, 0	collected	every 5'
			Title 19	3001	िणिंडमें कु	ay	, medium Stiff;	1.8/2.0	11:0.9	for confir	matron
			6101	mare	Graver,	* *20 ⁽ \(\text{A}\(orkyl3 brown w , medwm Shitt; & soct cracks	_3:	1,7 . 0 . ,	puposes	
	-									FUIP 0363	•
			(1-10	760	Soil cles	xnç	1116U			A. A. Inian	I PIN
	<u> </u>							ati ka ki		A: Ambien	
	10	ML	(101-12)) SILT	(mc); litt	u fi	ne Sand. 2.575/4	5/11/13/16		H: Headsp	all FID
					saturated		7	10-12	HIO. O		
			<u>ાહ્ય </u>	Sciturat	ed + bn	<u>0000</u>	2545/4				
			(12'-15')	no so	oil descrip	oita	<u> </u>				
	15	MC.	(15'-17') SILT	(mu); som	le cl	ay: 2,544/1 dark	1/2/2/3	A: 0.0		
			gray; w	et; ven	Soft; hi	gh P	ant 3.574/1 dark	15/20	H. O.5		
					Soil des						_
			017 00		CON MIC	3C/1142	1101				
	20		1001 20	D) Clur		· m()	· cla · contant	1/1/1/2	A: 0.0		
	1 20	A A /	(30° CC) <u> </u>	+ CCMY (<i>پر</i>	; clay content ay, damp to moist	2.0/2.0	4. 0.8		
		MIC	IWI alp	(h) 100	K9/1 CIUI	k gri	ay, comp torrow	20-22	סוש יוו		
			very si	<i>yr</i> +\							
			(aa'-a	2,) uc	5011 (La	SCY	ptia				
			-					1 . 1			
	25	CL	(92,-9	<u>ره کړ) (</u>	(MY (W)	Son	re Sittisone	13/6/9	A:0.0 H:0.4		
			THE SO	04: pc	edum p	ردعما	ne Sitt: some	25-27	H: 04		
		ΜL	yayon	101000 2011			Clariff Lithe Fac				
			(au.51) Sand	25/1/	Zidack a	SOMe By L'	Clay little fre				
			medun	plastri	ty! medut	, ST	-प				
	30				son des		たらつ				
PROJECT	J						GEOLOGIST SIGNATURE/DATE		1	BOREHOLE NUMBE	
TACIL	174	WIL	DE GR	aNDV	VAT EPZ 7	KI	amanda h	entr	03/14/12	LUZMO	N-10230

HTRW	DRILLIN	G LO	G (continued)	DISTRI	ICT E - Loutsville			BOREHOLE LLIZI			SS
1. COMPAN	Y NAME			2. DRIL	LING SUBCONTRACTOR			SHEET	3	OF	3
3. PROJECT		WMF	PRT (RUPPAP-LOLE)		4, LOCATION RVAAP	8451 State Rou	rte 6 Ravenna,	ОН 44266			
5. NAME OF			RETAL		6. DIRECTION OF BOREHOLE	<u> </u>	VERTICAL	INCLINE	:0	D	EGREE\$
7. NOTES	PID MAKE/MOD		lini RAE 2000		PID SERIAL#: 110-005	816e	l.	m Munsell So			٧
,	WATER LEVEL				WATER LEVEL SERIAL#: N		20	900 F	REU	とつ	
ELEVATIO	N DEPTH	uscs	CLASSIFICATION OF	MATER	RIALS	SPT DATA	MONITORING		REM		
	(Feet)					(0.5 Feet)	(PPM/CPM)	(Sample	IDs/Depi	hs/Core	Box/Etc.)
		CL	(30'-31.5') Sandy CLP. Gravel (14"-12"); 2,545	γ_{i}	11the sugranded	1,2/2.0	H: O. O				
			(navel (14", 12"); 2,545	110	Gray; medium	30.32	H11.6				
			dense								
		GP	(31.5'-34.0) SAND : little f.	ne	Gravel; 2544/1						
	35		darkgray + black;		timed dence	34-36					
!			/ /			7/10/15/19	A: 00. 0				
		CL	(34-36) SILTY CLAY W/MIC SS Gravelfon 3515'-3641; SHALL CONTENT MCKE SHAT.	ACO	ous stace; true	2.0/2.0	H:0.0	5			
	2.4		SS Grave from 35,5'-36++;	blac	ik Subangular		·				
	38		SHH.			36-38	Arolo				
	40	7	(36-38') SAA; MORE SIL	TW/	DEPTH	10hol15/50					
	-	1	(38.0) SHALE (SH); BLACK								
			BORING TORMINATED						_		
			DELLA LETELATION LED	<i>F.)</i>	J. 11 040						*
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	60										
PROJECT	*· · · · · · · · · · · · · · · · · · ·				GEOLOGIST SIGNATURE/DATE Amanda In	1	, ,	BOREHOLE	NUMBER	l	45
LM 61	NMP	KI	(RUMAP-66)		Umanda In	enth	03/15/12	LLIZ	nw	~18	225



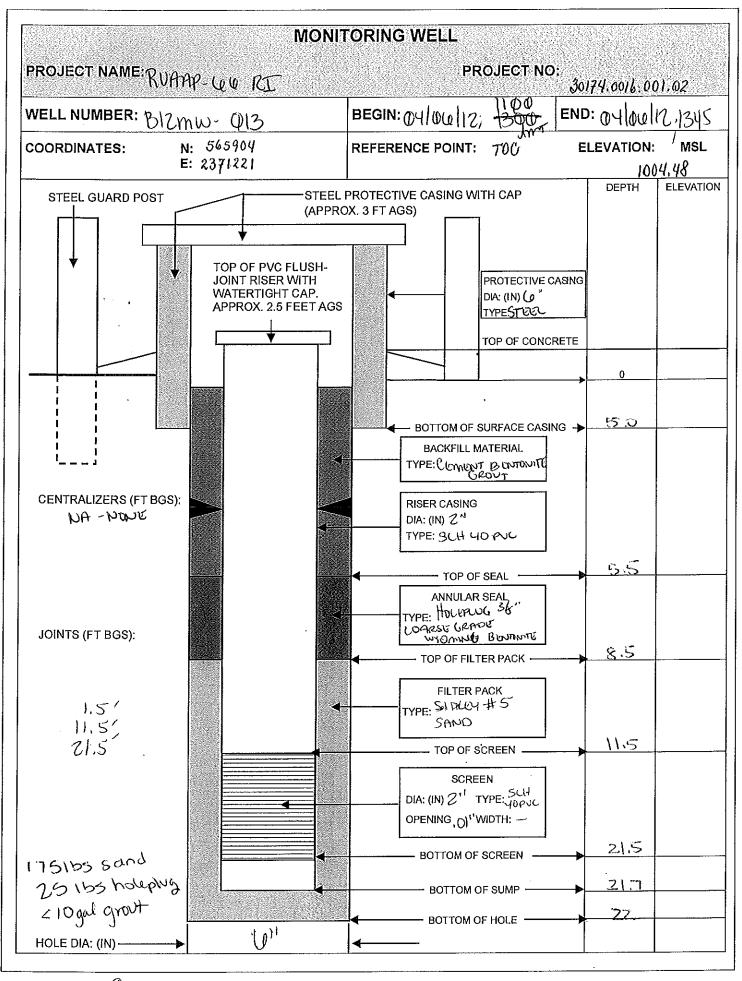
	DISTRICT		·			BOREHOLE NUMBER	
HTRW DRILLING LOG	1	· Louisville				L212mW-2	47
1. COMPANY NAME	2. DRILLING	SUBCONTRA	ACTOR			SHEET 1 OF	4
EQM	Frontz Di	rilling				SHEET 1 OF	<i>p</i>
3. PROJECT RVAAP- 46 RI	.	4. LOCATION	N RV	AAP 8451	State Route	5 Ravenna, OH 442	266
5. NAME OF DRILLER JOE TE LE		6. MAKE/MO	DEL OF DRI	LL CME	5 55		
7. SIZES AND TYPES OF SAMPLING EQUIPMENT	- 1	8. BOREHOL		15	iled w/ SC	FMW-002	
4/4" ID HSA		9. SURFACE	ELEVATION	V/DATUM	981.3	30	
2" x 24" Split- spoon	ł	10. DRILL DA		STARTED:	3/1/12	COMPLETED: 3/1/1	12
- A CO Open Open	i	15. DEPTH G			U	·5/t	
		16. DEPTH T	O WATER/E			OLE COMPLETION	
12. OVERBURDEN THICKNESS					IA		
13. DEPTH DRILLED INTO BEDROCK		17. OTHER V	VATER LEV		EMENTS (INLCLU	DE DATE/TIME)	
14. TOTAL DEPTH OF BOREHOLE 20.5 A					NA		
	DISTURBED	: NA		19. TOTAL	NUMBER OF COR	1371	
20, CHEMICAL SAMPLES CHEM: NA RAD:		OTHER:					JA
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/1/	/12		DATE	COMPLETE	D/ABANDONED:	3/1/12	
BACKFILL TYPE: GROUT BENTONITE	TEMP!	ORARY WELI	L POINT	マ	MONITORING W	ELL	
23. NOTES BKG; ≤Background BGS; Below Ground Surface	е	CPM: Coun	ts per Minu	ute	PPM: Parts per	: Million	
) 7' : First Water Encountered : Sta	atic Water Le	evel	NA: I	Not Applica	ble		
LOCATION SKETCH/COMMENTS					SCALE:	None	
South	Selvice	Kd 1			, .,		
4.							141211144
N			ong wile	bouse			
Cone Webouse				in in the second		sulmanes forman forman of the same	
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BROIECT .	GEOL	OGIST SIGNA	ATURE/DAT	i i		BOREHOLE NUMBER	
RYAAP-66 RI	1		. 1 (.	3/1/12	LL12 mW-24	17
<u> </u>		16.W 1	11 40 V	-WU	<i>41115</i>	1 2212 1110 27	<u> </u>

HTRW D	RILLIN	G LO	G (continued)	DISTRICT		<u> </u>	BOREHOLE NUME	nw • 247
			-	USACE - Louisville 2. DRILLING SUBCONTRACTOR			<u> </u>	
1. COMPANY N E.	ame QM			Frontz Driffing			SHEET 2	OF 🙇
3. PROJECT	RVAA	P-1/4	RI	4. LOCATION RVAAR	8451 State Route		OH 44266	
5. NAME OF DE			e Tele/	6. DIRECTION OF BOREHOLE	, प	VERTICAL	INCLINED	DEGREES
7. NOTES PIC) MAKE/MOD		Sirius MSA	PID SERIAL#: 12~1861		Colors fro	m Munsell Soll Colo	r Chart, Rev
WA	ATER LEVEL	MAKE/MC		WATER LEVEL SERIAL#:			,	
ELEVATION	DEPTH (Feet)	uscs	CLASSIFICATION C	F MATERIALS	SPT DATA (0,5 Feet)	MONITORING (PPM/CPM)	ļ	MARKS epths/Core Box/Etc.)
	0-	CL	Sitt clas, bin w/ roots in	und 4" then w/ 9/4/	1-2-2-4	0	1330; 0	-2/1
	2		Sity clay, ben w/ roots in	y sill teld in lower 6"	17/24			
]		J 0/				
NS								
	5	1	Upper 6" Silly Clay, ben w/	iron oxides grading to	4-6-	0.3	1350 ;	5-7 /l
			ben w/ gray day vertice	I freeties, loot in lower	6-10			
	. 7		<u></u>					
		CL	Sity day, by w/ gray alone y	vertical frectives, mod. stiff,	4-7-	0.2	1400 ; 7	-9 H
	9	<u> </u>	Yew swell proved in lower 12	2", sand seem (14") ~ 5" Hom	9-10			
	10		bottom wet.		24/24			
NS								1.
	12	(5)	Upper 4" Send, gray, wet me	d-crs, goody sorted,	1-4-	0.1	1418; 1	2-14/6
		ML.	Upper 4" Send, graf, wet me loose; remeinder clayer	silt, gray, sliphly plicble,	6-8			
4	14	"I~	moist, few for send		18/24	. 11	1 11	1
	15					14-16 16		be - 1458
	16		Shelby Tube		16/24			<u> 55 - 247-0001-</u>
		\$S_	Freatived sendstone wet, s	some sill in upper 4"	8-8-	_0	1517; 16	-18 /t
	. 18		Frectived sendstone wet s 3" sends tone wet s Upper 4" Silty clay, stet, th Sendstone Lower 7" Stele, of gray-b	1 above lock legs	12-594			
		CL	Upper 4" Silty clay, wet, th	en 3" wexthered	8/24			- 10
	20	SS	<u>&ndstone</u>		26-8-	0	1527; 18	- 20 fl
		SH	Lower 7" Style, of gray-b	lk, chfef, moist	10-15			
			~ /	- ' '	14/24			
			F., 1 / 1.	1 2 20 5 /4				
	25	-	<u> </u>	ing p 20.5 /1	1			
	-			<u> </u>				
					1			
	30						DODEHOLE MILLS	200
ROJECT		, ^		GEOLOGIST SIGNATURE/DATE	ſ		BOREHOLE NUME	-
χ_{Λ}	AAP-6	6 K	<u> </u>	Sto Spenda	<u> 317 3-</u>	1-12	1 115 W	W-247



													DIST	RICT						-				BORE	HOLE	NUME	3ER	
Η٦	۲R۱	W I)R		.IN	G L	.00	3					US	ACE ·	- Loi	ıisvill	е							8	512	_ ⁄'n	ധ-	013
1. CO	MPAN	IY NAN	1E				-						2. DR	ILLING	SUB	CONTR	ACTO	OR						ен	EET	1	OF	7
													Fro	ntz D	rilling	g								311	<u> </u>	'	Oi	
3. PR	OJEC	1 <i>R</i> 1	MA	12-1	م) ہی		RI								1	CATIO									venr	a, O	H 442	266
5. NA	ME OI	DRIL	LER 🛉	hera	20.	5. Y	nn	K	_						6. MA	KE/MC	DEL	OF DR	ILL (ME	<u> </u>	75	XQ	<u>′</u>				
7. SIZ	ES A	1D TYF	PES O	SAM	PLING	EQUIP	MENT								8. BO	REHO	LE LO	CATIO	N B	<u> </u>	DIV	<u>ა(,</u>	12	<u>.φφ</u>	<u>40</u>	<u>ں</u>		
		2" x	2'	Sp	LIT	SPE	<u>0</u> 0								I							001		usou.	OLETE	D: (A)	3100	112 1 121
		<u>(0" -</u>	<u>لبر) ر</u>	one	(0)	w	out								15. D	EPTH (3ROU	INDWA	STAR TER E	NCOU	OUI NTER	25/1	2_6	COM		D: (I)	4100	112; 13!
		<u>N (</u>	<u>sene</u>	\$ (ckkl	ورو	501	w b	LV_							EPTH 1								DLE CC	MPLE	TION		
12. 0	VERBI	IRDE	THIC	KNES	<u> </u>	1.8	> i								-													
							2,s,								17. O	THER	WATE	R LEV	EL ME	ASURE	MEN	S (INI	CLUD	E DAT	E/TIME	:)		
				OREH			2 ₁₆		D-/-						1						\							
18. G	EOTE	CHNIC	AL SA	MPLES	3			STUR		<u> </u>			DIST	URBEC); 				19. T	1 JATC	NUMBI	R OF	CORE	BOXE	s 2			
20. CI	HEMIC	AL SA	MPLE	3			CHE	И: <u>-</u>			RAO:	·	NΑ		OTHE	ER:			<u></u>			21. T	OTAL.	CORE	RECO'	VERY	% 6	4
22, DI	SPOS	ITION	OF BC	REHC	LE		DATE	STAF	RTED/II	NSTAL	LED: (0410	5/12	; 154	IΦ			DATE	СОМ	LETE	O/ABA	NDON	IED: (J	14/01	2110	, 134	5	
BACK	F(LL 1	YPE:]_	GRO	UT		厂								RY WEL		INT		\	MON	TORIN	NG WE	LL				
23. N	OTES		BKG	: ≤Ba	ckgro	und		BGS	: Belo	w Gro	und S	urfac	9		СРМ	l: Cour	nts pe	er Min	ute		PPM	: Part	s per	Million	I			
			∇	: Fir	st Wa	ter En	count	ered			Y	: Sta	itic W	ater L	evel			NA:	Not Ap	plicat	ole							
LOC	TAC	ON 8	SKE	гсн/	CON	MEI	NTS														sc	ALE:		Nor	ıe			
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HTRW DRILLING LOG (continued)					TT TT		BOREHOLE NUMBER						
HTRW DE	RILĻIN	G LO	G (continued)	USACE	- Louisviiie		B12 MW-013						
1. COMPANY NA	ME			2. DRILI	LING SUBCONTRACTOR			SHEET 2	0F Z_				
SHO				Frontz E	oniz Drilling								
3. PROJECT	UAAG	2-6	Le RI		4. LOCATION RVAAP	8451 State Rout							
5. NAME OF DRI	LLER 🖟	ARO	N MACKEY		6. DIRECTION OF BOREHOLE	. v	VERTICAL.	INCLINED	DEGREES				
7. NOTES PID			INTRAE 2000		PID SERIAL#: 11 φ - φØ5	816	Colors fro	from Munse [§] Soil Color Charl, Rev					
 FAW	TER LEVEL	MAKE/MC	DDEL:		WATER LEVEL SERIAL#:		2000 Rover						
ELEVATION	DEPTH	USCS	CLASSIFICATION OF	MATER	IALS	1	MONITORING	<u> </u>					
	(Feet)					ļ	(РРМУСРМ)		1.6				
	1	ML	(0.0'-0.7') Clayey SICT Wildephi Torresto y Elloms nedion plasham	(m); sund content?	举刊川 祭	4:0, ø	04/05/12;	15486				
			Widephy 10th SIGNS	— . О ц	MIN 30th Damp	0-2	ti O.1						
		17	(0,7'-1,2') SAA AN										
		152,	(1.2' - 1.8') WEATHORED ST										
·	5		GRAY+ YOLLOWSH BROWN										
		55											
		, I	CORT From 1/81-6.										
			moller bit (6") set	ca:	sing + benseal			Commonce	Cornella				
		سرنير	(6.0'-215) HOUSIDIVE	yel	louish bour	,		04100115	<u>. 60 142</u>				
		55	(6.0'-215') PW SMVE.	بہدر ر <u>دی</u>	Asserved applied		A	19-10					
	10				J		O'O Jupren	5.21/16.d	D ,				
			_\										
· · · · · · · · · · · · · · · · · · ·			~13.5' not recovered 1	e O	goust on mos								
			not recorded)	n a	Se.								
	15							Oyloul12 C	1/1/939				
							Ambient	16-22					
							0 '0	5,0/4,0)				
-			47' Grayish white s	and	store of shake]							
			partna> 175'-1	<i>رب</i> د	Sugar								
	20		Q20 00 100 01	<u>a.s</u>	and a challe								
			@20' sandstone is	2 CC	MOCINE SHENTY								
			mae water										
:	22	SIT	21.5'-22 SHALE	da	ic gray micacos								
			Borny terminated	to	22.0 Ft bas								
			<u> </u>										
	25												
							,						
PROJECT	30		- Live	 	GEOLOGIST SIGNATURE/DATE	<u> </u>		BOREHOLE NUMBER					
	· (N		<u></u>		amanda D			217 mi	~b13				
RUMP	1 - (QG	KL		II imanala 🔾	un	-0410611	BUIL IIIV	<u>, γιΟ</u>				

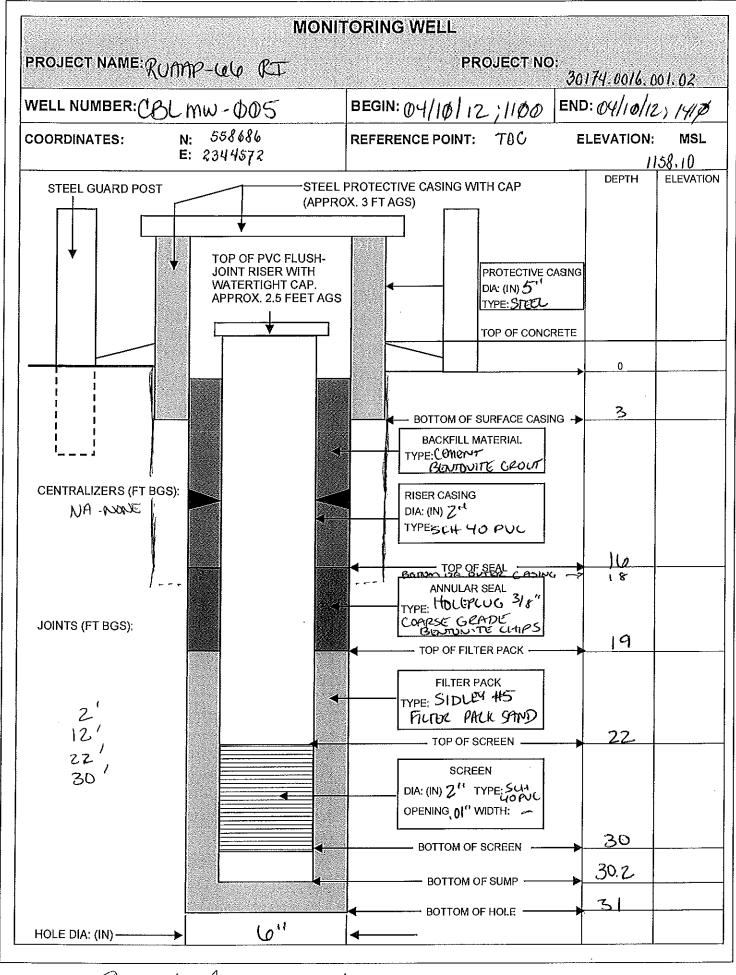


Recorded by: Amanda Sentin 04/06/2QA performed by:

	DISTRICT	STRICT BOREHOLE NUMBER											
HTRW DRILLING LOG	USACE	- Louis	ville		•					CBA	<u>ไทเ</u> ป	-00	5
1. COMPANY NAME	2. DRILLING	SUBCO	NTRACT	OR					\$HE			•	
EQM	Frontz D	rilling									1	OF :	
3. PROJECT RVAAP-66 RI 5. NAME OF DRILLER IT I TOLD TO THE PROJECT OF THE PROJECT	·	4. LOCA				3451	State	Route	5 Rav	/enna	a, Ol	1 442	66
1 106 16 16 16 MARKON MARICULLY		6. MAKE				CME	555	<u> </u>	1			,	.,
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BORE			ION 1	PW-3	6: 5	st in	d of	<u>C Bb</u>	KY U	by Ne	istor-Fell
4/4" IN 1/8A		l			ON/DATU			5.60				<u>U</u>	
2" x 24" 571: 57001		10. DRII					3/27/	<u>`</u>	COMP	LETEC	o: C	<u> </u>	0/12
N SERIES ROCK LORE SAMPLER		l .			VATER E		E AFTER	24	<u>/{</u>	VOLET	ION		
		16. DEP	THIOV	VAIE			E Ar I ER	BURER	OLE CO	MIFELI	ION		
12. OVERBURDEN THICKNESS Q		47 OTH	IED MAA	COIE	VEL ME	VA SUBE	MENTS (INI CI HI	DE DATE	/TIME	<u> </u>		
13. DEPTH DRILLED INTO BEDROCK 20FT		17.01	IER WA	בת בנ	AEC ME	N	_	ii (LOLO)	JE 0/110	., , <u>.</u> ,	′		
14. TOTAL DEPTH OF BOREHOLE 35 F+		<u> </u>			19. TO		11 UMBER	OF COR	E BOXES	3 2			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA	DISTURBED					,,, (. TOTAL				6 7	8%
20. CHEMICAL SAMPLES CHEM: NA RAD: 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: (1) 3	NA	OTHER:			TE COM	I STE	D/ABAND						0 00
Ψ H		ORARY	wen b		IE COMI		MONITO			,	-		
DACKING TITE.		CPM: C			inute	-	PPM: P						
5/6. 2340/3/54/4	etic Water L		3001110		: Not Ap								
: Flist Water Encountered . On	allo Trator E												
LOCATION SKETCH/COMMENTS							SCAL	E:	Non	e 			
						1134111>11	,	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
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		<u> </u>				X PH CA	7				*1*1 1 1 3 1 1 1		i i
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Newton Fells	řid	†											
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	GEO	LOGIST S	SIGNATI	JRE/D	ATE/	<u> </u>	<u> </u>		BORE	HOLE	NUME	ER	
PROJECT	1000	2	\ \		$\mathbb{N}(\Lambda)$,	,					
RVAAP-66 RI)tto	<u> X</u>	(AD)	hatt)	3/27	/12	!	L 04	MW	- 005		
	Ci	ma	ndo	2	resto	~	04/1	D/12					

HTRW DRILLING LOG (continued)			G (continued)	DISTRICT USACE - Louisville	В	BOREHOLE NUMBER CBL ML) - 005				
1. COMPANY NA	WE.			2, DRILLING SUBCONTRACTOR			SHEET 2			
EO	M			Frontz Drilling				° ⁵ 3		
3. PROJECT	RVAAI	P-667	RI	4. LOCATION RVAAP	8451 State Route 5		H 44266			
5. NAME OF DR		Toe T		6. DIRECTION OF BOREHOLE	STICAL [INCLINED	DEGREES			
7. NOTES PID			Sirius MSA	PID SERIAL#: 42-1861		Colors from	Munsell Soil Color C	hart, Rev		
WA	TER LEVEL			WATER LEVEL SERIAL#:						
ELEVATION	DEPTH (Feet)	uscs	CLASSIFICATION OF	MATERIALS		PM/CPM)	REM/ (Sample IDs/Dept			
	0		Now 3" Tossoi) AX bu	s. Hudal ands hattle	2-2-		0-2/1:1	440		
<u> </u>	V	11	Next 4" S: Hy day of bon,	sure costs dono del			- / /-			
			Mex or vira diay, or vira,	(With 1000), Willy 1 7000	2 · 2 7 · 22/24					
		U	Parala Silvala Jana	at willer to will	13 / 27					
	78"	<u> </u>	Renxinder Sitty ck/ bon w/ g few small grove	The modies, The offenios,						
	2	CL	SHICK Day of ext mattle	of little ion oxide	5-11-		2-4/1: 14	144		
	~	0~	Sitty clay bon u/ gray wolld	5 Seed for 10-12" del	0.9					
			1 7en smrt frever, on	0410 71011 10-12 , 019	9.9 B: 24/24					
	18'				D. 124					
	-	A.,			2 2		11 11 · 11	161		
	4	CL	Silly day but all gray sill alo iron oxides, the grav becoming day & Sollle	of VIII. Kaclules, KW	3-3-		4.6 ft; 12	107		
			iron oxides that elan	el, dem, mod stiff	7-14 R= 19/24					
			becoming dry & willle	in 10We/ 4"	1, 5 - 724		****			
	25%	νNi	Alice Cell has los casas	we say of 11. 1/2"	15-19-		6-8/1: 19	159		
	6	ML	Clayer Sill, but, few into o	x.oc), vome (12.vc) (6.14),	1		00/6,			
			ments, or, onthe		20-19 R= 22/24					
					17 /24					
			, , , , , , , , , , , , , , , , , , ,	11 1 1 1	1 2 1		0 . 11	· · · · · · · · · · · · · · · · · · ·		
	8	CL	Uper 12" S: Hy clay bon, few	SMCII MARI, DIY,	5-31-	{	8-10 H; 15	114		
	20		Somewhat Brittle	V 1	50/0 R=14/24					
		ML	Upper 12" Sitty clay, bon, few somewhat sittle Lower 2" Sandy sitt, red-bon,	micaceous, britle, dry	R = 1/24					
	10	ML	Sendy sitt, led bla, miccleaus	See le relletoro relate	50/i	<u>_</u>	10-12 /1: 13	522		
	עו	.,,	Britle dry	, visit vivice food,	50/1 R·1/24		" / °)			
	25		Andri Oil							
	12	M/	sandy will red brn, as above		50/3		12-14 /t; 1	550		
	1.0	_11/~	DAVA BILL TEO VIVI, E) LOOVE		50/3 R : 3/24		- /-/			
	_		A \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	- H . S . 1			10 00 11	100		
	18	MY	Augued into rock to 18 A . o brille, for send.	sitt, led bry dry,	50/1 R: 4/24		18-20 H; 1	642		
<u> </u>	,20		brille, fas send.	belock	16 724		OREHOLE NUMBER	· · · · · · · · · · · · · · · · · · ·		
PROJECT			• 1	GEULUGIST SIGNATURE/DATE		ا	OLICE NOMBEL	•		

HTRW DRILLING LOG (continued)				DISTRIC	DT .	BOREHOLE NUMBER				
HIKW L	KILLIN	G LU	G (continued)	USACE	- Louisville		CBLI	11W-0	005_	
1. COMPANY N					LING SUBCONTRACTOR		SHEET	3	of 3	
SAL				Frontz D	1	9454 Ciata Day	de 5 Ravenna,	OH 44268		
3. PROJECT	KUAA	P-(Q (O			5431 State Not		INCLINE		DEGREES
			n mackey		8, DIRECTION OF BOREHOLE	(VERTICAL	***************************************		
7. NOTES PII	D MAKE/MOD	EL: M	iniRATE 2000	,	PID SERIAL#: 110-005	Colors fro	m Munsell Sol	Color Chart	, Rev	
W	ATER LEVEL	MAKE/MC	DDEL:		WATER LEVEL SERIAL#:	- · 				
ELEVATION	DEPTH (Feet)	uscs	CLASSIFICATION OF	MATER	ALS	SPT DATA (0.5 Feet)	MONITORING (PPM/PM)		REMARK Ds/Depths/C	S fore Box/Etc.)
			CORE 18'-35' ON	941	19/12. GRANDUA	TER	0.0			64/10/12
			oucounted " 24 Ft BC	25.			Ambient	8.9/	(. v '	0956
			(18'- 30' > SANDST	2N) E	(SS); while to					
		_,,	light gray w/ pinkish	orar	ige staining			: :		
	71 5	()	medium to coarse qu	rain	ed, few					
) XI		norizontal fracture	:: 28	Few Dlant-Frago	tre				
			(black); wet by 24		, ,					
			@25 darker reddishi		m + white					
		·	@ 28 dark pinkish				0.0	28'-3	51	04/10/12
	39		@301 SHALE CUTTIA				Ambunt	4.37	γ_{0}	@1020
	Arra .		DURING DRILLING			or Cha	i I	•		
			121 COAL	, u	3 SHALL	1.20-1.11	1301	4 00 1	/	
	 	ड्रामी	31 STANL	N FO	O SHADE					
•									· · · · · · · · · · · · · · · · · · ·	
	ds.							-		
	3 5		Page							
			BORING TORMINATE	D (AT 35 FT					
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	45								<u></u> _	
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Eth.										
PROJECT	⋑ ,,,,,∢				GEOLOGIST SIGNATURE/DATE			BOREHOLE N		. <u>.</u>
BUA	AP-L	e (a	RI		amanda Ju	entn (14/10/12	CBL	mw-	ΦΦ5



Recorded by: Omanda hanton 04/10/12 QA performed by:

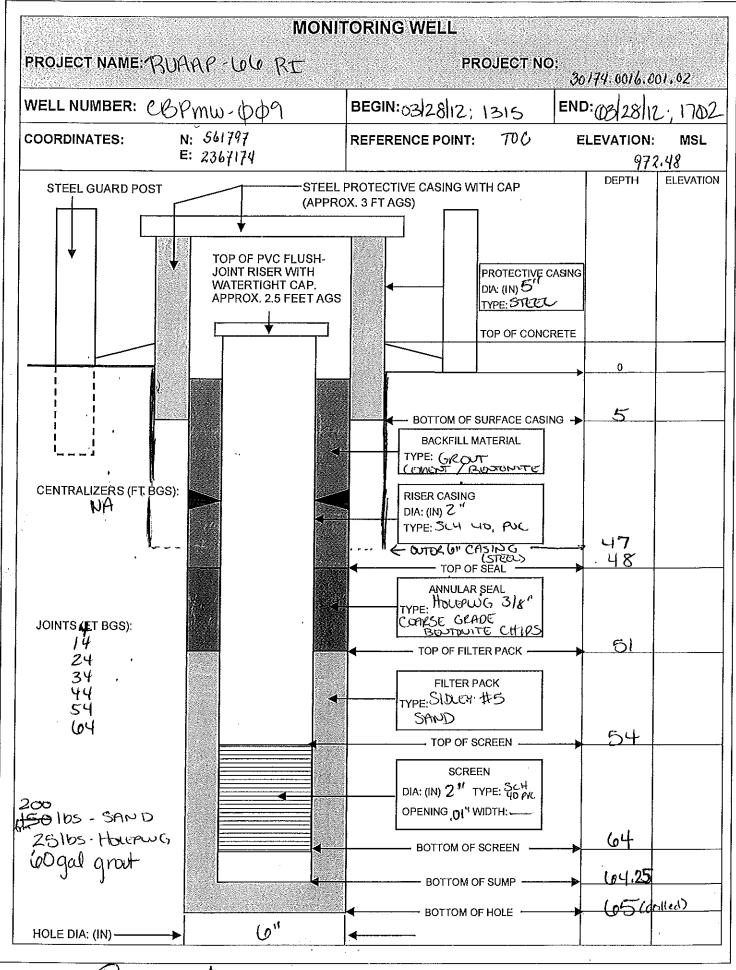
		DISTRI	CT									BORE	HOLE	NUME	BER	
HTRW DRILLING LOG		USAC	CE-	Lou	isvill	е							CB	Pmu	J- 00	19
1. COMPANY NAME		2. DRILI	LLING SUBCONTRACTOR									SHEET 1 OF 5				
EOM		Front	z Dri	illing	J							SH	EEI	7	OF !	\supset
3. PROJECT RVAAP-66 RI			7	4. LO	CATIO	N	RV/	\AP	8451	Sta	e Route	e 5 Ra	venn	ıa, O	H 442	266
5. NAME OF DRILLER JOE TOLE ATTOM. 7. SIZES AND TYPES OF SAMPLING EQUIPMENT	MACKEY	6. MAKE/MODEL OF DRILL CME 55 8. BOREHOLE LOCATION DIVIS 0 - Contr. By a 7:45														
7. SIZES AND TYPES OF SAMPLING EQUIPMENT									PW	0 [Centr	of Bur.	, Pit	s		
41/4" IN HSA			L				/ATION	I/DATI	JM		969	.90				
2" x 24" 57 1:1 57001			- 1		RILL DA			STAF		3/	16/12	COM	PLETE	D: 3	/28/	12
N SERIES ROLL LOGE SA	MPLER										ER BORE		47	TION	•	
12. OVERBURDEN THICKNESS 144 FT				10. DE		10 117	11-102	.640								
13. DEPTH DRILLED INTO BEDROCK 21 FT			 	17. O	THER \	WATE	R LEVI	EL ME	ASUR	MENT	S (INLCL	UDE DAT	Е/ТІМЕ)		
14. TOTAL DEPTH OF BOREHOLE (05 FT			\neg						•							
	1.7'-(03.2')	DISTUR	RBED;					19. T	OTAL I		R OF CO					
20. CHEMICAL SAMPLES CHEM:		NA			R:						21. TOTA	L CORE	RECO	VERY	× 92	2%
22. DISPOSITION OF BOREHOLE DATE STARTED/II	ISTALLED: 3/16/	/12					DATE	СОМ	PLETE	D/ABA	NDONED:	3/28	1/12			
t .		T	EMPC	ORAR	Y WEL	L POI	NT		V	MON	TORING V	WELL				
23. NOTES BKG: ≤Background BGS: Belo	w Ground Surface		(CPM:	: Cour	nts pe	r Minu	ite		PPM	: Parts pe	er Million	ı			
: First Water Encountered	: Stati	ic Wate	er Lev	vel			NA: I	Not A	plical	ole						
LOCATION SKETCH/COMMENTS										sc	ALE:	Non	e			
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PROJECT		G	SEOLO	OGIST	SIGN.	ATUR	E/DAT	¶ .				BOR	HOLE	NUME	BER	
RVAAP-66 RI			X	321	<u>0</u> ~	\mathcal{R}^{c}	josh	alte)	3/1	6/12		<u> CB7</u>	หน	- 009	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER CBPMW - 009
ME			2, DRILLING SUBCONTRACTOR		SHEET 2 OF 5
λM			Frontz Drilling		JOILER Z OF S
RVAAT	P. 66	RI	4. LOCATION RVAAP		
LER	Toe	Tetel	6. DIRECTION OF BOREHOLE	VER	TICAL INCLINED DEGREES
MAKE/MOD	EL:	Silius MSA	PID SERIAL#: 42-1861		Colors from Munsell Soil Color Chart, Rev
ER LEVEL	MAKE/MO	DEL;	WATER LEVEL SERIAL#:	<u>, , , , , , , , , , , , , , , , , , , </u>	
DEPTH (Feet)	USCS	CLASSIFICATION OF	MATERIALS	1	INITORING REMARKS PM/CPM) (Sample IDs/Depths/Core Box/Etc.
٥		Used 2' Tossoil, dx bry M	oist noto sitty clay	10-12-	0-2 /t; 0815
		Then 4" Fill dx by in und	" then ered ash	2-3	, ,
		et concrete lass Lim	D misty alor	R= 9/24	
		100 colors /100 , 00 m	11 7011		
<i>№</i> 2	<u> </u>	Sith old ben we red not	lles fax iron oxides	2-3-	2.4 /1; 0822
	U~	Jen 10) - Na ottoke:	1 lower 3" deats		
		/W 100 W/ V(1051) 1			
				1 7 7	
4	1)	Sitts del den sel del ocel	mothles down to ha	3-4-	4-6/1: 0829
ا کائر	<u> </u>	starte Live of	011		10/04
-		VINCEN), TRIFFY DOM,		R: 23/11	
			1	1 /4/	
<u></u>	Al	Sillialed her blood	and I sent while	W-1-	6-8/1; 0833
U	ÇЦ	VITY CITY, VITY, TEW STAKIL SI	WAST ACAD BICIN)		10.070, 2000
157		\t,\//,\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
		/		N - 164	
8	SC	Usul 2" Sitts della Sent	de do- escine) wet	8-10-	8-10 11: 0843
		Sittle del acono to della si	It has it ofal days		
	<u> </u>	South and Mantida Jam	Still has acclid	8 21/24	
28		10.10/ 11/	- 20-71 , VIII-YIN IQ	" / `	
		1004 7			
10	.CM	Hool I" Silli and has so	man aled he med alined	4-10-	10-12/t; 0851
IV	V''	int a willy value, viry, vi	(1) 7 mgo (15 mg)		1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	60.7	Roward Claracity Land	0/01 1/2 10/10/	22/211	
28'	145	nememor clayer site, bin w	10 Lange Value	''-/57	
		11001., 1 few 1" xno,	KIO, ORCENING PIN III		
		1024 2	V		
10	ıΛ1	Mus Black Line	had to ha	15-17-	12-14/1: 0857
IΖ	ጣሩ	ciayey vitt bin w/ oral abox	y /KCWE), KM),	T	14-17 76, 0007
a~		Stiff	J	0.14/21	
DAG.		1.004	GEOLOGIST SIGNATURE/DATE	115- 124	BOREHOLE NUMBER
P-66			Sto Spush	Ao 3/16	6/12 CBPMW-009
֡֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜	ME RVAAT LER MAKE/MODER LEVEL DEPTH (Feet) 0	ME RYAAP · 66 LER JOE MAKE/MODEL: ER LEVEL MAKE/MO DEPTH USCS (Feet) 0 4 CL 18 8 CL 20 10 SM ML 28 12 ML	RVAAP-66 RI LER JOE Telel MAKEMODEL: SILIUS MSA ER LEVEL MAKEMODEL: DEPTH USCS CLASSIFICATION OF (FOOL) O Uppel 2" Topsoil, dK bln, m Then 4" Fill, dK bln in upper be concrete facts, dem few led-bln steeks; 4 CL Silly clay, den w/ few graf Mot few led-bln steeks; 4 CL Silly clay, den w/ few graf 40 Silly clay, den, few small gr steeks, feirly st.ff, 6 CL Silly clay bln, few small gr st.ff, der 8 SC Upper 2" Silly clayer sind, vertical fractules, deny, lower volf ML Beneinar Clayer Sill, bln w/ lower 2" 12 ML Clayer Sill, bln w/ lower 2" 12 ML Clayer Sill, bln w/ lower 2"	RILLING LOG (continued) ME 2. CRILLING SUBCONTRACTOR FROME DIRECTION OF BOREHOLE RYAR? 66 RT LER JOE Tety MAKEMODEL: SILLY MSA PID SERIALR: A2-1861 WATER LEVEL SERIALR: CLASSIFICATION OF MATERIALS (FORM) O U770/2' 2' TOXOOI, OK BIN, MOTSH, 10048, 5:144 clay Then 4" Fill, SK Bin, 10 U710 1" then exct, 42h Let Concrete facts, &M, MISTY 2020 FOR 100 CL Silty clay, dan by gray motlles, fas into oxides, few 100-bin steeks in local 3", dan) 4 CL Silty clay, dan by fray motlles, fas into oxides, few 100-bin steeks in local 3", dan) 4 CL Silty clay, dan by fray motlles, fas into oxides, Stiff dif 8 SC U710 2" Silty clay, wand, dan, for grained, well CL Silty clay people to dayly silt, but by gray day Valual flactures, dans, stiff; dans gray in 10 SM U710 8" Silty sand, but, some clay, for med passach, Wet soft ML Remained Clayer Silt, but by gray done flactures, dans, Stiff 10 SM U710 8" Silty sand, but, some clay, for med passach, Wet soft ML Remained Clayer Silt, but by gray done flactures, dans, Stiff 12 ML Clayer Silt but by gray done flactures, dans, Stiff GEOLOGIST SIGNATUREPDATE	RILLING LOG (continued) WE 2. DIRLING SUBCONTRACTOR PROBLEM SINGLE PROBLEM SUBCONTRACTOR PROBLEM SINGLE PROBLE

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisv≊e	CBP MW. 009						
I. COMPANY NAME	<u>.</u>		2, DRILLING SUBCONTRACTOR	DRILLING SUBCONTRACTOR						
EQM			Frontz Drilling	Al Audit All Parties	SHEET 23 OF 5					
3. PROJECT XV///	17-66	RI	4. LOCATION RVA	AP 8451 State Route 5 Rave	enna, OH 44266					
. NAME OF DRILLER		Telel	6. DIRECTION OF BOREHOLE	VERTICAL) INCLINED DEGREES					
'. NOTES PID MAKE/MC		Sigus MSA	PID SERIAL#: 42-1861	Colo	ors from Munsell Soil Color Chart, Rev					
WATER LEVE	L MAKE/M	DDEL:	WATER LEVEL SERIAL#:							
ELEVATION DEPTH (Feet)	USCS	CLASSIFICATION	OF MATERIALS	SPT DATA MONITO						
14	ML	Chipey silt, grap, stightly	disble nod still	3-4-	14-16 H; 0907					
		(1) (M)	7/	7-11						
				R= 24/						
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
3816	ML	Clayer sitt, gray pliable to	slightly gliable, moist	7-12-	16-18 /t; 0911					
	-	to bant, mad stiff,	sticky	10.11						
		-		R = 24/24						
<u></u>	01	college of belle of	shla saset	2-3-	18-20 /4: 0920					
18	L	Silty clay, gray, failly 3)	isole, NIOI) (4.5	- 10 x0/1, 0 xx					
	1			R > 21/24						
				12 /4						
- 100	11	Silliaki al int & si	11 " word 10" then	ut of known	20-22/1; 0928					
20	CC	Silly cky, evay, wet & sof moist, failly plicable	1 11 0444 10 , 6164	R= 24/24	20 22/6, 0730					
A6	_	MISTOC, 1 725114 PICCUIT	<u> </u>	1/ /~1						
22	MI	Sitt, yay, little clay, den	a parce halle tes	6-7-	22-24 /4: 0934					
	112-	med-grained send	, more sprice, jew							
		met James date		8-9 R=21/24						
<i>></i> 50 21	I ML	Vill, gray, little day, moi	st to dans britle	4-6-	24-26/t; 1000					
		1311	7,							
				G-8 R: 20/24						
26	ML	Sill, gry, little chy, Moi	st brille fill soft	2-3-	26-28/1: 1006					
55		, 0 // //	(()	3-4						
				R= 20/24						
28	ML	Silt glad, some clad, Mois	l slightly pliable	1-4-6-	28-30 /l; 1017					
		Economy Selly cky, or	red moist plicale in	1-4-6- **********************************						
مر		Silt, gray, some clay, mois- excoming Silty cky, go lower 4"	t' ' ' '	R> 23/24						
ROJECT		-	GEOLOGIST SIGNATUREIDATE	1	BOREHOLE NUMBER					
RVAAP-66	RI		Sow Syssle	AD 3/16/12	CBPMU-009					

HTRW DRILLING LOG (continued)				DISTRI USACE	CT - Louisville			BOREHOLE N	^{JMBER} ກຟ⁻	009		
1. COMPANY					LING SUBCONTRACTOR		SHEET	<i>y</i> _u	of C	'n		
EQ. 3. PROJECT	`	·		Frontz I	7	8451 State Rou	te 5 Ravenna.	OH 44266	<u>4</u>			
5. NAME OF D	RVA47 DRILLER		-1 PARTUBICIENTO		6. DIRECTION OF BOREHOLE		VERTICAL)	INCLINED		DEGRE	ES	
_	ID MAKE/MOD		Tele / Apron mockey		A2-1861	Colors fro	m Munsell Soil (Color Che	art, Rev			
	03/0 ATER LEVEL				PID SERIAL#: - STUJIL WATER LEVEL SERIAL#: —	05816		TITE 2000 REV ED				
ELEVATION		USCS	CLASSIFICATION OF	MATER	. 3.2.		MONITORING	IE ZUC	REMAR		د	
-	(Feel)					(0.5 Feet)	(PPM/CPM)	(Sample ID	s/Depths	/Core Box/	Etc.)	
:	30	CL	Sitty clay, gray, wet, soft	1	····	1-2-		30-32/1	; 1	023		
			1 1.01, , ,			2-3						
· · · · · · · · · · · · · · · · · · ·						R= 24/24						
V												
_	A5 32	CL	sity clay, gray, wet, soft		·	5-5-		32-34/1	<i>; 1</i> 0	30		
			1 1/0//			4-5		,				
						B . 24/24						
				-								
		CL	As above snell riece of head	8/4	1 to-ercined	50/3		34-36 ft	; 10	40		
10 g	5510		As above, small piece of hard endstone cating - 5700	1 ve	1/56/	50/3 R= 5/24		,	7			
		41	120 ml = 31, 71)				•					
			Saily clay w/ little :	s Jo	owned gravel	7/17/10/10	A:0.0	34.36·	50	26	2	
			1shff wet; med plast in split soon.	rcit	ty day by Act	3136	14:2,3					
_			insplit sown.		111/25/10/100	111.	3 - 4					
	3	SM.	36.7'-37.0' SILT+SF	141	(cm) sand	2.0/20	H: Z.1	87/1v				
			content I w/ deptn; F		tomed acurred	37/40/11/10	A:0.00	27/10/	18/1	رو		
	:		104 Rull dark gray w			1.2/2 . 28-40	H: 4.7					
***		155	(37.01-37.3') SS Frag		de ida while	0.720	$A \circ a \circ 1$			-		
<u> </u>			+104x5/1 gray	13521	, (,,)	14/11/11/11	14:9.9					
	140	Y	(37.3' - 43.8) Sand is	w	w/ little 12"-18"	44/11/11/6	A 00.00					
	7,	a1 D	SS-tragments; day den	Se.	white + 10405/1	0,9/2.0	H: 15					
		70	gray; five grained; s	ر <u>ت دی</u> در م	detro Franci	50	A NA					
			Content voccenses wil do	abc	03101 2 11 3711011	Ø	10H NA					
			(43.8'-44.0') SIJ (MI	., c	ina si ha ndod							
	43	$\overline{}$	Gravel 2/2", Wellid	a(k.	armi da medit							
	1	/1	trace Sh. Fragment	•	-1-0-01/11-00-							
			44'- Sandstone; while	/ \	NE ACCU							
			AUGERED TO 47 (PUGE	v 2	FEICHL)+ CIT							
	1	55	CASING. BEGIN ROLL		21NO 47							
_	100 4C	-	(see pg 5)									
ROJECT	.1 - 4	t			GEOLOGIST SIGNATURE/DATE/		[OREHOLE NU	MBER			
RVA	AP-66	RI			Sato Spended amanda The	D		CB7n	1W-0	09		
	: '				amanda The	nto c	3/24/12	2				

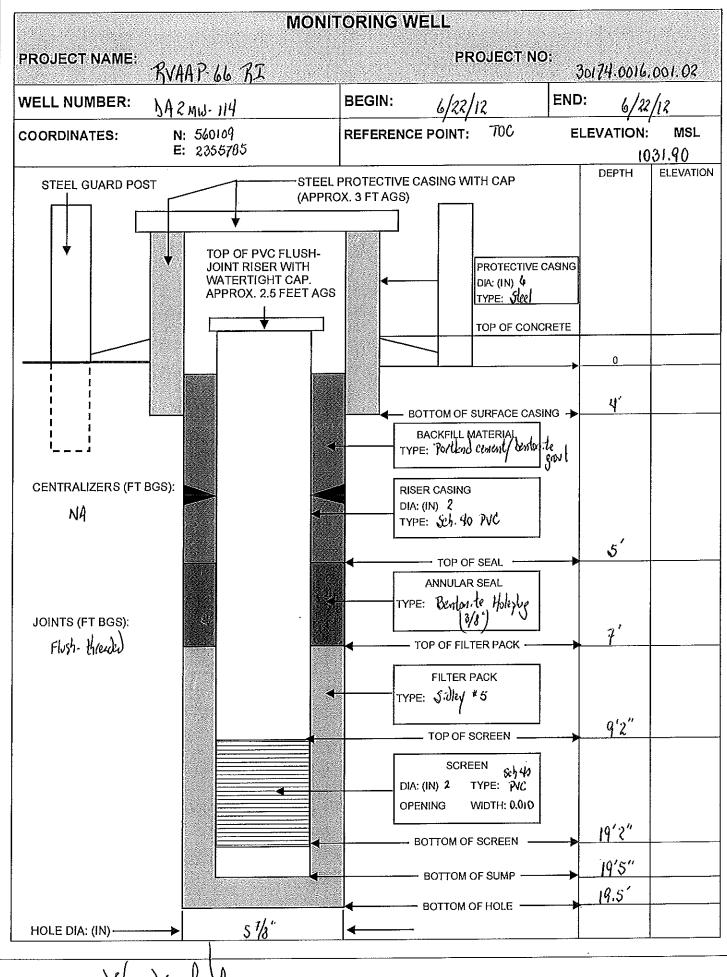
HTRW	DRILLIN	GIO	G (continued)	DISTRI	cr			BOREHOLE NUMBER	1		
78.				-	- Louisv⊉e		CBP mw- 009				
SAT				2. DRILI Frontz D	LING SUBCONTRACTOR		SHEET 1995	of 5			
-		W 1	al - O	110002	T	8451 State Rou	te 5 Ravenna,	OH 44266			
5. NAME OF	DRILLER .A	<u> </u>	OU RT ON MACKEY		6. DIRECTION OF BOREHOLE	····	VERTICAL.	INCLINED	DEGREES		
7 NOTES	DID MAKE/MOD	MIKE DELMAN	MACKEY		PID SERIAL#: \\ \\ \Phi - \phi \D \S	<i>/-</i>		om Munsell Soil Color Cha	art Rev		
1			NIRAE 2000		-	816					
ELEVATIO	WATER LEVEL	USCS	CLASSIFICATION OF	MATER	WATER LEVEL SERIAL#:	SOT DATA	MONITORING	COOKEV &			
LLLVAIIC	(Feet)	0303	CLASSIFICATION OF	MATER	NEO	(0.5 Feet)	<u> </u>	(Sample IDs/Depths			
-			147' - (05') SANOSTIN)E. 11	ueni pale arriu		Ambunt	COREBOX #1	-		
			(47'- 65') SANDETON Wet; few SUDDONALE Fractures in upper 2!	ol oc	a is marked			47'-57'	nslasla		
			Fruching Santona	s y	aces mosnes		47-57				
<u>. </u>			Canaly of upper Ca	**	1 1 (dade on)			4,770,0			
	50		few shale partings Tr	INOU.	ghat course (gray)	<u> </u>		C			
	Jim't						4-44	COREGON 2	i		
								57'-65'	<u> </u>		
								7.8/8.01			
, <u></u>	55							(01.7'-63.5	۷ ′		
··	55							REMOVED &	WM COCK		
 -		1						18317190			
	 						Ambury Ambury				
	100						0.0 57-65				
	Just										
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	کم)										
	105 1007										
			BORING TERMINATED	> 1A-	T 65 FT 865						
-			· · · 								
	10		111.1 201.001				:				
	74										
_											
	15 mg										
ROJECT	-80			I.	GEOLOGIST SIGNATURE/DATE		3	BOBERO! E MIMBER			
	.0-0 1	,	2		geologist signature/date Omanda J	A	13/28/12	CRD11-1-1-	000		
KUY	MP-6	0	KI		(imande	whin		Cos mo	w /		



Recorded by: Wmanda nester 03/28/12 QA performed by:

· · · · · · · · · · · · · · · · · · ·	DISTRICT	RICT BOREHOLE NUMBER														
HTRW DRILLING LOG	USACE	- Lou	iisvill	е								N	12 m	w - 11	4	
1. COMPANY NAME	2. DRILLING	3 SUBC	CONTR	ACTO	R						╁┈					
EOM	Frontz D	rilling	9								SH	IEET	1	OF	2	
3. PROJECT RYAAP- 66 RI		4. l.O	CATIO	N	RV	AAP	8451	Sta	te Ro	ute	5 Ra	veni	na, C	H 44	266	
5. NAME OF DRILLER JOE TENEY / ACOM MLCKEY		6. MA	KE/MC	DEL C	OF DR	ILL	CM	E \$	5 /	CM	£ 78					
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOLE LOCATION PW-17: Semo Alec 2 along cleek ust of 9. SURFACE ELEVATION/DATUM 1028 50 M2MW-1											t o/			
2" x 24" 571-6 span									<u> </u>				0	<u> </u>	JIZM.	₩- 0 {
4/4" I) 45A		10. DRILL DATE/TIME STARTED: 5/30/12 COMPLETED: 6/22/12 15. DEPTH GROUNDWATER ENCOUNTERED N 4														
57/8" Cole belle (N selies)		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION														
12. OVERBURDEN THICKNESS 3.5 Å		 NA														
13. DEPTH DRILLED INTO BEDROCK		17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME)														
14. TOTAL DEPTH OF BOREHOLE 19.5 /t		— NA														
18. GEOTECHNICAL SAMPLES UNDISTURBED: Box cole	DISTURBED	D:				19. T	OTAL I	NUMBI			BOXE		1			
20. CHEMICAL SAMPLES CHEM: NA RAD:	NA	OTHE	R:						L		CORE	RECO	VERY	% (<u> 10</u>	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED:					_,	E COM										
BACKFILL TYPE: GROUT BENTONITE		PORAR					ĮV	MON								
23. NOTES BKG: ≤Background BGS: Below Ground Surface		CPM	; Cour	nts pe		ute Not A	onlica		: Рап	s per	Million	1				
: First Water Encountered : Sta	itic Water L	evei			IVA.	NULA	phirea									
LOCATION SKETCH/COMMENTS								SC	ALE:		Non	10 				
		į					L	Vorocor				<u>[</u>	<u>.</u>	Į		<u>.</u>
4.							Į	į	.	ļ,	ļ		ļ	ļ		ļ
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PROJECT				ATUR	E/DAT	Ė,		1	Į.	<u> </u>	BORE	HOLE	NUM	BER		•
RVAA7-66 RI	λ	Sat	D)	Opy.	who	St)	5/.	30/1	2		<u>M</u> 2	MI)	114		

HTRW DR	ILLING	G LO	G (continued)	DISTRICT USACE - Louisvi‼e			BOREHOLE NU	мы- 114
. COMPANY NAM	Ę			2, DRILLING SUBCONTRACTOR			SHEET	2 OF 2
EQ	M			Frontz Drilling			- Green	- · · · · · ·
. PROJECT	RVAA	P- 66	31	4. LOCATION RVA	AP 8451 State Rou		OH 44266	
. NAME OF DRILL			Tepler / Arma Muckey	6. DIRECTION OF BOREHOLE	দ	VERTICAL	INCLINED	DEGREES
NOTES PID M		EL:	Sidus MSA	PID SERIAL#: A2-1861		Colors fro	om Munsell Soil C	olor Chart, Rev
WATE	R LEVEL N		1	WATER LEVEL SERIAL#:				
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION	OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	į	REMARKS /Depths/Core Box/Etc
	0_	ML	Upper 9" Clayey sill, bon, Renkinder Silty sond, 11 bon,	tes and roots bittle	2-2-	0.2	0.2 A;	1447
		SM	Renkinder Sitty send It ben	In granes britle, def	3-3			
				(B - 19/24			
	82	SM	Had 6" Silly son H la	u dans	3.3.	5.8	2-4 4'	1457
	7 2	M)	West 6" Cler 1.5H 360 11	Lian wile mall ne don	10.50/5	0.0	2-4 /1;	1101
		.",\	Next 4 cayey one, an will de	W salle his sols V	10.59/5 R = 21/24			
		SH	lower li Stile dx oral w/ o	Lide eleva molles in vary	7 7 7 7			
			Next 9" Sitty sand, It ben, Next 9" Clajey with, Sen wy xetings, some sand, of lower 6" State, JK per in o 3" becoming It per, Mi	texceous in bottom 3"				
	20		Jaily bittle 07	, ,				
			Aveled to repost 0 8 /1:	on 6/22/12 overdulled				
			Augus to 16/15/1 0 8 /1; to 9.5 /1 bes us, & 7/8 tempoky as,	lokey bit and installed				
	15'		Temporky (US,-					
		.cи	1 1 20 5" Ship wil W	all hid to my	B: 108/120	<u> </u>	9.5 - 19.5	; 0 94 6 (6/20
	7.7	/55	Upper 70.5" Style, get-dk	Ilt wil dalktonis	17 /10		(Semen)	1 Kom 16.5 f
		700	han 15'/3" to 17 / be	s; remainder Shale, bit,			17.1	t submitted gem. test op
			dated	, , , , , , , , , , , , , , , , , , , ,			fol.	perm. testup
	28							<i>'</i>
			- Alle Annual Control of the Control					
	28							
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	,ae			1				
OJECT	l	L		GEOLOGIST SIGNATURE/DATE		L	BOREHOLE NU	MBER
RVAAP	-66 7	ξĮ.		Sato Symme	to 5,	/30/12	BARn	NW-114



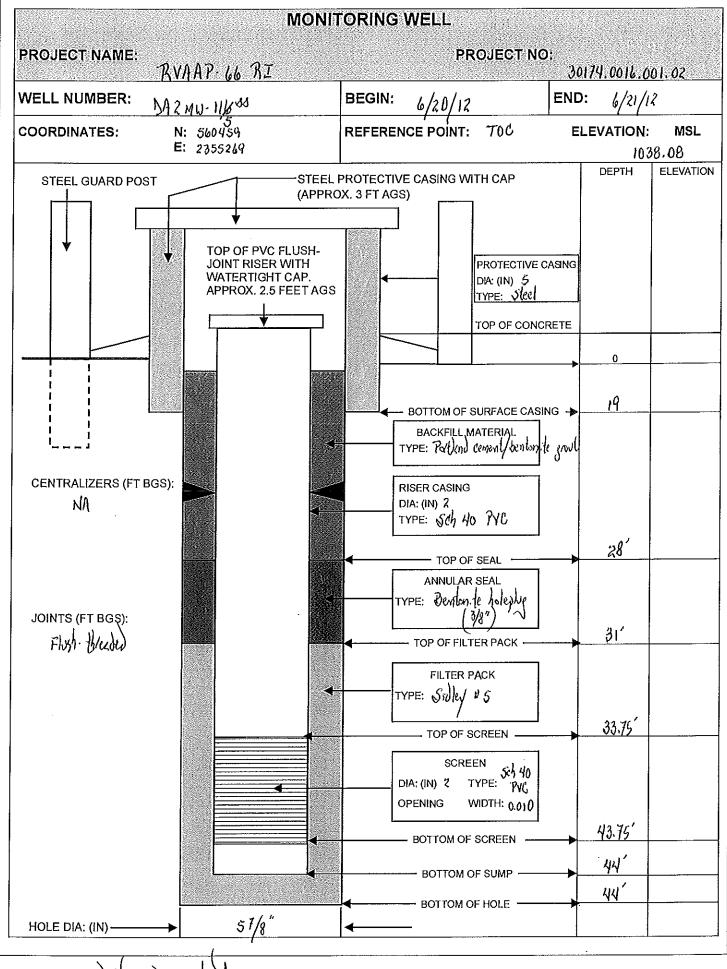
Recorded by: Xato Xywhado

QA performed by:___

	DISTRICT BOREHOLE NUMBER
HTRW DRILLING LOG	USACE - Louisville
1. COMPANY NAME	2. DRILLING SUBCONTRACTOR SHEET 1 OF 3
EQM	Frontz Drilling
3. PROJECT KVAAP- 66 3%	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266
	6. MAKE/MODEL OF DRILL CME 55 / CME 75
5. NAME OF DRILLER JOE TESTE / KAY MACKE/ 7. SIZES AND TYPES OF SAMPLING EQUIPMENT	8. BOREHOLE LOCATION PW-19 xi/2 S/ SETMW-003
2"x 24" 57): { 57001	9. SURFACE ELEVATION/DATUM 10'35, 40 /
4.25" IS 45A	10. DRILL DATE/TIME STARTED: 5/30/12 COMPLETED: 6/21/12
8.25" IS 4SA	15. DEPTH GROUNDWATER ENCOUNTERED 5.1
578" Cole bull (N selies)	16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION
12. OVERBURDEN THICKNESS /1, 25'	NA NA
13. DEPTH DRILLED INTO BEDROCK 29.75	17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME)
14. TOTAL DEPTH OF BOREHOLE 44'	NA
18. GEOTECHNICAL SAMPLES NA UNDISTURBED:	DISTURBED: 19. TOTAL NUMBER OF CORE BOXES 2
20. CHEMICAL SAMPLES CHEM: RAD:	NA OTHER: 21, TOTAL CORE RECOVERY % 96
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED:	DATE COMPLETED/ABANDONED:
BACKFILL TYPE: GROUT BENTONITE	□ TEMPORARY WELL POINT
23. NOTES BKG: ≤Background BGS: Below Ground Surfa	ace CPM: Counts per Minute PPM: Parts per Million
: First Water Encountered : S	Static Water Level NA: Not Applicable
LOCATION SKETCH/COMMENTS	SCALE: None
	<u> </u>
	0 0 - M2mw 116
	TO STEMBILE
	I with the transfer of the second sec
	Newton Fells Ro
	185.0 47.1 15.10 11.0
PROJECT	GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER
RVAAP-66	Sato Symbolo 5/30/12 5/30/12 NA2 mw - 11/4 MS
THAT WY	5A2 mw - 11/4 xxx
	5

HTRW [ORILLIN	G LO	G (continued)	DISTRI	CT - Louisv궏e			BOREHOLE A	NUMBER とかい・	111688
. COMPANY I					LING SUBCONTRACTOR			1	<u>፡ </u>	_
	EQM			Frontz I	Prilling			SHEET	2	OF 3
. PROJECT	RVAA	P-66	RI		4. LOCATION RVAAF	8451 State Rou		OH 44266		
, NAME OF D	•		Tepler / Accon Mickey		6. DIRECTION OF BOREHOLE	<u> </u>	VERTICAL	INCLINED	,	DEGREES
NOTES PI	ID MAKE/MOD		Sidus MSA		PID SERIAL#: 42-1861		Colors fro	m Munsell Soil	Color Chai	rt, Rev
w	ATER LEVEL				WATER LEVEL SERIAL#:					
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION O	F MATER	IALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	i	REMARI Ds/Depihs/	(S Core Box/Etc.)
	0		Ussel 1" Topsoil, dx 64 s	silly of	L. roots	5.5.	0	0-2 ft	; 100	7
			Upper 1" Topsoil, d' 614, o Next 36" Chyen gradel fill fill, bra, firth o Lown 3" villy chy, graf,	follow	ed by s: Hycky	5-5 R, 13/24				
		11	fill by filly s	Soft,	Ob/ few orknids	R, 19/24				
	<i>,</i> 8′	CL	Lower & Villy Chy, gray,	15714	160418					
	2	CL	SHICK at some land	٠,٠,٠	le Valueras	5-3-	0	2-4/1;	1019	
	~	ርኣ	Sitychy, pay, some frimed	<u>, v. 10</u>	all soul	4-4	V	471,	1011	
			TOLM), Thirty on we	jas v	()	R= 21/24				
	204	CL	Place 0" colf all are 1 Mass	d .c	A Lu sull	wto rome.	0	4.6 A:	10.2%	
		<u> </u>	Upper 8" sitty clay, gray, mois gravel & lorganits blk Lower 4" Sand & gravel, sin	20, 0	Y . 2 hord 3 f 8"	uto/ home. 3.5.7 R: 1724		7 - W / L /	1414	
		GP	Land He Scale Could have	0 8 8 8 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(1) ALLSH	7. 7.1				
		GP	Cower & Vanor prover, sing	37	, yas city rom,					
			Well to And							
	ی ₅ز	GP	Soul forces be new ords o	vene.	not cock in	7-21-	0	4-8 H	1054	
	•	01	Sand record, bin, med-cas g	KINCO	wet, tack of		<u> </u>	6-8/t :	3157	Shell!
			0)90			19-24 R: 3/24				will no
•••						17.7.				1200 75;)
						:		101-6		(1)
	203	A.C.	Chile 1 Sant aline of 1	ot	noll-manded original	12-18-	0	8-10 ft	. 110	4
		00	Clayed send & place glad, 1	, , , , , , , , , , , , , , , , , , , 	0			<u> </u>	1	······································
			(7. 7- 0-1)			29-41 R=21/24				
	10	GM	SEND + PLENT PLAT SOME SIT	H. w	t submake to	8-16-	D	10-12/1	1119	1
	28	- (Supportable) otesal lock	3" V	ellas ben sendstone				,	
			Send prevel, gray, some site subrounded grevel, lower weathered		· · · · · · · · · · · · · · · · · · ·	31-39 R=17/24				
***************************************			IANJANTA			'				
	12	SM	Send W/ Some kines & little of	eve)	ercy wet.	29.25.	12.5	12-14 ft	1/3	3
· · · · · · · · · · · · · · · · · · ·	1	*	Send w/ some fines of little go	_v.v.,	J // """)	29-25- 19-18 3-14/24	1	/	, .	
	30		1,100			3, 16/24				
ROJECT	1				GEOLOGIST SIGNATURE/DATE	(BOREHOLE N	JMBER	 5
RVIN	17-66 1	SI.			Math Great	atho i	5/30/12	DAZ	MW-11	K

HTRW DRILLING LOG (continued)				DISTRI	CT - Louisville	BOREHOLE NUMBER 542 MW-1164				
J-0.4					LING SUBCONTRACTOR		2'3 of 3			
		Y2 //		Frontz (8451 State Rou	rte 5 Ravenna,	OH 44268		
5, NAME OF DRILL		17-66			6. DIRECTION OF BOREHOLE	INCLINED	DEGREES			
7. NOTES PID M		1ΕΙ·	Teple / Acion Mackey		PID SERIAL#: A2-1861	`	VERTICAL COlors fro	m Munsell Soil C	olor Chart, Rev	
		MAKE/MC	Sillus MSA		- WATER LEVEL SERIAL#:				·	
	DEPTH	uscs	CLASSIFICATION OF	MATER		SPT DATA	MONITORING		REMARKS	
	(Feet)					(0.5 Feet)	(РРМ/СРМ)	(Sample IDs	/Depths/Core Box/Etc.)	
	14		Usnel 3" Vand elas med el	GIACO) vet	10-20-	2.4	14-16 ft.	1148	
		SH	Upper 3" Sand glay, med gl Renkinder State, glay, weath	eler)	bille	29-59/		, ,		
			7077			29-50/24				
	,3 5		Set Co Gae 0 19 11 hes 16/20	1/12)						
:.			Set aging a 19 th bys (6/2	1-7		Ì ,				
	19	SH	Shile IX out without	lust	ole class	B: 69/120	h	19-29 /t	· 0835 (6/21/12)	
	11	_UII	She, dk gray, weathered , note competent in lawer	15"	dems worst	17. 7		1	, (7.1-)	
			more compression of towar	10) (2011) 1100) 0					
	A8 29	~	11-0 511" Sent of me half	مادر /	1- when in orde	R= 120/120	t.	29 - 39 /	7 1010	
	47	w	duly landswik, ovij wi	yerror	1) wal	115- /150		×1 01/	, 1010	
		eil	Uzjer 54" Sandstone, Suff wy straky, In grand, Jas Next 60" Shale, d.K. gray, clase	<u>www.</u> 	ky prayer					
		Ŋη	New 60 Vicit, or my clase	<i>γ</i> , ε	JAN JAMINIZUED,					
		00	fairly britle, moist	<u>, , , , , , , , , , , , , , , , , , , </u>	1446					
	дв.	SS	land 6" Gendstone, It gray,	<u>(1)^ (((</u>	nw, poeuse				-	
	-	c.c	c \	+	W . , J.).	B= \$3.5/60	,	20 111 1	1, 401	
-	39	SS	Sandstone, It graf, for graine intubeds range from <7.	ν <u>,</u>	or say skie	15- /60		39-44/	(, 112)	
			interseds reher from 21	<u>4 (</u> 5	3, 1 //Letver					
			all and the							
	ا ر.		End of boing @ 44/1	· ····						
	,50		V							
						1				
										
	58									
		-								
PROJECT	60				GEOLOGIST SIGNATURE/DATE/			BOREHOLE NUI	MBER	
	MAP.	- 66	RI		Kato Symbat	D 5/.	30/12	542 mi	J-116	
			***		V	6/	20-21/12		124	



Recorded by: X www. Symboli

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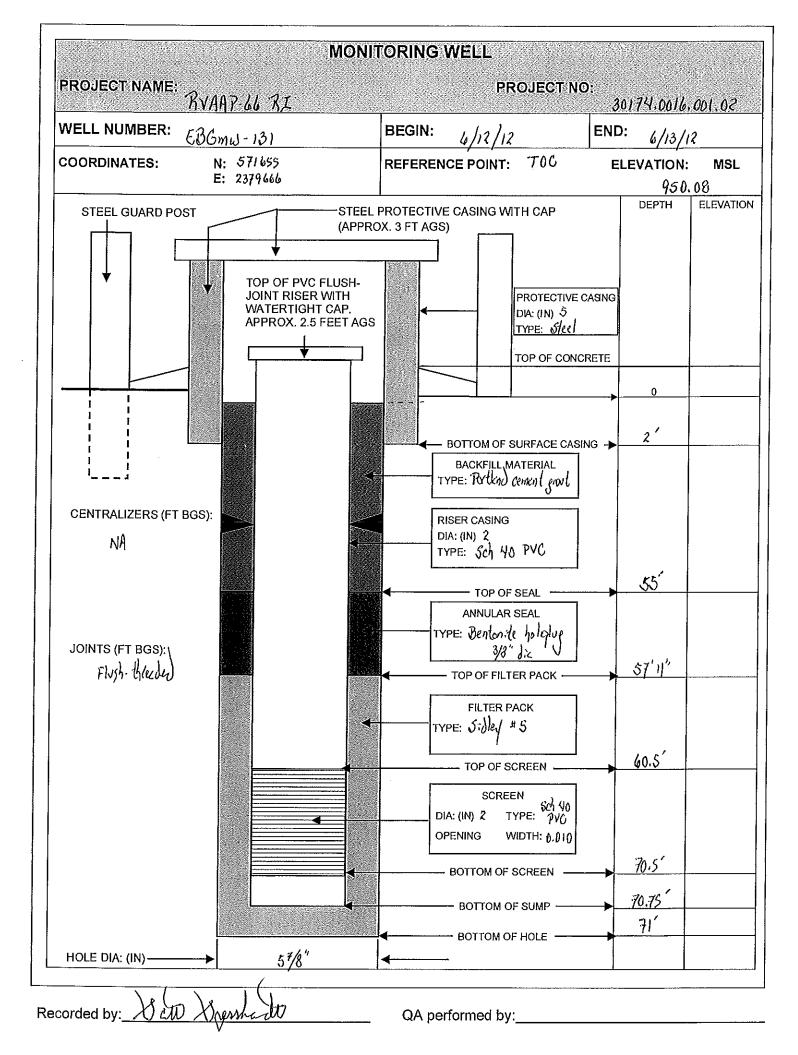
	DISTRICT									BOR	EHOL!	NUME	BER		
HTRW DRILLING LOG	USACE	E - Lou	isville								EBO	<i>รท</i> ูฟ	- 13	<u> </u>	
1. COMPANY NAME	2, DRILLIN	IG SUBC	ONTRAC	TOR					i						
EQM	Frontz [Drilling	ļ								EET		OF		
3. PROJECT RVAAP-66 RI			CATION					te Ro			veni	ъа, О	H 442	266	
5. NAME OF DRILLER JOE Teele		I	KE/MODE					5/Q							
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOLE LOCATION PW-2 : XIM W/ EBGMW-125													
2"x 24" 57): (57001		9. SURFACE ELEVATION/DATUM / 947.50 10. DRILL DATE/TIME STARTED: 6/11/12 COMPLETED: 6/12/12 15. DEPTH GROUNDWATER ENCOUNTERED 15' 16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION													
41/4" IN "HSA"															
81/4" ID 45A															
51/8" Cole bullet / dill bit (2" wile line to	<u>() </u>	10.05	PINIO	WAIER			ic Ar	EN BO	Kenot		J(III LL	.11014			
12. OVERBURDEN THICKNESS /50.1' 13. DEPTH DRILLED INTO BEDROCK 20.0'		17 OT	HER WA	TERIE	/EL ME		MEN	ES (INI (CLUDE	DAT	E/TIM8	=)			
40.9		- ''```'	11210 007			NA		. • (-,			
T1	O COTT (DDE	<u></u>					IUMBI	ER OF C	CORE	SOXE	S	1			
SHOUTCHOLD, JOCK WIT	DISTURBE		D.		1,02.			21. TO				VERY 9	% q	,,	_
NA CHEM	NA	OTHE	rt;		E 0011	DI ETE	D/APA	NDONE						Υ	
D/110 0 / 1111 1111	F	(PORAR)	/ W/EI - F		e com			ITORIN							
BACKFILL TYPE: GROUT BENTONITE 23. NOTES BKG: <			Counts		usto			: Parts			`				_
DIVO. SDackground Boo, Belon Cround Cul			Counts	-		pplicat		i, FaitS	hei M	miiOí	•				
: First Water Encountered :	Static Water I	revei		IYA,	NOLA	pplicat	,ie								
LOCATION SKETCH/COMMENTS							SC	ALE:	l	Non	e				
								ļ							F1441
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		أسسأ		Sincl	43	<u> </u>	· · · · · · · · · · · · · · · · · · ·	<u> </u>		ភាពគឺពិ	mum				,,,,,,
					1	<u>[</u>]		[]	.,						,,,,,,
PROJECT	GEO	LOGIST	SIGNATI	URE/DA	ſĒ				E	BORE	HOLE	NUMB	ER		
RVAAP- 66 BI	$ \rangle$	Sem	1 /10	ush	In)	6,	/12/1	2		EB (วทพ	-131		
12 11 11 11 11 11 11 11 11 11 11 11 11 1	1/1	1 m	· · · · · }	/	000		/						, . <u></u>		

HTRW D	RILLIN	G LO	G (continued)	E - Louisviile			EBGMW-131		
1. COMPANY NA	ME		2. DRI	LLING SUBCONTRACTOR					
	OM		Frontz	: Drilling			SHEET 2 OF 4		
3. PROJECT	RVAA	7-66	RI	4. LOCATION RVAAP	8451 State Rou		OH 44268		
5. NAME OF DRI		Toe Te		6. DIRECTION OF BOREHOLE	ন	VERTICAL	INCLINED DEGREES		
7. NOTES PID			Sitius MSA	PID SERIAL#: 12-1861		Colors fro	om Munsell Soll Color Chart, Rev		
WAI	TER LEVEL	MAKE/MC							
ELEVATION	DEPTH	uscs	CLASSIFICATION OF MATE	RIALS	SPT DATA (0.5 Feet)	MONITORING	1		
	(Feet)			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			(Sample IDs/Depths/Core Box/Et		
	0		Blind dill; refet to soil bong	100 for EBGMW-125			0-10/6		
	10	CL	upper 10" S: Hy cky, bin w/ gray m	ottles, 1: the / send,	1-2-	0	10-12/t: 1109		
			dam)		2-4				
	15	SM	Lower 7" Silly send, graf, moist	, M. grained	B= 17/24				
	15	SM_	Sind, glay, for graned, lille s.	It, wet, well-sorted	1-1-	o	15-17/1; 1123		
			. V 1 V	•	1-2				
					R = 14/24				
	,10								
	20	SM	Sand gray, for prained little sill	few med send,	3-4-	0.1	20-22/1. 1130		
			Sand, graf, for plained, little sill world	,	4.7		. ,		
			/ /		R. 241/24	1			
	2 5	SM	Unel 17" of no occi do exist.	u/ little med glined	4-4-	D	25-27/1: 1143		
			" Tille sitt wet	<i>(</i>	4-5				
		SN	Lowel 7" Sill, gray, wet		R. 24/24				
	27	ડામ	Upper 14" Vend, graf fn. med gra Lower 2" S.It, gray, wet	inco Let (here?)	1-1-	0	27-29 /1; 1230		
	287	ML	Lower 2" S.It day wet	<u>' </u>	1-2				
			'01'		1-2 R=16/24				
	29	SLI	that 17 Sand 15 charts		1-2-	D.1_	29-31 /t; 1238		
	~!	M)	Upper 12* Sand, 25 above Lower 12" Silt, gray, wet		2-3	μ.,	*** **/ */		
	25	775	Now 12 WILL HOW, WILL		1-2- 2-3 R=241/2				
	-				' /*	-			
	31	SM	Upper 10" Sand elly, for-med 1:	tlle s.lt, wet	2-2-	0.4	31.33 fl; 1246		
		ML	Upper 10" Sand, etcy, for-med 1: Lawer 13" Sitt, gray, little for &	nd, wet					
		- 1	7 // 1	,	3-3 R= 23/24				
	38			,					
ROJECT	-			Sato Dyman			BOREHOLE NUMBER		
PVA:	AP-66	21		I X An X	An 1	14/15	EBG mw-131		

HTRW D	RW DRILLING LOG (continued)			DISTRI	C - Louisville		EBG MW-131			
1. COMPANY NA	ME			2. DRIL	LING SUBCONTRACTOR			SHEET 3	<u>ω .π</u>	
	:QM			Frontz	DriIIng			Sheet 3	<u> </u>	
3. PROJECT	BVAA				4. LOCATION RVAAF	8451 State Rout	e 5 Ravenna,	, OH 44268		
5. NAME OF DR	LLER	Tol	Tester		6. DIRECTION OF BOREHOLE		VERTICAL)	INCLINED	DEGREES	
7. NOTES PID	MAKE/MOD	EL: J	SYLVS MSA		PID SERIAL#: 42-1861		Colors fre	om Munsell Soil Color	Chart, Rev	
WA	TER LEVEL				WATER LEVEL SERIAL#:					
ELEVATION	DEPTH	USCS	CLASS	SIFICATION OF MATER	RIALS		MONITORING		IARKS	
	(Feet)					(0.5 Feet)	(PPM/CPM)			
	33	SM	Upper 9" Send, In-med Lower 11" Silt, graf,	glef, some	sil, wit	2-3-	Q.1	33-35/t;	1254	
		ML	Lower 11" Sit glaf,	some for some	, wet	3.3 R=20/24				
						13 - 724				

	35	SM	Uziel 3" und, as abo	₩ (2-2-	0,1	35-37/t;	1300	
· · · · · · · · · · · · · · · · · · ·		ML	Uppet 3" Uxnd, as about Remainder Vxndy Sill,	glay, In-glas	ined, wet	2-3		<u> </u>		
				0 ' 0		R: 22/24				
				- 1		Wto / human	<u>, </u>	11		
	37	SM	Upel 6" End, graf,	In. Med, some	s.It wet	uit of huma 2-4-8	0.1	37-39 /t:	1307	
	Aσ	ML	Next 12' Sind silt,	164, fr.86	ined wet	B: 244/24				
		CL	Laver 9" Sittly cky	1841 Some (e)	- by mottles few		- · · · ·			
			Upper 6" Sind graf, Next 12' Sind sit, Lauer 9" Sitty cky, My crs sand grain	ns plicole						
			0 0	· , ,						
	39	CL	Situ day till eras	few smill or	evel dams plicale	1-4-	۵	39-41 /l;	1323	
	<i>\$</i> 5		Sity clay, till, easy,	of still in 90	we/ 4"	6.9				
			J			3,13/24				
	41	ML	Class sit out do	n slighte	ten redishmother	10-14-	0.2	41-43/6;	1330	
		.,.	Clayer s.lt play da	<i>" </i> ,	100 100 (11 100)	T	<u> </u>	7.		
	<i>,5</i> 6′					19-17 B: 16/24				
						'				
	43	M)	Charles S. H. ded w	not disi	With mother	2-5-	0	48-45 /1:	1437	
	••	"(>	Clayer s.lt day, M	Cad Land	will non-,	2-5- 7-7	Ψ	12 /2/		
-			100. 0(1), 700	V740		R= 15/24		-	• 0 =	
	58					1 /41				
	45	CL	CHI de H-11 -11	dused	calclass facul	2-5-	0.4	45-47 /6;	INUS	
	70	ひち	DINY UN LITT WAY	1 1 11 x10 , 1	LIVO WILL YILVOI		0,4	(¹ /1.71/ ₀)	טזין	
	45 CL S.Hy day till, e/a/, fow &	TICOTE, MOD)t	10-14 B=12/29						
				17 /44						
	,sect						-			
ROJECT	,ev				GEOLOGIST SIGNATURE/DATE	1		BOREHOLE NUMBE	R	
	AP-66	_			Sato Spended		14/12	EBGMU		

HTRW DI	ŖJLLIŅ	G LO	G_(continued)	DISTRICT USACE - Louisville	5 v*	BOREHOLE NUMBER EBG MW-131						
1. COMPANY NA	_			2. DRILLING SUBCONTRACTOR			SHEET ZU OF U					
E			^	Frontz Drilling			<u> </u>					
	RVAA				NP 8451 State Rou							
5. NAME OF DRI	LLER (be Te	Hed Aaron Mackey	6. DIRECTION OF BOREHOLE	(VERTICAL)	INCLINED DEGREES					
7. NOTES PID	MAKE/MOD	EL: V	YIUS MOA	PID SERIAL#: A2-1861		Colors fro	vs from Munsell Soil Color Charl, Rev					
WAT	ER LEVEL	MAKE/MC	DEL:	WATER LEVEL SERIAL#:	···•							
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF		SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)					
	47	U	Silty clay till graf, few send	onell glavel shele	11-22-	0.3	47-49 H; 1500					
			(10), wite, more very		R = 124							
	2849	GP	Uned 18" Send etc. 10-016	Lew excel, wet.	21-29-	0.2	49.51 /l; 1522					
		CL	Uppel 18" Send, etc./, fn-c16, Lower 6" Sitty clay, etc./, send moist - sendstone free	stone pras, mod stiff,	50/2 R= 24/24		Bedrock @ 50.1'					
	5()		No tecovely - Spoon / Ruger		50/1	-	<u>51·53/l; 1547</u>					
	*		Casing to 53.5 A; votary	dulled to 56 fl before								
			Coling		0							
	56 34	<i>S</i> S	Sandstone, It gray, very fine thin (4/32) of gray varves,	there 10" - they us sent	R* QU/2*/	}*	56-65; 1300 (6/12/12					
			lights in law 18"	Chec in the city one								
	6 5		Same as about		R= 74"/	· · ·	65-71'; 1337 (6/12/12					
	50		End of Boon	S			65-71'; 1337 (6/12/12 (Submilled core from 65'6"-67'2" bot geon. testy)					
							<i>V</i>					
	ÆŚ											
ROJECT	,60			GEOLOGIST SIGNATURE/DATE			BÖREHOLE NUMBER					
	P-66 1	ßΙ		Sato Hymrad	D 6/4	4/12	EBGMW-131					



USACE - Louisville	2
1. COMPANY NAME 2. DRILLING SUBCONTRACTOR SHEET 1 OF 3	2
Frontz Drilling Frontz Drilling	2
3. PROJECT TYARP 14 37 4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 4426 5. NAME OF DRILLER JOE TELK 7. SIZES AND TYPES OF SAMPLING EQUIPMENT 8. BOREHOLE LOCATION 7W-26 NTA 200 J NTA 000 - 10 Q 9. SURFACE ELEVATION/DATUM 10 Q7. 40 10. DRILL DATE/TIME STARTED: 3/28/12 COMPLETED: 4/10/1 15. DEPTH GROUNDWATER ENCOUNTERED 7.7 / 72° 16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE 130 16. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA DISTURBED: NA OTHER: 21. TOTAL CORE RECOVERY % NA 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/28/12 DATE COMPLETED/ABANDONED: 4/11/12 BACKFILL TYPE: ☐ GROUT ☐ BENTONITE ☐ TEMPORARY WELL POINT ☐ MONITORING WELL 23. NOTES BKG: ≤Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▼ : Static Water Level NA: Not Applicable	2
6. NAME OF DRILLER TO PETER 7. SIZES AND TYPES OF SAMPLING EQUIPMENT 8. BOREHOLE LOCATION W-26. NTA xi/c0 J/ NTAmis-109 9. SURFACE ELEVATION/DATUM 10.77, 10 10. DRILL DATE/TIME STARTED: 3/28/12 COMPLETED: 1/10/15. DEPTH GROUNDWATER ENCOUNTERED 7.7 / 72′ 16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE 15. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA DISTURBED: NA OTHER: 21. TOTAL CORE RECOVERY % NA 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/28/12 DATE COMPLETED/ABANDONED: 4/1/1/2 BACKFILL TYPE: GROUT BENTONITE TEMPORARY WELL POINT NA: Not Applicable PPM: Parts per Million Y: Static Water Level NA: Not Applicable	
9. SURFACE ELEVATION/DATUM 10.77.40 10. DRILL DATE/TIME STARTED: 3/28/12 COMPLETED: 4/10/15. DEPTH GROUNDWATER ENCOUNTERED 7.7 / 72 / 16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE 130 18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA DISTURBED: NA OTHER: 21. TOTAL CORE RECOVERY % NA OTHER: 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/28/12 DATE COMPLETED/ABANDONED: 4/11/12 BACKFILL TYPE: ☐ GROUT ☐ BENTONITE ☐ TEMPORARY WELL POINT ☐ MONITORING WELL 23. NOTES BKG: ≤Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▼: Static Water Level NA: Not Applicable	
10. DRILL DATE/TIME STARTED: 3/28/12 COMPLETED: 4/10/ 15. DEPTH GROUNDWATER ENCOUNTERED 7.7 / 72 ′ 16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE 130 18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA DISTURBED: NA OTHER: 21. TOTAL NUMBER OF CORE BOXES NA 20. CHEMICAL SAMPLES UNDISTURBED: NA OTHER: 21. TOTAL CORE RECOVERY % NA 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/28/12 DATE COMPLETED/ABANDONED: 4/11/12 BACKFILL TYPE: ☐ GROUT ☐ BENTONITE ☐ TEMPORARY WELL POINT ☐ MONITORING WELL 23. NOTES BKG: ≤Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▼: First Water Encountered ▼: Static Water Level NA: Not Applicable	
15. DEPTH GROUNDWATER ENCOUNTERED 7.7 / 72 / 16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 12. OVERBURDEN THICKNESS NA 13. DEPTH DRILLED INTO BEDROCK NA 14. TOTAL DEPTH OF BOREHOLE 130 18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA DISTURBED: NA OTHER: 21. TOTAL NUMBER OF CORE BOXES NA 20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER: 21. TOTAL CORE RECOVERY % NA 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/28/12 DATE COMPLETED/ABANDONED: 4/11/12 BACKFILL TYPE: ☐ GROUT ☐ BENTONITE ☐ TEMPORARY WELL POINT ☐ MONITORING WELL 23. NOTES BKG: ≤Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▼: First Water Encountered ▼: Static Water Level NA: Not Applicable	
13. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 14. TOTAL DEPTH OF BOREHOLE 15. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME) 18. GEOTECHNICAL SAMPLES 19. TOTAL NUMBER OF CORE BOXES 19. TOTAL NUMBER OF CORE BOXES 10. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME) 18. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 19. TOTAL NUMBER OF CORE BOXES 19. TOTAL NUMBER OF CORE BOXES 10. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 10. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 10. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 10. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 10. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 10. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 11. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME) 12. DOTAL NUMBER OF CORE BOXES 13. DOTAL NUMBER OF CORE BOXES 14. TOTAL CORE RECOVERY % 15. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME) 18. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 19. TOTAL NUMBER OF CORE BOXES 19. TOTAL NUM	
12. OVERBURDEN THICKNESS 13. DEPTH DRILLED INTO BEDROCK 14. TOTAL DEPTH OF BOREHOLE 13. O 15. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME) 16. GEOTECHNICAL SAMPLES 17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME) 18. GEOTECHNICAL SAMPLES 19. TOTAL NUMBER OF CORE BOXES 10. OTHER: 21. TOTAL CORE RECOVERY % 10. OTHER: 22. DISPOSITION OF BOREHOLE 13. DATE COMPLETED/ABANDONED: 4/11/12 14. TOTAL CORE RECOVERY % 15. TOTAL CORE RECOVERY % 16. STATED/INSTALLED: 3/28/12 17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME) 18. GEOTECHNICAL SAMPLES 19. TOTAL CORE RECOVERY % 19. TOTAL CORE RECOVERY % 10. OTHER: 21. TOTAL CORE RECOVERY % 10. OTHER: 22. DISPOSITION OF BOREHOLE 18. GEOTECHNICAL SAMPLES 19. TOTAL CORE RECOVERY % 19. TOTAL CORE RECOVERY % 10. OTHER: 21. TOTAL CORE RECOVERY % 10. OTHER: 22. DISPOSITION OF BOREHOLE 13. DATE COMPLETED/ABANDONED: 4/11/12 14. TOTAL CORE RECOVERY % 15. TOTAL CORE RECOVERY % 16. MAIN OTHER: 16. CORE RECOVERY % 17. OTHER WATER LEVEL MEASUREMENTS (INLCLUDE DATE/TIME) 18. GEOTECHNICAL SAMPLES 19. TOTAL NUMBER OF CORE BOXES 19. TOTAL NUMBER OF CORE BOXES 10. TOTAL CORE RECOVERY % 10. MAIN OTHER: 21. TOTAL CORE RECOVERY % 10. MAIN OTHER: 22. DISPOSITION OF BOREHOLE 23. NOTES 24. TOTAL CORE RECOVERY % 19. TOTAL NUMBER OF CORE BOXES 19. TOTAL CORE RECOVERY % 19. TOTAL CORE RECOVERY % 19. TOTAL NUMBER OF CORE BOXES 19. TOTAL CORE RECOVERY %	
13. DEPTH DRILLED INTO BEDROCK 14. TOTAL DEPTH OF BOREHOLE 13. OTHER WATER LEVEL MEASUREMENTS (INLOLUDE DATE/TIME) 14. TOTAL DEPTH OF BOREHOLE 15. OTHER WATER LEVEL MEASUREMENTS (INLOLUDE DATE/TIME) 16. GEOTECHNICAL SAMPLES 17. OTHER WATER LEVEL MEASUREMENTS (INLOLUDE DATE/TIME) 18. GEOTECHNICAL SAMPLES 19. TOTAL NUMBER OF CORE BOXES 10. TOTAL CORE RECOVERY % 11. TOTAL CORE RECOVERY % 12. TOTAL CORE RECOVERY % 12. TOTAL CORE RECOVERY % 13. DATE COMPLETED/ABANDONED: 4/11/12 13. NOTES 14. TOTAL NUMBER OF CORE BOXES 15. TOTAL CORE RECOVERY % 16. TOTAL CORE RECOVERY % 17. OTHER WATER LEVEL MEASUREMENTS (INLOLUDE DATE/TIME) 18. GEOTECHNICAL SAMPLES 19. TOTAL CORE RECOVERY % 19. TOTAL CORE RECOVERY % 10. TOTAL CORE RECOVERY % 11. TOTAL CORE RECOVERY % 12. TOTAL CORE RECOVERY % 13. TOTAL CORE RECOVERY % 14. TOTAL CORE RECOVERY	
14. TOTAL DEPTH OF BOREHOLE 13.0 18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBE	
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA 19. TOTAL NUMBER OF CORE BOXES 20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER: 21. TOTAL CORE RECOVERY % NA 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/28/12 BACKFILL TYPE: ☐ GROUT ☐ BENTONITE ☐ TEMPORARY WELL POINT ☐ MONITORING WELL 23. NOTES BKG: ≤Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ☐ : Static Water Level NA: Not Applicable	
20. CHEMICAL SAMPLES CHEM: NA OTHER: 21. TOTAL CORE RECOVERY % NA 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/28/12 BACKFILL TYPE:	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/28/12 DATE COMPLETED/ABANDONED: 4/11/12 BACKFILL TYPE:	
BACKFILL TYPE:	
23. NOTES BKG: ≤Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million T: First Water Encountered : Static Water Level NA: Not Applicable	
: First Water Encountered : Static Water Level NA: Not Applicable	
LOCATION SKETCH/COMMENTS SCALE: None	
IFOGATION SKETCH/COMMENTS TOGACC: NOTE	
200ATTON BRETONIOGRAMENTO	
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Field - No unitarizationed 1)	

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Kear NTAME 109 O NTAME 199	,,,
MTA 01W 109 NTA 114 159	
namental and the state of the s	
PROJECT GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER	
RVAAR-66 BI Sato Speshedt 3/28/12 NTAMW-119	

			Western .	1			-	I*****				
HTRW D	RILLIN	G LO	G (continued)	DISTRI	CT Loulsv≅e			NTA MW-119				
1. COMPANY NA				l	LING SUBCONTRACTOR		· · · · · · · · · · · · · · · · · · ·	SHEET 2	OF 7			
EGM			Or.	Frontz		8451 State Rout	o 5. Payonna i	OH 44268				
3. PROJECT "			4		6. DIRECTION OF BOREHOLE		VERTICAL	T INCUNED	DEGREES			
5. NAME OF DRI		Joe 7			PID SERIAL#: A2-1861		 1	m Munsell Soll Color C				
7, NOTES PID	TER LEVEL		Silius MSA		- WATER LEVEL SERIAL#:		COXORS IIO	ATT MUDISES DUST COOK C	(1011, 130)			
ELEVATION	DEPTH	uscs	CLASSIFICATION OF	MATER	 	SPT DATA	MONITORING	REM/	ARKS			
	(Feet)				**************************************	(0.5 Feet)	(PPM/CPM)	(Sample IDs/Dept	hs/Core Box/Etc.)			
	0		Uzzer 3" Topso: 1, SK bra, s.Hy Next 4" S:Hy clay, SK bra, fa Remainded SiHy clay, Sca is/ fe	1 clas	, roots	2-1-	0	0-2/1: 09.	34			
		U	Next 4' Sitty day of bin, fa	1 60	15, few smell placel,	2-4 R: 20.5/24						
			Benkindel Sitty day, day if te	الع ل	a) Molles, tew iron	R: 20.524						
			oxides dew organics des	1) V	<u> </u>		·					
	⁄قار											
	2	CL	Silly day, bear up few gray.	clap	factors, kill	4.5-	0	2-4 /t : 094	0			
			Silly day, beg uf few year of	<i>f(</i>)	<u> </u>	6-9						
			(, (, , , ,	<i>''</i>		R= 17/24						
			,									
	106	GC	Send erevel by some day;	ig Mic	ble 5" few excel	3-2-	O	6-8/1: 095	59			
			Send escret bin, some cless :	CoMin	vet in lower 4"	3.2		, ,				
				Ú		3·2 R= 9/24						
	10	SM	Send Den to-CIG occined	tas i	soxil wavel tow	3-4-	0	10-12/1: 10	07			
	18		Send, ben, for ces gained;	duct	ed	2-3		, ,				
			, , , , , , , , , , , , , , , , , , , ,			8= 17/24						
	14	SP	SEND OCCI Deronie den in lower	15"	med- CLS exined	Wt of himself 1011-1-1	0	14-16 At: 11	015			
			Send, praj become den in love	e)	,	R = 29/24						
	20		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									
heeve	18	SP	Send oral bin deloning	1 1/1.	ersine w/ Some	2-2-	0	18-20 ft; 11	35			
	Ů		Send, graf bin, redominantly	stre	les	3.3		, ,				
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			R= 16/24						
	25 20	SP	Sand used 11" Sen med-co	s ela	inco yet	2.2.	0	20-22 /1:11	40			
		รฟ	Gend, upper 11" son, med-cos End, lower 8" grey, fn-pre	cine	wet.	3-3		, , ,				
		•	() , resid s () / / / / / / / / / / / / / / / / / /	31	, WC V	3-3 R= 19/24						
:												
	38	· -				, .						
ROJECT					GEOLOGIST SIGNATURE/DATE	7		BOREHOLE NUMBER				
RVAA	P-66	77			Satt Spenda	to 3/	28/12	NTA MW-	119			
					V	,	,					

HTRW DRILLING LOG (continued)					CT		BOREHOLE NUMBER					
1. COMPANY I					- Louisville LING SUBCONTRACTOR		NTAMW-119					
i	EQM			Frontz [SHEET	2 3 of	7		
3. PROJECT		A7-61	1.17	1	1	8451 State Rou	te 5 Ravenna,	OH 44268				
5. NAME OF D		701	•		6. DIRECTION OF BOREHOLE		VERTICAL)	INCLINED	DEC	GREES		
7. NOTES PI	D MAKE/MOD				PID SERIAL#: 12-1861	w- mm / · · ·	Colors fro	m Munsell Soil C	olor Charl, Rev			
	ATER LEVEL		Sirius MSA	,	- WATER LEVEL SERIAL#:							
ELEVATION		uscs	CLASSIFICATION OF	MATER		SPT DATA	MONITORING		REMARKS	.		
	(Feet)					(0.5 Feet)	(PPM/CPM)) (Sample IDs/Depths/Core Box/Etc.)				
	22	SP/	Send as before ul lower 5	4 fr	erines and sond	160.3	- 22-24 At: 1145					
		SP/ /SW	Send, as before up lower 5		0.00/	2-3	0	,	,			
			Diactor			R= 24/24						
						1 /27						
	28 24 SP/ Sind, gic/ 19 /n-Cis elicine				Low Sette del	Wt.of hunga	1 0	24.26 ft	1152			
	1 24	Sr/ /GC	Vano, giz/ # 74- Ca Plane),	we t	700 Diny clay		, 0	21.0070) 1102			
		. 00	400 812VET 11 10WET 2			1-2-4 B: 8/24						
						15° 729				<u>.</u> .		

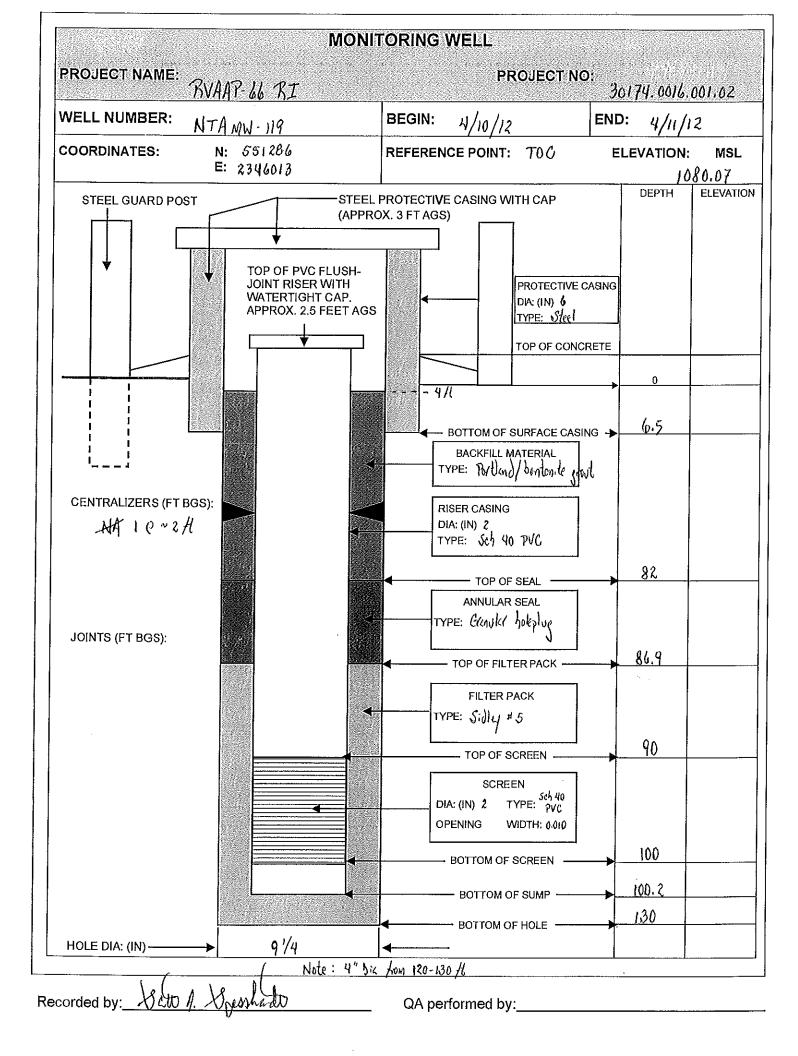
	26	SP	Uppel 3" med-cis send	2-3- 0					' 1157			
	40'	Ц_	Next 2" gray silly clay, son	1e 8/0	evel, vet							
		SM	Next 2" eray sitty chy, son	w e	revel of clay, wet	2-1 7:10/24						
			7 70 7									
	28		Upper 14" appecies to be carry to	J1.	wet	3-1-	0	28-30/1	; 1202			
		SP	Upper 14" appears to be early do Lower 10" Send gray, med-cas	e16	ined few small	1~1		,				
	45		gravel, uset	0		B= 24/24						
	<u> </u>		3,441)	•=		/ / /						
	30	SP	Sad and wedness are	1,11	he office and fel	2-1-	0	30-32 A	1207			
	30	0,	send, gray, med-cos grained,	/w/ /	1. 1200 000, 100	1 1		VV /1 / V	/ /** /			
			DAKIT PIEVET LIFE			2-1 B=12/24						
	58			· ·		h= 129						
	 		c l			H 11		• 2 20 <i>//</i>	. 1017			
, m, m, m, m, m, m, m, m, m, m, m, m, m,	32	SP	Sond, e/c/, Med-CIS e/cined, lower 2", charles, wet	<i>יון בוו</i>	ecsing planel in	7-4.	0	32-34 A	<u>, 141†</u>			
			lower 2", charles, wet	t Um	by phout	2-2 R= 22/24						
			V		<u> </u>	ነ <u>ት፣ "724</u>						
					• ifi t					_		
-	55 34	SP	As above, sand, graf, med-co	W,	I'dle znovkt pravel,	4-3-	0	34-36 ft	, 1222			
5534 SP As above, sand, graf, med			wet 0 (0 0	3-3						
						R= 14/24						
					'							
						=						
58												
PROJECT				GEOLOGIST SIGNATURE/DATE		BOREHOLE NUMBER						
RVAAP- 66 RI				:	& Leto Grusha	18/12	NTA mw-119					

HTRW DI	HTRW DRILLING LOG (continued)				CT : - Louisv퀻e		BOREHOLE NUMBER				
1. COMPANY NA	ME			-	LING SUBCONTRACTOR						
El	DM			Frontz I	Drilling			SHEET Z	4 OF 7		
3. PROJECT	RVAA	P-66	RI	•	4. LOCATION RVAAP	8451 State Route	5 Ravenna,	OH 44268			
5. NAME OF DRI			Telel		6. DIRECTION OF BOREHOLE	Q	ERTICAL	INCLINEO	DEGREES		
7. NOTES PID	MAKE/MOD	EL: 0	Sirius MJA		PID SERIAL#: 12-1861		Colors fro	om Munsell Soil Colo	r Charl, Rev		
WAT	ER LEVEL	MAKE/MO	DDEL:		WATER LEVEL SERIAL#:						
ELEVATION	DEPTH (Feet)	USÇS	CLASSIFICATION OF	MATER	RIALS		MONITORING (PPM/CPM)		MARKS epths/Core Box/Etc.)		
heve	36	SP	Und 12" Send, oral med-	16 04	sings lew line and	1-1-	()	36-38 ft;	1232		
	•	ML	Next 6" Clayey s. It, gray, Lost 6" Clayey gravel, w	() (507	t slightly pliable	4-11		, ,			
		GC.	Inst 6" Clever econel is	01	Stick 1 061	4-11 R=24/24					
			7 , 1	<u>, , , , , , , , , , , , , , , , , , , </u>	7, 57						
heve	,38°,38	SP	about 15" Soud hear elect de	ine to	Us offine wet	3-3-	0	38-40 ft;	1240		
-7%10	70	GA.	Used 15" Sand, bin-gial, fi Renxinded Sand gradel, gra- gistel to 1" (sub	/ .C.	we del & cett vot		J	*****	1.7.1.		
		OU.	MUZINOU VOID PIEVEL PIEV	1, 1r	A cel vivo, wee,	4-6 R= 22/24					
			9/6481 10 1 (SUE	npuki ()	/ ************************************	17 /49					
•		en	u 1 m// C \ 1		\	.	^	No 112 /1.	10110		
hexve	40)	OP AA	170 12 xno, ola-erc/, 10 . (215 fq	cined, wet	3-11-	0	40-42 /6;	1440		
-	40'	<u>60</u>	Remainded Sand graves, oh ora	/, N	ged- US prained, wet,	10-17 R=24/24					
			Uppel 12" Send, bin-graf, for a Remainded Send reasel, dK etc. Some sitt clay at	doz oz	this zone	K + ~724					
hear	42	SP	Upper 7" Sond, bry-ercy, fine-c Remainder Till, okycy Sill, ercy	Y5 pr	kined uet	7-20-	ρ	42-44 /6;	1258		
		ML	Remainder Till christ will ear	1. 1	w sind o plevel	27-38					
	18		souther, day	7	0	R= 24/24					
1	alzi	අත	1 104 9 1	h	~ 1 1 m	9-29-		m u H	1216		
hear	44	OF AL	One 8 Kno In-med grained	Urg-g	12/ 1/01/6	50/4	<u>V</u>	44-46 ft;	1017		
		CL	Next 1 Sitty Cky gavel gra	<u> </u>	970156 	50/4 B, 24+/24			· _		
		<u> </u>	Uper 8" skad for-med gained, Next 7" Sitty cky " gavel, ga Lower 9" Till, Sitty clay, ga	./, d	1/ brille but serb	15, /24					
			1	•							
nezve	46		Upel 6" Sand	•	_1 1	21-41-		46-48 ft:	1445		
		CL	Renkinder Till, every, silly c	14,	Some SMXII 1/cvel,	44-5% B> 24/24	0				
			Renxinder Till, early willy c	eHree	d ske o to	R= 24/24					
	<i>5</i> 8 48	Ц	Sitty day till, gray, some	R/CNP	1 des her	32-47	0	48-50-/	1500		
	_			0 110	, , , ,						
						- 50/4 R=14/24					
						11 /57					
	50	CL	Sity clay till, is above,	tw	send sendstone	29-50/5	0	50-52/1;	1514		
	60		Sily cly till, is above,			B= 18/24		7)	•		
ROJECT	<u>· </u>	I			GEOLOGIST SIGNATURE/DATE	7		BOREHOLE NUMB	ER		
21/11	7-66	RI			Sato Spenk	Sto V	28/12	NTAM	0-119		

HTRW D	RILLIN	G LO	G (continued)	DISTRICT USACE - Louisville	ВС	BOREHOLE NUMBER NTA MW - 119					
1. COMPANY NA				2. DRILLING SUBCONTRACTOR			SHEET \$15	OF 7			
Ear	•		· · · · · · · · · · · · · · · · · · ·	Frontz Drilling				7			
3. PROJECT	RVAAT		_		8451 State Route 5 F						
5. NAME OF DR	ILLER	Joe T	ete/	6. DIRECTION OF BOREHOLE	(VERTIC	AL)	INCLINEO	DEGREES			
7. NOTES PID	MAKE/MOD	EL:	Sirius MSA	PID SERIAL#: 42~1861	PID SERIAL#: #2~1861 Colo						
WA	TER LEVEL	MAKE/MC	DDEL:	WATER LEVEL SERIAL#;	<u>.,</u>						
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATERIALS		TORING M/CPM)	REMA! (Sample (Ds/Depth				
	52	CL	Sitly clay till, gray, some	eravel dams hard	37-50/3	0 3	52-54 /t;	1544			
				0	37-5%3 B= 13/24						
	54	SM	More 3" Sind del formed	orine del sitt	13-13-	0 6	54.56/6; 1	1549			
	38	 М)	Nest & Ckies Kill out ou	on will stable	20-30		~ ~ ~ ~ ·	· · · ·			
		ML CL	Noper 3" Sand, eral, for-med Next 9" Ckyey 8.11 graf, des Lower 7" Sirby cky, graf, to	11, Jew SHELL GEVEL, DEMY	R = 19/24						
	56	SP			19-24-	0 5	16.58/6; 16	612			
		ll	Remained Sitty day till, gray	little small pravel dry	34.5%						
	,40		hard	0 , ()	34.5% B: 20/24						
	58	CL	Silly clay till as above real	dish-vellow sendstone taxe	30-38- () 5	58-60 H; 16	35			
			Silty clay till, as above, red		46-50		, , ,				
					R= 15/24			· · · · · · · · · · · · · · · · · · ·			
	60	CL	Silly day till a chouse of	el dons had diele	19-29- () (60-62A; 16	52			
:		<u> </u>	Silly day till, as above, en	the wel send p tos	30-43	7 9	, 02/0)	<u></u>			
			(1)		B: 17/24						
	<i>5</i> 8 62	SM	11 15 Sud 261 med-165	s.H. Not	24-27-	0 6	2-64 ft; 08	154			
	<u> </u>	cl	Remainded Sitts day till oras se	ome send (MEVEL dem).	1 ' ' '	•	· • · / · / •	•			
			Upper 1.5" Send, graf, med-cas, Renxinder Sitty clay till, graf, so mod stiff, country	J /- //	31-19 B= 18/24						
	311		/		17-32- () 6		912			
	64 55	CL	Sitty clay till, pray, little &	no r graver (to) , ocm },	40-43) <u>(</u>	14-66 H; 0	7/3			
			Moo, Oth		R = 20/24						
							. 11				
	26	CL	Und 3" Silly clay till, 45 cb	ovl 1	36-59/ 1 B= 11.3/24	0 6	6-68 A; C	1939			
	€0,	SM CL	Upper 3" Sitty clay till, as ab Next 7" Sitty sand, gray few Lower 1.5" Sitty clay till of white	small gravel, med-cas	13: /24						
PROJECT				GEOLOGIST SIGNATURE/DATE	Λ		REHOLE NUMBER	. 0			
	/AAP-0	66 K	1	Saw Sysshal	D 3/28/1	ζ	NTA mw · 1	15			

HTRW DR	ILLIN	G LO	G (continued)	SACE - Louisville		*.	BOREHOLE NUMBE				
1. COMPANY NAM	E		2	DRILLING SUBCONTRACTOR	ARAINATT.						
EQ/	V		F	rontz Driling			SHEET &	OF 7			
3. PROJECT	RVA	1P-66	RI	4. LOCATION RVAAF	8451 State Route	5 Ravenna,	OH 44266				
6. NAME OF DRILL			se Total	6. DIRECTION OF BOREHOLE	(VE	RTICAL	INCLINED	DEGREES			
7. NOTES PID M.	AKE/MOD	EL:	Sitius MSA	PID SERIAL#: 42-1861		Colors fro	s from Munsell Soil Color Chart, Rev				
WATE	R LEVEL	MAKE/M	DDEL;	WATER LEVEL SERIAL#:							
ELEVATION	DEPTH	USCS	CLASSIFICATION OF M	MATERIALS	1 1	ONITORING		MARKS			
	(Feet)	A	ed ladd a lad	to Haral I.	 	PPM/CPM)		ths/Core Box/Etc.)			
	68	CL	Sitty cky till, gray, few sand.	SUKII HANET, OCHTZ,	50/4 R = 4/24	0	68-70 H;	JONA			
	70	CL	Silly cly till, as above		50/5	0	70~72 /l;	1026			
	25				\$0/5 R= 5/24		, , ,				
	72	SM	Upper 13" Send, graf, for US gra	ned, little silt, zoily	3-14.50/s R: 20/24	0	72-74/t;	1049			
		CL	Upper 13' Sand, gray, for cos gra- sorte) wel Remainder Silly oky till, gray, fe mod. slift	w send smell versel demo	R: 2724						
	0 المر		Mod. stiff	, , , , , , , , , , , , , , , , , , , ,							
_	74	SP	Upper 10" send, excy, /n-med p	kined, few ces, wet	25-46-50 B: 23/24	0	74-76 /l;	1448			
		ML M	Upper 10" sind, gray, In-med p Next 4" Clayer sindy silt, gray, Remainder Silty clay till, gray, damp, mod. stiff	wet, crumbly, few prevel	Z = 23/24						
	<i>\$</i> 8		Jamp, mod. stiff	TO MAN (MAN)							
	76	SW	Upper 5" Sand, graf, med-grainer Next 4" Clafer sand silt, graf, Renxinder silts clastill, graf,	, wet	9-24-	0	76-78 fl;	1523			
		ML CL	Remained Silly clay till, gray	MOIST, TEW SIEVEL, CRUMBLY TEW SEND, SOME SIEVEL	1 44.45 B= 22/24						
	,50		(14-12), em), n210								
	78	SP	Upper 6" Scad, pray, med-ces pres Next 4" Silly clay bru, soft, a Remainder Silly clay till, gray, firstly hard	ned, iset	5-26-50/4 B=21/24	0	78-80 /l;	1539			
		<u>U</u>	Next 4 Silly clay bon, Soft, a Remainder Silly clay till was	vet, some sand Italie sand takvel, dans.	13 = 1/24						
	,58	***************************************	Justy hard								
	80	SP	Upper 3" knd, graf, med-grained	, wet (probably comy daso)	20-35-	0	80-82 /l;	1559			
		GC	Upper 3" Sand, gray, med-prained Premainder Clayer placel, gray, Mo	ist, few send, grevel	46-50/4 R=16/24						
ROJECT	jee -		ζμ 1 (/1)ζ.	GEOLOGIST SIGNATURE/DATE	-, / \		BOREHOLE NUMBE	R			
	P-66	RI	(Sto Syntis	3/2		NTA MW				

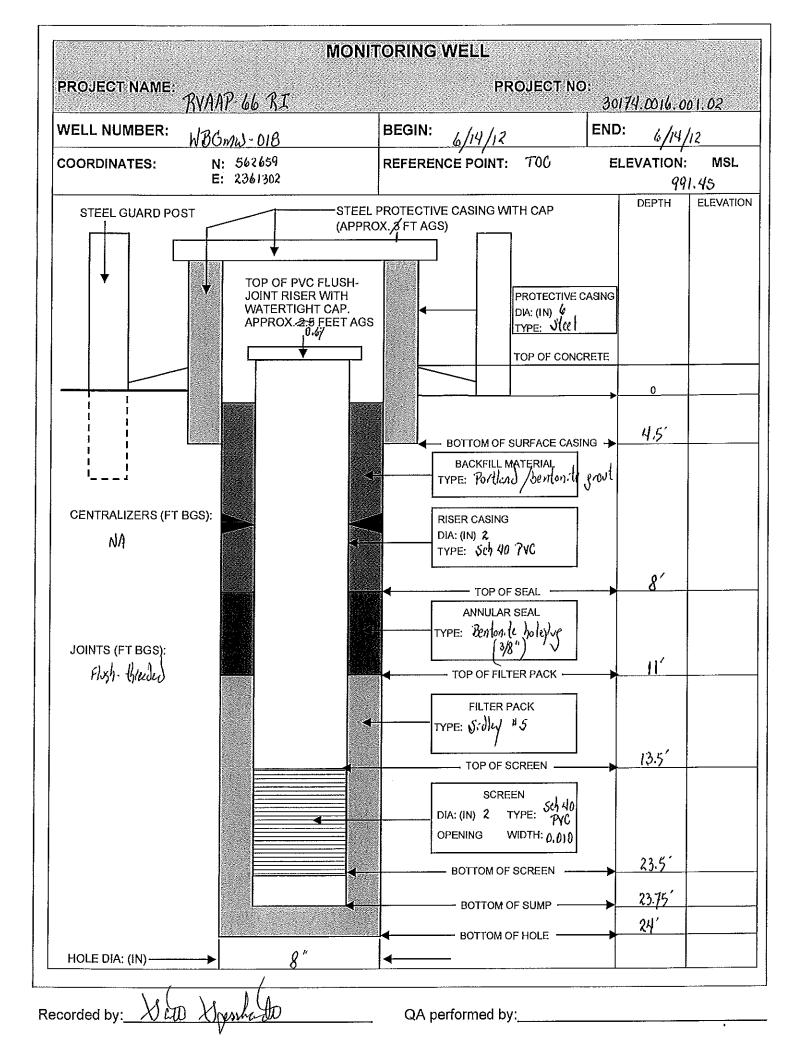
				USACE - Lou	POATE C		NTA mW-119				
1. COMPANY NA EQ	•			2. DRILLING Frontz Dri‱	SUBCONTRACTOR			SHEET 27	OF 7		
	RVAA	P. / I.				3451 State Route 6	, Ravenna,				
i. NAME OF DRI			Teld & Bob Hkm. Hon (88-130H)	6. D	IRECTION OF BOREHOLE	VEI	RTICAL	T INCLINED	DEGREES		
	MAKE/MOI	DEL: (Sitius MSA	<i>i</i> PID	SERIAL#: A2-1861	Colors fro	om Munsell Soil Color C	Charl, Rev			
	ER LEVEL				TER LEVEL SERIAL#:						
ELEVATION	DEPTH	USCS	CLASSIFICATION OF	MATERIALS		SPT DATA MO	NITORING	REM	ARKS		
	(Feet)					(0.5 Feet) (F	PM/CPM)	(Sample IDs/Dept	hs/Core Box/Etc.)		
	82	CL	Upper 12" Sity day till, gray, , day, , day, hard Lowel 12" Lond grayer, gray, ,	Some gas	sel, lew send,	30-26-	0	82-84 /l;	1630		
			dany, hard			43-50/s B= 24/24		1 // 1			
		GC	Lowel 12" Send gradel, graf, i	moist, 1	lew sill day,	<u> </u>					
			US SCAD								
	5							1			
	84	CL	Sitty clapy till, erzy, little &	ind to gla	evel, moist, here	33-36- 50/5 R: 16/24	Ø	84.86 /t;	1658		
	BY CL Sitty Clayey till, gray, little GC Clayey send of prevel in lower					50/5		,			
						R: 16/24					
•	1086	GM	Sitty and parel graf moist	Compact	led, kid,		86-88 A;	1030 (3/30/			
1086 GM Sitty send gravel, graf, noise		coel thes in love	3*	, ,		, ,					
					100/3 R=24/24						
_											
	9 0		Used 1 /L cobble zone, fist si	20 W/S	and except each	R= 120/120		90-100/1:	1516 (4/4/12)		
	J8'	GM	Next 4 /t, sond cousel, pist single given, little silt	In- Med e	exine. Ith us			' '	(' ' /		
		•	okined little sit	()							
		GP	From 5-10 /l Crs send presel, sorter From 10-11 /l, S:Hy-eleft till, genel (to 1") - wet	eld lit	le In-med root						
			volted of	0 / '	, ,,,,,						
		G M	From 10-11 / Sith about till ,	16/ Son	med send "						
	20		easel (to) 11) - 13et	d'tha	ich						
) "(")		9.						
	100	CL	Situated till east les to	S(n)	les soull variety	R= 120/120		100-110 /t;	1620		
	, - 0		Sity clay till easy, few for	V-10 ,	7,7,7	7		110/0	10.5		
			THE COMP				-				
	28/J10	Mζ	Sit all some of minist	6:01 3	itle	R= 10'		110-120 ft;	1040 (4/10/12)		
	1.0		Sit, graf, some day, moist,	/=// 0	77.6	.,,,,		1,0 ,00	1010 (414111)		
	120		I'm 2' self is done then 14" for	ar lan	W N/ N/CIE SOME	R= 10'		120-130 ft;	1297		
	100	&1/U	sit not followed by 15" si	Hi Neit	Il to a still	1 (0		100/0	73.1		
		ζм/	Upu 2' s. It, es above then 14" for s. It, wet, followed by 15" s.i Next 30" s. Ity send gravel, remainded s. Ity clay t. Il, gray.	white	woteste.						
	38	CM/CL	division of the Will all	W. L., UM	Alle sond 1 see 1						
ROJECT			TONKING VIGURA CIT (K)	GEO	LOGIST SIGNATURE/DATE			BOREHOLE NUMBER	₹		
RVAL	1P-66				LOGIST SIGNATURE/DATE/	3/30	/12	NTA MW.	119		



	DISTRIC	TRICT						BOREHOLE NUMBER								
HTRW DRILLING LOG	USACI	CE - Louisville								WBGMW-018						
1. COMPANY NAME	2, DRILLI	NG SUBC	ONTR	ACTO	R									0.5		
EQM	Frontz										l	EET		OF		
3. PROJECT KVAAP 66 RI		4. LO				AAP 8	3451	Stat	e Ro	ute 5	5 Ra	venr	ıa, O	H 44	266	
5. NAME OF DRILLER AKON MICKEY		6. MAJ				(<u> ME</u>									
7. SIZES AND TYPES OF SAMPLING EQUIPMENT				LE LOC			M-13)· }	JinKle	zeck	Bo	xil	40 W	<u>/NB</u>	<u>GM</u>	1.01
4/4" ID HSA						UTADV	М		990.	. <u>'50</u>		,				
3" Shelby Tube		1		ATE/TI		STAR			4/12		СОМ	PLETE	D:	6/14,	/12	
						TER E				141	ℓ					
		16. DE	T HT9:	ro wa	TER/E	LAPSE	MIT O	E AFT	ER BO	REHC	LE CC	MPLE	TION			
12. OVERBURDEN THICKNESS						NA										
13. DEPTH DRILLED INTO BEDROCK		17. OT	HER V	WATER	RLEV	EL MEA		MENT	S (INL	CLUD	E DAT	Z/ŢĮME	:)			
14. TOTAL DEPTH OF BOREHOLE 24/t						N										
18. GEOTECHNICAL SAMPLES UNDISTURBED: SHID TWO	DISTURB	ED:				19. TO	TAL N						N.			
20. CHEMICAL SAMPLES NA CHEM: HAD:	NA	OTHE	R:						21. TC	TAL (CORE	RECO	/ERY 9	% N	<u> </u>	
22, DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED:					DATE	COMP	LETE	D/ABA	NDONE	ED:						
BACKFILL TYPE: GROUT BENTONITE	TE	MPORAR'	Y WEL	L POIN	١T			MONI	TORIN	G WE	LL					
23. NOTES BKG: ≤Background BGS: Below Ground Surfa	ace	CPM:	Cour	its per	Minu	ıte		PPM	Parts	per l	Million	1				
: First Water Encountered	Static Water	Level			NA: I	Not Ap	plicab	le								
LOCATION SKETCH/COMMENTS								SC/	NLE:		Non	е				
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DDO/FOX			SIGN	ATURE	/DAT						BODE	HOI E	NUMB	ER	<u> </u>	<u> </u>
PROJECT	I GE	OLOGIST	SIGIV	STOKE	۱۱۸۵۱	7 N					20110	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	.,,,,,,	1		
RVAAP 66 RI		XXX	$_{j}$ λ	()Nu	sh.	#1		6/14	1/12			WBC	MW.	018		

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HTRW DRILLING LOG (continued)					СТ		BOREHOLE NUMBER					
		G LU	G (continued)	USACE	- Louisvi∄e		WBG MW-018					
1. COMPANY N			4		LING SUBCONTRACTOR			SHEET	2	of 2		
3. PROJECT	QM QUA	12 11	Pt	Frontz D	T	8451 State Rou	le 5, Ravenna.	OH 44266				
5. NAME OF DR	BVA/	11-66	1 Mechan		6. DIRECTION OF BOREHOLE		VERTICAL	INCLINED		DEGREES		
7. NOTES PID			11/2000		PID SERIAL#:		Colors fro	om Munsell Soil C	olor Charl	, Rev		
	TER LEVEL	MAKE/MC	DDEL:		→ WATER LEVEL SERIAL#:							
ELEVATION	DEPTH	uscs	CLASSIFICATION OF	MATER	IALS	SPT DATA	MONITORING					
	(Feet)				A. J. A. S. S. S. S. S. S. S. S. S. S. S. S. S.	(PPM/CPM)	(Sample IDs	/Depths/C	Core Box/Etc.)			
			Refer to soil log for	/ WB	GMW-019		** **********************************		***************************************			
			V			1 0/1		0.14				
	16					R= 1/24		16-18 /	140	1		
								Shelb	y 100	7 e - 1, extedol w		
A A								10.	recorh	1, extend w		
	18					13/- 12/24		18-20 /t	: 143	30		
								Sheli	\$/ TU	be		
							···	18-20 /t 5held 12-	11. 1ec	wey,		
	70							W	kler in	lube		
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			Blind dill to 21/1 - end of	1 601	iq							
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RVAAP-66 RI					GEOLOGIST SIGNATURE/DATE State System	Sb 6	1	BOREHOLE NU!		}		



	DISTRICT					BOF	BOREHOLE NUMBER					
HTRW DRILLING LOG	USACE -	- Louis	ville					WB	Gми) · <u>01</u>	9	
1. COMPANY NAME	2. DRILLING	SUBCO	NTRACTO	₹							a	
EOM	Frontz Di	rilling						HEET		OF		
3. PROJECT RVAAP. 66 RI		4. LOCA	TION	RVAAP	8451	1 State Ro	ute 5 R	avenr	ıa, O	H 44	266	
5. NAME OF DRILLER JOE TEPLY / ACKS MICKLY		6. MAKE	/MODEL O	FDRILL	CM	1E-55 /	CME	75				
7. SIZES AND TYPES OF SAMPLING QUIPMENT		8. BORE	HOLE LOC	ATION	PW-1	14 : locat	e) 6/0%	Winkle)	ec (R) est	0/	
2"x 24" sylit sycon				ATION/DAT	'UM	1989.	30 U			W	BCmi.	1-007
4/0" ID 45A						5/31/12	CON	IPLETE	D:	6/15	/12	
814" IS HUA				IDWATER I			14/1			/ !		
57/8" Cole bellet (N Series)		16. DEP	TH TO WA			ME AFTER BO	REHOLE C	OMPLE	TION			
12. OVERBURDEN THICKNESS 30'				<i>\</i>	JA							
13. DEPTH DRILLED INTO BEDROCK 14. TOTAL DEPTH OF BOREHOLE 50		17. OTH	ER WATER	R LEVEL ME		EMENTS (INL	CLUDE DA	re/TIME	≣)			
14. TOTAL DEPTH OF BOREHOLE 50					NA							
	DISTURBED):		19. 1	OTAL	NUMBER OF (1			
20. CHEMICAL SAMPLES NA CHEM: RAD:	NA	OTHER:				21. TC	TAL CORE	RECO'	VERY	[%] 5	8	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED:				DATE COM	IPLETE	D/ABANDONE	D;					
BACKFILL TYPE: GROUT BENTONITE	TEMP	ORARY V	WELL POIN	IT	<u>V</u>	MONITORIN	G WELL					
23. NOTES BKG: ≤Background BGS: Below Ground Surface)	СРМ: С	ounts per	Minute		PPM: Parts	per Millio	n				
: First Water Encountered : Sta	itic Water Le	evel		NA: Not A	pplica	ble						
LOCATION SKETCH/COMMENTS				,		SCALE:	No	ne				
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PROJECT	GEOLG	OGIST SI	GNATURE	I /DATE	<u>:</u>	<u> </u>	BOR	EHOLE	NUMB	ER		·
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RVAAR-66 BI	$ X\rangle$	all	DNW	he itto		5/31/12	?	WB(and.	-019		

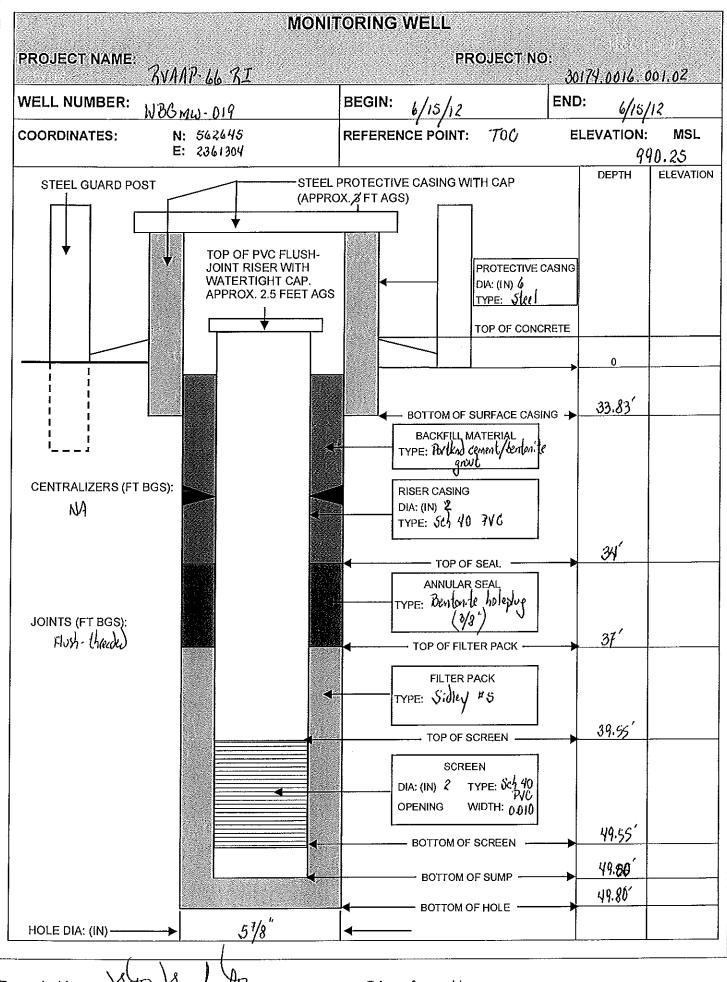
HTRW D	RILLIN	G LO	G (continued)	DISTRI	CT - Louisville			BOREHOLE I		J-019		
1. COMPANY N	NAME				LING SUBCONTRACTOR		<u></u>	SHEET	2	OF 1		
EQ	M			Frontz (Orilling			SHEET		- 		
3. PROJECT	TRVAP	17-66	31		4, LOCATION RVAAF	8451 State Rout		a, OH 44268				
5. NAME OF DI	RILLER	Jol	Terler		6. DIRECTION OF BOREHOLE	₽ P	VERTICAL	INCLINE	· · · · · ·	DEGREES		
7. NOTES PI	D MAKE/MOD		Birlius MSA		PID SERIAL#: A2-1861		Colors fro	om Munsell Soil	Color Cha	art, Rev		
W	ATER LEVEL	MAKE/M	ODEL:		WATER LEVEL SERIAL#:							
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF			SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)		REMAR Ds/Depths	/Core Box/Etc.)		
	0	ML	Clayed sitt; upper 7" dK bin, hottles, few soull giavel, to killy brille	lenkin	der bis w/ few graf	4.3-	0	0-2 A	; 134	14		
			hottles, few small prevel, to	ots in	אָל ייד ערעע (5-6						
			killy brille			R= 18/24	 .					
	×2	ML	Clases sill by w/ two oran	/ mott	les in used 6".	7-9.	0	2-4/1:	135	Ý		
			Clayey silt, but w/ few grands	Ws	\c/\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	1/- 13		, ,				
			///	/		R= 20.5/24				•		
	4	Mζ	Ibral B" Class of her b	ر درمدا	1 111	5-9-	0	46 A	· 14n	2		
	70	ጣር	10) per o Clegay Oste, ora, jan	י אינט נ	Javel, Oly,	10-8	V	Y 0 / C	/ 1 1V			
	SN Remained Sign It buy in				1 1/1 1000	R= 20/24						
		NN.	Upper 5" Clayer sitt, ben, few mod. stiff Remainder sand, It ben, med faith well-sorted) Henje	0, oy, lwx,	11 /41						
	,	(2)	/			0.4	0	10//	. 1//0	D		
	18	SP	Send, It day, formed girined,	140	(erever, jew fine),	8.7-	<u> </u>	6-8/1	/ /900	<u> </u>		
	^ _		ching to dry, 100se			3: 18/24						
			<u>'</u>			λ· /24	_					
	8	SP	Sad so med-rained little	ekvel	ten 10 cls sond	2-4-	Ð	8-10 /t	: 141	4		
		_	Send 519 med-rained little	(in	shoe	4.6	`	, ,				
	20			•		4-6 3:9/24						
	10	SP	Same as above			2-3-	0	10-12/1	, 14	27		
						5-5		•				
					***************************************	5-5 B, 9/24						
	28							- 1111				
_	12	SP	Sand & devel bon, few fell	as bu	n sendutone clists,	7-5-	0	12-14/1	14	33		
			Sand & gave, buy few fell	lowe/	1"	4-3 R: 13/24			-			
_			')			8: 13/24						
									<u>.</u> ,			
PROJECT	38			-	GEOLOGIŞT SIGNATURE/DATE	<u> </u>		BOREHOLE N	UM8ER			
_	10 U	カホ				An .				210		
KVA	<u> 17-66</u>	<i>አ</i> ላ	Marie Control of the		Scto Dyoshi	ww by	131/12	พทษ	mw-(רוע.		

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HTRW DRILLING LOG (continued) USACE - LOUSSVIIIS 1. COMPANY NAME EDM S. PROJECT RVAAP-66 BT S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NAME OF DRILLER S. NOTES PID MAKEMODEL: S. NAME OF DRILLER S. NAME OF USING DRIVER S. NAME OF USING DRILLER S. NAME OF USING DRIVER S. NAME OF USING DRILLER S. NAME OF USING DRIVER S. NAME OF USING DRILLER S. NAME OF USING DRIVER S. NAME OF USING	LITOMA	BULIN	C I O	C / // "	DISTRI	CT			BOREHOLE NUMBE				
FIGHE DATING SHEET 84 OF 4 1. LOCATION RVAAP 8451 State Route 5 Revenue, OH 44266 S. NAME OF DRILLER JOE TEELEN ARON MICKEY FOOR REVAMP ALSO FROM THE COLOR FROM THE COLOR FROM MUNSES SOIL COLOR CHART, Rev PID SERIAL#: A2-1861 WATER LEVEL, MAKE/MODEL: WATER LEVEL, MAKE/MODEL: WATER LEVEL, MAKE/MODEL: WATER LEVEL, MAKE/MODEL: WATER LEVEL SERIAL#: ELEVATION DEPTH USCS CLASSIFICATION OF MATERIALS SPT DATA MONITORING (PPM/OPM) (Sample IDs/Depths/Core Box/Etc.) 28 SP Sand ficale by A figure by A fig	HIKWD	KILLIN	G LO	G (continued)	USACE	- Louisville			NBG nw-019				
3. PROJECT RVAAP-66 BT 5. NAME OF DRILLER JOE TESTED ACON MUCKED 7. NOTES PID MAKE/MODEL: SIVIUS MSA PID SERIAL#: A2-1861 WATER LEVEL MAKE/MODEL: WATER LEVEL SERIAL#: ELEVATION DEPTH USCS CLASSIFICATION OF MATERIALS SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 28 SP Sand played bit of play, mid-cis sand, but 4-5. D 28-30 /t; 1644 10058, 2" glayed in since adjects to be 7-9 Micaceus glay sixte Route 5 Ravenna, OH 44268 4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268 ERTICAL INCLINED DEGREES Colors from Munsell Soil Color Chart, Rev WATER LEVEL SERIAL#: (0.5 Feet) (PPM/CPM) (Sample IDs/Depths/Core Box/Etc.) 28 SP Sand played in since adjects to be 7-9 Micaceus glay sixte Route 5 Ravenna, OH 44268					į.				SHEET &	1 OF 4			
5. NAME OF DRILLER JOE TEFLEY ALON MICKEY 7. NOTES PID MAKE/MODEL: SITIUS MSA PID SERIAL#: A2-1861 WATER LEVEL MAKE/MODEL: WATER LEVEL SERIAL#: ELEVATION DEPTH USCS CLASSIFICATION OF MATERIALS SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 28 8P Sand player bin floye appears to be 10058, 2" glavel in show appears to be Micaceus grad shale Micaceus grad shale 6. DIRECTION OF BOREHOLE WATER LEVEL SERIAL#: Colors from Munsell Soil Color Chart, Rev Colors from Munsell Soil Color Chart, Rev WATER LEVEL SERIAL#: 10058 SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 10058 SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 10058 SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 10058 SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 10058 SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 10058 SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 10058 SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 10058 SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 10058 SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.) 10058 SPT DATA MONITORING (Sample IDs/Depths/Core Box/Etc.)			3 11	Q7	FIORIZA	1	8451 State Route	5 Ravenna.	OH 44266				
WATER LEVEL MAKE/MODEL: WATER LEVEL SERIAL#: ELEVATION DEPTH USCS CLASSIFICATION OF MATERIALS SPT DATA MONITORING (0.5 Feel) (PPM/CPM) (Sample IDs/Depths/Core Box/Etc.) 28 SP Sand playel bin felal, med-cls and let 4-5. D 28-30/t; 1644 10058, 2" playel in shoe appears to be 7-9. Micaceus play shale R: 13/24	1		7 66 T ^	THI / N. M.K. I						DEGREES			
WATER LEVEL MAKE/MODEL: WATER LEVEL SERIAL#: ELEVATION DEPTH USCS CLASSIFICATION OF MATERIALS SPT DATA MONITORING (0.5 Feel) (PPM/CPM) (Sample IDs/Depths/Core Box/Etc.) 28 SP Sand playel bin felal, med-cls and let 4-5. D 28-30/t; 1644 10058, 2" playel in shoe appears to be 7-9. Micaceus play shale R: 13/24			-\06	1efter / PK101 Macsey		<u> </u>				Charl Rev			
ELEVATION DEPTH USCS CLASSIFICATION OF MATERIALS 28 SP Sand Picyel, bit felal, med-cits and wet 4-5. D 28-30/t; 1644 10058, 2" picyel in short appears to be 7-9. Micaceus gial shale REMARKS (Sample IDs/Depths/Core Box/Etc.) R= 13/24						-		COIOIS IIC	III Muisei Goli Golo	Onland 1101	:		
(Feet) (PPM/CPM) (Sample IDs/Depths/Core Box/Etc.) 28 8P Sand foliate bit foliation mid-cits and wet 4-5. 0 28-30/t; 1644 10058, 2" givel in shoe appears to be 7-9. Micaceus girl shale R: 13/24				7	N OE MATER		I SPT DATA M	IONITORING	REA	IARKS			
	ELEVATION		uaca	OD SSI TOATIO	NOT NOTICE	RAEG	! 1						
		28	5 P	Sand + playel, bit t elay,	med-ce	s send, wet	4-5-	0_	28-30 H;	1644			
				1005e 2" ekvel 17	shoe = a	years to be	7-9						
		Micaceous end state				H	B: 13/24						
2830 Appox 6" send in spoon; believe it is heave 50/1 - 30-32/t; 1658													
70 11/10x 6 4-10 11 1/20x 11 10 10-10 11 11 11 11 11 11 11 11 11 11 11 11 1	28 30 Anny L" Sent in Smar he				holiono i	1 in here	50/	~	30-32 /t:	1458			
(no shota): queel lefus 0 30 H		(on yor); Every to				0 30 11			~~ ~ / /				
(10 71000), 20) 2 199711 (30) 2	(10 71000), 2034				10/071								
Set I to a / authors as a 33'10"		Set bottom of averbaden asi				23'10"		-					
() () () () () () () () () ()						50 10		-					
2034 SS Sandstone Suff w/ reddish his for-excined flectives R= 534/78" 33.8-40.4 H. 0925 (4)		49 0.1	00	C. let 1 // /// ch h	/.	wind led be	D 53/4/		22 8 ill il	11. 1025 /1/	5/9		
234 SS (XM/S (OTE)) 1600 ST 1/NE 14-912-140 / 1/20 (V)	34 SS Sandstone, Suff w/ reduish the				X, 71-	912-1960 7120(ME)	12 /19		90.0 Y	76, 0100 (M)	119		
2034 SS Sandstone, buff w/teddish hue, fn-excined, freetiles B= 53/478" 33.8 "40.4 H; 0925 (4) 0 3-3/2" and 73/4-9" from to, scattered conglomeratic zone 26-29" from to, scattered		@ 3-3/2" and 73/4-9"				(b) (hv.2.),							
Conglanguatic zone 26-29 from to, scattered				Conglonelatic Zone 26-2	29 <u>/von</u>	1 loz, scallered	-						
c's send exins throughout, conflomentic grains subrounded (up to 1/4")				Cis scal prains thro	poul, c	tonplomektoc gkins							
				Subsoluted (up to 14	<u> </u>								
40 SS Sindstone bull w/ iron tendines for excises vertical R: 50/4" " 40.4-50/1: 1159		1					58/47 "						
40 SS Sindstone buf up non bandings, for excinent vertical R. 2014 1159 40.4-50/1; 1159 fractise from 26-32.54 from top of run. (Submitted core segment		40	SS	Sindstone, but we wan band	ins, 1	n-ercined, vertical	K, 119		40.4 - 50 /1	1 1159			
fixetise from 26.32.5" from top of run. (Submitted) cole segment for 41'5" to 42'7" but years testing)				fractise from 26-32.5	510 from	top of NA.			(Submilled Co	le sement			
pon 41'5" to 42 7"						••••••••••••••••••••••••••••••••••••••			Non 41'5	" ts 42 7"			
to rem. testing)									for yeam.	lesting)			
50		50											
55		55											

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60		60											
PROJECT GEOLOGIST SIGNATURE/DATE BOREHOLE NUMBER	ROJECT	ı					λ		BOREHOLE NUMBE	R			
RYAAP-66 RI Scto Spendento 6/15/12 WBGmw-019	RYAA	P-66 9	RI			Scto Spendas	to 4/3	5/12	WBGmu)-019			



Recorded by: Xitto Sygnificanto

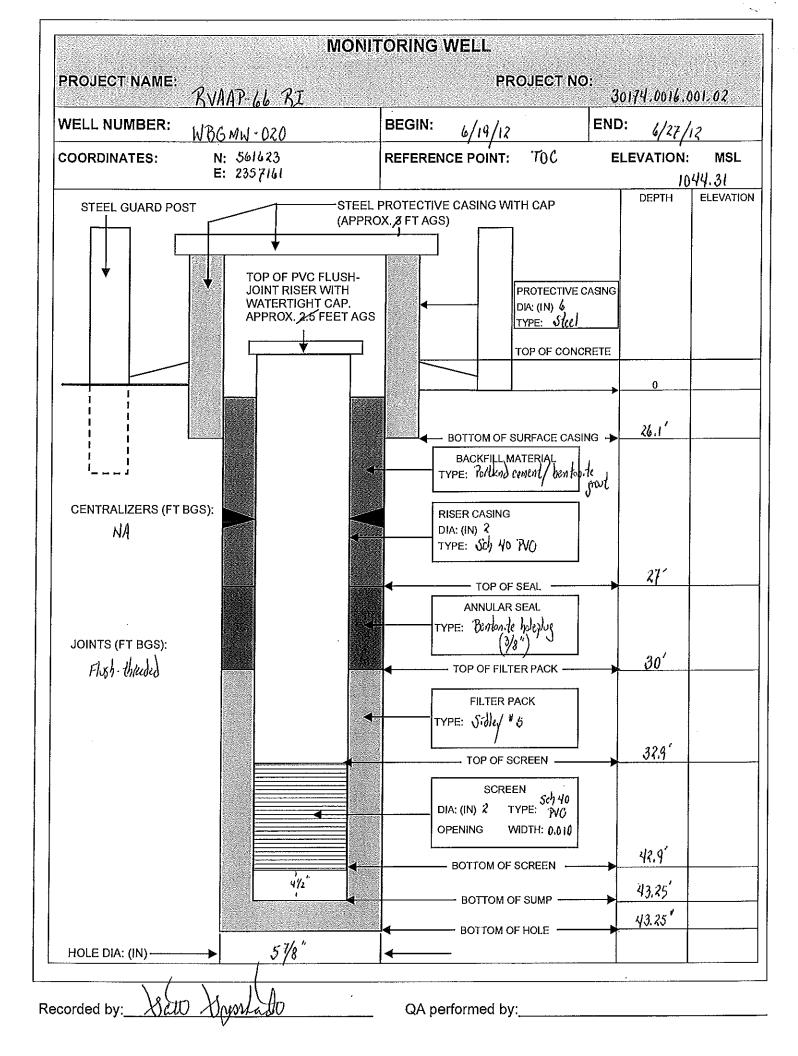
QA performed by:_

	DISTRICT	DISTRICT								BOREHOLE NUMBER					
HTRW DRILLING LOG	USACE -	- Louisville								WBGMW . 020					
1. COMPANY NAME	2. DRILLING	SUBCONT	RACTO	R											
EQN	Frontz Dr	rilling								SH	EET	1	OF	3	
3. PROJECT RYAAP. 66 RING		4. LOCATION	ON.	RVA	AP 8	3451	Stat	e Ro	ute	5 Ra	venr	ıa, C)H 44	1266	
5. NAME OF DRILLER JOE TERW / ALROY MICKEY		6. MAKE/M	ODEL O	F DRI	LL	CM	E 55	i / (HE.	75					
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHO	DLE LOC	OITAC	N	PW	- 15	7 76	14)	iJ/ 1	106	тW -	009		
2"x 24" vil. (vion		9. SURFAC	E ELEV	ATION	V/DATU	М	•	1043	.40	7					
41/4" IN HSA	1	10. DRILL DATE/TIME STARTED: 5/31/12 COMPLETED: 6/26								1/12					
57/8' coa ballet (N series)	- 1	15. DEPTH							221				<u> </u>	/	
8/4° I) H5/		16. DEPTH	TO WA	TERVE		_	1E AFT	ER BC	REHO	DLE CC	MPLE	TION			
12. OVERBURDEN THICKNESS 24 /Ł					N/	7									
13. DEPTH DRILLED INTO BEDROCK 19 /L		17. OTHER	WATER	R LEV			EMENT	S (iNL	CLUD	E DAT	E/TIME	:)			
14. TOTAL DEPTH OF BOREHOLE 43.25 /						N/I									
18. GEOTECHNICAL SAMPLES UNDISTURBED: 100 Coll	DISTURBED	:			19. TC	TAL						1	- ·		
20, CHEMICAL SAMPLES NA CHEM: RAD:	NA	OTHER:						21. TO	OTAL	CORE	RECO	√ERY	% (<u> 10</u>	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED:				DATE	COMP										
BACKFILL TYPE: GROUT BENTONITE		ORARY WE					MONI								
23. NOTES BKG: ≤Background BGS: Below Ground Surfac	:e	CPM: Cou						: Parts	s per	Million					
: First Water Encountered : Sta	alic Water Le	evel		NA: I	Vot Ap	plical	ole			•					
LOCATION SKETCH/COMMENTS							SCA	ALE:		Non	e				
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PROJECT .	GEOLG	opist sigi	VATURE	/DAŢ	E I				<u> </u>	BORE	HOLE	NUME	3ER		-
RVAAP- 66 BI		sato)	J res	Tha !	D		5/	31/12	2		WE	ВM	J · 02	20	

HTRW D	ITRW DRILLING LOG (continued) COMPANY NAME COMPANY NAME				CT - Louisvi‼e			BOREHOLE NUMBE	
				1	LING SUBCONTRACTOR			SHEET 2	or 3
. PROJECT	•	7 1 1	·2·r	Frontz I	1	P 8451 State Rou	le 5, Ravenna.	OH 44266	
S. NAME OF DR	RVAAT]	6. DIRECTION OF BOREHOLE		VERTICAL	I INCUNED	DEGREES
, NOTES PID) Make/Mode	L; ,	Teglel / Aron MccXe Isvius MSA (PID SERIAL#: 12-1861		Colors fro	m Munsell Soil Color (Chart, Rev
WA	ATER LEVEL M		1	u. t. m. u. v.					
ELEVATION	DEPTH	uscs	CLA	SSIFICATION OF MATER	NALS	SPT DATA	MONITORING		IARKS
	(Feet)			. 1 /		(0.5 Feet)	(PPM/CPM)		ths/Core Box/Etc.)
	0		Upper 2" Topso:1, d Remainder Object Sith, dry, birthe	K brn	1 /, 1	5-5-	3.7	0-2 /1; 09	739
		ML	Kemindel Olyey Sitt	brs, few grav	rel, fa) bots,	3.3		<u> </u>	् ४हेन इ
	+		dy, britle			B= 22/24			<u></u>
	6.3	. 41						01/1/200	ω
	<i>></i> 52	N/L	One 6 CKRY SIT	45 400NP	15. 1 16.1.44	3-3-	0.4	2-4/t; 09	Y G
		<u>(</u> 'L_	Kenkindel Dilly Cky,	15/1 W 1/4/ 2/01	y verbuet przawes, N	3-3 R= 20/24			
	CL REMAINDER SITURELY SITURES AND ACMY				V	η · · /24			
11 21 (11/1) 1/1/1				- (<u> </u>	A 40 /2 10	3-5-	16.8	4.6 ft; 10	ınc
	4 CL Sity clay, by w/ graf				(LXE), 19W 110A	1	Though I	4-071, 10	05
						8:24/24	U		
						17. /24			
		0.1	.C.WJ. / 1.	1 (1) 1/2	the land	5.8.	0	1.0 4: 10	100
	6	CL	Sity chy, bu wy oxides, ful z	12/ 2/00 TKA	1. 1. 100 1001	10-11	_U	6-8 A; 10	307
	15		(2) (1)	tees wood Uneer	_(0)	B: 24/24			
			(14) IN 100	Je 6", mod s	(y), ory	17. /49			
	8	<u>/)</u>	SHick de des	ias order	2000 1 100	5-8-	0	8-10 /l; 1	1016
	0		Sity cly, son, few (any dass),	11011 UX-08), 1	nae y wwo		ν	0.070, "	
			(uny 100wi),	Moo. orig		13-15 R : ² /24			
	20					1 131			
		4	See 100 for 1386mi	1-009 L/ WXX	ine intervels				
			See log for WBGMU	· · · · · · · · · · · · · · · · · · ·	J				
	15	CL	Silly ely, gay 1 ba	molly mo	5l:#	R= 10.5	′ -	15-17 16:1	1352 (6/19
			7 7 77	, , , , , , , , , , , , , , , , , , , ,	-//	1		15-17 ft; 1 Shelby	Tube
	25								
		CL	Sitty dent till or	W. Jas send	r six 11 erave)	20-2-3	ρ	20-22 /(; 11	414
		-	Sity day till gr	disble in un	ul b")			, ,	
	05					4-6 B= 14.5/24			
	38								
ROJECT					GEOLOGIST SIGNATURE/DATE			BOREHOLE NUMBE	
RVA	1AP- 66	BI			South Spendal	5/3. 6/14	1/12	WBGMW.	-020

LITOMODI	DII I IN	010	0.4	DISTRI	СТ			BOREHOLE NUM	BER	
LIKAA D	KILLIŅ	G LU	G (continued)	USACE	- Louisville			NBGM	W-020	
1. COMPANY NA				2. DRIL	LING SUBCONTRACTOR			1		
	<u>gom</u>			Frontz (Drilling				3 OF 3	
3. PROJECT	BYAN	P-66	RI		4. LOCATION RVAA	NP 8451 State Rou	te 5 Ravenna,	OH 44266		
5. NAME OF DR			n McKey		6. DIRECTION OF BOREHOLE	(VERTICAL	INCLINEO	DEGREES	
7. NOTES PID	MAKE/MOD		Birius MSA		PID SERIAL#: 42-1861		Colors fro	om Munsell Soil Colo	r Chart, Rev	
	TER LEVEL				 WATER LEVEL SERIAL#:					
ELEVATION	DEPTH	USCS	CLASSIFICATION OF	HATER		SPT DATA	MONITORING	D.C.	MARKS	
ELEVATION	(Feet)	0363	CLASSIFICATION OF	MAICH	IACS	(0.5 Feet)	(PPM/CPM)		epths/Core Box/Etc	
		נג	n. 10" cdl. 1. 1.11			_				
	22	U.	Usper 4 virty Chy till Play	<u>weι,</u>	. Some favel	7-8-	p.3	22-24 A;	1920	
-	22 CL Upper 4" Sitty cky till gle SN Next 8" Send, gray, sond Jus US send, W SP Lewer 6" Send gravel, w 25 CYS send, Some 7				In grainer w/	10-11				
					v /	R. 19/24				
					1 moly softer					
					7, 100, 00, 00,					
LAS XAO, DOME				3						
				1	11			. 0		
	24 SS Sendstone, It gray, In gr				weiteler	50/2	• • • • • • • • • • • • • • • • • • • •	24.26 /	1432	
			· 0 l' ' 0	′		50/2 R- 2/24				
	48 01		.64 .6 0 21'1"							
-	20 <u>26</u>		Set cosing c 26'1"							
		V			02/					
	SS Sendstope It graf, for-			ned_	thin dirk kmink	R= 83/108	's	26-35/1:	1550 (6/3	
			Sindstone, It graf, for grain	<i>,</i> '				//	•	
			90077000, 7000 71100000)					······································	
	45- as as	:	<i>c</i> 1 .			D 100.5/		20 112 11	. Hrr	
	²⁴⁵ 35		Sime as above			R: 100.5/g	<i></i>	35-43/	1655	
								Removed segn	nert from	
			The 43'3"					37'4"-3	38'11/2" /6/	
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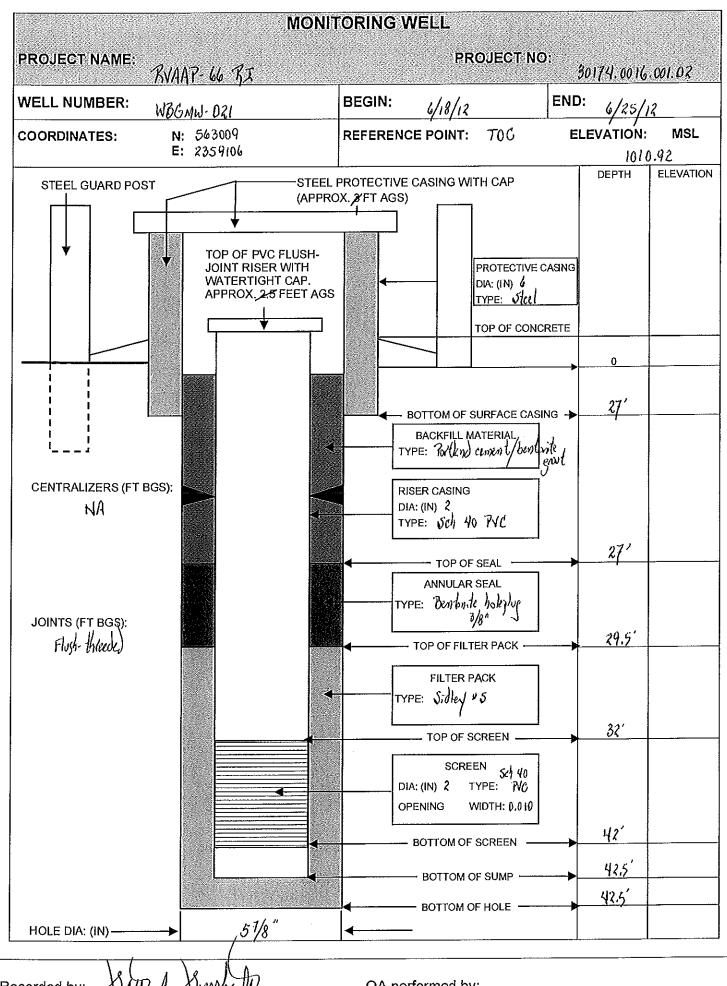
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ROJECT		I			GEOLOGIST SIGNATURE/DATE		BOREHOLE NUMBER			
BVAA	P-LL	R1	ı		Short Should	An W	9/12	WBGMW-	020	
	שעשיו	<i>i</i>			Sato Yesha	41	1/12	שוייש טווו		
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and the second s	DISTR	IICT									BOR	EHOLE	NUM	BER		
HTRW DRILLING LOG	USA	CE -	E - Louisville								WBG 19W-021					
1. COMPANY NAME	2. DRI	LLING	SUBO	CONTR	ACTOR	2						rrr		OF	2	
EQM	Fron	tz Dr	rilling]							SH	EET	1	OF	<i>5</i>	
3. PROJECT RVAAP. 66 BI		- 1		CATIO			P 845	l Stat	e Ro	ute	5 Ra	venr	ıa, O	H 44	266	
5. NAME OF DRILLER JO! Tell / AKON MKKEY		- 1				DRILL		ME:		/ GP	16 7.					
7. SIZES AND TYPES OF SAMPLING EXMPMENT		- 1			LE LOC		PW-	16:	بحر:	14)	พ/	WB(2mil	. 00	<u>6</u>	
2" x 24" s)lit spoon			9. SURFACE ELEVATION/DATUM 1010.00													
41/4" ID 1/51		- 1			ATE/TIN	_	ARTED:		31/17		COM	PLETE	D:	6/29	i /12	
57/8" cole bit (N series)		- 1					RENCOL			8'				<u>' </u>	,	
81/4" ID 45A			16. DI	EPTH 1	ro wat	ER/ELA	PSED TII	ME AFT	ER BO	OREH	OLE CO	MPLE	TION			
12. OVERBURDEN THICKNESS 24.1'							NA	=4.(=5)	0 //1 11	01115	E 5.1		-			
13. DEPTH DRILLED INTO BEDROCK 18.4			17. OTHER WATER LEVEL MEASUREMENTS (INLOLUDE DATE/TIME)													
14. TOTAL DEPTH OF BOREHOLE 42.5						140	. TOTAL	NUMBER	O OF	COBE	: DOVE					
18. GEOTECHNICAL SAMPLES UNDISTURBED: ROCK WE	DISTU					18	. TOTAL				CORE		VERY!	%	40	
20. CHEMICAL SAMPLES CHEM: RAD: 22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED:	NA		OTHE	R;					<u> </u>		CONE	NLCO	V_(\(\)		88	
	_	_					MPLETE									
BACKFILL TYPE: GROUT BENTONITE 23. NOTES BKC: Charles and BKC: Charles and Sur					L POIN			MONI								
pito, Spackgloulid Boo. Below Clouds Col				: Cour		Minute			; Paru	s per	Million					
: First Water Encountered :	Static Wa	ter Le	vei			VA: NOI	Applica	Die					_			
LOCATION SKETCH/COMMENTS							SCA	ALE:		Non	e					
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PROJECT	-	GEOLC	ogist	SIGN	ATURE/	DATE/	·	•		*	BORE	HOLE	NUMB	ER		
RVAAP-66 RI		X	all	<u>) }</u>	3/yeo1	hed	D	5/	31 /1	2	V	186	MW.	021		

HTRW DE	RILLING	LO	G (continued)	DISTRICT USACE - Louisville			BOREHOLE NUMB	
. COMPANY NA	ME			2. DRILLING SUBCONTRACTOR			SHEET 2	
<u>E0</u>	Ŋ		,	Frontz Drilling			SHEET Z	^o 3
3. PROJECT 4	RVAAP	66	RI	4. LOCATION RVAA	P 8451 State Route			
, NAME OF DRIL	LLER ,	Jop .	Total Aron McKey	6. DIRECTION OF BOREHOLE	Þ ,	ÆRTICAL	INCLINED	DEGREES
. NOTES PID			sidius MSA	PID SERIAL#; 42-1861		Colors fro	m Munsell Soil Color	Chart, Rev
WAT	ER LEVEL M	AKE/M(DDEL:	WATER LEVEL SERIAL#:				
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF	MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)		MARKS plhs/Core Box/Etc.)
	0		Used 5" Topsoil, dk day	chyex silt, nots, dry	5-4-	0	0-2/1:	1118
			Uper 5" Topsoil, d' dra,	'/ ' ' '	4.4			
			Next 3" Sind" gravel, Hb	(1, 100Se, dry 19-mes)	3: 10/24			
		CL	Lower 2" Sitty day every in	1 dx 5/4 molles, lew				
	<i>,</i> 5·		Next 3" Sind" gravel, Hb Lower 2" Silty Oly, ercy, w Smell gravel, dy, both	tk				
	2	ML	Ok has GH her and all mobile	(Shite int order (AK)	4-6-	0	2-4/6: 11	127
	2	715	Ckyey Silt, bin w/ gray mobile few snxll gravel, few	while mor oxides (or),	8-9		<u> </u>	
			1 740 ONET PLANET, 760	×10, 014, 00 WE	B, 2/24			
	18'							
4 CL S:14 cky sin w/ gas	Sitty day dry w/ gay done	kactures few dx oxides	4-5-	0	4-6/1: 1	133		
			Silty cky din w/ gray along Jud smill gravell, dry,	St. #	9-12			
			, , , , , ,		R, 18.5/24			
	286	11	Cillialis colors ly dil	h. swl. mil. t	15-23-	0	6-8 ft; 1	138
	7 8	CL	Sity cky, as above less glay,	34" Los hattas	21-18	- 0	8 0/(, /	107
			1 WEB DAY DEZIN TRINE	0.1 10001 00000	3, 13/24			
			gavel, by staining		17.73			
	8	SP	Upper 7" Send 1 presel, ora, m Lower 3" Silly day, Sin, demy	ed-using wet ten sill.	2-4-	0	8-10/6; 1	148
	28	<u>()</u>	LOWER 3" Sitte day been from	the easel still			,_,	
		~	7, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,	, , , , , , , , , , , , , , , , , , , ,	G-8 R:1924			
		41	ا اول اول	14/1/1/1/1	110		10 11 14.	10 /1 /. O
	12	<u>CL</u>	Sity chy till, gay, hard, a	stiff, of feel six/	4.9.	0,4	14-14-76	1345 (6/18/
	-		" gravel (1/8") "	/	11-12 B: 14/24	-		
-	35		-		17): 724			
	18	SM	Usel 34 SHI Sent Form	ocal net usall	1-3-	1.3	18-20 A;	1414
	10	رن (رم	USDU 3" S.H./ Send Crayel, Benkinder S.H./ Claf E.H. orz gravel (1/2"), mod stelf	1 could should	3 1	1.0	, <u>,,,,,,</u>	· · · · · · · · · · · · · · · · · · ·
		υ ς	Marking all har and all	y, sylvar country	2-3 B-3/24			
	20		GIENCI (12), MOU DUT		11 1-1		<u> </u>	
ROJECT	<u> </u>			GEOLOGIST SIGNATURE/DATE	(,		BOREHOLE NUMBI	ER
2VA	IAP- 66	7	I	GEOLOGIST SIGNATURE/DATE	uto 5	/31/12	NBG M	W.021

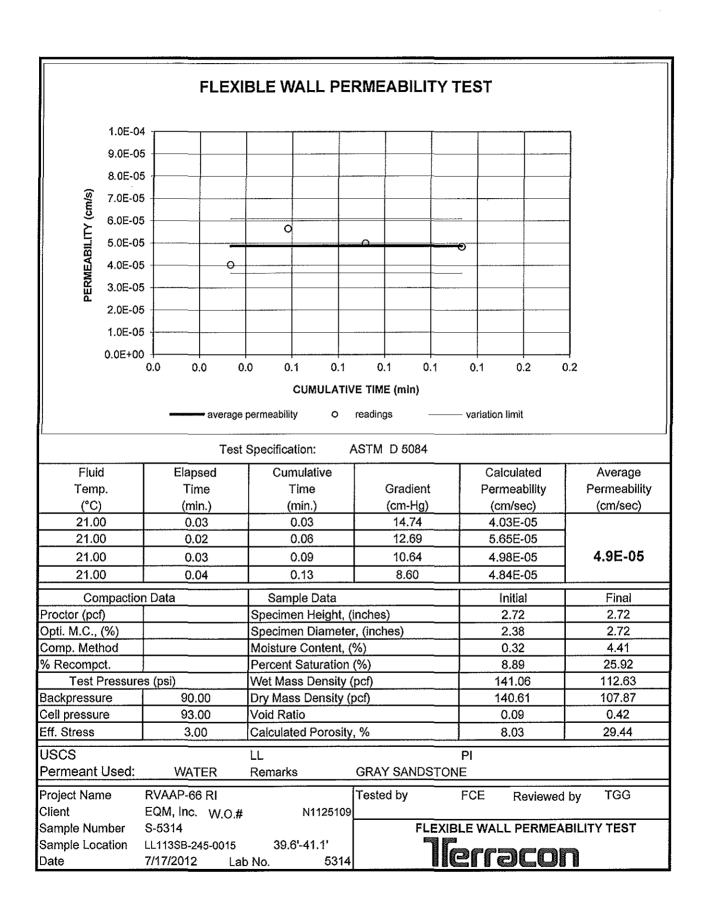
HTRW DF	RILLIN	G LO	G (continued)	DISTRIC	Louisville		BOREHOLE NUMBER WBG MW-021				
. COMPANY NA	ME				NG SUBCONTRACTOR						
	EDM.			Frontz Di	iling			SHEET 3	of <i>3</i>		
. PROJECT	RVA	AP. 66	, RI		4. LOCATION RVAAP	8451 State Rout	e 5 Ravenna,	OH 44266			
. NAME OF DRIL		A	n MccKel		6, DIRECTION OF BOREHOLE		VERTICAL	INCLINED	DEGREES		
NOTES PID	MAKE/MOD	1.8.	Situs MSA		PID SERIAL#: A2~1861		Colors fro	m Munsell Soil Colo	r Chart, Rev		
WAT	ER LEVEL	MAKE/MC	,	······································	WATER LEVEL SERIAL#:						
ELEVATION	DEPTH	USCS	CLASSIFICATION	OF MATER	NLS	SPT DATA	MONITORING	RE	MARKS		
	(Feet)		1	-	1 . 7/1	(0.5 Feet)	(PPM/CPM)		epths/Core Box/Etc.)		
	20	SM	Upper 9" Send, graf, form	ned plai	ned, Ittle gavet	2-5-	0.7	20-22/6	· 1421		
			and s.H. wet			11-16 R: 14/24					
		CL	Next 2" S. Hy cky till 1	14, 04	1, xxo, few	3: 14/24					
			exvel 1 0	1 1							
	35	SS	Lower " Endstone, gray,	MICKCEL	×15				v		
			/ 0 / /		-						
	22	SP	Used 2" Send former or	ed, wet		3-3-	0.1	22-24 /t;	1440		
	. • •	CL	Next 4" S.H. del 1:11 8	1'	enguld glavel		• •				
			AND THE STATE OF T	7, 000	Jane,	10-11 R=8/24					
55 Lower 2" Sendstone every,					1) 10 des / / / / / / /	['' / "'					
1 00 2004 2 02100001E, 122y,				711-110	nc), weathered/fact.						
				" . "	1	50/4	4.	*** 1 // ·			
24 CL Sitty clay till, ear, upper			Dity Cley Fill, etcy, upper 2	! Soft	uset, reminder	 / ; 		24.26/6;	1901		
			ding, kid the gian	el, wezt	uet , revxinder ded sandslone c bus	R = 7/24					
			tip believe to b	e cuy o	bJJ						
	AS		1								
			Set copy o 27 ft bas								
			U , v		, , , ,	14/					
	27	55	Sandstone, H. old, for-glasson thin JK banding	Gray,	ecvity factoed,	R = 39/120	h :	27-37 /C	1229 (6/25/		
			Some thin SK bending					-			
	50		V								
	37	SS	Sendstone, as above, less for	actual.	few still x12-es	R: 120/60'		37-42 /t;	1456 om 40'8"-42' of zeneeb.lity		
			, ,		' ' 0			Sement A	om 40'8"-42		
			The 42.5 /					removed to	1 xuneibility		
								testo.	7		
	58							()			
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				•							
	or.										
DJECT	,80			To	EOLOGIȘT SIGNATURE/DATE	<u> </u>	<u></u>	BOREHOLE NUMB	ER		
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RVAAP.	66 K	1			X) WW X/MMas	W 6/	10/12	WOGN	1W-021		

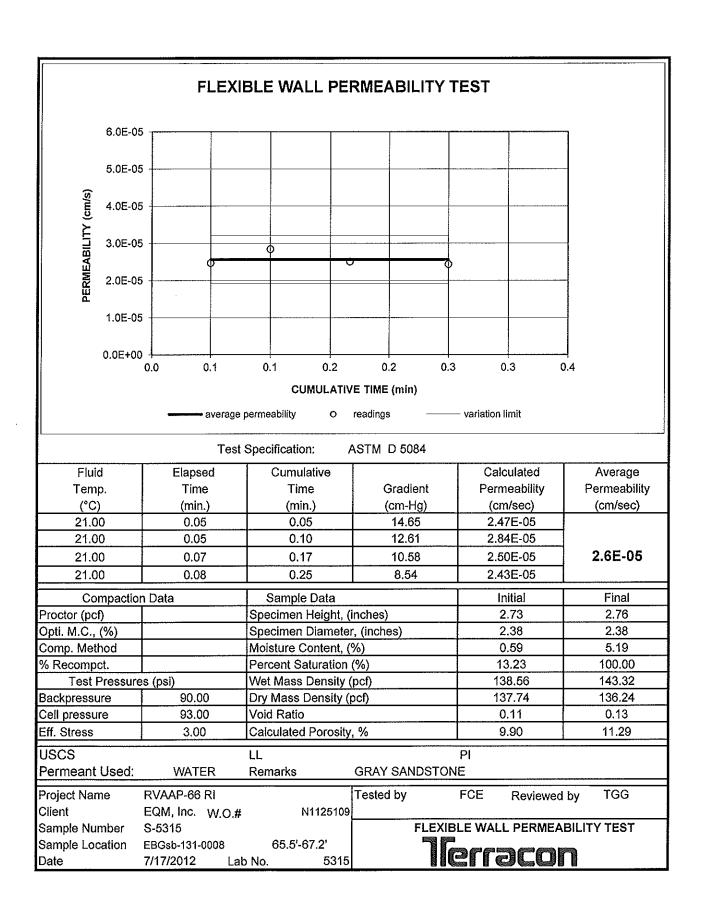


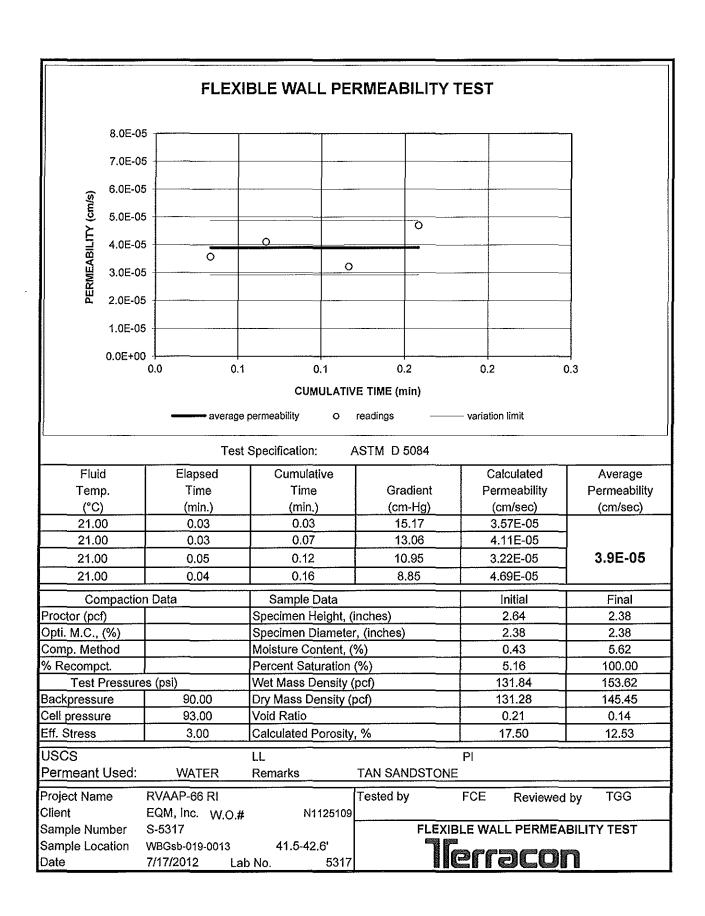
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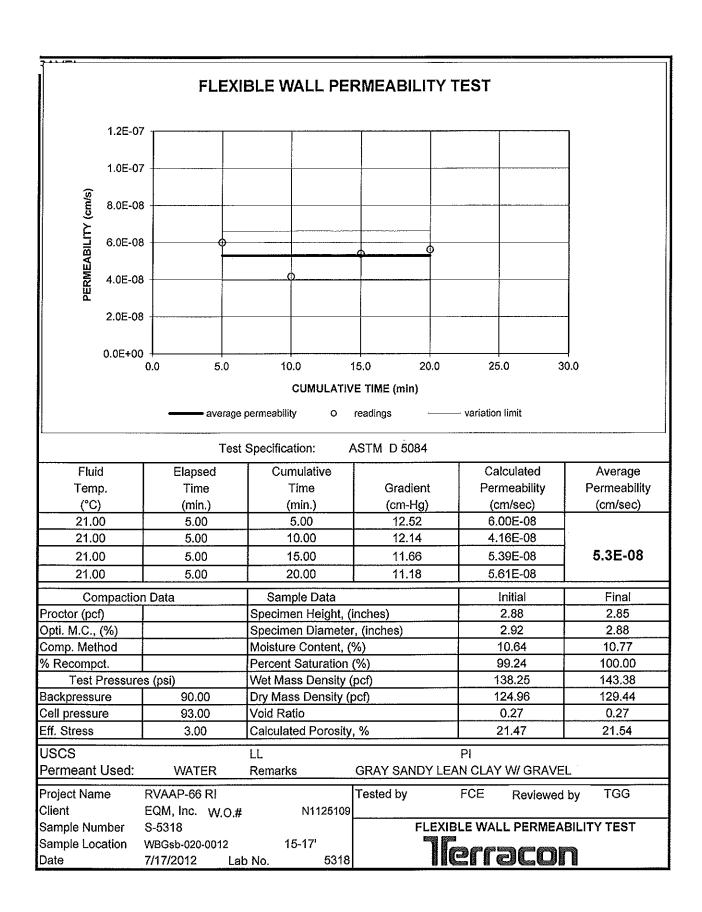
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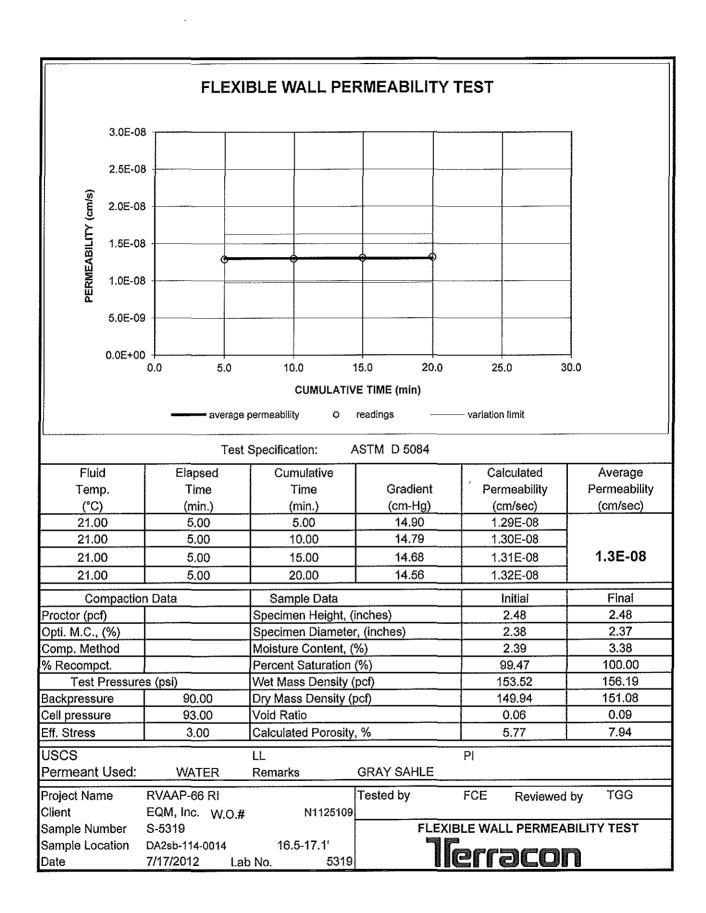
2 3 **APPENDIX B** FLEXIBLE WALL PERMEABILITY TEST RESULTS

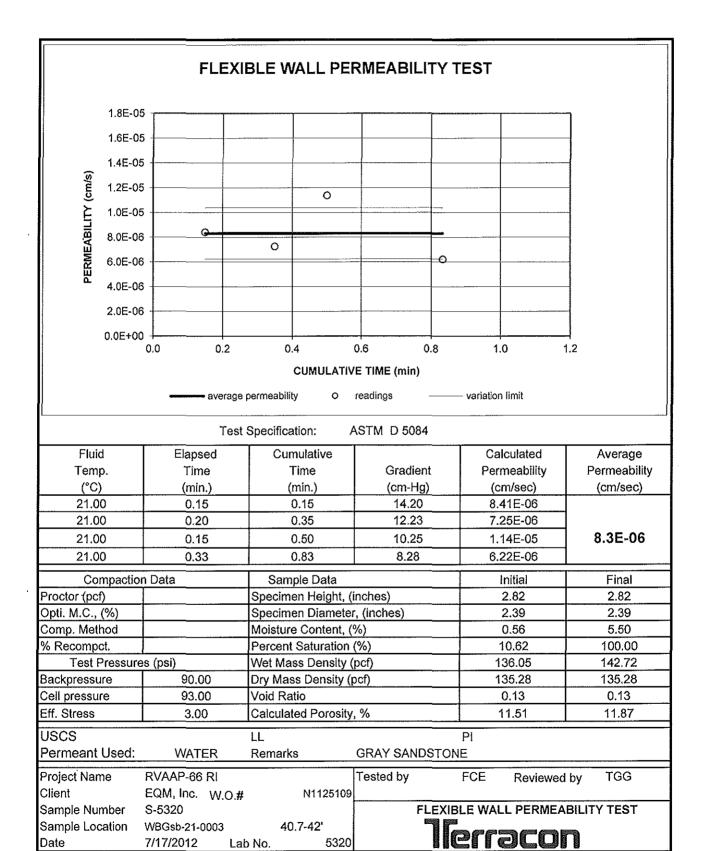










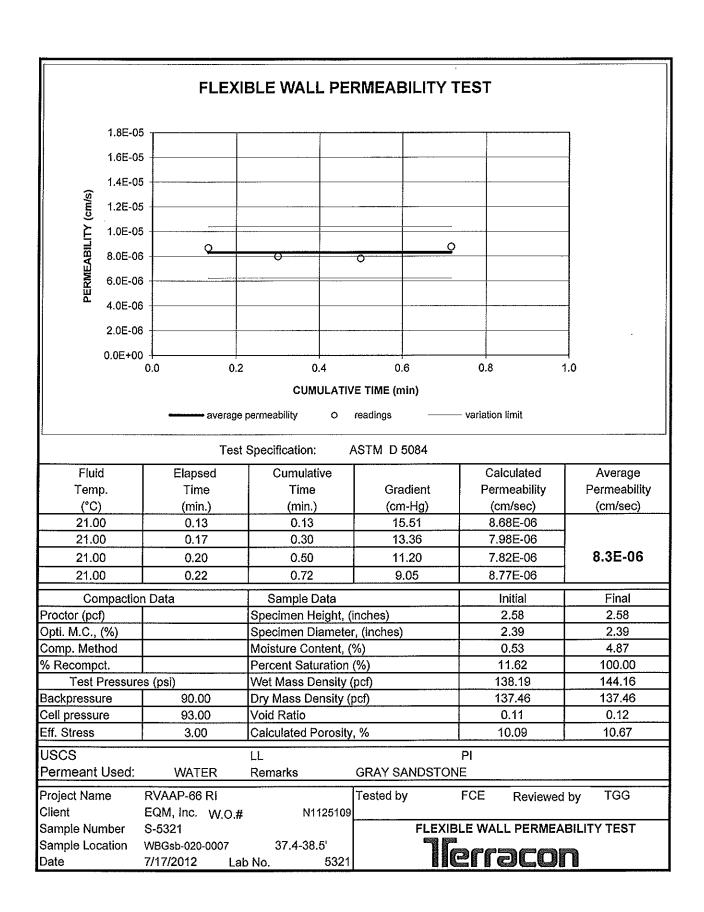


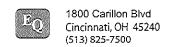
Date

7/17/2012

Lab No.

5320

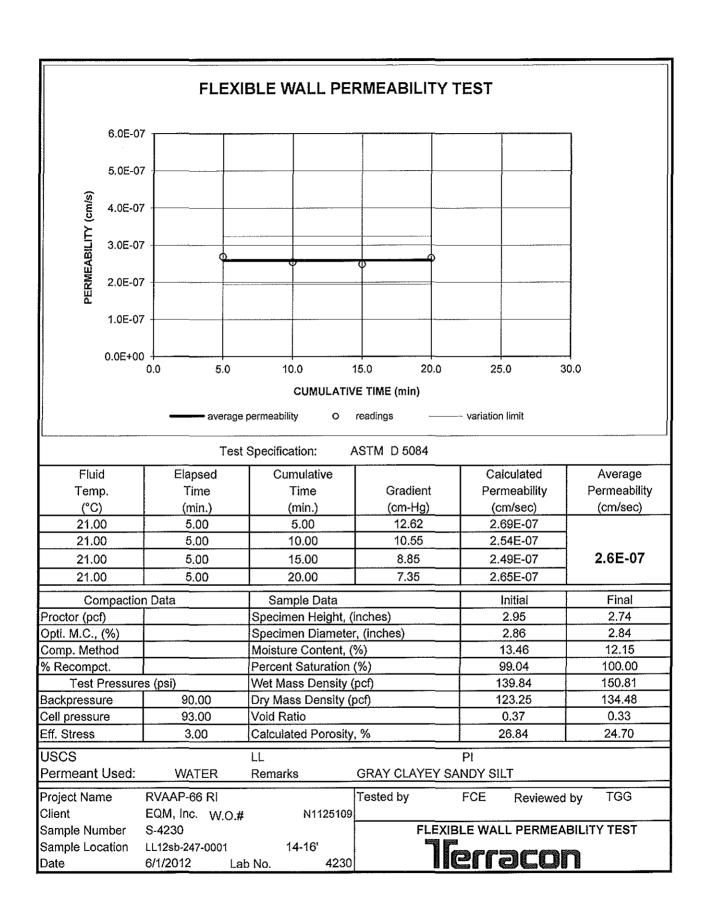


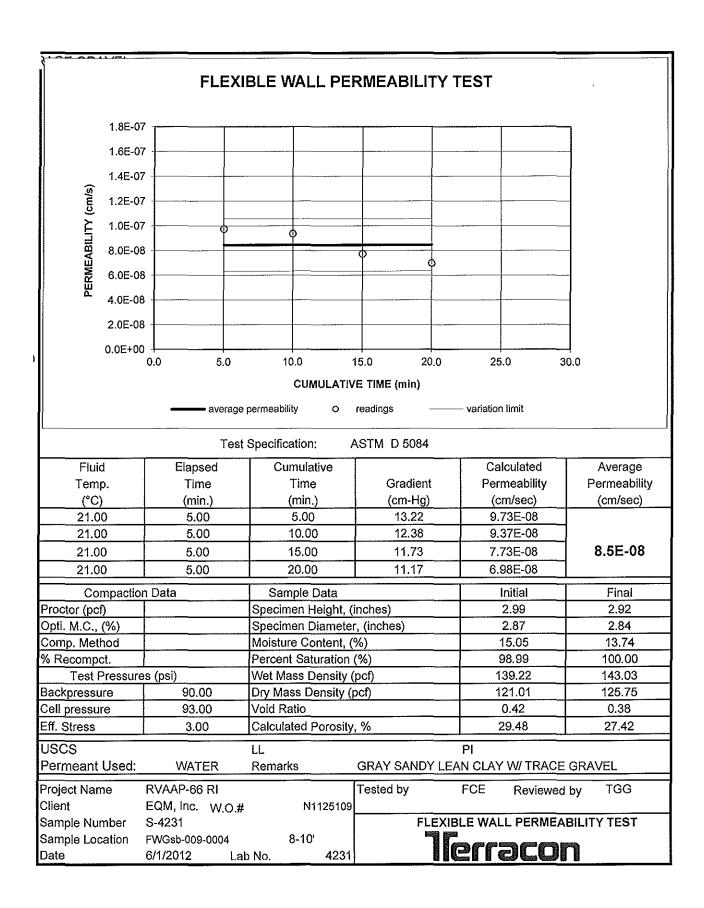


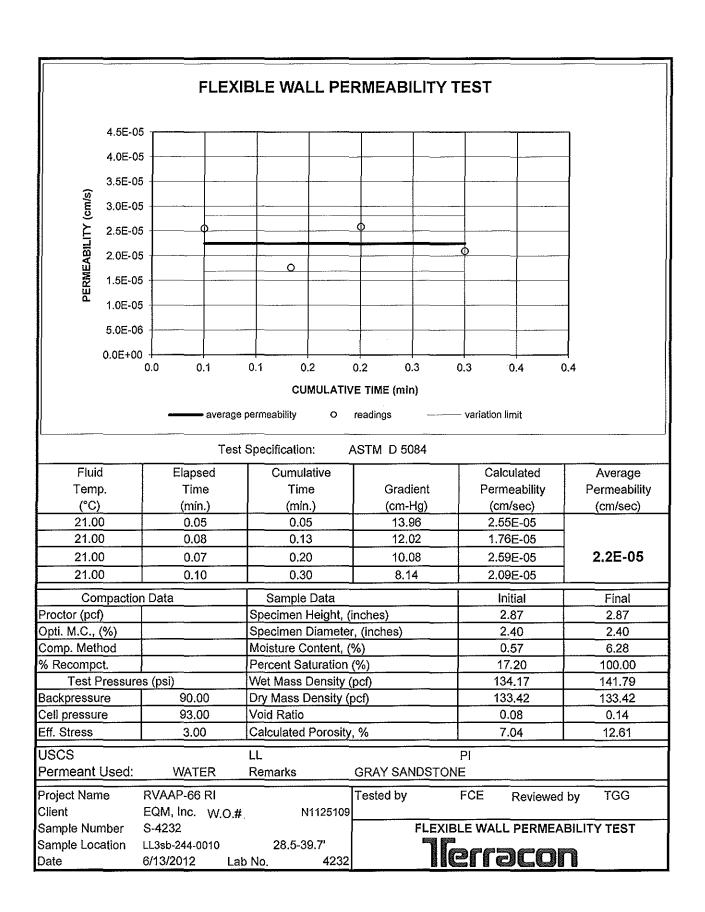
Environmental Quality Management, Inc. Chain of Custody Record

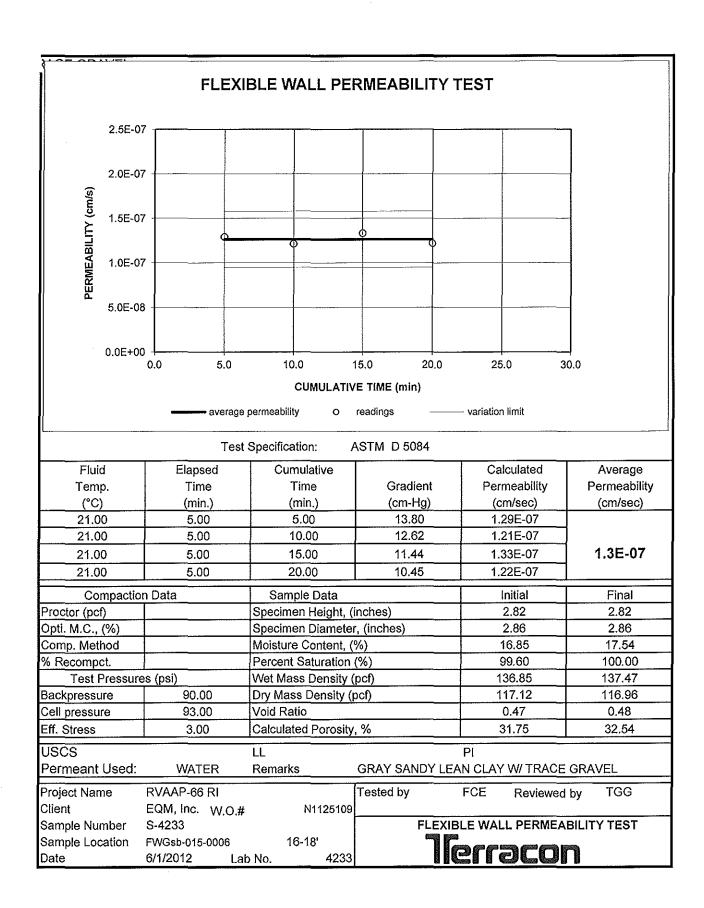
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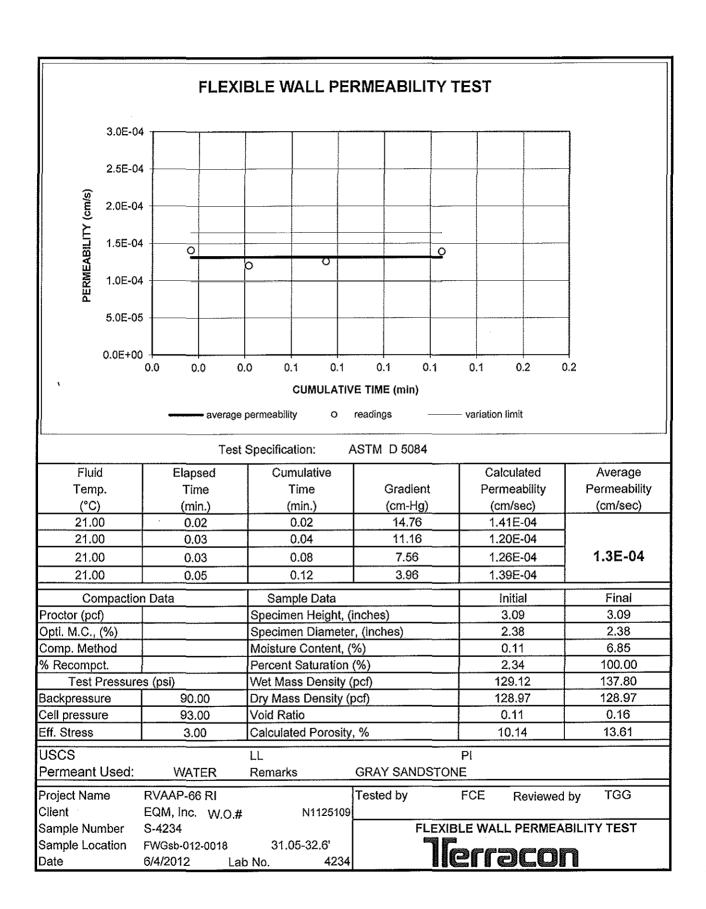
Project No.		Project Na	me			TESTS						
<u>の30 / ラダ・80 / は、00 / いの2</u> Samplers/Affiliation: (Print Name and Sign		RV	1AP-66 2I		No. of Containers	084						
	n)			Lab P.O. No:	onta	い 人						
Scatt Spessherit				18468 Sample Volume /	.of C	- Com.						
Sample ID:	Date	Time	Description/Matrix:	Sample Volume / Comments	No	ASTM D-5084	7,00					
FWGLL35b-245-0015-GT	4/2/13	≪dr.	Roce Cole	39'7"-41'1/2"		√.	_/					
FuiG 5868b-131-0086-GT	6/12/12	1887	Bock ask	65'6" - 67'2"	1	√ /	_/					
FKG WBGS6-018-0002-6T	10/14/12	1430	Shelly Tube soil	18-20-14	*	4	1					
Fails W86 55-019-00:3-67	14/15/12	1159	Rock code	41'5"-42'7"	į	1	-/					
FUGW0656-020-0012-6T	6/19/12	1352	Stelly Tube, 55:1	15-17 /t		√						
FWG NA 256-114-0014-GT	6/22/12	0944	Bock loke	16,5-17) /	2	1						
FWG W1706 Sh - 021-0003-GT	6/25/12	1456	Book Cole	4018"-421	1.	1						
FW6 WB653-020-0007-67	14/26/12	1655	Rock Cole	37'4"-38'1/2"	•	1			_ _			
	ļ											
			1									
Relinquished by: (Signature)	Date 7/3/12	Time 1450	Received by: (Signature)	Date Time	2	Ship To):					
Relinquished by: (Signature)	Date ¹	Time	Received by: (Signature)	Date Time	2							
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date · Time	2	Airbill 1	Number) delivered				-
Reporting/QA Requirements:	Turn Arour (EXACT DU	d Time E DATE	.): July 18 2012	Report To:			Chain of Cus	tody Seal Numbe	rs			

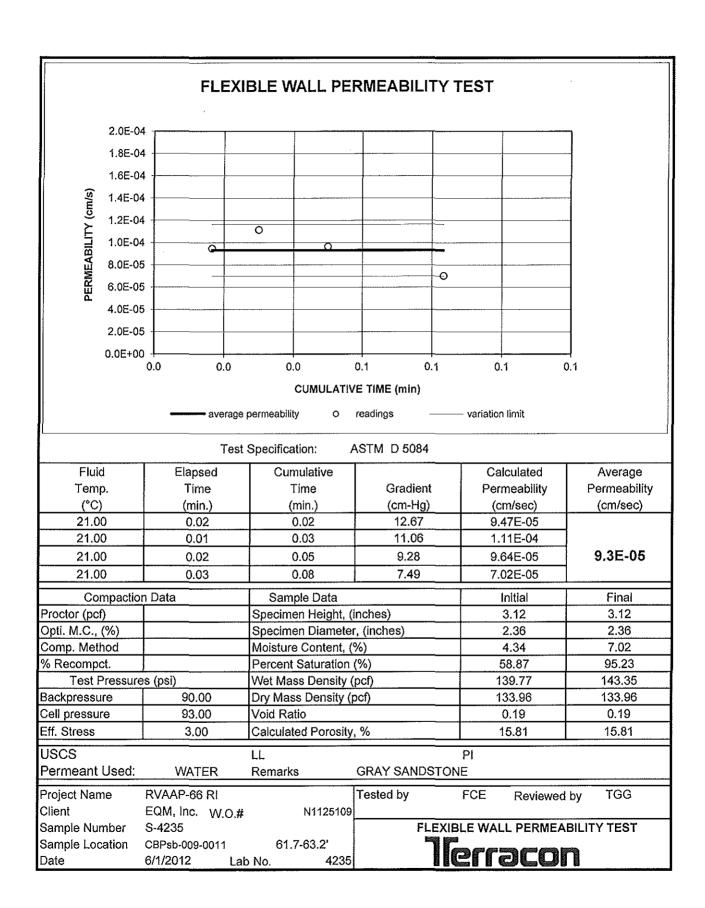


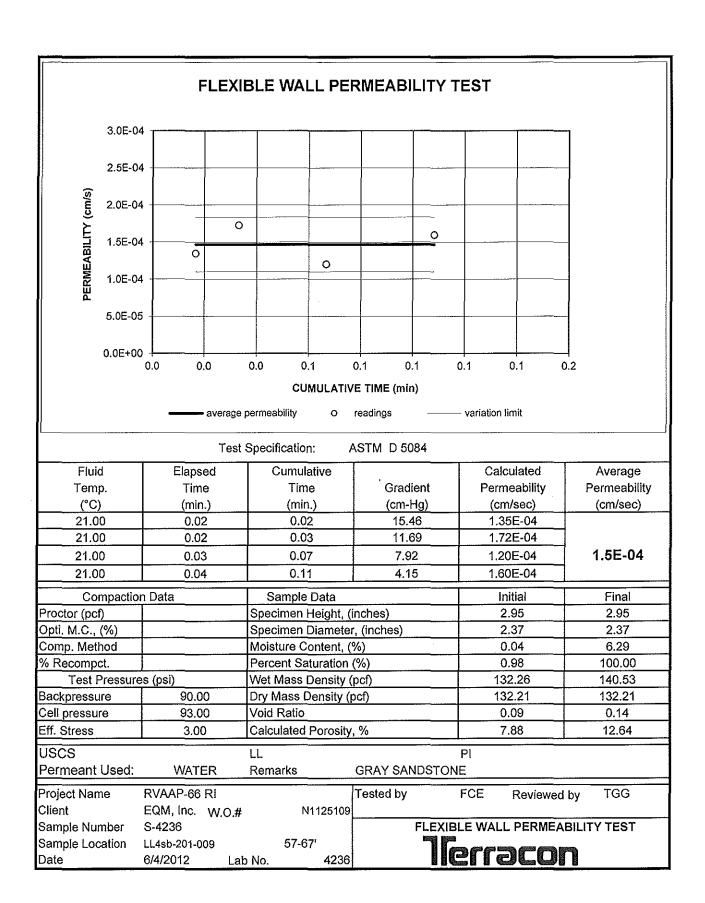


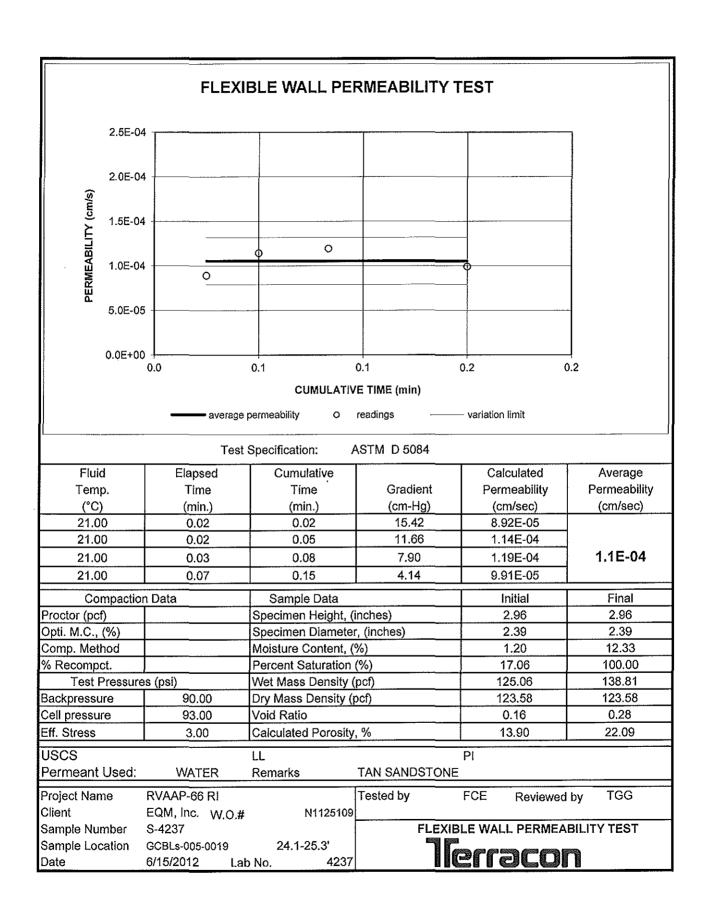


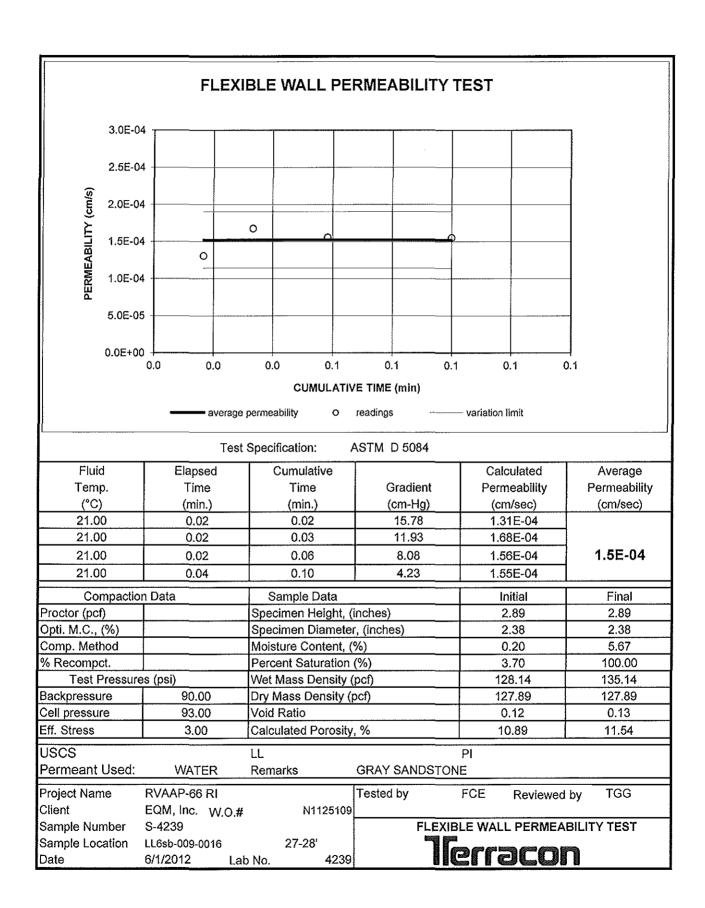


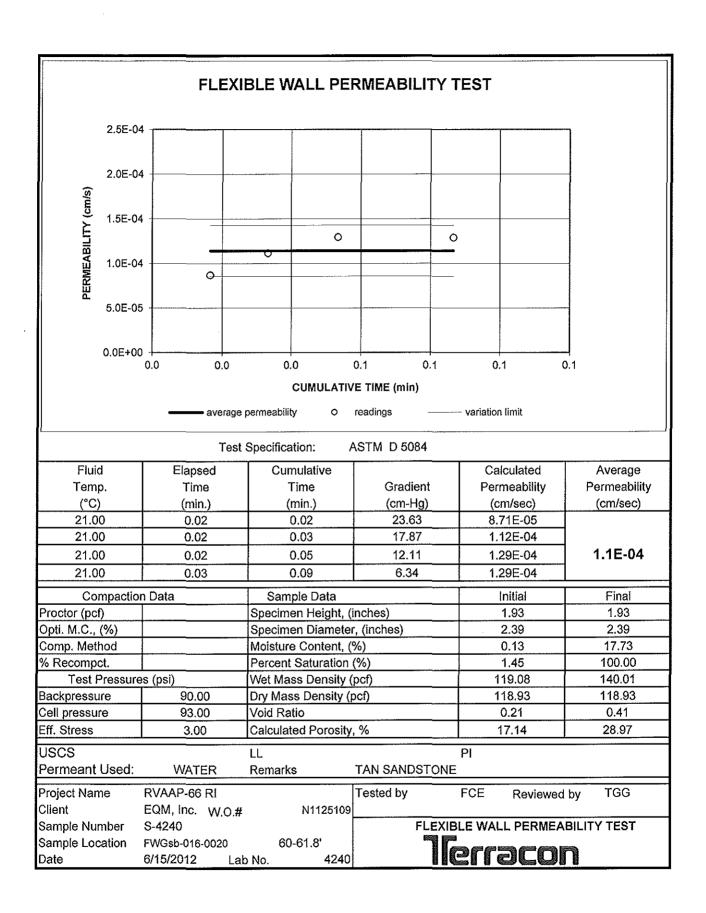


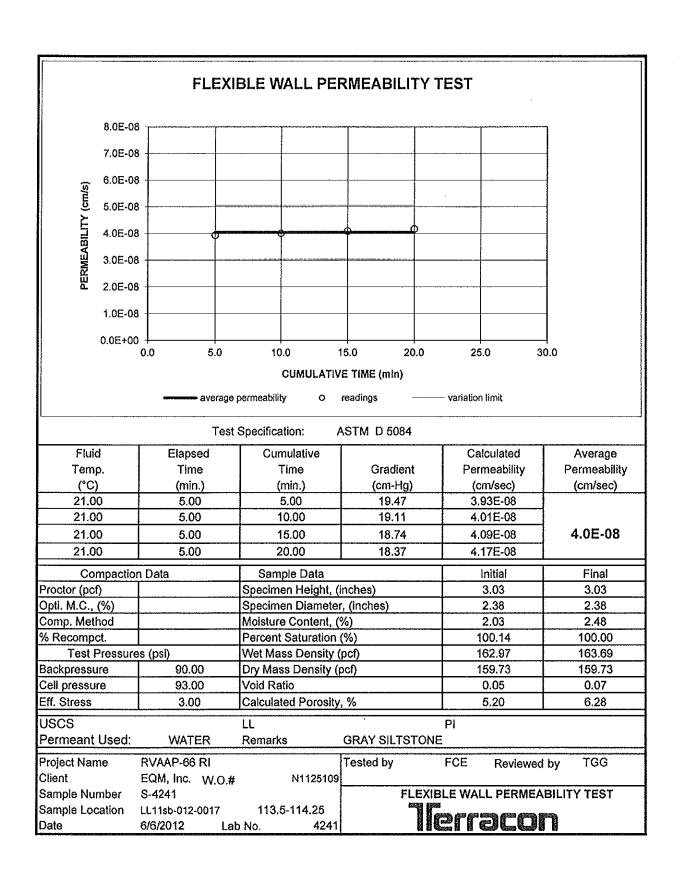


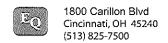












Environmental Quality Management, Inc. Chain of Custody Record

COC Tracking: EQ- 20951

Project No.	Project Name								TE:	STS		
030174.0016.001.02 Samplers/Affiliation: (Print Name and Sign		R	VAAP-66 RI		No. of Containers	A-5084						STATE THE PARTY OF
				Lab P.O. No:	Cont	25						
A. Trenton (S. Spessing 18th	<u> </u>			2174046605-1/4). of (
Sample ID:	Date	Time	Description/Matrix:	Sample Volume / Comments	ž	ASTM						
FWGLL12 Sb-247-0001-GT.	3/1/12	1455	501: 14-16	Shelby Tube	Virtual	1						site and the same of the same
FING FING 56-009-0004-6T	3/7/12	5} 3 \$	Soil: 8-101	Shell by Tube	and Contract of	/						
FWG 435b-244-0010-GT	3/2/12	i455	Back: 38.5-39.71	Back 65/8	4,7 117	V						and the second
FWG FWGSh - 015 - 0006 - 67	3/13/12	1013	50:1: 16-12	Shelay Tube	Policy.	1						
FNG FNG 56-012-0018-67	3/19/12		Bock: 31.05-32.6'	Bock Cole	- Action	1						
FW6 CBPsb-009-0011-6T	3/28/12	/225	Bock: 61.7-63.2"	Back Code	Sp. policy (j						_
FMG-224 56 - 201 - 0009 - 67	4/4/12		BOCK; ST-AT	8x5 54	3 6	1					_	
FWG CBL 62-005-0019-GT	4/10/12		RNCK : 29.1-25.3	Bock Carle	\$70,000	Je ⁱ						
FWG (LGS) - 009 - 0005 - GT	4/11/12	1400	5011 12-12.79'	Shelly Tube	66.09	/						
FW64656-000-0016-67	4/12/12	1300	Bock : 27-28"	Rock Care	A. (2)	1						
PWG PWG 56-016-0020-GT	4/16/12	1330	ROCK : 60-61.8	Back Care	6 777.0	1						
FUG 4211 Sb-012-0017-GT	4/17/12	Maria	Rock: 113,5-114,25	Box Gre	al _e ction	1		<u> </u>				
										_	;	
Dalin michael by (Cinnadan)	Deta	Times	Received by: (Signature)	Data		Ship To	-	<u> </u>				
Relinquished by: (Signature)	Date	Time		Date Time 100 5-17-12 2:3		Ship To	.					THE CONTRACT OF THE CONTRACT O
Relinquished by: \(\signature\)	Date /	Time	Received by: (Signature)	Date Time								
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date Time	2	Airbill 1	Number	, 1 1	· Salahan ·			
									eliveled			
Reporting/QA Requirements:	Turn Arour (EXACT DU	nd Time E DATE): June 1, 2012	Report To:			Chain of Cu	tody Sea	l Numbers		 	



19-Jul-2012

Tim Goodall Terracon 611 Lunken Park Drive, P.O. Box C Cincinnati, OH 45226

Tel: 513-321-5816 Fax: 513-321-0294

Re: RVAAP-66 RI; N1125109

Dear Tim,

ALS Environmental received 5 samples on 12-Jul-2012 10:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Work Order: 1207265

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 5.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

J'im Baxter

Electronically approved by: Chris Gibson

Jim Baxter

Director

ADDRESS 4388 Glendale Milford Rd. Cincinnati, Ohio 45242- PHONE (513) 733-5336 FAX (513) 733-5347

ALS GROUP USA, CORP. Part of the ALS Laboratory Group. A Campbell Brothers Limited Company

Environmental 🏬

Date: 19-Jul-12

Client:

Terracon

Project:

RVAAP-66 RI; N1125109

Work Order:

1207265

Work Order Sample Summary

Lab Samp II	Client Sample ID	<u>Matrix</u>	Tag Number	Collection Date	Date Received	Hold
1207265-01	5314	Soil		7/11/2012 10:00	7/12/2012 10:15	
1207265-02	5315	Soil		7/11/2012 10:00	7/12/2012 10:15	
1207265-03	5316	Soil		7/11/2012 10:00	7/12/2012 10:15	
1207265-04	5317	Soil		7/11/2012 10:00	7/12/2012 10:15	
1207265-05	5319	Soil		7/11/2012 10:00	7/12/2012 10:15	

Date: 19-Jul-12

Client:

Terracon

Project:

RVAAP-66 RI: N1125109

Work Order: 1207265

Lab ID:

1207265-01A

Collection Date: 7/11/2012 10:00:00 AM

Client Sample ID: 5314

Matrix: SOIL

Analyses

Dilution Report

Result Units Qual

Limit

Factor

Date Analyzed

TOTAL ORGANIC CARBON BY WALKLEY-BLACK Total Organic Carbon

WALKLEY-BLACK 0.025

1

Analyst: RDN 7/19/2012

Lab ID:

1207265-02A

Collection Date: 7/11/2012 10:00:00 AM

Client Sample ID: 5315

Matrix: SOIL

Analyses

Result

0.11

Result

Result

0.36

Report Limit

Qual

Units

Dilution Factor

Date Analyzed

TOTAL ORGANIC CARBON BY WALKLEY-BLACK **Total Organic Carbon** 0.053

WALKLEY-BLACK

Analyst: RDN

Lab ID:

1207265-03A

0.025

Collection Date: 7/11/2012 10:00:00 AM

7/19/2012

Client Sample ID: 5316

Client Sample ID: 5317

Matrix: SOIL

Analyses

Result

Report Limit Units Qual

Dilution Factor

Date Analyzed

Total Organic Carbon

WALKLEY-BLACK 0.025

Analyst: RDN 7/19/2012

Lab ID:

1207265-04A

TOTAL ORGANIC CARBON BY WALKLEY-BLACK

Collection Date: 7/11/2012 10:00:00 AM

Matrix: SOIL

Analyses

Qual

Report Limit Units Dilution Factor

Date Analyzed

Total Organic Carbon

TOTAL ORGANIC CARBON BY WALKLEY-BLACK 0.039

WALKLEY-BLACK 0.025

1

Analyst: RDN 7/19/2012

Lab ID:

Analyses

1207265-05A

Collection Date: 7/11/2012 10:00:00 AM

Matrix: SOIL

Client Sample ID: 5319

Report Limit Units Qual

0.025

Dilution Factor

Date Analyzed

Total Organic Carbon

TOTAL ORGANIC CARBON BY WALKLEY-BLACK

WALKLEY-BLACK %

1

Analyst: RDN 7/19/2012

Note:

Date: 19-Jul-12

Client:

Terracon

Project:

RVAAP-66 RI; N1125109

WorkOrder:

1207265

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
В	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ŅD	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
Units Reported	Description

%

Sample Receipt Checklist

Client Name: TERRACON-CINCINNATI				Date/Time F	Received:	12-Jul-12	10:15		
Work Order: <u>1207265</u>				Received by	y:	<u>JNW</u>			
Checklist completed by: Steve Wilcox eSignature		13-Jul-12	_	Reviewed by:	A lexis W	'ilsey		13-Jul-	12
Matrices: Carrier name: FedEx		Date			eSignature			Date	
Shipping container/cooler in good condition?		Yes	v	No 🗆	Not Prese	ent 🗌			
Custody seals intact on shipping container/cooler	r?	Yes		No 🗌	Not Prese	ent 🗸			
Custody seals intact on sample bottles?		Yes		No 🗌	Not Prese	ent 🗸			
Chain of custody present?		Yes	V	No 🗌					
Chain of custody signed when relinquished and r	received?	Yes	v	No 🗌					
Chain of custody agrees with sample labels?		Yes	v	No 🗌					
Samples in proper container/bottle?		Yes	~	No 🗌					
Sample containers intact?		Yes	✓	No 🗌					
Sufficient sample volume for indicated test?		Yes	V	No 🗆					
All samples received within holding time?		Yes	V	No 🗆					
Container/Temp Blank temperature in compliance	e?	Yes		No 🗌					
Temperature(s)/Thermometer(s):		24.4							
Cooler(s)/Kit(s):									
Water - VOA vials have zero headspace?		Yes		No 🗌	No VOA vials	submitted	•		
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A				
pH adjusted? pH adjusted by:		Yes		No 🗌	N/A				
Login Notes:									
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Client Contacted:	Date Contacted:			Person	Contacted:				
Contacted By:	Regarding:								
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19	WELL DEVELOPMENT LOGS
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PROJECT NAME: RVAAP	PRO	OJECT NUMBER:030174.0016.001
LOCATION: BUILDING 120	DATE: 4/18/2012	START TIME: 8:29
WELL ID: B12mw-013	•	
WELL DEPTH: 24.09	INITIAL WATER LEVEL:	:17
WELL DIAMETER 2 in.		SCREEN INTERVAL: 11.5 - 21.5
PUMP/PURGING DEVICE: BP - BLADE	ER PUMP	PUMP INTAKE DEPTH: 19.5
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0

COMMENTS surge overpurge 7.5 GAL. FINAL WL = 21.41, twd= 24.19 Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	рН	Turb (NTU)	ORP (mV)
8:36	17.00	0.8	0	9.7	0.307	15.69	6.6	999	
8:42		0.5	6	9.6	0.304		6.59	999	
8:46		0.5	4	10.5	0.298		6.48	999	
8:50		0.75	4	9.8	0.305		6.42	999	
8:53		0.4	3	10.3	0.297		6.4	999	
8:56		0.5	3	10.7	0.3	15.36	6.37	482	
9:00		0.5	4	10.6	0.294		6.36	358	
9:03		0.5	3	11.2	0.29		6.37	270	
9:06		0.5	3	10.9	0.291		6.32	260	
9:09	21.41	0.8	3	11.6	0.294		6.32	245	

PROJECT NAME:	RVAAP	_	PROJECT NUMBER:(30174.0016.001	_
LOCATION: <u>C-BLO</u>	CK QUA_	DATE: <u>4/18/2012</u>	START TIME:	13:49	
WELL ID: CBLmw-	005		•		
WELL DEPTH:	32.3	INITIAL WATER LEV	EL: <u>23.42</u>		
WELL DIAMETER_	2 in.		SCREEN INTE	ERVAL: 22 -	30
PUMP/PURGING DE	VICE: BP - BLADD	ER PUMP	PUMP INTAKI	E DEPTH:	28.0
PUMP READINGS:	Throttle: 0	Recharge: 0	Discharge: 0		

COMMENTS surge overpurge 18 GAL. Final WL = 25.84, twd=32.43 possible QC Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	рĦ	Turb (NTU)	ORP (mV)
14:02	23.42	1	0	13.1	0.168	16.21	6.87	999	
14:05		1	3	12.2	0.136		6.18	445	
14:08		1	3	11.8	0.133		5.84	131	
14:11		1	3	11.9	0.135		5.87	91	
14:15		1	4	11.9	0.136		5.87	94	
14:18		1	3	12.2	0.133	13.56	5.86	56	
14:21	25.84	1	3	11.8	0.123		5.78	55	

PROJECT NAME: RVAAP	PRO	OJECT NUMBER:030174.0016.0	01
LOCATION: CENTRAL BUR	DATE: <u>4/17/2012</u>	START TIME: 12:11	_
WELL ID: CBPmw-009			
WELL DEPTH: 66.6	INITIAL WATER LEVEL:	8.81	
WELL DIAMETER 2 in.		SCREEN INTERVAL:	54 - 64
PUMP/PURGING DEVICE: BP - BLADD	PUMP INTAKE DEPTH: _	62.0	
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0	

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
12:23	8.81	1	0	12	0.445	15.42	8.31	270	
12:28		1	5	11.7	0.434		8.05	755	
12:33		1	5	11.8	0.442	14.28	8.06	25	
12:38		0.75	5	11.9	0.445		8.01	17	
12:43		1	5	11.7	0.445		7.96	11	
12:48		0.8	5	11.5	0.445		7.95	12	
12:53		1	5	11.8	0.445		7.86	25	
12:58		1	5	11.5	0.445		7.88	104	
13:03	8.90	1	5	11.5	0.445		7.86	14	
13:08		0.8	5	11.7	0.445		7.82	8	
13:13		0.751	5	11.5	0.445		7.85	9	
13:18	8.92	1	5	11.5	0.445		7.88	7	

COMMENTS surge overpurge 50 GAL, FINAL WL=8.92, twd= 66.6. good for QC Odor:

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001 LOCATION: DEMO.AREA 2 DATE: 6/27/2012 START TIME: 15:30 WELL ID: DA2mw-114 WELL DEPTH: 21.87 INITIAL WATER LEVEL: 5.95 SCREEN INTERVAL: 9.16 - 19.16 WELL DIAMETER 2 in. PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 17.2 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0

COMMENTS surge overpurge dry @ 1600 recharge purge dry at 1614 wait then purge dry total 15 gal. twd= 21.87 Odor:

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	ТЕМР. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
15:40	5.97	1	0	15.3	0.379	15.57	7.37	999	
15:44		1	4	17.4	0.376	13.66	7.29	702	
15:48		İ	4	14.8	0.45	14.01	7.27	999	
15:52	16.70	1	4	14.5	0.444	14.24	7.25	999	
15:56	18.50	1	4	13.5	0.465	15.65	7.19	999	
16:00	20.30	1	4	13.9	0.46	16	7.14	999	
16:11		1	11	14.4	0.502	15.78	7.2	999	
16:14		1	3	14.6	0.548	14.63	7.29	999	
16:30	16.00	1	16	15.6	0.53	16.16	7.33	819	
16:33		1	3	13.9	0.499	17.16	7.31	999	
16:36		1	3	13.9	0.48	16.9	7.4	999	
16:39		1	3	15.9	0.554	14.84	7.39	999	*****

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001

LOCATION: DEMO.AREA 2 DATE: 6/28/2012 START TIME: 9:03

WELL ID: DA2mw-115

WELL DEPTH: 46.91 INITIAL WATER LEVEL: 6.5

WELL DIAMETER 2 in. SCREEN INTERVAL: 33.75 - 43.75

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 41.8 ___

PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0

COMMENTS surge overpurge 33 gal. twd= 46.91 good for QC Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
8:11	11.00	1	0	14.4	0.592	12.44	7.92	930	
8:16	11.00	1	5	13.3	0.558	13.15	7.48	930	
8:20	11.00	1	4	13	0.548	13.3	7.42	385	
8:24	10.90	1	4	12.4	0.549	13.35	7.15	215	
8:28	10.80	1	4	12.6	0.541	13.19	7.12	135	
8:32	10.85	1	4	12.1	0.539	13.36	7.07	108	
8:36	10.90	1	4	12.5	0.539	13.31	7.06	85	
8:40	11.00	1	4	12.1	0.541	13.58	7.04	96	•
8:45	11.40	1	5	12.5	0.539	13.21	7.1	87	
8:50	11.80	1	5	12.4	0.539	13.25	7.12	76	
8:55	12.00	1	5	12,4	0.538	13.18	7.12	74	
9:00	12.40	1	5	12.5	0.536	13.12	7.1	70	

PROJECT NAME: RVAAP	PROJEC	CT NUMBER: 030174.0010	5.001
LOCATION: ERIE BURNIN	DATE: 6/27/2012	START TIME: 14:06	
WELL ID: EBGmw-131			
WELL DEPTH: 73.15	INITIAL WATER LEVEL:	11	
WELL DIAMETER 2 in.		SCREEN INTERVAL:	60.5 - 70.5
PUMP/PURGING DEVICE: BP - BLADDER	PUMP	PUMP INTAKE DEPTH:	68.5
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 14	

COMMENTS surge overpurge 55 gal. twd= 73.15 clear Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	тем г р. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
14:16	11.49	1	1	16	0.405	13.57	6.58	507	
14:19		1	3	14.9	0.404	13.9	7.06	354	
14:22	11.56	0,9	3	14.3	0.403	14.36	7.18	247	
14:26		1	4	13.8	0.398	14.98	7.21	197	,
14:30		1	4	15.1	0.399	13.8	7.18	188	
14:33	11.88	1	3	13.5	0.4	13.76	7.24	230	
14:36		0.75	3	13.1	0.399	13.88	7.22	202	
14:40	11.80	1	4	13.5	0.403	13.94	7.24	212	
14:44	11.84	1	4	13.7	0.401	14.13	7.27	221	
14:47	11.80	1	0	13.5	0.403	14.19	7.33	99	
14:48	11.83	1	4	13.5	0.404	14.2	7.33	93	
14:52	11.82	1	4	13.4	0.402	14.4	7.25	98	
14:56	11.81	1	4	13	0.4	14.49	7.23	89	

Note: Condition of	the well:	See STATIC WATER LEVEL FORM	*.	•			
Field Personnel:	CAL						

PROJECT NAME: RVAAP		PROJECT NUMBER: 030174.00	16.001
LOCATION: FACILITYWID	DATE: <u>3/28/2012</u>	START TIME: 10:20	<u>) </u>
WELL ID: FWGmw-001			
WELL DEPTH: 20	INITIAL WATER LEV	/EL:8.21	
WELL DIAMETER 2 in.	•	SCREEN INTERVAL:_	7 - 17
PUMP/PURGING DEVICE: BP - BLADDER	PUMP INTAKE DEPTH	15.0	
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0	

COMMENTS surge overpurge 18 GAL, final WL = 10.29, twd=20 Odor:

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
10:25	8.21	1	0	10.3	0.203	16.29	7.25	423	
10:28		0.9	3	10.4	0.207	-	7		
10:31		0.9	3	9.9	0.2		6.82		
10:34		0.9	3	9.8	0.189		6.66	165	
10:37		0.9	3	9.7	0.185	13.45	6.6	151	
10:40		0.9	3	10	0.181		6.56	148	
10:43		0.9	3	10	0.182		6.53		
10:46		0.8	3	10	0.181		6.5		
10:49	10.29	0.8	3	10.6	0.178		6.46		

Note: Condition of the well:	See STATIC WATER LEVEL FORM	
Field Dersonnel A.D.		

 PROJECT NAME:
 RVAAP
 PROJECT NUMBER:
 030174.0016.001

 LOCATION:
 FACILITYWID
 DATE:
 3/29/2012
 START TIME:
 11:07

 WELL ID:
 FWGmw-002

 WELL DEPTH:
 66.95
 INITIAL WATER LEVEL:
 22.16

WELL DIAMETER 2 in. SCREEN INTERVAL: 57 - 67

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 65.0

PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0

COMMENTS surge overpurge 50 gal, final WL = 23.83,twd=68.59. Depth stabilized after 30 gallons. Light grey color. Odor:

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TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	ТЕМР. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
11:18	22.16	0.7	0	11	0.45	16.52	7.95	999	
11:23		0.75	5	11.2	0.441		7.88	999	
11:28		0.7	5	11.2	0.44		7.93	999	
11:33		0.6	5	11.2	0.449		7.96	999	
11:38		0.75	5	10.7	0.462		8.02	999	
11:43		0.6	5	11.1	0.442		7.96	999	
11:48		0.75	5	11.1	0.426		8	380	
11:53		0.8	5	11.2	0.45		8.08	557	
11:58		0.75	5	10.9	0.457	14.69	8.54	999	
12:03	23.54	0.75	5	11.1	0.456		8.46	999	
12:08		0.75	5	11.4	0.545		8.91	474	
12:13		0.8	5	11.4	0.429		8.45	999	
12:18		0.75	5	11.3	0.444		8.37	999	
12:23		0.7	5	10.9	0.442		8.4	999	
12:28		0.7	5	11.1	0.449		8.32	999	
12:33		0.7	5	11.1	0.457		8.32	999	
12:38	23,83	0.7	5	11.1	0.459		8.39	999	

Note: Condition of the well:	See STATIC WATER LEVEL FORM	

Field Personnel: AR

PROJECT NAME: _	RVAAP		PROJECT NUMBER:	030174.0016.0	01
LOCATION: FACIL	ITYWID	DATE:3/22/2012	START TIM	E: <u>11:00</u>	
WELL ID: FWGmw	<u>003</u>				
WELL DEPTH:	20.8	INITIAL WATER L	EVEL: <u>4.7</u>		
WELL DIAMETER_	2 in.		SCREEN IN	ΓERVAL;8	3.5 - 18.5
PUMP/PURGING DE	EVICE: BP - BLADDE	R PUMP	PUMP INTA	KE DEPTH: _	16.5
PUMP READINGS:	Throttle: 0	Recharge: 0	Discharge: 0		
COMMENTS high susp	pended solids, surge and c	verpurge 18 gallon. Fina	I WL = 18.84 twd=21.11 Odor:		

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
11:10	4.70	0.5	0	14.1	0.004	17.25	7.32	999	
11:14		0.4	4	12.7	0.522		7.26	800	
11:18		0.5	4	11.9	0.517		7.25	999	
11:22		0.5	4	15.9	0.453		7.36	999	
11:28		0.6	2	15.2	0.437		7.35	999	
11:33		0.6	5	15.4	0.435		7.38		
11:44	18.84	0.4	11	15.8	0.455		7.44		

PROJECT NAME: _	RVAAP		PROJECT NUMBER:	030174.0016.	001
LOCATION: FACIL	ITYWID_	DATE: 3/28/2012	START TIM	E: 8:33	
WELL ID: FWGmw	-004				
WELL DEPTH:	22.45	INITIAL WATER LE	VEL:11,4		
WELL DIAMETER_	2 in.		SCREEN IN	TERVAL:	9.5 - 19.5
PUMP/PURGING DE	VICE: BP - BLADDER	PUMP	PUMP INTA	KE DEPTH: _	17.5
PUMP READINGS:	Throttle: 0	Recharge: 0	Discharge: 0		

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	рН	Turb (NTU)	ORP (mV)
8:39	11.40	1.	0	10.7	0.658	16.85	7.79	999	
8:42		1	3	10.4	0.654		7.78	999	11 11 11 11 11 11 11 11 11 11 11 11 11
8:45		1	3	10.6	0.655	13.66	7.65	753	
8:48		1	3	10.9	0.656		7.56	746	
8:51		1	3	10.9	0.655		7.6	731	
8:54		1	3	10.7	0.651		7.52		
8:57	22.45	1	3	10.8	0.653		7.56		

COMMENTS surge overpurge 18 gal, final WL = 14.61 twd=22.58 Odor:

PROJECT NAME: RVAAP	PRO PRO	OJECT NUMBER: <u>030</u> 174.0016.00	01
LOCATION: FACILITYWID	DATE: 4/18/2012	START TIME: 10:02	-
WELL ID: FWGmw-005			
WELL DEPTH: 30.8	INITIAL WATER LEVEL:	:20.05	
WELL DIAMETER 2 in.		SCREEN INTERVAL: 19.	25 - 29.25
PUMP/PURGING DEVICE: BP - BLAD	DER PUMP	PUMP INTAKE DEPTH:	27.3
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0	

COMMENTS surge overpurge 22 GAL, final WL= 20.91 twd=30.90, good for QC Odor:

					T				
TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	ТЕМР. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
10:10	20.05	0.8	0	9.5	0.382	16.57	6.57	999	
10:13		1	3	9.6	0.369		6.59	999	
10:16		1	3	9.7	0.371		6.56	999	***
10:19		0.9	3	9.6	0.392		6.69	889	
10:22		1	3	9.8	0.394	14.25	6.68	999	
10:26	20.78	1	4	9.7	0.389		6.72	999	
10:30		1	4	9.6	0.39		6.76	877	
10:33		1	3	9.7	0.389		6.76	541	
10:36		0.8	3	9.7	0.39		6.8	322	
10:39		1	3	9.7	0.391		6.79	240	
10:42	20.91	1	3	9.7	0.39		6.8	222	

PROJECT NAME: RVAAP		PROJECT NUMBER: 0:	30174.0016.001
LOCATION: FACILITYWID	DATE: 3/21/2012	START TIME:	14:42
WELL ID: FWGmw-006			
WELL DEPTH: 18.68	INITIAL WATER LE	VEL:3,33	
WELL DIAMETER 2 in.		SCREEN INTE	RVAL: 7.5 - 17.5
PUMP/PURGING DEVICE: BP - BLADDER	L PUMP	PUMP INTAKE	DEPTH: 15.5
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0	

COMMENTS gray, surge overpurge twd=19.32 final water depth 14.89 Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
14:48	3.33	0.5	0	12.6	0.004	16.23	7.61	725	
14:52		0.5	4	12.5	0.475		6.79	562	
14:57		0.5	5	13.5	0.473		6.75		
15:02		0.5	5	14.3	0.475		6.47		***************************************
15:06		0.4	4	16.5	0.475		6.3		
15:13		0.5	7	12.9	0.475		6.23	235	
15:18		0.6	5	12.4	0.452		6.3	165	
15:22		0.5	3	13.1	0.459		6.2	160	
15:27		0.5	5	13.4	0.452		6.24	155	
15:33		0.5	6	12.7	0.455		6.26		
15:38		0.5	5	12.4	0.456		6.32		

PROJECT NAME: RVAAP	PROJE	CT NUMBER: 030174.0016.001	
LOCATION: FACILITYWID	DATE: <u>3/21/2012</u>	START TIME: 13:03	
WELL ID: FWGmw-007			
WELL DEPTH: 30.44	INITIAL WATER LEVEL:	22.43	
WELL DIAMETER 2 in.		SCREEN INTERVAL: 19.5 - 29.5	
PUMP/PURGING DEVICE: BP - BLADDER	R PUMP	PUMP INTAKE DEPTH: 27.5	
PUMP READINGS: Throttle: 0	Recharge: 2	Discharge: 2	

COMMENTS gray-tan, surge overpurge twd= 32.0, water level = 23.9 Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (nig/L)	pН	Twb (NTU)	ORP (mV)
13:03	22.46	0.5	4	16.02	1.56	16.16	8.05	999	
13:08		0.5	5	15.9	1.16		7.33	999	
13:20		0.5	12	14.2	1.03		7.1	999	
13:27		0.25	7	14.2	1.02		7.16		
13:38		0.5	11	14.8	1.03		7.19		
13:48		0.5	10	15.3	1.03		6.87		
13:54		0.75	6	17.8	0.94		6.76		
14:04		0.5	10	17.3	0.925		6.69		
14:07		0.5	3	16.8	0.885		6.67		

Note: Condition of the well:	See STATIC WATER LEVEL FORM	 	
Field Personnel: AR			

PROJECT NAME: RVAAP	PRO	DJECT NUMBER: 030174.0016.	001
LOCATION: FACILITYWID	DATE: 3/22/2012	START TIME: 8:55	
WELL ID: FWGmw-008			
WELL DEPTH: 22.05	INITIAL WATER LEVEL:	5,22	
WELL DIAMETER 2 in.		SCREEN INTERVAL:	10 - 20
PUMP/PURGING DEVICE: BP - BLADDER	PUMP	PUMP INTAKE DEPTH:	18.0
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0	

COMMENTS gray, surge overpurge 17 gal. Final WL = 5.45 twd=22.05 Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
9:35	5.20	0.45	0	11.8	0.486	15.12	7.48	999	
10:00		0.4	25	12.1	0.004		6.93	999	
10:05		0.5	5	11	0.004		6.96	999	
10:08		0.45	3	11.9	0.004		6.86		
10:13	5.45	0.45	- 5	11.4	0.004		6.92		

PROJECT NAME:	RVAAP		PROJECT NUMBER:	030174.0016.	.001
LOCATION: FACIL	ITYWID	DATE: 3/22/2012	START TI	ME: 12:20	
WELL ID: FWGmw	7-009				
WELL DEPTH:	20.4	INITIAL WATER LE	VEL:1		
WELL DIAMETER_	2 in.		SCREEN I	INTERVAL:	8 - 18
PUMP/PURGING DE	EVICE: <u>BP - BLADDEI</u>	R PUMP	PUMP INT	TAKE DEPTH:	16.0
PUMP READINGS:	Throttle: 0	Recharge: 0	Discharge: 0		
COMMENTS tan, surg	e overpurge 19 gal. Final \	NL = 2.60 twd=20.5 Odor	:		

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
12:24	1.00	0.45	0	14.3	0.557		7.28		
12:28		0.51	4	12.9	0.558	16.45	7.24	769	
12:31		0.4	3	13.3	0.56		7.21		
12:37		0.45	6	13	0.566	_	7.29	485	
12:45		0.45	8	12.9	0.553		7.16	452	
12:49		0.45	4	12.6	0.561	_	7.2	431	
12:51		0.45	2	12.7	0.562		7.12		
12:54		0.45	3	13.6	0.566		7.19		
12;58	2.60	0.45	4	13	0.564		7.16		

PROJECT NAME: RVAAP		PROJECT NUMBER: 030174.001	6.001
LOCATION: FACILITYWID	DATE: 3/23/2012	START TIME: 10:06	
WELL ID: FWGmw-010			
WELL DEPTH:18.7	INITIAL WATER LE	VEL:8.72	
WELL DIAMETER 2 in.		SCREEN INTERVAL:	6 - 16
PUMP/PURGING DEVICE: BP - BLADDER	PUMP	PUMP INTAKE DEPTH:	14.0
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0	

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темР. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
10:20	8.72	0.4	0	12.4	0.14	15.4	5.73	450	
10:34		0.25	4	11.7	0.11		5.74	999	
10:49		0.4	15	12.1	0.126		5.75	753	
11:16		0.2	27	12.1	0.161		5.9	624	
11:25		0.3	9	12.6	0.165		5.91	308	
11:32		0.4	7	12.8	0.175		5.93	139	
11:41		0.35	9	13.1	0.166		5.98	127	
11:50	16.60	0.4	9	13.6	0.176	<u> </u>	6.03	137	

COMMENTS surge overpurge 8.5 gal. Final WL = 16.6, twd= 19.21 slight rust color_Odor:

PROJECT NAME: RVAAP	PROJE	CT NUMBER: 030174.0016	.001
LOCATION: FACILITYWID	DATE: <u>3/23/2012</u>	START TIME: 8:55	
WELL ID: FWGmw-011			
WELL DEPTH:18.1	INITIAL WATER LEVEL:	1.64	
WELL DIAMETER 2 in.		SCREEN INTERVAL:	6 - 16
PUMP/PURGING DEVICE: BP - BLADDER	PUMP	PUMP INTAKE DEPTH;	14.0
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0	

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	ТЕМР. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	рН	Turb (NTU)	ORP (mV)
9:01	1.64	0.75	0	10.7	0.469	16.98	7.98	999	
9:05		0.7	4	9.4	0.469		7.76	999	
9:09		0.7	4	9	0.459		7.4	999	
9:14		0.8	5	9.1	0.453		7.28		
9:18		0.6	4	9.3	0.452		7.13		
9:22		0.7	4	9.5	0.451		7.29	525	
9:26		0.7	4	9.5	0.442		7.18	421	
9:30		0.75	4	9.6	0.448		7.25	403	
9:34		0.7	4	9.3	0.447		7.27	389	
9:38	-	0.7	4	9.7	0.452		7.29		

COMMENTS surge overpurge 27.5 gal. twd= Odor:

PROJECT NAME: RVAAP		PROJECT NUMBER: 03	0174.0016.001
LOCATION: FACILITYWID	DATE: <u>3/29/2012</u>	START TIME:	15:25
WELL ID: FWGmw-012			
WELL DEPTH: 42.44	INITIAL WATER LEVE	EL: <u>0.1</u>	
WELL DIAMETER 2 in.		SCREEN INTER	VAL: 29.5 - 39.5
PUMP/PURGING DEVICE: BP - BLA	DDER PUMP	PUMP INTAKE	DEPTH: 37.5
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0	

COMMENTS surge overpurge36 gal, final WL = 0.4, twd=42.44 Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
15:32	0.10	0.8	0	9.9	0.213	16.54	7.06	999	
15:37		0.75	5	9.9	0.211		6.6	999	
15:42		0.6	5	9.9	0.213		6.48	999	
15:47		0.8	5	9.7	0.223		6.21	999	
15:52		0.8	5	10	0.22	15.26	6.18	925	
15:57		0.75	5	9.9	0.218		6.16	463	
16:03	0.30	0.6	6	9.8	0.219		6.18	999	
16:08		0.75	5	10.1	0.22		6.18	586	
16:13		0.8	5	10	0.221		6.22	286	
16:18		0.75	5	10	0.222		6.22	118	
16:23		0.7	5	10.1	0.222		6.22	115	
16:28	0.40	0.7	5	10	0.226		6.26	126	·····

Note: Condition of	the well:	See STATIC WATER	LEVEL FORM	 All the second	***************************************	
Field Personnel:	AR		•			

PROJEC	CT NUMBER:030174.0	016.001
DATE: <u>4/18/2012</u>	START TIME: 12:5	50
INITIAL WATER LEVEL: 1	7.05	
	SCREEN INTERVAL:_	24 - 34
R PUMP	PUMP INTAKE DEPTH	I: <u>32.0</u>
	DATE: 4/18/2012	DATE: 4/18/2012 START TIME: 12:: INITIAL WATER LEVEL: 17.05 SCREEN INTERVAL:

Discharge: 0

Recharge: 0

COMMENTS surge overpurge 18 gal. Final wl = 26.41 twd= 36.77 Odor:

PUMP READINGS: Throttle: 0

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT, (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
13:04	17.05	0.9	0	13.2	0.443	15.94	7.76	999	
13:07		1	3	12.2	0.482		7.67	999	
13:10		1	3	12.8	0.447		7.73	201	
13:13		1	3	12.5	0.446		7.7	94	
13:17		1	4	12.3	0.447		7.73	65	
13:20	26.41	1	3	12.4	0.448		7.66	42	

Note: Condition of the well: See STATIC WATER LEVEL FORM

Field Personnel: AR

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001

LOCATION: FACILITYWID DATE: 4/18/2012 START TIME: 11:00

WELL ID: FWGmw-014

WELL DEPTH: 20.79 INITIAL WATER LEVEL: 3.29

WELL DIAMETER 2 in. SCREEN INTERVAL: 8.25 - 18.25

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 16.3

PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0

COMMENTS surge overpurge 26 gal. Final WL = 6.24, twd=21.25. Good for QC. Color = dark gray to a really lt brown. Odor:

тіме	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	· тем г . (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (nig/L)	рН	Turb (NTU)	ORP (mV)
11:15	3.29	1	0	10.6	0.417	16.52	7.88	951	
11:18		1	3	10.3	0.411		7.8	986	
11:21		0.7	3	10.7	0.413		7.73	999	***************************************
11:25		1	4	10.5	0.413		7.73	999	
11:30		1	5	10.4	0.414		7.75	999	
11:34		0.5	4	10.4	0.415		7.8	999	
11:38		1	4	10.3	0.413		7.77	999	
11:42		0.7	4	10.3	0.414		7.79	999	
11:46		0.8	4	10.3	0.414		7.76	602	
11:50	6.00	1	4	10.3	0.414		7.8	417	
11:53		0.9	3	10.4	0.413		7.77	370	
11:56		1	3	10.3	0.414	13.25	7.8	341	
12:00		1	4	10.3	0.413		7.82	327	
12:04	6.24	0.9	4	10.3	0.413		7.82	312	

Note: Condition of the well: See STATIC WATER LEVEL FORM

Field Personnel: AR

PROJECT NAME: RVAAP	PR	OJECT NUMBER: 030174.0016.001
LOCATION: FACILITYWID	DATE: 3/28/2012	START TIME:11:20
WELL ID: FWGmw-015		
WELL DEPTH: 26.3	INITIAL WATER LEVEL	<i>.</i> :4,44
WELL DIAMETER 2 in.		SCREEN INTERVAL: 13.5 - 23.5
PUMP/PURGING DEVICE: BP - BLADD	ER PUMP	PUMP INTAKE DEPTH: 21.5
PLIMP READINGS: Throffle: 0	Recharge: 0	Discharge: 0

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
11:25	4.44	0.61	0	12.9	0.572		7.34		
11:30		0.6	5	12.4	0.578	16.99	7.33	999	
11:35		0.6	5	13.1	0.58		7.56	999	
11:40		0.6	5	13.4	0.572		7.5	999	
11:45		0.5	5	13.6	0.577		7.45	999	
11:50		0.7	5	13.8	0.577		7.44		
11:55		0.6	5	14.1	0.571		7.36		
12:00		0.6	5	14.3	0.571		7.34		
12:05	24.66	0,6	5	14.2	0.571		7.33		

COMMENTS surge overpurge 18 gal, final WL = 24.66, twd= 26.38 silty well Odor:

PROJECT NAME: RVAAP	PROJ	JECT NUMBER: 030174.0016.001
LOCATION: FACILITYWID	DATE: 4/19/2012	START TIME: 15:20
WELL ID: FWGmw-016		
WELL DEPTH:67.5	INITIAL WATER LEVEL:	16.5
WELL DIAMETER 2 in.		SCREEN INTERVAL: 54.5 - 64.5
PUMP/PURGING DEVICE: BP - BLADI	DER PUMP	PUMP INTAKE DEPTH: 62.5
DIMPREADINGS: Throftle: 0	Pacharge: 0	Discharge: A

COMMENTS surge overpurge 44 gallons, final WL = 17.43, twd= 67.53 clear Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	∙pĦ	Turb (NTU)	ORP (mV)
15:27	16.50	0.9	0	15.4	0.674	12	7.31	293	
15:32		1	5	13.9	0.719		7.34	355	
15:37		1	5	13.5	0.731		7.37	516	
15:42		0.9	5	13.3	0.904		7.36	88	
15:47		1	5	13.3	1.13		7.35	333	
15:52		0.9	5	14.1	1.14	14.75	7.38	211	
15:57		1	5	13.4	1.14		7.36	67	****
16:02		0.5	5	13.4	1.09		7.39	10	
16:07	17.40	1	5	13.2	1,16		7.38	8	
16:12	17.43	1	5	13.3	1.16		7.36	6	

Note: Condition of	f the well:	See STATIC WATER LEVEL FORM	 ·	 ····
Field Personnel:	AR			

PROJECT NAME: RVAAP	PRC	DJECT NUMBER: 030174.0016.001
LOCATION: LOADLINE 1	DATE: <u>3/27/2012</u>	START TIME: 14:35
WELL ID: LL1mw-086		
WELL DEPTH:77.08	INITIAL WATER LEVEL:	6.01
WELL DIAMETER 2 in.		SCREEN INTERVAL: 64.5 - 74.5
PUMP/PURGING DEVICE: BP - BLA	DDER PUMP	PUMP INTAKE DEPTH: 72.5
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
14:46	6.01	0.65	0	11.7	0.533	16.81	10.1	999	
14:51		0.65	5	11.6	0.508		9.35	999	
14:56		0.65	5	11.2	0.505		8.68	999	
15:00		0.6	4	11,3	0.53		8.06	999	C. Will II
15:05		0.5	5	11.4	0.516		7.72	999	
15:10		0.65	5	11.3	0.521		7.66	999	100
15:15		0.65	5	11.4	0.53		7.64	999	
15:20		0.7	5	11.3	0.522	12	7.48	900	
15:25		0.65	5	11.1	0.52		7.54	875	
15:30		0.65	5	11.2	0.521		7.49		
15:35		0.65	5	11.1	0.515		8.87		
15:40		0.6	5	11.3	0.516		7.72		
15:45		0.6	5	11.1	0.509		7.56		
15:50		0.6	5	11.1	0.508		7.54		
15:55		0.6	5	11.2	0.51	12.6	7.57	760	
16:00		0.65	5	11.2	0.506		7.55	734	
16:05		0.65	5	11.5	0.519		7.58	721	
16:10		0.75	5	11.3	0.502		7.49		
16:15		0.65	5	11.3	0.509		7.49		
16:20		0.65	5	11.3	0.519		7.51		
16:25	6.12	0.65	5	11.3	0.51		7.54		-

COMMENTS surge overpurge 59 gal. Final WL = 6.12 twd=77.89 gray Odor:

Note: Condition of the well:	See STATIC WATER LEVEL FORM	
Field Dergonnels AD		

PROJECT NAME: _	RVAAP		PROJECT NUMBER: 03	0174.0016.001
LOCATION: LOAD	LINE 1	DATE: 3/29/2012	START TIME:	14:01
WELL ID: LL1mw-	087			
WELL DEPTH:	18.34	INITIAL WATER LI	EVEL: <u>4.42</u>	
WELL DIAMETER_	2 in.		SCREEN INTER	VAL: 7 - 17
PUMP/PURGING DE	EVICE: BP - BLADDE	R PUMP	PUMP INTAKE	DEPTH:15.0
PUMP READINGS:	Throttle: 0	Recharge: 0	Discharge: 0	
COMMENTS surge ov	erpurge initial purge of 60	gal., then 5 well volumes. I	Final WL = 11.51, twd=18.8 gray Od	or:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр, (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
14:06	4.42	0.5	0	9	0.561	17.59	7.67	999	
14:09		0.45	3	10	0.521		7.5	999	
14:18		0.5	9	9.4	0.561		7.56	755	
14:21		0.4	3	9.6	0.568		7.57	963	
14:24		0.45	3	10.1	0.549		7.42	999	
14:27		0.5	3	9.8	0.569	14.25	7.5	999	
14:30		0.5	3	9.4	0.562		7.49	999	
14:33		0.5	3	9.6	0.569		7.51	999	
14:39		0.45	6	9.7	0.573		7.45	999	
14:42	-	0.4	3	9.2	0.566		7.52	999	
14:45	11.51	0.45	3	9	0.574		7.51	999	

Recharge: 0

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001

LOCATION: LOADLINE 3 DATE: 3/22/2012 START TIME: 15:20

WELL ID: LL3mw-244

WELL DEPTH: 46.9 INITIAL WATER LEVEL: 9.3

WELL DIAMETER 2 in. SCREEN INTERVAL: 34.5 - 44.5

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 42.5

Discharge: 0

COMMENTS surge overpurge 34 gal. Final WL = 9.31, twd= 47.5 clear Odor:

PUMP READINGS: Throttle: 0

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
15:27	9.30	0.7	0	16.7	0.196	15.78	6.45	545	
15:31		0.7	4	13.1	0.19		5.77		
15:36		0.6	5	12.7	0.189		6.65		
15:40		0.5	4	13	0.188		5.72		
15:45		0.7	5	13	0.189		5.87		
15:50		0.75	5	12.5	0.19		5.85		
15:55		0.71	5	12.2	0.189		5.88		
16:00		0.7	5	12.9	0.19		5.91	. 265	
16:05		0.7	5	12.9	0.19	12.6	5.95	255	
16:10		0.7	5	12.3	0.189		5.94	242	
16:15	9.31	0.7	5	12.4	0.189		5.95		

 PROJECT NAME:
 RVAAP
 PROJECT NUMBER:
 030174.0016.001

 LOCATION:
 LOADLINE 3
 DATE:
 4/17/2012
 START TIME:
 13:58

 WELL ID:
 LL3mw-245

 WELL DEPTH:
 48.9
 INITIAL WATER LEVEL:
 11.18

 WELL DIAMETER
 2 in.
 SCREEN INTERVAL:
 36.5 - 46.5

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 44.5

PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0

COMMENTS surge overpurge 31 GALLONS, FINAL WL =12.66, twd=48.92. good for QC Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	ТЕМР. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (nig/L)	pН	Turb (NTU)	ORP (mV)
14:10	11.18	0.9	0	12.4	0.811	15.37	7.64	402	
14:15		0.75	5	12	0.796		7.54	117	
14:20		0.75	5	12	0.797	14.26	7.51	27	
14:25		0.75	5	11.8	0.798		7.47	15	
14:30		0.8	5	11.8	0.796		7.5	176	
14:35		0.7	5	11.8	0.796		7.47	14	
14:40		0.6	5	12.1	0.794		7.44	8	
14:45		0.75	5	11.8	0.796		7.48	8	
14:50	12.60	0.7	5	11.7	0.796		7.48	7	
14:55	12.66	0.75	5	11.7	0.797		7.46	7	

PROJECT NAME: LOCATION: LOADLINE 4

PROJECT NUMBER: 030174.0016.001

DATE: 4/17/2012

START TIME:

15:30

WELL ID: LL4mw-201

WELL DEPTH: 69.89

INITIAL WATER LEVEL: 8.8

SCREEN INTERVAL: 56.5 - 66.5

PUMP/PURGING DEVICE: BP - BLADDER PUMP

WELL DIAMETER

2 in.

PUMP INTAKE DEPTH:

PUMP READINGS: Throttle: 0

Recharge: 0

Discharge: 0

COMMENTS surge overpurge final depth 69.89 Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CÓNDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
15:32	8.80	0.5	0	13.1	0.634	14.23	7.75	114	
15:37		1	5	12.2	0.639		7.72	110	
15:42		0.75	5	12	0.641		7.69	79	
15:47		0.75	5	12.4	0.642		7.7	32	
15:52		0.5	5	11.8	0.64		7.7	29	
15:57		1	5	11.7	0.641		7.72	16	
16:02		0.75	5	11.7	0.641		7.67	9	

Note: Condition of the well: See STATIC WATER LEVEL FORM

Field Personnel: AR

PROJECT NAME:	RVAAP	PR	OJECT NUMBER: 030174.001	6.001
LOCATION: LOADL	INE 6	DATE: 3/28/2012	START TIME: 13:47	
WELL ID: LL6mw-0	08			
WELL DEPTH:	20.2	INITIAL WATER LEVEL	: <u>12.21</u>	
WELL DIAMETER	2 in.		SCREEN INTERVAL:	7.2 - 17.2
PUMP/PURGING DEV	VICE: BP - BLADDE	ER PUMP	PUMP INTAKE DEPTH:	15.2
DUMD DEADINGS	Throttle: 0	Pacharace A	Discharge: 0	

COMMENTS surge overpurge 14 gal, final WL = 15.22, twd= 20.2 Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT, (mS/cm)	DO (mg/L)	Нq	Turb (NTU)	ORP (mV)
13:55	12.21	0.4	0	13.7	0.765	17.21	7.71	999	
13:58		0.45	3	13.5	0.76		7.27	999	
14:01		0.45	3	12.9	0.755	12.56	7.18	999	
14:04		0.5	3	12.5	0.771		7.05		
14:07		0.45	3	13	0.767		7		
14:10		0.4	3	12.6	0.766		6.95		
14:13		0.45	3	12.6	0.771		6.89	999	
14:16		0.5	3	12.6	0.772		6.82		
14:19		0.45	3	12.9	0.771		6.73		
14:22		0.45	3	12.5	0.771		6.74		
14:25		0.45	3	12.5	0.771		6,77		
14:30	15.22	0.4	5	12.9	0.771		6.71	-	

Note: Condition o	f the well:	See STATIC WATER LEVEL FORM		 	
Field Personnel:	AR	•			

PROJECT NAME: RVAAP	PI	ROJECT NUMBER: 030174.0016.0	01
LOCATION: LOADLINE 6	DATE: 4/18/2012	START TIME: 15:26	_
WELL ID: <u>LL6mw-009</u>			
WELL DEPTH: 41.4	INITIAL WATER LEVEI	.: <u>14</u>	
WELL DIAMETER 2 in.		SCREEN INTERVAL:	29 - 39
PUMP/PURGING DEVICE: BP - BLAD	DER PUMP	PUMP INTAKE DEPTH:	37.0
PUMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0	

COMMENTS surge overpurge 23 gal., final WL = 14.01, twd= 41.41, good for QC Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темР. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
15:35	14.00	1	0	13.6	0.676		6.74	955	
15:40		1	5	12,8	0.676		6.89	629	1112
15:45		0.75	5	12.6	0.679		6.98	497	
15:50		1	5	12.8	0.679		6.95	229	1.8.3.
15:55		0.8	5	12.5	0.676		6.93	71	
16:00		1	5	12.9	0.677		6.91	85	
16:05	14.01	0.8	5	13.2	0.677		6.87	86	
16:10		1	5	13	0.677		6.89	64	
16:15	14.01	1	5	13	0.677		6.9	55	**

Note: Condition of	the well:	See STATIC WATER LEVEL FORM	
Field Personnel:	AR		

PROJECT NAME: **RVAAP** PROJECT NUMBER:

030174.0016.001

LOCATION: LOADLINE 11

DATE: 3/29/2012

START TIME:

9:14

WELL ID: LL11mw-011

WELL DEPTH: 20.2

INITIAL WATER LEVEL: 7.25__

WELL DIAMETER 2 in. SCREEN INTERVAL: 7.8 - 17.8_

PUMP/PURGING DEVICE: BP - BLADDER PUMP

PUMP INTAKE DEPTH: 15.8

PUMP READINGS: Throttle: 0

Recharge: 0

Discharge: 0

COMMENTS surge overpurge 21 gal, final WL =7.81,twd=20.44 Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	ТЕМР. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
9:20	7.25	0.8	0	10	0.431		7.93	999	
9:23		0.75	3	10.3	0.419		7.9	999	
9:26		0.6	3	10.3	0.418		7.79	999	
9:29		0.8	3	9.7	0.418		7.74	999	
9:32		0.8	3	9.8	0.42		7.65	999	
9:35		0.8	3	10	0.419		7.57	999	
9:38		0.75	3	10	0.42	13.58	7.52	643	
9:41		0.6	3	10	0.421		7.51	436	
9:44		0.8	3	10	0.421		7.5	424	
9:47	7.81	0.8	3	10	0.426		7.49	394	

PROJECT NAME: _	RVAAP	_		PROJECT NUMBER:	030174.0016.001
LOCATION: LOAD	DLINE 11	DATE:	4/19/2012	START TI	ME: 12:46

WELL ID: LL11mw-012

WELL DEPTH: 117.35 INITIAL WATER LEVEL: 20.11

WELL DIAMETER 2 in. SCREEN INTERVAL: 104.5 - 114.5

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 112.5

PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0

COMMENTS surge overpurge 80 gal, Final WL = 20.4, twd= 117.41 QC worthy Odor:

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	Нq	Turb (NTU)	ORP (mV)
13:05	20.11	1	0	14.4	0.517	14.35	8.1	198	
13:15		0.7	10	14.3	0.517	15.27	7.82	227	
13:20		0.6	5	14.1	0.517		7.74	85	
13:28		0.6	8	13.5	0.517	13.4	7.71	36	
13:35		0.8	7	13.2	0.517		7.69	98	
13:44		0.9	9	13.2	0.517		7.71	15	
13:51		0.8	7	12.9	0.517		7.68	9	
14:00		0.5	9	12.8	0.517		7.62	7	
14:10		0.6	10	12.7	0.517		7.63	7	
14:20		0.7	10	12.9	0.517		7.62	64	
14:30		0.7	10	12.9	0.517		7.68	7	
14:40		0.7	10	13.2	0.517		7.58	7	
14:50		0.9	10	13,5	0.517		7.58	7	
15:00	20.40	0.6	10	13,5	0.517		7.55	7	

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001

LOCATION: LOADLINE 12 DATE: 3/23/2012 START TIME: 12:18

WELL ID: LL12mw-182ss

WELL DEPTH: 38.55 INITIAL WATER LEVEL: 8.05

WELL DIAMETER 2 in. SCREEN INTERVAL: 25.25 - 35.25

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 33.3

PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0

COMMENTS surge overpurge 31 gallon, final WL = 31.61, twd= 38.44 clear Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	рН	Turb (NTU)	ORP (mV)
12:25	8.05	0.51	0	14.7	1.07		7.5	254	
12:30		0.6	5	14.1	0.984		7.64		
12:35		0.5	5	14.3	0.988		7.66		
12:40		0.5	5	14	0.968	13	7.69	400	
12:45		0.5	5	14.6	0.961		7.58	346	
12:50		0.75	5	14.2	0.958		7.58	339	
12:55		0.4	5	13.8	0.935		7.55	324	
13:00		0.5	5	14.6	0.928	***	7.58		
13:05		0.5	5	14.3	0.936		7.56		
13:10		0.4	5	14.1	0.933	****	7.59		
13:15		0.5	5	14.6	0.929		7.58		
13:20		0.5	5	15.1	0.922		7.55		
13:25		0.5	5	14.1	0.938		7.53		
13:30	31.61	0.5	5	14.4	0.987		7.53		

Note: Condition of the well:	See STATIC WATER LEVEL FORM	 	
Field Personnel: AR			

PROJECT NAME: RVAAP	F	PROJECT NUMBER: 030174.0016.001	_
LOCATION: LOADLINE 12	DATE: 3/22/2012	START TIME: 13:48	
WELL ID: LL12mw-247			
WELL DEPTH: 22.7	INITIAL WATER LEVI	EL: <u>4.4</u>	
WELL DIAMETER 2 in.		SCREEN INTERVAL: 10 -	20
PUMP/PURGING DEVICE: BP - BLADDE	R PUMP	PUMP INTAKE DEPTH:	18.0
PLIMP READINGS: Throttle: 0	Recharge: 0	Discharge: 0	

COMMENTS surge overpurge 21 gal twd= 22.73 final water level = 19.77 clear Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pН	Turb (NTU)	ORP (mV)
13:54	4.40	0.5	0	15.1	0.833	16.47	6.81	543	
13:59		0.5	5	13.7	0.838		6.8		
14:03		0.4	4	12.7	0.841		6.82		
14:07		0.6	4	11,8	0.848		6.87	324	
14:11		0.45	4	12.7	0.87		6.86		
14:15		0.5	4	12.8	0.888		6.93		
14:24		0.5	9	13.5	0.831		6.95	74	
14:32		0.5	8	13.8	0.871		7.02	67	
14:45	22.73	0.5	13	14.3	0.856		7.03	50	

PROJECT NAME:	RVAAP			PROJECT N	iumber: _	0301	74.0016	.001
LOCATION: NACA	TEST A	DATE:	4/19/2012		START TIM	ме:	10:00	
WELL ID: NTAmw-	-119							
WELL DEPTH:	103.3	INITIAL	WATER LEV	VEL:11.41				
WELL DIAMETER_	2 in.				SCREEN II	NTERV.	AL:	90 - 100
PUMP/PURGING DE	EVICE: BP - BLADDER	PUMP		<u>.</u>	PUMP INT	AKE DI	EPTH:	98.0
PUMP READINGS:	Throttle: 0	Rechar	ge: 0	Di	scharge: 0			
COMMENTS surge ov	erpurge 150 initial remova	al +75 gal. F	inal WL = 11.7	2twd= 103.6. (Good for QC (Odor:		

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
10:20	11.41	1	0	12.5	0.624	15.24	8.47	45	
10:30		1	10	12.2	0.6		8.4	13	
10:40	11.56	1	10	12	0.597		8.32	10	
10:50		1	10	12.2	0.594		8.41	9	****
11:00		1	10	12.2	0.587	14.23	8.4	17	
11:10	11.62	1	10	11.9	0.589		8.35	8	
11:15		1	5	11.9	0.585		8.3	5	
11:20	11.70	1	5	12	0.588		8.25	7	
11:25		1	5	11.9	0.588		8.2	6	
11:30		1	5	11.9	0.584		8.16	7	
11:40	11.72	1	10	11.8	0.582		8.17	6	

 PROJECT NAME:
 RVAAP
 PROJECT NUMBER:
 030174.0016.001

 LOCATION:
 WINKLEPECK
 DATE:
 6/27/2012
 START TIME:
 11:33

 WELL ID:
 WBGmw-018

 WELL DEPTH:
 24.78
 INITIAL WATER LEVEL:
 21.38

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 21.5

SCREEN INTERVAL: 13.5 - 23.5

PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0

COMMENTS surge overpurge twd= 24.92, soft muck at start,0.5 gal/min, brown, 12 gal. Odor:

2 in.

WELL DIAMETER

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT, (mS/cm)	DO (mg/L)	рН	Turb (NTU)	ORP (mV)
12:44		0.5	1	12.5	0.097	13.31	7.4	999	
12:47		0.5	1.5	12	0.093	13.67	6.57	999	
12:51	21.40	0.5	2	12.1	0.09	13.47	6.22	999	
12:55	21.40	0.5	2	12.6	0.092	13	5.97	999	
12:59	21.40	0.5	2	12.5	0.09	13.12	5.9	999	
13:03	21.40	0.6	2	12.4	0.089	13.31	5.93	999	
13:06	21.40	0.5	1.5	12.4	0.089	13.37	5.92	999	
13:10	21.40	0.5	2	12.3	0.089	13.38	5.86	999	
13:13	21.40	0.5	1.5	12.5	0.089	13.1	5.84	999	

Note: Condition of the well	See STATIC WATER LEVEL FORM		
Field Personnel: CAI			

PROJECT NAME: RVAAP			PROJECT NUMBER:	030174.0016.001
LOCATION: WINKLEPECK	DATE:	6/27/2012	START TIME	E: 11:40

LOCATION: WINKLEPECK

DATE: 6/27/2012

WELL ID: WBGmw-019

WELL DEPTH: _____50.61

INITIAL WATER LEVEL: 17.9

WELL DIAMETER 2 in. SCREEN INTERVAL: 39.55 - 49.55

PUMP INTAKE DEPTH: 47.6

PUMP/PURGING DEVICE: BP - BLADDER PUMP

PUMP READINGS: Throttle: 0

Recharge: 0

Discharge: 0

COMMENTS surge overpurge twd=50.58, 28 gallons total, clear Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	темр. (°С)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	рН	Turb (NTU)	ORP (mV)
11:50	18.41	0.9	1	15.7	0.44	13	6.81	600	
11:54	18.59	0.75	4	12.9	0.412	15.09	7.21	59	
11:58	18.59	0.85	4	12.2	0.408	15.49	7.18	73	
12:02	18.58	0.91	4	12	0.407	14.7	7.21	35	
12:09	18.54	1	7	12.2	0.406	13.97	7.24	128	
12:13	18.58	1	4	12.1	0.404	14.07	7.22	45	
12:17	18.57	1	4	12	0.404	14.1	7.23	44	
12:21	18.57	1	4	12.1	0.406	13.9	7.25	41	
12:26	18.57	1	5	11.7	0.408	14	7.23	43	
12:30	18.57	1	4	11.6	0.406	13.85	7.21	44	
12:35	18.57	1	5	12,1	0.404	13.56	7.14	44	
12:40	18.57	1	5	12	0.404	13.67	7.13	44	
12:44	18.57	1	4	11.8	0.406	13.8	7.14	44	

Note: Condition of the well	See STATIC WATER LEVEL FORM		
Field Personnel: CAL			

PROJECT NAME: RVAAP			PROJECT NUMBER:	030174.0016.001
LOCATION: WINKLEPECK	DATE:	7/17/2012	START TIM	4E: 9:07

LOCATION: WINKLEPECK

WELL ID: WBGmw-020

WELL DEPTH: 43.8

INITIAL WATER LEVEL: 14.02

WELL DIAMETER 2 in.

SCREEN INTERVAL: 32.9 - 42.9

PUMP/PURGING DEVICE: BP - BLADDER PUMP

PUMP INTAKE DEPTH:

PUMP READINGS: Throttle: 0

Recharge: 0

Discharge: 0

COMMENTS surge overpurge 41 gal., twd=43.8 Odor:

	,								
TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	рН	Turb (NTU)	ORP (mV)
9:27	15.03	1	1	16.3	0.195	14.96	7.23	999	
9:31	14.53	1	4	16.8	0.189	15.22	6.91	999	
9:35	15.00	í	4	15.6	0.182	16.17	6.86	560	
9:39	15.17	1	4	15.4	0.187	16.61	6.87	999	
9:43	15,60	1	4	14.9	0.189	17.06	6.9	999	
9:47	15.69	1	4	14.9	0.189	16.97	6.91	778	
9:51	15.75	1	4	14.5	0.19	16.66	6.9	498	
9:55	15.72	1	4	15.6	0.189	15.28	6.92	330	
9:59	15,69	1	4	15.7	0.19	15.02	6.94	230	
10:03	15.67	1	4	15.5	0.191	15.2	6.94	213	
10:07	15.68	1	4	15.3	0.19	15.09	6.94	233	

Note: Condition of the well:	See STATIC WATER LEVEL FORM	 	
Field Desconnels CAI			

PROJECT NAME: _	RVAAP	_		PROJECT NUMBER:	030174.0016	.001
I OCATION: WINK	I EDECK	DATE	7/17/2012	 የፐለ የተ ፕር	4E+ 8+04	

WELL ID: WBGmw-021

WELL DEPTH: 43.08 INITIAL WATER LEVEL: 10.65

WELL DIAMETER 2 in. SCREEN INTERVAL: 32 - 42

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 40.0

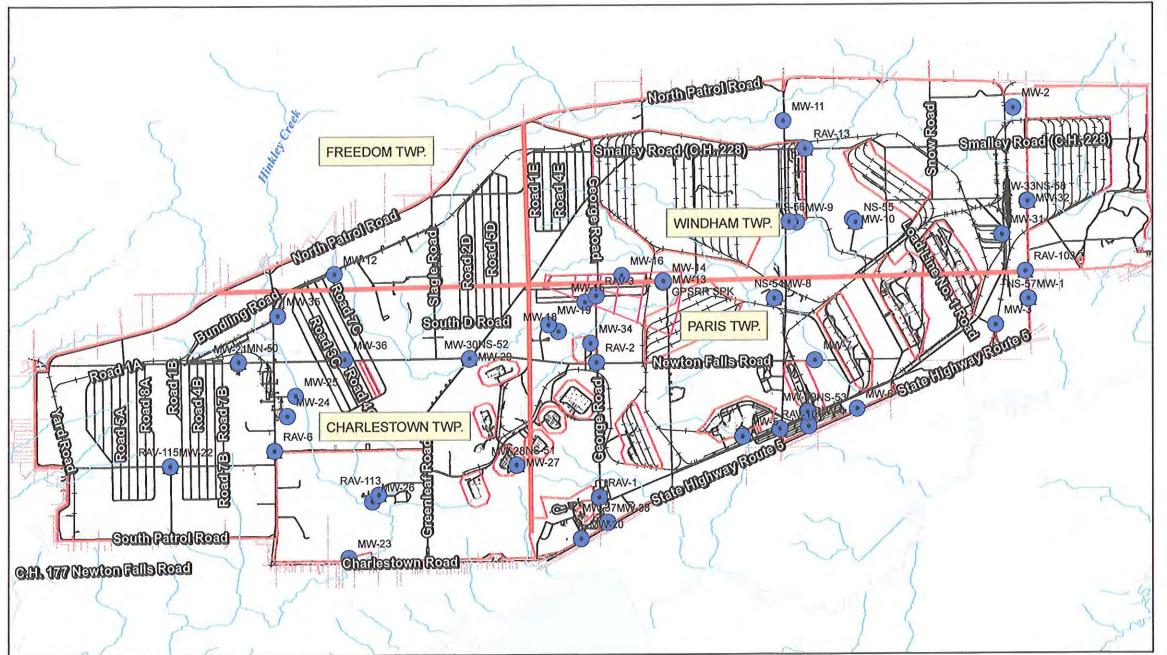
PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0

COMMENTS surge over purge 35 gal., twd=43. 08 Odor:

TIME	WATER LEVEL (bloc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	рН	Turb (NTU)	ORP (mV)
8:18	10.94	1	5	15.1	0.404	13.9	7.6	330	
8:23	10.95	1	5	14.6	0.383	13.4	7.35	597	
8:28	10.94	1	5	13.9	0.385	13.73	7.29	114	
8:32	10.94	1	4	13.3	0.373	14.19	7.13	65	
8:36	10.94	1	4	13.1	0.38	14.21	7.08	52	
8:40	10.94	1	4	13.2	0.379	14.15	7.02	41	
8:44	10.94	1	4	13	0.381	14.3	6.98	43	
8:48	10.94	1	4	13.4	0.38	14	6.95	38	

Note: Condition of	the well:	See STATIC WATER LEVEL FORM
Field Personnel:	CAL	

2 3 APPENDIX D **SURVEY REPORT**



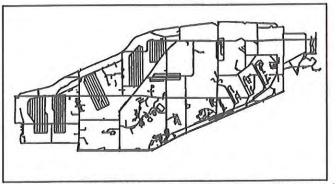
Map Showing Ground Water Monitor Test Wells Installed by Environmental Quality Management Inc.

Legend

- EQM Monitor Test Wells Installed 2012 (38 Total)
- =Control points used

Township Lines

Ravenna Army Ammunition Plant Ravenna, Ohio



Portage County, Ravenna, Ohio (Camp Ravenna)







US Army Corps of Engineers

600 Dr. Martin Luther King Jr. Place Louisville, KY 40202

15,000 Feet

Louisville District



Projection Datum is NAD83, Ohio State Plane Rectangular Grid, North Zone

2,500 5,000 10,000 Bar Scale in Feet

Prepared August 6, 2012



8451 State Route 5 Bidg:1037 Ravenna, Oh 44266 330-358-7311 Don Trocchio, PS don.trocchio@us.army.mll



8451 State Route 5 Bldg:1027 Ravenna, Oh 44266 330-358-7311 Don Trocchio, PS don.trocchio@us.army.mil

Survey of Monitor Wells Installed by EQM, Inc. at Ravenna Army Ammunition Plant, Ravenna, Ohio Spring 2012 & August 2012

Pt	North(Y)	East(X)	Elv88(Z)	Gnd88	Desc	Elv29	Gnd29	Desc
1	561714	2380437	940.09	937.5	MW-1	940.63	938.0	MW-1
2	571655	2379666	949.54	947.0	MW-2	950.08	947.5	MW-2
3	560375	2378732	943.78	941.3	MW-3	944.32	941.8	MW-3
4	555141	2368932	983.71	980.8	MW-4	984.25	981.3	MW-4
5	554607	2365417	977.48	975.4	MW-5	978.02	975.9	MW-5
6	556033	2371456	988.24	985.7	MW-6	988.78	986.2	MW-6
7	558573	2369249	980.70	978.2	MW-7	981.24	978.7	MW-7
8	561797	2367174	971.94	969.4	MW-8	972.48	969.9	MW-8
9	565739	2368321	956.08	953.1	MW-9	956.62	953.6	MW-9
10	565904	2371221	1003.94	1001.3	MW-10	1004.48	1001.8	MW-10
11	571015	2367606	972.56	970.1	MW-11	973.10	970.6	MW-11
12	563118	2344042	1131.42	1128.9	MW-12	1131.96	1129.4	MW-12
13	562659	2361302	990.91	990.0	MW-13	991.45	990.5	MW-13
14	562645	2361304	989.71	988.8	MW-14	990.25	989.3	MW-14
15	561623	2357161	1043.77	1042.9	MW-15	1044.31	1043.4	MW-15
16	563009	2359106	1010.38	1009.5	MW-16	1010.92	1010.0	MW-16
18	560109	2355785	1031.36	1029.0	MW-18	1031.90	1029.5	MW-18
19	560459	2355269	1037.54	1034.9	MW-19	1038.08	1035.4	MW-19
20	549319	2356970	1036.61	1034.0	MW-20	1037.15	1034.5	MW-20
21	558510	2338973	1169.56	1167.0	MW-21	1170.10	1167.5	MW-21
22	553142	2335421	1183.79	1181.4	MW-22	1184.33	1181.9	MW-22
23	548356	2344785	1074.87	1072.3	MW-23	1075.41	1072.8	MW-23
24	555735	2341569	1111.07	1108.5	MW-24	1111.61	1109.0	MW-24
25	556784	2341998	1101.60	1099.0	MW-25	1102.14	1099.5	MW-25
26	551286	2346013	1079.53	1076.9	MW-26	1080.07	1077.4	MW-26
27	553154	2353616	1123.61	1120.8	MW-27	1124.15	1121.3	MW-27
28	553149	2353604	1123.21	1120.9	MW-28	1123.75	1121.4	MW-28
29	558680	2351119	1079.66	1076.9	MW-29	1080.20	1077.4	MW-29
30	558691	2351125	1079.82	1077.4	MW-30	1080.36	1077.9	MW-30
31	565077	2379060	961.61	959.0	MW-31	962.15	959.5	MW-31
32	566790	2380389	940.85	938.4	MW-32	941.39	938.9	MW-32
33	566801	2380390	941.07	938.5	MW-33	941.61	939.0	MW-33

Pt	North(Y)	East(X)	Elv88(Z)	Gnd88	Desc	Elv29	Gnd29	Desc
34	559483	2357460	1058.97	1056.6	MW-34	1059.51	1057.1	MW-34
35	560957	2341064	1137.03	1134.5	MW-35	1137.57	1135.0	MW-35
36	558686	2344572	1157.56	1155.1	MW-36	1158.10	1155.6	MW-36
37	550179	2358353	1013.97	1011.6	MW-37	1014.51	1012.1	MW-37
38	550171	2358364	1013.85	1011.4	MW-38	1014.39	1011.9	MW-38
39	555897	2368867	984.48	981.8	MW-39	985.02	982.3	MW-39

Survey of Monitor Wells Installed by EQM, Inc. at Ravenna Army Ammunition Plant, Ravenna, Ohio Control Points Spring & Summer 2012

Pt	North(Y)	East(X)	Elv88(Z)	Desc Desc	Elv29	Desc
50	558563.717	2338995.282	1165.95	MN-50	1166.49	MN-50
51	553175.06	2353605.995	1120.78	NS-51	1121.32	NS-51
52	558714.747	2351134.167	1078.81	NS-52	1079.35	NS-52
53	555864.815	2368883.721	982.15	NS-53	982.69	NS-53
54	561790.923	2367120.975	970.25	NS-54	970.79	NS-54
55	565744.212	2371372.538	1003.88	NS-55	1004.42	NS-55
56	565772.683	2367900.774	961.92	NS-56	962.46	NS-56
57	561713.721	2380466.513	936.92	NS-57	937.46	NS-57
58	566792.394	2380412.918	939.18	NS-58	939.72	NS-58
70	569575.016	2368754.577	965.60	RAV-13	966.14	RAV-13
71	553935.235	2340909.174	1117.55	RAV-6	1118.09	RAV-6
72	551472.462	2357923.326	1023.92	RAV-1	1024.46	RAV-1
73	555004.363	2367417.833	983.84	RAV-10	984.38	RAV-10
74	551646.93	2346357.5	1082.64	RAV-113	1083.18	RAV-113
75	558490.787	2357792.668	1061.61	RAV-2	1062.15	RAV-2
76	563155.39	2380303.12	932.21	RAV-103	932.75	RAV-103
77	553159.58	2335425.11	1182.03	RAV-115	1182.57	RAV-115
78	561955.072	2357760.413	1034.46	RAV-3	1035.00	RAV-3

Notes: Northings & Eastings are based on NAD83, Ohio State Plane Rectangular Grid Coordinate System, North Zone, 3401

MW=preliminary monitor well number assigned to wells

Elv88= the NAVD88 datum elevation of the monitor well inner pvc casing (notched top of northern edge)

Elv29= the NGVD29 datum elevation of the monitor well inner pvc casing (notched top of northern edge)

Gnd88= NAVD88 datum elevation of the ground at base of the monitor well

Gnd29= NGVD29 datum elevation of the ground at base of the monitor well

NS=12"nail spike used for nearby offset

MN=mag nail used for nearby offset

RAV= are USACE control monuments found and used, brass disc set in concrete

The above data represents the initial 31 wells surveyed to date (April 30, 2012). An additional 8 wells will be installed in May and June (Nos.2,13,14,15,16,17,18,19).

7 additional wells were added between July 30 and August 13, 2012 (18,19, 13,14,15,16,2) 17 was eliminated

Well Survey Key

Survey Desc. ^a	RVAAP Well ID	Survey Desc. ^a	RVAAP Well ID
MW-1	LL1mw-086	MW-21	FWGmw-005
MW-2	EBGmw-131	MW-22	FWGmw-006
MW-3	LL1mw-087	MW-23	FWGmw-007
MW-4	LL12mw-247	MW-24	FWGmw-008
MW-5	LL4mw-201	MW-25	FWGmw-009
MW-6	LL3mw-244	MW-26	NTAmw-119
MW-7	LL3mw-245	MW-27	LL6mw-008
MW-8	CBPmw-009	MW-28	LL6mw-009
MW-9	FWGmw-001	MW-29	LL11mw-011
MW-10	B12mw-013	MW-30	LL11mw-012
MW-11	FWGmw-002	MW-31	FWGmw-010
MW-12	FWGmw-003	MW-32	FWGmw-012
MW-13	WBGmw-018	MW-33	FWGmw-011
MW-14	WBGmw-019	MW-34	FWGmw-013
MW-15	WBGmw-020	MW-35	FWGmw-014
MW-16	WBGmw-021	MW-36	CBLmw-005
MW-18	DA2mw-114	MW-37	FWGmw-015
MW-19	DA2mw-115	MW-38	FWGmw-016
MW-20	FWGmw-004	MW-39	LL12mw-182s

^a Survey description adapted from EIS Addendum map IDs.

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17	APPENDIX E
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19	FIELD CHANGE REQUESTS
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21	

John Miller

From: Deppisch, Vicki <Vicki.Deppisch@epa.state.oh.us>

Sent: Thursday, March 08, 2012 6:27 AM

To: JOHN MILLER

Cc: Nichter, Mark W LRL (Mark.W.Nichter@usace.army.mil); Mohr, Eileen; Mark Patterson;

Fisher, Todd; Katie Tait (kathryn.s.tait@us.army.mil) (kathryn.s.tait@us.army.mil); Kinder,

Derek S LRL (Derek, S, Kinder@usace.army.mil)

Subject: RE: Approval Form for Filter Pack

Importance: Low

John

Looks good to me, go ahead with the requested change. I also agree we do not need a technical change order. Thanks vicki

From: John Miller [mailto:jmiller@eqm.com] Sent: Wednesday, March 07, 2012 2:04 PM

To: Deppisch, Vicki

Cc: Nichter, Mark W LRL (Mark.W.Nichter@usace.army.mil); Mohr, Eileen; Mark Patterson; Fisher, Todd; Katie Tait (kathryn.s.tait@us.army.mil) (kathryn.s.tait@us.army.mil); Kinder, Derek S LRL (Derek.S.Kinder@usace.army.mil)

Subject: Approval Form for Filter Pack

Vicki: due to the field conditions encountered during well installation we are requesting a change in the type of sand used for the wells. Attached for your review is our request and associated backup documentation. As described in the request EQM does not believe that this is a technical change order as the sand alternatives are already referenced in the Facility Wide Sampling and Analysis Plan for Environmental Investigations (SAIC, 2011). If you have any questions please let me know.

Thanks, John

John M. Miller

Environmental Quality Management, Inc. 1800 Carillon Boulevard Cincinnati, Ohio 45240 513.825.7500 Cell 513.673.4065

Environmental Quality Management, Inc.

March 7, 2012

1800 Carillon Boulevard Cincinnati, Ohio 45240 (513) 825-7500 FAX (513) 825-7495 www.eqm.com

Mr. Mark Nichter U.S. Army Corps of Engineers 600 Martin Luther King Jr. Place Louisville, Kentucky 40202

Regarding: Additional Approval Form for Well Material (No. 5 sand) at RVAAP

Dear Mr. Nichter:

Environmental Quality Management, Inc. (EQM) has been contracted by the United States Army Corps of Engineers (USACE), Louisville District, to install 39 new monitoring wells on the former Ravenna Army Ammunition Plant (RVAAP) facility property. In accordance with the *Facility Wide Sampling and Analysis Plan for Environmental Investigations (SAIC, 2011)* EQM provided approval forms for filter pack, bentonite, and water. EQM requests approval of an additional filter pack. We are requesting the approved filter pack, No. 7 sand, be replaced with No. 5 sand in thick water columns. The No. 7 sand in current conditions has a tendency to float on the water column and has a propensity to try and bridge or form a natural filter pack. The heavier No. 5 sand should descend through the water column at a more acceptable rate. This material will be used for well installation activities. The attached approval forms document the manufacturer, source, and quality of the downhole material to be used on site. Please note that this is not a technical change order as the *Facility Wide Sampling and Analysis Plan for Environmental Investigations (SAIC, 2011)* indicates that No. 7 sand is acceptable based on site-specific conditions encountered during drilling (see attached pages 5-11 and 5-12 from the above referenced plan).

Thank you for your consideration in this matter.

Sincerely,

Environmental Quality Management, Inc.

Colleen A. Lear, LG

cc: Ms. Vickie Deppisch, Ohio EPA

Attachments



Solving Problems...Creating Cost-Effective, Sustainable Solutions!

GRANULAR FILTER PACK APPROVAL

Project for Intended Use: RI Well Installation, Ravenna, OH.

Filter Material Brand Name: Silica Dry Industrial Sand

Lithology: Silica Sanel

Grain Size Distribution: 99.7% SiOz, No.5 Sand (See attached)

Source/pit or quarry of origin: Sharon Conglomerate, Thompson Mine, OH

Manufacturer: R.W. Sidley

Manufacturer address: 7123 Madison Rd, Thompson, 04 44086

Processing method: Washed, dried, and screened

Slot Size of Intended Screen: O. 010 inches

SUBMITTED BY:

Company: Environmental Quality Hanagement

Person: Colleen A. Lear

Telephone Number: (5/3) 825-7500

Date 3-1-2012

FOR APPROVAL (A)/DISAPPROVAL (D)

(circle one)

Project Officer/Date:

. D

Project Geologist/Date:

D

U.S. Army Project Manager/Date:

\ D

Figure 5-2. Granular Filter Pack Description and Approval Form

R.W. SIDLEY, INC.

LABORATORY SIEVE ANALYSIS

SAMPLE#

600

LOT#

	GM.WEIGHT	%RET.	CUM%RET.	CUM%PASS	SPEC.	E.S.	U.C	A.F.S.
1020							:	
8	11.9	2.4%	2.4%	97.6%		0.874	1.772	0.000
10	34.5	7.0%	9.4%	90.6%				" "
12	84.3	17.0%	26.4%	73.6%		,	-1 .	
14	133.0	26.9%	53.3%	46.7%				
16	89.2	18.0%	71.3%	28.7%				
18	59.1	11.9%	83.3%	16.7%				
20	39.6	8.0%	91.3%	8.7%				
25	24.0	4.9%	96.1%	3.9%				
30	11.3	2.3%	98.4%	1.6%				
35	5.9	1.2%	99.6%	0.4%				
40	1.1	0.2%	99.8%	0.2%				
Pan	0.9	0.2%	100.0%	0.0%				

494.8

F.M.

2.461

Quality Control Lab

DATE

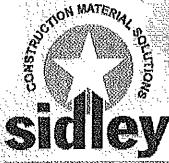
27-Apr-09

Prepared B

JEFF

ALSO KNOWN AS # 5 WELL PACK.

}



PRODUCT INFORMATION

SILICA DRY INDUSTRIAL SAND PLANT: THOMPSON, OH

R.W. Sidley's operates a state of the art processing plant that produces the highest quality products virtually free of deleterious materials. Our processed silica sand is from our Thompson mine part of the Sharon conglomerate formation. All silica sands are washed, dried and screened at the Thompson plant.

Available packaging: 50 lb, bags, 100 lb, bags; 3,000 lb, super sacks, 4,000 lb, super sacks and bulk quantities.

			LAI	BORATORY	SIEVE ANA	LYSIS						
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{	CHEMICAL ANALYSIS								
Ì	Tests	Results/Units	Methods						
	Fe2O3	0.067%	ICP						
1	Na2O	0,007%	DC ARC						
	SiO2	99.70%	By Difference after imputities scan						
	TAŌ	<0.10%	DC ARC						

Testing: Results are typical for the product.

Laboratory Sieve Analysis: Testing was conducted at R.W. Sidley, Inc.,
Thompson, OH. Tests performed in accordance with ASTM D-7S,
ASTM C-136, and AASHTO T-176.

Chemical Analysis: Testing conducted by NSL Analytical, Cleveland, OH. Physical Analysis: Testing conducted by Solar Testing Laboratories, Inc., Brooklyn Heights, OH.

PHYSICAL ANALYSIS *	
Silica	
Percent Loss, Sodulm Sulfate Soundness (ASTM C88)	0.3%
Percent Loss, Acid Solubility (ASTM D3042)	0.3%
Moh's Hardness	7
Deleterious Substances	0
Coal, Lignite	0
Clay Lumps	Q
Shale, Shaly Material	. 0
Limonitic Concretions	0
Chert	0
Soft Pieces	0
Metallic Particles	0

evised: 02.19,10

	Hardness by WOHS Scale - 7 Shane - Round to Semi-Anoular								R W Sidley Inc	P.O. Box 150	Painesville. Ohio 44077	440-352-9343	Realition of the second control of the secon	
	200	260.1	76.0%	97-99 Tbs	Less than 5%	Dess than 1:0%	6.5-7.0%			%+66	750%	70%	**************************************	- 17 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
Typical Physical Properties	Specific Gravity Absorbtion	Soundness:Loss	LA Abrasion Loss	LBS/Curost	Deleterious Material	Acid Solubility		・ 大きない できない アンド・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	Typical Elemental Analysis	S102 % By Difference	OFA	07	Pezos Other Elements Less Than	このでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、これのでは、

5.4.2.2.1 Casing/Screen

The casing, screen, and fitting materials to be used for monitoring well construction during the AOC-specific investigations will be composed of new, pre-cleaned, 5.0-cm (2.0-inch) rigid Schedule 40 or Schedule 80 PVC. Screen sections will be commercially fabricated and slotted with openings equal to 0.025 cm (0.010 inches). Screen and casing sections will be flush threaded, and thermal or solvent welded couplings will not be used. Gaskets, pop rivets, and screws will not be used during monitoring well construction. Pre-packed screens will be used for intervals that cannot be filter-packed conventionally.

All materials used for monitoring well construction will be as chemically inert as technically practical with respect to the environment. All PVC screens, casings, and fittings will conform to National Sanitation Foundation/American National Standards Institute Standard 14 (NSF 2009) for potable water usage or the *Annual Book of ASTM Standards* (ASTM 1995) and will bear the appropriate rating logo. Additional specifications are provided in the *Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Well* (USEPA 1991).

The well caps and centralizers used for monitoring well construction will be composed of new, pre-cleaned PVC. The tops of all new monitoring well casings associated with well installations will be covered with water-tight expandable-flange locking well caps. The caps will be fitted to the casings and will be designed to preclude binding to the casing resulting from tightness of fit, unclean surface, or frost and to allow for equilibration between hydrostatic and atmospheric pressures. The caps will be designed to fit securely enough to preclude debris and insects from entering the monitoring well.

Well centralizers will be used in construction of all monitoring wells that are installed within open boreholes exceeding approximately 6.1 m (20.0 ft) in depth to prevent the PVC well casing from deforming. Well centralizers will be attached to the well casing at regular and equal intervals with stainless steel fasteners or strapping. Centralizer placement will be determined in the field at the time of monitoring well installation based on the total depth of each well. Centralizers will not be attached to well screens or to portions of well casings exposed to the granular filter pack or bentonite seal. Centralizers will be oriented to allow unrestricted passage of the tremie pipe used to place monitoring well construction materials within the annular space between the well and the borehole wall.

5.4.2.2.2 Well Installation Materials: Filter Pack, Bentonite, And Grout

The granular filter pack used during the AOC-specific investigations for monitoring well installation will comply with requirements defined in the *Monitoring Well Design, Installation, and Documentation at Hazardous and/or Toxic Waste Sites* (USACE 1998a) and will be approved by the U.S. Army Project Manager prior to beginning fieldwork (Figure 5-2). A 500-cm³ (1-pint) representative sample of the granular filter pack material proposed for use will be submitted to the USACE, Louisville District; RVAAP; or other U.S. Army Project Manager for approval, if requested. Based on the screen slot size of 0.025 cm (0.010 inches) to be used for monitoring well construction, the granular filter pack material used will generally be Global Supply No. 7 (size equals 0.047 cm



[0.0188 inches]) sand. Global Supply No. 5 alternately may be used with prior approval from the U.S. Army Project Manager and Ohio EPA if conditions warrant.



The granular filter pack material will be visually clean (as seen through a 10-power hand lens), free of material that would pass through a No. 200 sieve, inert, siliceous, and composed of rounded grains. The filter material will be packaged in bags or buckets by the supplier and delivered. Filter pack material in pre-packed screens also will meet these criteria.

Bentonite will be used during the AOC-specific investigations for one or more of the following purposes:

- Creation of an annular seal during monitoring well construction between the granular filter pack and the grout seal;
- Additive in the grout mixture used to create the upper grout seal during monitoring well construction;
- Additive in the grout mixture used to abandon boreholes not converted into monitoring wells;
 and/or
- Abandonment of surficial boreholes and pilot holes.

ENVIRONMENTAL QUALITY MANAGEMENT, INC. TECHNICAL CHANGE ORDER

Subject: Remedial Investigation Well Completion at Winklepeck Burning Grounds

Ravenna Army Ammunition Plant

File: GSA Contract Number GS-10F-0293K

Date: February 24, 2012

Distribution List: V. Deppisch - OEPA K. Elgin - OHARNG

T. Fisher – OEPA M. Patterson - BRAC M. Nichter – USACE E. Mohr – OEPA

Pursuant to the Final Sampling and Analysis Plan for Environmental Investigation Services Addendum (EQM, January 2012), which is Part I of the Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Addendum (EQM, January 2012), Environmental Quality Management, Inc. (EQM) will be installing four new monitoring wells in the Winklepeck Burning Grounds (WBG) to define the horizontal and vertical extent of contaminants of potential concern (COPCs) within this area of concern (AOC) at the former Ravenna Army Ammunition Plant (RVAAP) in Ravenna, Ohio. At the request of the Ohio Army National Guard (OHARNG), the four new wells are to be completed in such a fashion as to prevent potential ricochets during firing range activities. As a result, the wells must either be completed as flush-mount wells or with above-ground protective casings that are surrounded by soil berms. Because flush-mount wells are susceptible to surface water accumulation around the wellhead, EQM recommends completing each well with a short stickup (i.e., about 1 foot above grade) coupled with a soil berm. The soil berm will take the place of bollards, which are typically used for additional well protection at RVAAP.

Specifically, the 6-in. to 8-in.-diameter steel protective casing typically used for above-ground completions will be adapted for the shorter stickup by simply inserting most of the casement below ground (approximately 5 feet). The grout will be inserted to within 12 inches of the ground surface and topped with concrete. The top of the polyvinyl chloride (PVC) well casing will be sawed off so that approximately 8 inches of the PVC well pipe extends above the ground surface. The gap between the top of the PVC well and the lid of the protective casing will be about 4 inches; this will allow room for the expandable well cap to be placed on the well. The attached schematic shows the proposed well completion scenario for the new WBG wells.

This requested change will not impact cost or schedule for this project.

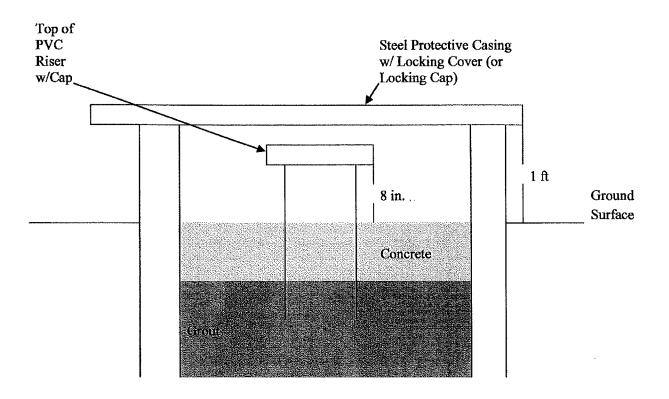
Jøhn M. Miller

EQM Project manager

Mark Nichter

USACE Technical Manager

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Environmental Quality Management, Inc.

1800 Carillon Boulevard Cincinnati, Ohio 45240 (513) 825-7500 FAX (513) 825-7495 www.egm.com

April 11, 2012

Mr. Mark W. Nichter, PG Environmental Compliance (CELRL-ED-E-C) Room 921 U.S. Army Corps of Engineers P.O. Box 59 Louisville, KY 40201-0059

Reference:

Contract No. GS-10F-0293K

Delivery Order No. W912QR-1-F-0266

Subject:

Facility-Wide Groundwater Monitoring Program Plan

RVAAP-66 Facility-Wide Groundwater

Soil IDW Letter Report - Draft

Dear Mr. Nichter:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI), installation of monitoring wells, approved per the Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum, EQM, Jan 2012 (Addendum) began on February 27, 2012. These activities resulted in the generation of IDW consisting of soil from drilling operations. The purpose of this letter is to characterize and classify IDW for disposal and to propose methods for disposing the IDW. This report includes a summary of IDW generated and its origin (Table 1), a summary of the analysis and methods (Table 2), a summary of detected analytical results compared to regulatory characteristic levels (Table 3) and recommendations for disposal. The laboratory data sheets are included in Attachment 1.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (EPA) regarding IDW disposition at RVAAP, including the IDW disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations* SAIC 2011 (FWSAP), and the Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material



pending waste characterization and classification based on analytical results. The FWSAP and the Addendum describe approved procedures used for containerizing and handling IDW.

Soil IDW Discussion

Accumulated IDW soil cuttings are containerized in 55-gal drums on site pending transport and disposal to an offsite disposal facility. A summary of the drums of IDW generated and its origin are presented in Table 1. Composite sampling for disposal characterization was performed using a composite grab sampling technique. The composite sample was collected from 23 drums of soil. The drums were opened and screened with a PID. Grab samples of the drums were collected using a hand auger or by manually driving a decontaminated split-spoon sampler to the bottom of each container. The retrieved sample was placed in a decontaminated stainless steel bowl or aluminum pan for homogenization. Rocks and loose twigs were removed and discarded. Clumps of soil were broken down using a gloved hand and mixed in the bowl. The mixture was collected using a gloved hand and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the location of the highest screened PID level was collected and transferred directly from the IDW waste container into the sample container with minimum head space for laboratory analysis for VOC characterization.

All stainless steel bowls, hand augers, and split-spoon samplers were decontaminated in accordance with Section 2.13 of the Addendum after collection of each composite sample.

The indigenous IDW contained in drums were characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite totals analysis and Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 2. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1. Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24), and Table 8-2. Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23), as presented in the FWSAP; and USEPA Risk Screening Levels (RSLs) for residential soils and/or site specific background criteria for RVAAP. Table 3 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP and RVAAP full suite analysis for IDW soil cuttings.

Summary of the IDW containers shown is as follows:

- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 140 degrees F. Reactive sulfide and reactive cyanide were not detected above the reporting limit.
- Arsenic was the only concentration to exceed the USEPA RSLs for the RVAAP full suite totals composite sample.
- Only Sodium exceeded background criteria, although this result has no USEPA RSL.



Recommended Disposal Pathways for IDW

After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. It is recommended that the 23 drums containing soil be classified as contaminated, but non-hazardous and that it be sent offsite for disposal to a permitted facility in accordance with Section 8.0 of the FWSAP. Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with the appropriate waste disposal. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

John M. Miller, CHMM Project Manager

ce: Vicki Deppisch – Ohio EPA Mark Patterson – RVAAP EQM PN – 030174.0016.001.02

Table 1. IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-001s	55 gallon Steel	Soil Cuttings	02/27/12	LL3mw-244	6.9
EQM-002s	55 gallon Steel	Soil Cuttings	02/27/12	LL3mw-244	8.2
EQM-003s	55 gallon Steel	Soil Cuttings	02/27/12	LL3mw-244	7.5
EQM-004s	55 gallon Steel	Soil Cuttings	02/27/12	LL3mw-244	0.0
EQM-005s	55 gallon Steel	Soil Cuttings	02/28/12	LL1mw-086	8.4
EQM-006s	55 gallon Steel	Soil Cuttings	02/28/12	LL1mw-086	60.2
EQM-007s	55 gallon Steel	Soil Cuttings	02/29/12	LL1mw-087	0.0
EQM-008s	55 gallon Steel	Soil Cuttings	03/01/12	LL1mw-087	0.0
EQM-009s	55 gallon Steel	Soil Cuttings	03/01/12	LL12mw-247	0.0
EQM-010s	55 gallon Steel	Soil Cuttings	03/01/12	LL1mw-086	9.0
EQM-011s	55 gallon Steel	Soil Cuttings	03/05/12	FWGmw-006	9.3
EQM-012s	55 gallon Steel	Soil Cuttings	03/06/12	FWGmw-008	1.8
EQM-013s	55 gallon Steel	Soil Cuttings	03/06/12	LL1mw-087	10,5
EQM-014s	55 gallon Steel	Soil Cuttings	03/06/12	LL1mw-087	8.6
EQM-015s	55 gallon Steel	Soil Cuttings	03/06/12	LL1mw-087	10.1
EQM-016s	55 gallon Steel	Soil Cuttings	03/06/12	LL1mw-087	21.5
EQM-017s	55 gallon Steel	Soil Cuttings	03/06/12	LL1mw-087	0.0
EQM-018s	55 gallon Steel	Soil Cuttings	2/27-3/7/12	LL3mw-244	9.3
EQM-019s	55 gallon Steel	Soil Cuttings	03/02/12	FWGmw-010	41.7
EQM-020s	55 gallon Steel	Soil Cuttings	03/03/12	FWGmw-003	85.6
EQM-021s	55 gallon Steel	Soil Cuttings	03/08/12	FWGmw-003	8.4
EQM-022s	55 gallon Steel	Soil Cuttings	03/08/12	FWGmw-005	9.1
EQM-023s	55 gallon Steel	Soil Cuttings	03/12/12	UNKNOWN	3.4

Table 2. Summary of Analytical Suite of Chemicals

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium, cadmium, chromium, lead, and selenium)	EPA Method SW-846 1311/6010B
TCLP semivolatile organic compounds (SVOCs)	EPA Method SW-846 1311/8270C
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
pH	EPA Method SW-846 9040B
Polychlorinated biphenyls (PCBs)	EPA Method SW-846 8082
Pesticides	EPA Method SW-846 8081A
Base/Neutrals and Acids (SVOCs)	EPA Method SW-846 8270C
Volatile Organic Compounds (VOCs)	EPA Method SW-846 8260B
Nitroguanidine (Propellant)	EPA Method SW-846 8330 modified
Nitroaromatics & Nitramines (Explosives)	EPA Method SW-846 8330
Nitrocellulose as N (Propellant)	General Chemistry (WS-WC-0050)
Nitrate/Nitrites	General Chemistry (353.2)1
Metals (Magnesium, Manganese, Barium, Nickel, Potassium, Silver, Sodium, Vanadium, Chromium, Calcium, Cobalt, Copper, Arsenic, Lead, Selenium)	EPA Method SW-846 6010B
Metals (Antimony, Iron, Beryllium, Thallium, Zinc, Cadmium, Aluminum)	EPA Method SW-846 6020
Mercury	EPA Method SW-846 7470A

1 EPA Methods for Chemical Analysis of Water and Waste

Table 3. Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	Cas#	Units	Lab Results	Lab Qualifier	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
VOCs	2-Butanone (MEK)	78-93-3	mg/Kg	0.054		28000	NA	NA
VOCs	2-Hexanone	591-78-6	mg/Kg	0.002	J, B	210	NA	NA
VOCs	Acetone	67-64-1	mg/Kg	0.24		61000	NA	NA
VOCs	Carbon disulfide	75-15-0	mg/Kg	0.00074	J	820	NA	NA
VOCs	Methylene Chloride	75-09-2	mg/Kg	0.0057	J, B	11	NA	NA
VOCs	m-Xylene & p-Xylene	179601-23-1	mg/Kg	0.0018	J	590	NA	NA
VOCs	o-Xylene	95-47-6	mg/Kg	0.001	J	690	NA	NA
VOCs	Toluene	108-88-3	mg/Kg	0.11		5000	NA	NA
VOCs	Xylenes, Total	1330-20-7	mg/Kg	0.0028	J	630	NA	NA
SVOCs	2-Methylnaphthalene	91-57-6	mg/Kg	0.026		310	NA	NA
SVOCs	Benzo[b]fluoranthene	205-99-2	mg/Kg	0.0099		0	NA	NA
SVOCs	Benzo[g,h,i]perylene	191-24-2	mg/Kg	0.019		NA	NA	NA
SVOCs	Bis(2-ethylhexyl) phthalate	117-81-7	mg/Kg	0.075		35	NA	NA
SVOCs	Chrysene	218-01-9	mg/Kg	0.01		15	NA	NA
SVOCs	Fluoranthene	206-44-0	mg/Kg	0.0091		2300	NA	NA
SVOCs	Naphthalene	91-20-3	mg/Kg	0.017		4	NA	NA
SVOCs	Phenanthrene	85-01-8	mg/Kg	0.018		NA	NA	NA
SVOCs	Pyrene	129-00-0	mg/Kg	0.011		1700	NA	NA
Total Metals	Aluminum	7429-90-5	mg/Kg	7600	В	77000	19500	NA
Total Metals	Antimony	7440-36-0	mg/Kg	0.086	J	31	0.96	NA
Total Metals	Arsenic	7440-38-2	mg/Kg	12		0.39	19,8	NA
Total Metals	Barium	7440-39-3	mg/Kg	47.0	В	15000	124	NA
Total Metals	Beryllium	7440-41-7	mg/Kg	0.49		160	0.88	NA
Total Metals	Cadmium	7440-43-9	mg/Kg	0.13	В	70	0	NA
Total Metals	Calcium	7440-70-2	mg/Kg	19000	В	NA	35500	NA
Total Metals	Chromium	7440-47-3	mg/Kg	12	В	120000	27.2	NA
Total Metals	Cobalt	7440-48-4	mg/Kg	7.2		23	23.2	NA
Total Metals	Copper	7440-50-8	mg/Kg	14		3100	32,2	NA
Total Metals	Iron	7439-89-6	mg/Kg	23000	В	55000	35200	NA
Total Metals	Lead	7439-92-1	mg/Kg	11		400	19.1	NA
Total Metals	Magnesium	7439-95-4	mg/Kg	3900	В	NA	8790	NA
Total Metals	Manganese	7439-96-5	mg/Kg	300	В	1800	3030	NA
Total Metals	Nickel	7440-02-0	mg/Kg	20		1500	60.7	NA
Total Metals	Potassium	7440-09-7	mg/Kg	1200	В	NA	3350	NA
Total Metals	Sodium	7440-23-5	mg/Kg	420	В	NA	145	NA
Total Metals	Thallium	7440-28-0	mg/Kg	0.24	В	0.78	0.91	NA
Total Metals	Vanadium	7440-62-2	mg/Kg	13		390	37.6	NA
Total Metals	Zinc	7440-66-6	mg/Kg	52	В	23000	93.3	NA

Table 3. Detected Analytical Results Compared to Regulatory Characteristic Levels (continued)

Analyte Group	Analyte	Cas#	Units	Lab Results	Lab Qualifier	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
TCLP-Misc.	Ignitability	N/A	F	>140		NA	NA	<180
TCLP-Misc.	Corrosivity	N/A	SU	11.9		NA	NA	NA
TCLP- Metals	Arsenic	7440-38-2	mg/L	0.0033	J	NA	NA	5.0
TCLP- Metals	Barium	7440-39-3	mg/L	0.44	J, B	NA	NA	100.0
TCLP- Metals	Cadmium	7440-43-9	mg/L	0.00067	J	NA	NA	1.0
TCLP- Metals	Chromium	7440-47-3	mg/L	0.0028	J	NA	NA	5.0
TCLP- Metals	Selenium	7782-49-2	mg/L	0.0047	J	NA	NA	1,0

J = estimated result. Result is less than reporting limit.

B = method blank contamination

NA = not applicable

Chloroform (0.26 ug/L J) was detected in the Trip blank.

* The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1. Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR) 261.24), and Table 8-2. Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23). Bold concentrations exceed a regulatory limit.

ATTACHMENT 1. LABORATORY ANALYTICAL DATA SHEETS



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc. TestAmerica North Canton 4101 Shuffel Street NW North Canton, OH 44720 Tel: (330)497-9396

TestAmerica Job ID: 240-9236-1

Client Project/Site: RVAAP (OH) - IDW

For:

Environmental Quality Mgt., Inc. 1800 Carillon Blvd Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin

Authorized for release by: 4/5/2012 10:28:55 AM

Mark Loeb Project Manager II

mark.loeb@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
В	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
×	Surrogate is outside control limits
F	MS or MSD exceeds the control limits
E	Result exceeded calibration range.
F	RPD of the MS and MSD exceeds the control limits

GC/MS Semi VOA

Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
7	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC

Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	

Metals

Qualifier	Qualifier Description
В	Compound was found in the blank and sample,
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	RPD of the MS and MSD exceeds the control limits

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
N	Spike sample recovery is outside control limits.
J	Estimated result. Result is less than RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
to the second	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

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Definitions/Glossary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Glossary (Continued)

Abbreviation These commonly used abbreviations may or may not be present in this report.

TEQ Toxicity Equivalent Quotient (Dioxin)

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW TestAmerica Job ID: 240-9236-1

Job ID: 240-9236-1

Laboratory: TestAmerica North Canton

Narrative

CASE NARRATIVE

Client: Environmental Quality Mgt., Inc.

Project: RVAAP (OH) - IDW

Report Number: 240-9236-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 1020B Ignitability analysis was performed at the TestAmerica Pittsburgh Laboratory. The 8330B Explosive, Nitrocellulose as N by WS-WC-0050 and UV/HPLC-SOP Nitroguanidine analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 03/14/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.4 C.

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 03/20/2012 and analyzed on 03/23/2012.

No difficulties were encountered during the VOCs analysis. All quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/15/2012.

2-Hexanone and Methylene Chloride were detected in method blank MB 240-36992/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a

TestAmerica North Canton 4/5/2012

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Laboratory: TestAmerica North Canton (Continued)

result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Dibromofluoromethane (Surr) failed the surrogate recovery criteria low for FWG-IDW-SBCOMP1-SO (240-9236-1), FWG-IDW-SBCOMP1-SOMS (240-9236-1MS), and FWG-IDW-SBCOMP1-SOMSD (240-9236-1MSD). The samples show evidence of matrix interference. Refer to the QC report for details.

1,1,2,2-Tetrachloroethane failed the recovery criteria low for the MS and MSD of sample FWG-IDW-SBCOMP1-SOMS (240-9236-1) in batch 240-36992. Toluene and Trichloroethene failed the recovery criteria high for the MS. Toluene exceeded the rpd limit. Refer to the QC report for details.

No other difficulties were encountered during the VOCs analysis. All other quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample TRIP BLANK (240-9236-2) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/19/2012.

No difficulties were encountered during the VOCs analysis. All quality control parameters were within the acceptance limits.

FLASHPOINT

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for flashpoint in accordance with EPA SW-846 Method 1020B. The samples were analyzed on 03/26/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 03/20/2012, prepared on 03/21/2012 and analyzed on 03/22/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 03/20/2012 and analyzed on 03/22/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

TCLP CHLORINATED PESTICIDES

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/8081A. The samples were leached on 03/20/2012, prepared on 03/21/2012 and analyzed on 03/22/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

The closing Technical Chlordane continuing calibration verification (CCV) associated with batch 37721 was recovered above the upper control limit. The samples associated with this CCV FWG-IDW-SBCOMP1-SO were not detected above the reporting limit for Technical Chlordane; therefore the data have been reported.

No other difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

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Job ID: 240-9236-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

CHLORINATED PESTICIDES

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 03/20/2012 and analyzed on 03/23/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Sample FWG-IDW-SBCOMP1-SO (240-9236-1)[2X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

The opening and closing continuing calibration verifications (CCVs) associated with batch 37819 were recovered above the upper control limits. The samples associated with these CCVs FWG-IDW-SBCOMP1-SO were not detected above the reporting limits; therefore, the data have been reported.

No other difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 03/20/2012 and analyzed on 03/22/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the PCBs analysis. All quality control parameters were within the acceptance limits.

TCLP CHLORINATED HERBICIDES

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/8151A. The samples were leached on 03/20/2012, prepared on 03/21/2012 and analyzed on 03/23/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the herbicides analysis. All quality control parameters were within the acceptance limits.

TCLP METALS (ICP)

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 03/20/2012, prepared on 03/21/2012 and analyzed on 03/22/2012.

Barium was detected in method blank LB 240-37404/1-D at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 03/16/2012 and analyzed on 03/20/2012.

Several analytes were detected in method blank MB 240-37028/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Magnesium failed the recovery criteria high for the MS of sample FWG-IDW-SBCOMP1-SOMS (240-9236-1) in batch 240-37419.

Calcium failed the recovery criteria low for the MSD of sample FWG-IDW-SBCOMP1-SOMSD (240-9236-1) in batch 240-37419.

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW TestAmerica Job ID: 240-9236-1

Job ID: 240-9236-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

Manganese failed the recovery criteria high. Calcium and Magnesium exceeded the rpd limit.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL METALS (ICPMS)

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 03/16/2012 and analyzed on 03/21/2012.

Several analytes were detected in method blank MB 240-37028/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Antimony and Iron failed the recovery criteria low for the MS of sample FWG-IDW-SBCOMP1-SOMS (240-9236-1) in batch 240-37588. Aluminum failed the recovery criteria high.

Antimony failed the recovery criteria low for the MSD of sample FWG-IDW-SBCOMP1-SOMSD (240-9236-1) in batch 240-37588. Aluminum failed the recovery criteria high.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TCLP MERCURY

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 03/20/2012, prepared on 03/21/2012 and analyzed on 03/22/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 03/16/2012 and analyzed on 03/20/2012.

Mercury exceeded the rpd limit for the MSD of sample FWG-IDW-SBCOMP1-SOMSD (240-9236-1) in batch 240-37465. Refer to the QC report for details.

No other difficulties were encountered during the mercury analysis. All other quality control parameters were within the acceptance limits.

TOTAL AND AMENABLE CYANIDE

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for total and amenable cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 03/21/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

SULFIDE

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 03/16/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits,

PH

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for pH in accordance with EPA SW-846 Method 9045C. The samples were analyzed on 03/15/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Sample FWG-IDW-SBCOMP1-SO (240-9236-1) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples

TestAmerica North Canton 4/5/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Job ID: 240-9236-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

were analyzed on 03/15/2012.

No difficulties were encountered during the % solids analysis. All quality control parameters were within the acceptance limits.

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Method Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NO
3081A	Organochlorine Pesticides (GC)	SW846	TAL NO
3082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
3151A	Herbicides (GC)	SW846	TAL NC
3330 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
3330B	Nitroaromatics & Nitramines: Explosives (8330B)	SW846	TAL WSC
6010B	Metals (ICP)	SW846	TAL NC
6020	Metals (ICP/MS)	SW846	TAL NC
470A	Mercury (CVAA)	SW846	TAL NC
471A	Mercury (CVAA)	SW846	TAL NC
020B	Ignitability, Small Scale Closed-Cup Method	SW846	TAL PIT
012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
9045C	pH	SW846	TAL NC
2216-90	Moisture, Percent (D2216-90) - AFCEE	ASTM	TAL WSC
Moisture	Percent Moisture	EPA	TAL NC
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-SOP = TAL-SOP

Laboratory References:

TAL NC = TestAmerica North Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Sample Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-9236-1	FWG-IDW-SBCOMP1-SO	Solid	03/13/12 14:30	03/14/12 11:57
240-9236-2	TRIP BLANK	Water	03/13/12 14:30	03/14/12 11:57

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Detection Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Lab Sample ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	54		26	1.8	ug/Kg	1	0	8260B	Total/NA
2-Hexanone	2.0	JB	26	0.82	ug/Kg	1	₩.	8260B	Total/NA
Acetone	240		26	8.2	ug/Kg	1	杂	8260B	Total/NA
Carbon disulfide	0.74	J	6.5	0.57	ug/Kg	1	*	8260B	Total/NA
Methylene Chloride	5.7	JB	6.5	0.87	ug/Kg	1	*	8260B	Total/NA
m-Xylene & p-Xylene	1.8	J	13	1.6	ug/Kg	1	*	8260B	Total/NA
o-Xylene	1.0	J	6.5	0.45	ug/Kg	1	菜	8260B	Total/NA
Toluene	110		6.5	0.35	ug/Kg	-1	辛	8260B	Total/NA
Xylenes, Total	2.8	J	13	0.87	ug/Kg	1	\$	8260B	Total/NA
Benzo[b]fluoranthene	9.9		8.6	4.3	ug/Kg	-1	許	8270C	Total/NA
Fluoranthene	9.1		8.6	4.3	ug/Kg	1	章	8270C	Total/NA
Chrysene	10		8.6	1.4	ug/Kg	1	*	8270C	Total/NA
Benzo[g,h,i]perylene	19		8,6	4.3	ug/Kg	1	*	8270C	Total/NA
2-Methylnaphthalene	26		8.6	4.3	ug/Kg	1	袋	8270C	Total/NA
Naphthalene	17		8.6	4.3	ug/Kg	-1	*	8270C	Total/NA
Pyrene	11		8.6	4.3	ug/Kg	1	Ô	8270C	Total/NA
Phenanthrene	18		8.6	4.3	ug/Kg	1	0	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	75		65	25	ug/Kg	1	*	8270C	Total/NA
Arsenic	12		1.2	0.37	mg/Kg	1	\$	6010B	Total/NA
Chromium	12	В	0.61	0.24	mg/Kg	1.	*	6010B	Total/NA
Cobalt	7.2		6.1	0.20	mg/Kg	1	*	6010B	Total/NA
Lead	-11		0.37	0.23	mg/Kg	1	0	6010B	Total/NA
Vanadium	13		6.1	0.15	mg/Kg	-1	华	6010B	Total/NA
Barium	47	В	24	0.087	mg/Kg	1	≎	6010B	Total/NA
Calcium	19000	В	610	20	mg/Kg	1	ø	6010B	Total/NA
Copper	14		3.1	0.90	mg/Kg	1	章	6010B	Total/NA
Magnesium	3900	В	610	6.2	mg/Kg	1	*	6010B	Total/NA
Manganese	300	В	1.8	0.090	mg/Kg	1	*	6010B	Total/NA
Nickel	20		4.9	0.33	mg/Kg	1	*	6010B	Total/NA
Potassium	1200	В	610	7.6	mg/Kg	1	ů	6010B	Total/NA
Arsenic	0.0033	J	0.50	0.0032	mg/L	1		6010B	TCLP
Barium	0.44	JB	10	0.00067	mg/L	1		6010B	TCLP
Cadmium	0.00067	J	0.10	0.00066	mg/L	1		6010B	TCLP
Chromium	0.0028	J	0.50	0.0022	mg/L	1		6010B	TCLP
Selenium	0.0047	J	0.25	0.0041	mg/L	1		6010B	TCLP
Aluminum	7600	В	6.1	1.6	mg/Kg	1	22	6020	Total/NA
Antimony	0.086	J	0.24	0.029	mg/Kg	1	益	6020	Total/NA
Beryllium	0.49		0.12	0.057	mg/Kg	-1	贷	6020	Total/NA
Cadmium	0.13	В	0.12	0.0095	mg/Kg	1	益	6020	Total/NA
Iron	23000	В	12	1.2	mg/Kg	1	*	6020	Total/NA
Sodium	420	В	120	2.9	mg/Kg	1	₩.	6020	Total/NA
Thallium	0.24	В	0.24	0.016	mg/Kg	1	华	6020	Total/NA
Zinc	52	В	2.4	0.24	mg/Kg	1	*	6020	Total/NA
Ignitability	>140				Degrees F	1		1020B	Total/NA
Corrosivity	11.9		0.100	0.100	SU	1		9045C	Total/NA

Client Sample ID: TRIP BLANK

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Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Chloroform	0.26	J	1.0	0.16	ug/L	1.	8260B	Total/NA

Lab Sample ID: 240-9236-2

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Lab Sample ID: 240-9236-1

Matrix: Solid

Percent Solids: 77.2

Client Sample ID: FWG-IDW-SBCOMP1-SO

Date Collected: 03/13/12 14:30 Date Received: 03/14/12 11:57

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	6.5	U	6.5	0.73	ug/Kg	13		03/15/12 22:39	1
1,1,2,2-Tetrachloroethane	6.5	U	6.5	0.44	ug/Kg	375		03/15/12 22:39	1
1,1,2-Trichloroethane	6.5	U	6.5	0.51	ug/Kg	D		03/15/12 22:39	1
1,1-Dichloroethane	6.5	U	6.5	0.47	ug/Kg	-02		03/15/12 22:39	1
1,1-Dichloroethene	6.5	U	6.5	0.67	ug/Kg	- 52		03/15/12 22:39	1
1,2-Dichloroethane	6.5	U	6.5	0.44	ug/Kg	308		03/15/12 22:39	1
1,2-Dichloroethene, Total	13	U	13	1.0	ug/Kg	13		03/15/12 22:39	1
1,2-Dichloropropane	6.5	U	6.5	0.89	ug/Kg	**		03/15/12 22:39	1
2-Butanone (MEK)	54		26	1.8	ug/Kg	欽		03/15/12 22:39	1
2-Hexanone	2.0	JB	26	0.82	ug/Kg	335		03/15/12 22:39	1
4-Methyl-2-pentanone (MIBK)	26	U	26	0.70	ug/Kg	-0		03/15/12 22:39	1
Acetone	240		26	8.2	ug/Kg	-		03/15/12 22:39	1
Benzene	6.5	U	6.5	0.30	ug/Kg	⇒		03/15/12 22:39	1
Bromoform	6.5	U	6.5	0.43	ug/Kg	÷.		03/15/12 22:39	1
Bromomethane	6.5	U	6.5	0.70	ug/Kg	-82		03/15/12 22:39	1
Carbon disulfide	0.74	J	6.5	0.57	ug/Kg	435		03/15/12 22:39	1
Carbon tetrachloride	6.5	U	6.5	0.48	ug/Kg	-13		03/15/12 22:39	1
Chlorobenzene	6.5	U	6.5	0.43	ug/Kg	43		03/15/12 22:39	1
Chloromethane	6.5	U	6.5	0.53	ug/Kg	**		03/15/12 22:39	1
cis-1,2-Dichloroethene	6.5	U	6.5	0.47	ug/Kg	**		03/15/12 22:39	1
cis-1,3-Dichloropropene	6.5	U	6.5	0.44	ug/Kg	拉		03/15/12 22:39	1
Dibromochloromethane	6.5	U	6.5	0.71	ug/Kg	63		03/15/12 22:39	1
Bromodichloromethane	6.5	U	6.5	0.36	ug/Kg	थ		03/15/12 22:39	1
Ethylbenzene	6.5	U	6.5	0.34	ug/Kg	13		03/15/12 22:39	1
Methylene Chloride	5.7	JB	6.5	0.87	ug/Kg	- 51		03/15/12 22:39	1
m-Xylene & p-Xylene	1.8	J	13		ug/Kg	i p		03/15/12 22:39	d
o-Xylene	1.0	J	6.5	0.45	ug/Kg	808		03/15/12 22:39	1
Styrene	6.5	U	6.5		ug/Kg	808		03/15/12 22:39	1
Tetrachloroethene	6.5	U	6.5	0.67	ug/Kg	Ò		03/15/12 22:39	1
Toluene	110		6.5	0.35	ug/Kg	3.58		03/15/12 22:39	1
trans-1,2-Dichloroethene	6.5	U	6.5		ug/Kg	-03		03/15/12 22:39	1
trans-1,3-Dichloropropene	6.5	U	6.5		ug/Kg	12		03/15/12 22:39	1
Trichloroethene	6.5	U	6.5	0.54	ug/Kg	33		03/15/12 22:39	1
Vinyl chloride	6.5	U	6.5	0.51	ug/Kg	325		03/15/12 22:39	1
Xylenes, Total	2.8	J	13		ug/Kg	12		03/15/12 22:39	1
Chloroform	6.5		6.5	0.38		30		03/15/12 22:39	1
Bromochloromethane	6.5	U	6.5		ug/Kg	13		03/15/12 22:39	1
1,2-Dibromoethane	6.5		6.5		ug/Kg	10		03/15/12 22:39	1
Chloroethane	6.5		6.5		ug/Kg	100		03/15/12 22:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Taluana de (Surri	105		67 125			-		02/15/12 22:20	- 4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		67 - 125		03/15/12 22:39	1
1,2-Dichloroethane-d4 (Surr)	92		58 - 123		03/15/12 22:39	1
4-Bromofluorobenzene (Surr)	83		52 - 136		03/15/12 22:39	1
Dibromofluoromethane (Surr)	21	X	37 - 132		03/15/12 22:39	7

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			03/23/12 21:41	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			03/23/12 21:41	4
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			03/23/12 21:41	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Lab Sample ID: 240-9236-1 Date Collected: 03/13/12 14:30

Matrix: Solid

Date Received: 03/14/12 11:57

Method: 8260B - Volatile Orga	nic Compounds	(GC/MS) - T	CLP (Continue	ed)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0.025	0.0065	mg/L			03/23/12 21:41	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			03/23/12 21:41	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			03/23/12 21:41	1
Chloroform	0.025	U	0.025	0.0080	mg/L			03/23/12 21:41	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			03/23/12 21:41	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			03/23/12 21:41	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			03/23/12 21:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 121					03/23/12 21:41	1
4-Bromofluorobenzene (Surr)	96		70 - 124					03/23/12 21:41	1
Toluene-d8 (Surr)	107		90 - 115					03/23/12 21:41	1
Dibromofluoromethane (Surr)	111		84 - 128					03/23/12 21:41	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	8.6	U	8.6	4.3	ug/Kg	菜	03/20/12 08:42	03/22/12 15:03	1
Acenaphthylene	8.6	U	8.6	4.3	ug/Kg	*25	03/20/12 08:42	03/22/12 15:03	1
Anthracene	8.6	U	8.6	4.3	ug/Kg	Ø	03/20/12 08:42	03/22/12 15:03	1
Benzo[a]anthracene	8.6	U	8.6	4.3	ug/Kg	D	03/20/12 08:42	03/22/12 15:03	1
Benzoic acid	860	U	860	430	ug/Kg	338	03/20/12 08:42	03/22/12 15:03	1
Benzo[b]fluoranthene	9,9		8.6	4.3	ug/Kg	800	03/20/12 08:42	03/22/12 15:03	1
Benzo[k]fluoranthene	8.6	U	8.6	4.3	ug/Kg	-	03/20/12 08:42	03/22/12 15:03	1
Benzyl alcohol	430	U	430	27	ug/Kg	Q	03/20/12 08:42	03/22/12 15:03	1
Bis(2-chloroethoxy)methane	130	U	130	29	ug/Kg	325	03/20/12 08:42	03/22/12 15:03	1
Bis(2-chloroethyl)ether	130	U	130	2.6	ug/Kg	Ċ	03/20/12 08:42	03/22/12 15:03	1
4-Bromophenyl phenyl ether	65	U	65	17	ug/Kg	0.0	03/20/12 08:42	03/22/12 15:03	1
Butyl benzyl phthalate	65	U	65	13	ug/Kg	405	03/20/12 08:42	03/22/12 15:03	1
2,4-Dimethylphenol	190	U	190	26	ug/Kg	405	03/20/12 08:42	03/22/12 15:03	1
Dimethyl phthalate	65	U	65	22	ug/Kg	101	03/20/12 08:42	03/22/12 15:03	1
4,6-Dinitro-2-methylphenol	190	U	190	100	ug/Kg	ø	03/20/12 08:42	03/22/12 15:03	1
2,4-Dinitrophenol	430	U	430	100	ug/Kg	808	03/20/12 08:42	03/22/12 15:03	1
2,4-Dinitrotoluene	260	U	260	35	ug/Kg	rich (ch	03/20/12 08:42	03/22/12 15:03	1
2,6-Dinitrotoluene	260	U	260	27	ug/Kg	Ø	03/20/12 08:42	03/22/12 15:03	1
Fluoranthene	9.1		8.6	4.3	ug/Kg	£3	03/20/12 08:42	03/22/12 15:03	1
Fluorene	8.6	U	8.6	4.3	ug/Kg	Q	03/20/12 08:42	03/22/12 15:03	1
Hexachlorobenzene	8.6	U	8.6	2.7	ug/Kg	Ò	03/20/12 08:42	03/22/12 15:03	1
Hexachlorobutadiene	65	U	65	35	ug/Kg	12	03/20/12 08:42	03/22/12 15:03	1
Hexachlorocyclopentadiene	430	U	430	35	ug/Kg	305	03/20/12 08:42	03/22/12 15:03	4
Hexachloroethane	65	U	65	12	ug/Kg	40	03/20/12 08:42	03/22/12 15:03	1
N-Nitrosodiphenylamine	65	U	65	27	ug/Kg	101	03/20/12 08:42	03/22/12 15:03	1
N-Nitrosodi-n-propylamine	65	U	65	35	ug/Kg	122	03/20/12 08:42	03/22/12 15:03	1
1,4-Dichlorobenzene	65	U	65	26	ug/Kg	835	03/20/12 08:42	03/22/12 15:03	1
2-Chloronaphthalene	65	U	65	4.3	ug/Kg	10	03/20/12 08:42	03/22/12 15:03	1
2-Chlorophenol	65	U	65	35	ug/Kg	4.7	03/20/12 08:42	03/22/12 15:03	- 1
4-Chlorophenyl phenyl ether	65	U	65	17	ug/Kg	Ċ.	03/20/12 08:42	03/22/12 15:03	1
Chrysene	10		8.6	1.4	ug/Kg	-02	03/20/12 08:42	03/22/12 15:03	1
Dibenz(a,h)anthracene	8.6	U	8.6	4.3	ug/Kg	in.	03/20/12 08:42	03/22/12 15:03	1
Dibenzofuran	65	U	65	4.3	ug/Kg	ø	03/20/12 08:42	03/22/12 15:03	1
Benzo[g,h,i]perylene	19		8.6	4.3	ug/Kg	a	03/20/12 08:42	03/22/12 15:03	1
Benzo[a]pyrene	8.6	U	8.6	4.3	ug/Kg	.0	03/20/12 08:42	03/22/12 15:03	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW TestAmerica Job ID: 240-9236-1

Lab Sample ID: 240-9236-1

Matrix: Solid

Percent Solids: 77.2

Client Sample ID: FWG-IDW-SBCOMP1-SO

Date Collected: 03/13/12 14:30 Date Received: 03/14/12 11:57

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued) Result Qualifier D Prepared Dil Fac MDL Unit Analyzed Di-n-butyl phthalate 65 U 65 03/20/12 08:42 03/22/12 15:03 19 ug/Kg -05 65 65 03/20/12 08:42 03/22/12 15:03 1,2-Dichlorobenzene U 13 ug/Kg έŝ 1,3-Dichlorobenzene 65 U 65 ug/Kg 03/20/12 08:42 03/22/12 15:03 03/20/12 08:42 3,3'-Dichlorobenzidine 130 130 03/22/12 15:03 23 ug/Kg 2,4-Dichlorophenol 190 U 190 26 ug/Kg 03/20/12 08:42 03/22/12 15:03 Diethyl phthalate 65 65 03/20/12 08:42 03/22/12 15:03 21 ug/Kg 拉 Indeno[1,2,3-cd]pyrene 8.6 U 8.6 4.3 ug/Kg 03/20/12 08:42 03/22/12 15:03 65 65 03/20/12 08:42 03/22/12 15:03 1 Isophorone 17 ug/Kg 13 2-Methylnaphthalene 26 8.6 4.3 ug/Kg 03/20/12 08:42 03/22/12 15:03 2-Methylphenol 260 260 100 ug/Kg 03/20/12 08:42 03/22/12 15:03 5,7 8.6 03/20/12 08:42 03/22/12 15:03 Naphthalene 17 4.3 ug/Kg 260 d 03/20/12 08:42 03/22/12 15:03 2-Nitroaniline 260 12 ug/Kg 32 03/22/12 15:03 260 U 260 3-Nitroaniline 21 ug/Kg 03/20/12 08:42 4-Nitroaniline 260 260 34 ug/Kg 23 03/20/12 08:42 03/22/12 15:03 ø 130 11 130 2.9 03/22/12 15:03 Nitrobenzene ug/Kg 03/20/12 08:42 835 2-Nitrophenol 65 U 65 03/20/12 08:42 03/22/12 15:03 ug/Kg 430 ug/Kg 03/20/12 08:42 03/22/12 15:03 4-Nitrophenol 430 100 8.6 ug/Kg 拉 03/20/12 08:42 03/22/12 15:03 Pyrene 11 Pentachlorophenol 190 190 03/20/12 08:42 03/22/12 15:03 100 ug/Kg 305 Phenanthrene 18 8.6 ug/Kg 03/20/12 08:42 03/22/12 15:03 1.2.4-Trichlorobenzene 65 U 65 35 ug/Kg 03/20/12 08:42 03/22/12 15:03 578 190 2,4,5-Trichlorophenol 13 190 32 ug/Kg 03/20/12 08:42 03/22/12 15:03 3,3 2,4,6-Trichlorophenol 190 190 100 ug/Kg 03/20/12 08:42 03/22/12 15:03 1 C Phenol 65 U 65 35 ug/Kg 03/20/12 08:42 03/22/12 15:03 Carbazole 65 65 35 ug/Kg 838 03/20/12 08:42 03/22/12 15:03 4-Chloroaniline 190 U 190 03/20/12 08:42 03/22/12 15:03 22 ug/Kg 23 3 & 4 Methylphenol 520 520 03/20/12 08:42 03/22/12 15:03 26 ug/Kg 03/22/12 15:03 Bis(2-ethylhexyl) phthalate 75 65 25 ug/Kg 03/20/12 08:42 協 Di-n-octyl phthalate 65 U 65 35 ug/Kg 03/20/12 08:42 03/22/12 15:03 190 190 27 03/20/12 08:42 03/22/12 15:03 4-Chloro-3-methylphenol ug/Kg 2,2'-oxybis[1-chloropropane] 130 U 130 12 ug/Kg 03/20/12 08:42 03/22/12 15:03

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	61		34 - 110	03/20/12 08:42	03/22/12 15:03	1
2-Fluorophenol (Surr)	75		26 - 110	03/20/12 08:42	03/22/12 15:03	1
Nitrobenzene-d5 (Surr)	64		24 - 112	03/20/12 08:42	03/22/12 15:03	1
Terphenyl-d14 (Surr)	74		41 - 119	03/20/12 08:42	03/22/12 15:03	1
2,4,6-Tribromophenol (Surr)	36		10 - 118	03/20/12 08:42	03/22/12 15:03	1
Phenol-d5 (Surr)	77		28 - 110	03/20/12 08:42	03/22/12 15:03	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		03/21/12 12:01	03/22/12 11:50	- 1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		03/21/12 12:01	03/22/12 11:50	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		03/21/12 12:01	03/22/12 11:50	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		03/21/12 12:01	03/22/12 11:50	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		03/21/12 12:01	03/22/12 11:50	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		03/21/12 12:01	03/22/12 11:50	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		03/21/12 12:01	03/22/12 11:50	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		03/21/12 12:01	03/22/12 11:50	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		03/21/12 12:01	03/22/12 11:50	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Date Collected: 03/13/12 14:30 Date Received: 03/14/12 11:57 Lab Sample ID: 240-9236-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		03/21/12 12:01	03/22/12 11:50	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		03/21/12 12:01	03/22/12 11:50	1
Pyridine	0.020	Ü	0.020	0.00035	mg/L		03/21/12 12:01	03/22/12 11:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	68		22 - 110				03/21/12 12:01	03/22/12 11:50	1
2-Fluorophenol (Surr)	65		10 - 110				03/21/12 12:01	03/22/12 11:50	1
2,4,6-Tribromophenol (Surr)	67		17 - 117				03/21/12 12:01	03/22/12 11:50	1
Nitrobenzene-d5 (Surr)	72		29 - 111				03/21/12 12:01	03/22/12 11:50	1
Phenol-d5 (Surr)	63		10 - 110				03/21/12 12:01	03/22/12 11:50	1
Terphenyl-d14 (Surr)	81		40 - 119				03/21/12 12:01	03/22/12 11:50	1

Method: 8081A - Organochlor	rine Pesticides (G	C)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	4.4	Ü	4.4	1.6	ug/Kg	O	03/20/12 08:58	03/23/12 21:27	2
4,4'-DDE	4.4	U	4.4	1.0	ug/Kg	49	03/20/12 08:58	03/23/12 21:27	2
4,4'-DDT	4.4	U	4.4	1.6	ug/Kg	12/4	03/20/12 08:58	03/23/12 21:27	2
Aldrin	4.4	U	4.4	3.1	ug/Kg	808	03/20/12 08:58	03/23/12 21:27	2
alpha-BHC	4.4	U	4.4	1.9	ug/Kg	Ď	03/20/12 08:58	03/23/12 21:27	2
alpha-Chlordane	4.4	U	4.4	2.4	ug/Kg	13	03/20/12 08:58	03/23/12 21:27	2
beta-BHC	4.4	U	4.4	2.8	ug/Kg	-400	03/20/12 08:58	03/23/12 21:27	2
delta-BHC	4.4	U	4.4	3.1	ug/Kg	65	03/20/12 08:58	03/23/12 21:27	2
Dieldrin	4.4	U	4.4	1.2	ug/Kg	101	03/20/12 08:58	03/23/12 21:27	2
Endosulfan I	4.4	U	4.4	1.3	ug/Kg	838	03/20/12 08:58	03/23/12 21:27	2
Endosulfan II	4.4	U	4.4	2.1	ug/Kg	p	03/20/12 08:58	03/23/12 21:27	2
Endosulfan sulfate	4.4	U	4.4	2.2	ug/Kg	tò.	03/20/12 08:58	03/23/12 21:27	2
Endrin	4.4	U	4.4	1.3	ug/Kg	100	03/20/12 08:58	03/23/12 21:27	2
Endrin aldehyde	4.4	U	4.4	2.6	ug/Kg	405	03/20/12 08:58	03/23/12 21:27	2
Endrin ketone	4.4	U	4.4	1.6	ug/Kg	405	03/20/12 08:58	03/23/12 21:27	2
gamma-BHC (Lindane)	4.4	U	4.4	1.9	ug/Kg	101	03/20/12 08:58	03/23/12 21:27	2
gamma-Chlordane	4.4	U	4.4	1.1	ug/Kg	Ø	03/20/12 08:58	03/23/12 21:27	2
Heptachlor	4.4	U	4.4	2.8	ug/Kg	838	03/20/12 08:58	03/23/12 21:27	2
Heptachlor epoxide	4,4	U	4,4	2.1	ug/Kg	rò.	03/20/12 08:58	03/23/12 21:27	2
Methoxychlor	8.5	U	8.5	3.9	ug/Kg	102	03/20/12 08:58	03/23/12 21:27	2
Toxaphene	170	U	170	49	ug/Kg	ņ	03/20/12 08:58	03/23/12 21:27	2

Surrogate	%Recovery C	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	111		32 - 175	03/20/12 08:58	03/23/12 21:27	2
DCB Decachlorobiphenyl	95		32 - 175	03/20/12 08:58	03/23/12 21:27	2
Tetrachloro-m-xylene	117		24 - 150	03/20/12 08:58	03/23/12 21:27	2
Tetrachloro-m-xylene	67		24 - 150	03/20/12 08:58	03/23/12 21:27	2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0,000079	mg/L		03/21/12 12:15	03/22/12 23:38	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		03/21/12 12:15	03/22/12 23:38	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		03/21/12 12:15	03/22/12 23:38	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		03/21/12 12:15	03/22/12 23:38	4
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		03/21/12 12:15	03/22/12 23:38	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		03/21/12 12:15	03/22/12 23:38	4
Toxaphene	0.048	U	0.048	0.00077	mg/L		03/21/12 12:15	03/22/12 23:38	- 1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Lab Sample ID: 240-9236-1

Matrix: Solid

Client Sample ID: FWG-IDW-SBCOMP1-SO

Date Collected: 03/13/12 14:30 Date Received: 03/14/12 11:57

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	66		46 - 122	03/21/12 12:15	03/22/12 23:38	1
Tetrachloro-m-xylene	70		46 - 122	03/21/12 12:15	03/22/12 23:38	1
DCB Decachlorobiphenyl	84		34 - 141	03/21/12 12:15	03/22/12 23:38	1
DCB Decachlorobiphenyl	83		34 - 141	03/21/12 12:15	03/22/12 23:38	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	43	U	43	27	ug/Kg	172	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1221	43	U	43	21	ug/Kg	ф	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1232	43	U	43	18	ug/Kg	808	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1242	43	U	43	17	ug/Kg	à	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1248	43	U	43	22	ug/Kg	101	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1254	43	U	43	22	ug/Kg	23	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1260	43	U	43	22	ug/Kg	80	03/20/12 08:48	03/22/12 14:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		29 - 151				03/20/12 08:48	03/22/12 14:35	1
DCB Decachlorobiphenyl	94		14 - 163				03/20/12 08:48	03/22/12 14:35	1

Method: 8151A - Herbicides (C	GC) - TCLP								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0,0020	U	0.0020	0.00021	mg/L		03/21/12 12:19	03/23/12 01:44	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		03/21/12 12:19	03/23/12 01:44	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	57		37 - 116				03/21/12 12:19	03/23/12 01:44	1
2,4-Dichlorophenylacetic acid	58		37 - 116				03/21/12 12:19	03/23/12 01:44	7

Method: 8330 (Modified) - Orga	nic Compounds	by UV/HPLC							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	0.25	U	0.25	0.020	mg/kg		03/22/12 10:00	03/26/12 09:36	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.36	U	0.36	0,014	mg/kg	- 6	03/22/12 10:00	03/26/12 18:35	0.98
1,3-Dinitrobenzene	0.36	U	0.36	0.0061	mg/kg	tit.	03/22/12 10:00	03/26/12 18:35	0.98
2,4,6-Trinitrotoluene	0.36	U	0.36	0.028	mg/kg	\$3	03/22/12 10:00	03/26/12 18:35	0.98
2,4-Dinitrotoluene	0.36	U	0.36	0.0076	mg/kg	(2)	03/22/12 10:00	03/26/12 18:35	0.98
2,6-Dinitrotoluene	0.36	U	0.36	0.011	mg/kg	D)	03/22/12 10:00	03/26/12 18:35	0.98
2-Amino-4,6-dinitrotoluene	0.36	U	0.36	0.018	mg/kg	Ċ	03/22/12 10:00	03/26/12 18:35	0.98
2-Nitrotoluene	0.36	U	0.36	0.019	mg/kg	105	03/22/12 10:00	03/26/12 18:35	0.98
3-Nitrotoluene	0.36	U	0.36	0.022	mg/kg	-105	03/22/12 10:00	03/26/12 18:35	0.98
4-Amino-2,6-dinitrotoluene	0.36	U	0.36	0.014	mg/kg	-53	03/22/12 10:00	03/26/12 18:35	0.98
4-Nitrotoluene	0.36	U	0.36	0.026	mg/kg	學	03/22/12 10:00	03/26/12 18:35	0.98
HMX	0.36	U	0.36	0.017	mg/kg	635	03/22/12 10:00	03/26/12 18:35	0.98
Nitrobenzene	0.36	U	0.36	0.025	mg/kg	10.	03/22/12 10:00	03/26/12 18:35	0.98
Nitroglycerin	0.72	U	0.72	0.022	mg/kg	ric .	03/22/12 10:00	03/26/12 18:35	0.98
PETN	0.72	U	0.72	0.036	mg/kg	O	03/22/12 10:00	03/26/12 18:35	0.98
RDX	0.36	U	0.36	0.017	mg/kg	100	03/22/12 10:00	03/26/12 18:35	0.98
Tetryl	0.36	U	0.36	0.014	mg/kg	Ġ.	03/22/12 10:00	03/26/12 18:35	0.98
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	103		75 - 115				03/22/12 10:00	03/26/12 18:35	0.98

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW TestAmerica Job ID: 240-9236-1

Lab Sample ID: 240-9236-1

Matrix: Solid

Percent Solids: 77.2

Client Sample ID: FWG-IDW-SBCOMP1-SO

Date Collected: 03/13/12 14:30 Date Received: 03/14/12 11:57

Method: 6010B - Metals (ICP) Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Analyte 袋 12 1.2 0.37 mg/Kg 03/16/12 10:02 03/20/12 15:56 Arsenic 0.61 4\$ 03/16/12 10:02 03/20/12 15:56 12 B 0.24 mg/Kg Chromium 338 Cobalt 7.2 6.1 0.20 mg/Kg 03/16/12 10:02 03/20/12 15:56 0.37 0.23 mg/Kg 03/16/12 10:02 03/20/12 15:56 Lead 11 Selenium 0.61 U 0.61 0.55 mg/Kg 03/16/12 10:02 03/20/12 15:56 0.12 mg/Kg Silver 0.61 U 0.61 03/16/12 10:02 03/20/12 15:56 Vanadium 13 6.1 0.15 mg/Kg 03/16/12 10:02 03/20/12 15:56 47 24 0.087 mg/Kg 03/16/12 10:02 03/20/12 15:56 Barium B 03/16/12 10:02 03/20/12 15:56 Calcium 19000 610 20 mg/Kg 03/16/12 10:02 03/20/12 15:56 Copper 14 3.1 0.90 mg/Kg 3,6 610 6.2 mg/Kg 03/16/12 10:02 03/20/12 15:56 Magnesium 3900 B 300 B 1.8 0.090 mg/Kg 03/16/12 10:02 03/20/12 15:56 Manganese 03/20/12 15:56 4.9 0.33 mg/Kg 03/16/12 10:02 Nickel 20 Potassium 1200 B 610 7.6 mg/Kg 03/16/12 10:02 03/20/12 15:56

Method: 6010B - Metals (ICP) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0033	J	0.50	0.0032	mg/L		03/21/12 08:58	03/22/12 13:47	1
Barium	0.44	JB	10	0.00067	mg/L		03/21/12 08:58	03/22/12 13:47	1
Cadmium	0.00067	J	0.10	0.00066	mg/L		03/21/12 08:58	03/22/12 13:47	1
Chromium	0.0028	J	0.50	0.0022	mg/L		03/21/12 08:58	03/22/12 13:47	1
Lead	0.50	U	0.50	0.0019	mg/L		03/21/12 08:58	03/22/12 13:47	1
Selenium	0.0047	J	0.25	0.0041	mg/L		03/21/12 08:58	03/22/12 13:47	1
Silver	0.50	U	0.50	0.0022	mg/L		03/21/12 08:58	03/22/12 13:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7600	В	6.1	1.6	mg/Kg	- 125	03/16/12 10:02	03/21/12 10:53	1
Antimony	0.086	J	0.24	0.029	mg/Kg	308	03/16/12 10:02	03/21/12 10:53	1
Beryllium	0.49		0.12	0.057	mg/Kg	101	03/16/12 10:02	03/21/12 10:53	1
Cadmium	0.13	В	0.12	0.0095	mg/Kg	808	03/16/12 10:02	03/21/12 10:53	1
Iron	23000	В	12	1.2	mg/Kg	101	03/16/12 10:02	03/21/12 10:53	1
Sodium	420	В	120	2.9	mg/Kg	Ċ	03/16/12 10:02	03/21/12 10:53	1
Thallium	0.24	В	0.24	0.016	mg/Kg	Þ	03/16/12 10:02	03/21/12 10:53	1
Zinc	52	В	2.4	0.24	mg/Kg	-02	03/16/12 10:02	03/21/12 10:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L	- 1	03/21/12 14:10	03/22/12 14:06	1
Method: 7471A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.14	U	0.14	0.021	mg/Kg	- 62	03/16/12 13:25	03/20/12 13:53	1

Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
>140				Degrees F			03/26/12 13:50	1
0.63	U	0.63	0.13	mg/Kg	305	03/21/12 13:59	03/21/12 15:39	1
39	U	39	29	mg/Kg	Ė	03/16/12 09:58	03/16/12 16:16	1
11.9		0.100	0.100	SU			03/15/12 15:42	1
7.4	U	7.4	1.1	mg/kg	325	03/23/12 06;00	03/29/12 14:29	1
	>140 0.63 39 11.9	0.63 U 39 U	>140 0.63 U 0.63 39 U 39 11.9 0.100	>140 0.63 U 0.63 0.13 39 U 39 29 11.9 0.100 0.100	>140 Degrees F 0.63 U 0.63 0.13 mg/Kg 39 U 39 29 mg/Kg 11.9 0.100 0.100 SU	>140 Degrees F 0.63 U 0.63 0.13 mg/Kg 39 U 39 29 mg/Kg 11.9 0.100 0.100 SU	>140 Degrees F 0.63 U 0.63 0.13 mg/Kg	>140 Degrees F 03/26/12 13:50 0.63 U 0.63 O.13 mg/Kg 03/21/12 13:59 O3/21/12 15:39 39 U 39 29 mg/Kg 03/16/12 09:58 O3/16/12 16:16 11.9 0.100 O.100 SU 03/15/12 15:42

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Client Sample ID: TRIP BLANK

Date Collected: 03/13/12 14:30 Date Received: 03/14/12 11:57

Dibromofluoromethane (Surr)

Lab Sample ID: 240-9236-2

03/19/12 18:58

Matrix: Water

Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1.0	U	1.0	0.19	ug/L			03/19/12 18:58	1
1.0	U	1.0	0.22	ug/L			03/19/12 18:58	1
1.0	U	1.0	0.13	ug/L			03/19/12 18:58	1
1.0	U	1.0	0.13	ug/L			03/19/12 18:58	1
1.0	U	1.0	0.15	ug/L			03/19/12 18:58	1
0.26	J	1.0	0.16	ug/L			03/19/12 18:58	1
10	U	10	0.57	ug/L			03/19/12 18:58	1
1.0	U	1.0	0.29	ug/L			03/19/12 18:58	1
1.0	U	1.0	0.17	ug/L			03/19/12 18:58	1
1.0	U	1.0	0.22	ug/L			03/19/12 18:58	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
96		63 - 129					03/19/12 18:58	1
89		66 - 117					03/19/12 18:58	1
94		74 - 115					03/19/12 18:58	1
	1.0 1.0 1.0 1.0 1.0 0.26 10 1.0 1.0 1.0 %Recovery	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 0.26 J 10 U 1.0 U 1.0 U 1.0 U 1.0 U 96 Recovery Qualifier 96 89	1.0 U 1.0 1.0 U 1.0 1.0 U 1.0 1.0 U 1.0 1.0 U 1.0 1.0 U 1.0 0.26 J 1.0 10 U 10 1.0 U 10 1.0 U 1.0 1.0 U 1.0 2.0 U 1.0 1.0 U 1.0 2.1 U 1.0 3.2 U 1.0 4.3 U 1.0 4.4 U 1.0 5.5 U 1.0 6.7 U 1.0 6.8 U 1.0 6.8 U 1.0 6.9 U 1.0 6.9 U 1.0 6.9 U 1.0 6.9 U 1.0 6.9 U 1.0	1.0 U 1.0 0.19 1.0 U 1.0 0.22 1.0 U 1.0 0.13 1.0 U 1.0 0.13 1.0 U 1.0 0.15 0.26 J 1.0 0.16 10 U 10 0.57 1.0 U 10 0.29 1.0 U 1.0 0.29 1.0 U 1.0 0.29 **Recovery Qualifier Limits 96 63 - 129 89 66 - 117	1.0 U 1.0 0.19 ug/L 1.0 U 1.0 0.22 ug/L 1.0 U 1.0 0.13 ug/L 1.0 U 1.0 0.13 ug/L 1.0 U 1.0 0.15 ug/L 1.0 U 1.0 0.16 ug/L 0.26 J 1.0 0.16 ug/L 10 U 10 0.57 ug/L 1.0 U 1.0 0.29 ug/L 1.0 U 1.0 0.29 ug/L 1.0 U 1.0 0.22 ug/L 1.0 U 1.0 0.22 ug/L %Recovery Qualifier Limits 96 63 - 129 89 66 - 117	1.0 U 1.0 0.19 ug/L 1.0 U 1.0 0.22 ug/L 1.0 U 1.0 0.13 ug/L 1.0 U 1.0 0.13 ug/L 1.0 U 1.0 0.15 ug/L 0.26 J 1.0 0.16 ug/L 10 U 10 0.57 ug/L 1.0 U 1.0 0.29 ug/L 1.0 U 1.0 0.29 ug/L 1.0 U 1.0 0.29 ug/L 1.0 U 1.0 0.29 ug/L 1.0 U 1.0 0.22 ug/L 1.0 U 1.0 0.22 ug/L 1.0 U 1.0 0.22 ug/L	1.0 U 1.0 0.19 ug/L 1.0 U 1.0 0.22 ug/L 1.0 U 1.0 0.13 ug/L 1.0 U 1.0 0.13 ug/L 1.0 U 1.0 0.15 ug/L 0.26 J 1.0 0.16 ug/L 10 U 10 0.57 ug/L 1.0 U 1.0 0.29 ug/L 1.0 U 1.0 0.17 ug/L 1.0 U 1.0 0.22 ug/L 1.0 U 1.0 0.22 ug/L 1.0 U 1.0 0.22 ug/L 96 63 - 129 89 66 - 117	1.0 U 1.0 0.19 ug/L 03/19/12 18:58 1.0 U 1.0 0.22 ug/L 03/19/12 18:58 1.0 U 1.0 0.13 ug/L 03/19/12 18:58 1.0 U 1.0 0.13 ug/L 03/19/12 18:58 1.0 U 1.0 0.15 ug/L 03/19/12 18:58 1.0 U 1.0 0.16 ug/L 03/19/12 18:58 0.26 J 1.0 0.16 ug/L 03/19/12 18:58 10 U 10 0.57 ug/L 03/19/12 18:58 1.0 U 10 0.57 ug/L 03/19/12 18:58 1.0 U 1.0 0.29 ug/L 03/19/12 18:58 1.0 U 1.0 0.29 ug/L 03/19/12 18:58 1.0 U 1.0 0.29 ug/L 03/19/12 18:58 1.0 U 1.0 0.29 ug/L 03/19/12 18:58 1.0 U 1.0 0.29 ug/L 03/19/12 18:58 1.0 U 1.0 0.29 ug/L 03/19/12 18:58 1.0 U 1.0 0.29 ug/L 03/19/12 18:58 1.0 U 1.0 0.29 ug/L 03/19/12 18:58 1.0 U 1.0 0.29 ug/L 03/19/12 18:58

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW TestAmerica Job ID: 240-9236-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: Total/NA

				Percent Sur	rogate Recovery (Acceptance Lir
		TOL	12DCE	BFB	DBFM	
Lab Sample ID	Client Sample ID	(67-125)	(58-123)	(52-136)	(37-132)	
240-9236-1	FWG-IDW-SBCOMP1-SO	105	92	83	21 X	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	111	81	86	18 X	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	103	90	82	29 X	
LCS 240-36992/5	Lab Control Sample	109	86	90	96	
MB 240-36992/6	Method Blank	107	84	88	92	
Surrogate Legend						

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: Total/NA

				Percent Sur	rogate Recovery	(Acceptance Limits)
		12DCE	TOL	BFB	DBFM	
Lab Sample ID	Client Sample ID	(80-121)	(90-115)	(70-124)	(84-128)	
LCS 240-37853/4	Lab Control Sample	113	105	99	119	

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: TCLP

				Percent Sur	rogate Recovery (Acc	eptance Limits)
		12DCE	BFB	TOL	DBFM	
Lab Sample ID	Client Sample ID	(80-121)	(70-124)	(90-115)	(84-128)	
240-9236-1	FWG-IDW-SBCOMP1-SO	108	96	107	111	
LB 240-37401/1-A LB	Method Blank	111	94	105	117	

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
		12DCE	BFB	TOL	DBFM			
Lab Sample ID	Client Sample ID	(63-129)	(66-117)	(74-115)	(75-121)			
240-9236-2	TRIP BLANK	96	89	94	95			
LCS 240-37166/4	Lab Control Sample	96	110	94	99			
MB 240-37166/5	Method Blank	93	100	94	95			

Surrogate Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW TestAmerica Job ID: 240-9236-1

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		FBP	2FP	NBZ	TPH	TBP	PHL		
Lab Sample ID	Client Sample ID	(34-110)	(26-110)	(24-112)	(41-119)	(10-118)	(28-110)		
240-9236-1	FWG-IDW-SBCOMP1-SO	61	75	64	74	36	77		
LCS 240-37287/23-A	Lab Control Sample	63	74	66	71	60	77		
MB 240-37287/22-A	Method Blank	64	72	67	76	56	73		

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

PHL = Phenol-d5 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		FBP	2FP	TBP	NBZ	PHL	TPH			
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)			
LCS 240-37496/9-A	Lab Control Sample	75	70	75	82	61	85			
MB 240-37496/8-A	Method Blank	73	73	72	79	69	82			

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: TCLP

_				Percent Sur	rogate Reco	very (Accept	ance Limits)
		FBP	2FP	TBP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)
240-9236-1	FWG-IDW-SBCOMP1-SO	68	65	67	72	63	81

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

TestAmerica North Canton 4/5/2012 Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW TestAmerica Job ID: 240-9236-1

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
		DCB1	DCB2	TCX1	TCX2			
Lab Sample ID	Client Sample ID	(34-141)	(34-141)	(46-122)	(46-122)			
LCS 240-37503/8-A	Lab Control Sample	119	102	77	81			
MB 240-37503/7-A	Method Blank	100	100	71	78			
Surrogate Legend								
DCB = DCB Decachloro	obiphenyl							
TCX = Tetrachloro-m-x	ylene							

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
		DCB1	DCB2	TCX1	TCX2			
Lab Sample ID	Client Sample ID	(32-175)	(32-175)	(24-150)	(24-150)			
240-9236-1	FWG-IDW-SBCOMP1-SO	111	95	117	67			
LCS 240-37302/8-A	Lab Control Sample	101	92	148	100			
MB 240-37302/9-A	Method Blank	108	105	139	83			
Surrogate Legend								
DCB = DCB Decachloro	biphenyl							
TCX = Tetrachloro-m-xy	lene							

Method: 8081A - Organochlorine Pesticides (GC)

DCB = DCB Decachlorobiphenyl

Matrix: Solid Prep Type: TCLP

				Percent Sur	rogate Recovery (A	Acceptance Limits)
		TCX1	TCX2	DCB1	DCB2	
Lab Sample ID	Client Sample ID	(46-122)	(46-122)	(34-141)	(34-141)	
240-9236-1	FWG-IDW-SBCOMP1-SO	66	70	84	83	
Surrogate Legend						

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid Prep Type: Total/NA

Lab Sample ID	Client Sample ID	TCX2 (29-151)	DCB2 (14-163)	Percent Surrogate Recovery (Acceptance Limits)
240-9236-1	FWG-IDW-SBCOMP1-SO	88	94	
LCS 240-37290/24-A	Lab Control Sample	86	80	
MB 240-37290/23-A	Method Blank	85	95	
Surrogate Legend				
TCX = Tetrachloro-m-xy	lene			
DCB = DCB Decachloro	biphenyl			

TestAmerica North Canton 4/5/2012

Surrogate Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Method: 8151A - Herbicides (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		DCPA1	DCPA2	
Lab Sample ID	Client Sample ID	(37-116)	(37-116)	
LCS 240-37504/8-A	Lab Control Sample	60	63	
MB 240-37504/7-A	Method Blank	61	62	
Surrogate Legend				

Method: 8151A - Herbicides (GC)

Matrix: Solid Prep Type: TCLP

				Percent Surrogate Recovery (Acceptance Limits)
		DCPA1	DCPA2	
Lab Sample ID	Client Sample ID	(37-116)	(37-116)	
240-9236-1	FWG-IDW-SBCOMP1-SO	57	58	
Surrogate Legend				

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)

Matrix: Solid Prep Type: Total

			Percent Surrogate Recovery (Acceptance Limits)
		DNT	
Lab Sample ID	Client Sample ID	(75-115)	
240-9236-1	FWG-IDW-SBCOMP1-SO	103	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	108	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	106	
G2C220000046B	Method Blank	104	
G2C220000046C	Lab Control Sample	105	
Surrogate Legend			

QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Prep Type: Total/NA

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-36992/6 Client Sample ID: Method Blank Matrix: Solid

Analysis Batch: 36992

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.0	U	5.0	0.56	ug/Kg	===		03/15/12 22:17	-1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.34	ug/Kg			03/15/12 22:17	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			03/15/12 22:17	1
1,1-Dichloroethane	5.0	U	5.0	0.36	ug/Kg			03/15/12 22:17	1
1,1-Dichloroethene	5.0	U	5.0	0.52	ug/Kg			03/15/12 22:17	1
1,2-Dichloroethane	5.0	U	5.0	0.34	ug/Kg			03/15/12 22:17	1
1,2-Dichloroethene, Total	10	U	10	0.77	ug/Kg			03/15/12 22:17	1
1,2-Dichloropropane	5.0	U	5.0	0.69	ug/Kg			03/15/12 22:17	1
2-Butanone (MEK)	20	U	20	1.4	ug/Kg			03/15/12 22:17	1
2-Hexanone	0.896	J	20	0.63	ug/Kg			03/15/12 22:17	1
4-Methyl-2-pentanone (MIBK)	20	U	20	0.54	ug/Kg			03/15/12 22:17	1
Acetone	20	U	20	6.3	ug/Kg			03/15/12 22:17	1
Benzene	5.0	U	5.0	0.23	ug/Kg			03/15/12 22:17	- 1
Bromoform	5.0	U	5.0	0.33	ug/Kg			03/15/12 22:17	1
Bromomethane	5.0	U	5.0	0.54	ug/Kg			03/15/12 22:17	1
Carbon disulfide	5.0	U	5.0	0.44	ug/Kg			03/15/12 22:17	1
Carbon tetrachloride	5.0	U	5.0	0.37	ug/Kg			03/15/12 22:17	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			03/15/12 22:17	1
Chloromethane	5.0	U	5.0	0.41	ug/Kg			03/15/12 22:17	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.36	ug/Kg			03/15/12 22:17	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.34	ug/Kg			03/15/12 22:17	1
Dibromochloromethane	5.0	U	5.0	0.55	ug/Kg			03/15/12 22:17	1
Bromodichloromethane	5.0	U	5.0	0.28	ug/Kg			03/15/12 22:17	1
Ethylbenzene	5.0	U	5.0	0.26	ug/Kg			03/15/12 22:17	1
Methylene Chloride	2.51	J	5.0	0.67	ug/Kg			03/15/12 22:17	1
m-Xylene & p-Xylene	10	U	10	1.2	ug/Kg			03/15/12 22:17	1
o-Xylene	5.0	U	5.0	0.35	ug/Kg			03/15/12 22:17	1
Styrene	5.0	U	5.0	0.15	ug/Kg			03/15/12 22:17	1
Tetrachloroethene	5.0	U	5.0	0.52	ug/Kg			03/15/12 22:17	1
Toluene	5.0	U	5.0	0.27	ug/Kg			03/15/12 22:17	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.41	ug/Kg			03/15/12 22:17	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.54	ug/Kg			03/15/12 22:17	1
Trichloroethene	5.0	U	5.0	0.42	ug/Kg			03/15/12 22:17	1
Vinyl chloride	5.0	U	5.0	0.39	ug/Kg			03/15/12 22:17	1
Xylenes, Total	10	U	10		ug/Kg			03/15/12 22:17	1
Chloroform	5.0	U	5.0	0.29	ug/Kg			03/15/12 22:17	1
Bromochloromethane	5.0	U	5.0	0.71	ug/Kg			03/15/12 22:17	1
1,2-Dibromoethane	5.0	U	5.0	0.50	ug/Kg			03/15/12 22:17	1
Chloroethane	5.0	U	5.0	0.86	ug/Kg			03/15/12 22:17	1

IVI	MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		58 - 123		03/15/12 22:17	1
Toluene-d8 (Surr)	107		67 - 125		03/15/12 22:17	1
4-Bromofluorobenzene (Surr)	88		52 - 136		03/15/12 22:17	7
Dibromofluoromethane (Surr)	92		37 - 132		03/15/12 22:17	1

Spike

LCS LCS

TestAmerica Job ID: 240-9236-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-36992/5

Matrix: Solid

Analysis Batch: 36992

Client Sample ID: Lab Control Sample Prep Type: Total/NA

%Rec.

	Spike	LCS	LC2				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1-Trichloroethane	50.0	49.4		ug/Kg		99	77 - 126	
1,1,2,2-Tetrachloroethane	50.0	54.2		ug/Kg		108	77 - 123	
1,1,2-Trichloroethane	50.0	53.1		ug/Kg		106	83 - 112	
1,1-Dichloroethane	50.0	48.6		ug/Kg		97	76 - 115	
1,1-Dichloroethene	50.0	50.6		ug/Kg		101	75 - 135	
1,2-Dichloroethane	50,0	44.9		ug/Kg		90	72 - 120	
1,2-Dichloroethene, Total	100	95.8		ug/Kg		96	78 - 115	
1,2-Dichloropropane	50.0	48.9		ug/Kg		98	87 - 113	
2-Butanone (MEK)	100	87.7		ug/Kg		88	52 - 131	
2-Hexanone	100	107		ug/Kg		107	64 _ 136	
4-Methyl-2-pentanone (MIBK)	100	103		ug/Kg		103	67 _ 135	
Acetone	100	90.1		ug/Kg		90	41 - 137	
Benzene	50.0	49.7		ug/Kg		99	79 - 112	
Bromoform	50,0	49.1		ug/Kg		98	62 - 133	
Bromomethane	50.0	54.3		ug/Kg		109	42 - 136	
Carbon disulfide	50.0	50.3		ug/Kg		101	62 - 146	
Carbon tetrachloride	50.0	52.2		ug/Kg		104	71 - 129	
Chlorobenzene	50,0	48.3		ug/Kg		97	78 - 110	
Chloromethane	50.0	41.2		ug/Kg		82	50 - 110	
cis-1,2-Dichloroethene	50.0	48.4		ug/Kg		97	76 - 113	
cis-1,3-Dichloropropene	50,0	50.5		ug/Kg		101	74 - 128	
Dibromochloromethane	50.0	52.0		ug/Kg		104	72 - 127	
Bromodichloromethane	50.0	50.8		ug/Kg		102	84 - 122	
Ethylbenzene	50,0	49.0		ug/Kg		98	79 - 117	
Methylene Chloride	50.0	45.1		ug/Kg		90	75 _ 118	
m-Xylene & p-Xylene	100	99.6		ug/Kg		100	80 _ 117	
o-Xylene	50.0	49.7		ug/Kg		99	80 - 120	
Styrene	50.0	49.4		ug/Kg		99	87 - 117	
Tetrachloroethene	50.0	51.3		ug/Kg		103	79 - 114	
Toluene	50.0	50.4		ug/Kg		101	75 - 111	
trans-1,2-Dichloroethene	50.0	47.4		ug/Kg		95	78 - 117	
trans-1,3-Dichloropropene	50.0	51.4		ug/Kg		103	73 - 131	
Trichloroethene	50,0	49.3		ug/Kg		99	79 - 113	
Vinyl chloride	50,0	45.9		ug/Kg		92	57 _ 114	
Xylenes, Total	150	149		ug/Kg		100	80 - 118	
Chloroform	50.0	47.4		ug/Kg		95	77 - 114	
Bromochloromethane	50.0	46.8		ug/Kg		94	79 - 111	
1,2-Dibromoethane	50.0					100		
	50.0	50.2		ug/Kg		100	83 - 117	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		58 - 123
Toluene-d8 (Surr)	109		67 - 125
4-Bromofluorobenzene (Surr)	90		52 - 136
Dibromofluoromethane (Surr)	96		37 - 132

TestAmerica Job ID: 240-9236-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-9236-1 MS

Matrix: Solid

Chloroethane

Analysis Batch: 36992

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Analysis Daton. 30332	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	6.5	U	64.8	71.9		ug/Kg	9	111	51 - 128
1,1,2,2-Tetrachloroethane	6.5	U	64.8	6.5	UF	ug/Kg	0	0	16 - 179
1,1,2-Trichloroethane	6.5	U	64.8	55.2		ug/Kg	0	85	10 _ 166
1,1-Dichloroethane	6.5	U	64.8	68.1		ug/Kg	*	105	54 - 122
1,1-Dichloroethene	6.5	U	64.8	85.5		ug/Kg	**	132	49 - 157
1,2-Dichloroethane	6.5	U	64.8	56.2		ug/Kg	**	87	49 - 123
1,2-Dichloroethene, Total	13	U	130	135		ug/Kg	\$	104	51 _ 120
1,2-Dichloropropane	6.5	U	64.8	66.0		ug/Kg	*	102	61 - 117
2-Butanone (MEK)	54		130	138		ug/Kg	Ċ	65	30 - 143
2-Hexanone	2.0	JB	130	124		ug/Kg	*	94	37 - 147
4-Methyl-2-pentanone (MIBK)	26	U	130	115		ug/Kg	*	89	43 _ 147
Acetone	240		130	283		ug/Kg	章	29	24 - 140
Benzene	6.5	U	64.8	67.7		ug/Kg	☼	105	53 - 118
Bromoform	6.5	U	64.8	55.7		ug/Kg	*	86	18 - 129
Bromomethane	6.5	U	64.8	73.8		ug/Kg	0	114	33 - 130
Carbon disulfide	0.74	J	64.8	70.1		ug/Kg	**	107	20 - 151
Carbon tetrachloride	6.5	U	64.8	75.2		ug/Kg	**	116	32 - 137
Chlorobenzene	6.5	U	64.8	65.3		ug/Kg	-05	101	37 _ 116
Chloromethane	6.5	U	64.8	58.7		ug/Kg	*	91	34 - 117
cis-1,2-Dichloroethene	6.5	U	64.8	65.8		ug/Kg	O	102	50 - 119
cis-1,3-Dichloropropene	6.5	U	64.8	62.7		ug/Kg	30	97	27 - 133
Dibromochloromethane	6.5	U	64.8	63.2		ug/Kg	0	98	29 - 135
Bromodichloromethane	6.5	U	64.8	64.5		ug/Kg	4	100	35 - 132
Ethylbenzene	6.5	U	64.8	71.2		ug/Kg	0	110	30 - 131
Methylene Chloride	5.7	JB	64.8	63.2		ug/Kg	0	89	54_115
m-Xylene & p-Xylene	1.8	J	130	148		ug/Kg	**	113	29 _ 131
o-Xylene	1.0	J	64.8	72.1		ug/Kg	章	110	29 _ 134
Styrene	6.5	U	64.8	66.6		ug/Kg	*	103	27 - 127
Tetrachloroethene	6.5	U	64.8	75.5		ug/Kg	Ø	117	31 - 135
Toluene	110		64.8	315	EF	ug/Kg	305	321	39 - 129
trans-1,2-Dichloroethene	6.5	U	64.8	69.2		ug/Kg	*	107	50 - 123
trans-1,3-Dichloropropene	6.5	U	64.8	63.1		ug/Kg	*	.97	28 - 137
Trichloroethene	6.5	U	64.8	124	F	ug/Kg	♦	192	10 - 177
Vinyl chloride	6.5	U	64.8	64.4		ug/Kg	×.	99	42 - 117
Xylenes, Total	2.8		194	220		ug/Kg	*	112	30 - 131
Chloroform	6.5		64.8	65.1		ug/Kg	*	101	53 - 119
Bromochloromethane		U	64.8	60.9		ug/Kg	33	94	53 - 116
1,2-Dibromoethane	6.5		64.8	60.5		ug/Kg	*	93	45 - 127

IS	MS

6.5 U

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	81		58 - 123
Toluene-d8 (Surr)	111		67 - 125
4-Bromofluorobenzene (Surr)	86		52 - 136
Dibromofluoromethane (Surr)	18	×	37 - 132

45 - 118

116

64.8

74.9

ug/Kg

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-9236-1 MSD

Matrix: Solid

Analysis Batch: 36992

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1-Trichloroethane	6.5	U	64.8	67.6		ug/Kg	泵	104	51 - 128	6	30
1,1,2,2-Tetrachloroethane	6.5	U	64.8	6.5	UF	ug/Kg	0	0	16 - 179	NC	30
1,1,2-Trichloroethane	6.5	U	64.8	54.0		ug/Kg	*	83	10_166	2	30
1,1-Dichloroethane	6.5	U	64.8	64.4		ug/Kg	0	99	54 - 122	6	30
1,1-Dichloroethene	6.5	U	64.8	82.2		ug/Kg	105	127	49 - 157	4	30
1,2-Dichloroethane	6.5	U	64.8	57.6		ug/Kg	100	89	49 - 123	3	30
1,2-Dichloroethene, Total	13	U	130	128		ug/Kg	300	99	51 - 120	5	30
1,2-Dichloropropane	6.5	U	64.8	63.7		ug/Kg	*	98	61 - 117	4	30
2-Butanone (MEK)	54		130	150		ug/Kg	Ø	74	30 - 143	8	30
2-Hexanone	2.0	JB	130	144		ug/Kg	**	110	37 - 147	15	30
4-Methyl-2-pentanone (MIBK)	26	U	130	134		ug/Kg	**	103	43 _ 147	15	30
Acetone	240		130	285		ug/Kg	章	31	24 - 140	1	30
Benzene	6.5	U	64.8	65.8		ug/Kg	0	102	53 - 118	3	30
Bromoform	6.5	U	64.8	58.4		ug/Kg	300	90	18 - 129	5	30
Bromomethane	6.5	U	64.8	71.9		ug/Kg	-	111	33 - 130	3	30
Carbon disulfide	0.74	J	64.8	62.6		ug/Kg	105	95	20 - 151	11	30
Carbon tetrachloride	6.5	U	64.8	68.4		ug/Kg	**	106	32 - 137	10	30
Chlorobenzene	6.5	U	64.8	60.0		ug/Kg	**	93	37 - 116	8	30
Chloromethane	6.5	U	64.8	58.9		ug/Kg	**	91	34 - 117	0	30
cis-1,2-Dichloroethene	6.5	U	64.8	63.6		ug/Kg	**	.98	50 - 119	3	30
cis-1,3-Dichloropropene	6.5	U	64.8	60.5		ug/Kg	0	93	27 - 133	4	30
Dibromochloromethane	6.5	U	64.8	62.4		ug/Kg	0	96	29 - 135	1	30
Bromodichloromethane	6.5	U	64.8	62.2		ug/Kg	0.	96	35 - 132	4	30
Ethylbenzene	6.5	U	64.8	64.2		ug/Kg	-00	99	30 - 131	10	30
Methylene Chloride	5.7	JB	64.8	62.6		ug/Kg	100	88	54_115	1	30
m-Xylene & p-Xylene	1.8	J	130	128		ug/Kg	*	97	29 _ 131	15	30
o-Xylene	1.0	J	64.8	62.7		ug/Kg		95	29_134	14	30
Styrene	6.5	U	64.8	60.2		ug/Kg	*	93	27 - 127	10	30
Tetrachloroethene	6.5	U	64.8	67.6		ug/Kg	:0:	104	31 - 135	11	30
Toluene	110		64.8	166	F	ug/Kg	**	91	39 - 129	62	30
trans-1,2-Dichloroethene	6.5	U	64.8	64.4		ug/Kg	**	99	50 - 123	7	30
trans-1,3-Dichloropropene	6.5	U	64.8	62.6		ug/Kg	*	.97	28 - 137	1	30
Trichloroethene	6.5		64.8	112		ug/Kg	\$	173	10 - 177	10	30
Vinyl chloride	6.5	U	64.8	65.1		ug/Kg	**	101	42 - 117	1	30
Xylenes, Total	2.8	J	194	191		ug/Kg	100	97	30 - 131	14	30
Chloroform	6.5		64.8	62.6		ug/Kg	**	97	53 - 119	4	30
Bromochloromethane	6.5		64.8	59.7		ug/Kg	33	92	53 - 116	2	30
1,2-Dibromoethane	6.5		64.8	62,9		ug/Kg	ō.	97	45 - 127	4	30
Chloroethane	6.5		64.8	73.6		ug/Kg	0	114	45 - 118	2	-30
	MSD	MSD									

ISD	MSD
130	MOD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		58 - 123
Toluene-d8 (Surr)	103		67 - 125
4-Bromofluorobenzene (Surr)	82		52 - 136
Dibromoflyoromethane (Surr)	20	Y	37 132

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-37166/5

Matrix: Water

Analysis Batch: 37166

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/19/12 11:25	-1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			03/19/12 11:25	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			03/19/12 11:25	7
Benzene	1.0	U	1.0	0.13	ug/L			03/19/12 11:25	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			03/19/12 11:25	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			03/19/12 11:25	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			03/19/12 11:25	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			03/19/12 11:25	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			03/19/12 11:25	1
Chloroform	1.0	U	1.0	0.16	ug/L			03/19/12 11:25	1

MB MB

%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
93		63 - 129		03/19/12 11:25	1
94		74 - 115		03/19/12 11:25	1
100		66 - 117		03/19/12 11:25	1
95		75 - 121		03/19/12 11:25	1
	93 94 100	94 100	93 63 - 129 94 74 - 115 100 66 - 117	93 63 - 129 94 74 - 115 100 66 - 117	93 63 - 129 03/19/12 11:25 94 74 - 115 03/19/12 11:25 100 66 - 117 03/19/12 11:25

Lab Sample ID: LCS 240-37166/4

Matrix: Water

Analysis Batch: 37166

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	10,0	10.4		ug/L		104	78 - 131	
1,2-Dichloroethane	10.0	9.86		ug/L		99	71 - 127	
2-Butanone (MEK)	20.0	19.3		ug/L		97	60 - 126	
Benzene	10.0	9.72		ug/L		97	83 - 112	
Carbon tetrachloride	10.0	10.0		ug/L		100	66 - 128	
Chlorobenzene	10,0	9.37		ug/L		94	85 - 110	
Tetrachloroethene	10.0	9.43		ug/L		94	79 - 114	
Trichloroethene	10.0	10.0		ug/L		100	76 - 117	
Vinyl chloride	10.0	9.95		ug/L		100	53 - 127	
Chloroform	10.0	9.56		ug/L		96	79 - 117	

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96	_	63 - 129
Toluene-d8 (Surr)	94		74 - 115
4-Bromofluorobenzene (Surr)	110		66 - 117
Dibromofluoromethane (Surr)	99		75 - 121

Lab Sample ID: LCS 240-37853/4

Matrix: Solid

Analysis Batch: 37853

Client Sample I	D: Lab Control Sample
	Prep Type: Total/NA

and the state of t	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	1.00	1,19		mg/L		119	71 - 133
1,2-Dichloroethane	1.00	1,06		mg/L		106	81 - 114
2-Butanone (MEK)	2.00	1.98		mg/L		99	49 - 120
Benzene	1.00	0.945		mg/L		95	84 - 120
Carbon tetrachloride	1.00	1.19		mg/L		119	54 - 122

TestAmerica Job ID: 240-9236-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-37853/4

Matrix: Solid

Analyte Chlorobenzene Tetrachloroethene Trichloroethene Vinyl chloride Chloroform

Analysis Batch: 37853

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Spike	LCS	LCS				%Rec.	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
1.00	0,905		mg/L	_	91	86 - 111	_
1.00	0.930		mg/L		93	79 - 134	
1.00	0.985		mg/L		99	78 _ 130	
1.00	1.01		mg/L		101	56 _ 111	
1.00	0.060		ma/l		06	07 400	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	113		80 - 121
Toluene-d8 (Surr)	105		90 - 115
4-Bromofluorobenzene (Surr)	99		70 - 124
Dibromofluoromethane (Surr)	119		84 - 128

Lab Sample ID: LB 240-37401/1-A LB

Matrix: Solid

Client Sample ID: Method Blank

Prep Type: TCLP

madix. Cond								1 1ch 1 Jb	J. I OLI
Analysis Batch: 37853									
	LB	LB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1.1-Dichloroethene	0.025	O.	0.025	0.0095	ma/l			03/23/12 15:36	-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			03/23/12 15:36	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			03/23/12 15:36	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			03/23/12 15:36	- 1
Benzene	0.025	U	0.025	0.0065	mg/L			03/23/12 15:36	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			03/23/12 15:36	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			03/23/12 15:36	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			03/23/12 15:36	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			03/23/12 15:36	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			03/23/12 15:36	1
Chloroform	0.025	U	0.025	0.0080	mg/L			03/23/12 15:36	1

LB LB Surrogate %Recovery Qualifier Limits Prepared Analyzed 03/23/12 15:36 1,2-Dichloroethane-d4 (Surr) 80 - 121 111 Toluene-d8 (Surr) 105 90 - 115 03/23/12 15:36 4-Bromofluorobenzene (Surr) 94 70 - 124 03/23/12 15:36 Dibromofluoromethane (Surr) 117 84 - 128 03/23/12 15:36

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-37287/22-A Client Sample ID: Method Blank Matrix: Solid Prep Type: Total/NA

Analysis Batch: 37595

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Acenaphthene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1	
Acenaphthylene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1	
Anthracene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1	
Benzo[a]anthracene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1	
Benzoic acid	660	U	660	330	ug/Kg		03/20/12 08:42	03/22/12 10:32	. 1	
Benzo[b]fluoranthene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1	
Benzo[k]fluoranthene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1	
Benzyl alcohol	330	U	330	21	ug/Kg		03/20/12 08:42	03/22/12 10:32	1	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-37287/22-A

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Method Blank	
Prep Type: Total/NA	

Analysis Batch: 37595	MB	МВ						Prep Batch	0. 20.
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	100	U	100	22	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Bis(2-chloroethyl)ether	100	U	100	2.0	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4-Bromophenyl phenyl ether	50	U	50	13	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Butyl benzyl phthalate	50	U	50	10	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4-Dimethylphenol	150	U	150	20	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Dimethyl phthalate	50	U	50	17	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4,6-Dinitro-2-methylphenol	150	U	150	80	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4-Dinitrophenol	330	U	330	80	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4-Dinitrotoluene	200	U	200	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,6-Dinitrotoluene	200	U	200	21	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Fluoranthene	6.7		6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Fluorene	6.7		6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	-1
Hexachlorobenzene	6.7		6.7	2.1	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Hexachlorobutadiene	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Hexachlorocyclopentadiene	330		330	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Hexachloroethane	50		50	9.0	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
N-Nitrosodiphenylamine	50		50	21	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
N-Nitrosodi-n-propylamine	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
1,4-Dichlorobenzene	50		50	20	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
	50								1
2-Chlorophthalene	50		50 50	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	
2-Chlorophenol	50		50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4-Chlorophenyl phenyl ether				13	ug/Kg		03/20/12 08:42	03/22/12 10:32	
Chrysene	6.7		6.7	1.1	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Dibenz(a,h)anthracene	6.7		6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Dibenzofuran	50		50	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	-1
Benzo[g,h,i]perylene	6.7		6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Benzo[a]pyrene	6.7		6.7				03/20/12 08:42	03/22/12 10:32	- 1
Di-n-butyl phthalate	50	U	50		ug/Kg		03/20/12 08:42	03/22/12 10:32	1
1,2-Dichlorobenzene	50		50		ug/Kg		03/20/12 08:42	03/22/12 10:32	1
1,3-Dichlorobenzene	50		50		ug/Kg		03/20/12 08:42	03/22/12 10:32	1
3,3'-Dichlorobenzidine	100		100	18	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4-Dichlorophenol	150		150	20	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Diethyl phthalate	50	U	50		ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Indeno[1,2,3-cd]pyrene	6.7		6.7		ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Isophorone	50	U	50	13	ug/Kg		03/20/12 08:42	03/22/12 10:32	.1
2-Methylnaphthalene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2-Methylphenol	200	U	200		ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Naphthalene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	- 1
2-Nitroaniline	200	U	200	9.1	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
3-Nitroaniline	200	U	200	16	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4-Nitroaniline	200	U	200	26	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Nitrobenzene	100	U	100	2.2	ug/Kg		03/20/12 08:42	03/22/12 10:32	- 1
2-Nitrophenol	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4-Nitrophenol	330	U	330	80	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Pyrene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Pentachlorophenol	150	U	150	80	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Phenanthrene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
1,2,4-Trichlorobenzene	50	U	50		ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4,5-Trichlorophenol	150	U	150		ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4,6-Trichlorophenol	150	U	150		ug/Kg		03/20/12 08:42	03/22/12 10:32	1

TestAmerica Job ID: 240-9236-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-37287/22-A

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37287

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Carbazole	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4-Chloroaniline	150	U	150	17	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
3 & 4 Methylphenol	400	U	400	20	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Bis(2-ethylhexyl) phthalate	50	U	50	19	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Di-n-octyl phthalate	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4-Chloro-3-methylphenol	150	U	150	21	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,2'-oxybis[1-chloropropane]	100	U	100	9.5	ug/Kg		03/20/12 08:42	03/22/12 10:32	1

MB MB

Surrogate	%Recovery G	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	64		34 - 110	03/20/12 08:42	03/22/12 10:32	1
2-Fluorophenol (Surr)	72		26 - 110	03/20/12 08:42	03/22/12 10:32	1
2,4,6-Tribromophenol (Surr)	56		10 - 118	03/20/12 08:42	03/22/12 10:32	1
Nitrobenzene-d5 (Surr)	67		24 - 112	03/20/12 08:42	03/22/12 10:32	1
Phenol-d5 (Surr)	73		28 - 110	03/20/12 08:42	03/22/12 10:32	1
Terphenyl-d14 (Surr)	76		41 - 119	03/20/12 08:42	03/22/12 10:32	1

Lab Sample ID: LCS 240-37287/23-A

Matrix: Solid

Analysis Batch: 37595

Client Sample	ID:	Lab	Control Sample	
		Dron	Type: Total/NA	

Analysis Batch: 37595	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Acenaphthene	667	427		ug/Kg		64	46 - 110
Acenaphthylene	667	438		ug/Kg		66	47 _ 110
Anthracene	667	457		ug/Kg		69	56 - 111
Benzo[a]anthracene	667	435		ug/Kg		65	58 - 111
Benzoic acid	667	660	U	ug/Kg		15	10 - 124
Benzo[b]fluoranthene	667	414		ug/Kg		62	43 - 124
Benzo[k]fluoranthene	667	452		ug/Kg		68	38 - 122
Benzyl alcohol	667	485		ug/Kg		73	10 - 130
Bis(2-chloroethoxy)methane	667	492		ug/Kg		74	42 - 110
Bis(2-chloroethyl)ether	667	513		ug/Kg		77	41 - 110
4-Bromophenyl phenyl ether	667	445		ug/Kg		67	53 - 112
Butyl benzyl phthalate	667	489		ug/Kg		73	57 - 121
2,4-Dimethylphenol	667	354		ug/Kg		53	28 - 110
Dimethyl phthalate	667	464		ug/Kg		70	54 _ 112
4,6-Dinitro-2-methylphenol	667	407		ug/Kg		61	21_110
2,4-Dinitrophenol	667	287	J	ug/Kg		43	10 - 110
2,4-Dinitrotoluene	667	496		ug/Kg		74	55 - 116
2,6-Dinitrotoluene	667	495		ug/Kg		74	54 - 115
Fluoranthene	667	469		ug/Kg		70	55 _ 118
Fluorene	667	437		ug/Kg		66	51 - 110
Hexachlorobenzene	667	431		ug/Kg		65	51 - 110
Hexachlorobutadiene	667	416		ug/Kg		62	39 - 110
Hexachlorocyclopentadiene	667	305	J	ug/Kg		46	10 - 110
Hexachloroethane	667	446		ug/Kg		67	38 _ 110
N-Nitrosodiphenylamine	667	472		ug/Kg		71	54 - 112
N-Nitrosodi-n-propylamine	667	529		ug/Kg		79	40 - 114
1,4-Dichlorobenzene	667	444		ug/Kg		67	38 - 110

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-37287/23-A

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 37287

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
2-Chloronaphthalene	667	440		ug/Kg		66	46 - 110	
2-Chlorophenol	667	486		ug/Kg		73	39 _ 110	
4-Chlorophenyl phenyl ether	667	439		ug/Kg		66	53 _ 110	
Chrysene	667	447		ug/Kg		67	56 - 111	
Dibenz(a,h)anthracene	667	454		ug/Kg		68	45 - 122	
Dibenzofuran	667	434		ug/Kg		65	50 - 110	
Benzo[g,h,i]perylene	667	454		ug/Kg		68	44 - 120	
Benzo[a]pyrene	667	400		ug/Kg		60	44 - 115	
Di-n-butyl phthalate	667	527		ug/Kg		79	57 - 119	
1,2-Dichlorobenzene	667	465		ug/Kg		70	42 - 110	
1,3-Dichlorobenzene	667	458		ug/Kg		69	40 - 110	
3,3'-Dichlorobenzidine	667	309		ug/Kg		46	31 - 110	
2,4-Dichlorophenol	667	479		ug/Kg		72	40 - 110	
Diethyl phthalate	667	463		ug/Kg		69	55 _ 114	
Indeno[1,2,3-cd]pyrene	667	445		ug/Kg		67	45 _ 121	
Isophorone	667	474		ug/Kg		71	46 _ 117	
2-Methylnaphthalene	667	451		ug/Kg		68	46 _ 110	
2-Methylphenol	667	498		ug/Kg		75	36 _ 110	
Naphthalene	667	470		ug/Kg		70	42 - 110	
2-Nitroaniline	667	510		ug/Kg		76	47 - 124	
3-Nitroaniline	667	463		ug/Kg		69	44 - 110	
4-Nitroaniline	667	481		ug/Kg		72	50 - 110	
Nitrobenzene	667	482		ug/Kg		72	40 - 110	
2-Nitrophenol	667	476		ug/Kg		71	35 - 110	
4-Nitrophenol	667	413		ug/Kg		62	24 - 117	
Pyrene	667	439		ug/Kg		66	58 - 113	
Pentachlorophenol	667	242		ug/Kg		36	10 - 110	
Phenanthrene	667	468		ug/Kg		70	54 _ 110	
1,2,4-Trichlorobenzene	667	413		ug/Kg		62	43 _ 110	
2,4,5-Trichlorophenol	667	416		ug/Kg		62	42 _ 110	
2,4,6-Trichlorophenol	667	411		ug/Kg		62	37 - 110	
Phenol	667	506		ug/Kg		76	39 _ 110	
Carbazole	667	481		ug/Kg		72	56 - 115	
4-Chloroaniline	667	377		ug/Kg		56	25 - 110	
3 & 4 Methylphenol	1330	1030		ug/Kg		77	40 - 110	
Bis(2-ethylhexyl) phthalate	667	499		ug/Kg		75	56 - 123	
Di-n-octyl phthalate	667	497		ug/Kg		74	45 - 123	
4-Chloro-3-methylphenol	667	495		ug/Kg		74	42 - 110	
2,2'-oxybis[1-chloropropane]	667	551		ug/Kg		83	36 - 116	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	63		34 - 110
2-Fluorophenol (Surr)	74		26 - 110
2,4,6-Tribromophenol (Surr)	60		10 - 118
Nitrobenzene-d5 (Surr)	66		24 - 112
Phenol-d5 (Surr)	77		28 - 110
Terphenyl-d14 (Surr)	71		41 - 119

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-37496/8-A

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 37496

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	0.020	U	0.020	0.00035	mg/L	= =	03/21/12 12:01	03/22/12 09:35	1
2,4-Dinitrotoluene	0,020	U	0.020	0.00027	mg/L		03/21/12 12:01	03/22/12 09:35	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		03/21/12 12:01	03/22/12 09:35	1
Hexachlorobutadiene	0,020	U	0.020	0.00027	mg/L		03/21/12 12:01	03/22/12 09:35	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		03/21/12 12:01	03/22/12 09:35	1
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		03/21/12 12:01	03/22/12 09:35	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		03/21/12 12:01	03/22/12 09:35	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		03/21/12 12:01	03/22/12 09:35	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		03/21/12 12:01	03/22/12 09:35	1
2,4,5-Trichlorophenol	0.020	U	0,020	0.00030	mg/L		03/21/12 12:01	03/22/12 09:35	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		03/21/12 12:01	03/22/12 09:35	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		03/21/12 12:01	03/22/12 09:35	1

мв мв

	11100	1412				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	73		22 - 110	03/21/12 12:01	03/22/12 09:35	1
2-Fluorophenol (Surr)	73		10 - 110	03/21/12 12:01	03/22/12 09:35	1
2,4,6-Tribromophenol (Surr)	72		17 - 117	03/21/12 12:01	03/22/12 09:35	1
Nitrobenzene-d5 (Surr)	79		29 - 111	03/21/12 12:01	03/22/12 09:35	1
Phenol-d5 (Surr)	69		10 - 110	03/21/12 12:01	03/22/12 09:35	1
Terphenyl-d14 (Surr)	82		40 - 119	03/21/12 12:01	03/22/12 09:35	1

Lab Sample ID: LCS 240-37496/9-A

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 37496

Trans Trans Edition (F. F. F.)	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Pyridine	0.0800	0.0564		mg/L		71	10 - 110	
2,4-Dinitrotoluene	0.0800	0.0677		mg/L		85	45 - 126	
Hexachlorobenzene	0.0800	0.0574		mg/L		72	47 _ 116	
Hexachlorobutadiene	0.0800	0.0595		mg/L		74	10 - 110	
Hexachloroethane	0.0800	0.0644		mg/L		81	10 _ 110	
2-Methylphenol	0.0800	0.0705		mg/L		88	24 - 110	
Nitrobenzene	0.0800	0.0673		mg/L		84	35 - 117	
Pentachlorophenol	0.0800	0.0548		mg/L		69	12 - 110	
2,4,5-Trichlorophenol	0.0800	0.0611		mg/L		76	35 - 111	
2,4,6-Trichlorophenol	0.0800	0.0598		mg/L		75	32 - 110	
3 & 4 Methylphenol	0.160	0,130		mg/L		82	27 - 110	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	75		22 - 110
2-Fluorophenol (Surr)	70		10 - 110
2,4,6-Tribromophenol (Surr)	75		17 - 117
Nitrobenzene-d5 (Surr)	82		29 - 111
Phenol-d5 (Surr)	61		10 - 110
Terphenyl-d14 (Surr)	85		40 - 119

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-37302/9-A

Matrix: Solid

Analysis Batch: 37819

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 37302

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	1.7	U	1.7	0.62	ug/Kg		03/20/12 09:02	03/23/12 23:50	-1
4,4'-DDE	1.7	U	1.7	0.39	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
4,4'-DDT	1.7	U	1.7	0.63	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Aldrin	1.7	U	1.7	1.2	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
alpha-BHC	1.7	U	1.7	0.73	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
alpha-Chlordane	1.7	U	1.7	0.94	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
beta-BHC	1.7	U	1.7	1.1	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
delta-BHC	1.7	U	1.7	1.2	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Dieldrin	1.7	U	1.7	0.47	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Endosulfan I	1.7	U	1.7	0.52	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Endosulfan II	1.7	U	1.7	0.82	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Endosulfan sulfate	1.7	U	1.7	0.87	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Endrin	1.7	U	1.7	0.50	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Endrin aldehyde	1.7	U	1.7	1.0	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Endrin ketone	1.7	U	1.7	0.63	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
gamma-BHC (Lindane)	1.7	U	1.7	0.74	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
gamma-Chlordane	1.7	U	1.7	0.42	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Heptachlor	1.7	U	1.7	1.1	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Heptachlor epoxide	1.7	U	1.7	0.80	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Methoxychlor	3.3	U	3.3	1.5	ug/Kg		03/20/12 09:02	03/23/12 23:50	1
Toxaphene	67	U	67	19	ug/Kg		03/20/12 09:02	03/23/12 23:50	1

MO	MB	
VID	IVID	

MD MD

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	108	32 - 175	03/20/12 09:02	03/23/12 23:50	1
DCB Decachlorobiphenyl	105	32 . 175	03/20/12 09:02	03/23/12 23:50	1
Tetrachloro-m-xylene	139	24 - 150	03/20/12 09:02	03/23/12 23:50	1
Tetrachloro-m-xylene	83	24 - 150	03/20/12 09:02	03/23/12 23:50	1

Lab Sample ID: LCS 240-37302/8-A

Matrix: Solid

Analysis Batch: 37819

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 37302

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
4,4'-DDD	33.3	36.0		ug/Kg		108	38 - 160
4,4'-DDE	33.3	32.3		ug/Kg		97	41 - 137
4,4'-DDT	33.3	36.2		ug/Kg		109	34 _ 139
Aldrin	33.3	29.8		ug/Kg		89	52 - 119
alpha-BHC	33,3	31.2		ug/Kg		94	50 - 129
alpha-Chlordane	33.3	31.1		ug/Kg		93	43 - 130
beta-BHC	33,3	32.1		ug/Kg		96	51 _ 127
delta-BHC	33.3	34.8		ug/Kg		104	54 _ 134
Dieldrin	33:3	33.3		ug/Kg		100	45 - 140
Endosulfan I	33.3	23.5		ug/Kg		71	13 - 110
Endosulfan II	33.3	26.0		ug/Kg		78	22_115
Endosulfan sulfate	33.3	35,5		ug/Kg		107	44 _ 143
Endrin	33.3	33.5		ug/Kg		100	48 - 143
Endrin aldehyde	33,3	33.7		ug/Kg		101	31 - 126
Endrin ketone	33.3	33.2		ug/Kg		100	39 _ 137
gamma-BHC (Lindane)	33.3	32.2		ug/Kg		97	41 - 137

TestAmerica Job ID: 240-9236-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 240-37302/8-A

Matrix: Solid

Analysis Batch: 37819

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 37302

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
gamma-Chlordane	33.3	32.7		ug/Kg		98	53 - 129	
Heptachlor	33.3	29.8		ug/Kg		90	37 - 127	
Heptachlor epoxide	33.3	32.3		ug/Kg		97	53 _ 132	
Methoxychlor	33.3	45.4		ug/Kg		136	33 _ 151	
Methoxythio	00.0	10.1		aging		100		

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	101		32 - 175
DCB Decachlorobiphenyl	92		32 - 175
Tetrachloro-m-xylene	148		24 - 150
Tetrachloro-m-xylene	100		24 - 150

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 37503

Lab Sample ID: MB 240-37503/7-A

Matrix: Solid

Analysis Batch: 37721

	INIC	INID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		03/21/12 12:15	03/23/12 00:50	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		03/21/12 12:15	03/23/12 00:50	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		03/21/12 12:15	03/23/12 00:50	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		03/21/12 12:15	03/23/12 00:50	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		03/21/12 12:15	03/23/12 00:50	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		03/21/12 12:15	03/23/12 00:50	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		03/21/12 12:15	03/23/12 00:50	1

MB MB

Surrogate	%Recovery Qualifier Limits		Prepared	Analyzed	Dil Fac	
DCB Decachlorobiphenyl	100		34 - 141	03/21/12 12:15	03/23/12 00:50	1
DCB Decachlorobiphenyl	100		34 - 141	03/21/12 12:15	03/23/12 00:50	1
Tetrachloro-m-xylene	71		46 - 122	03/21/12 12:15	03/23/12 00:50	1
Tetrachloro-m-xylene	78		46 - 122	03/21/12 12:15	03/23/12 00:50	1

Lab Sample ID: LCS 240-37503/8-A

Matrix: Solid

Analysis Batch: 37721

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 37503

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Endrin	0.00200	0.00219	J	mg/L		110	59 - 136
gamma-BHC (Lindane)	0.00200	0.00212	J	mg/L		106	59 - 137
Heptachlor	0.00200	0.00191	J	mg/L		95	63 - 123
Heptachlor epoxide	0.00200	0.00227	J	mg/L		114	59 - 141
Methoxychlor	0.00400	0.00530	J	mg/L		133	42 _ 141

LCS LCS

Surrogate	%Recovery	Qualifier	Limits					
DCB Decachlorobiphenyl	119		34 - 141					
DCB Decachlorobiphenyl	102		34 - 141					
Tetrachloro-m-xylene	77		46 - 122					
Tetrachloro-m-xylene	81		46 - 122					

TestAmerica Job ID: 240-9236-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

MO MO

Lab Sample ID: MB 240-37290/23-A

Matrix: Solid

Analysis Batch: 37663

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37290

	INID	INID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	33	U	33	21	ug/Kg		03/20/12 08:55	03/22/12 15:57	1
Aroclor-1221	33	U	33	16	ug/Kg		03/20/12 08:55	03/22/12 15:57	1
Aroclor-1232	33	U	33	14	ug/Kg		03/20/12 08:55	03/22/12 15:57	1
Aroclor-1242	33	U	33	13	ug/Kg		03/20/12 08:55	03/22/12 15:57	1
Aroclor-1248	33	U	33	17	ug/Kg		03/20/12 08:55	03/22/12 15:57	1
Aroclor-1254	33	U	33	17	ug/Kg		03/20/12 08:55	03/22/12 15:57	1
Aroclor-1260	33		33	17	ug/Kg		03/20/12 08:55	03/22/12 15:57	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85	29 - 151	03/20/12 08:55	03/22/12 15:57	1
DCB Decachlorobiphenyl	95	14 - 163	03/20/12 08:55	03/22/12 15:57	1

Lab Sample ID: LCS 240-37290/24-A

Matrix: Solid

Analysis Batch: 37663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Prep Batch: 37290

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	333	297		ug/Kg		89	62 - 120
Aroclor-1260	333	290		ug/Kg		87	56 - 122

LCS LCS

MB MB

Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene	86		29 - 151
DCB Decachlorobiphenyl	80		14 - 163

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-37504/7-A

Matrix: Solid

Analysis Batch: 37669

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 37504

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		03/21/12 12:19	03/23/12 02:55	1
Silvex (2,4,5-TP)	0.00050		0.00050	0.00010	mg/L		03/21/12 12:19	03/23/12 02:55	1
	MR	MR							

	IND IND				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	61	37 - 116	03/21/12 12:19	03/23/12 02:55	7
2,4-Dichlorophenylacetic acid	62	37 - 116	03/21/12 12:19	03/23/12 02:55	1

Lab Sample ID: LCS 240-37504/8-A

Matrix: Solid

Analysis Batch: 37669

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 37504

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
2,4-D	0.0200	0.0151		mg/L		76	35 _ 136	
Silvex (2,4,5-TP)	0.00500	0.00375		mg/L		75	46 - 112	

LCS LCS

Surrogate %Recovery Qualifier Limits 2,4-Dichlorophenylacetic acid 60 37 - 116

TestAmerica Job ID: 240-9236-1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 240-37504/8-A

Matrix: Solid

Analysis Batch: 37669

LCS LCS

Surrogate %Recovery Qualifier Limits 2,4-Dichlorophenylacetic acid 63 37 - 116 Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 37504

Method: 8330 (Modified) - Organic Compounds by UV/HPLC

Lab Sample ID: G2C220000047B

Matrix: Solid

Analysis Batch: 2082047

MB MB

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac 0.25 U 0.25 Nitroguanidine 0.020 mg/kg

LCS LCS

MS MS

MSD MSD

Result Qualifier

Result

0.997

0.995

Qualifier

Qualifier

Unit

Unit

Unit

mg/kg

mg/kg

Result

1.06

Spike

Added

Spike

Added

1.00

Spike

Added

1.00

1.00

Lab Sample ID: G2C220000047C

Matrix: Solid

Analysis Batch: 2082047

Analyte

Nitroguanidine

Lab Sample ID: 240-9236-1 MS

Matrix: Solid

Analysis Batch: 2082047

Analyte

Nitroguanidine

Lab Sample ID: 240-9236-1 MSD

Matrix: Solid

Analyte

Nitroguanidine

Analysis Batch: 2082047

Lab Sample ID: G2C220000046B

Matrix: Solid

Analysis Batch: 2082046

Client Sample ID: Method Blank Prep Type: Total

Prep Batch: 2082047_P

03/22/12 10:00 03/26/12 09:07

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 2082047_P

%Rec. %Rec Limits

mg/kg 106 72 - 121

%Rec

100

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total

Prep Batch: 2082047_P

%Rec. Limits

72 - 121

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total

Prep Batch: 2082047 P %Rec. RPD

Limits D %Rec RPD Limit 100 72 - 121 0.21 20

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)

Sample Sample

0.25 U

Sample Sample

0.25 U

Result Qualifier

Result Qualifier

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 2082046 P

Analysis Baton. 2002040	MB	MB						rep baten. 200	2040_1
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.25	U	0.25	0.010	mg/kg	= =	03/22/12 10:00	03/26/12 17:15	1
1,3-Dinitrobenzene	0.25	Ü	0.25	0.0042	mg/kg		03/22/12 10:00	03/26/12 17:15	4
2,4,6-Trinitrotoluene	0.25	U	0.25	0.019	mg/kg		03/22/12 10:00	03/26/12 17:15	1
2,4-Dinitrotoluene	0.25	U	0.25	0.0053	mg/kg		03/22/12 10:00	03/26/12 17:15	4
2,6-Dinitrotoluene	0,25	U	0.25	0.0073	mg/kg		03/22/12 10:00	03/26/12 17:15	1
2-Amino-4,6-dinitrotoluene	0.25	U	0.25	0.012	mg/kg		03/22/12 10:00	03/26/12 17:15	1
2-Nitrotoluene	0.25	U	0.25	0.013	mg/kg		03/22/12 10:00	03/26/12 17:15	1
3-Nitrotoluene	0.25	U	0.25	0.016	mg/kg		03/22/12 10:00	03/26/12 17:15	1
4-Amino-2,6-dinitrotoluene	0.25	U	0.25	0.010	mg/kg		03/22/12 10:00	03/26/12 17:15	1
4-Nitrotoluene	0.25	U	0.25	0.018	mg/kg		03/22/12 10:00	03/26/12 17:15	1
HMX	0.25	U	0.25	0.012	mg/kg		03/22/12 10:00	03/26/12 17:15	1

TestAmerica Job ID: 240-9236-1

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

Lab Sample ID: G2C220000046B

Matrix: Solid

Analysis Batch: 2082046

Client Sample ID: Method Blank Prep Type: Total

Prep Batch: 2082046_P

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	0.25	U	0.25	0.018	mg/kg		03/22/12 10:00	03/26/12 17:15	1
Nitroglycerin	0.50	U	0.50	0.015	mg/kg		03/22/12 10:00	03/26/12 17:15	1
PETN	0.50	U	0.50	0.025	mg/kg		03/22/12 10:00	03/26/12 17:15	1
RDX	0.25	U	0.25	0.012	mg/kg		03/22/12 10:00	03/26/12 17:15	1
Tetryl	0.25	U	0.25	0.010	mg/kg		03/22/12 10:00	03/26/12 17:15	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	104	75 - 115	03/22/12 10:00	03/26/12 17:15	1

Client Sample ID: Lab Control Sample

Prep Type: Total Prep Batch: 2082046 P

Matrix: Solid Analysis Batch: 2082046

Tetryl

Matrix: Solid

Lab Sample ID: G2C220000046C

Lab Sample ID: 240-9236-1 MS

Analysis Batch: 2082046

Analysis Batch: 2082046	Spike	LCS	LCS				%Rec. 2082046_F
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,3,5-Trinitrobenzene	0.500	0.517		mg/kg		103	81 _ 121
1,3-Dinitrobenzene	0.500	0.524		mg/kg		105	81 _ 121
2,4,6-Trinitrotoluene	0.500	0.450		mg/kg		90	65 _ 105
2,4-Dinitrotoluene	0.500	0.510		mg/kg		102	79 _ 119
2,6-Dinitrotoluene	0.500	0.510		mg/kg		102	79 - 119
2-Amino-4,6-dinitrotoluene	0.500	0.511		mg/kg		102	79 - 119
2-Nitrotoluene	0.500	0.507		mg/kg		101	78 - 118
3-Nitrotoluene	0.500	0.515		mg/kg		103	77 - 117
4-Amino-2,6-dinitrotoluene	0.500	0.507		mg/kg		101	81 - 121
4-Nitrotoluene	0.500	0.511		mg/kg		102	78 - 118
HMX	0.500	0.509		mg/kg		102	80 - 120
Nitrobenzene	0.500	0.530		mg/kg		106	80 - 120
Nitroglycerin	1.00	1.05		mg/kg		105	76 - 116
PETN	1.00	0.992		mg/kg		99	76 - 116
RDX	0.500	0.494		mg/kg		99	82 - 122

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
3,4-Dinitrotoluene	105		75 - 115

Client Sample ID: FWG-IDW-SBCOMP1-SO

63 _ 120

Prep Type: Total

Prep Batch: 2082046_P

Third Join Bulletin Brown										
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,3,5-Trinitrobenzene	0,36	U	0.736	0.745		mg/kg	0	101	81 - 121	
1,3-Dinitrobenzene	0.36	U	0.736	0.779		mg/kg	0	106	81 - 121	
2,4,6-Trinitrotoluene	0.36	U	0.736	0.662		mg/kg	0	90	65 - 105	
2,4-Dinitrotoluene	0.36	U	0.736	0.756		mg/kg	*	103	79 - 119	
2,6-Dinitrotoluene	0.36	U	0.736	0.760		mg/kg	**	103	79 - 119	
2-Amino-4,6-dinitrotoluene	0.36	U	0.736	0.754		mg/kg	袋	102	79 - 119	
2-Nitrotoluene	0.36	U	0.736	0.762		mg/kg	Ø	104	78 _ 118	
3-Nitrotoluene	0.36	U	0.736	0.771		mg/kg	**	105	77 _ 117	
4-Amino-2,6-dinitrotoluene	0.36	U	0.736	0.754		mg/kg	*	102	81 _ 121	
4-Nitrotoluene	0.36	U	0.736	0.766		mg/kg	\$	104	78 - 118	

0.500

0.486

mg/kg

TestAmerica North Canton 4/5/2012

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TestAmerica Job ID: 240-9236-1

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

Lab Sample ID: 240-9236-1 MS

Lab Sample ID: 240-9236-1 MSD

Matrix: Solid

Analysis Batch: 2082046

Client Sample ID: FWG-IDW-SBCOMP1-SO Prep Type: Total

Prep Batch: 2082046 P

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
HMX	0,36	U	0.736	0.746		mg/kg	*	101	80 - 120	
Nitrobenzene	0.36	U	0.736	0.790		mg/kg	33	107	80 - 120	
Nitroglycerin	0.72	U	1.47	1.58		mg/kg	**	107	76 _ 116	
PETN	0.72	U	1.47	1.44		mg/kg	30:	98	76 _ 116	
RDX	0.36	U	0.736	0.690		mg/kg	**	94	82 _ 122	
Tetryl	0.36	U	0.736	0.585		mg/kg	*	80	63 _ 120	

MS MS

Qualifier Surrogate %Recovery Limits 3,4-Dinitrotoluene 75 - 115 108

Client Sample ID: FWG-IDW-SBCOMP1-SO

ø

22

¢

Ö

袋

100

106

106

98

93

79

80 - 120

80 - 120

76 - 116

76 - 116

82 - 122

63 _ 120

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

Prep Type: Total

2.4

1.9

2.1

0.87

1.6

1.3

20

20

20

20

20

20

Prep Batch: 2082046 P

Matrix: Solid Analysis Batch: 2082046 Sample Sample Spike MSD MSD %Rec. RPD Result Qualifier Added Result Qualifier Limit Unit D %Rec Limits RPD Analyte 0 0.36 U 0.730 20 1,3,5-Trinitrobenzene 0.732 mg/kg 100 81 _ 121 1.7 0.730 0.767 Ø. 105 1,3-Dinitrobenzene 0.36 U mg/kg 81 - 121 1.6 20 * 2,4,6-Trinitrotoluene 0.36 U 0.730 0.645 mg/kg 88 65 105 2.5 20 2,4-Dinitrotoluene 0.36 U 0.730 0.738 mg/kg 100 101 79 - 119 2.4 20 0.36 U 0.730 0.742 ď. 102 79 - 119 20 2.6-Dinitrotoluene mg/kg 2.4 2-Amino-4,6-dinitrotoluene 0.36 U 0.730 0.740 ¢ 101 79 - 119 20 mg/kg ÷ 0.36 U 0.730 0.744 102 78 - 118 24 20 2-Nitrotoluene mg/kg 83 3-Nitrotoluene 0.36 U 0.730 0.739 101 77 - 117 mg/kg 0.36 U 4-Amino-2.6-dinitrotoluene 0.730 0.742 102 81_121 1.6 20 mg/kg 8 4-Nitrotoluene 0.36 U 0.730 0.737 mg/kg 101 78 - 118 3.8 20

0.728

0.775

1.55

1.43

0.679

0.578

0.730

0.730

1.46

1.46

0.730

0.730

Limits

0.36 U MSD MSD

0.36 U

0.36 U

0.72 U

0.72 U

0.36 U

Surrogate %Recovery Qualifier 3,4-Dinitrotoluene 106 75 - 115

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-37028/1-A

Matrix: Solid

HMX

PETN

RDX

Tetryl

Nitrobenzene

Nitroglycerin

Analysis Batch: 37419

Client Sample ID: Method Blank Prep Type: Total/NA

Mary Control of the C	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.0	U	1.0	0.30	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Cobalt	5.0	U	5.0	0.16	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Chromium	0.270	J	0.50	0.20	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Lead	0.30	U	0.30	0.19	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Selenium	0.50	U	0.50	0.45	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Silver	0.50	U	0.50	0.10	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Vanadium	5.0	U	5.0	0.12	mg/Kg		03/16/12 10:02	03/20/12 13:19	1

TestAmerica Job ID: 240-9236-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 240-37028/1-A

Matrix: Solid

Analysis Batch: 37419

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37028

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.120	J	20	0.071	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Calcium	31.0	J	500	16	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Copper	2.5	U	2.5	0.74	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Magnesium	5.99	J	500	5.1	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Manganese	0.177	J	1.5	0.074	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Nickel	4.0	U	4.0	0.27	mg/Kg		03/16/12 10:02	03/20/12 13:19	1
Potassium	21.6	J	500	6.2	mg/Kg		03/16/12 10:02	03/20/12 13:19	1

Lab Sample ID: LCS 240-37028/2-A

Matrix: Solid

Analysis Batch: 37419

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

10

Prep Batch: 37028

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Arsenic	200	191		mg/Kg		96	80 - 120
Coball	50.0	49.2		mg/Kg		98	80 _ 120
Chromium	20.0	20.0		mg/Kg		100	80 - 120
Lead	50.0	48.7		mg/Kg		97	80 - 120
Selenium	200	189		mg/Kg		94	80 - 120
Silver	5.00	4.98		mg/Kg		100	80 _ 120
Vanadium	50.0	49.5		mg/Kg		99	80 - 120
Barium	200	209		mg/Kg		104	80 - 120
Calcium	5000	5140		mg/Kg		103	80 - 120
Copper	25.0	25.1		mg/Kg		100	80_120
Magnesium	5000	5020		mg/Kg		100	80 _ 120
Manganese	50.0	52.2		mg/Kg		104	80 _ 120
Nickel	50.0	47.8		mg/Kg		96	80 _ 120
Potassium	5000	4980		mg/Kg		100	80 _ 120

Lab Sample ID: 240-9236-1 MS

Matrix: Solid

Analysis Batch: 37419

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Analysis Baton. 07410	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Arsenic	12		247	232		mg/Kg	0	89	75 _ 125
Cobalt	7.2		61.7	63.0		mg/Kg	0	90	75 - 125
Chromium	12	В	24.7	35.2		mg/Kg	0	92	75 - 125
Lead	11		61.7	65,3		mg/Kg	0	89	75 - 125
Selenium	0.61	U	247	216		mg/Kg	100	87	75 - 125
Silver	0.61	U	6.17	5.70		mg/Kg	305	92	75 - 125
Vanadium	13		61.7	68.9		mg/Kg	0	91	75 - 125
Barium	47	В	247	282		mg/Kg	益	95	75 _ 125
Calcium	19000	В	6170	26000		mg/Kg	**	121	75 - 125
Copper	14		30.8	42.7		mg/Kg	ø	92	75 _ 125
Magnesium	3900	В	6170	15100	F	mg/Kg	\$	182	75 _ 125
Manganese	300	В	61.7	375	4	mg/Kg	30	120	75 _ 125
Nickel	20		61.7	74.2		mg/Kg	305	88	75 - 125
Potassium	1200	В	6170	7280		mg/Kg	30	98	75 - 125

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-9236-1 MSD

Matrix: Solid

Analysis Batch: 37419

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Prep Batch: 37028

rittary old Baton. or The										Dato	0,020
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	12		247	235		mg/Kg	Ø	90	75 - 125	1	20
Cobalt	7,2		61.7	65.0		mg/Kg	0	94	75 - 125	3	20
Chromium	12	В	24.7	37.5		mg/Kg	0	102	75 - 125	6	20
Lead	11		61.7	66.1		mg/Kg	30	90	75 - 125	1	20
Selenium	0.61	U	247	217		mg/Kg	335	88	75 - 125	1	20
Silver	0.61	U	6.17	5.74		mg/Kg	335	93	75 - 125	1	20
Vanadium	13		61.7	70.7		mg/Kg	.00	94	75 - 125	3	20
Barium	47	В	247	289		mg/Kg	0	98	75 - 125	2	20
Calcium	19000	В	6170	20000	F	mg/Kg	Ø	25	75 - 125	26	20
Copper	14		30,8	47.4		mg/Kg	♦	107	75 _ 125	10	20
Magnesium	3900	В	6170	10100	F	mg/Kg	**	100	75 _ 125	40	20
Manganese	300	В	61.7	436	4	mg/Kg	章	218	75 _ 125	15	20
Nickel	20		61.7	77.2		mg/Kg	0	93	75 - 125	4	20
Potassium	1200	В	6170	7010		mg/Kg	30	93	75 - 125	4	20
Potassium	1200	В	0170	7010		mg/kg	-	93	15 - 125	4	

Lab Sample ID: MB 240-37454/2-A

Matrix: Solid

Analysis Batch: 37799

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37454

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.0032	mg/L		03/21/12 08:58	03/22/12 12:57	1
Cadmium	0.10	U	0.10	0.00066	mg/L		03/21/12 08:58	03/22/12 12:57	1
Chromium	0.50	U	0.50	0.0022	mg/L		03/21/12 08:58	03/22/12 12:57	4
Lead	0.50	U	0.50	0.0019	mg/L		03/21/12 08:58	03/22/12 12:57	1
Selenium	0.25	U	0.25	0.0041	mg/L		03/21/12 08:58	03/22/12 12:57	1
Silver	0.50	U	0.50	0.0022	mg/L		03/21/12 08:58	03/22/12 12:57	1
Barium	10	U	10	0.00067	mg/L		03/21/12 08:58	03/22/12 12:57	1

Lab Sample ID: LCS 240-37454/3-A

Matrix: Solid

Analysis Batch: 37799

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37454

The second secon	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Arsenic	2.00	2.01		mg/L		100	50 _ 150
Cadmium	0.0500	0.0510	J	mg/L		102	50 _ 150
Chromium	0.200	0,203	J	mg/L		102	50 _ 150
Lead	0.500	0.502		mg/L		100	50 - 150
Selenium	2.00	2.04		mg/L		102	50 _ 150
Silver	0.0500	0.0514	J	mg/L		103	50 _ 150
Barium	2.00	2.09	J	mg/L		105	50 - 150

Lab Sample ID: LB 240-37404/1-D LB

Matrix: Solid

Analysis Batch: 37799

Client Sample ID: Method Blank

Prep Type: TCLP

	LB	LB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Arsenic	0.50	U	0.50	0.0032	mg/L		03/21/12 08:58	03/22/12 12:40	1	
Cadmium	0.10	U	0.10	0.00066	mg/L		03/21/12 08:58	03/22/12 12:40	1	
Chromium	0.50	U	0.50	0.0022	mg/L		03/21/12 08:58	03/22/12 12:40	1	
Lead	0.50	U	0.50	0.0019	mg/L		03/21/12 08:58	03/22/12 12:40	1	

TestAmerica Job ID: 240-9236-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LB 240-37404/1-D LB

Matrix: Solid

Analysis Batch: 37799

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 37454

			LU							
Ar	nalyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Se	elenium	0,25	U	0.25	0.0041	mg/L		03/21/12 08:58	03/22/12 12:40	1
Sil	lver	0.50	U	0.50	0.0022	mg/L		03/21/12 08:58	03/22/12 12:40	1
Ba	arium	0.00194	J	10	0.00067	mg/L		03/21/12 08:58	03/22/12 12:40	1

IR IR

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-37028/1-A

Matrix: Solid

Analysis Batch: 37588

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37028

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.30	J	5.0	1.3	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Antimony	0.20	U	0.20	0.024	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Beryllium	0.10	U	0.10	0.047	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Cadmium	0.00780	J	0.10	0.0078	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Iron	7.53	J	10	1.0	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Sodium	7.52	J	100	2.4	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Thallium	0.0449	J	0.20	0.013	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Zinc	0.553	J	2.0	0.20	mg/Kg		03/16/12 10:02	03/21/12 10:41	9

Lab Sample ID: LCS 240-37028/3-A

Matrix: Solid

Analysis Batch: 37588

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37028

Analysis Baton. 67600	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Aluminum	1000	980		mg/Kg		98	80 - 120
Antimony	10.0	9.17		mg/Kg		92	68 - 113
Beryllium	100	99.0		mg/Kg		99	79 _ 110
Cadmium	100	94.8		mg/Kg		95	74 - 110
Iron	1000	1030		mg/Kg		103	80 - 120
Sodium	1000	978		mg/Kg		98	80 - 120
Thallium	25.0	23.6		mg/Kg		94	71 - 110
Zinc	100	94.1		mg/Kg		94	72 _ 113

Lab Sample ID: 240-9236-1 MS

Matrix: Solid

Analysis Batch: 37588

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Allalysis Balcii. 3/300									Frep Batch.
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Aluminum	7600	В	1260	10400	4	mg/Kg	0	226	70 - 130
Antimony	0.086	J	12.6	3.76	F	mg/Kg	0	29	75 - 125
Beryllium	0.49		126	106		mg/Kg	Ø.	84	58 - 112
Cadmium	0,13	В	126	112		mg/Kg	805	89	58 _ 110
Iron	23000	В	1260	23300	4	mg/Kg	0	38	70 _ 130
Sodium	420	В	1260	1400		mg/Kg	**	78	70 - 130
Thallium	0.24	В	31,4	28.6		mg/Kg	0	90	62 _ 110
Zinc	52	В	126	159		mg/Kg	幸	85	10 _ 199

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-9236-1 MSD

Matrix: Solid

Analysis Batch: 37588

Client Samp	ole ID: FWG-	IDW-SBCOMP1	SO
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Prep Type: Total/NA

Prep Batch: 37028

Allalysis Datell. 37 300									rich	Daten.	3/020
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	7600	В	1260	10100	4	mg/Kg	Ø	199	70 - 130	3	20
Antimony	0.086	J	12.6	3.77	F	mg/Kg	0	29	75 - 125	0	20
Beryllium	0.49		126	101		mg/Kg	0	80	58 - 112	4	20
Cadmium	0.13	В	126	107		mg/Kg	301	85	58 - 110	4	20
Iron	23000	В	1260	23900	4	mg/Kg	305	86	70 - 130	3	20
Sodium	420	В	1260	1320		mg/Kg	**	72	70 - 130	6	20
Thallium	0.24	В	31.4	28.7		mg/Kg	30	91	62 _ 110	1	20
Zinc	52	В	126	155		mg/Kg	0	82	10 - 199	2	20

RL

0.0020

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-37467/2-A

Matrix: Solid

Analyte

Mercury

Analysis Batch: 37693

MDL Unit

0.00012 mg/L

Prep Type: Total/NA Prep Batch: 37467

Dil Fac

Lab Sample ID: LCS 240-37467/3-A

Matrix: Solid

Analysis Batch: 37693

Client Sample ID: Lab Control Sample

Prepared

03/21/12 14:10

Client Sample ID: Method Blank

Analyzed

03/22/12 13:52

Prep Type: Total/NA Prep Batch: 37467

LCS LCS Spike Analyte Added Result Qualifier Unit D %Rec Limits Mercury 0.00500 0.00474 95 50 - 150 mg/L

MB MB

LB LB

MB MB

0.0020 U

Result Qualifier

Lab Sample ID: LB 240-37404/1-E LB

Matrix: Solid

Analysis Batch: 37693

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 37467

Result Qualifier MDL Unit D Analyte RL Prepared Analyzed Dil Fac 0.0020 U 0.0020 03/21/12 14:10 Mercury 0.00012 mg/L 03/22/12 13:50

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 240-37046/1-A

Matrix: Solid

Analysis Batch: 37465

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37046

MDL Unit Analyte Result Qualifier RI Prepared Analyzed Dil Fac 0.10 U 0.10 0.015 mg/Kg 03/16/12 13:25 03/20/12 13:50 Mercury

Lab Sample ID: LCS 240-37046/2-A

Matrix: Solid

Analysis Batch: 37465

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37046

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits Mercury 0.833 0.784 mg/Kg 94 73 - 121

> TestAmerica North Canton 4/5/2012

Spike

Added

0.212

Spike

Added

0.212

Sample Sample

0.14 U

Sample Sample

0.14 U

Result Qualifier

MR MR

Result Qualifier

Result Qualifier

MS MS

MSD MSD

0.188 F

Result Qualifier

MDL Unit

0.10 mg/Kg

Unit

mg/Kg

0.234

Result Qualifier

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-9236-1 MS

Matrix: Solid

Analyte

Mercury

Analyte

Mercury

Analysis Batch: 37465

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Prep Batch: 37046

Limits Unit D %Rec Ö mg/Kg 110 11 - 192

%Rec

Prepared

03/21/12 13:59

D

Lab Sample ID: 240-9236-1 MSD

Matrix: Solid

Analysis Batch: 37465

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Prep Batch: 37046 RPD

10

Limits RPD Limit 89 11 - 192 20

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-37544/1-A

Matrix: Solid

Analysis Batch: 37571

Client Sample ID: Method Blank

Analyzed

03/21/12 15:39

Prep Type: Total/NA

Prep Batch: 37544

Dil Fac

Analyte Cyanide, Total 0.50 U

Lab Sample ID: LCS 240-37544/2-A

Matrix: Solid

Analysis Batch: 37571

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37544

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits 2.25 2.22 mg/Kg 68 123 Cyanide, Total 99

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 240-37027/1-A

Matrix: Solid

Analysis Batch: 37093

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 37027

MB MB

MOI Unit Result Qualifier RI D Prepared Analyzed Dil Fac Analyte 30 Sulfide 30 U 22 mg/Kg 03/16/12 09:58 03/16/12 16:07

RL

0.50

Lab Sample ID: LCS 240-37027/2-A

Matrix: Solid

Analysis Batch: 37093

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 37027

Prep Type: Total/NA

%Rec. Limits

Client Sample ID: Lab Control Sample

Spike LCS LCS Analyte Added Result Qualifier Unit D %Rec Sulfide 95,4 92.1 mg/Kg 97 70 - 130

Method: 9045C - pH

Lab Sample ID: LCS 240-36972/5

Matrix: Solid

Analysis Batch: 36972

LCS LCS Spike %Rec. Added Analyte Result Qualifier Unit %Rec Limits 5.50 5.520 SU 100 97 103 Corrosivity

QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: FWG-IDW-SBCOMP1-SO

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total

Prep Type: Total

Prep Type: Total

Prep Type: Total

Prep Batch: 2083029_P

Prep Batch: 2083029_P

Method: 9045C - pH (Continued)

Lab Sample ID: 240-9236-1 DU

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Analysis Batch: 36972

Matrix: Solid

Analyte

Corrosivity

Sample Sample DU DU RPD Result Qualifier Result Qualifier RPD Limit Unit D SU 11.9 12.02

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G2C230000029B

Matrix: Solid

Analysis Batch: 2083029

MB MB

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Nitrocellulose 0.89 J 5.0 0.78 mg/kg 03/23/12 06:00 03/29/12 14:25

Lab Sample ID: G2C230000029C

Matrix: Solid

Analysis Batch: 2083029

Prep Batch: 2083029 P Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit Nitrocellulose 50.7 34.7 mg/kg 68 34 _ 115

Lab Sample ID: 240-9236-1 MS

Matrix: Solid

Analysis Batch: 2083029

Sample Sample Spike MS MS %Rec. Result Qualifier Added Analyte Result Qualifier Unit %Rec Limits 7.4 U 71.8 34 - 115 8.38 N mg/kg Nitrocellulose 11

Lab Sample ID: 240-9236-1 MSD

Matrix: Solid

Analysis Batch: 2083029

Prep Batch: 2083029 P Sample Sample Spike MSD MSD %Rec. RPD Result Qualifier Added Result Qualifier Analyte Unit D %Rec Limits RPD Limit Ÿ. 7.4 U 75.4 Nitrocellulose 10.2 N mg/kg 12 34 - 115 71

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

GC/MS VOA

Anal	ysis	Batch	n: 36992
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8260B	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8260B	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8260B	
LCS 240-36992/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-36992/6	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 37166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-2	TRIP BLANK	Total/NA	Water	8260B	
LCS 240-37166/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-37166/5	Method Blank	Total/NA	Water	8260B	

Leach Batch: 37401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	1311	
LB 240-37401/1-A LB	Method Blank	TCLP	Solid	1311	

Analysis Batch: 37853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	8260B	
LB 240-37401/1-A LB	Method Blank	TCLP	Solid	8260B	
LCS 240-37853/4	Lab Control Sample	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 37287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3540C	
LCS 240-37287/23-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-37287/22-A	Method Blank	Total/NA	Solid	3540C	

Leach Batch: 37404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	1311	

Prep Batch: 37496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	3510C	37404
LCS 240-37496/9-A	Lab Control Sample	Total/NA	Solid	3510C	
MB 240-37496/8-A	Method Blank	Total/NA	Solid	3510C	

Analysis Batch: 37595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	8270C	37496
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8270C	37287
LCS 240-37287/23-A	Lab Control Sample	Total/NA	Solid	8270C	37287
LCS 240-37496/9-A	Lab Control Sample	Total/NA	Solid	8270C	37496
MB 240-37287/22-A	Method Blank	Total/NA	Solid	8270C	37287
MB 240-37496/8-A.	Method Blank	Total/NA	Solid	8270C	37496

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

GC Semi VOA

Prep	Bat	ch:	37	290
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3540C	
LCS 240-37290/24-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-37290/23-A	Method Blank	Total/NA	Solid	3540C	

Prep Batch: 37302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3540C	
LCS 240-37302/8-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-37302/9-A	Method Blank	Total/NA	Solid	3540C	

Leach Batch: 37404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	1311	

Prep Batch: 37503

Client Sample ID	Prep Type	Matrix	Method	Prep Batch
FWG-IDW-SBCOMP1-SO	TCLP	Solid	3510C	37404
Lab Control Sample	Total/NA	Solid	3510C	
Method Blank	Total/NA	Solid	3510C	
	FWG-IDW-SBCOMP1-SO Lab Control Sample	FWG-IDW-SBCOMP1-SO TCLP Lab Control Sample Total/NA	FWG-IDW-SBCOMP1-SO TCLP Solid Lab Control Sample Total/NA Solid	FWG-IDW-SBCOMP1-SO TCLP Solid 3510C Lab Control Sample Total/NA Solid 3510C

Prep Batch: 37504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	8151A	37404
LCS 240-37504/8-A	Lab Control Sample	Total/NA	Solid	8151A	
MB 240-37504/7-A	Method Blank	Total/NA	Solid	8151A	

Analysis Batch: 37663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8082	37290
LCS 240-37290/24-A	Lab Control Sample	Total/NA	Solid	8082	37290
MB 240-37290/23-A	Method Blank	Total/NA	Solid	8082	37290

Analysis Batch: 37669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	8151A	37504
LCS 240-37504/8-A	Lab Control Sample	Total/NA	Solid	8151A	37504
MB 240-37504/7-A	Method Blank	Total/NA	Solid	8151A	37504

Analysis Batch: 37721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	8081A	37503
LCS 240-37503/8-A	Lab Control Sample	Total/NA	Solid	8081A	37503
MB 240-37503/7-A	Method Blank	Total/NA	Solid	8081A	37503

Analysis Batch: 37819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8081A	37302
LCS 240-37302/8-A	Lab Control Sample	Total/NA	Solid	8081A	37302
MB 240-37302/9-A	Method Blank	Total/NA	Solid	8081A	37302

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

HPLC

Analysis Batch: 2082046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
G2C220000046B	Method Blank	Total	Solid	8330B	
G2C220000046C	Lab Control Sample	Total	Solid	8330B	

Analysis Batch: 2082047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	8330 (Modified)	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	8330 (Modified)	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	8330 (Modified)	
G2C220000047B	Method Blank	Total	Solid	8330 (Modified)	
G2C220000047C	Lab Control Sample	Total	Solid	8330 (Modified)	

Prep Batch: 2082046_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
G2C220000046B	Method Blank	Total	Solid	8330B	
G2C220000046C	Lab Control Sample	Total	Solid	8330B	

Prep Batch: 2082047_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	3550A	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	3550A	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	3550A	
G2C220000047B	Method Blank	Total	Solid	3550A	
G2C220000047C	Lab Control Sample	Total	Solid	3550A	

Metals

Prep Batch: 37028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3050B	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3050B	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3050B	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3050B	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3050B	
LCS 240-37028/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 240-37028/3-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 240-37028/1-A	Method Blank	Total/NA	Solid	3050B	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	
LCS 240-37046/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 240-37046/1-A	Method Blank	Total/NA	Solid	7471A	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Metals ((Continued)

Lea			

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	1311	
LB 240-37404/1-D LB	Method Blank	TCLP	Solid	1311	
LB 240-37404/1-E LB	Method Blank	TCLP	Solid	1311	

Analysis Batch: 37419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	6010B	37028
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	6010B	37028
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	6010B	37028
LCS 240-37028/2-A	Lab Control Sample	Total/NA	Solid	6010B	37028
MB 240-37028/1-A	Method Blank	Total/NA	Solid	6010B	37028

Prep Batch: 37454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	3010A	37404
LB 240-37404/1-D LB	Method Blank	TCLP	Solid	3010A	37404
LCS 240-37454/3-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 240-37454/2-A	Method Blank	Total/NA	Solid	3010A	

Analysis Batch: 37465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	37046
240-9236-1 MS FWG-IDW-SBCOMP1-SO		Total/NA	Solid	7471A	37046
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	37046
LCS 240-37046/2-A	Lab Control Sample	Total/NA	Solid	7471A	37046
MB 240-37046/1-A	Method Blank	Total/NA	Solid	7471A	37046

Prep Batch: 37467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	7470A	37404
LB 240-37404/1-E LB	Method Blank	TCLP	Solid	7470A	37404
LCS 240-37467/3-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 240-37467/2-A	Method Blank	Total/NA	Solid	7470A	

Analysis Batch: 37588

Lab Sample ID	Client Sample ID	Prep Type Matrix		Method	Prep Batch
240-9236-1 FWG-IDW-SBCOMP1-SO		Total/NA	Solid	6020	37028
240-9236-1 MS FWG-IDW-SBCOMP1-SO		Total/NA	Solid	6020	37028
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	6020	37028
LCS 240-37028/3-A	Lab Control Sample	Total/NA	Solid	6020	37028
MB 240-37028/1-A	Method Blank	Total/NA	Solid	6020	37028

Analysis Batch: 37693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch		
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	7470A	37467		
LB 240-37404/1-E LB	Method Blank	TCLP	Solid	7470A	37467		
LCS 240-37467/3-A	LCS 240-37467/3-A Lab Control Sample		Lab Control Sample To	Total/NA	Solid	7470A	37467
MB 240-37467/2-A	Method Blank	Total/NA	Solid	7470A	37467		

Analysis Batch: 37799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	6010B	37454

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

G2C160473001X

Lab Sample ID

240-9236-1

Analysis Batch: 2083029

Duplicate

Client Sample ID

FWG-IDW-SBCOMP1-SO

TestAmerica Job ID: 240-9236-1

Metals (Continued)					
Analysis Batch: 37799	(Continued)				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 240-37404/1-D LB	Method Blank	TCLP	Solid	6010B	37454
LCS 240-37454/3-A	Lab Control Sample	Total/NA	Solid	6010B	37454
MB 240-37454/2-A	Method Blank	Total/NA	Solid	6010B	37454
General Chemistry					
Analysis Batch: 31612					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	1020B	
Analysis Batch: 36934					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	Moisture	
Analysis Batch: 36972					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9045C	
240-9236-1 DU	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9045C	
LCS 240-36972/5	Lab Control Sample	Total/NA	Solid	9045C	
Prep Batch: 37027					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9030B	
LCS 240-37027/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 240-37027/1-A	Method Blank	Total/NA	Solid	9030B	
Analysis Batch: 37093					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9034	37027
LCS 240-37027/2-A	Lab Control Sample	Total/NA	Solid	9034	37027
MB 240-37027/1-A	Method Blank	Total/NA	Solid	9034	37027
Prep Batch: 37544					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9012A	
LCS 240-37544/2-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 240-37544/1-A	Method Blank	Total/NA	Solid	9012A	
Analysis Batch: 37571					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9012A	37544
LCS 240-37544/2-A	Lab Control Sample	Total/NA	Solid	9012A	37544
MB 240-37544/1-A	Method Blank	Total/NA	Solid	9012A	37544
Analysis Batch: 20820	89				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	D 2216-90	

Prep Batch

D 2216-90

Method

WS-WC-0050

Total

Total

Prep Type

Solid

Matrix

Solid

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

General Chemistry (Continued)

Analysis	Batch: 2083029	(Continued)
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	WS-WC-0050	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	WS-WC-0050	
G2C230000029B	Method Blank	Total	Solid	WS-WC-0050	
G2C230000029C	Lab Control Sample	Total	Solid	WS-WC-0050	

Prep Batch: 2083029_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
G2C230000029B	Method Blank	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
G2C230000029C	Lab Control Sample	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	

Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Lab Sample ID: 240-9236-1

Matrix: Solid

Percent Solids: 77.2

Client Sample ID: F	NG-IDW-SBCOMP1-SO
---------------------	-------------------

Date Collected: 03/13/12 14:30 Date Received: 03/14/12 11:57

	Batch	Batch		Dilution	Batch	Prepared		
rep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
otal/NA	Analysis	8260B		1	36992	03/15/12 22:39	TL	TAL NC
CLP	Leach	1311			37401	03/20/12 18:20	BF	TAL NO
CLP	Analysis	8260B		1	37853	03/23/12 21:41	RQ	TAL NC
CLP	Leach	1311			37404	03/20/12 17:35	DJ	TAL NO
CLP	Prep	3510C			37496	03/21/12 12:01	SE	TAL NC
CLP	Analysis	8270C		1	37595	03/22/12 11:50	MU	TAL NC
otal/NA	Prep	3540C			37287	03/20/12 08:42	AK	TAL NC
otal/NA	Analysis	8270C		1	37595	03/22/12 15:03	MU	TAL NC
otal/NA	Prep	3540C			37290	03/20/12 08:48	AK	TAL NC
otal/NA	Analysis	8082		1	37663	03/22/12 14:35	LH	TAL NC
CLP	Leach	1311			37404	03/20/12 17:35	DJ	TAL NO
CLP	Prep	8151A			37504	03/21/12 12:19	SE	TAL NC
CLP	Analysis	8151A		1	37669	03/23/12 01:44	AR	TAL NC
CLP	Prep	3510C			37503	03/21/12 12:15	SE	TAL NC
CLP	Analysis	8081A		1	37721	03/22/12 23:38	AR	TAL NO
otal/NA	Prep	3540C			37302	03/20/12 08:58	AK	TAL NO
otal/NA	Analysis	8081A		2	37819	03/23/12 21:27	AR	TAL NO
otal	Prep	8330B			2082046_P	03/22/12 10:00	TQP	TAL WSC
otal	Analysis	8330B		0.98	2082046	03/26/12 18:35	RN	TAL WSC
otal	Prep	3550A			2082047_P	03/22/12 10:00	TQP	TAL WSC
otal	Analysis	8330 (Modified)		1	2082047	03/26/12 09:36	RN	TAL WSC
otal/NA	Prep	3050B			37028	03/16/12 10:02	DE	TAL NC
otal/NA	Analysis	6010B		1	37419	03/20/12 15:56	BD	TAL NO
otal/NA	Prep	7471A			37046	03/16/12 13:25	DE	TAL NO
otal/NA	Analysis	7471A		1	37465	03/20/12 13:53	AS	TAL NO
otal/NA	Analysis	6020		ž.	37588	03/21/12 10:53	кс	TAL NO
CLP	Leach	1311			37404	03/20/12 17:35	DJ	TAL NO
CLP	Prep	7470A			37467	03/21/12 14:10	LM	TAL NO
CLP	Analysis	7470A		3	37693	03/22/12 14:06	AS	TAL NO
CLP	Prep	3010A			37454	03/21/12 08:58	LM	TAL NO
CLP	Analysis	6010B		à	37799	03/22/12 13:47	BD	TAL NO
otal/NA	Analysis	1020B		3	31612	03/26/12 13:50	MW	TAL PIT
otal/NA	Analysis	Moisture		7	36934	03/15/12 11:30	CN	TAL NC
otal/NA	Analysis	9045C		Ŷ	36972	03/15/12 15:42	BW	TAL NO
	100							
otal/NA	Prep	9030B		4	37027	03/16/12 09:58	JB	TAL NO
otal/NA	Analysis	9034		1	37093	03/16/12 16:16	JB	TAL NC
otal/NA	Prep	9012A			37544	03/21/12 13:59	BR	TAL NO
otal/NA	Analysis	9012A		1	37571	03/21/12 15:39	BR	TAL NC
otal	Analysis	D 2216-90		1	2082089	03/23/12 11:51	AM	TAL WSC
otal	Prep	EXTRACTION, SOLID/SOLVENT			2083029_P	03/23/12 06:00	TQP	TAL WSC
		(Manual)			2083029	03/29/12 14:29	JB	TAL WSC

Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Client Sample ID: TRIP BLANK

TestAmerica Job ID: 240-9236-1

Lab Sample ID: 240-9236-2

Matrix: Water

Date Collected: 03/13/12 14:30

Date Received: 03/14/12 11:57

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	37166	03/19/12 18:58	LE	TAL NC

Laboratory References:

TAL NC = TestAmerica North Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Certification Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

aboratory	Authority	Program	EPA Region	Certification ID
estAmerica North Canton	California	NELAC	9	01144CA
estAmerica North Canton	Connecticut	State Program	1	PH-0590
estAmerica North Canton	Florida	NELAC	4	E87225
estAmerica North Canton	Georgia	State Program	4	N/A
estAmerica North Canton	Illinois	NELAC	5	200004
estAmerica North Canton	Kansas	NELAC	7	E-10336
estAmerica North Canton	Kentucky	State Program	4	58
estAmerica North Canton	L-A-B	DoD ELAP		L2315
estAmerica North Canton	Minnesota	NELAC	5	039-999-348
estAmerica North Canton	Nevada	State Program	9	OH-000482008A
estAmerica North Canton	New Jersey	NELAC	2	OH001
estAmerica North Canton	New York	NELAC	2	10975
estAmerica North Canton	Ohio VAP	State Program	5	CL0024
estAmerica North Canton	Pennsylvania	NELAC	3	68-00340
estAmerica North Canton	USDA	Federal		P330-11-00328
estAmerica North Canton	Virginia	NELAC Secondary AB	3	460175
estAmerica North Canton	Washington	State Program	10	C971
estAmerica North Canton	West Virginia DEP	State Program	3	210
estAmerica North Canton	Wisconsin	State Program	5	999518190
estAmerica Pittsburgh	Arkansas DEQ	State Program	6	88-0690
estAmerica Pittsburgh	Connecticut	State Program	1	PH-0688
estAmerica Pittsburgh	Florida	NELAC	4	E871008
estAmerica Pittsburgh	Illinois	NELAC	5	002602
estAmerica Pittsburgh	Kansas	NELAC	7	E-10350
estAmerica Pittsburgh	L-A-B	DoD ELAP		L2314
estAmerica Pittsburgh	Louisiana	NELAC	6	04041
estAmerica Pittsburgh	New Jersey	NELAC	2	PA005
estAmerica Pittsburgh	North Carolina DENR	State Program	4	434
estAmerica Pittsburgh	Pennsylvania	NELAC	3	02-00416
estAmerica Pittsburgh	Pennsylvania	State Program	3	02-416
estAmerica Pittsburgh	South Carolina	State Program	4	89014002
estAmerica Pittsburgh	USDA	Federal		P330-10-00139
estAmerica Pittsburgh	USDA	Federal		P-Soil-01
estAmerica Pittsburgh	Utah	NELAC	8	STLP
estAmerica Pittsburgh	Virginia	NELAC	3	460189
estAmerica Pittsburgh	West Virginia DEP	State Program	3	142
estAmerica Pittsburgh	Wisconsin	State Program	5	998027800
estAmerica West Sacramento	A2LA	DoD ELAP		2928-01
estAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
estAmerica West Sacramento	Arizona	State Program	9	AZ0708
estAmerica West Sacramento	Arkansas DEQ	State Program	6	88-0691
estAmerica West Sacramento	California	NELAC	9	1119CA
estAmerica West Sacramento	California	NELAC Primary AB	9	MP0007
estAmerica West Sacramento	Colorado	State Program	8	N/A
estAmerica West Sacramento	Connecticut	State Program	1	PH-0691
estAmerica West Sacramento	Florida	NELAC	4	E87570
estAmerica West Sacramento	Georgia	State Program	4	960
estAmerica West Sacramento	Guam	State Program	9	N/A
estAmerica West Sacramento	Hawaii	State Program	9	N/A
estAmerica West Sacramento	Illinois	NELAC	5	200060
estAmerica West Sacramento	Kansas	NELAC	7	E-10375
estAmerica West Sacramento	Louisiana	NELAC	6	30612
estAmerica West Sacramento	Michigan	State Program	5	9947

Certification Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-9236-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
estAmerica West Sacramento	Northern Mariana Islands	State Program	9	MP0007
FestAmerica West Sacramento	Oregon	NELAC	10	CA200005
estAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
estAmerica West Sacramento	South Carolina	State Program	4	87014
estAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
estAmerica West Sacramento	US Fish & Wildlife	Federal		LE148388-0
estAmerica West Sacramento	USDA	Federal		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	State Program	3	9930C
estAmerica West Sacramento	West Virginia DEP	State Program	3	334
estAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

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O) b. (Matrix	Containers & Preservatives	I EXY	121.97 121.97	Conditions of Receipt	of Receipt
Description Date	Air Air Air Air Air Air Air Air Air Air	HOSO4 HOSO4 HOBOH HOBOH	1491 1491 1491	16437 1811.01 1810.01 1810.01		
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Turn Around Time Required 24 Hours 48 Hours 7 Days 14 Days 22 Days	Other	Spi	1			
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2. Relinquished By	Date Time	2. Received By			Date	Time
3. Relinquished By	Date	3. Received By			Date	Time
Comments						

Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-9236-1

Login Number: 9236 List Source: TestAmerica North Canton

List Number: 1

Creator: Ferrel, Matthew

Creator: Perrei, Matthew			
Question	Answer	Comment	
Radioactivity either was not measured or, if measured, is at or below background	N/A		
The cooler's custody seal, if present, is intact.	True		
The cooler or samples do not appear to have been compromised or tampered with.	True		
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True	3.4	
Cooler Temperature is recorded.	True		
COC is present.	True		
COC is filled out in ink and legible.	True		
COC is filled out with all pertinent information.	True		
Is the Field Sampler's name present on COC?	True		
There are no discrepancies between the sample IDs on the containers and the COC.	True		
Samples are received within Holding Time.	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	True		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
VOA sample vials do not have headspace or bubble is <6 mm (1/4") in diameter.	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		

N/A

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Residual Chlorine Checked.

Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-9236-1

List Source: TestAmerica Pittsburgh
List Number: 1
List Creation: 03/15/12 10:48 AM

Creator: Watson, Debbie

Question	Answer	Comment
		Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information,	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
/OA sample vials do not have headspace or bubble is <6mm (1/4") in fiameter.	True	
Multiphasic samples are not present.	N/A	

N/A

N/A

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Samples do not require splitting or compositing.

Residual Chlorine Checked.



May 30, 2012

Mr. Mark Patterson Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266

Reference:

Contract No. GS-10F-0293K

Delivery Order No. W912QR-1-F-0266

Subject:

Facility-Wide Groundwater Monitoring Program Plan

RVAAP-66 Facility-Wide Groundwater

Soil IDW Letter Report - Draft

Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI), installation of monitoring wells, approved per the *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum* (FWGWMP Addendum; EQM, January 2012) began on February 27, 2012. These activities resulted in the generation of IDW consisting of soil cuttings and rock chips from drilling operations. The purpose of this letter is to characterize and classify the second batch of drummed IDW comprising 98 drums of solids for disposal and to provide recommendations for disposing of the IDW.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (EPA) regarding IDW disposition at RVAAP, including the IDW disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations* (FWSAP; SAIC, 2011), and the FWGWMP Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material pending waste characterization and classification based on analytical results. The FWSAP and the FWGWMP Addendum describe approved procedures used for containerizing and handling IDW.

Soil IDW Discussion

Accumulated IDW soil cuttings are containerized in Department of Transportation (DOT)-approved 55-gal drums on site pending transport and disposal to an offsite disposal facility. A summary of the drums of IDW generated and its origin are presented in Table 1. Composite sampling for disposal characterization was performed using a composite grab sampling technique. The composite sample was collected from 98 drums of soil. The drums were opened and screened with a photoionization detector (PID). Grab samples of the drums were collected using a decontaminated trier inserted through the bung to the bottom of each container. The retrieved sample was placed in a decontaminated stainless steel bowl for homogenization. Rocks and loose twigs were removed and discarded. Clumps of soil were broken down using a gloved hand and mixed in the bowl. The mixture was collected using a gloved hand and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis, a discrete grab sample was collected from the drum with the highest PID screening level (i.e., drum EQM-079s) and transferred directly from the IDW waste container into a separate 4-oz glass sample jar with minimum head space. The sample was immediately placed on ice for delivery to the laboratory.

All stainless steel bowls and triers were decontaminated in accordance with Section 2.13 of the FWGWMP Addendum after collection of each composite sample.

The indigenous IDW contained in drums were characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite totals analysis and Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 2. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1 – Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24) and Table 8-2 – Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23), as presented in the FWSAP, and the USEPA Risk Screening Levels (RSLs) for residential soils and/or site-specific background criteria for RVAAP. Table 3 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP and RVAAP full suite analysis for IDW soil cuttings.

A summary of the IDW containers shown is as follows:

- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 180 degrees F.
- Arsenic was the only concentration to exceed the USEPA RSLs for the RVAAP full suite totals composite sample.
- Only sodium exceeded the background criteria for subsurface soil. There is no USEPA RSL for sodium.

Recommended Disposal Pathways for IDW

After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. It is recommended that the 98 drums containing soil be classified as contaminated, but non-hazardous, and that the drummed soils be sent offsite for disposal to a permitted facility in accordance with Section 8.0 of the FWSAP. Upon RVAAP and Ohio EPA concurrence with the preliminary characterization that no RCRA listings apply, we will proceed with the appropriate waste disposal. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

John M. Miller, CHMM

Project Manager

cc: Vicki Deppisch – Ohio EPA Mark Nichter – USACE

EQM PN - 030174.0016.001.02

Table 1. IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-024s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-012	0.0
EQM-025s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-012	0.0
EQM-026s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-012	0.0
EQM-027s	55-gallon Steel	Soil Cuttings	03/12/12	FWGmw-012	0.0
EQM-028s	55-gallon Steel	Soil Cuttings	03/09/12	FWGmw-007	0.0
EQM-029s	55-gallon Steel	Soil Cuttings	03/09/12	FWGmw-007	2.5
EQM-030s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-001	28.5
EQM-031s	55-gallon Steel	Grout	03/12/12	RVAAP-66	0.0
EQM-032s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-015	0.0
EQM-033s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-015	0.0
EQM-034s	55-gallon Steel	Soil Cuttings	03/14/12	LL12mw-182ss	0.0
EQM-035s	55-gallon Steel	Soil Cuttings	03/12/12	FWGmw-004	0.0
EQM-036s	55-gallon Steel	Soil Cuttings	03/14/12	LL12mw-182ss	0.0
EQM-037s	55-gallon Steel	Soil Cuttings	03/12/12	FWGmw-004	1.5
EQM-038s	55-gallon Steel	Soil Cuttings	03/14/12	LL12mw-182ss	0,0
EQM-039s	55-gallon Steel	Soil Cuttings	03/15/12	LL3mw-245	1.1
EQM-040s	55-gallon Steel	Soil Cuttings	03/15/12	LL3mw-245	0.0
EQM-041s	55-gallon Steel	Grout	03/15/12	LL12mw-182ss	0.0
EQM-042s	55-gallon Steel	Soil Cuttings	03/16/12	CBPmw-009	0.0
EQM-043s	55-gallon Steel	Soil Cuttings	03/16/12	CBPmw-009	0.0
EQM-044s	55-gallon Steel	Soil Cuttings	3/13-20/12	FWGmw-002 FWGmw-012	0.0
EQM-045s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0
EQM-046s			03/22/12	FWGmw-002	0.0
EQM-047s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0

Table 1 (continued). IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-048s	EQM-048s 55-gallon Steel		03/20/12	FWGmw-002	0.0
EQM-049s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0
EQM-050s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0
EQM-051s	55-gallon Steel	Soil Cuttings	03/22/12	FWGmw-002	0.0
EQM-052s	55-gallon Steel	Soil Cuttings	03/22/12	FWGmw-002	0.0
EQM-053s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0
EQM-054s	55-gallon Steel	Soil Cuttings	03/26/12	CBPmw-009	0.0
EQM-055s	55-gallon Steel	Soil Cuttings	03/27/12	CBPmw-009	0.0
EQM-056s	55-gallon Steel	Soil Cuttings	03/26/12	CBPmw-009	0.0
EQM-057s	55-gallon Steel	Soil Cuttings	03/26/12	CBPmw-009	0.0
EQM-058s	55-gallon Steel	Soil Cuttings	03/27/12	CBPmw-009	0.0
EQM-059s	55-gallon Steel	Soil Cuttings	03/30/12	LL3mw-245	0.0
EQM-060s	55-gallon Steel	Soil Cuttings	03/30/12	LL3mw-245	0.0
EQM-061s	55-gallon Steel	Soil Cuttings	03/30/12	LL3mw-245	0.0
EQM-062s	55-gallon Steel	Soil Cuttings	03/30/12	LL3mw-245	0,0
EQM-063s	55-gallon Steel	Grout	03/06/12	RVAAP-66	0.0
EQM-064s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-065s	55-gallon Steel	Soil Cuttings	04/04/12	LL4mw-201	0.0
EQM-066s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-067s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-068s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-069s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-070s 55-gallon Steel		Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-071s	55-gallon Steel	Soil Cuttings	03/27/12	CBLmw-005	0.0

Table 1 (continued). IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-072s	55-gallon Steel	Soil Cuttings	04/02/12	FWGmw-017	0.0
EQM-073s	55-gallon Steel	Soil Cuttings	04/02/12	FWGmw-017	1.4
EQM-074s	55-gallon Steel	Soil Cuttings	04/02/12	FWGmw-017	0.0
EQM-075s	55-gallon Steel	Soil Cuttings	03/27/12	CBLmw-005	0.0
EQM-076s	55-gallon Steel	Soil Cuttings	04/02/12	FWGmw-017	5.5
EQM-077s	55-gallon Steel	Soil Cuttings	04/04/12	CBLmw-005	0.0
EQM-078s	55-gallon Steel	Soil Cuttings	04/02/12	FWGmw-017	0.0
EQM-079s	55-gallon Steel	Soil Cuttings	04/03/12	FWGmw-014	30.7
EQM-080s	55-gallon Steel	Soil Cuttings	03/30/12	LL3mw-245	0.0
EQM-081s	55-gallon Steel	Soil Cuttings	04/05/12	B12mw-013	0.0
EQM-082s	55-gallon Steel	Soil Cuttings	3/21-22/12	LL11mw-012	0.0
EQM-083s	55-gallon Steel	Soil Cuttings	03/23/12	LL11mw-012	0.0
EQM-084s	55-gallon Steel	Soil Cuttings	03/21/12	LL11mw-012	0.0
EQM-085s	55-gallon Steel	Soil Cuttings	03/27/12	LL11mw-012	0.0
EQM-086s	55-gallon Steel	Soil Cuttings	03/27/12	LL11mw-012	0,0
EQM-087s	55-gallon Steel	Soil Cuttings	03/21/12	LL11mw-012	0.0
EQM-088s	55-gallon Steel	Soil Cuttings	04/04/12	CBLmw-005	0.0
EQM-089s	55-gallon Steel	Soil Cuttings	04/10/12	FWGmw-005	0.0
EQM-090s	55-gallon Steel	Soil Cuttings	04/10/12	FWGmw-005	0.0
EQM-091s	55-gallon Steel	Soil Cuttings	04/10/12	FWGmw-005	0.0
EQM-092s	55-gallon Steel	Soil Cuttings	04/10/12	FWGmw-005	0.0
EQM-093s	55-gallon Steel	Soil Cuttings	4/12-13/12	LL11mw-012	0.0
EQM-094s	55-gallon Steel	Soil Cuttings	04/12/12	LL11mw-012	1.4
EQM-095s	55-gallon Steel	Soil Cuttings	03/28/12	NTAmw-119	0.0
EQM-096s	55-gallon Steel	Soil Cuttings	03/29/12	NTAmw-119	0.0

Table 1 (continued). IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-097s	55-gallon Steel	Soil Cuttings	04/10/12	NTAmw-119	0.0
EQM-098s	55-gallon Steel	Soil Cuttings	04/09/12	NTAmw-119	0.0
EQM-099s	55-gallon Steel	Soil Cuttings	04/09/12	NTAmw-119	0.0
EQM-100s	55-gallon Steel	Soil Cuttings	04/12/12	FWGmw-016	0.0
EQM-101s	55-gallon Steel	Soil Cuttings	04/13/12	FWGmw-016	0.0
EQM-102s	55-gallon Steel	Soil Cuttings	04/12/12	FWGmw-016	0.0
EQM-103s	55-gallon Steel	Soil Cuttings	04/13/12	FWGmw-016	0.0
EQM-104s	55-gallon Steel	Soil Cuttings	04/13/12	FWGmw-016	0.0
EQM-105s	55-gallon Steel	Soil Cuttings	04/12/12	FWGmw-016	0.0
EQM-106s	55-gallon Steel	Soil Cuttings	04/13/12	FWGmw-016	0.0
EQM-107s	55-gallon Steel	Soil Cuttings	04/11/12	LL6mw-009	0.0
EQM-108s	55-gallon Steel	Soil Cuttings	04/11/12	LL6mw-009	0.0
EQM-109s	55-gallon Steel	Soil Cuttings	04/11/12	LL6mw-009	0.0
EQM-110s	55-gallon Steel	Soil Cuttings	04/12/12	LL6mw-009	0.0
EQM-111s	55-gallon Steel	Soil Cuttings	04/11/12	LL6mw-009	0.0
EQM-112s	55-gallon Steel	Soil Cuttings	03/20/12	LL6mw-008	0.0
EQM-113s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-013	0.0
EQM-114s	55-gallon Steel	Soil Cuttings	04/05/12	FWGmw-013	0.0
EQM-115s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-013	0.0
EQM-116s	55-gallon Steel	Soil Cuttings	04/05/12	FWGmw-013	0.0
EQM-117s	55-gallon Steel	Soil Cuttings	04/05/12	FWGmw-013	0.0
EQM-118s	55-gallon Steel	Soil Cuttings	04/16/12	FWGmw-016	0.0
EQM-119s	55-gallon Steel	Soil Cuttings	04/13/12	FWGmw-016	1.3
EQM-120s	55-gallon Steel	Soil Cuttings	04/17/12	LL11mw-012	0.0
Hydraulic	55-gallon Steel	Soil Cuttings	2/28/12	LL1mw-086	0.0

Table 2. Summary of Analytical Suite of Chemicals

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium,	EPA Method SW-846 1311/6010B
cadmium, chromium, lead, and selenium)	
TCLP semivolatile organic compounds	EPA Method SW-846 1311/8270C
(SVOCs)	
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
pН	EPA Method SW-846 9040B
Polychlorinated biphenyls (PCBs)	EPA Method SW-846 8082
Pesticides	EPA Method SW-846 8081A
Base/Neutrals and Acids (SVOCs)	EPA Method SW-846 8270C
Volatile Organic Compounds (VOCs)	EPA Method SW-846 8260B
Nitroguanidine (Propellant)	EPA Method SW-846 8330 modified
Nitroaromatics & Nitramines (Explosives)	EPA Method SW-846 8330
Nitrocellulose as N (Propellant)	General Chemistry (WS-WC-0050)
Nitrate/Nitrites	General Chemistry (353.2)1
Metals (Magnesium, Manganese, Barium,	EPA Method SW-846 6010B
Nickel, Potassium, Silver, Sodium,	
Vanadium, Chromium, Calcium, Cobalt,	
Copper, Arsenic, Lead, Selenium)	
Metals (Antimony, Iron, Beryllium,	EPA Method SW-846 6020
Thallium, Zinc, Cadmium, Aluminum)	
Mercury	EPA Method SW-846 7470A

¹ EPA Methods for Chemical Analysis of Water and Waste.

Table 3. Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	CAS#	Units	Lab Results	Lab Qualifier	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
VOCs	2-Butanone (MEK)	78-93-3	mg/Kg	0.035		28000	NA	NA
VOCs	Acetone	67-64-1	mg/Kg	0.034	В	61000	NA	NA
VOCs	Carbon disulfide	75-15-0	mg/Kg	0.0024	J	820	NA	NA
VOCs	Methylene chloride	75-09-2	mg/Kg	0.0020	J,B	11	NA	NA
VOCs	Toluene	108-88-3	mg/Kg	0.100		5000	NA	NA
SVOCs	Anthracene	120-12-7	mg/Kg	0.011		17000	NA	NA
SVOCs	Benzo(a)anthracene	56-55-3	mg/Kg	0.015		0.15	NA	NA
SVOCs	Benzo(b)fluoranthene	205-99-2	mg/Kg	0.018		0.15	NA	NA
SVOCs	Benzo(k)fluoranthene	207-08-9	mg/Kg	0.0072	J	1.5	NA	NA
SVOCs	Fluoranthene	206-44-0	mg/Kg	0.036		2300	NA	NA
SVOCs	Fluorene	86-73-7	mg/Kg	0.0085		2300	NA	NA
SVOCs	Chrysene	218-01-9	mg/Kg	0.018		15	NA	NA
SVOCs	Dibenzofuran	132-64-9	mg/Kg	0.0054	J	78	NA	NA
SVOCs	Benzo(g,h,i)perylene	191-24-2	mg/Kg	0.012		NA	NA	NA
SVOCs	Benzo(a)pyrene	50-32-8	mg/Kg	0.014		0.015	NA	. NA
SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	mg/Kg	0.0083	J	0.15	NA	NA
SVOCs	2-Methylnaphthalene	91-57-6	mg/Kg	0.0087		310	NA	NA
SVOCs	Pyrene	129-00-0	mg/Kg	0.029		1700	NA	NA
SVOCs	Phenanthrene	85-01-8	mg/Kg	0.049		ΝA	NA	NA
	Bis(2-ethylhexyl)							
SVOCs	phthalate	117-81-7	mg/Kg	0.042	J,B	35	NA	NA
Total Metals	Aluminum	7429-90-5	mg/Kg	7300	·_	77000	19500	NA
Total Metals	Antimony	7440-36-0	mg/Kg	0.072	J	31	0.96	NA
Total Metals	Arsenic	7440-38-2	mg/Kg	12		0.39	19.8	NA
Total Metals	Barium	7440-39-3	mg/Kg	36		15000	124	NA
Total Metals	Beryllium	7440-41-7	mg/Kg	0.39		160	0.88	NA
Total Metals	Cadmium	7440-43-9	mg/Kg	0.062	J	70	0	NA
Total Metals	Calcium	7440-70-2	1	8800		NA	35500	NA
Total Metals	Chromium	7440-47-3	mg/Kg	14		120000	27.2	NA
Total Metals	Cobalt	7440-48-4	mg/Kg	7.2		23	23.2	NA
Total Metals	Copper	7440-50-8	mg/Kg	15		3100	32.2	NA NA
Total Metals	Iron	7439-89-6	mg/Kg	19000	В	55000	35200	NA
Total Metals	Lead	7439-92-1	mg/Kg	9.7		400	19.1	NA
Total Metals	Magnesium	7439-95-4	mg/Kg	3600	В	NA	8790	NA
Total Metals	Manganese	7439-96-5	mg/Kg	290		1800	3030	NA
Total Metals	Mercury	7439-97-6	mg/Kg	0.023	J,B	10	0.044	NA
Total Metals	Nickel	7440-02-0	mg/Kg	18		1500	60.7	NA
Total Metals	Potassium	7440-09-7	mg/Kg	1400	В	NA	3350	NA
Total Metals	Sodium	7440-23-5	mg/Kg	260	В	NA	145	NA NA

Table 3 (continued). Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	CAS#	Units	Lab Results	Lab Qualifier	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
Total Metals	Thallium	7440-28-0	mg/Kg	0.10	J,B	0.78	0.91	NA
Total Metals	Vanadium	7440-62-2	mg/Kg	13		390	37.6	NA
Total Metals	Zinc	7440-66-6	mg/K.g	48	В	23000	93.3	NA
TCLP-Misc	Cyanide (total)	57-12-5	mg/Kg	0.14	J	47	0	0.66
TCLP-Misc.	Flashpoint	Q376	°F	>180		NA	NA	<180
TCLP- Metals	Barium	7440-39-3	mg/L	0.43	J,B	NA	NA	100
TCLP- Metals	Cadmium	7440-43-9	mg/L	0.00077	J	NA	NA	1.0
TCLP- Metals	Chromium	7440-47-3	mg/L	0.0023	J	NA	NA	5.0
TCLP- Metals	Lead	7439-92-1	mg/L	0.0023	J	NA	NA	5.0

Notes

NA = not applicable.

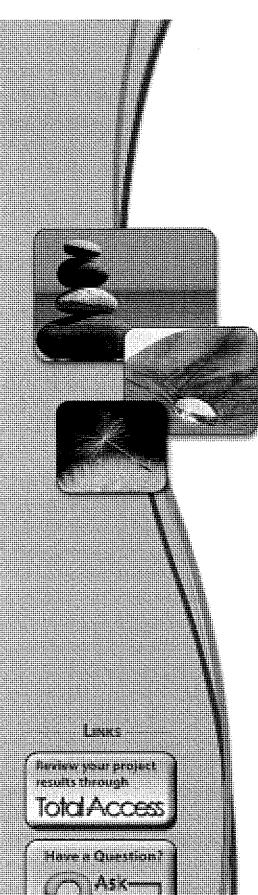
^{*} The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1 - Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24), and Table 8-2 - Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23).

Bold concentrations exceed a regulatory limit.

J = estimated result. Result is less than reporting limit.

B = method blank contamination.

ATTACHMENT 1. LABORATORY ANALYTICAL DATA SHEETS



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ANALYTICAL REPORT

TestAmerica Laboratories, Inc. TestAmerica Canton 4101 Shuffel Street NW North Canton, OH 44720 Tel: (330)497-9396

TestAmerica Job ID: 240-10866-1 Client Project/Site: RVAAP (OH) - IDW

For: Environmental Quality Mgt., Inc. 1800 Carillon Blvd Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin

Authorized for release by: 5/30/2012 8:36:20 AM

Mark Loeb
Project Manager II
mark loeb@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
υ	Indicates the analyte was analyzed for but not detected.
В	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected,
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
В	Compound was found in the blank and sample.

GC Semi VOA

Qualifier	Qualifier Description
U	indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
٨	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
В	Compound was found in the blank and sample.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
N	Spike sample recovery is outside control limits.
	·

Glossary

These commonly used abbreviations may or may not be present in this report.
Listed under the "D" column to designate that the result is reported on a dry weight basis
Percent Recovery
Contains no Free Liquid
Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
Estimated Detection Limit
United States Environmental Protection Agency
Method Detection Limit
Minimum Level (Dioxin)
Not detected at the reporting limit (or MDL or EDL if shown)
Practical Quantitation Limit
Quality Control
Reporting Limit
Relative Percent Difference, a measure of the relative difference between two points
Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW TestAmerica Job ID: 240-10866-1

Job ID: 240-10866-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Environmental Quality Mgt., Inc.

Project: RVAAP (OH) - IDW

Report Number: 240-10866-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 8330 Explosives, Nitrocellulose as N, and UV/HPLC-SOP Nitroguanidine analysis were performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 05/02/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.0 C.

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-3) was analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 05/09/2012 and analyzed on 05/10/2012.

No difficulties were encountered during the VOCs analysis. All quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-3) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/04/2012.

Several analytes were detected in method blank MB 240-42797/7 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above

TestAmerica Canton 5/30/2012

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ELECTRICAL STREET

Think the second of the second

PROPERTY AND A PROPER



Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Job ID: 240-10866-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Due to poor purging problems, there was no MS/MSD associated with QC Batch 42797.

No other difficulties were encountered during the VOCs analysis. All other quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample TRIP BLANK (240-10866-2) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/09/2012.

No difficulties were encountered during the VOCs analysis. All quality control parameters were within the acceptance limits.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 05/07/2012, prepared on 05/08/2012 and analyzed on 05/10/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/03/2012 and analyzed on 05/07/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-42667/10-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Benzoic acid failed the recovery criteria low for LCS 240-42667/11-A. Benzoic Acid has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No other difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

TCLP CHLORINATED PESTICIDES

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/8081A. The samples were leached on 05/07/2012, prepared on 05/08/2012 and analyzed on 05/09/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

CHLORINATED PESTICIDES

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 05/08/2012 and analyzed on 05/11/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Sample FWG-IDW-SBCOMP2-SO (240-10866-1)[2X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

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TestAmerica Canton 5/30/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Job ID: 240-10866-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

No difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 05/08/2012 and analyzed on 05/10/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: FWG-IDW-SBCOMP2-SO. Lot # S65830

No difficulties were encountered during the PCBs analysis. All quality control parameters were within the acceptance limits.

TCLP METALS (ICP)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 05/07/2012, prepared on 05/08/2012 and analyzed on 05/09/2012.

Barium was detected in leach blank LB 240-43074/1-C and method blank MB 240-43166/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 05/07/2012 and analyzed on 05/08/2012.

Magnesium and Potassium were detected in method blank MB 240-43033/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL METALS (ICPMS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/07/2012 and analyzed on 05/09/2012.

Iron was detected in method blank MB 240-43033/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Sodium, Thallium and Zinc were detected in method blank MB 240-43033/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

The continuing calibration verification (CCV) for Antimony associated with batch 43264 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-SBCOMP2-SO

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TCLP MERCURY

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 05/07/2012, prepared on 05/08/2012 and analyzed on 05/09/2012.

TestAmerica Canton 5/30/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Job ID: 240-10866-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 05/08/2012 and analyzed on 05/09/2012.

Mercury was detected in method blank MB 240-43185/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the mercury analysis. All other quality control parameters were within the acceptance limits.

FLASHPOINT

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 05/08/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

TOTAL AND AMENABLE CYANIDE

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for total and amenable cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 05/03/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

SULFIDE

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 05/03/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Samples FWG-IDW-SBCOMP2-SO (240-10866-1) and FWG-IDW-SBCOMP2-SO (240-10866-3) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 05/03/2012.

No difficulties were encountered during the % solids analyses. All quality control parameters were within the acceptance limits.

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TestAmerica West Sacramento Project Number G2E040501

SOLID, Nitrocellulose

Sample(s): 1

There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

Sample(s): 1

The matrix spikes, which were performed on sample 1, have low recoveries due to possible matrix interferences. Since the laboratory control sample met acceptance criteria, no corrective action was performed.

There were no other anomalies associated with this project.

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Method Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
8081A	Organochlorine Pesticides (GC)	SW846	TAL NC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
3330 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
8330B	Nitroaromatics & Nitramines: Explosives (8330B)	SW846	TAL WSC
6010B	Metals (ICP)	SW846	TAL NC
6020	Metals (ICP/MS)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC
7471A	Mercury (CVAA)	SW846	TAL NC
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL NC
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
D 2216-90	Moisture, Percent (D2216-90) - AFCEE	ASTM	TAL WSC
Moisture	Percent Moisture	EPA	TAL NC
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-SOP ≈ TAL-SOP

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Canton 5/30/2012

Sample Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

		- MANAGAN - WALL RESEARCH	13-91
Lab Sample ID	Client Sample ID	Matrix	Collected Received
240-10866-1	FWG-IDW-SBCOMP2-SO	Solid	05/01/12 15:00 05/02/12 07:00
240-10866-2	TRIP BLANK	Water	05/01/12 08:00 05/02/12 07:00
240-10866-3	FWG-IDW-SBCOMP2-SO	Solid	05/01/12 15:00















Detection Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac		Method	Ргер Тур
Anthracene	11		8.5	4.2	ug/Kg	1	₩	8270C	Total/NA
Benzo[a]anthracene	15		B.5	4.2	ug/Kg	1	₿	B270C	Total/NA
Benzo[b]fluoranthene	18		B.5	4.2	ug/Kg	1	₽	8270C	Total/NA
Benzo[k]fluoranthene	7.2	J	8,5	4.2	ug/Kg	1	₩	8270C	Total/NA
Fluoranthene	36		8.5	4.2	ug/Kg	1	Ħ	8270C	Total/NA
Fluorene	8.5		8.5	4.2	ug/Kg	1	\$	8270C	Total/NA
Chrysene	18		8.5	1.4	ug/Kg	1	ф	8270C	Total/NA
Dibenzofuran	5.4	J	63	4.2	ug/Kg	1	\$	8270C	Total/NA
Benzo[g,h,i]perylene	12		8.5	4.2	ug/Kg	1	₽	8270C	Total/NA
Benzo[a]pyrene	14		8.5	4.2	ug/Kg	1	ΙX	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	8.3	J	8.5	4.2	ug/Kg	1	₽	B270C	Total/NA
2-Methylnaphthalene	8.7		8.5	4.2	ug/Kg	1	₹;	8270C	Total/NA
Pyrene	29		8.5	4.2	ug/Kg	1	₽	8270C	Total/NA
Phenanthrene	49		8.5	4,2		1	₽	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	42	JВ	63	24	ug/Kg	1	₩	8270C	Total/NA
Arsenic	12		1.2	0,35	mg/Kg	1	Þ	6010B	Total/NA
Chromium	14		0.58	0.23	mg/Kg	1	₩	6010B	Total/NA
Cobalt	7.2		5.8	0.18	mg/Kg	1	₽	6010B	Total/NA
Lead	9.7		0.35	0.22	mg/Kg	1	Ü	6010B	Total/NA
Vanadium	13		5.8	0.14	mg/Kg	1	¤	6010B	Total/NA
Barium	36		23	0.082	mg/Kg	1	₽	6010B	Total/NA
Calcium	8800		580	18	mg/Kg	1	₽	6010B	Total/NA
Copper	15		2.9	0.85		1	₽	6010B	Total/NA
Magnesium	3600	В	580	5.9		1	₽	6010B	Total/NA
Manganese	290		1.7	0.085		1	₽	6010B	Total/NA
Nickel	18		4.6	0.31	mg/Kg	1	₽	6010B	Total/NA
Potassium	1400	В	580	7.1	mg/Kg	1		6010B	Total/NA
Barium			10	0.00067		1		6010B	TCLP
Cadmium	0.00077		0,10	0.00066	_	1		6010B	TCLP
Chromium	0.0023		0.50	0.0022		1		6010B	TCLP
Lead	0.0023		0,50	0.0019	mg/L	. 1		6010B	TCLP
Aluminum	7300	Ü	5.8	1.5	-	1	•	6020	Total/NA
Antimony	0.072	.1 ^	0.23	0.028		1		6020	Total/NA
Beryllium	0.39	•	0.12	0.054	mg/Kg	1		6020	Total/NA
Cadmium	0.062	.1	0.12	0.0090	mg/Kg	1	₽	6020	Total/NA
Iron	19000		12	1.2		1		6020	Total/NA
Sodium	260		120		mg/Kg			6020	Total/NA
Thallium		JB	0.23	0,015		1	#	6020	Total/NA
Zinc		В	2.3	0.23	mg/Kg	1		6020	Total/NA
	0.023		0.11	0.017				7471A	Total/NA
Mercury Electronist	0.023 >180	u D	1.00	1.00	Degrees F	1	-,,	1010	Total/NA
Flashpoint Cyanide, Total	>180 0.14		1.00 0.65	0.13	_	1	₽	1010 9012A	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-10866-2

No Detections

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lah	Same	ıle	ID:	240-	10866-3	

iummu	 Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
-	2-Butanone (MEK)	35		25	1.7	ug/Kg	1	₩	8260B	Total/NA
-	Acetone	34	В	25	7,8	ug/Kg	1	₽	8260B	Total/NA
	Carbon disulfide	2.4	J	6.2	0.54	ug/Kg	1	₽	8260B	Total/NA
I	Methylene Chloride	2.0	JВ	6.2	0.83	ug/Kg	1	Ų	8260B	Total/NA

Detection Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO (Continued)

Lab Sample ID: 240-10866-3

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac	O Method	Prep Type
Toluene	100	6.2	0,33 ug/Kg	1	8260B	Total/NA

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Date Collected: 05/01/12 15:00 Date Received: 05/02/12 07:00 Lab Sample ID: 240-10866-1

Matrix: Solid Percent Solids: 78.9

Method: 8270C - Semivolatile O Analyte	-	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dìl Fa
Acenaphthene	8.5		8.5		ug/Kg	_	05/03/12 12:12	05/07/12 20:07	
Acenaphthylene	8.5		8,5		ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
Anthracene	11		8.5		ug/Kg	¢	05/03/12 12:12	05/07/12 20:07	
Benzo[a]anthracene	15		8,5		ug/Kg	φ	05/03/12 12:12	05/07/12 20:07	
Benzoic acid	840	II *	840	420	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
Benzo[b]fluoranthene	18	•	8.5	4.2		☆	05/03/12 12:12	05/07/12 20:07	
Benzo[k]fluoranthene	7.2		8.5		ug/Kg	φ.	05/03/12 12:12	05/07/12 20:07	
lenzył alcohol	420		420	27	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
Bis(2-chloroethoxy)methane	130		130	28	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
Bis(2-chloroethyl)ether	130		130		ug/Kg	ø	05/03/12 12:12	05/07/12 20:07	
I-Bromophenyl phenyl ether	63		63	. 17		. 101	05/03/12 12:12	05/07/12 20:07	
Butyl benzyl phthalate	63		63	13	ug/Kg	₩.	05/03/12 12:12	05/07/12 20:07	
4.4-Dimethylphenol	190		190	25	ug/Kg	₩	05/03/12 12:12	05/07/12 20:07	
Dimethyl phthalate	63		63	22	ug/Kg	Ø	05/03/12 12:12	05/07/12 20:07	
1,6-Dinitro-2-methylphenol	190		190	100		₽	05/03/12 12:12	05/07/12 20:07	
,,o-Dinitrophenol	420	. .	420	100	ug/Kg		05/03/12 12:12	05/07/12 20:07	
,,4-Dinitrophenoi ,,4-Dinitrotoluene	420 250		250	34	ug/Kg ug/Kg	#	05/03/12 12:12	05/07/12 20:07	
•	250	_	250	34 27	ug/Kg ug/Kg		05/03/12 12:12	05/07/12 20:07	
2,6-Dinitrotoluene			8.5			Ď.	05/03/12 12:12	05/07/12 20:07	
fluoranthene	36			4.2		Ď			
fluorene	8.5		8.5	4.2		*	05/03/12 12:12	05/07/12 20:07	
lexachlorobenzene	8.5		8,5	2.7	ug/Kg		05/03/12 12:12	05/07/12 20:07	
lexachlorobutadiene	63	U	63	34	ug/Kg	**	05/03/12 12:12	05/07/12 20:07	
lexachlorocyclopentadiene	420	=	420	34	ug/Kg	☆	05/03/12 12:12	05/07/12 20:07	
lexachloroethane	63		. 63	11	ug/Kg		05/03/12 12:12	05/07/12 20:07	
l-Nitrosodiphenylamine	63		63	27	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	
I-Nitrosodi-n-propylamine	63		63	34	ug/Kg		05/03/12 12:12	05/07/12 20:07	
,4-Dichlorobenzene	63		63			☆	05/03/12 12:12	05/07/12 20:07	
2-Chloronaphthalene	63		63		ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
2-Chlorophenol	63		63	34	ug/Kg	**	05/03/12 12:12	05/07/12 20:07	
l-Chlorophenyl phenyl ether	63	U	63	17	ug/Kg		05/03/12 12:12	05/07/12 20:07	
Chrysene	18		8.5	1.4		10	05/03/12 12:12	05/07/12 20:07	
Dibenz(a,h)anthracene	8.5	U '	8.5	4.2	ug/Kg	₩	05/03/12 12:12	05/07/12 20:07	
Dibenzofuran	5.4	J	63	4.2	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
Benzo[g,h,i]perylene	12		8,5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	
Benzo[a]pyrene	14		8.5	4.2	ug/Kg	Ф	05/03/12 12:12	05/07/12 20:07	
Di-n-butyl phthalate	63	U	63	19	ug/Kg		05/03/12 12:12	05/07/12 20:07	
,2-Dichlorobenzene	63	Ü	63	12	ug/Kg	算	05/03/12 12:12	05/07/12 20:07	
I,3-Dichlorobenzene	63	U	63	14	ug/Kg	₩	05/03/12 12:12	05/07/12 20:07	
3,3'-Dichlorobenzidine	130	U	130	23	ug/Kg	¤	05/03/12 12:12	05/07/12 20:07	
2,4-Dichlorophenol	190	U	190	25	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
Diethyl phthalate	63	U	63	20	ug/Kg	±X	05/03/12 12:12	05/07/12 20:07	
ndeno[1,2,3-cd]pyrene	8.3	J	8.5	4.2	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
sophorone	63	U	63	17	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
2-Methylnaphthalene	8.7		8.5	4.2	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
?-Methylphenol	250	U	250	100	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
Naphthalene	8.5	Ü	8.5	4.2	ug/Kg		05/03/12 12:12	05/07/12 20:07	
2-Nitroaniline	250	U	250	12	ug/Kg	₩	05/03/12 12:12	05/07/12 20:07	
3-Nitroaniline	250	U	250	20	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
I-Nitroaniline	250		250		ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
Nitrobenzene	130		130		ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	
2-Nitrophenol	63		63		ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Date Collected: 05/01/12 15:00 Date Received: 05/02/12 07:00 Lab Sample ID: 240-10866-1

Matrix: Solid Percent Solids: 78.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	420	υ	420	100	ug/Kg	<u> </u>	05/03/12 12:12	05/07/12 20:07	1
Pyrene	29		8.5	4.2	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	1
Pentachiorophenol	190	υ	190	100	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	1
Phenanthrene	49		8.5	4.2	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	1
1,2,4-Trichlorobenzene	63	U	63	34	ug/Kg	₩	05/03/12 12:12	05/07/12 20:07	1
2,4,5-Trichlorophenol	190	U	190	32	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	1
2,4,6-Trichlorophenol	190	U	190	100	ug/Kg	₩	05/03/12 12:12	05/07/12 20:07	1
Phenol	63	U	63	34	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	1
Carbazole	63	U	63	34	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	1
4-Chloroaniline	190	U	190	22	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	1
3 & 4 Methylphenol	510	U	510	25	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	1
Bis(2-ethylhexyl) phthalate	42	JB	63	24	ug/Kg	₩	05/03/12 12:12	05/07/12 20:07	1
Di-n-octyl phthalate	63	U	63	34	ug/Kg	Q.	05/03/12 12:12	05/07/12 20:07	1
4-Chioro-3-methylphenol	190	U	190	27	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	1
2,2'-oxybis[1-chloropropane]	130	υ	130	12	ug/Kg	₽	05/03/12 12:12	05/07/12 20:07	1
	44.5	0	4.114					ahd	04 E

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	57		34 - 110	05/03/12 12:12	05/07/12 20:07	1
2-Fluorophenol (Surr)	62		26 - 110	05/03/12 12:12	05/07/12 20:07	1
Nitrobenzene-d5 (Surr)	52		24 - 112	05/03/12 12:12	05/07/12 20:07	1
Terphenyl-d14 (Surr)	69		41 - 119	 05/03/12 12:12	05/07/12 20:07	1
2,4,6-Tribromophenol (Surr)	32		10-118	05/03/12 12:12	05/07/12 20:07	1
Phenol-d5 (Surr)	63		28 - 110	05/03/12 12:12	05/07/12 20:07	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	Ü	0.0040	0.00034	mg/L		05/08/12 08:55	05/10/12 14:09	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		05/08/12 08:55	05/10/12 14:09	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		05/08/12 08:55	05/10/12 14:09	1
2,4-Dinitrotoluene	0,020	U	0.020	0.00027	mg/L		05/08/12 08:55	05/10/12 14:09	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		05/08/12 08:55	05/10/12 14:09	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		05/08/12 08:55	05/10/12 14:09	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		05/08/12 08:55	05/10/12 14:09	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		05/08/12 08:55	05/10/12 14:09	1
2-Methylphenol	0.0040	υ	0.0040	0.00080	mg/L		05/08/12 08:55	05/10/12 14:09	1
Nitrobenzene	0.0040	Ū	0.0040	0.000040	mg/L		05/08/12 08:55	05/10/12 14:09	1
Pentachlorophenol	0.040	υ	0.040	0.0024	mg/L		05/08/12 08:55	05/10/12 14:09	1
Pyridine	0.020	υ	0.020	0,00035	mg/L		05/08/12 08:55	05/10/12 14:09	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	70		22 110	•	05/08/12 08:55	05/10/12 14:09	1
2-Fluorophenol (Surr)	74		10 - 110		05/08/12 08:55	05/10/12 14:09	1
2,4,6-Tribromophenol (Surr)	69		17 - 11 <i>7</i>		05/08/12 08:55	05/10/12 14:09	1
Nitrobenzene-d5 (Surr)	81		29 - 111	 	05/08/12 08:55	05/10/12 14:09	1
Phenol-d5 (Surr)	66		10-110		05/08/12 08:55	05/10/12 14:09	1
Terphenyl-d14 (Surr)	80		40 119		05/08/12 08:55	05/10/12 14:09	1

Method: 8081A - Organochlorine Pesticides (GC)											
Апаlyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
4,4'-DDD	4,3	U	4.3	1.6	ug/Kg	₩	05/08/12 09:33	05/11/12 04:39	2		
4,4'-DDE	4.3	U	4.3	0.99	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2		
4,4'-DDT	4.3	U	4.3	1.6	ug/Kg	₽	05/08/12 09:33	05/11/12 04:39	2		

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Date Collected: 05/01/12 15:00 Date Received: 05/02/12 07:00

DCB Decachlorobiphenyl

DCB Decachlorobiphenyl

Tetrachloro-m-xylene

Tetrachloro-m-xylene

Lab Sample ID: 240-10866-1

05/08/12 09:33

05/08/12 09:33

05/08/12 09:33

05/08/12 09:33

05/11/12 04:39

05/11/12 04:39

05/11/12 04:39

05/11/12 04:39

2

2

Matrix: Solid Percent Solids: 78.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	4.3	Ū	4.3	3.0	ug/Kg	₽	05/08/12 09:33	05/11/12 04:39	2
alpha-BHC	4.3	U	4.3	1.9	ug/Kg	₩	05/08/12 09:33	05/11/12 04:39	2
alpha-Chlordane	4.3	U	4.3	2.4	ug/Kg	₽	05/08/12 09:33	05/11/12 04:39	2
beta-BHC	4.3	U	4.3	2.8	ug/Kg	**	05/08/12 09:33	05/11/12 04:39	2
delta-BHC	4.3	U	4.3	3.0	ug/Kg	₽	05/08/12 09:33	05/11/12 04:39	2
Dieldrin	4.3	U	4.3	1.2	ug/Kg	₩	05/08/12 09:33	05/11/12 04:39	2
Endosulfan I	4.3	U	4.3	1.3	ug/Kg	₽	05/08/12 09:33	05/11/12 04:39	2
Endosulfan II	4.3	U	4.3	2.1	ug/Kg	₽	05/08/12 09:33	05/11/12 04:39	2
Endosulfan sulfate	4.3	U	4.3	2.2	ug/Kg	₩	05/08/12 09:33	05/11/12 04:39	2
Endrin	4.3	U	4.3	1.3	ug/Kg	尊	05/08/12 09:33	05/11/12 04:39	2
Endrin aldehyde	4.3	U	4.3	2.5	ug/Kg	#	05/08/12 09:33	05/11/12 04:39	2
Endrin ketone	4.3	U	4.3	1.6	ug/Kg	₽	05/08/12 09:33	05/11/12 04:39	2
gamma-BHC (Lindane)	4.3	U	4.3	1.9	ug/Kg	₽	05/08/12 09:33	05/11/12 04:39	2
gamma-Chlordane	4.3	U	4.3	1.1	ug/Kg	₽	05/08/12 09:33	05/11/12 04:39	2
Heptachlor	4.3	U	4.3	2,8	ug/Kg	X F	05/08/12 09:33	05/11/12 04:39	2
Heptachior epoxide	4.3	U	4.3	2.0	ug/Kg	₽	05/08/12 09:33	05/11/12 04:39	2
Methoxychlor	8.4	U	8.4	3.8	ug/Kg	Đ.	05/08/12 09:33	05/11/12 04:39	2
Toxaphene	170	U	170	48	ug/Kg	ä	05/08/12 09:33	05/11/12 04:39	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		05/08/12 08:58	05/09/12 09;32	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		05/08/12 08:58	05/09/12 09:32	1
Heptachlor	0,0012	U	0.0012	0.000019	mg/L		05/08/12 08:58	05/09/12 09:32	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		05/08/12 08:58	05/09/12 09:32	1
gamma-BHC (Lindane)	0.0012	U	0,0012	0.000015	mg/L		05/08/12 08;58	05/09/12 09:32	1
Methoxychior	0.0024	U	0.0024	0.000077	mg/L		05/08/12 08:58	05/09/12 09:32	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		05/08/12 08;58	05/09/12 09:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		46 - 122				05/08/12 08:58	05/09/12 09:32	1
Tetrachloro-m-xylene	82		46 - 122				05/08/12 08:58	05/09/12 09;32	1
DCB Decachlorobiphenyl	90		34 - 141				05/08/12 08:58	05/09/12 09:32	1
DCB Decachlorobiphenyl	92		34 - 141				05/08/12 08:58	05/09/12 09:32	1

32 - 175

32 - 175

24 - 150

24 - 150

94

85

77

79

Aπalyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	42	U	42	27	ug/Kg	₽	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1221	42	U	42	20	ug/Kg	φ	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1232	42	U	42	18	ug/Kg	₽	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1242	42	U	42	16	ug/Kg	ξţ	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1248	42	U	42	22	ug/Kg	\$	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1254	42	U	42	22	ug/Kg	φ	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1260	42	U	42	22	ug/Kg	₽	05/08/12 09:22	05/10/12 04:29	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Date Collected: 05/01/12 15:00 Date Received: 05/02/12 07:00

3,4-Dinitrotoluene

Manganese

Potassium

Nickel

Lab Sample ID: 240-10866-1

05/10/12 10:00

05/07/12 11:28

05/07/12 11:28

05/07/12 11:28

05/19/12 21:08

05/08/12 22:06

05/08/12 22:06

05/08/12 22:06

0.96

1

Matrix: Solid Percent Solids: 78.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		29 _ 151	05/08/12 09:22	05/10/12 04:29	1
DCB Decachlorobiphenyl	58		14 163	05/08/12 09:22	05/10/12 04:29	1

Method: 8330 (Modified) - Organic Compounds by UV/HPLC												
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac			
Nitroguanidine	0.25	U	0.25	0.020	mg/kg		05/10/12 10:00	05/22/12 16:08	1.01			

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.24	U	0.24	0.0096	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
1,3-Dinitrobenzene	0.24	U	0,24	0.0040	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
2,4,6-Trinitrotoluene	0.24	U	0.24	0.019	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
2,4-Dinitrotoluene	0.24	U	0.24	0.0051	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
2,6-Dinitrotoluene	0.24	υ	0.24	0.0070	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
2-Amino-4,6-dinitrotoluene	0.24	υ	0.24	0.012	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
2-Nitrotoluene	0,24	υ	0.24	0.012	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
3-Nitrotoluene	0.24	U	0.24	0.015	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
4-Amino-2,6-dinitrotoluene	0.24	U	0.24	0,0096	mg/kg		05/10/12 10:00	05/19/12 21:08	0,96
4-Nitrotoluene	0.24	U	0.24	0.017	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
HMX	0,24	U	0.24	0.012	mg/kg		05/10/12 10:00	05/19/12 21:08	0,96
Nitrobenzene	0.24	U	0.24	0.017	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
Nitroglycerin	0.48	U	0.48	0.014	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
PETN	0.48	U	0.48	0.024	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
RDX	0.24	U	0.24	0.012	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
Tetryl	0.24	υ	0.24	0.0096	mg/kg		05/10/12 10:00	05/19/12 21:08	0,96
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

- Mothod: 6010D - Motolo (I/	~ D\								
Method: 6010B - Metals (K Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		1.2	0.35	mg/Kg	<u> </u>	05/07/12 11:28	05/08/12 22:06	1
Chromium	14		0.58	0.23	mg/Kg	₩	05/07/12 11:28	05/08/12 22:06	1
Cobalt	7.2	•	5.8	0.18	mg/Kg	₽	05/07/12 11:28	05/08/12 22:06	1
Lead	9.7		0.35	0.22	mg/Kg	₩	05/07/12 11:28	05/08/12 22:06	1
Selenium	0.58	υ	0.58	0.52	mg/Kg	##	05/07/12 11:28	05/08/12 22:06	1
Silver	0.58	υ	0.58	0.12	mg/Kg	₽	05/07/12 11;28	05/08/12 22:06	1
Vanadium	13		5.8	0.14	mg/Kg	₽	05/07/12 11:28	05/08/12 22:06	1
Barium	36		23	0,082	mg/Kg	₽	05/07/12 11:28	05/08/12 22:06	1
Calcium	8800		580	18	mg/Kg	₽	05/07/12 11:28	05/08/12 22:06	1
Copper	15		2.9	0.85	mg/Kg	₽	05/07/12 11: 2 8	05/08/12 22:06	1
Magnesium	3600	В	580	5.9	mg/Kg	. **	05/07/12 11:28	05/08/12 22:06	1

75-115

100

290

18

1400 B

Method: 6010B - Metals (ICP) - To	CLP							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0,50 U	0.50	0.0032	mg/L		05/08/12 10:18	05/09/12 16:01	1
Barium	0.43 JB	10	0.00067	mg/L		05/08/12 10:18	05/09/12 16:01	1
Cadmium	0.00077 J	0.10	0.00066	mg/L		05/08/12 10:18	05/09/12 16:01	1
Chromium	0.0023 J	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 16:01	1
Lead	0.0023 J	0.50	0.0019	mg/L		05/08/12 10:18	05/09/12 16:01	1

1.7

4.6

580

0.085 mg/Kg

0.31 mg/Kg

7.1 mg/Kg

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Date Collected: 05/01/12 15:00 Date Received: 05/02/12 07:00 Lab Sample ID: 240-10866-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Selenium	0,25	υ	0.25	0.0041	mg/L		05/08/12 10:18	05/09/12 16:01	
Silver	0.50	υ	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 16:01	
Method: 6020 - Metals (ICP/MS)									
Analyte	Result	Qualifier	RL _	MDL	Unit	_ D	Prepared	Analyzed	Dil Fac
Aluminum	7300		5.8	1.5	mg/Kg	<u>\$</u>	05/07/12 11:28	05/09/12 01:43	•
Antimony	0.072	J^	0.23	0.028	mg/Kg	₩	05/07/12 11:28	05/09/12 01:43	•
Beryllium	0.39		0.12	0.054	mg/Kg	₽	05/07/12 11:28	05/09/12 01:43	•
Cadmium	0.062	J	0.12	0.0090	mg/Kg	Þ	05/07/12 11:28	05/09/12 01:43	
Iron	19000	В	12	1.2	mg/Kg	₩	05/07/12 11:28	05/09/12 01:43	•
Sodium	260	В	120	2.8	mg/Kg	₽	05/07/12 11:28	05/09/12 01:43	
Thallium	0.10	JB	0.23	0.015	mg/Kg	₩	05/07/12 11:28	05/09/12 01:43	
Zinc	48	В	2.3	0.23	mg/Kg	₩	05/07/12 11:28	05/09/12 01:43	,
Method: 7470A - Mercury (CVAA) - TG	CLP								
3 \ ,		Qualifier	RL	MDI	Unit	D	Prepared		
Analyte	Result	Quanner	KL	MUL	O I II C	U	гтератец	Analyzed	Dil Fac
	0.0020		0.0020	0.00012			05/08/12 14:30	05/09/12 11:35	Dil Fac
Mercury									
Mercury Method: 7471A - Mercury (CVAA) Analyte	0.0020				mg/L	D			
Mercury Method: 7471A - Mercury (CVAA) Analyte	0.0020	U Qualifier	0.0020	0.00012	mg/L Unit	name warm	05/08/12 14:30	05/09/12 11:35	
Mercury Method: 7471A - Mercury (CVAA)	0.0020 Result	U Qualifier	0.0020 RL	0.00012 MDL	mg/L Unit	D	05/08/12 14:30 Prepared	05/09/12 11:35 Analyzed	Dil Fac
Mercury Method: 7471A - Mercury (CVAA) Analyte Mercury General Chemistry	0.0020 Result 0.023	U Qualifier	0.0020 RL	0.00012 MDL	mg/L Unit mg/Kg	D	05/08/12 14:30 Prepared	05/09/12 11:35 Analyzed	Dil Fac
Mercury Method: 7471A - Mercury (CVAA) Analyte Mercury General Chemistry Analyte	0.0020 Result 0.023	Qualifier J B	0.0020 RL 0.11	0.00012 MDL 0.017	mg/L Unit mg/Kg	\$	05/08/12 14:30 Prepared 05/08/12 13:55	05/09/12 11:35 Analyzed 05/09/12 11:43	Dil Fac
Mercury Method: 7471A - Mercury (CVAA) Analyte Mercury General Chemistry Analyte Flashpoint	0.0020 Result 0.023	Qualifier J B Qualifier	0.0020 RL 0.11	0.00012 MDL 0.017	mg/L Unit mg/Kg Unit	\$	05/08/12 14:30 Prepared 05/08/12 13:55	05/09/12 11:35 Analyzed 05/09/12 11:43 Analyzed	Dil Fac
Mercury Method: 7471A - Mercury (CVAA) Analyte Mercury	0.0020 Result 0.023 Result >180 0.14	Qualifier J B Qualifier	0.0020 RL 0.11 RL 1.00	0.00012 MDL 0.017 MDL 1.00	mg/L Unit mg/Kg Unit Degrees F		05/08/12 14:30 Prepared 05/08/12 13:55 Prepared	05/09/12 11:35 Analyzed 05/09/12 11:43 Analyzed 05/08/12 12:28	Dil Fac

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: TRIP BLANK

Date Collected: 05/01/12 08:00 Date Received: 05/02/12 07:00

Dibromofluoromethane (Surr)

Lab Sample ID: 240-10866-2

05/09/12 23:37

Matrix: Water

Method: 8260B - Volatile Organic	Compounds ((GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/09/12 23:37	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			05/09/12 23:37	1
Benzene	1.0	U	1.0	0.13	ug/L			05/09/12 23:37	1
Carbon tetrachloride	1.0	ີ ປ	1.0	0.13	ug/L			05/09/12 23:37	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			05/09/12 23:37	1
Chloroform	1.0	U	1.0	0.16	ug/L			05/09/12 23:37	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			05/09/12 23:37	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L	•		05/09/12 23:37	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			05/09/12 23:37	1
Virtyl chloride	1.0	U	1.0	0.22	ug/L			05/09/12 23:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		63 _ 129			-		05/09/12 23:37	1
4-Bromofluorobenzene (Surr)	96		66 - 117					05/09/12 23:37	1
Toluene-d8 (Surr)	92		74 - 115					05/09/12 23:37	1

75 - 121

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Date Collected: 05/01/12 15:00 Date Received: 05/02/12 07:00

Dibromofluoromethane (Surr)

Lab Sample ID: 240-10866-3

Matrix: Solid
Percent Solids: 81.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1-Trichloroethane	6,2	U	6.2	0.69	ug/Kg	<u> </u>		05/04/12 22:01	
1,1,2,2-Tetrachloroethane	6.2	U	6,2	0.42	ug/Kg	*		05/04/12 22:01	
1,1,2-Trichioroethane	6.2	U	6.2	0.48	ug/Kg	₽		05/04/12 22:01	
1,1-Dichloroethane	6.2	U	6.2	0.44	ug/Kg	Φ		05/04/12 22:01	
1,1-Dichloroethene	6.2	U	6.2	0.64	ug/Kg	₽		05/04/12 22:01	
1,2-Dichloroethane	6.2	U	6.2	0,42	ug/Kg	÷.		05/04/12 22:01	
1,2-Dichloroethene, Total	12	U	12	0.95	ug/Kg	₩		05/04/12 22:01	
1,2-Dichloropropane	6.2	U	6.2	0.85	ug/Kg	₽		05/04/12 22:01	,
2-Butanone (MEK)	35		25	1.7	ug/Kg	₽		05/04/12 22:01	
2-Hexanone	25	U	25	0.78	ug/Kg	۵		05/04/12 22:01	
4-Methyl-2-pentanone (MIBK)	25	U	25	0,67	ug/Kg	ø		05/04/12 22:01	
Acetone	34	В	25	7.8	ug/Kg	₩.		05/04/12 22:01	,
Benzene	6.2	U	6,2	0.28	ug/Kg	≎		05/04/12 22:01	
Bromoform	6,2	U	6.2	0.41	ug/Kg	i O F		05/04/12 22:01	
Bromomethane	6.2	U	6,2	0,67	ug/Kg	₽		05/04/12 22:01	
Carbon disulfide	2.4		6.2	0.54	ug/Kg	₽		05/04/12 22:01	
Carbon tetrachloride	6.2	U	6.2	0.46	ug/Kg	₽		05/04/12 22:01	
Chlorobenzene	6.2	U	6.2	0.41	ug/Kg	ø		05/04/12 22:01	
Chloromethane	6.2	U	6.2	0.50	ug/Kg	. ☆		05/04/12 22:01	
cis-1,2-Dichloroethene	6,2	U	6.2	0.44	ug/Kg	₽		05/04/12 22:01	
sis-1,3-Dichloropropene	6.2	U	6,2	0,42	ug/Kg	#3÷		05/04/12 22:01	
Dibromochloromethane	6.2	U	6.2		ug/Kg	₽		05/04/12 22:01	
Bromodichtoromethane	6.2		6,2		ug/Kg	☆		05/04/12 22:01	
Ethylbenzene	6.2	U	6.2	0.32	ug/Kg	**		05/04/12 22:01	
Methylene Chloride	2.0	JB	6.2		ug/Kg	₩		05/04/12 22:01	
m-Xylene & p-Xylene	12		12		ug/Kg	₽		05/04/12 22:01	
p-Xylene	6.2		6.2		ug/Kg	₽		05/04/12 22:01	
Styrene	6.2		6.2		ug/Kg			05/04/12 22:01	
Tetrachloroetherie	6.2		6.2		ug/Kg	÷		05/04/12 22:01	
Foluene	100		6.2		ug/Kg	₽		05/04/12 22:01	
rans-1,2-Dichloroethene	6.2		6.2		ug/Kg			05/04/12 22:01	• • • • • • • • •
rans-1,3-Dichloropropene	6.2		6.2	0.67	-	₽		05/04/12 22:01	
Trichloroethene	6.2		6.2		ug/Kg	φ		05/04/12 22:01	
√inyi chloride	6.2		6.2		ug/Kg	₩		05/04/12 22:01	
Xylenes, Total	12		12		ug/Kg	₽		05/04/12 22:01	
Chloroform	6.2		6.2		ug/Kg	₽		05/04/12 22:01	
Bromochloromethane	6.2		6.2		ug/Kg			05/04/12 22:01	
1,2-Dibromoethane	6.2		6.2		ug/Kg	*		05/04/12 22:01	
Chloroethane	6.2		6.2		ug/Kg	Ф		05/04/12 22:01	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Toluene-d8 (Surr)	97		67 - 125			=	-	05/04/12 22:01	
1,2-Dichloroethane-d4 (Surr)	101		58 ₋ 123					05/04/12 22:01	
4-Bromofluorobenzene (Surr)	99		52 ₋ 136					05/04/12 22:01	

	Method: 8260B - Volatile Organic C	ompounds ((GC/MS) - T	CLP						
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	1,1-Dichloroethene	0,025	U	0.025	0.0095	mg/L			05/10/12 20:42	1
ļ	1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			05/10/12 20:42	1
	2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			05/10/12 20:42	1

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05/04/12 22:01

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Date Collected: 05/01/12 15:00 Date Received: 05/02/12 07:00 Lab Sample ID: 240-10866-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0,025	0,0065	mg/L			05/10/12 20:42	1
Carbon tetrachloride	0,025	Ü	0.025	0.0065	mg/L			05/10/12 20:42	1
Chlorobenzene	0.025	U	0,025	0,0075	mg/L			05/10/12 20:42	1
Chloroform	0.025	U	0.025	0.0080	mg/L			05/10/12 20:42	1
Tetrachloroethene	0.025	U	0,025	0.015	mg/L			05/10/12 20:42	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			05/10/12 20;42	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			05/10/12 20:42	1

Surrogate	%Recovery Q	Qualifier Limits	Prepared Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98	80 - 121	05/10/12 20:42	1
4-Bromofluorobenzene (Surr)	92	70 ₋ 124	05/10/12 20:42	1
Toluene-d8 (Surr)	100	90 - 115	05/10/12 20:42	1
Dibromofluoromethane (Surr)	109	84 - 128	05/10/12 20:42	1



Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: Total/NA

Lab Sample ID Client Sample ID (67-125) (58-123) (52-136) (37-132) 240-10866-3 FWG-IDW-SBCOMP2-SO 97 101 99 71			Percent Surrogate Recovery (Acceptance Limi						
			TOL	12DCE	BFB	DBFM			
240-10866-3 FWG-IDW-SBCOMP2-SO 97 101 99 71	Lab Sample ID	Client Sample ID	(67-125)	(58-123)	(52-136)	(37-132)			
	240-10866-3	FWG-IDW-SBCOMP2-SO	97	101	99	71			
LCS 240-42797/5 Lab Control Sample 90 100 93 99	LCS 240-42797/5	Lab Control Sample	90	100	93	99			
MB 240-42797/7 Method Blank 89 101 88 90	MB 240-42797/7	Method Blank	89	101	88	90			
Surrogate Legend	Surrogate Legend								

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: Total/NA

				Percent Su	rrogate Reco	very (Accepta	nce Limits)	
		12DCE	TOL	BFB	DBFM			
Lab Sample ID	Client Sample ID	(80-121)	(90-115)	(70-124)	(84-128)			
LCS 240-43615/4	Lab Control Sample	107	111	98	119			

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: TCLP

				Percent Sur	rrogate Reco	егу (Ассер	tance Limits)	
		12DCE	BFB	TOL	DBFM			
Lab Sample ID	Client Sample ID	(80-121)	(70-124)	(90-115)	(84-128)		•	
240-10866-3	FWG-IDW-SBCOMP2-SO	98	92	100	109			-
240-10866-3 MS	FWG-IDW-SBCOMP2-SO	93	91	100	108			
240-10866-3 MSD	FWG-IDW-SBCOMP2-SO	* 98	99	10 4	104			
LB 240-43416/1-A MB	Method Blank	95	91	100	103			 ٠

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Suπ)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

			Percent Surrogate Reco					
		12DCE	BFB	TOL	DBFM			
Lab Sample ID	Client Sample ID	(63-129)	(66-117)	(74-115)	(75-121)			
240-10866-2	TRIP BLANK	91	96	92	97			
LCS 240-43408/10	Lab Control Sample	97	99	93	101			
MB 240-43408/11	Method Blank	98	98	100	92			
Surrogate Legend								

TestAmerica Canton 5/30/2012

TestAmerica Job ID: 240-10866-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: Total/NA

_				Percent Sur	rogate Reco	very (Accepta	ance Limits)
		FBP	2FP	NBZ	TPH	TBP	PHL
Lab Sample ID	Client Sample ID	(34-110)	(26-110)	(24-112)	(41-119)	(10-118)	(28-110)
240-10866-1	FWG-IDW-SBCOMP2-SO	57	62	52	69	32	63
LCS 240-42667/11-A	Lab Control Sample	60	66	60	80	62	66
MB 240-42667/10-A	Method Blank	52	59	53	69	37	58

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Suπ)

TPH = Terphenyl-d14 (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

PHL = Phenol-d5 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: Total/NA

				Percent Su	rrogate Reco	very (Accept	ance Limits)
		FBP	2FP	TBP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)
LCS 240-43139/12-A	Lab Control Sample	72	71	71	75	62	82
MB 240-43139/11-A	Method Biank	72	73	62	76	69	81

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ ≈ Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH ≈ Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)									
		FBP	2FP	TBP	NBZ	PHL	TPH				
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)				
240-10866-1	FWG-IDW-SBCOMP2-SO	70	74	- 69	81	66	80				

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Suπ)

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TestAmerica Job ID: 240-10866-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		DCB1	DCB2	TCX1	TCX2				
Lab Sample ID	Client Sample ID	(32-175)	(32-175)	(24-150)	(24-150)				
240-10866-1	FWG-IDW-SBCOMP2-SO	94	85	77	79				
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	132	102	117	87				
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	124	102	76	83				
LCS 240-43148/5-A	Lab Control Sample	103	84	75	101				
MB 240-43148/4-A	Method Blank	97	98	78	82				
Surrogate Legend									

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptence Limits)									
		DCB1	DCB2	TCX1	TCX2						
Lab Sample ID	Client Sample ID	(34-141)	(34-141)	(46-122)	(46-122)						
LCS 240-43140/4-A	Lab Control Sample	104	95	78	86						
MB 240-43140/3-A	Method Blank	98	101	77	88						

DCB = DCB Decachlorobiphenyl TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Lim									
		TCX1	TCX2	DCB1	DCB2						
Lab Sample ID	Client Sample ID	(46-122)	(46-122)	(34-141)	(34-141)						
240-10866-1	FWG-IDW-SBCOMP2-SO	73	82	90	92						
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	79	85	99	100						
Surrogate Legend		6									

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		TCX2	DCB2							
Lab Sample ID	Client Sample ID	(29-151)	(14-163)							
240-10866-1	FWG-IDW-SBCOMP2-SO	67	58							
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	73	62							
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	68	59							
LCS 240-43146/23-A	Lab Control Sample	90	67							
MB 240-43146/22-A	Method Blank	91	72							

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

TestAmerica Canton 5/30/2012

Surrogate Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)

Matrix: Solid Prep Type: Total

			Percent Surrogate Recovery (Acceptance Limits)
		DNT	
Lab Sample ID	Client Sample ID	(75-115)	
240-10866-1	FWG-IDW-SBCOMP2-SO	100	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	101	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	103	
G2E100000051B	Method Blank	100	
G2E100000051C	Lab Control Sample	103	
Surrogate Legend			
DNT = 3,4-Dinitrotoluer	ne		

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TestAmerica Canton 5/30/2012

QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-42797/7

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 42797

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.0	U	5.0	0.56	ug/Kg			05/04/12 12:30	1
1,1,2,2-Tetrachloroethane	5.0	U	5,0	0.34	ug/Kg			05/04/12 12;30	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			05/04/12 12:30	1
1,1-Dichloroethane	5.0	U	5.0	0,36	ug/Kg			05/04/12 12:30	1
1,1-Dichloroethene	5.0	U	5.0	0.52	ug/Kg			05/04/12 12:30	1
1,2-Dichloroethane	5.0	U	5.0	0.34	ug/Kg			05/04/12 12:30	1
1,2-Dichloroethene, Totai	10	U	10	0.77	ug/Kg			05/04/12 12:30	1-
1,2-Dichloropropane	5.0	U	5.0	0,69	ug/Kg			05/04/12 12:30	1
2-Butanone (MEK)	20	υ	20	1.4	ug/Kg			05/04/12 12:30	1
2-Hexanone	20	U	20	0.63	ug/Kg			05/04/12 12:30	1
4-Methyl-2-pentanone (MIBK)	0.567	J	20	0.54	ug/Kg			05/04/12 12:30	1
Acetone	9.68	J	20	6.3	ug/Kg			05/04/12 12:30	1
Benzene	5.0	υ	5,0	0.23	ug/Kg			05/04/12 12:30	1
Bromoform	5.0	U	5.0	0.33	ug/Kg			05/04/12 12:30	1
Bromomethane	5.0	U	5.0	0.54	ug/Kg			05/04/12 12:30	1
Carbon disulfide	5.0	U	5.0	0.44	ug/Kg			05/04/12 12:30	1
Carbon tetrachloride	5.0	U	5,0	0.37	ug/Kg			05/04/12 12:30	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			05/04/12 12:30	1
Chloromethane	5.0	U	5,0	0.41	ug/Kg			05/04/12 12:30	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.36	ug/Kg			05/04/12 12:30	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.34	ug/Kg			05/04/12 12:30	1
Dibromochloromethane	5.0	Ū	5.0	0.55	ug/Kg			05/04/12 12:30	1
Bromodichloromethane	5.0	υ	5,0	0.28	ug/Kg			05/04/12 12:30	1
Ethylbenzene	5.0	υ	5.0	0.26	ug/Kg			05/04/12 12:30	1
Methylene Chloride	2.10	J	5.0	0.67	ug/Kg			05/04/12 12:30	1
m-Xylene & p-Xylene	10	υ	10	1.2	ug/Kg			05/04/12 12:30	1
o-Xylene	5.0	υ	5.0	0.35	ug/Kg			05/04/12 12:30	1
Styrene	0.171	J	5.0	0.15	ug/Kg			05/04/12 12:30	1
Tetrachloroethene	5.0	υ	5.0	0.52	ug/Kg			05/04/12 12:30	1
Toluene	5.0	U	5.0	0.27	ug/Kg			05/04/12 12:30	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.41	ug/Kg		,	05/04/12 12:30	1
trans-1,3-Dichloropropene	5.0	U	5,0	0.54	ug/Kg			05/04/12 12:30	1
Trichloroethene	5.0	U	5.0	0.42	ug/Kg			05/04/12 12:30	1
Vinyl chloride	5.0	U	5.0	0.39	ug/Kg			05/04/12 12:30	1
Xylenes, Total	10	U	10	0.67	ug/Kg			05/04/12 12:30	1
Chloroform	5.0	U	5.0	0.29	ug/Kg			05/04/12 12:30	1
Bromochloromethane	5.0	U	5.0	0.71	ug/Kg			05/04/12 12:30	1
1,2-Dibromoethane	5.0	U	5.0	0.50	ug/Kg			05/04/12 12:30	1
Chloroethane	5.0	U	5.0	. 0.86	ug/Kg			05/04/12 12:30	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 123	Manufacture and the second sec	05/04/12 12:30	
Toluene-d8 (Surr)	89		67 - 125		05/04/12 12:30	1
4-Bromofluorobenzene (Surr)	88		52 _ 136		05/04/12 12:30	1
Dibromofluoromethane (Surr)	90		37 _ 132		05/04/12 12:30	1

QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-42797/5

Matrix: Solid

Analysis Batch: 42797

Client Sample ID: Lab Control Sample Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1-Trichloroethane	50.0	49.7		ug/Kg		99	77 - 126	
1,1,2,2-Tetrachloroethane	50.0	49.5		ug/Kg		99	77 - 123	
1,1,2-Trichioroethane	50.0	50.3		ug/Kg		101	83 _ 112	
1,1-Dichloroethane	50.0	52.7		ug/Kg		105	76 ₋ 115	
1,1-Dichloroethene	50,0	57,9		ug/Kg		116	75 ₋ 135	
1,2-Dichloroethane	50.0	52.4		ug/Kg		105	72 - 120	
1,2-Dichloroethene, Total	100	100		ug/Kg		100	78 - 115	
1,2-Dichloropropane	50.0	51.3		ug/Kg		103	87 - 113	
2-Butanone (MEK)	100	92.5		ug/Kg		93	52 _ 131	
2-Hexanone	100	98,3		ug/Kg		98	64.136	
4-Methyl-2-pentanone (MIBK)	100	102		ug/Kg		102	67 _ 135	
Acetone	100	107		ug/Kg		107	41 - 137	
Benzene	50.0	49.3		ug/Kg		99	79 - 112	
Bromoform	50,0	47,9		ug/Kg		96	62 - 133	
Bromomethane	50.0	53.1		ug/Kg		106	42 - 136	
Carbon disulfide	50.0	41.0		ug/Kg		82	62 - 146	
Carbon tetrachloride	50.0	50.3		ug/Kg		101	71 - 129	
Chlorobenzene	50.0	46.6		ug/Kg		93	78 - 110	
Chloromethane	50.0	42.5		ug/Kg		85	50 - 110	
cis-1,2-Dichloroethene	50.0	49.4		ug/Kg		99	76 - 113	
cis-1,3-Dichloropropene	50.0	44.5		ug/Kg		89	74 - 128	
Dibromochioromethane	50,0	48.0		ug/Kg		96	72 - 127	
Bromodichloromethane	50.0	48.2		ug/Kg		96	84 - 122	
Ethylbenzene	50.0	48.8		ug/Kg		98	79 - 117	
Methylene Chloride	50.0	49.7		ug/Kg		99	75 ₋ 118	
m-Xylene & p-Xylene	100	96.0		ug/Kg		96	80 - 117	
o-Xylene	50.0	48,6		ug/Kg		97	80 - 120	
Styrene	50.0	49.9		ug/Kg		100	87 ₋ 117	
Tetrachloroethene	50,0	49,9		ug/Kg		100	79 - 114	
Toluene	50.0	45.9		ug/Kg		92	75 - 111	
trans-1,2-Dichloroethene	50.0	50.9		ug/Kg		102	78 - 117	
trans-1,3-Dichloropropene	50.0	46.2		ug/Kg		92	73 - 131	
Trichloroethene	50.0	50.7		ug/Kg		101	79 ₋ 113	
Vinyl chloride	50.0	47.5		ug/Kg		95	57 - 114	
Xylenes, Total	150	145		ug/Kg		96	80 _ 118	
Chłoroform	50.0	52.1		ug/Kg		104	77 _ 114	
Bromochloromethane	50.0	50.2		ug/Kg		100	79 - 111	
1,2-Dibromoethane	50.0	52.2		ug/Kg		104	83 _ 117	
Chłoroethane	50,0	45.0		ug/Kg		90	58 ₋ 117	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		58 - 123
Toluene-d8 (S urr)	90		67 - 125
4-Bromofluorobenzene (Surr)	93		52 136
Dibromofluoromethane (Surr)	99		37 ₋ 132

QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-43408/11

Matrix: Water

Analysis Batch: 43408

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	Ü	1.0	0.19	ug/L			05/09/12 20:14	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			05/09/12 20:14	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			05/09/12 20:14	1
Benzene	1.0	U	1.0	0.13	ug/L			05/09/12 20:14	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			05/09/12 20:14	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			05/09/12 20:14	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			05/09/12 20:14	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			05/09/12 20:14	1
Vinyi chloride	1.0	U	1.0	0.22	ug/L			05/09/12 20:14	1
Chloroform	1.0	U	1.0	0.16	ug/L			05/09/12 20:14	1

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 98 63 - 129 05/09/12 20:14 Toluene-d8 (Surr) 100 74 - 115 05/09/12 20:14 66 .. 117 05/09/12 20:14 4-Bromofluorobenzene (Surr) 98 05/09/12 20:14 Dibromofluoromethane (Surr) 92 75 - 121

Lab Sample ID: LCS 240-43408/10

Matrix: Water

Analysis Batch: 43408

Client Sample ID: Lab Control Sample Prep Type: Total/NA

- -	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	10.0	11.0		ug/L		110	78 - 131	
1,2-Dichloroethane	10.0	10.1		ug/L		101	71 - 127	
2-Butanone (MEK)	20.0	18.0		ug/L		90	60 - 126	
Benzene	10.0	10.1		ug/L		101	83 112	
Carbon tetrachloride	10.0	9.49		ug/L		. 95	66 _ 128	
Chlorobenzene	10.0	9.64		ug/L		96	85 - 110	
Tetrachloroethene	10.0	9.68		ug/L		97	79 - 114	
Trichloroethene	10.0	10.1		ug/L		101	76 - 117	
Vinyl chloride	10.0	9.63		ug/L		96	53 - 127	
Chloroform	10.0	10.3		ug/L		103	79 - 117	

LCS LCS Surrogate Qualifier Limits %Recovery 63 - 129 1,2-Dichloroethane-d4 (Surr) 97 Toluene-d8 (Surr) 93 74 - 115 4-Bromofluorobenzene (Surr) 99 66 - 117 Dibromofluoromethane (Surr) 101 75 - 121

Lab Sample ID: LCS 240-43615/4

Matrix: Solid Analysis Batch: 43615

Client Sample ID:	Lab Control Sample
	Prep Type: Total/NA

•	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	1.00	1.11		mg/L		111	71 - 133	ACCOUNTY AND ADDRESS OF THE PERSON OF THE PE
1,2-Dichloroethane	1.00	0.905		mg/L		91	81 _ 114	
2-Butanone (MEK)	2.00	2.02		mg/L		101	49 _ 120	
Benzene	1.00	0.965		mg/L		97	84 - 120	
Carbon tetrachloride	1.00	1.11		mg/L		111	54 _ 122	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-43615/4

Matrix: Solid

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Analysis Batch: 43615

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chlorobenzene	1.00	1.00		mg/L		100	86 - 111	
Tetrachloroethene	1.00	0.970		mg/L		97	79 _ 134	
Trichloroethene	1.00	0.945		mg/L		95	78 - 130	
Vinyl chloride	1.00	1.02		mg/L		102	56 - 111	
Chloroform	1.00	0.930		mg/L		93	87 - 123	•

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		80 - 121
Toluene-d8 (Surr)	111		90 - 115
4-Bromofluorobenzene (Surr)	98		70 - 124
Dibromofluoromethane (Surr)	119		84 _ 128

Lab Sample ID: LB 240-43416/1-A MB

Matrix: Solid

Analysis Batch: 43615

Client Sample ID: Method Blank

Prep Type: TCLP

MB MB

1									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	υ	0.025	0.0095	mg/L			05/10/12 19:07	1
1,2-Dichloroethane	0.025	υ	0.025	0.011	mg/L			05/10/12 19:07	1
2-Butanone (MEK)	0,25	υ	0.25	0.029	mg/L			05/10/12 19:07	1
Benzene	0.025	U	0,025	0,0065	mg/L			05/10/12 19:07	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			05/10/12 19:07	1
Chlorobenzene	0.025	U.	0.025	0.0075	mg/L			05/10/12 19:07	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			05/10/12 19:07	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			05/10/12 19:07	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			05/10/12 19:07	1
Chloroform	0.025	U	0.025	0.0080	mg/L			05/10/12 19:07	1

MB MB

Surre	ogate	%Recovery	Qualific	er	Limits -	Prepared	Analyzed	Dil Fac
1,2-E	ichloroethane-d4 (Surr)	95		*	80 - 121		05/10/12 19:07	1
Tolue	ene-d8 (Surr)	100			90 - 115		05/10/12 19:07	1
4-Bro	mofluorobenzene (Surr)	91			70 - 124		05/10/12 19:07	1
Dibro	mofluoromethane (Surr)	103			84 - 128	 	05/10/12 19:07	1

Lab Sample ID: 240-10866-3 MS

Matrix: Solid

Client Sample ID: FWG-IDW-SBCOMP2-SO

Prep Type: TCLP

Analysis Batch: 43615										
	Sample	Sample	Spike	MS	MS.				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	Ð	%Rec	Limits	
1,1-Dichloroethene	0.025	U	1.00	1.07		mg/L		107	67 _ 139	
1,2-Dichloroethane	0.025	U	1.00	0.885		mg/L		89	80 _ 115	
2-Butanone (MEK)	0.25	U	2.00	1.83		mg/L		91	49 - 117	
Benzene	0.025	Ü	1,00	0.925		mg/L		93	85 _ 119	
Carbon tetrachloride	0.025	U	1.00	1.01		mg/L		101	60 - 110	
Chlorobenzene	0.025	U	1.00	0.910		mg/L		91	85 _ 113	
Tetrachloroethene	0.025	U	1.00	0.875		mg/L		88	74 - 138	
Trichloroethene	0.025	U	1.00	0.960		mg/L		96	75 - 134	
Vinyl chloride	0.025	U	1.00	0.960		mg/L		96	51 - 118	
Chloroform	0.025	U	1.00	0.875		mg/L		88	86 - 124	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-10866-3 MS

Matrix: Solid

Surrogate

Analysis Batch: 43615

Client Sample ID: FWG-IDW-SBCOMP2-SO

Prep Type: TCLP

MS MS %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 93

80 - 121 Toluene-d8 (Surr) 100 90 - 115 70 - 124 4-Bromofluorobenzene (Surr) 91 Dibromofluoromethane (Surr) 108 84 - 128

Lab Sample ID: 240-10866-3 MSD

Matrix: Solid

Analysis Batch: 43615

Client Sample ID: FWG-IDW-SBCOMP2-SO

Prep Type: TCLP

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.025	Ū	1,00	1.10		mg/L		110	67 - 139	2	30
1,2-Dichloroethane	0.025	U	1.00	0.910		mg/L		91	BO ₋ 115	3	30
2-Butanone (MEK)	0.25	U	2.00	1.79		mg/L		89	49 - 117	2	30
Benzene	0,025	Ü	1.00	0.920		mg/L		92	B5 ₋ 119	1	30
Carbon tetrachloride	0.025	U	1.00	1.07		mg/L		107	60 - 110	6	30
Chlorobenzene	0,025	U	1.00	0.960		mg/L		96	85 - 113	5	30
Tetrachloroethene	0.025	υ	1.00	0.965		mg/L		97	74 ₋ 13B	10	30
Trichloroethene	0.025	υ	1.00	0,965		mg/L		97	75 ₋ 134	1	30
Vinyl chloride	0.025	υ	1.00	0.985		mg/L		99	51 - 118	3	30
Chloroform	0.025	U	1.00	0,925		mg/L		93	86 - 124	6	30

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
Toluene-d8 (Surr)	104		90_115
4-Bromofluorobenzene (Surr)	99		70 - 124
Dibromofluoromethane (Surr)	104		84 _ 128

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-42667/10-A

Matrix: Solid

Analysis Batch: 42988

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42667

Analysis Batch: 42988								Fieb patci	1: 42007
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	6.7	υ	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Acenaphthylene	6.7	υ	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Anthracene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzo[a]anthracene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzoic acid	660	U	660	330	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzo[b]fluoranthene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzo[k]fluoranthene	6,7	U	6.7	3,3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzyl alcohol	330	U	330	21	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Bis(2-chloroethoxy)methane	100	U	100	22	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Bis(2-chloroethyl)ether	100	U	100	2.0	ug/Kg	-	05/03/12 12:12	05/07/12 11:29	1
4-Bromophenyl phenyl ether	50	U	50	13	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Butyl benzyl phthalate	50	U	50	10	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2,4-Dimethylphenol	150	U	150	20	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Dimethyl phthalate	50	U	50	17	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
4,6-Dinitro-2-methylphenol	150	U	150	80	ug/Kg		05/03/12 12:12	05/07/12 11:29	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-42667/10-A

Matrix: Solid

Analysis Batch: 42988

Client Sample ID: Method Blank
Prep Type: Total/NA

Prep Batch: 42667

Ameliato		MB	RL	MDL	Unit	D	Propared	Anglyzod	Dil Fa
Analyte		Qualifier				b	Prepared	Analyzed	
2,4-Dinitrophenol	330		330 200	80	ug/Kg		05/03/12 12:12 05/03/12 12:12	05/07/12 11:29 05/07/12 11:29	
2,4-Dinitrotoluene	200		200		ug/Kg		05/03/12 12:12	05/07/12 11:29	
2,6-Dinitrotoluene	200			21	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Fluoranthene	6.7		6.7		ug/Kg				
Fluorene	6.7		6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Hexachlorobenzene	6.7		6.7	2.1	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Hexachlorobutadiene	50		50		ug/Kg		05/03/12 12:12	05/07/12 11:29	
Hexachlorocyclopentadiene	330		330	27			05/03/12 12:12	05/07/12 11:29	
Hexachloroethane	50		50	9.0	ug/Kg		05/03/12 12:12	05/07/12 11:29	
N-Nitrosodiphenylamine	50		50	21	ug/Kg		05/03/12 12:12	05/07/12 11:29	
N-Nitrosodi-n-propyłamine	50		50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	
1,4-Dichlorobenzene	50		50	20	ug/Kg		05/03/12 12:12	05/07/12 11:29	
2-Chloronaphthalene	50		50	3.3			05/03/12 12:12	05/07/12 11:29	
2-Chlorophenol	50		50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	
4-Chlorophenyl phenyl ether	50		50		ug/Kg		05/03/12 12:12	05/07/12 11:29	
Chrysene	6.7		6.7	1.1	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Dibenz(a,h)anthracene	6.7		6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Dibenzofuran	50	U	50	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Benzo[g,h,i]perylene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Benzo[a]p yrene	6.7	Ü	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Di-n-butyt phthalate	50	U	50	15	ug/Kg		05/03/12 12:12	05/07/12 11:29	
1,2-Dichlorobenzene	50	U	50	9.7	ug/Kg		05/03/12 12:12	05/07/12 11:29	
1,3-Dichlorobenzene	50	υ	50	11	цд/Кд		05/03/12 12:12	05/07/12 11:29	
3,3'-Dichlorobenzidine	100	υ	100	18	ug/Kg		05/03/12 12:12	05/07/12 11:29	
2,4-Dichlorophenol	150	υ	150	20	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Diethyl phthalate	50	U	50	16	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Indeno[1,2,3-cd]pyrene	6.7	U	6.7	. 3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Isophorone	50	Ü	50	13	ug/Kg		05/03/12 12:12	05/07/12 11:29	
2-Methylnaphthalene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	
2-Methylphenol	200	U	200	80	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Naphthalene	6.7	U ·	6.7	3,3	ug/Kg		05/03/12 12:12	05/07/12 11:29	
2-Nitroaniline	200	U	200	9.1	ug/Kg		05/03/12 12:12	05/07/12 11:29	
3-Nitroaniline	200	U	200	16	ug/Kg		05/03/12 12:12	05/07/12 11:29	
4-Nitroaniline	200		200	26	ид/Кд		05/03/12 12:12	05/07/12 11:29	
Nitrobenzene	100	U	100	2.2	ug/Kg		05/03/12 12:12	05/07/12 11:29	
2-Nitrophenol	50	υ	50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	
4-Nitrophenol	330	 ປ	330	80	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Pyrene	6.7	U	6.7	3,3	ug/Kg		05/03/12 12:12	05/07/12 11:29	
Pentachlorophenol	150		150		ug/Kg		05/03/12 12:12	05/07/12 11:29	
Phenanthrene	6.7		6.7	and the second	ug/Kg		05/03/12 12:12	05/07/12 11:29	
1,2,4-Trichlorobenzene		U	50		ug/Kg		05/03/12 12:12	05/07/12 11:29	
2,4,5-Trichlorophenol	150		150		ug/Kg		05/03/12 12:12	05/07/12 11:29	
2,4,6-Trichlorophenol	150		150		ug/Kg		05/03/12 12:12	05/07/12 11:29	
Phenol		Ü	50	27			05/03/12 12:12	05/07/12 11:29	
Carbazole		U	50		ug/Kg		05/03/12 12:12	05/07/12 11:29	
4-Chloroaniline	150		150		ug/Kg		05/03/12 12:12	05/07/12 11:29	
3 & 4 Methylphenol	400		400		ug/Kg		05/03/12 12:12	05/07/12 11:29	
Bis(2-ethylhexyl) phthalate	20.3		50		ug/Kg		05/03/12 12:12	05/07/12 11:29	
Di-n-octyl phthalate			50		ug/Kg		05/03/12 12:12	05/07/12 11:29	
4-Chloro-3-methyiphenol		U	150		ug/Kg		05/03/12 12:12	05/07/12 11:29	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

MR MR

Lab Sample ID: MB 240-42667/10-A

Matrix: Solid

Analysis Batch: 42988

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 42667

MB	MID							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
100	U	100	9.5	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
MB	MB							
%Recovery	Qualifier	Limits				Prepared .	Analyzed	Dil Fac
52		34 - 110				05/03/12 12:12	05/07/12 11:29	ĩ
59		26 - 110				05/03/12 12:12	05/07/12 11:29	1
37		10-118				05/03/12 12:12	05/07/12 11:29	1
53		24 - 112				05/03/12 12:12	05/07/12 11:29	1
58		28 - 110				05/03/12 12:12	05/07/12 11:29	. 1
69		41 119				05/03/12 12:12	05/07/12 11:29	1
	Result 100 MB %Recovery 52 59 37 53	59 37 53 58	Result Qualifier RL 100 U 100 MB MB **Recovery Qualifier Limits 52 34-110 59 26-110 37 10-118 53 24-112 56 28-110	Result Qualifier RL MDL 100 U 100 9.5 MB MB Control of the property of	Result Qualifier RL MDL Unit 100 U 100 9.5 ug/Kg MB %Recovery Qualifier Limits 52 34-110 59 26-110 37 10-118 53 24-112 58 28-110	Result Qualifier RL MDL Unit D 100 0 9.5 ug/Kg ### MB ### WRecovery Qualifier Limits 52 34-110 59 26-110 37 10-118 53 24-112 58 28-110	Result Qualifier RL MDL unit D Prepared 100 U 100 9.5 ug/Kg 05/03/12 12:12 MB %Recovery Qualifier Limits Prepared 52 34-110 05/03/12 12:12 59 26-110 05/03/12 12:12 37 10-118 05/03/12 12:12 53 24-112 05/03/12 12:12 58 28-110 05/03/12 12:12	Result Qualifier RL MDL Unit D Prepared Analyzed 100 U 100 9.5 ug/Kg 05/03/12 12:12 05/07/12 11:29 MB %Recovery Qualifier Limits Prepared Analyzed 52 34-110 05/03/12 12:12 05/07/12 11:29 59 26-110 05/03/12 12:12 05/07/12 11:29 37 10-118 05/03/12 12:12 05/07/12 11:29 53 24-112 05/03/12 12:12 05/07/12 11:29 58 28-110 05/03/12 12:12 05/07/12 11:29

Lab Sample ID: LCS 240-42667/11-A

Matrix: Solid

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Analysis Batch: 42988							Prep Batch: 42	:667
	Spike		LCS				%Rec.	
Analyte	Added		Qualifier	Unit	D	%Rec	Limits	
Acenaphthene	667	425		ug/Kg		64	46 - 110	
Acenaphthylene	667	425		ug/Kg		64	47 - 110	
Anthracene .	667	461		ug/Kg		69	56 _ 111	
Benzo[a]anthracene	667	452		ug/Kg		68	58 - 111	
Benzoic acid	667	660	U *	ug/Kg		9	10 _ 124	
Benzo[b]fluoranthene	667	458		ug/Kg		69	43 - 124	
Benzo[k]fluoranthene	667	484		ug/Kg		73	38 _ 122	
Benzyl alcohol	667	443		ug/Kg		66	10 - 130	
Bis(2-chloroethoxy)methane	667	422		ug/Kg		63	42 - 110	
Bis(2-chloroethyl)ether	667	418		ug/Kg		63	41 - 110	
4-Bromophenyl phenyl ether	667	454		ug/Kg		68	53 - 112	
Butyl benzyl phthalate	667	511		ug/Kg		77	5 <u>7</u> - 121	
2,4-Dimethylphenol	667	336		ug/Kg		50	28 - 110	
Dimethyl phthalate	667	. 477		ug/Kg		72	54 - 112	
4,6-Dinitro-2-methylphenol	667	422		ug/Kg		63	21 - 110	
2,4-Dinitrophenol	667	288	J	ug/Kg		43	10 - 110	
2,4-Dinitrotoluene	667	487		ug/Kg		73	55 - 116	
2,6-Dinitrotoluene	667	491		ug/Kg		74	54 ₋ 115	
Fluoranthene	667	478		ug/Kg		72	55 _ 118	
Fluorene	667	443		ug/Kg		66	51 ₋ 110	
Hexachlorobenzene	667	452		ug/Kg		68	51 _ 110	
Hexachlorobutadiene	667	430		ug/Kg		64	39 - 110	
Hexachlorocyclopentadiene	667	389		ug/Kg		58	10 - 110	
Hexachloroethane	667	403		ug/Kg		60	38 _ 110	
N-Nitrosodiphenylamine	667	461		ug/Kg		69	54 - 112	
N-Nitrosodi-n-propylamine	667	449		ug/Kg		67	40 - 114	
1,4-Dichlorobenzene	667	403		ug/Kg		60	38 - 110	
2-Chloronaphthalene	667	426		ug/Kg		64	46 _ 110	
2-Chlorophenol	667	431		ug/Kg		65	39 - 110	
4-Chlorophenyl phenyl ether	667	459		ug/Kg		69	53 _ 110	
Chrysene	667	474		ug/Kg		71	56 - 111	
Dibenz(a,h)anthracene	667	503		ug/Kg		75	45 _ 122	
Dibenzofuran	667	424		ug/Kg		64	50 - 110	
Benzo[g,h,i]perylene	667	503		ug/Kg		75	44 - 120	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 240-42667/11-A Matrix: Solid Prep Type: Total/NA Prep Batch: 42667 Analysis Batch: 42988 Spike LCS LCS %Rec. Added Result Qualifier Unit D %Rec Limits Analyte 667 441 66 44 - 115 Benzo[a]pyrene ug/Kg Di-n-butyl phthalate 667 519 ид/Кд 78 57 - 119 667 411 ug/Kg 62 42 - 110 1,2-Dichlorobenzene 667 403 60 40 - 110 1,3-Dichlorobenzene ug/Kg 3,3'-Dichlorobenzidine 667 285 ug/Kg 43 31 - 110 433 65 40 - 110 2,4-Dichlorophenol ug/Kg 667 494 74 55 .. 114 Diethyl phthalate ug/Kg 496 Indeno[1,2,3-cd]pyrene 667 ug/Kg 74 45 - 121 667 421 63 46 - 117 Isophorone ug/Kg 667 412 ug/Kg 62 46 _ 110 2-Methylnaphthalene 36 - 110 2-Methylphenol 667 421 ug/Kg 63 Naphthalene 667 405 ug/Kg 61 42 - 110 2-Nitroaniline 667 481 ug/Kg 72 47 _ 124 667 442 66 44 _ 110 3-Nitroaniline ug/Kg 74 50 - 110 4-Nitroaniline 667 495 ug/Kg 667 436 40 - 110 Nitrobenzene ug/Kg 667 411 62 35 _ 110 ug/Kg 2-Nitrophenol 667 24 - 117 424 64 4-Nitrophenol ug/Kg 667 479 ug/Kg 72 58 - 113 Pyrene 10 - 110 Pentachlorophenol 667 345 ug/Kg 52 68 667 453 54 - 110 ug/Kg Phenanthrene 1,2,4-Trichlorobenzene 667 415 ug/Kg 62 43 - 110 667 486 73 42 - 110 2.4.5-Trichtorophenol ug/Kg 2,4,6-Trichiorophenal 667 405 ug/Kg 61 37 - 110 39 _ 110 667 66 Phenol 439 ug/Kg Carbazole 667 485 ug/Kg 73 56 - 115 25 - 110 4-Chloroaniline 667 347 ug/Kg 52 40 - 110 69 3 & 4 Methylphenol 1330 913 ug/Kg Bis(2-ethylhexyl) phthalate 667 518 ug/Kg 78 56 - 123 Di-n-octyl phthalate 667 500 ug/Kg 75 45 _ 123

667

667

491

419

ug/Kg

ug/Kg

74

63

42 ₋ 110 36 ₋ 116

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	60	VIII VIII VIII VIII VIII VIII VIII VII	34 - 110
2-Fluorophenol (Surr)	66		26 - 110
2,4,6-Тribromophenol (Surr)	62		10-118
Nitrobenzene-d5 (Surr)	60		24 - 112
Phenol-d5 (Surr)	66		28 - 110
Terpheпyl-d14 (Surr)	80		41 119

Lab Sample ID: MB 240-43139/11-A

Matrix: Solid

4-Chloro-3-methylphenol

2,2'-oxybis[1-chloropropane]

Analysis Batch: 43457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43139

ł		MB	MR							
l	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ŀ	Pyridine	0.020	ΰ	0,020	0.00035	mg/L		05/08/12 08:55	05/10/12 10:10	1
ŀ	2,4-Dinitrotoluene	0,020	υ	0.020	0.00027	mg/L		05/08/12 08;55	05/10/12 10:10	1
ŀ	Hexachlorobenzene	0.020	υ	0.020	0.00010	mg/L		05/08/12 08:55	05/10/12 10:10	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-43139/11-A

Matrix: Solid

Analysis Batch: 43457

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 43139

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Faç
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		05/08/12 08:55	05/10/12 10:10	1
Hexachloroethane	0.020	U	0,020	0.00080	mg/L		05/08/12 08:55	05/10/12 10:10	1
1,4-Dichlorobenzene	0,0040	U	0.0040	0.00034	mg/L		05/08/12 08:55	05/10/12 10:10	1
2-Methylphenol	0.0040	U	0,0040	0.00080	mg/L		05/08/12 08:55	05/10/12 10:10	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		05/08/12 08:55	05/10/12 10:10	1
Pentachlorophenol	0.040	U	0.040	0,0024	mg/L		05/08/12 08:55	05/10/12 10:10	1
2,4,5-Trichlorophenol	0,020	U	0.020	0.00030	mg/L		05/08/12 08:55	05/10/12 10:10	1
2,4,6-Trichlorophenol	0.020	υ	0.020	0.00080	mg/L		05/08/12 08:55	05/10/12 10:10	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		05/08/12 08:55	05/10/12 10:10	. 1

MB MB

Surrogate	%Recovery Qu	ualifier Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	72	22 - 110	05/08/12 08:55	05/10/12 10:10	1
2-Fluorophenol (Surr)	73	10 - 110	05/08/12 08:55	05/10/12 10:10	1
2,4,6-Tribromophenol (Surr)	62	17-117	05/08/12 08:55	05/10/12 10:10	1
Nitrobenzene-d5 (Surr)	76	29 _ 111	05/08/12 08:55	05/10/12 10:10	1
Phenol-d5 (Surr)	69	10 - 110	05/08/12 08:55	05/10/12 10:10	1
Terphenyl-d14 (Surr)	81	40 - 119	05/08/12 08:55	05/10/12 10:10	1

Lab Sample ID: LCS 240-43139/12-A

Matrix: Solid

Analysis Batch: 43457

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43139

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Pyridine	0.0800	0.0454		mg/L		57	10 _ 110	
2,4-Dinitrotoluene	0.0800	0.0651		mg/L		81	45 ₋ 12 6	
Hexachlorobenzene	0.0800	0.0573		mg/L		72	47 - 116	
Hexachlorobutadiene	0.080,0	0.0584		mg/L		73	10 - 110	
Hexachloroethane	0.0800	0.0618		mg/L		77	10 - 110	
2-Methylphenol	0.0800	0.0671		mg/L		84	24 - 110	
Nitrobenzene	0.0800	0.0656		mg/L		82	35 - 117	
Pentachlorophenol	0.0800	0.0325	J	mg/L		41	12 _ 110	
2,4,5-Trichlorophenol	0.0800	0.0573		mg/L		72	35 - 111	
2,4,6-Trichlorophenol	0,0800	0.0581		mg/L		73	32 _ 110	
3 & 4 Methylphenol	0.160	0.118		mg/L		74	27 - 110	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	72		22 - 110
2-Fluoropheлоl (\$urr)	71		10-110
2,4,6-Tribromophenol (Surr)	71		17-117
Nitrobenzene-d5 (Surr)	75		29 - 111
Phenol-d5 (Surr)	62		10 - 110
Terphenyl-d14 (Surr)	82		40-119

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-43140/3-A

Matrix: Solid

Analysis Batch: 43194

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 43140

1		IND	MID							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chlordane (technical)	0,012	U	0.012	0.000079	mg/L		05/08/12 08:58	05/09/12 10:21	1
	Endrin	0.0012	U	0,0012	0.000026	mg/L		05/08/12 08;58	05/09/12 10:21	1
-	gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		05/08/12 08:58	05/09/12 10:21	1
	Heptachlor	0.0012	U	0,0012	0.000019	mg/L		05/08/12 08:58	05/09/12 10:21	1
	Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		05/08/12 08:58	05/09/12 10:21	1
İ	Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		05/08/12 08;58	05/09/12 10:21	1
	Toxaphene	0.048	U	0.048	0,00077	mg/L		05/08/12 08:58	05/09/12 10:21	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	98		34 - 141	05/08/12 08:58	05/09/12 10:21	1
DCB Decachlorobiphenyl	101		34 _ 141	05/08/12 08:58	05/09/12 10:21	1
Tetrachloro-m-xylene	77		46 122	05/08/12 08:58	05/09/12 10:21	1
Tetrachloro-m-xylene	88		46 - 122	05/08/12 08:58	05/09/12 10:21	1

Lab Sample ID: LCS 240-43140/4-A

Matrix: Solid

Analysis Batch: 43194

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 43140

	Spike	LUS	LUS				%Kec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Endrin	0.00200	0.00192		mg/L		96	59 - 136	
gamma-BHC (Lindane)	0.00200	0.00187		mg/L		93	59 - 137	
Heptachlor	0.00200	0.00193		mg/L		96	63 - 123	
Heptachlor epoxide	0.00200	0,00201		mg/L		101	59 - 141	
Methoxychlor	0.00400	0.00369		mg/L		92	42 141	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	104		34 _ 141
DCB Decachlorobiphenyl	95		34 ₋ 141
Tetrachloro-m-xylene	78		46 - 122
Tetrachloro-m-xylene	86		46 - 122

Lab Sample ID: MB 240-43148/4-A

Matrix: Solid

Client Sample ID: Method Blank

Prep Type: Total/NA

Analysis Batch: 43566								Prep Batch	n: 43148
-	МВ	MB						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	1.7	U	1.7	0.62	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
4,4'-DDE	1.7	U	1,7	0.39	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
4,4'-DDT	1.7	U	1.7	0.63	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Aldrin	1.7	U	1.7	1,2	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
alpha-BHC	1.7	U	1.7	0.73	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
alpha-Chiordane	1.7	U	1.7	0.94	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
beta-BHC	1.7	U	1.7	1.1	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
delta-BHC	1.7	U	1.7	1.2	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Dieldrin	1.7	U	1.7	0.47	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Endosulfan I	1.7	Ü	1.7	0.52	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Endosulfan II	1.7	U	1.7	0.82	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Endosulfan sulfate	1.7	U	1.7	0.87	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Endrin	1.7	U	1.7	0.50	ug/Kg		05/08/12 09:33	05/11/12 05:50	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample	ID: MB	240-43148/4-A
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Matrix: Solid

Analysis Batch: 43566

Client Sam	ple ID	: Meth	od Bl	ank
	Prep	Type:	Total	/NA

Prep Batch: 43148

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin aldehyde	1.7	U	1.7	1.0	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Endrin ketone	1.7	U	1.7	0,63	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
gamma-BHC (Lindane)	1.7	U	1.7	0.74	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
gamma-Chlordane	1.7	U	1.7	0.42	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Heptachlor	1.7	U	1.7	1.1	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Heptachlor epoxide	1.7	U	1.7	0,80	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Methoxychlor	3.3	U	3.3	1.5	ug/Kg		05/08/12 09:33	05/11/12 05;50	1
Toxaphene	67	U	67	19	ug/Kg		05/08/12 09:33	05/11/12 05:50	1

мв мв

Surrogate	%Recovery Qu	ualifier Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	97	32 _ 175	05/08/12 09:33	05/11/12 05:50	
DCB Decachlorobiphenyl	98	32_175	05/08/12 09:33	05/11/12 05:50	1
Tetrachloro-m-xylene	78	24 - 150	05/08/12 09;33	05/11/12 05:50	1
Tetrachloro-т-хуlеле	82	24 - 150	05/08/12 09:33	05/11/12 05:50	1

Lab Sample ID: LCS 240-43148/5-A

Matrix: Solid

Analysis Batch: 43566

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 43148

Analysis Batch: 43566							Prep	Batch: 43148
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
4,4'-DDD	33.3	38.1		ug/Kg		114	38 - 160	
4,4'-DDE	33,3	32.3		ug/Kg		97	41 - 137	
4,4'-DDT	33.3	39.0		ug/Kg		117	34 - 139	
Aldrin	33.3	26.9		ug/Kg		81	52 - 119	
alpha-BHC	33.3	29.9		ug/Kg		90	50 - 129	
alpha-Chlordane	33.3	29.9		ug/Kg		90	43 - 130	
beta-BHC	33.3	30,3		ug/Kg		91	51 - 127	
delta-BHC	33.3	33.1		ug/Kg		99	54 _ 134	
Dieldrin	33.3	32.9		цg/Kg		99	45 - 140	
Endosulfan I	33.3	20.7		ug/Kg		62	13 - 110	
Endosulfan II	33.3	24.0		ug/Kg		72	22 - 115	
Endosulfan sulfate	33.3	36.2		ug/Kg		109	44 - 143	
Endrin	33.3	33.9		цg/Kg		102	48 - 143	
Endrin aldehyde	33.3	34.7		ug/Kg		104	31 - 126	
Endrin ketone	33.3	32.5		ug/Kg		98	39 137	
gamma-BHC (Lindane)	33.3	31.2		ug/Kg		94	41 - 137	
gamma-Chlordane	33.3	31.7		ug/Kg		95	53 - 129	
Heptachlor	33.3	34.9		ug/Kg		105	37 - 127	
Heptachlor epoxide	33.3	32.1		ug/Kg		96	53 - 132	
Methoxychlor	33.3	38.9		ug/Kg		117	33 - 151	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	103		32 _ 175
DCB Decachlorobiphenyl	84		32 - 175
Tetrachloro-m-xylene	75		24 _ 150
Tetrachloro-m-xvlene	101		24 _ 150

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Methoxychlor

TestAmerica Job ID: 240-10866-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 240-10866-1 MS

Client Sample ID: FWG-IDW-SBCOMP2-SO

Matrix: Solid

Prep Type: Total/NA

Analysis Ratch: 43566

Analysis Batch: 43566 Prep Batch: 43148 MS MS Sample Sample Spike %Rec. Result Qualifier Added Result Qualifier %Rec Analyte Unit D Limits ₩ 4,4'-DDD 4.3 U 42.1 52,5 125 27 - 177 ug/Kg ₩ 42.1 4,4'-DDE 4.3 U 44.3 ug/Kg 105 17 - 174 4,4'-DDT 4.3 U 42,1 54.2 ug/Kg ₩ 129 24 - 161 Ф Aldrin 4.3 U 42.1 37.1 ug/Kg 88 33 - 139 alpha-BHC 43 U 42.1 41.1 ug/Kg 98 27 - 15215 - 168 alpha-Chlordane 4.3 U 42.1 40.3 ug/Kg 96 12 beta-BHC 4.3 U 42.1 40.6 ug/Kg 97 10 - 199 delta-BHC 4.3 11 42 1 42.9 ug/Kg 102 14 - 174 35 - 155 Dieldrin 4.3 U 42.1 45.2 ug/Kg 107 p Endosulfan I 4.3 U 42.1 27,0 64 10 - 124 ug/Kg ₽ Endosulfan II 4.3 U 42.1 31.6 75 12 - 125 ug/Kg 48.5 Endosulfan sulfate 4.3 U 42.1 ug/Kg 115 12 - 188 p Endrin 4.3 U 42.1 41.7 ug/Kg 99 25 - 168 42.1 47.5 Endrin aldehyde 4.3 U ug/Kg 113 15 - 146 Endrin ketone 4.3 U 42.1 44.4 ug/Kg 106 16 _ 183 gamma-BHC (Lindane) 4.3 U 42.1 42.7 ug/Kg 101 33 _ 146 gamma-Chlordane 4.3 U 42.1 42.8 ug/Kg ü 102 10 - 188 Heptachlor 4.3 U 42,1 48.4 ug/Kg 115 24 - 153 ņ Heptachior epoxide 4.3 U 42.1 105 22 .. 179 44.0 ug/Kg

MS MS Surrogate %Recovery Qualifier Limits DCB Decachlorobiphenyl 132 32 - 175 DCB Decachlorobiphenyl 102 32 - 175 24 _ 150 Tetrachloro-m-xylene 117 Tetrachloro-m-xylene 87 24 _ 150

8.4 U

Lab Sample ID: 240-10866-1 MSD

Matrix: Solid

Client Sample ID: FWG-IDW-SBCOMP2-SO

Prep Type: Total/NA

42.1

llysis Batch: 43566 Prep Batch: 43148

53.3

ug/Kg

127

20 _ 183

Analysis Batch: 43566			•						Prep	Batch:	43148
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
4,4'-DDD	4.3	υ	42.2	48.2		ug/Kg	₩	114	27 - 177	8	30
4,4'-DDE	4,3	U	42.2	40.7		ug/Kg	₽	97	17 - 174	9	30
4,4'-DDT	4.3	υ	42.2	48.7		ug/Kg	₽	115	24 - 161	11	30
Aldrin	4.3	ΰ	42.2	34.3		ug/Kg	₽	81	33 - 139	8	30
alpha-BHC	4.3	υ	42.2	38.4		ug/Kg	₽	91	27 - 152	7	30
alpha-Chlordane	4.3	U	42.2	35.9		ug/Kg	₽	85	15 - 168	12	30
beta-BHC	4.3	U	42.2	38.4	4	ug/Kg	₽	91	10 - 199	6	30
delta-BHC	4.3	U	42.2	39.3		ug/Kg	₽	93	14 - 174	9	30
Dieldrin	4.3	U	42.2	42.1		ug/Kg	₽	100	35 - 155	7	30
Endosulfan I	4.3	U	42.2	24.4		ug/Kg	₽	58	10 - 124	10	30
Endosulfan II	4.3	υ	42.2	28.7		ug/Kg	₽	68	12 - 125	10	30
Endosulfan sulfate	4.3	U	42.2	44.7		ug/Kg	₽	106	12 - 188	8	30
Endrin	4.3	Ü	42.2	39.2		ug/Kg	₽	93	25 - 168	6	30
Endrin aldehyde	4.3	υ	42.2	44.2		ug/Kg	**	105	15 - 146	7	30
Endrin ketone	4.3	U	42.2	41.2		ug/Kg	₽	98	16 _ 183	7	30
gamma-BHC (Lindane)	4.3	U	42.2	40.2		ug/Kg	ø	95	33 - 146	6	30
gamma-Chlordane	4.3	U	42.2	40.0		ug/Kg	**	95	10 _ 188	7	30

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 240-10866-1 MSD Client Sample ID: FWG-IDW-SBCOMP2-SO Matrix: Solid Prep Type: Total/NA Analysis Batch: 43566 Prep Batch: 43148 MSD MSD %Rec. Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec RPD ₩ Heptachlor 4.3 U 42.2 44.5 ug/Kg 106 24 - 153 8 7 Heptachlor epoxide 4.3 U 42.2 41.1 ug/Kg 97 22 - 179 30 42.2 48.5 20 - 183 9 Methoxychlor 8.4 U ug/Kg 115

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	124		32 _ 175
DCB Decachlorobiphenyl	102		32 _ 175
Tetrachloro-m-xylene	76		24 _ 150
Tetrachloro-m-xylene	83		24 - 150

Lab Sample ID: 240-10866-1 MS

Matrix: Solid

Analysis Batch: 43194

Client Sample ID: FWG-IDW-SBCOMP2-SO Prep Type: TCLP

Prep Batch: 43140

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Endrin	0.0012	U	0.167	0.158	J	mg/L		94	50 _ 150	
gamma-BHC (Lindane)	0.0012	U	0.167	0,159	J	mg/L		95	50 _ 150	
Heptachlor	0.0012	U	0.167	0.161	J	mg/L		97	50 - 150	
Heptachlor epoxide	0,0012	U	0.167	0.171	J	mg/L		102	50 - 150	
Methoxychlor	0.0024	U	0.333	0.312	J	mg/L		93	50 _ 150	
	MS	MS								

	NIS	MS	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	99		34 - 141
DCB Decachlorobiphenyl	100		34 141
Tetrachloro-m-xylene	79		46 - 122
Tetrachloro-m-xylene	85		46 - 122

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-43146/22-A Client Sample ID: Method Blank
Matrix: Solid Prep Type: Total/NA
Analysis Batch: 43441 Prep Batch: 43146

	мв	MB						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	33	U	33	21	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Aroclor-1221	33	U	33	16	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Aroclor-1232	33	U	33	14	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Arodor-1242	33	Ü	33	13	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Arocior-1248	33	U	33	17	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Aroclor-1254	33	U	33	17	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Aroclor-1260	33	U	33	17	ug/Kg		05/08/12 09:22	05/10/12 07:13	1

	M B	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	91		29 _ 151	05/08/12 09:2	2 05/10/12 07:13	1
DCB Decachlorobiphenyl	72		14 - 163	05/08/12 09:2	2 05/10/12 07:13	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: Lab Control Sample

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 240-43146/23-A

Matrix: Solid

Analysis Batch: 43441

Prep Type: Total/NA

Prep Batch: 43146

%Rec. Spike LCS LCS Added Result Qualifier Unit %Rec Limits Analyte Aroclor-1016 333 298 62 - 120 89 ug/Kg Aroclor-1260 333 56 - 122 234 ug/Kg 70

LCS LCS

%Recovery Qualifier Surrogate Limits Tetrachloro-m-xylene 90 29 - 151 DCB Decachlorobiphenyl 67 14 - 163

Lab Sample ID: 240-10866-1 MS

Matrix: Solid

Analysis Batch: 43441

Client Sample ID: FWG-IDW-SBCOMP2-SO

Prep Type: Total/NA

Prep Batch: 43146

Spike MS MS %Rec. Sample Sample Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits ά 42 ū 423 329 78 22 - 157 Aroclor-1016 ug/Kg ņ Aroclor-1260 42 U 423 271 ug/Kg 64 13 .. 161 MS MS Surrogate %Recovery Qualifier Limits

29 _ 151

14 - 163

Lab Sample ID: 240-10866-1 MSD

Matrix: Solid

Tetrachloro-m-xylene DCB Decachlorobiphenyl

Analysis Batch: 43441

Client Sample ID: FWG-IDW-SBCOMP2-SO

Prep Type: Total/NA

Prep Batch: 43146

MSD MSD Sample Sample Spike Result Qualifier Result Qualifier Limits RPD Limit Added D %Rec Analyte Unit ₩ ΰ 42 424 307 72 22 157 30 Aroclor-1016 ug/Kg Ü Aroclor-1260 42 U 424 265 62 13 - 161 2 30 ug/Kg

MSD MSD

73

62

Surrogate %Recovery Qualifier Limits 68 29 - 151 Tetrachloro-m-xylene DCB Decachlorobiphenyl 59 14 - 163

Method: 8330 (Modified) - Organic Compounds by UV/HPLC

Lab Sample ID: G2E100000053B

Matrix: Solid

Matrix: Solid

Analysis Batch: 2131053

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 2131053_P

MR MR

Dil Fac Analyte Result Qualifier RI MDI Unit Prepared Analyzed Nitroguanidine 0.25 U 0.25 0.020 mg/kg 05/10/12 10:00 05/22/12 15:40

Lab Sample ID: G2E100000053C

Analysis Batch: 2131053

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 2131053_P

Limits

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Nitroguanidine 1.00 1.06 mg/kg 106 72 - 121

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8330 (Modified) - Organic Compounds by UV/HPLC (Continued)

Client Sample ID: FWG-IDW-SBCOMP2-SO Lab Sample ID: 240-10866-1 MS Matrix: Solid

Prep Type: Total

Prep Batch: 2131053 P Analysis Batch: 2131053 MS MS %Rec. Sample Sample Spike

Result Qualifier Added Qualifier Limits Result Unit D %Rec Analyte 0.25 U 72 - 121 Nitroguanidine 1.02 n 974 mg/kg 96

Client Sample ID: FWG-IDW-SBCOMP2-SO Lab Sample ID: 240-10866-1 MSD

Analysis Batch: 2131053

Matrix: Solid Prep Type: Total

Prep Batch: 2131053 P %Rec.

Sample Sample Spike MSD MSD Limits RPD Limit Result Qualifier Result Qualifier Added Unit D %Rec Analyte 72 - 121 0.65 20 Nitroguanidine 0.25 U 1.03 0.981 mg/kg

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)

Client Sample ID: Method Blank Lab Sample ID: G2E100000051B

Prep Type: Total Matrix: Solid Analysis Batch: 2131051 Prep Batch: 2131051 P

мв мв Dil Fac Result Qualifier RL MDL Unit Prepared Analyzed Analyte 05/10/12 10:00 05/19/12 19:48 0.25 U 0.25 0.010 mg/kg 1,3,5-Trinitrobenzene 05/19/12 19:48 1,3-Dinitrobenzene 0.25 U 0.25 0.0042 mg/kg 05/10/12 10:00 0.25 0.019 05/10/12 10:00 05/19/12 19:48 2,4,6-Trinitrotoluene 0.25 U mg/kg 0,25 05/10/12 10:00 05/19/12 19:48 0.25 U 0.0053 mg/kg 2.4-Dinitrotoluene 0,0073 mg/kg 05/19/12 19:48 0.25 05/10/12 10:00 2,6-Dinitrotoluene 0.25 U 0.25 0.012 mg/kg 05/10/12 10:00 05/19/12 19:48 2-Amino-4,6-dinitrotoluene 0.25 U 05/19/12 19:48 2-Nitrotoluene 0.25 U 0.25 0.013 mg/kg 05/10/12 10:00 0.25 U 05/19/12 19:48 3-Nitrotoluene 0.25 0.016 mg/kg 05/10/12 10:00 4-Amino-2,6-dinitrotoluene 0,25 U 0,25 0.010 mg/kg 05/10/12 10:00 05/19/12 19:48 05/19/12 19:48 4-Nitrotoluene 0.25 U 0.25 0.018 mg/kg 05/10/12 10:00 0.25 05/10/12 10:00 05/19/12 19:48 HMX 0.25 H 0.012 mg/kg Nitrobenzene 0.25 U 0.25 0.018 mg/kg 05/10/12 10:00 05/19/12 19:48 0,50 U 0.50 mg/kg 05/10/12 10:00 05/19/12 19:48 Nitroglycerin PETN 0.50 0.025 mg/kg 05/10/12 10:00 05/19/12 19:48 0.50 U 0.25 0.012 mg/kg 05/10/12 10:00 05/19/12 19:48 RDX 0.25 U 05/10/12 10:00 Tetryl 0.25 U 0.25 0.010 mg/kg 05/19/12 19:48

MB MB Dil Fac Surrogate %Recovery Qualifier Limits Prepared Analyzed 75 - 115 05/10/12 10:00 3,4-Dinitrotoluene 100 05/19/12 19:48

Lab Sample ID: G2E100000051C Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Total

Prep Batch: 2131051_P Analysis Batch: 2131051

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,3,5-Trinitrobenzene	0,500	0.514		mg/kg		103	81 - 121	
1,3-Dinitropenzene	0.500	0.522		mg/kg		104	81 _ 121	
2,4,6-Trinitrotoluene	0.500	0.436		mg/kg		87	65 - 105	
2,4-Dinitrotoluene	0.500	0.504		mg/kg		101	79 - 119	
2,6-Dinitrotoluene	0.500	0.508		mg/kg		102	79 - 119	
2-Amino-4,6-dinitrotoluene	0.500	0.512		mg/kg		102	79 - 119	
2-Nitrotoluene	0.500	0.507		mg/kg		101	78 - 118	•
3-Nitrotoluene	0.500	0,506		mg/kg		101	77 - 117	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Surrogate

3,4-Dinitrotoluene

TestAmerica Job ID: 240-10866-1

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

%Recovery Qualifier

103

101

Lab Sample ID: G2E100000051C					Client Sample ID: Lab Control Sample				
Matrix: Solid							Prep Ty	ype: Total	
Analysis Batch: 2131051							Prep Batch: 2	131051_P	
	Spike	LC\$	LCS				%Rec.		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
4-Amino-2,6-dinitrotoluene	0.500	0.516	-	mg/kg		103	81 - 121		
4-Nitrotoluene	0,500	0.496		mg/kg		99	78 - 118		
HMX	0.500	0.520		mg/kg		104	80 - 120		
Nitrobenzene	0,500	0,525		mg/kg		105	80 - 120		
Nitroglycerin	1.00	1.11		mg/kg		111	76 ₋ 116		
PETN	1,00	1.01		mg/kg		101	76 - 116		
RDX	0.500	0.508		mg/kg		102	82 - 122		
Tetryl	0.500	0.442		mg/kg		88	63 _ 120		
LCS L	ne.								
LC3 Li	~3								

Limits

75 - 115

3,4-Dinitrotoluene Client Sample ID: FWG-IDW-SBCOMP2-SO Lab Sample ID: 240-10866-1 MS Prep Type: Total Matrix: Solid Prep Batch: 2131051_P Analysis Batch: 2131051 Sample Sample **Spike** MS MS %Rec. Result Qualifier Added Result Qualifier D %Rec Limits Analyte Unit ₩ 0.24 U 0.502 0,503 81 - 121 1,3,5-Trinitrobenzene 100 mg/kg ₩ 1,3-Dinitrobenzene 0.24 U 0.502 0.526 mg/kg 105 81 - 121 0.24 U 0,502 0.434 87 2,4,6-Trinitrotoluene mg/kg 0.24 U 0.502 0.506 ₽ 79 - 119 2,4-Dinitrotoluene mg/kg 101 ₽ 2,6-Dinitrotoluene 0.24 U 0,502 0.508 mg/kg 101 79 _ 119 2-Amino-4,6-dinitrotoluene 0.24 U 0.502 0.507 101 79 - 119 mg/kg 0.24 Ú 0,502 0.506 101 78 - 118 2-Nitrotoluene mg/kg 3-Nitrotoluene 0.24 U 0.502 0.504 100 77 - 117 mg/kg 4-Amino-2,6-dinitrotoluene 0.24 U 0.502 0.514 mg/kg 102 81 - 121 0.499 4-Nitrotoluene 0.24 U 0.502 100 78 - 118 mg/kg HMX 0.502 0.519 80 - 120 0.24 U 103 mg/kg 0.502 0.520 Nitrobenzene 0.24 U mg/kg 104 80 - 120 φ Nitroglycerin 0.48 U 1.00 1.11 76 - 116 mg/kg PETN 1.00 1.01 101 76 - 116 0.48 U mg/kg 0.486 RDX 0.502 82 - 122 0.24 U mg/kg 97 Tetryl 0.24 U 0.502 0.397 mg/kg 79 63 - 120 MS MS Surrogate %Recovery Qualifier Limits

Lab Sample ID: 240-10866-1 MSD					•	Clie	nt Sam	iple ID: I	FWG-IDW-S	SBCOMI	P2-SO
Matrix: Solid					4				Pre	p Type:	Total
Analysis Batch: 2131051									Prep Bato	h: 2131	051_P
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,3,5-Trinitrobenzene	0,24	U	0.499	0.501		mg/kg	- 4	101	81 - 121	0,35	20
1,3-Dinitrobenzene	0.24	U	0,499	0.522		mg/kg	₩	105	81 - 121	0.78	20
2,4,6-Trinitrotoluene	0.24	U	0.499	0.432		mg/kg	₿	87	65 _ 105	0.60	20
2,4-Dinitrotoluene	0.24	υ	0.499	0.505		mg/kg	₽	101	79 - 119	0.15	20
2,6-Dinitrotoluene	0.24	U	0.499	0,506		mg/kg	₩	101	79 - 119	0.53	20
2-Amino-4,6-dinitrotoluene	0.24	υ	0.499	0.505		mg/kg	₩	101	79 _ 119	0.29	20
2-Nitrotoluene	0.24	U	0.499	0.499		mg/kg	₽	100	78 - 118	1.4	20

75 - 115

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

Sample Sample

0.24 U

Result Qualifier

Lab Sample ID: 240-10866-1 MSD Client Sample ID: FWG-IDW-SBCOMP2-SO Prep Type: Total

MSD MSD

0.507

Result Qualifier

Spike

Added

0.499

Matrix: Solid

Analyte

3-Nitrotoluene

Analysis Batch: 2131051

Prep Batch: 2131051 P %Rec. RPD %Rec Limits RPD Limit Unit D ₩ 77 - 117 mg/kg 102 0.67 20 ø 103 81 - 121 0.050 20 mg/kg Þ 100 78 - 118 0.020 20 mg/kg ņ 80 - 120 2.1 20 mg/kg 102

0,499 0.514 4-Amino-2,6-dinitrotoluene 0.24 U 0.499 0.499 4-Nitrotoluene 0.24 U HMX 0.508 0.24 U 0.499 Ħ Nitrobenzene 0.24 U 0.499 0.524 105 80 .. 120 0.92 20 mg/kg ø 20 Nitroglycerin 0.48 Ù 0.997 1.09 109 76 - 116 1.6 mg/kg Ħ PETN 76 - 116 20 0.997 1.02 102 0.19 0.48 U mg/kg ₽ RDX 0.24 U 0.499 0.479 mg/kg 96 82 _ 122 1.5 20 ф 0.24 U 0.499 0.402 81 63 . 120 1.2 Tetryl mg/kg

MSD MSD

Surrogate %Recovery Qualifier Limits 3,4-Dinitrotoluene 103 75 - 115

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-43033/1-A Client Sample ID: Method Blank

Matrix: Solid

Analysis Batch: 43270

Prep Type: Total/NA Prep Batch: 43033

MB MB Dil Fac Result Qualifier RL MDL Unit Analyte D Prepared Analyzed Arsenic 1.0 Ū 1.0 0.30 mg/Kg 05/07/12 11:28 05/08/12 19:26 5.0 05/07/12 11:28 05/08/12 19:26 Cobait 5.0 U 0,16 mg/Kg 05/07/12 11:28 05/08/12 19:26 υ 0.50 Chromium 0.50 0.20 mg/Kg Lead 0.30 U 0,30 0.19 mg/Kg 05/07/12 11:28 05/08/12 19:26 0.50 05/07/12 11:28 05/08/12 19:26 Selenium 0,50 0.45 mg/Kg Silver 0.50 U 0.50 05/07/12 11:28 05/08/12 19:26 0.10 mg/Kg 5.0 U 5.0 05/07/12 11:28 05/08/12 19:26 Vanadium 0.12 mg/Kg Barium 20 U 20 0.071 mg/Kg 05/07/12 11:28 05/08/12 19:26 Calcium 500 U 500. 16 mg/Kg 05/07/12 11:28 05/08/12 19:26 25 05/07/12 11:28 05/08/12 19:26 2.5 U 0.74 mg/Kg Copper Magnesium 17.8 J 500 mg/Kg 05/07/12 11:28 05/08/12 19:26 1.5 05/07/12 11:28 05/08/12 19:26 Manganese 1.5 U 0.074 mg/Kg 4.0 U 4.0 mg/Kg 05/07/12 11:28 05/08/12 19:26 Nickel 0.27 500 05/08/12 19:26 6.2 mg/Kg 05/07/12 11:28 Potassium 22.7 J

Lab Sample ID: LCS 240-43033/2-A Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Total/NA

Analysis Batch: 43270 Prep Batch: 43033

	Spike	LCS	LCS	•			%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	200	196		mg/Kg		98	80 _ 120	
Cobalt	50.0	48.7		mg/Kg		97	80 - 120	
Chromium	20.0	19.8		mg/Kg		99	80 - 120	
Lead	50.0	49.1		mg/Kg		98	80 - 120	
Selenium	200	194		mg/Kg		97	80 _ 120	
Silver	5.00	5.05		mg/Kg		101	80 - 120	
Vanadium	50.0	48.8		mg/Kg		98	80 - 120	
Barium	200	208		mg/Kg		104	80 - 120	
Calcium	5000	5090		mg/Kg		102	80 - 120	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-43033/2-A Client Sample ID: Lab Control Sample Prep Type: Total/NA Matrix: Solid Prep Batch: 43033 Analysis Batch: 43270 LCS LCS %Rec. Spike Result Qualifier Added Unit %Rec Limits Copper 25.0 24.0 mg/Kg 96 80 - 120 4900 98 80 - 120 Magnesium 5000 mg/Kg 49.7 99 80 - 120 50.0 mg/Kg Manganese 99 80 - 120 Nickel 50.0 49.7 mg/Kg 5000 4890 80 - 120 Potassium mg/Kg

Lab Sample ID: MB 240-43166/2-A

Matrix: Solid

Analysis Batch: 43447

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 43166

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0,50	U	0,50	0.0032	mg/L		05/08/12 10:18	05/09/12 14:41	1
Cadmium	0.10	U	0.10	0.00066	mg/L		05/08/12 10:18	05/09/12 14:41	1
Chromium	0.50	U	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 14:41	1
Lead	0,50	Ū	0.50	0,0019	mg/L		05/08/12 10:18	05/09/12 14:41	1
Selenium	0.25	U	0,25	0.0041	mg/L		05/08/12 10:18	05/09/12 14:41	1
Silver	0,50	U	0.50	0,0022	mg/L		05/08/12 10:18	05/09/12 14:41	1
Barium	0.000901	J	10	0.00067	mg/L		05/08/12 10:18	05/09/12 14:41	1

Lab Sample ID: LCS 240-43166/3-A

Matrix: Solid

Analysis Batch: 43447

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 43166

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	2.00	2.00	***************************************	mg/L		100	50 - 150	was a second
Cadmium	0.0500	0,0500	J .	mg/L		100	50.150	
Chromium	0,200	0.194		mg/L		97	50 _ 150	
Lead	0.500	0.495	J	mg/L		99	50.150	
Selenium	2.00	2.01		mg/L		101	50 - 150	
Silver	0.0500	0.0501	J	mg/L		100	50 - 150	
Rarium	2.00	2.06	j	mg/L		103	50 - 150	

Lab Sample ID: LB 240-43074/1-C LB

Matrix: Solid

Analysis Batch: 43447

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 43166

	LB	LB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.0032	mg/L		05/08/12 10:18	05/09/12 14:35	1
Cadmium	0.10	U	0.10	0.00066	mg/L		05/08/12 10:18	05/09/12 14:35	1
Chromium	0.50	U	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 14:35	1
Lead	0.50	U	0.50	0.0019	mg/L		05/08/12 10:18	05/09/12 14:35	1
Selenium	0.25	U	0,25	0.0041	mg/L		05/08/12 10:18	05/09/12 14:35	1
Silver	0.50	U	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 14:35	1
Barium	0.00225	J	10	0.00067	mg/L		05/08/12 10:18	05/09/12 14:35	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-43033/1-A

Matrix: Solid

Analysis Batch: 43264

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43033

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	5.0	Ü	5.0	1.3	mg/Kg		05/07/12 11:28	05/09/12 00:02	1
Antimony	0.20	U	0.20	0.024	mg/Kg		05/07/12 11:28	05/09/12 00:02	1
Beryllium	0.10	U	0.10	0.047	mg/Kg		05/07/12 11:28	05/09/12 00:02	1
Cadmium	0.10	υ	0.10	0.0078	mg/Kg		05/07/12 11:28	05/09/12 00:02	1
Iron	3.60	J	10	1.0	mg/Kg		05/07/12 11:28	05/09/12 00:02	1
Sodium	7,66	J	100	2.4	mg/Kg		05/07/12 11:28	05/09/12 00:02	1
Thallium	0.0171	J	0,20	0.013	mg/Kg		05/07/12 11:28	05/09/12 00:02	1
Zinc	0.518	J	2.0	0.20	mg/Kg		05/07/12 11:28	05/09/12 00:02	1
L									

Lab Sample ID: LCS 240-43033/3-A

Matrix: Solid

Analysis Batch: 43264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Prep Batch: 43033

· · · · · · · · · · · · · · · · · · ·	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aluminum	1000	941		mg/Kg		94	80 - 120	
Antimony	10,0	9.81		mg/Kg		98	68 - 113	
Beryllium	100	79.8		mg/Kg		80	79 - 110	
Cadmium	100	93,8		mg/Kg		94	74 - 110	
Iron	1000	988		mg/Kg		99	80 - 120	
Sodium	1000	1000		mg/Kg		100	80 - 120	
Thallium	25.0	23.3		mg/Kg		93	71 - 110	
Zinc	100	89.0		mg/Kg		89	72 - 113	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-43168/2-A

Matrix: Solid

Analysis Batch: 43595

Client Sample ID: Method Blank
Prep Type: Total/NA

Tep Type: Totalite

Prep Batch: 43168

 Analyte
 Result
 Qualifier
 RL
 MDL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Mercury
 0.0020
 U
 0.0020
 0.00012
 mg/L
 05/08/12 14:30
 05/09/12 11:10
 1

Lab Sample ID: LCS 240-43168/3-A

Matrix: Solid

Analysis Batch: 43595

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 43168

 Spike
 LCS
 LCS
 %Rec.

 Analyte
 Added
 Result
 Qualifier
 Unit
 D
 %Rec
 Limits

 Mercury
 0.00500
 0.00471
 mg/L
 94
 50 - 150

MR MR

Lab Sample ID: LB 240-43074/1-D LB

Matrix: Solid

Analysis Batch: 43595

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 43168

 LB
 LB

 Analyte
 Result
 Qualifier
 RL
 MDL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Mercury
 0.0020
 U
 0.0020
 0.00012
 mg/L
 05/08/12 14:30
 05/09/12 11:09
 1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Matrix: Solid

Analyte

Sulfide

TestAmerica Job ID: 240-10866-1

Lab Sample ID: MB 240-43185/1-A										Cliant Sa	mple ID: Metho	d Blook
Matrix: Solid										Ciletti Sa	•	
											Prep Type:	
Analysis Batch: 43345	MR	мв									Prep Batc	11: 43100
Analyte		Qualifier		RL		MDL Unit		D	P	repared	Analyzed	Dil Fac
Mercury	0,0212			0.10		0.015 mg/K	g	_		8/12 13:55	05/09/12 10:29	
Lab Sample ID: LCS 240-43185/2-A								c	lient	Sample i	ID: Lab Control	Samole
Matrix: Solid								•		· oumpio	Prep Type:	
Analysis Batch: 43345											Prep Batc	
Alialysis Datell. 43343			Spike		LCS	LCS					"Rec.	11. 45 10.
Analyte			Added		· -	Qualifier	Unit		D	%Rec	Limits	
Mercury			0.833		0.750		mg/Kg			90	73 - 121	
			. 4									
lethod: 1010 - Ignitability, Pensl	cy-Marte	ens Clos	ed-Cup	Met	hod						7,1,7,	
1 ah Cample ID: I CC 240 42442/4								_	lion4	Comple	ID. Lab Cantral	Cample
Lab Sample ID: LCS 240-43142/1								C	пепц	. Sample	ID: Lab Control	-
Matrix: Solid											Prep Type:	i otai/NA
Analysis Batch: 43142					1.00	LCS					%Rec.	
•												
•			Spike				l lmi4		ь	B/ Boo		
Analyte			Added		Result	Qualifier	Unit	• F	D	%Rec	Limits	-
•			•				Unit Degree	s F	<u>D</u>	%Rec		
Analyte Flashpoint	ınd/or A	menable	Added 81.0		Result			s F	<u>D</u>		Limits	
Analyte Flashpoint //ethod: 9012A - Cyanide, Total a	ınd/or A	menable	Added 81.0		Result			s F	<u>D</u>	101	Limits 97 - 103	od Blank
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A	ınd/or A	menabl	Added 81.0		Result			s F	<u>D</u>	101	97 - 103	
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A Matrix: Solid	ınd/or A	menabl	Added 81.0		Result			s F	<u>D</u>	101	97 - 103 umple ID: Metho Prep Type:	Total/NA
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A Matrix: Solid			Added 81.0		Result			s F	<u>D</u>	101	97 - 103	Total/NA
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A Matrix: Solid Analysis Batch: 42701	МВ	МВ	Added 81.0	RL	Result	Qualifier		s F		101 Client Sa	97 - 103 umple ID: Metho Prep Type: Prep Batc	Total/NA
Analyte Flashpoint Iethod: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A Matrix: Solid Analysis Batch: 42701 Analyte	МВ	MB Qualifier	Added 81.0	RL 0.50	Result		Degree		P	101	97 - 103 umple ID: Metho Prep Type:	Total/NA h: 42657 Dil Fac
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A Matrix: Solid Analysis Batch: 42701 Analyte	MB Result	MB Qualifier	Added 81.0		Result	Qualifier MDL Unit	Degree		P 05/0	Client Sa	umple ID: Metho Prep Type: Prep Batc Analyzed	Total/NAh: 42657
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A Matrix: Solid Analysis Batch: 42701 Analyte Cyanide, Total	MB Result	MB Qualifier	Added 81.0		Result	Qualifier MDL Unit	Degree		P 05/0	Client Sa	Imple ID: Methor Prep Type: Prep Batc Analyzed 05/03/12 13:36	Total/NA h: 42657 Dil Fac
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A	MB Result	MB Qualifier	Added 81.0		Result	Qualifier MDL Unit	Degree		P 05/0	Client Sa	umple ID: Metho Prep Type: Prep Batc Analyzed	Total/NA h: 42657 Dil Fac
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A Matrix: Solid Analysis Batch: 42701 Analyte Cyanide, Total Lab Sample ID: LCS 240-42657/2-A	MB Result	MB Qualifier	Added 81.0		Result	Qualifier MDL Unit	Degree		P 05/0	Client Sa	Imple ID: Methor Prep Type: Prep Batc Analyzed 05/03/12 13:36	Total/NA h: 42657 Dil Fac Sample Total/NA
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A Matrix: Solid Analysis Batch: 42701 Analyte Cyanide, Total Lab Sample ID: LCS 240-42657/2-A Matrix: Solid	MB Result	MB Qualifier	Added 81.0		82.00	Qualifier MDL Unit	Degree		P 05/0	Client Sa	Imits 97 - 103 Imple ID: Methor Prep Type: Prep Batc Analyzed 05/03/12 13:36 ID: Lab Control Prep Type:	Total/NA h: 42657 Dil Fac Sample Total/NA
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A Matrix: Solid Analysis Batch: 42701 Analyte Cyanide, Total Lab Sample ID: LCS 240-42657/2-A Matrix: Solid Analysis Batch: 42701 Analyte Analyte	MB Result	MB Qualifier	Added 81.0		82.00	MDL Unit	Degree		P 05/0	Client Sa	Imits 97 - 103 Imple ID: Methor Prep Type: Prep Batc Analyzed 05/03/12 13:36 ID: Lab Control Prep Type: Prep Batc	Total/NA h: 42657 Dil Fac Sample Total/NA
Analyte Flashpoint Method: 9012A - Cyanide, Total a Lab Sample ID: MB 240-42657/1-A Matrix: Solid Analysis Batch: 42701 Analyte Cyanide, Total Lab Sample ID: LCS 240-42657/2-A Matrix: Solid Analysis Batch: 42701	MB Result	MB Qualifier	Added 81.0		82.00	MDL Unit mg/K	Degree		Pi 05/0	repared 3/12 13:00 . Sample	Limits 97 - 103 Imple ID: Methor Prep Type: Prep Bato Analyzed 05/03/12 13:36 ID: Lab Control Prep Type: Prep Bato %Rec.	Total/NAh: 4265 Dil Fa

Analysis Batch: 42693									Prep Batch	ո։ 42660
	MB	MB								
Analyte	Result	Qualifier		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	30	Ū		30	22	mg/Kg		05/03/12 11:53	05/03/12 15:13	1
Lab Sample ID: LCS 240-42660/2-A Matrix: Solid Analysis Batch: 42693			Ocitica		100 100		С	lient Sample i	D: Lab Control Prep Type: 1 Prep Batch	otal/NA
			Spike		LCS LCS	\$			%Rec.	

Result Qualifier

72.8

Unit

mg/Kg

%Rec

97

Limits

70 - 130

Prep Type: Total/NA

Added

75.4

Client: Environmental Quality Mgt., Inc.

TestAmerica Job ID: 240-10866-1

Project/Site: RVAAP (OH) - IDW

Method: WS-WC-0050	- Nitrocellulose as	N by WS-WC-0050

6.8 U

Matrix: Solid

Analysis Batch: 2131020

Nitrocellulose

Lab Sample ID: G2E100000020B Client Sample ID: Method Blank

Prep Type: Total Prep Batch: 2131020_P

MB MB Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Faç 05/10/12 06:00 Nitrocellulose 5.0 υ 5.0 0.78 mg/kg 05/15/12 14:35

Lab Sample ID: G2E100000020C Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Total

Analysis Batch: 2131020 Prep Batch: 2131020_P

LCS LCS Spike %Rec. Result Qualifier Limits Added Analyte Unit %Rec

50,7 34 - 115 Nitrocellulose 36,3 mg/kg

Lab Sample ID: 240-10866-1 MS Client Sample ID: FWG-IDW-SBCOMP2-SO

Matrix: Solid Prep Type: Total Analysis Batch: 2131020 Prep Batch: 2131020_P

MS MS Spike %Rec. Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 9.4 34 - 115

67.3

Client Sample ID: FWG-IDW-SBCOMP2-SO Lab Sample ID: 240-10866-1 MSD

7.05 N

mg/kg

Prep Type: Total Matrix: Solid

Prep Batch: 2131020_P Analysis Batch: 2131020 MSD MSD %Rec. RPD Spike Sample Sample

Result Qualifier Result Qualifier Added Limits **RPD** Limit Analyte Unit D %Rec 8,35 34 - 115 17 Nitrocellulose 6.8 U 69.3 N mg/kg 11 71

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Analysis Datab. 49707					
Analysis Batch: 42797 -					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-3	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8260B	
LCS 240-42797/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-42797/7	Method Blank	Total/NA	Solid	8260B	
Analysis Batch: 43408					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-2	TRIP BLANK	Total/NA	Water	8260B	
LCS 240-43408/10	Lab Control Sample	Total/NA	Water	8260B	
MB 240-43408/11	Method Blank	Total/NA	Water	8260B	
Leach Batch: 43416					
— Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-3	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	
240-10866-3 MS	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	
240-10866-3 MSD	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	
LB 240-43416/1-A MB	Method Blank	TCLP	Solid	1311	
– Analysis Batch: 43615					
— Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-3	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8260B	
240-10866-3 MS	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8260B	
240-10866-3 MSD	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8260B	
LB 240-43416/1-A MB	Method Blank	TCLP	Solid	8260B	
LCS 240-43615/4	Lab Control Sample	Total/NA	Solid	8260B	
		do		4.1	
GC/MS Semi VOA		and the state of the State of t			
Prep Batch: 42667 –					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
LCS 240-42667/11-A	Lab Control S am ple	Total/NA	Solid	3540C	
MB 240-42667/10-A	Method Blank	Total/NA	Solid	3540C	
Analysis Batch: 42988	•				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8270C	42667
LCC 240 42667/44 A	Lab Control Sample		-		
LCS 240-42667/11-A	Edb Collifor Califibre	Total/NA	Sotid	8270C	42667
MB 240-42667/10-A	Method Blank	Total/NA Total/NA	Solid	8270C 8270C	
					42667 42667
MB 240-42667/10-A Leach Batch: 43074	Method Blank	Total/NA	Solid	8270C	42667
MB 240-42667/10-A					42667
MB 240-42667/10-A Leach Batch: 43074 Lab Sample ID 240-10866-1	Method Blank Client Sample ID	Total/NA Prep Type	Soiid Matrix	8270C Method	42667
MB 240-42667/10-A Leach Batch: 43074 Lab Sample ID 240-10866-1	Method Blank Client Sample ID	Total/NA Prep Type	Soiid Matrix	8270C Method	42667 Prep Batch
MB 240-42667/10-A Leach Batch: 43074 Lab Sample ID 240-10866-1 Prep Batch: 43139	Method Blank Client Sample ID FWG-IDW-SBCOMP2-SO	Total/NA Prep Type TCLP	Solid Matrix Solid	8270C Method 1311	Prep Batch
MB 240-42667/10-A Leach Batch: 43074 Lab Sample ID 240-10866-1 Prep Batch: 43139 Lab Sample ID	Client Sample ID FWG-IDW-SBCOMP2-SO Client Sample ID	Total/NA Prep Type TCLP Prep Type	Solid Matrix Solid Matrix	8270C Method 1311 Method	Prep Batch
MB 240-42667/10-A Leach Batch: 43074 Lab Sample ID 240-10866-1 Prep Batch: 43139 Lab Sample ID 240-10866-1	Client Sample ID FWG-IDW-SBCOMP2-SO Client Sample ID FWG-IDW-SBCOMP2-SO	Prep Type TCLP Prep Type TCLP	Solid Matrix Solid Matrix Solid	8270C Method 1311 Method 3510C	
MB 240-42667/10-A Leach Batch: 43074 Lab Sample ID 240-10866-1 Prep Batch: 43139 Lab Sample ID 240-10866-1 LCS 240-43139/12-A	Client Sample ID FWG-IDW-SBCOMP2-SO Client Sample ID FWG-IDW-SBCOMP2-SO Lab Control Sample Method Blank	Prep Type TCLP Prep Type TCLP TCLP Total/NA	Matrix Solid Matrix Solid Solid	Method 1311 Method 3510C 3510C	Prep Batch
MB 240-42667/10-A Leach Batch: 43074 Lab Sample ID 240-10866-1 Prep Batch: 43139 Lab Sample ID 240-10866-1 LCS 240-43139/12-A MB 240-43139/11-A	Client Sample ID FWG-IDW-SBCOMP2-SO Client Sample ID FWG-IDW-SBCOMP2-SO Lab Control Sample Method Blank	Prep Type TCLP Prep Type TCLP TCLP Total/NA	Matrix Solid Matrix Solid Solid	Method 1311 Method 3510C 3510C	Prep Batch

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

GC/MS Semi	VOA	(Continued)
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Analysis	Batch:	43457	(Continued)	
Allalysis	Daten.	TUTU 1	(Odnimiaca)	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-43139/12-A	Lab Control Sample	Total/NA	Solid	8270C	43139
MB 240-43139/11-A	Method Blank	Total/NA	Solid	8270C	43139

GC Semi VOA

Leach Batch: 43074

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	

Prep Batch: 43140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	3510C	43074
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	TCLP	Solid	3510C	43074
LCS 240-43140/4-A	Lab Control Sample	Total/NA	Solid	3510C	
MB 240-43140/3-A	Method Blank	Total/NA	Solid	3510C	

Prep Batch: 43146

r -					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
LCS 240-43146/23-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-43146/22-A	Method Blank	Total/NA	Solid	3540C	

Prep Batch: 43148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C
LCS 240-43148/5-A	Lab Control Sample	Total/NA	Solid	3540C
MB 240-43148/4-A	Method Blank	Total/NA	Solid	3540C

Analysis Batch: 43194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8081A	43140
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8081A	43140
LCS 240-43140/4-A	Lab Control Sample	Totai/NA	Solid	8081A	43140
MB 240-43140/3-A	Method Blank	Total/NA	Solid	8081A	43140

Analysis Batch: 43441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8082	43146
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8082	43146
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8082	43146
LCS 240-43146/23-A	Lab Control Sample	Total/NA	Solid	8082	43146
MB 240-43146/22-A	Method Blank	Total/NA	Solid	8082	43146

Analysis Batch: 43566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8081A	43148
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8081A	43148

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Analysis	Batch:	43566	(Continued)
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8081A	43148
LCS 240-43148/5-A	Lab Control Sample	Total/NA	Solid	8081A	43148
MB 240-43148/4-A	Method Blank	Total/NA	Solid	8081A	43148

HPLC

Analysis Batch: 2131051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
G2E100000051B	Method Blank	Total	Solid	8330B	
G2E100000051C	Lab Control Sample	Total	Solid	8330B	

Analysis Batch: 2131053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	8330 (Modified)
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	8330 (Modified)
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	8330 (Modified)
G2E100000053B	Method Błank	Total	Solid	8330 (Modified)
G2E100000053C	Lab Control Sample	Total	Solid	8330 (Modified)

Prep Batch: 2131051_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
G2E100000051B	Method Blank	Total	Solid	8330B	
G2E100000051C	Lab Control Sample	Total	Solid	8330B	

Prep Batch: 2131053_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO ·	Total	Solid	3550A	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	3550A	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	3550A	
G2E100000053B	Method Blank	Total	Solid	3550A	
G2E100000053C	Lab Control Sample	Total	Solid	3550A	

Metals

Prep Batch: 43033

Lat	b Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240	0-10866-1	FWG-IDW-SBCOMP2-SO	Totai/NA	Solid	3050B	
LC:	S 240-43033/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LC:	S 240-43033/3-A	Lab Control Sample	Total/NA	Solid	3050B	
МВ	3 240-43033/1-A	Method Blank	Total/NA	Solid	3050B	

Leach Batch: 43074

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	
LB 240-43074/1-C LB	Method Blank	TCLP	Solid	1311	
LB 240-43074/1-D LB	Method Blank	TCLP	Solid	1311	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

— Daten. 43100					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	3010A	43074
LD 040 40074/4 OLD	Mathad Diagle	TOLD	Calid	20404	42074

 LB 240-43074/1-C LB
 Method Blank
 TCLP
 Solid
 3010A

 LCS 240-43166/3-A
 Lab Control Sample
 Total/NA
 Solid
 3010A

 MB 240-43166/2-A
 Method Blank
 Total/NA
 Solid
 3010A

Prep Batch: 43168

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	7470A	43074
LB 240-43074/1-D LB	Method Blank	TCLP	Solid	7470A	43074
LCS 240-43168/3-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 240-43168/2-A	Method Blank	Total/NA	Solid	7470A	

Prep Batch: 43185

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method Pre	p Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	7471A	
LCS 240-43185/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 240-43185/1-A	Method Blank	Total/NA	Solid	7471A	

Analysis Batch: 43264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	6020	43033
LCS 240-43033/3-A	Lab Control Sample	Total/NA	Solid	6020	43033
MB 240-43033/1-A	Method Blank	Total/NA	Solid	6020	43033

Analysis Batch: 43270

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	6010B	43033
LCS 240-43033/2-A	Lab Control Sample	Total/NA	Solid	6010B	43033
MB 240-43033/1-A	Method Blank	Total/NA	Solid	6010B	43033

Analysis Batch: 43345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO ,	Total/NA	Solid	7471A	43185
LCS 240-43185/2-A	Lab Control Sample	Total/NA	Solid	7471A	43185
MB 240-43185/1-A	Method Blank	Total/NA	Solid	7471A	43185

Analysis Batch: 43447

	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
	240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP .	Solid	6010B	43166
	LB 240-43074/1-C LB	Method Blank	TCLP	Solid	6010B	43166
	LCS 240-43166/3-A	Lab Control Sample	Total/NA	Solid	6010B	43166
-	MB 240-43166/2-A	Method Blank	Total/NA	Solid	6010B	43166

Analysis Batch: 43595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	7470A	43168
LB 240-43074/1-D LB	Method Blank	TCLP	Solid	7470A	43168
LCS 240-43168/3-A	Lab Control Sample	Total/NA	Solid	7470A	43168
MB 240-43168/2-A	Method Blank	Total/NA	Solid	7470A	43168

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

General Chemistry	

Prep Batch: 42657					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	9012A	
LCS 240-42657/2-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 240-42657/1-A	Method Blank	Total/NA	Solid	9012A	
Prep Batch: 42660					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	9030B	
LCS 240-42660/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 240-42660/1-A	Method Blank	Total/NA	Solid	9030B	
Analysis Batch: 42693	3				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	9034	42660
LCS 240-42660/2-A	Lab Control Sample	Total/NA	Solid	9034	42660
MB 240-42660/1-A	Method Blank	Total/NA	Solid	9034	42660
Analysis Batch: 42701	I				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	9012A	42657
LCS 240-42657/2-A	Lab Control Sample	Total/NA	Solid	9012A	42657
MB 240-42657/1-A	Method Blank	Total/NA	Solid	9012A	42657
Analysis Batch: 42702	2				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	Moisture	
240-10866-3	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	Moisture	
Analysis Batch: 43142	2				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	. 1010 ·	
LCS 240-43142/1	Lab Control Sample	Total/NA	Solid	1010	
Analysis Batch: 21310	020	•			
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	WS-WC-0050	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	WS-WC-0050	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	WS-WC-0050	
G2E100000020B	Method Blank	Total	Solid	WS-WC-0050	
G2E100000020C	Lab Control Sample	Total	Solid	WS-WC-0050	
Analysis Batch: 21360	095				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	D 2216-90	
G2D300407013X	Duplicate	Total	Solid	D 2216-90	
Prep Batch: 2131020_	P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

General Chemistry (Continued)

Prep Batch: 2131020_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
G2E100000020B	Method Blank	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manua!)	
G2E100000020C	Lab Control Sample	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	

TestAmerica Canton 5/30/2012

Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Date Collected: 05/01/12 15:00 Date Received: 05/02/12 07:00 Lab Sample ID: 240-10866-1

Matrix: Solid Percent Solids: 78.9

Total/NA Analysis 8081A 2 43566 05/11/12 04:39 AR TAL NC Total Prep 8330B 2131051_P 05/10/12 10:00 TQP TAL WSC Total Analysis 8330B 0.96 2131051_P 05/10/12 10:00 TQP TAL WSC Total Prep 3560A 2131053_P 05/10/12 10:00 TQP TAL WSC Total Analysis 8330 (Modified) 1.01 2131053_P 05/10/12 10:00 TQP TAL WSC Total Analysis 8330 (Modified) 1.01 2131053_P 05/10/12 10:08 VN TAL WSC Total Analysis 8330 (Modified) 1.01 2131053_P 05/10/12 10:08 VN TAL WSC Total/NA Prep 3050B 43033 05/27/12 16:08 VN TAL WSC Total/NA Analysis 6020 1 43264 05/09/12 01:43 KC TAL NC Total/NA Analysis 6010B 1 43270 05/08/12 22:08 BD TAL NC Total/NA Analysis 7471A 1 43345 05/09/12 11:43 AS TAL NC TCLP Leach 1311 43345 05/09/12 11:43 AS TAL NC TCLP Leach 1311 43345 05/09/12 11:43 AS TAL NC TCLP Prep 3010A 43166 05/09/12 10:18 AS TAL NC TCLP Analysis 6010B 1 43447 05/09/12 16:01 BD TAL NC TCLP Prep 7470A 43168 05/09/12 16:01 BD TAL NC TCLP Analysis 7470A 1 43569 05/09/12 11:33 JB TAL NC TCLP Analysis 7470A 1 43660 05/09/12 11:35 JB TAL NC TOTal/NA Prep 9030B 42660 05/03/12 11:33 JB TAL NC TOTal/NA Analysis 9034 1 42667 05/03/12 11:33 JB TAL NC Total/NA Analysis 9034 1 42667 05/03/12 11:33 JB TAL NC Total/NA Analysis 9012A 1 42667 05/03/12 11:33 JB TAL NC Total/NA Analysis 9012A 1 42667 05/03/12 11:38 BR TAL NC Total/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC Total/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC	Dens Tur-	Batch	Batch	Dilution	Batch	Prepared	Amelicat	1 n b
Total/NA				Kun Factor				
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Total/NA Prep 3540C 43148 05/08/12 09:33 BM TAL NC Total/NA Analysis 8081A 2 43566 05/11/12 04:39 AR TAL NC Total Prep 8330B 2131051_P 05/10/12 10:00 TQP TAL WSC Total Analysis 8330B 0.96 2131053_P 05/10/12 10:00 TQP TAL WSC Total Analysis 8330 (Modified) 1.01 2131053_P 05/10/12 10:00 TQP TAL WSC Total Analysis 8330 (Modified) 1.01 2131053_P 05/09/12 10:00 TQP TAL WSC Total/NA Prep 3050B 43033 05/07/12 11:28 DE TAL NC Total/NA Analysis 6020 1 43284 05/09/12 22:06 BD TAL NC Total/NA Analysis 6010B 1 43270 05/08/12 22:06 BD TAL NC Total/NA Analysis 7471A 1 43345 05/09/12 11:43		•						
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Total Prep 8330B 2131051_P 05/10/12 10:00 TQP TAL WSC Total Analysis 8330B 0.96 2131051 05/19/12 21:08 VN TAL WSC Total Analysis 8330B 0.96 2131051 05/19/12 21:08 VN TAL WSC Total Prep 3550A 2131053_P 05/10/12 10:00 TQP TAL WSC Total Analysis 8330 (Modified) 1.01 2131053 05/22/12 16:08 VN TAL WSC Total/NA Prep 3050B 43033 05/07/12 11:28 DE TAL NC Total/NA Analysis 6020 1 43033 05/07/12 11:28 DE TAL NC Total/NA Analysis 6010B 1 43270 05/08/12 22:08 BD TAL NC Total/NA Analysis 7471A 1 43185 05/08/12 13:55 DE TAL NC TOTAL/NA Analysis 7471A 1 43345 05/08/12 13:55 DE TAL NC TOTAL/NA Analysis 6010B 1 43270 05/08/12 12:08 DJ TAL NC TCLP Leach 1311 43074 05/07/12 16:06 DJ TAL NC TCLP Prep 3010A 43166 05/08/12 10:18 AS TAL NC TCLP Analysis 6010B 1 43447 05/09/12 10:18 AS TAL NC TCLP Analysis 6010B 1 43447 05/09/12 16:01 BD TAL NC TCLP Prep 3030B 43460 05/08/12 10:18 AS TAL NC TCLP Analysis 7470A 1 43565 05/08/12 11:35 AS TAL NC TCLP Analysis 7470A 1 43565 05/08/12 11:35 AS TAL NC TCLP Prep 9030B 42660 05/03/12 11:35 AS TAL NC TOTAL/NA Analysis 9034 1 42669 05/03/12 11:35 JB TAL NC TOTAL/NA Analysis 9034 1 42669 05/03/12 11:35 JB TAL NC TOTAL/NA Analysis 9012A 1 42667 05/03/12 13:36 BR TAL NC TOTAL/NA Analysis 9012A 1 42667 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:38 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:39 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:39 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:39	Total/NA	Prep	3540C		43148	05/08/12 09:33	вм	TAL NC
Total Analysis 8330B 0.96 2131051 05/19/12 21:08 VN TAL WSC Total Prep 3550A 2131053_P 05/10/12 10:00 TQP TAL WSC Total Analysis 8330 (Modified) 1.01 2131053_P 05/10/12 10:00 TQP TAL WSC Total/NA Prep 3050B 43033 05/07/12 11:28 DE TAL NC Total/NA Analysis 6020 1 43284 05/09/12 01:43 KC TAL NC Total/NA Analysis 6010B 1 43270 05/09/12 11:43 KC TAL NC Total/NA Prep 7471A 1 43270 05/09/12 13:55 DE TAL NC TOLLP Leach 1311 1 43345 05/09/12 11:43 AS TAL NC TCLP Prep 3010A 1 43074 05/07/12 16:06 DJ TAL NC TCLP Prep 3010A 1 43166 05/09/12 16:01 BD <t< td=""><td>Total/NA</td><td>Analysis</td><td>B081A</td><td>2</td><td>43566</td><td>05/11/12 04:39</td><td>AR</td><td>TAL NC</td></t<>	Total/NA	Analysis	B081A	2	43566	05/11/12 04:39	AR	TAL NC
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Total	Total	Analysis	8330B	0.96	2131051	05/19/12 21:08	VN	TAL WSC
Total/NA	Total	Prep	3550A		2131053_P	05/10/12 10:00	TQP	TAL WSC
Total/NA	Total	Analysis	8330 (Modified)	1.01	2131053	05/22/12 16:08	VN	TAL WSC
Total/NA	Total/NA	Prep	3050B		43033	05/07/12 11:28	DE	TAL NC
Total/NA Prep 7471A 43185 05/08/12 13:55 DE TAL NC Total/NA Analysis 7471A 1 43345 05/09/12 11:43 AS TAL NC TCLP Leach 1311 43074 05/09/12 10:18 AS TAL NC TCLP Prep 3010A 43166 05/08/12 10:18 AS TAL NC TCLP Analysis 6010B 1 43447 05/09/12 16:01 BD TAL NC TCLP Prep 7470A 43168 05/08/12 14:30 AS TAL NC TCLP Analysis 7470A 1 43595 05/09/12 11:35 AS TAL NC Total/NA Prep 9030B 42660 05/03/12 11:53 JB TAL NC Total/NA Analysis 9034 1 42693 05/03/12 15:13 JB TAL NC Total/NA Prep 9012A 42657 05/03/12 13:36 BR TAL NC Total/NA Analysis Moisture </td <td>Total/NA</td> <td>Analysis</td> <td>6020</td> <td>1</td> <td>43264</td> <td>05/09/12 01:43</td> <td>KC</td> <td>TAL NC</td>	Total/NA	Analysis	6020	1	43264	05/09/12 01:43	KC	TAL NC
Total/NA Analysis 7471A 1 43345 05/09/12 11:43 AS TAL NC TCLP Leach 1311 43074 05/07/12 16:06 DJ TAL NC TCLP Prep 3010A 43166 05/08/12 10:18 AS TAL NC TCLP Analysis 6010B 1 43447 05/09/12 16:01 BD TAL NC TCLP Prep 7470A 43168 05/08/12 14:30 AS TAL NC TCLP Analysis 7470A 1 43695 05/09/12 11:35 AS TAL NC TCLP Analysis 7470A 1 43695 05/09/12 11:35 AS TAL NC TOTAL/NA Prep 9030B 42660 05/03/12 11:53 JB TAL NC TOTAL/NA Analysis 9034 1 42693 05/03/12 15:13 JB TAL NC TOTAL/NA Prep 9012A 42667 05/03/12 15:13 JB TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:36 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:36 BR TAL NC TOTAL/NA Analysis Moisture 1 42702 05/03/12 15:48 CN TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 14:39 JB TAL WS CANALYSIS 1010/NA Analysis 1010 1 43142 05/08/12 14:39 JB TAL WS CANALYSIS 1010/NA Analysis 1010 1 43142 05/08/12 14:39 JB TAL WS CANALYSIS 1010/NA Analysis 1010 1 43142 05/08/12 14:39 JB TAL WS CANALYSIS 1010/NA Analysis 1010 1 43142 05/08/12 14:39 JB TAL WS CANALYSIS 1010/NA Analysis 1010 1 43142 05/08/12 14:39 JB TAL WS CANALYSIS 1010/NA Analysis 1010 1 43142 05/08/12 14:39 JB TAL WS CANALYSIS 1010	Total/NA	Analysis	601 0 B	1	43270	05/08/12 22:06	BD	TAL NC
TCLP Leach 1311	Total/NA	Prep	7471A		43185	05/08/12 13:55	DE	TAL NC
TCLP Prep 3010A 43166 05/08/12 10:18 AS TAL NC TCLP Analysis 6010B 1 43447 05/09/12 16:01 BD TAL NC TCLP Prep 7470A 43168 05/08/12 14:30 AS TAL NC TCLP Analysis 7470A 1 43595 05/09/12 11:35 AS TAL NC TCLP Analysis 7470A 1 43595 05/09/12 11:35 AS TAL NC TOTAL/NA Prep 9030B 42660 05/03/12 11:53 JB TAL NC TOTAL/NA Analysis 9034 1 42693 05/03/12 15:13 JB TAL NC TOTAL/NA Prep 9012A 42657 05/03/12 15:13 JB TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:36 BR TAL NC TOTAL/NA Analysis 9012A 1 42701 05/03/12 13:36 BR TAL NC TOTAL/NA Analysis Moisture 1 42702 05/03/12 15:48 CN TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC TOTAL/NA Analysis 1010 1 43142 05/08/12 12:39 JB TAL WSC TAL NC TOTAL/NA Analysis 1010 1 43142 05/15/12 14:39 JB TAL WSC TAL NC TOTAL/NA Analysis 1010 1 43142 05/15/12 14:39 JB TAL WSC TAL NC TOTAL/NA Analysis 1010 1 43142 05/15/12 14:39 JB TAL WSC TAL NC TOTAL/NA Analysis 1010 1 43142 05/15/12 14:39 JB TAL WSC TAL NC TOTAL/NA Analysis 1010 1 43142 05/15/12 14:39 JB TAL WSC TAL NC TOTAL/NA Analysis 1010 1 43142 05/15/12 14:39 JB TAL WSC TAL NC TAL NC TAL NC TAL NC TAL NC TAL NC TAL NC T	Total/NA	Analysis	7471A	1	43345	05/09/12 11:43	AS	TAL NC
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TCLP Prep 7470A	TCLP	Prep	3010A		43166	05/08/12 10:18	AS	TAL NC
TCLP Analysis 7470A 1 43595 05/09/12 11:35 AS TAL NC Total/NA Prep 9030B 42660 05/03/12 11:53 JB TAL NC Total/NA Analysis 9034 1 42693 05/03/12 15:13 JB TAL NC Total/NA Prep 9012A 42657 05/03/12 15:13 JB TAL NC Total/NA Analysis 9012A 1 42701 05/03/12 13:36 BR TAL NC Total/NA Analysis Moisture 1 42701 05/03/12 13:36 BR TAL NC Total/NA Analysis Moisture 1 42702 05/03/12 15:48 CN TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total/NA Prep EXTRACTION, 2131020_P 05/10/12 06:00 TQP TAL WSC SOLID/SOLVENT (Manual) Total Analysis WS-WC-0050 1 2131020 05/15/12 14:39 JB TAL WSC	TCLP	Analysis	6010B	1	43447	05/09/12 16:01	BD	TAL NC
TCLP Analysis 7470A 1 43595 05/09/12 11:35 AS TAL NC Total/NA Prep 9030B 42660 05/03/12 11:53 JB TAL NC Total/NA Analysis 9034 1 42693 05/03/12 15:13 JB TAL NC Total/NA Prep 9012A 42657 05/03/12 15:13 JB TAL NC Total/NA Analysis 9012A 1 42701 05/03/12 13:36 BR TAL NC Total/NA Analysis Moisture 1 42701 05/03/12 13:36 BR TAL NC Total/NA Analysis Moisture 1 42702 05/03/12 15:48 CN TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total/NA Prep EXTRACTION, 2131020_P 05/10/12 06:00 TQP TAL WSC SOLID/SOLVENT (Manual) Total Analysis WS-WC-0050 1 2131020 05/15/12 14:39 JB TAL WSC	TCLP	Prep	7470A		43168	05/08/12 14:30	AS	TAL NC
Total/NA Analysis 9034 1 42693 05/03/12 15:13 JB TAL NC Total/NA Prep 9012A 42657 05/03/12 13:00 CN TAL NC Total/NA Analysis 9012A 1 42701 05/03/12 13:36 BR TAL NC Total/NA Analysis Moisture 1 42702 05/03/12 15:48 CN TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total Prep EXTRACTION, SOLID/SOLVENT (Manual) 2131020_P 05/10/12 06:00 TQP TAL WSC Total Analysis WS-WC-0050 1 2131020 05/15/12 14:39 JB TAL WSC	TCLP	•		1	43595	05/09/12 11:35	AS	TAL NC
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Total/NA Analysis 9012A 1 42701 05/03/12 13:36 BR TAL NC Total/NA Analysis Moisture 1 42702 05/03/12 15:48 CN TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total Prep EXTRACTION, SOLID/SOLVENT (Manual) 2131020_P 05/10/12 06:00 TQP TAL WSC Total Analysis WS-WC-0050 1 2131020 05/15/12 14:39 JB TAL WSC	Total/NA	•		. 1	42693	05/03/12 15:13	JB	TAL NC
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Total/NA Analysis Moisture 1 42702 05/03/12 15:48 CN TAL NC Total/NA Analysis 1010 1 43142 05/08/12 12:28 TH TAL NC Total Prep EXTRACTION, SOLID/SOLVENT (Manual) 2131020_P 05/10/12 06:00 TQP TAL WSC Total Analysis WS-WC-0050 1 2131020 05/15/12 14:39 JB TAL WSC	Total/NA	•		1				
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Total Analysis WS-WC-0050 1 2131020 05/15/12 14:39 JB TAL WSC	Total		EXTRACTION, SOLID/SOLVENT	·				
	Total	Analysis	•	1	2131020	05/15/12 14:39	JB	TAL WS0
	Total	Analysis	D 2216-90	1	2136095	05/17/12 09:19	JB	TAL WSC

Client Sample ID: TRIP BLANK

Date Collected: 05/01/12 08:00 Date Received: 05/02/12 07:00 Lab Sample ID: 240-10866-2

Matrix: Water

	_	Batch	Batch		Dilution	Batch	Prepared		
	Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
i	Total/NA	Analysis	8260B		1	43408	05/09/12 23:37	LW	TAL NC

Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Date Collected: 05/01/12 15:00 Date Received: 05/02/12 07:00 Lab Sample ID: 240-10866-3

Matrix: Solid

Percent Solids: 81.2

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B			42797	05/04/12 22:01	SM	TAL NC
TCLP	Leach	1311			43416	05/09/12 15:57	BF	TAL NC
TCLP	Analysis	8260B		1	43615	05/10/12 20:42	TL	TAL NC
Total/NA	Analysis	Moisture		1	42702	05/03/12 15:48	CN	TAL NO

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Certification Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190
		- · · · · · · · · · · · · · · · · · · ·		
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas DEQ	State Program		88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program		PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program		N/A
TestAmerica West Sacramento	Hawaii	State Program	. 9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Northem Mariana Islands	State Program	9	MP0007
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	Federal	· · · · · · · · · · · · · · · · · · ·	LE148388-0
TestAmerica West Sacramento	USDA	Federal		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	 3	178
TestAmerica West Sacramento	-	· · · · · · · · · · · · · · · · · · ·	10	C581
	Washington	State Program	3	9930C
TestAmerica West Sacramento	West Virginia	State Program		
TestAmerica West Sacramento	West Virginia DEP	State Program	3	334
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Certification Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-10866-1

		_		
Laboratory	Authority	Program	EPA Region	Certification ID

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

040 5-1-12-10 **TestAmerica** THE LEADER IN ENVIRONMENTAL TESTING FestAmerica Laboratories, In COC No: SECONDS -10W Sample Specific Notes / Special Instructions: 8 Date Time: | S | 2 - 1 | 2 - | TAL-0018 (100B) 5238 ď J771 330497936 AUSACTING BOLO

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AUGUST 36 Company: 14 1 sseed if samples are refained longer than I month)

Disposal By Lab _______ Archive For______ ď nlark ORDINS ON ۲, J Other Ś Ø 219 2 2 Regived in Laboratory by: :TafitC 513 815 1500x 4 3 յս**եւ**ցշ Chain of Custody Record 1 week 2 days cceived by: HOR BCRA Site Contact: /γγu? TAT if different from below 1001 S. HOS ЮН 7700 NPDES EONH 200/ **†OSZH** 5-5-12-Unknown TestAmerica Laboratory location: N CareATON S/1/n 513 825 1500 X330 emili evolbinalym com : redio PHOS tasmibsi Method of Shipment/Carrier: JOHN MILLEY Poison B Sample Time 020 08 5/11/2 1500 141-510 81112 5/1/2 \$ CO Skin Irritant 705-10M-812-0007-50 unduration 0445240 Mages 800 Contition Bluc DIN-SAcomoz IND WASK 20174.0016.001.02 SURPING | | |-| |-S S Page 56 of 63 5/30/2012

TestAmerica North Canton Sample Receipt Form/Narrati	ve Login # : [DÎle 6
Client EQM Site Name 1	VAAP66 Byleny Bun
	5/7=1/1>_ (Signature)
FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Of	
TestAmerica Cooler # 5236 Foam Box Client Cool	er Box Other
Packing material used Bubble Wrap Foam Plastic E	Bag None Other
COOLANT: Wet Ice Blue Ice Dry Ice W.	ater None
1. Cooler temperature upon receipt	
IR GUN#1 (CF-2°C) Observed Sample Temp. 3,0	
IR GUN# 4G (CF-1°C) Observed Sample Temp	°C Corrected Sample Temp. °C D Multiple
IR GUN# 5G (CF-1°C) Observed Sample Temp.	°C Corrected Sample Temp. °C on Back °C Corrected Sample Temp. °C
IR GUN#6Y (CF-2°C) Observed Sample Temp. 2. Were custody seals on the outside of the cooler(s)? If Yes	Overtity to Ves No
-Were custody seals on the outside of the cooler(s) signed & dat	ed? (S) No NA
-Were custody seals on the bottle(s)?	Yes No
3. Shippers' packing slip attached to the cooler(s)?	Yes 阪
4. Did custody papers accompany the sample(s)?	₩ No
5. Were the custody papers relinquished & signed in the appropria	tte place?
Did all bottles arrive in good condition (Unbroken)?	Yes No
7. Could all bottle labels be reconciled with the COC?	(Yes) N₀
8. Were correct bottle(s) used for the test(s) indicated?	Yes No
9. Sufficient quantity received to perform indicated analyses?	Yes No (NA)
10. Were sample(s) at the correct pH upon receipt?	Yes No
11. Were VOAs on the COC?12. Were air bubbles >6 mm in any VOA vials?	Yes No NA
13. Was a trip blank present in the cooler(s)?	Yes No
15. 11.00 0 0.00	
Contacted PM Date by	via Verbal Voice Mail Other
Concerning	
14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES	
```	
·	
·	
· .	
15. SAMPLE CONDITION	
Sample(s) were received	after the recommended holding time had expired.
Sample(s)	were received in a broken container.
Sample(s) were re	ceived with bubble >6 mm in diameter. (Notify PM)

N-None
O-Ashbatz
P-Nazoks
R-Nazoks
G-Nazoks
R-Nazosts
R-Nazosts
I-TSP Dedesthydrate
U-Archare
W-INLA
R-V-MCA
Z-criter (specify) Tost America that thatether be represented by the transfer of the teat. Special Instructions/Note: がある Months Corrogray 240-10866-1 Preservation Codes: A. HCL B. NaOH C. Zn Aostin D. Nitre Acid E. NaHSO4 E. NeOH G. Another SEC Page 1 of 1 COC Nac 240-5668.1 1. foe 3. Di Water K. EDTA L. EDA Zamistnop to redinish teroT Aethod of Shipment Analysis Requested Cocker Temperature(s) "C and Other Remarks: Special Instructions/QC Requirements: Chain of Custody Record Lab PM Loeb, Mark J E-Mair mark.loeb@lestamericaino.com × Raceived by: × SUBCONTRACT! Witrocollulose as N by WS-WC-0050 × (MA so sey) CISMISM miches (Werealtr, Breatta, Ormastefall, Matrix Preservation Code Solid Company Type (C=comp, G=grab) Sample ď Sample Eastern 15.00 LAT Requested (days): Due Date Requested: 5/15/2012 グーからの Sample Date 5/1/12 Project #: 24006545 SSOW#: Date/Time: Fhone ¥OM. Ş. Custody Seal No. 9 (5745 Client Information (Sub Contract Lab) Unconfirmed Deliverable Requested: II, III, IV, Other (specify) North Canton, OH 44720 Phone (330) 497-9396 Fax (330) 457-9772 Sample Identification - Client ID (Lab ID) FWG-IDW-SBCOMP2-SO (240-10866-1) 400 Possible Hazard Identification TestAmerica Canton ompany. FestAmerica Laboratories, Inc. Empty Kil Repreduished by Custody Seals Intact: 4101 Shuffel Street NW Address: 880 Riverside Parkway, Phone: 916-373-5600(Tel) Shipping/Receiving Project Name: RVAAP (OH) - IDW West Sacramento yd berfaltige dinguished by State, Zp: CA, 95605

Page 59 of 63

5/30/2012



## LOT RECEIPT CHECKLIST TestAmerica West Sacramento

CLIENT	TAL CA	NON	· · · · · · · · · · · · · · · · · · ·			PM	KD
LOT# (QUANTIMS ID			QUOTE#_	89187	LOCATI	ON_	W20E
DATE RECEIVED	5/4/12	TIME REC	EIVED	9:10			Checked (▼
DELIVERED BY				OTHER			
☐ GOLDENSTATE	UPS	☐ EZ PAF	RCEL				
☐ TAL COURIER	☐ TAL SF	☐ CLIENT	-				$\checkmark$
SHIPPPING CONTAIL	NER(S)	AL 🗆	CLIENT	N/A			
	MU	IT-COOLER(S	s) (If checked see	multi-cooler form	)		
SINGLE COOLER IN	FORMATION					N/A	
CUSTODY SEAL STA							$\checkmark$
CUSTODY SEAL #(S)	)	21574	15,215744				
COC #(S)		240-566	5.1				
TEMPERATURE BLA	.NK Observed:	1.1	Corrected:	0.3			
SAMPLE TEMPERAT Observed: 1.6,1.4 LABORATORY THER	,2.7 Average_			_e 1.5			
IR UNIT: #4 ☑	#5	☐ OTHER	<u> </u>	<del></del>			$\checkmark$
					CH		5/4/12
=======================================				· ========	Initials ======	D: =====	ate 
pH MEASURED							. 🔽
LABELED BY				·····			<b>✓</b>
SHORT HOLD TEST	NOTIFICATION		SAMPLE R WETCHEN		I/A		<b>▼</b>
			VOA-ENCO				$\overline{Z}$
☐ METALS NOT	IFIED OF FILTER/	PRESERVE VI	A VERBAL & EM	AIL 🛭 N/A			$\checkmark$
	:HIPMENT RECEI\ EMPERATURES, (						
☐ CLOUSEAU ☑ WET ICE	☐ TEMPER	RATURE EXCE	EDED (0 °C – 6	°C) ^{*1} 🗹 N/A OLING AGENTS U	JSED		
					CH	;	5/4/12
Nisass				Initia	als	Date	•
Notes							
							-

^{*1} Acceptable temperature range for State of Wisconsin samples is  $\leq$ 4°C.

# **TestAmerica**

## **Bottle Lot Inventory**

Lot G2E040501 ID: THE LEADER IN ENVIRONMENTAL TESTING 2 6 | 7 8 9 10 11 | 12 | 13 14 15 16 17 18 19 20 1 3 VOA* VOAh* **VOAmeoh** AGB **AGBs** 250AGB 250AGBs 250AGBn 500AGB AGJ 500AGJ 250AGJ 125AGJ 125AGJmeoh CGJ 500CGJ 250CGJ 125CGJ ΡJ PJn 500PJ 500PJn 500PJna 500PJzn/na 250PJ 250PJn 250PJna 250PJzn/na Acetate Tube "CT Encore Folder/filter PUF Petri/Filter XAD Trap Ziploc

2 | 10 | 11 | 12 | 16 | 17 | 18 3 5 6 7 8 14 | 15 4  $\mathbf{h}$  = hydrochloric acid  $\mathbf{s}$  = sulfuric acid  $\mathbf{na}$  = sodium hydroxide **n** = nitric acid zn = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

13

ORIGIN ID PHUM AL HRIDET TEST AMERICA 4101 SHUFFEL OR

OND: Ansternation

NORTH CANTON, OH 44720

BILL RECIPIENT

**ENVIRONMENTAL SAMPLE RECEIPT TESTAMERICA WEST SACRAMENTO BOO RIVERSIDE PARKWAY

LIEST SACRAMENTO CA 95605

DEPT: AL HAIDE!

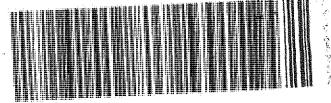


TREE 9784 4680 4881

FRI - 04 MAY AL PRIORITY OVERNIGHT

XH BLUA

95605 ch-us SMF



## Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-10866-1

Login Number: 10866

List Number: 1 Creator: Sutek, Nick List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True ·	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



July 18, 2012

Mr. Mark Patterson Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266

Reference:

Contract No. GS-10F-0293K

Delivery Order No. W912QR-1-F-0266

Subject:

Facility-Wide Groundwater Monitoring Program Plan

RVAAP-66 Facility-Wide Groundwater

Soil IDW Letter Report - Draft

#### Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI), installation of monitoring wells, approved per the *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum* (Addendum; EQM, January 2012), began on February 27, 2012. These activities resulted in the generation of IDW consisting of soil cuttings from drilling operations. The purpose of this letter is to characterize and classify IDW for disposal and to propose methods for disposing of the IDW. This report includes a summary of IDW generated and its origin (Table 1), a summary of the analysis and methods (Table 2), a summary of detected analytical results compared to regulatory characteristic levels (Table 3), and recommendations for disposal. The laboratory data sheets are included in Attachment 1.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (EPA) regarding IDW disposition at RVAAP, including the IDW disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations* (FWSAP; SAIC, 2011) and the Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material pending waste characterization and classification based on analytical results. The FWSAP and the Addendum describe approved procedures used for containerizing and handling IDW.

#### Soil IDW Discussion

Accumulated IDW soil cuttings were containerized in 55-gal drums on site pending characterization and transport and disposal to an offsite disposal facility. A summary of the drums of IDW generated and its origin are presented in Table 1. Composite sampling for disposal characterization was performed using a composite grab sampling technique. The composite sample was collected from 28 drums of soil. The drums were opened and screened with a photoionization detector (PID). Grab samples of the drums were collected using a decontaminated trier manually pushed to the bottom of each container. The retrieved sample was placed in a decontaminated stainless steel bowl for homogenization. Rocks and loose twigs were removed and discarded. Clumps of soil were broken down using a gloved hand and mixed in the bowl. The mixture was collected using a gloved hand and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the location of the highest screened PID level was collected and transferred directly from the IDW waste container into the sample container with minimum head space for laboratory analysis of VOCs.

All stainless steel bowls and triers were decontaminated in accordance with Section 2.13 of the Addendum after collection of each composite sample.

The indigenous IDW contained in drums were characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite totals analysis and Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 2. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1 "Maximum Concentration of Contaminants for Toxicity Characteristic" (40 CFR 261.24) and Table 8-2 "Maximum Concentration of Hazardous Waste Characterization Analytes" (40 CFR 261.21-23), as presented in the FWSAP, the USEPA Risk Screening Levels (RSLs) for residential soils, and/or the site-specific background criteria for RVAAP. Table 3 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP and RVAAP full suite analysis for IDW soil cuttings.

Summary of the IDW containers shown is as follows:

- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 180 degrees F. Reactive sulfide and reactive cyanide were not detected above the reporting limit.
- Arsenic was the only concentration to exceed the USEPA RSLs for the RVAAP full suite totals composite sample. However, the arsenic concentration did not exceed the background criterion for RVAAP.
- Only cadmium exceeded the RVAAP background criteria, but it was not identified at a concentration exceeding the USEPA RSL.

## **Recommended Disposal Pathways for IDW**

After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. It is recommended that the 28 drums containing soil be classified as contaminated but non-hazardous, and that they be sent offsite for disposal to a permitted facility in accordance with Section 8.0 of the FWSAP. Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with the appropriate waste disposal. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

John M. Miller, CHMM Project Manager

cc: Vicki Deppisch – Ohio EPA

Mark Nichter – USACE

EQM PN - 030174.0016.001.02

Table 1. IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-121s	55 gallon Steel	Soil Cuttings	06/04/12	EBGmw-131	0.0
EQM-122s	55 gallon Steel	Soil Cuttings	06/07/12	EBGmw-131	4.5
EQM-123s	55 gallon Steel	Soil Cuttings	06/05/12	EBGmw-131	0.0
EQM-124s	55 gallon Steel	Soil Cuttings	06/1-4/12	EBGmw-131	0.0
EQM-125s	55 gallon Steel	Soil Cuttings	06/07/12	EBGmw-131	0.0
EQM-126s	55 gallon Steel	Soil Cuttings	06/13/12	WBGmw-019	0.0
EQM-127s	55 gallon Steel	Soil Cuttings	05/31/12	WBGmw-019	4.6
EQM-128s	55 gallon Steel	Soil Cuttings	06/14/12	WBGmw-019	1.8
EQM-129s	55 gallon Steel	Soil Cuttings	06/19/12	WBGmw-020	3.0
EQM-130s	55 gallon Steel	Soil Cuttings 06/13/12 EBGmw-1		EBGmw-131 & WBGmw-019	0.0
EQM-131s	55 gallon Steel	Soil Cuttings	uttings 06/19/12 WBGmw-020		0.0
EQM-132s	55 gallon Steel	Soil Cuttings	05/31/12- 06/18/12	WBGmw-021	0.0
EQM-133s	55 gallon Steel	Soil Cuttings	06/18/12	WBGmw-021	0.0
EQM-134s	55 gallon Steel	Soil Cuttings	06/19/12	WBGmw-020	0.0
EQM-135s	55 gallon Steel	Soil Cuttings	06/18/12	WBGmw-021	9.6
EQM-136s	55 gallon Steel	Soil Cuttings	06/19/12	WBGmw-020	2.9
EQM-137s	55 gallon Steel	Soil Cuttings	06/14/12	WBGmw-019	0.0
EQM-138s	55 gallon Steel	Soil Cuttings	05/31/12	WBGmw-020	0.0
EQM-139s	55 gallon Steel	Soil Cuttings	06/14-18/12	WBGmw-018 & WBGmw-021	0.0
EQM-140s	55 gallon Steel	Soil Cuttings	06/19/12	WBGmw-021	0.0
EQM-141s	55 gallon Steel	Soil Cuttings	06/20/12	DA2mw-116	0.0
EQM-142s	55 gallon Steel	Soil Cuttings	06/20/12	DA2mw-116	0.0
EQM-143s	55 gallon Steel	Soil Cuttings	05/30/12	DA2mw-116	0.0
EQM-144s	55 gallon Steel	Soil Cuttings	06/18-25/12	WBGmw-021	0.0
EQM-145s	55 gallon Steel	Soil Cuttings	06/19-26/12	WBGmw-020	0.0
EQM-146s	55 gallon Steel	Soil Cuttings	05/30/12	DA2mw-114	0.0
EQM-147s	55 gallon Steel	Soil Cuttings	06/20/12	DA2mw-116	0.0
EQM-148s	55 gallon Steel	Sediment from Purge Water	06/27/12	Various	0.0

Table 2. Summary of Analytical Suite of Chemicals

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium,	EPA Method SW-846 1311/6010B
cadmium, chromium, lead, and selenium)	
TCLP semivolatile organic compounds	EPA Method SW-846 1311/8270C
(SVOCs)	
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
рH	EPA Method SW-846 9040B
Polychlorinated biphenyls (PCBs)	EPA Method SW-846 8082
Pesticides	EPA Method SW-846 8081A
Base/Neutrals and Acids (SVOCs)	EPA Method SW-846 8270C
Volatile Organic Compounds (VOCs)	EPA Method SW-846 8260B
Nitroguanidine (Propellant)	EPA Method SW-846 8330 modified
Nitroaromatics & Nitramines (Explosives)	EPA Method SW-846 8330
Nitrocellulose as N (Propellant)	General Chemistry (WS-WC-0050)
Metals (Magnesium, Manganese, Barium,	EPA Method SW-846 6010B
Nickel, Potassium, Silver, Sodium,	
Vanadium, Chromium, Calcium, Cobalt,	
Copper, Arsenic, Lead, Selenium)	
Metals (Antimony, Iron, Beryllium,	EPA Method SW-846 6020
Thallium, Zinc, Cadmium, Aluminum)	
Mercury	EPA Method SW-846 7470A

1 EPA Methods for Chemical Analysis of Water and Waste

Table 3. Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	Cas#	Units	Lab Results	Lab Qualifier	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
VOCs	Carbon disulfide	75-15-0	mg/Kg	0.0054	J, B	820	NA	NA
VOCs	Methylene chloride	75-09-2	mg/Kg	0.0012	J, B	11	NA	NA
VOCs	Toluene	108-88-3	mg/Kg	0.00043	J	5000	NA_	NA
SVOCs	2-Methylnaphthalene	91-57-6	mg/Kg	0.0073	J	310	NA_	NA
SVOCs	Benzo[g,h,i]perylene	191-24-2	mg/Kg	0.013		NA	NA	NA
SVOCs	Benzo(a)pyrene	50-32-8	mg/Kg	0.0063	J	0.015	NA	NA
SVOCs	Bis(2-ethylhexyl) phthalate	117-81-7	mg/Kg	0.140	В	35	NA	NA
SVOCs	Fluoranthene	206-44-0	mg/Kg	0.0074	J	2300	NA	NA
SVOCs	Naphthalene	91-20-3	mg/Kg	0.0045	J	4.0	NA	NA
SVOCs	Pyrene	129-00-0	mg/Kg	0.0088		1700	NA	NA
Total Metals	Aluminum	7429-90-5	mg/Kg	11000	В	77000	19500	NA
Total Metals	Antimony	7440-36-0	mg/Kg	0.13	J, B	31	0.96	NA
Total Metals	Arsenic	7440-38-2	mg/Kg	11		0.39	19.8	NA
Total Metals	Barium	7440-39-3	mg/Kg	120	В	15000	124_	NA NA
Total Metals	Beryllium	7440-41-7	mg/Kg	0.57		160	0.88	NA
Total Metals	Cadmium	7440-43-9	mg/Kg	0.14		70	0.0	NA
Total Metals	Calcium	7440-70-2	mg/Kg	16000	В	NA	35500	NA
Total Metals	Chromium	7440-47-3	mg/Kg	15		120000	27.2	NA
Total Metals	Cobalt	7440-48-4	mg/Kg	10		23	23.2	NA
Total Metals	Copper	7440-50-8	mg/Kg	21		3100	32.2	NA
Total Metals	Iron	7439-89-6	mg/Kg	25000	В	55000	35200	NA
Total Metals	Lead	7439-92-1	mg/Kg	11		400	19.1	NA
Total Metals	Magnesium	7439-95-4	mg/Kg	4500		NA	8790	NA
Total Metals	Manganese	7439-96-5	mg/Kg	430		1800	3030	NA
Total Metals	Nickel	7440-02-0	mg/Kg	24	В	1500	60.7	NA
Total Metals	Potassium	7440-09-7	mg/Kg	1500	В	NA	3350	NA
Total Metals	Sodium	7440-23-5	mg/Kg	90	J, B	NA	145	NA
Total Metals	<u>Thallium</u>	7440-28-0	mg/Kg	0.17	J	0.78	0.91	NA
Total Metals	Vanadium	7440-62-2	mg/Kg	17	В	390	37.6	NA
Total Metals	Zinc	7440-66-6	mg/Kg	63	В	23000	93.3	NA
Total Metals	Mercury	7439-97-6	mg/Kg	0.027	J	10	0.044	NA
Explosives	Nitrocellulose	9004-70-0	mg/Kg	1.7	J, B	1.8E+08	NA_	NA
TCLP-Misc.	Flashpoint	NA	°F	>180		NA	NA	<180
TCLP-Misc.	Corrosivity	NA	S.U.	10		NA	NA	NA
TCLP-Metals	Arsenic	7440-38-2	mg/L	0.0048	J	NA	NA	5.0
TCLP-Metals	Barium	7440-39-3	mg/L	0.88	J, B	NA	NA	100
TCLP-Metals	Cadmium	7440-43-9	mg/L	0.0024	J	NA	NA	1.0
TCLP-Metals	Chromium	7440-47-3	mg/L	0.0037	J	NA	NA	5.0
TCLP-Metals	Lead	7439-92-1	mg/L	0.0035	J	NA	NA	5.0

# Table 3. Detected Analytical Results Compared to Regulatory Characteristic Levels (continued)

#### Note:

Acetone (1.4 ug/L J) was detected in the trip blank.

* The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1. Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24), and Table 8-2. Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23).

Bold concentrations exceed a regulatory limit.

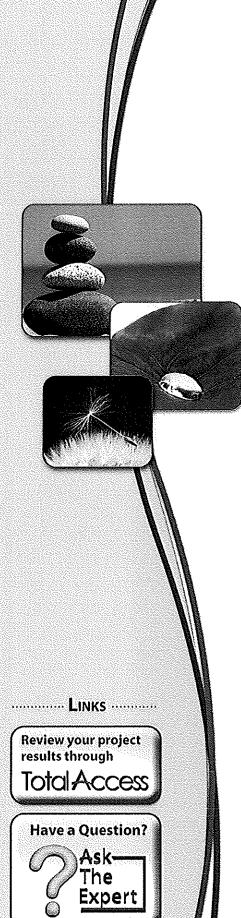
Shaded result exceeds RVAAP background criteria,

J = estimated result. Result is less than reporting limit.

B = method blank contamination.

NA = not applicable.

## ATTACHMENT 1. LABORATORY ANALYTICAL DATA SHEETS



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## **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc. TestAmerica Canton 4101 Shuffel Street NW North Canton, OH 44720 Tel: (330)497-9396

TestAmerica Job ID: 240-12752-1 Client Project/Site: RVAAP (OH) - IDW

For:

Environmental Quality Mgt., Inc. 1800 Carillon Blvd Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin

Authorized for release by: 7/16/2012 12:10:41 PM

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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## **Definitions/Glossary**

Client: Environmental Quality Mgt., Inc.

TestAmerica Job ID: 240-12752-1

Project/Site:	RVAAP	(OH) -	IDW	

Minimum Level (Dioxin)

Practical Quantitation Limit

Not detected at the reporting limit (or MDL or EDL if shown)

ML

ND PQL

GC/MS VOA	
Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
3	Compound was found in the blank and sample.
GC/MS Semi	VOA
Qualifier	Qualifier Description
J	Indicates the analyte was analyzed for but not detected.
	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
ŀ	Compound was found in the blank and sample.
ł	Sample was prepped or analyzed beyond the specified holding time
	Surrogate is outside control limits
3C Semi VOA	
Qualifier	Qualifler Description
J	Indicates the analyte was analyzed for but not detected.
I	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
(	Surrogate is outside control limits
IPLC	
Qualifier	Qualifier Description
J	Indicates the analyte was analyzed for but not detected.
	Estimated result. Result is less than RL.
Metals	
Qualifier	Qualifier Description
J	Indicates the analyte was analyzed for but not detected.
l	Compound was found in the blank and sample.
	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	MS or MSD exceeds the control limits
	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not
	applicable.
	RPD of the MS and MSD exceeds the control limits
	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
General Chen	nistry
Qualifier	Qualifier Description
J	Indicates the analyte was analyzed for but not detected.
	Estimated result. Result is less than RL.
	Method blank contamination. Analyte detected at a reportable level in blank.
ı	Spike sample recovery is outside control limits.
	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
<b>&gt;</b>	Listed under the "D" column to designate that the result is reported on a dry weight basis
6R	Percent Recovery
NF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA .	United States Environmental Protection Agency

## Definitions/Glossary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

## Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
QC	Quality Control
RL.	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
rEF	Toxicity Equivalent Factor (Dioxin)
ΓEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1

Laboratory: TestAmerica Canton

Narrative

#### **CASE NARRATIVE**

Client: Environmental Quality Mgt., Inc.

Project: RVAAP (OH) - IDW

Report Number: 240-12752-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Analyses for Explosive and Propellants were performed by TestAmerica West Sacracmento.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

#### RECEIP1

The samples were received on 6/28/2012 12:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 5.6° C, 5.9° C, 6.0° C and 6.0° C.

Method(s) 9040B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: FWG-IDW-TANK3-GW

#### TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 07/03/2012 and 07/05/2012 and analyzed on 07/04/2012 and 07/06/2012.

No difficulties were encountered during the VOCs analyses. All quality control parameters were within the acceptance limits.

#### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846

TestAmerica Canton 7/16/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

#### Job ID: 240-12752-1 (Continued)

#### Laboratory: TestAmerica Canton (Continued)

Method 8260B. The samples were analyzed on 06/29/2012.

Acetone was detected in method blank MB 240-49421/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-49421/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Internal standard (ISTD) response for the following sample was outside control limits: FWG-IDW-SBCOMP3-SO. The sample was re-analyzed with concurring results. The original set of data has been reported.

No other analytical or quality issues were noted. All other quality control parameters were within the acceptance limits.

#### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples TRIP BLANK (240-12752-1) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 07/10/2012.

No difficulties were encountered during the VOCs analyses. All quality control parameters were within the acceptance limits.

#### TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/06/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

#### SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/03/2012 and analyzed on 07/06/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-49770/15-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

#### SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/02/2012 and 07/10/2012 and analyzed on 07/09/2012 and 07/13/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate and Butyl benzyl phthalate were detected in method blank MB 240-50344/13-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl (Surr), Nitrobenzene-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for MB 240-49608/13-A. Refer to the QC report for details.

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TestAmerica Canton 7/16/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

#### Job ID: 240-12752-1 (Continued)

#### Laboratory: TestAmerica Canton (Continued)

The associated Method Blank 49608 for sample FWG-IDW-TANK3-GW had surrogates out of control. Upon re-extraction and re-analysis all QC met acceptance criteria, however sample holding times had been exceeded. Both sets of data will be reported.

No other difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

#### **TCLP CHLORINATED PESTICIDES**

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/ 8081A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012 and 07/06/2012.

Sample FWG-IDW-SBCOMP3-SO (240-12752-3)[5X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

The closing continuing calibration verification (CCV) associated with batch 50336 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-SBCOMP3-SO

No other difficulties were encountered during the pesticides analyses. All other quality control parameters were within the acceptance limits.

#### **CHLORINATED PESTICIDES**

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 07/03/2012 and analyzed on 07/09/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Sample FWG-IDW-SBCOMP3-SO (240-12752-3)[10X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

#### CHLORINATED PESTICIDES

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 07/02/2012 and analyzed on 07/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

The continuing calibration verification (CCV) for alpha, gamma, beta and delta-BHC, Heptachlor, Aldrin, Heptachlor epoxide, gamma and alpha-Chlordane, Endosulfan I and II, DDE, Dieldrin, Endrin, DDD, Endosulfan sulfate and Endrin ketone associated with batch 49739 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-TANK3-GW

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 49615.

No difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

#### POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 07/03/2012 and analyzed on 07/06/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

#### Job ID: 240-12752-1 (Continued)

#### Laboratory: TestAmerica Canton (Continued)

The opening continuing calibration verification (CCV) associated with this sample passed average. Since the samples were ND no corrective action is required.FWG-IDW-SBCOMP3-SO.

The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: FWG-IDW-SBCOMP3-SO. Lot # S65830

No difficulties were encountered during the PCBs analysis. All quality control parameters were within the acceptance limits.

#### POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 07/02/2012 and analyzed on 07/03/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 49612.

No other difficulties were encountered during the PCBs analysis. All other quality control parameters were within the acceptance limits.

#### TCLP CHLORINATED HERBICIDES

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/ 8151A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/07/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the herbicides analyses. All quality control parameters were within the acceptance limits.

#### TCLP METALS (ICP)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

Barium was detected in method blank LB 240-49653/1-D at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

#### **TOTAL METALS (ICP)**

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012.

Several analytes were detected in method blank MB 240-49412/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Manganese failed the recovery criteria low for the MS of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-50003. Calcium failed the recovery criteria high.

Calclum and Manganese failed the recovery criteria high for the MSD of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-50003. Manganese exceeded the rpd limit. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

#### **TOTAL RECOVERABLE METALS (ICP)**

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/10/2012 and analyzed on 07/11/2012.

Several analytes were detected in method blank MB 240-50314/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### **TOTAL METALS (ICPMS)**

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012 and 07/09/2012.

Antimony failed the recovery criteria low for the MS and MSD of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-49993. Aluminum and Iron failed the recovery criteria high. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### TOTAL RECOVERABLE METALS (ICPMS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 07/10/2012 and analyzed on 07/11/2012.

Sodium was detected in method blank MB 240-50314/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Thallium and Zinc were detected in method blank MB 240-50314/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Sodium failed the recovery criteria low for the MS of sample FWG-IDW-TANK3-GW (240-12752-4) in batch 240-50556. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### TCLP MERCURY

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

#### **TOTAL MERCURY**

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/29/2012 and analyzed on 07/03/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

#### TOTAL MERCURY

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

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TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

#### **FLASHPOINT**

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 06/29/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

#### **FLASHPOINT**

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 07/02/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

#### TOTAL AND AMENABLE CYANIDE

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total and amenable cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 07/09/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

#### **TOTAL CYANIDE**

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 07/02/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

#### SULFIDE

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 07/03/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

#### SULFIDE

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 07/03/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

#### PH

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for pH in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 06/28/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

#### <u>PH</u>

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for pH in accordance with EPA SW-846 Method 9045C. The samples were analyzed on 06/29/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

#### PERCENT SOLIDS

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/29/2012.

No difficulties were encountered during the % solids analysis. All quality control parameters were within the acceptance limits.

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

#### **WEST SACRAMENTO**

#### **CASE NARRATIVE**

#### **General Comments**

Please note that the percent solids analysis was performed by the TestAmerica Canton laboratory.

#### WATER, 8330, Explosives

Sample: FWG-IDW-TANK3-GW

There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

#### SOLID, Nitrocellulose

Sample: FWG-IDW-SBCOMP3-SO

The matrix spikes, which were performed on sample 2, have a low matrix spike duplicate recovery due to possible matrix interferences.

Since the laboratory control sample met acceptance criteria, no corrective action was performed.

There are no other anomalies associated with this project.

## **Method Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
8081A	Organochlorine Pesticides (GC)	SW846	TAL NC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
8151A	Herbicides (GC)	SW846	TAL NC
8330 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
8330/8330A	Nitroaromatics & Nitramines: Explosives (8330/A)	SW846	TAL WSC
8330B	Nitroaromatics & Nitramines: Explosives (8330B)	SW846	TAL WSC
6010B	Metals (ICP)	SW846	TAL NC
6020	Metals (ICP/MS)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC
7471A	Mercury (CVAA)	SW846	TAL NC
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL NO
160.3 MOD	Solids, Percent (as TS - 160.3 MOD) - Solids	MCAWW	TAL NO
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
9040B	На	SW846	TAL NC
9045C	PH	SW848	TAL NC
Moisture	Percent Moisture	EPA	TAL NO
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

#### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-SOP = TAL-SOP

#### Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Canton 7/16/2012

## Sample Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Lab Sample ID	Cilent Sample ID	Matrix	Collected	Received
240-12752-1	TRIP BLANK	Water	06/28/12 08:00	08/28/12 12:45
240-12752-3	FWG-IDW-SBCOMP3-SO	Solid	06/28/12 10:15	06/28/12 12:45
240-12752-4	FWG-IDW-TANK3-GW	Water	06/28/12 11:00	06/28/12 12:45

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## **Detection Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client	Sample	ID:	TRIP	BL	ANK

Lab Sample ID: 240-12752-1

-	Analyte	Result	Qualifler	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
	Acetone	1.4	J	10	1.1	ug/L	1	_	8260B	Total/NA

## Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

- Analyte	Resuit	Qualifier	RL	MDL	Unit	Dil Fac		Method	Prep Typ
Carbon disulfide	5.4	JB	6.4	0,56	ug/Kg	1	₩	82608	Total/NA
Methylene Chloride	1.2	JB	6.4	0.86	ид/Кд	1	₩	8260B	Total/NA
Toluene	0.43	J	6.4	0.34	ug/Kg	1	Þ	8260B	Total/NA
Fluoranthene	7.4	J	8.4	4.2	ug/Kg	1	₩	8270C	Total/NA
Benzo[g,h,i]perylene	13		8.4	4.2	ug/Kg	1	₽	8270C	Total/NA
Benzo[a]pyrene	6.3	J	8.4	4.2	ug/Kg	1	¢	8270C	Total/NA
2-Methylnaphthalene	7.3	J	8.4	4.2	ug/Kg	1	₽	8270C	Total/NA
Naphthalene	4.5	J	8.4	4.2	ug/Kg	1	Ф	8270C	Total/NA
Pyrene	8.8		8.4	4.2	ug/Kg	1	ø	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	140	В	63	24	ug/Kg	1	₿	8270C	Total/NA
Arsenic	11		1.2	0.37	mg/Kg	1	₽	6010B	Total/NA
Chromium	15		0.61	0.25	mg/Kg	1	₩	6010B	Total/NA
Cobalt	10		6.1	0.20	mg/Kg	1	₽	6010B	Total/NA
Lead	11		0.37	0.23	mg/Kg	1	ø	6010B	Total/NA
Vanadium	17	В	6.1	0.15	mg/Kg	1	ø	6010B	Total/NA
Banum	120	В	25	0.087	mg/Kg	1	₽	6010B	Total/NA
Calcium	16000	В	810	20	mg/Kg	1	₽	6010B	Total/NA
Copper	21		3,1	0.91	mg/Kg	1	Ф	6010B	Total/NA
Magnesium	4500		610	6.3	mg/Kg	1	₽	8010B	Total/NA
Manganese	430		1.8	0.091	mg/Kg	1	₽	6010B	Total/NA
Nickel	24	В	4.9	0.33	mg/Kg	1	₽	6010B	Total/NA
Potassium	1500	B	610	7.6	mg/Kg	1	₽	6010B	Total/NA
Arsenic	0.0048	J	0.50	0.0032	mg/L	1		6010B	TCLP
Barium	0.88	JВ	10	0.00067	mg/L	1		6010B	TCLP
Cadmium	0.0024	J	0.10	0.00066	mg/L	1		6010B	TCLP
Chromium	0.0037	J	0.50	0,0022	mg/L	1		6010B	TCLP
Lead	0.0035	J	0.50	0.0019	mg/L	1		6010B	TCLP
Aluminum	11000	В	6.1	1.6	mg/Kg	1	ø	6020	Total/NA
Antimony	0.13	JВ	0,25	0.029	mg/Kg	1	ņ	8020	Total/NA
Beryllium	0.57		0.12	0.058	mg/Kg	1	ø	6020	Total/NA
Cadmium	0.14		0.12	0,0096	mg/Kg	1	₽	6020	Total/NA
Iron	25000	В	12	1.2	mg/Kg	1	ø	6020	Total/NA
Sodium		JB	120	2.9	mg/Kg	1	Ф	6020	Total/NA
Thallium	0.17		0.25	0.016	mg/Kg	1	₽	6020	Total/NA
Zinc		В	2.5	0.25	mg/Kg	1	₽	6020	Total/NA
Mercury	0.027		0.13		mg/Kg	1	Þ	7471A	Total/NA
Flashpoint	>180	-	1,00		Degrees F	1		1010	Total/NA
Corrosivity	10.0		0.100	0.100	-	1		9045C	Total/NA
Nitrocellulose		JB	6.4		mg/kg	1	Ф		Total

## Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Analyte	Result	Qualifler	RL	MDL	Unit	Dii Faç	D	Method	Prep Type
2-Butanone (MEK)	0,94	J	10	0.57	ug/L	1	_	8260B	Total/NA
Bis(2-ethylhexyl) phthalate - RE	2,2	нв	2.0	0.79	ug/L	1		8270C	Tota!/NA
alpha-BHC	0.0093	J	0.051	0.0071	ug/L	1		80B1A	Total/NA
beta-BHC	0.012	J	0.051	0,0086	ug/L	1		8081A	Total/NA
3-Nitrotoluene	0.081	J	0,52	0.059	ug/L	1.03		8330/8330A	Total

TestAmerica Canton 7/16/2012

## **Detection Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW (Continued) Lab Sample ID: 240-12752-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Arsenic	8.3	J	10	3.2	ug/L	1	6010B	Total
								Recoverable
Chromium	3.7	J	5.0	2.2	ug/L	1	6010B	Total
								Recoverable
Vanadium	1.9	J	7.0	0.64	ug/L	1	6010B	Total
								Recoverab
Barium	56	JB	200	0.67	ug/L	1	6010B	Total
								Recoverab
Calcium	43000	В	5000	130	ug/L	1	6010B	Total
								Recoverab
Magnesium	10000	В	5000	34	ug/L	1	6010B	Total
								Recoverab
Manganese	110	В	15	0.41	ug/L	1	6010B	Total
					_		00400	Recoverab
Nickel	3.2	J	40	3.2	ug/L	1	6010B	Total
							00400	Recoverab
Potassium	19000	В	5000	72	ug/L	1	6010B	Total
		_				4	6010B	Recoverab TCLP
Arsenic	0.0054		0.50	0.0032	and the second second second second	1		
Barium	0.052	JВ	10	0.00067	•	1	6010B	TCLP
Chromium	0.0029	J	0.50	0.0022	mg/L	1	6010B	TCLP
Aluminum	580		50	19	ug/L	1	6020	Total
								Recoverab
Antimony	2.3		2.0	0.13	ug/L	1	6020	Total
								Recoverab
Iron	1300	٨	100	26	ug/L	1	6020	Total
								Recoverab
Sodium	28000	В	1000	6.9	ug/L	1	6020	Total
								Recoverat
Thallium	0,58	JВ	2.0	0.14	ug/L	1	6020	Total
					_	_		Recoverat
Zinc	11	JB	20	2.3	ug/L	1	6020	Total
								Recoverat
Flashpoint	>180		1.00		Degrees F	1	1010	Total/NA
рН	8.39		0.100	0.100	SU	1	9040B	Total/NA

Client Sample ID: TRIP BLANK

Date Collected: 06/28/12 08:00 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 12:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			07/10/12 12:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			07/10/12 12:54	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L	•		07/10/12 12:54	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	1
1,2-Dichtoroethane	1.0	U	1,0	0.22	ug/L			07/10/12 12:54	1
1,2-Dichloroethene, Total	2.0	U	2,0	0.34	ug/L			07/10/12 12:54	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 12:54	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			07/10/12 12:54	1
2-Hexanone	10	U	10	0.41	ug/L			07/10/12 12:54	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 12:54	1
Acetone	1.4	J	10	1.1	ug/L			07/10/12 12:54	1
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
Bromoform	1.0	U	1.0	0.64	ug/L			07/10/12 12:54	1
Bromomethane	1.0	U	1.0	0.41	ug/L			07/10/12 12:54	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
Carbon tetrachtoride	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			07/10/12 12:54	1
Chloromethane	1.0	U	1.0	0.30	ug/L			07/10/12 12:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			07/10/12 12:54	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			07/10/12 12:54	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			07/10/12 12:54	1
Elhylbenzene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			07/10/12 12:54	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			07/10/12 12:54	1
o-Xylene	1.0	U	1.0	0.14	ug/L			07/10/12 12:54	1
Styrene	1.0	U	1.0	0.11	ug/L			07/10/12 12:54	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			07/10/12 12:54	1
Toluene	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0,19	ug/L			07/10/12 12:54	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			07/10/12 12:54	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			07/10/12 12:54	1
Chloroform	1.0	U	1.0	0.16	ug/L			07/10/12 12:54	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			07/10/12 12:54	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			07/10/12 12:54	1
Chloroethane	1.0	U	1.0	0.29	ug/L			07/10/12 12:54	1
Surrogate	%Recovery	Qualifier	Limits			•	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		74 - 115					07/10/12 12:54	1
1,2-Dichloroethane-d4 (Surr)	93		63 - 129					07/10/12 12:54	1
4-Bromofluorobenzene (Surr)	95		66 - 117					07/10/12 12:54	1
Dibromofluoromethane (Surr)	100		75-121					07/10/12 12:54	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45

1,1-Dichloroethene

1,2-Dichloroethane

2-Butanone (MEK)

Lab Sample ID: 240-12752-3

Matrix: Solid Percent Solids: 78.3

Method: 8260B - Volatile Orga Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	6.4	U	6.4	0.71	ug/Kg	<del></del>		06/29/12 19:38	1
1,1,2,2-Tetrachloroethane	6,4	U	6.4	0.43	ug/Kg	Þ		06/29/12 19:38	1
1,1,2-Trichloroethane	6,4	υ	6.4	0.50	ug/Kg	Þ		06/29/12 19:38	1
1,1-Dichloroethane	6.4	Ú	6.4	0.46	ug/Kg	<b>\$</b>		06/29/12 19:38	1
1,1-Dichloroethene	6,4	U	6.4		ug/Kg	₽		06/29/12 19:38	1
1,2-Dichloroethane	6.4	U	6.4	0.43	ug/Kg	≎		06/29/12 19:38	1
1,2-Dichloroethene, Total	13	Ü	13	0.98	ug/Kg	` <b>⊅</b>		06/29/12 19:36	1
1,2-Dichloropropane	6.4	U	6.4	0.88	ug/Kg	₽		06/29/12 19:38	1
2-Butanone (MEK)	26	U	26	1.8	ug/Kg	ø		06/29/12 19:36	1
2-Hexanone	26	U	26	0.80	ug/Kg	₽		06/29/12 19:38	1
4-Methyl-2-pentanone (MIBK)	26	U	26	0.69	ug/Kg	ø		06/29/12 19:38	1
Acetone	26	U	26	8.0	ug/Kg	≎		06/29/12 19:38	1
Benzene	6.4	U	6.4	0.29	ug/Kg	₽		06/29/12 19:38	1
Bromoform	6.4		6,4	0.42	ug/Kg	ø		06/29/12 19:38	1
Bromomethane	6.4		6.4	0.69	ug/Kg	**		08/29/12 19:38	1
Carbon disulfide	5.4		6,4	0.58	ug/Kg	¢		06/29/12 19:38	1
Carbon tetrachtoride	6.4		6.4		ug/Kg	ø		06/29/12 19:38	1
Chlorobenzene	6.4		6.4		ug/Kg	<b>\$</b>		06/29/12 19:38	1
Chloromethane	6.4	=	6.4		ug/Kg	ø		06/29/12 19:38	1
cis-1,2-Dichloroethene	6.4	-	6.4		ug/Kg	<b>☆</b>		08/29/12 19:38	1
	6,4		6.4		ug/Kg	ø		06/29/12 19:38	1
cls-1,3-Dichloropropene	6.4		6.4	0.70		⋫		06/29/12 19:38	1
Dibromochloromethane	6.4		6.4	0.36	ug/Kg	⋫		06/29/12 19:38	1
Bromodichloromethane	6.4		6,4	0.33	ug/Kg	ņ		06/29/12 19:38	1
Ethylbenzene			6.4	0.86	ug/Kg	Ŕ		08/29/12 19:38	1
Methylene Chioride	1.2	JB	13		ug/Kg	Đ.		06/29/12 19:38	1
m-Xylene & p-Xylene	6.4		6.4		ug/Kg	ø		06/29/12 19:38	1
o-Xylene				0.19	- 1 Table 2	ģ		06/29/12 19:38	1
Styrene	6.4		6.4	0.19	ug/Kg	**		06/29/12 19:38	1
Tetrachloroethene	6.4		6.4	0.34	ug/Kg			06/29/12 19:38	1
Toluene	0.43		6.4		ug/Kg	ø		06/29/12 19:38	
trans-1,2-Dichloroethene	6.4		8.4			~ \$		06/29/12 19:38	1
trans-1,3-Dichloropropene	6.4		6.4	0.69		r Ø		06/29/12 19:38	
Trichloroethene	6,4		6.4		ug/Kg	×		06/29/12 19:38	1
Vinyl chloride	6.4	-	6,4		ug/Kg	~ ₽		06/29/12 19:38	1
Xylenes, Total	13		13		ug/Kg	₽		06/29/12 19:38	1
Chloroform	6.4		6.4		ug/Kg	ø			1
Bromochloromethane	6.4		6.4		ug/Kg			06/29/12 19:38	
1,2-Dibromoethane	6.4		6.4		ug/Kg	**		06/29/12 19:38	ا
Chloroethane	6.4	U	6.4	1,1	ug/Kg	♡		06/29/12 19:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DII Fac
Toluene-dB (Surr)	112		67 - 125					06/29/12 19:38	1
1,2-Dichloroethane-d4 (Surr)	96		58 - 123					06/29/12 19:38	Ī
4-Bromofluorobenzene (Surr)	121		52 - 136					06/29/12 19:38	ī
Dibromofluoromethane (Surr)	89		37 - 132					06/29/12 19:38	ī
Method: 8260B - Volatile Orga	nic Compounds	(GC/MS) - T	CLP						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
								07/00/40 04:40	

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07/08/12 21:42

07/06/12 21:42

07/06/12 21:42

0.025

0.025

0.25

0.0095 mg/L

0.011 mg/L

0.029 mg/L

0,025 Ū

0.025 U

0.25 U

Matrix: Solid

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP (Continued) Dil Fac Analyzed Analyte Result Qualifier RL MDL Unit D Prepared 07/06/12 21:42 0.025 U 0.025 0,0065 mg/L Benzene 07/08/12 21:42 0.025 0.0065 mg/L 0.025 U Carbon tetrachloride 07/06/12 21:42 0.025 0.0075 mg/L Chlorobenzene 0,025 U 07/06/12 21:42 0.0080 mg/L 0.025 U 0.025 Chloroform 07/08/12 21:42 0.025 0,015 mg/L 0.025 U Tetrachloroethene 07/06/12 21:42 0.025 0.0085 mg/L 0.025 U Trich!oroethene 07/06/12 21:42 Vinyl chloride 0.025 U 0.025 0.011 mg/L

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	1,2-Dichloroethane-d4 (Surr)	104		80 - 121		07/06/12 21:42	1
	4-Bromofluorobenzene (Surr)	94		70 - 124		07/06/12 21:42	1
1	Toluene-d8 (Suπ)	107		90 - 115		07/06/12 21:42	1
1	Dibromofluoromethane (Surr)	117		84 - 128		07/06/12 21:42	1

Method: 8270C - Semivolatile O Analyte		Quailfier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Acenaphthene	8.4	U	8.4	4.2	ug/Kg	₩	07/03/12 13:56	07/08/12 19:27	
Acenaphthylene	8.4	U	8.4	4.2	ug/Kg	₩	07/03/12 13:56	07/06/12 19:27	
Anthracene	8.4	U	8.4	4.2	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	
Benzo[a]anthracene	8.4	U	8.4	4.2	ug/Kg	Þ	07/03/12 13:56	07/06/12 19:27	•
Benzoicacid	830	U	830	420	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	
Benzo[b]fluoranthene	8.4	U	8.4	4.2	ug/Kg	尊	07/03/12 13:56	07/06/12 19:27	
Benzo[k]fluoranthene	8.4	U	8.4	4.2	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	
Benzyl alcohol	420	U	420	27	ug/Kg	❖	07/03/12 13:56	07/06/12 19:27	
Bis(2-chloroethoxy)methane	130	U	130	28	ug/Kg	₩	07/03/12 13:56	07/06/12 19:27	
Bis(2-chloroethyl)ether	130	U	130	2.5	ug/Kg	❖	07/03/12 13:56	07/06/12 19:27	
4-Bromophenyl phenyl ether	63	U	63	16	ug/Kg	₽	07/03/12 13:56	07/08/12 19:27	
Butyl benzyl phthalate	63	U	63	13	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	
2,4-Dimethylphenol	190	Ú	190	25	ug/Kg	**	07/03/12 13:56	07/06/12 19:27	
Dimethyl phthalate	63	U	63	21	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	
4,6-Dinitro-2-methylphenol	190	U	190	100	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	
2,4-Dinitrophenol	420	Ú	420	100	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	
2,4-Dinitrotoluene	250	U	250	34	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	
2,6-Dinitrotoluene	250	U	250	27	ug/Kg	₩	07/03/12 13:56	07/06/12 19:27	
Fluoranthene	7.4	J	8.4	4.2	ug/Kg	₽	07/03/12 13:56	07/08/12 19:27	
Fluorene	8.4	U	8.4	4.2	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	
Hexachlorobenzene	8.4	U	8.4	2.7	ug/Kg	₿	07/03/12 13:56	07/06/12 19:27	
Hexachlorobutadiene	63	U	63	34	ug/Kg	ņ	07/03/12 13:56	07/06/12 19:27	
Hexachlorocyclopentadiene	420	U	420	34	ug/Kg	Ф	07/03/12 13:56	07/06/12 19:27	
Hexachloroethane	63	U	63	11	ug/Kg	Ф	07/03/12 13:56	07/06/12 19;27	
N-Nitrosodiphenylamine	63	U	63	27	ug/Kg	¢	07/03/12 13:56	07/06/12 19:27	
N-Nitrosodi-n-propylamine	63	U	63	34	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	
1.4-Dichlorobenzene	63	U	63	25	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	
2-Chloronaphthalene	63	U	63	4.2	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	
2-Chlorophenol	63	U	63	34	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	
4-Chlorophenyl phenyl ether	63	U	63	16	ug/Kg	₿	07/03/12 13:56	07/06/12 19:27	
Chrysene	8.4	U	8.4	1.4	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	
Dibenz(a,h)anthracene	8.4	U	8.4	4.2	ug/Kg	φ	07/03/12 13:56	07/06/12 19:27	
Dibenzofuran	63	U	63	4.2	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	
Benzo[g,h,i]perylene	13		8.4	4.2	ug/Kg	φ	07/03/12 13:56	07/06/12 19:27	
Benzo[a]pyrene	6.3	J	8.4	4.2	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45

3 & 4 Methylphenol

2-Methylphenol

Lab Sample ID: 240-12752-3

Matrix: Solid Percent Solids: 78.3

Method: 8270C - Semivolatile Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	63	U	63	19	ug/Kg	<u> </u>	07/03/12 13:56	07/08/12 19:27	1
1,2-Dichlorobenzene	63	Ü	63	12	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
1,3-Dichlorobenzene	63	U	63	14	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
3,3'-Dichtorobenzidine	130	U	130	23	ug/Kg	<b>Ç</b>	07/03/12 13:56	07/06/12 19:27	1
2,4-Dichlorophenol	190	U	190	25	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
Diethyl phthalate	63	U	63	20	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
Indeno[1,2,3-cd]pyrene	8.4	U	8.4	4.2	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
Isophorone	63	U	63	16	ug/Kg	₽	07/03/12 13:58	07/06/12 19:27	1
2-Methylnaphthalene	7.3	J	8.4	4.2	ug/Kg	₿	07/03/12 13:56	07/06/12 19:27	1
2-Methylphenol	250	U	250	100	ug/Kg	₿	07/03/12 13:56	07/06/12 19:27	1
Naphthalene	4.5	J	8.4	4.2	ug/Kg	≎	07/03/12 13:56	07/06/12 19:27	1
2-Nitroaniline	250	U	250	12	ug/Kg	₿	07/03/12 13:56	07/06/12 19:27	1
3-Nitroaniline	250	U	250	20	ид/Кд	ø	07/03/12 13:56	07/08/12 19:27	1
4-Nitroaniline	250	U	250	33	ug/Kg	Þ	07/03/12 13:56	07/06/12 19:27	1
Nitrobenzene	130		130	2.8	ив/Кд	⋫	07/03/12 13:56	07/06/12 19:27	1
2-Nitrophenol	63		63	34	ug/Kg	φ	07/03/12 13:56	07/06/12 19:27	1
4-Nitrophenol	420	U	420	100	ug/Kg	₩	07/03/12 13:56	07/06/12 19:27	1
Pyrene	8.8		8.4	4.2	ug/Kg	₽	07/03/12 13:58	07/06/12 19:27	1
Pentachlorophenol	190	U	190	100	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
Phenanthrene	8.4	U	8.4	4.2	ug/Kg	ø	07/03/12 13:56	07/08/12 19:27	1
1,2,4-Trichlorobenzene	63	U	63	34	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
2,4,5-Trichlorophenol	190	U	190	32	ug/Kg	σ	07/03/12 13:56	07/06/12 19:27	1
2,4,6-Trichlorophenol	190		190	100	ug/Kg	ø	07/03/12 13:56	07/08/12 19:27	1
Phenol	63		63	34	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
Carbazole	63	U	63	34	ug/Kg	Φ	07/03/12 13:56	07/06/12 19:27	1
4-Chloroaniline	190		190	21	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
3 & 4 Melhyiphenol	510		510		ug/Kg	Ø.	07/03/12 13:56	07/06/12 19:27	1
Bis(2-ethylhexyl) phthaiate	140		63	24	ug/Kg	Φ	07/03/12 13:56	07/06/12 19:27	1
Di-n-octyl phthalate	63		63	34	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
4-Chloro-3-methylphenol	190		190	27	ug/Kg	**	07/03/12 13:56	07/06/12 19:27	1
2,2'-oxybis[1-chloropropane]	130		130		ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	53		34 - 110				07/03/12 13:56	07/06/12 19:27	1
2-Fluorophenol (Surr)	69		26 - 110				07/03/12 13:56	07/06/12 19:27	1
Nitrobenzene-d5 (Sum)	53		24 - 112				07/03/12 13:56	07/06/12 19:27	1
Terphenyl-d14 (Surr)	75		41 - 119				07/03/12 13:56	07/06/12 19:27	1
2,4,6-Tribromophenol (Surr)	46		10-118				07/03/12 13:56	07/06/12 19:27	1
Phenol-d5 (Surr)	71		28 - 110				07/03/12 13:56	07/06/12 19:27	1
Method: 8270C - Semivolatile	Organic Compou	nds (GC/M	S) - TCLP						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040		0.0040	0.00034	mg/L		07/03/12 09:12	07/06/12 18:11	1
2,4,5-Trichlorophenol	0.020		0.020	0.00030			07/03/12 09:12	07/06/12 16:11	1
2,4,6-Trichlorophenol	0.020		0.020	0.00080	_		07/03/12 09:12	07/06/12 18:11	1
2,4-Dinitrotoluene	0.020		0.020	0.00027			07/03/12 09:12	07/06/12 18:11	1
Hexachtorobenzene	0,020		0.020	0,00010	-		07/03/12 09:12	07/06/12 18:11	1
Hexachlorobutadiene	0.020		0.020	0.00027	-		07/03/12 09:12	07/06/12 18:11	1
Hexachloroethane	0,020		0.020	0.00080	•		07/03/12 09:12	07/06/12 18:11	1
Lievaguitoroafiiatio	0,020		0.020	0.000075	.,,,,,,,,,		07/03/12 00:12	07/06/12 18:11	1

1

07/06/12 18:11

07/06/12 18:11

07/03/12 09:12

07/03/12 09:12

0.040

0.0040

0.00075 mg/L

0.00080 mg/L

0.040 U

0.0040 U

Client: Environmental Quality Mgt., Inc.

TestAmerica Job ID: 240-12752-1

Project/Site: RVAAP (OH) - IDW

## Client Sample ID: FWG-IDW-SBCOMP3-SO

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP (Continued)

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45

Lab Sample ID: 240-12752-3

Matrix: Solid

Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Nitrobenzene	0,0040		0.0040		mg/L		07/03/12 09:12	07/06/12 18:11	1
Pentachlorophenol	0.040		0.040	0.0024	-		07/03/12 09:12	07/06/12 18:11	1
Pyńdine	0.020	U	0.020	0,00035	mg/L		07/03/12 09:12	07/06/12 18:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	46		22 - 110				07/03/12 09:12	07/06/12 18:11	1
2-Fluorophenol (Surr)	13		10 - 110				07/03/12 09:12	07/06/12 18:11	1
2,4,6-Tribromophenol (Surr)	68		17 - 117				07/03/12 09:12	07/06/12 18:11	1
Nitrobenzene-d5 (Surr)	46		29 - 111				07/03/12 09:12	07/06/12 18:11	1
Phenol-d5 (Surr)	46		10-110				07/03/12 09:12	07/06/12 18:11	1
Terphenyl-d14 (Surr)	71		40 - 119				07/03/12 09:12	07/06/12 18:11	1
	las Dastisidas (Ci	<b>~</b> \							
Method: 8081A - Organochlor Analyte		ر) Qualifler	RL	MDL	Unit	D	Prepared	Analyzed	Dli Fac
4,4'-DDD	21		21	7.8	ug/Kg	<u> </u>	07/03/12 12:02	07/09/12 0B:27	10
4,4'-DDE	21	U	21	4.9	ug/Kg	ø	07/03/12 12:02	07/09/12 08:27	10
4,4'-DDT	21		21	7.9	ug/Kg	☆	07/03/12 12:02	07/09/12 08:27	10
Aldrin	21		21		ug/Kg	φ	07/03/12 12:02	07/09/12 08:27	10
alpha-BHC	21		21		ug/Kg	ø	07/03/12 12:02	07/09/12 08:27	10
alpha-Chlordane	21		21		ug/Kg	ø	07/03/12 12:02	07/09/12 08:27	10
beta-BHC	21		21	14	ug/Kg	ø	07/03/12 12:02	07/09/12 08:27	10
	21		21		ug/Kg	Þ	07/03/12 12:02	07/09/12 08:27	10
delta-BHC	21		21		ug/Kg	ø	07/03/12 12:02	07/09/12 08:27	10
Dieldrin Factorities 1	21		21	6.6		ø	07/03/12 12:02	07/09/12 08:27	10
Endosulfan I	21		21		ug/Kg	ø	07/03/12 12:02	07/09/12 08:27	10
Endosulfan II	21		21	11	ug/Kg	ø	07/03/12 12:02	07/09/12 08:27	10
Endosulfan sulfate	21		21		ug/Kg	ø	07/03/12 12:02	07/09/12 08:27	10
Endrin	21		21		ug/Kg	<b>\$</b>	07/03/12 12:02	07/09/12 08:27	10
Endrin aldehyde			21		ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endrin ketone	21		21		ug/Kg	φ	07/03/12 12:02	07/09/12 08:27	10
gamma-BHC (Lindane)	21				ug/Kg ug/Kg	<b>#</b>	07/03/12 12:02	07/09/12 08:27	10
gamma-Chlordane	21		21			ø	07/03/12 12:02	07/09/12 08:27	10
Heptachlor	21		21		ug/Kg	ø	07/03/12 12:02	07/09/12 06:27	10
Heptachlor epoxide	21		21		ug/Kg	ø	07/03/12 12:02	07/09/12 08:27	10
Methoxychlor	42		42	19	ug/Kg	Ď.	07/03/12 12:02	07/09/12 08:27	10
Тохарһеле	840	U	840	240	ug/Kg	*	07103/12 12.02	07108/12 00.27	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dii Fac
DCB Decachlorobiphenyl	97		32 - 175				07/03/12 12:02	07/09/12 08:27	10
DCB Decachlorobiphenyl	110		32 - 175				07/03/12 12:02	07/09/12 08:27	10
Tetrachloro-m-xylene	95		24 - 150				07/03/12 12:02	07/09/12 08:27	10
Tetrachloro-m-xylene	91		24 - 150				07/03/12 12:02	07/09/12 08:27	10
Method: 8081A - Organochior	ina Bostinidos (G	C) TCL P							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0,060	Ü	0.060	0.00040	mg/L		07/03/12 09:15	07/06/12 14:52	5
Endrin	0.0060	U	0.0060	0.00013	mg/L		07/03/12 09:15	07/06/12 14:52	5
Heptachlor	0.0060		0.0060	0,000096	mg/L		07/03/12 09:15	07/06/12 14:52	5
Heptachlor epoxide	0.0060		0.0060	0.000085	mg/L		07/03/12 09:15	07/06/12 14:52	5
gamma-BHC (Lindane)	0.0060		0,0060	0,000077	-		07/03/12 09:15	07/06/12 14:52	5
Methoxychlor	0.012		0,012	0.0003B	_		07/03/12 09:15	07/06/12 14:52	5
					-				

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-3

Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		46 - 122				07/03/12 09:15	07/06/12 14:52	ŧ
Fetrachloro-m-xylene	74		46 - 122				07/03/12 09:15	07/06/12 14:52	ŧ
DCB Decachorobiphenyl	102		34 - 141				07/03/12 09:15	07/06/12 14:52	ŧ
DCB Decachlorobiphenyl	100		34 - 141				07/03/12 09:15	07/06/12 14:52	Į
Method: 8082 - Polychlorinated Biph	ienyls (PCE	3s) by Gas	Chromatograp ¹	hy					
Analyte		Qualifler	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
roclor-1016	42	U	42	26	ug/Kg	ф	07/03/12 11:53	07/06/12 09:43	•
roclor-1221	42	U	42	20	ug/Kg	Þ	07/03/12 11:53	07/06/12 09:43	•
roclor-1232	42	U	42	18	ug/Kg	ø	07/03/12 11:53	07/06/12 09:43	•
roclor-1242	42	U	42	16	ug/Kg	Þ	07/03/12 11:53	07/06/12 09:43	•
roclor-1248	42	U	42	21	ug/Kg	Ф	07/03/12 11:53	07/06/12 09:43	•
roclor-1254	42	U	42	21	ug/Kg	₽	07/03/12 11:53	07/06/12 09:43	
ractor-1260	42	U	42	21	ug/Kg	Φ	07/03/12 11:53	07/06/12 09:43	
urrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DII Fa
etrachloro-m-xylene	60		29 - 151				07/03/12 11:53	07/06/12 09:43	
CB Decachlorobiphenyl	58		14 - 163				07/03/12 11:53	07/06/12 09:43	
lethod: 8151A - Herbicides (GC) - T	CLP								
nalyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
<b>4-</b> D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 19:42	
ilvex (2,4,5-TP)	0,00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 19:42	
urrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Dichlorophenylacetic acid	53		37 - 116				07/03/12 09:18	07/07/12 19:42	
,4-Dichlorophenylacetic acid	63		37 - 116				07/03/12 09:18	07/07/12 19:42	
Nethod: 8330 (Modified) - Organic C	ompounds	by UV/HPL	.C						
nalyte		Qualifier	RL		Unit	P	Prepared	Analyzed	Dil Fa
itroguanidine	0.25	U	0,25	0.020	mg/kg		07/06/12 06:00	07/10/12 12:23	0.9
lethod: 8330B - Nitroaromatics & N	itramines:	Explosives	(8330B)						
nalyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dli Fa
3,5-Trinitrobenzene	0.25	U	0.25	0.0099			07/09/12 12:45	07/10/12 14:06	0.9
3-Dinitrobenzene	0.25	U	0,25	0.0042	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
4,6-Trinitrotoluene	0.25	U	0.25	0.019	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
,4-Dinitrotoluene	0.25	U	0,25	0.0052			07/09/12 12:45	07/10/12 14:06	0.9
6-Dinitrotoluene	0.25	U	0.25	0.0072	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
-Amino-4,8-dinitrotoluene	0,25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
-Nitrotoluene	0.25	U	0.25	0.013	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
-Nitratoluene	0.25	U	0.25	0.015	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
Amino-2,6-dinitrotoluene	0,25	U	0.25	0.0099	mg/kg		07/09/12 12:45	07/10/12 14:06	0,9
-Nitrotoluene	0.25	Ü	0,25	0.025	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
MX	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
itrobenzene	0.25	U	0.25	0.017	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
itroglycerin	0.50	Ű	0.50	0.015	mg/kg		07/09/12 12:45	07/10/12 14:06	0.8
ETN	0.50		0.50	0.025	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
DX	0.25		0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 14:08	0.9
			0.25	0.0099	mg/kg		07/09/12 12:45	07/10/12 14:06	0.9
eiryi	0.25	U	0,20	0.0000					
Felryl Surrogate	%Recovery		Limits	0.0000			Prepared	Analyzed	Dil Fa

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-3

Matrix: Solid
Percent Solids: 78.3

Method: 6010B - Metals (ICP) Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		1.2	0.37	mg/Kg	_ <del>p</del>	06/29/12 11:17	07/05/12 20:27	1
Chromium	15		0.61	0.25	mg/Kg	₿	08/29/12 11:17	07/05/12 20:27	
Cobalt	10		6.1	0.20	mg/Kg	₽	06/29/12 11:17	07/05/12 20:27	-
.ead	11		0.37	0.23	mg/Kg	Ď.	06/29/12 11:17	07/05/12 20:27	
Selenium	0.81	U	0.61	0.55	mg/Kg	贷	06/29/12 11:17	07/05/12 20:27	-
Silver	0.61	U	0.61	0.12	mg/Kg	×	06/29/12 11:17	07/05/12 20:27	•
/anadium	17	 В	6.1	0.15	mg/Kg	ø	06/29/12 11:17	07/05/12 20:27	
Barium		В	25	0.087	mg/Kg	₽	06/29/12 11:17	07/05/12 20:27	
Calcium	16000	В	610	20	mg/Kg	₽	06/29/12 11:17	07/05/12 20:27	
Copper	21		3.1	0.91	mg/Kg	Þ	06/29/12 11:17	07/05/12 20:27	
Aagnesium	4500		610		mg/Kg	Þ	06/29/12 11:17	07/05/12 20:27	
/anganese	430		1.8		mg/Kg	₽	06/29/12 11:17	07/05/12 20:27	
lickel	24	В	4.9		mg/Kg	ф	06/29/12 11:17	07/05/12 20:27	
Potassium	1500		610		mg/Kg	ø	06/29/12 11:17	07/05/12 20:27	
* the London Metals (ION) TOLD									
Method: 6010B - Metals (ICP) - TCLP	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
rsenic	0.0048	J	0.50	0.0032	mg/l.		07/03/12 10:01	07/05/12 20:59	
Barium	0.08	JВ	10	0.00067	mg/L		07/03/12 10:01	07/05/12 20:59	
Cadmium	0.0024	J	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 20:59	
Chromium	0.0037	J	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 20:59	
ead	0.0035	J	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 20:59	
Selenium	0,25		0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 20:59	
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 20:59	
Method: 6020 - Metals (ICP/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Numinum	11000	В	6,1	1.6	mg/Kg	**	06/29/12 11:17	07/05/12 21:15	
Antimony	0.13	JВ	0.25	0.029	mg/Kg	Þ	06/29/12 11:17	07/05/12 21:15	
Beryllium	0.67		0.12	0.058	mg/Kg	₽	06/29/12 11:17	07/09/12 09:43	
Cadmium	0.14		0.12	0.0096	mg/Kg	ø.	06/29/12 11:17	07/05/12 21:15	
ron	25000	В	12	1.2	mg/Kg	₽	06/29/12 11:17	07/05/12 21:15	
Sodium	90	JВ	120	2.9	mg/Kg	ø	06/29/12 11:17	07/05/12 21:15	
Challium	0.17		0.25	0.016	mg/Kg	ġ.	06/29/12 11:17	07/05/12 21:15	
Zinc	63		2.5	0.25	mg/Kg	₽	06/29/12 11:17	07/05/12 21:15	
· · · · · · · · · · · · · · · · · · ·	~! D								
Method: 7470A - Mercury (CVAA) - TC		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Analyte Mercury	0.0020		0,0020	0,00012			07/03/12 14:30	07/05/12 13:58	
Method: 7471A - Mercury (CVAA) Analyte	Result	Qualifler	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Hercury	0.027		0.13		mg/Kg	<del>\alpha</del>	06/29/12 14:00	07/05/12 16:29	
Congral Chamistry									
General Chemistry Analyte	Result	Qualifler	RL	MDL	Unit	D	Prepared	Analyzed	Dii Fa
flashpoint	>180		1,00	1.00	Degrees F			06/29/12 14:17	
Cyanida, Total	0.63	U	0.63	0.13	mg/Kg	₩	07/09/12 08:07	07/09/12 10:24	
,			39		mg/Kg	₽	07/03/12 07:56	07/03/12 13:48	
Sulfide	39	U	33						
Sulfide Corrosivity	39 10.0	U	0.100	0.100				06/29/12 16:15	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-4 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	Ū	1.0	0.22	ug/L			07/10/12 13:16	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.16	ug/L			07/10/12 13:16	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			07/10/12 13:16	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			07/10/12 13:16	· 1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 13:16	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 13:16	1
1,2-Dichloroethene, Total	2,0	U	2.0	0.34	ug/L			07/10/12 13:16	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 13:16	1
2-Butanone (MEK)	0.94	J	10	0.57	ug/L			07/10/12 13:16	1
2-Hexanone	10	U	10	0.41	ug/L			07/10/12 13:16	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 13:16	1
Acetone	10	U	10	1.1	ug/L			07/10/12 13:16	1
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
Bromoform	1.0	U	1.0	0.64	ug/L			07/10/12 13:16	1
Bromomethane	1.0	U	1.0	0.41	ug/L			07/10/12 13:16	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			07/10/12 13:16	1
Chloromethane	1.0	Ū	1,0	0.30	ug/L			07/10/12 13:16	1
cis-1,2-Dichtoroethene	1.0	U	1.0	0.17	ug/L			07/10/12 13:16	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			07/10/12 13:16	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			07/10/12 13:16	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			07/10/12 13:16	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			07/10/12 13:16	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			07/10/12 13:16	1
m-Xylene & p-Хуlепе	2.0	U	2.0	0.24	ug/L			07/10/12 13:16	1
o-Xylene	1.0	U	1.0	0.14	ug/L			07/10/12 13:16	1
Styrene	1.0	Ü	1.0	0.11	ug/L			07/10/12 13:18	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			07/10/12 13:16	1
Toluene	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 13:16	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			07/10/12 13:16	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 13:16	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			07/10/12 13:16	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			07/10/12 13:16	1
Chloroform	1.0	U	1.0	0.16	ug/L			07/10/12 13:16	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			07/10/12 13:16	1
1,2-Dibromoethane	1,0	U	1.0	0.24	ug/L			07/10/12 13:16	1
Chloroethane	1.0	U	1.0	0.29	ug/L			07/10/12 13:16	1
Surrogate	%Recovery	Qualifier	Limits			_	Prepared	Analyzed	Dil Fac
Toluene-d8 (Sum)	100		74 _ 115					07/10/12 13:16	1
1,2-Dichloroethane-d4 (Surr)	95		63 - 129					07/10/12 13:16	1
4-Bromofluorobenzene (Surr)	96		66 - 117					07/10/12 13:16	1
Dibromofluoromethane (Surr)	100		75 ₋ 121					07/10/12 13:16	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP											
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
1,1-Dichloroethene	0.025	U	0.025	0,0095	mg/L			07/04/12 03:00	1		
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/04/12 03:00	1		
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/04/12 03:00	1		

07/04/12 03:00

Project/Site. RVAAP (OH) - IDW

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45

Dibromofluoromethane (Surr)

Lab Sample ID: 240-12752-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dll Fac
Benzene	0.025	U	0,025	0.0065	mg/L	"		07/04/12 03:00	1
Carbon tetrachloride	0.025	Ü	0.025	0.0065	mg/L			07/04/12 03:00	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/04/12 03:00	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/04/12 03:00	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/04/12 03:00	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/04/12 03:00	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/04/12 03:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dìl Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 121			•		07/04/12 03:00	1
4-Bromofluorobenzene (Surr)	91		70 - 124					07/04/12 03:00	1
Toluene-d8 (Surr)	108		90 - 115					07/04/12 03:00	1

84 - 128

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dii Fac
Acenaphthene	0.20	U	0,20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Acenaphthylene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[a]anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzoic acid	25	U	25	10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[k]fluoranthene	0.20	Ū	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Bromophenyi phenyi ether	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Butyl benzyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dimethylphenol	2,0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 11:21	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2,4	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dinitrophenol	5.0	Ü	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Fluorenthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorobenzene	0.20	U	0,20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorobuladiene	1.0	U	1.0	0.27	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L.		07/02/12 11:43	07/09/12 11:21	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
N-Nitrosodiphenylamine	1.0	U	1.0	0.31	ug/L		07/02/12 11:43	07/09/12 11:21	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Chlorophenol	1.0	U	1.0	0,29	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		07/02/12 11:43	07/09/12 11:21	1
Chrysene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[g,h,i]perylene	0,20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[a]pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45

Benzyl alcohol

Bis(2-chloroethoxy)methane

Lab Sample ID: 240-12752-4

Matrix: Water

Method: 8270C - Semivolatile Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Di-n-butyi phthalate	1.0	U	1.0	0.67	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,2-Dichlorobenzene	1.0	Ü	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,3-Dichtorobenzene	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3,3'-Dichlorobenzidine	5,0	U	5.0	0.37	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dichlorophenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 11:21	1
Indeлo[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Isophorone	1,0	U	1.0	0.27	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Naphthalene	0.20	Ű	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Nitroaniline	2.0	U	2,0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Nitrobenzene	1.0	U	1.0	0.040	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Nitrophenol	5.0	U	5.0	2,4	ug/L		07/02/12 11:43	07/09/12 11:21	1
Pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Pentachlorophenol	5,0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
Phenanthrene	0.20	Ú	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4,6-Trichlorophenol	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Phenol	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 11:21	1
Carbazole	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chloroanlline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chloro-3-methylphenol	2.0	U	2,0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		07/02/12 11:43	07/09/12 11:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Suπ)	54		28 - 110				07/02/12 11:43	07/09/12 11:21	1
2-Fluorophenol (Surr)	64		10 - 110				07/02/12 11:43	07/09/12 11:21	1
Nitrobenzene-d5 (Suп)	51		27 - 111				07/02/12 11:43	07/09/12 11:21	1
Terphenyl-d14 (Surr)	72		37 - 119				07/02/12 11:43	07/09/12 11:21	1
2,4,6-Tribromophenol (Surr)	67		22 - 120				07/02/12 11:43	07/09/12 11:21	1
Phenol-d5 (Surr)	67		10-110				07/02/12 11:43	07/09/12 11:21	1
Method: 8270C - Semivolatile	Organic Compou	nds (GC/M	S) - RE						
Analyte		Qualifier	, RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.20	UH	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Acenaphthy!ene	0.20	UH	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	
Anthracene	0.20	UH	0.20	0,099	ug/L		07/10/12 10:24	07/13/12 12:33	
Benzo[a]anthracene	0.20	ÜН	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzoic acid		UH	25	9.9	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[b]fluoranthene		UH	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[k]fluoranthene		ΰ́н	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
				0.20	_		07/10/12 10:24	07/13/12 12:33	1

1

07/13/12 12:33

07/13/12 12:33

07/10/12 10:24

07/10/12 10:24

5.0

0,99

0,38 ug/L

0.32 ug/L

5,0 U H

0.99 UH

## Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-4

Matrix: Water

## 4-Biomorphenyl phanyl either   2.0 U H   2.0 0.79 Ug/L   07/10/12/10.24   07/13/12   02/14   07/10/12/10.24   07/13/12   02/14   07/10/12/10.24   07/13/12   07/10/12/10.24   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12	yte	tile Organic Compou Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   Second   S	-chloroethyl)ether	0.99	UΗ	0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	
2.4 Dimethylphanol 2.0 UH 2.0 0.79 UgL 07/10/12 10.24 07/13/12 Dimethylphanol 8.0 UH 0.99 0.29 UgL 07/10/12 10.24 07/13/12 Dimethylphanol 5.0 UH 0.99 0.29 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 5.0 UH 5.0 0.24 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 5.0 UH 5.0 0.24 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 5.0 UH 5.0 0.27 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 5.0 UH 5.0 0.27 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 5.0 UH 5.0 0.27 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.99 0.79 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.99 0.79 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.99 0.79 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.99 0.79 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.99 0.79 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.99 0.79 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.99 0.79 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.99 0.79 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH 0.20 0.099 UgL 07/10/12 10.24 07/13/12 24-Dimethylphanol 6.0 UH	mophenyl phenyl ether	2.0	UΗ	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	•
Dimethyl phthalate   0.98   U H   0.99   0.29   Ugil.   07/10/12 10:24   07/15/12   0.24   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25   0.25	i benzyl phthalate	0.99	υH	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	
1,8   Dinitio 2 - multiplened   5.0   U H   5.0   2.4   ug/L   07/10/12 10:24   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/	Dimethylphenol	2.0	UH	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
2.4-Diliticophenol   5.0 UH   5.0   2.4 ug/L   07/10/12 10.24   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12   07/13/12	thyl phthalate	0.99	UH	0.99	0.29	ug/L		07/10/12 10:24	07/13/12 12:33	1
2.4-Diliticolduene	Dinitro-2-methylphenol	5,0	UH	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
2.5.   Dilitizotolusine	Dinitrophenol	5.0	UΗ	5,0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	•
Flooring	Dinitrotoluene	5.0	υH	5.0	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	•
Fluorene 0.20 UN 0.20 0.099 ugl. 07/10/12 10:24 07/13/12 Hexachlorobenzene 0.20 UN 0.20 0.099 ugl. 07/10/12 10:24 07/13/12 Hexachlorobenzene 0.20 UN 0.99 0.27 ugl. 07/10/12 10:24 07/13/12 Hexachlorobenzene 0.99 UN 0.99 0.27 ugl. 07/10/12 10:24 07/13/12 Hexachlorobenzene 0.99 UN 0.99 0.27 ugl. 07/10/12 10:24 07/13/12 Hexachlorobenzene 0.99 UN 0.99 0.37 ugl. 07/10/12 10:24 07/13/12 N-Nitrosodi-n-propylamine 0.99 UN 0.99 0.31 ugl. 07/10/12 10:24 07/13/12 N-Nitrosodi-n-propylamine 0.99 UN 0.99 0.31 ugl. 07/10/12 10:24 07/13/12 1-4-Dichlorobenzene 0.99 UN 0.99 0.39 ugl. 07/10/12 10:24 07/13/12 2-Chloropphanlame 0.99 UN 0.99 0.39 ugl. 07/10/12 10:24 07/13/12 2-Chloropphanlame 0.99 UN 0.99 0.39 ugl. 07/10/12 10:24 07/13/12 2-Chloropphanlame 0.99 UN 0.99 0.90 0.39 ugl. 07/10/12 10:24 07/13/12 2-Chloropphanlame 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 2-Chloropphanlame 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 2-Chloropphanlame 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 2-Chloropphanlame 0.90 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 2-Chloropphanlame 0.90 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Dibenzoluran 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Dibenzoluran 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Dibenzoluran 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Dibenzoluran 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Denzolghyrne 0.20 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Denzolghyrne 0.20 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Denzolghyrne 0.20 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Denzolghyrne 0.20 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Denzolghyrne 0.20 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Denzolghyrne 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Denzolghyrne 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 Denzolghyrne 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 11.3-Dichlorobenzene 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 11.3-Dichlorobenzene 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 11.3-Dichlorobenzene 0.99 UN 0.99 0.90 ugl. 07/10/12 10:24 07/13/12 0	Dinitrotoluene	5,0	UH	5.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	•
Hexachlorobenzene 0.20 UH 0.20 0.099 ugl. 07/10/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12	ranthene	0.20	UH	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	•
Hexachlorobutadiene 0.99 UH 0.99 0.27 Ug/L 07/10/12 10:24 07/13/12 Hexachlorobutadiene 0.99 UH 0.99 0.79 Ug/L 07/10/12 10:24 07/13/12 N-Nitrosodiphenylamine 0.99 UH 0.99 0.79 Ug/L 07/10/12 10:24 07/13/12 N-Nitrosodiphenylamine 0.99 UH 0.99 0.79 Ug/L 07/10/12 10:24 07/13/12 N-Nitrosodiphenylamine 0.99 UH 0.99 0.31 Ug/L 07/10/12 10:24 07/13/12 1.4-Dichlorobenzene 0.99 UH 0.99 0.34 Ug/L 07/10/12 10:24 07/13/12 2-Chloropaphthalene 0.99 UH 0.99 0.39 Ug/L 07/10/12 10:24 07/13/12 2-Chloropaphthalene 0.99 UH 0.99 0.089 Ug/L 07/10/12 10:24 07/13/12 2-Chloropaphthalene 0.99 UH 0.99 0.089 Ug/L 07/10/12 10:24 07/13/12 2-Chloropaphthalene 0.99 UH 0.99 0.089 Ug/L 07/10/12 10:24 07/13/12 2-Chloropaphthalene 0.20 UH 0.90 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)anthracene 0.20 UH 0.20 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)anthracene 0.20 UH 0.20 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)anthracene 0.20 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)anthracene 0.20 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)anthracene 0.20 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.20 UH 0.20 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.20 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.20 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.20 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.99 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.99 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.99 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.99 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.99 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.99 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.99 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.99 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.99 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)perylene 0.99 UH 0.99 0.099 Ug/L 07/10/12 10:24 07/	rene	0,20	UН	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	•
Hexachlorocyclopentadiene 9,9 UH 9,9 0,79 UgL 07/10/12 10:24 07/13/12 Hexachlorocethane 0,99 UH 0,98 0,79 UgL 07/10/12 10:24 07/13/12 N-Nificosodih-norpylamine 0,99 UH 0,98 0,31 UgL 07/10/12 10:24 07/13/12 N-Nificosodih-norpylamine 0,99 UH 0,99 0,34 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,99 UH 0,99 0,39 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,99 UH 0,99 0,99 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,99 UH 0,99 0,99 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,99 UH 0,99 0,99 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,99 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chlorophenine 0,09 UH 0,09 0,099 UgL 07/10/12 10:24 07/13/12 C-Chloro	achlorobenzene	0.20	UН	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	•
Hexachloreshane	achlorobutadiene	0.99	UH	0.99	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	•
Hexachloroethane		9,9	UН	9.9	0,79	ug/L		07/10/12 10:24	07/13/12 12:33	•
N-Nifrosodi-n-propylamine	• •	0.99	UН	0,99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	
N-Nitrosodi-n-propylamine 0.99 UH 0.99 0.78 U9/L 07/10/12 10:24 07/13/12 1.4-Ublichorbenzene 0.99 UH 0.99 0.34 U9/L 07/10/12 10:24 07/13/12 2-Chloronaphthalene 0.99 UH 0.99 0.099 U9/L 07/10/12 10:24 07/13/12 2-Chlorophenol 0.99 UH 0.99 0.099 U9/L 07/10/12 10:24 07/13/12 2-Chlorophenol 0.99 UH 0.99 0.099 U9/L 07/10/12 10:24 07/13/12 2-Chlorophenol 0.99 UH 0.90 0.99 U9/L 07/10/12 10:24 07/13/12 Chrysene 0.20 UH 0.20 0.99 U9/L 07/10/12 10:24 07/13/12 Dibenz(a)halhartracene 0.20 UH 0.20 0.999 U9/L 07/10/12 10:24 07/13/12 Dibenz(a)halhartracene 0.20 UH 0.20 0.999 U9/L 07/10/12 10:24 07/13/12 Dibenz(a)halhartracene 0.20 UH 0.20 0.999 U9/L 07/10/12 10:24 07/13/12 Dibenz(a)halperyene 0.20 UH 0.20 0.999 U9/L 07/10/12 10:24 07/13/12 Dibenz(a)halperyene 0.20 UH 0.20 0.999 U9/L 07/10/12 10:24 07/13/12 Di-n-butyl phthalate 0.99 UH 0.99 0.69 U9/L 07/10/12 10:24 07/13/12 Di-n-butyl phthalate 0.99 UH 0.99 0.66 U9/L 07/10/12 10:24 07/13/12 Di-n-butyl phthalate 0.99 UH 0.99 0.66 U9/L 07/10/12 10:24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 07/13/12 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1-24 0.1	trosodiphenylamine	0.99	UH	0,99	0.31	ug/L		07/10/12 10:24	07/13/12 12:33	
1,4-Dichlorobenzene 0.99 UH 0.99 0.34 ug/L 07/10/12 10:24 07/13/12 2-Cichlorophenbenol 0.99 UH 0.99 0.098 ug/L 07/10/12 10:24 07/13/12 2-Cichlorophenol 0.99 UH 0.99 0.098 ug/L 07/10/12 10:24 07/13/12 2-Cichlorophenol 0.99 UH 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 4-Cichlorophenol 0.099 UH 0.90 0.090 ug/L 07/10/12 10:24 07/13/12 Chrysene 0.20 UH 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenz(ah)anthracene 0.20 UH 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzo(uran 0.99 UH 0.99 0.099 ug/L 07/10/12 10:24 07/13/12 Benzo(g,h.)perjene 0.20 UH 0.90 0.099 ug/L 07/10/12 10:24 07/13/12 Benzo(g,h.)perjene 0.20 UH 0.90 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzo(uran 0.99 UH 0.90 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzo(uran 0.99 UH 0.90 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzo(uran 0.99 UH 0.90 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzo(uran 0.99 UH 0.99 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzo(uran 0.99 UH 0.99 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzo(uran 0.99 UH 0.99 0.099 ug/L 07/10/12 10:24 07/13/12 10:24 07/13/12 Dibenzo(uran 0.99 UH 0.99 0.099 ug/L 07/10/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07	• •	0.99	υH	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	
2-Chloronaphthalens 0.99 U H 0.99 0.099 ug/L 07/10/12 10:24 07/13/12 2-Chlorophenol 0.99 U H 0.99 0.29 ug/L 07/10/12 10:24 07/13/12 2-Chlorophenol 0.99 U H 0.99 0.29 ug/L 07/10/12 10:24 07/13/12 4-Chlorophenyl ether 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)anthracene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)anthracene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenz(a,h)anthracene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 0.99 U H 0.90 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 0.99 U H 0.90 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 0.99 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 0.99 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 0.99 U H 0.90 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 0.99 U H 0.90 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 0.99 U H 0.90 0.099 ug/L 07/10/12 10:24 07/13/12 1:2-2 07/13/12 Dibenzofuran 0.99 U H 0.99 0.66 ug/L 07/10/12 10:24 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 1:2-2 07/13/12 07/13/12 07/13/12 07/13				0.99				07/10/12 10:24	07/13/12 12:33	
2-Chiorophenol 0.99 U H 0.99 0.20 ug/L 07/10/12 10:24 07/13/12 4-Chiorophenyl phenyl ether 2.0 U H 2.0 0.30 ug/L 07/10/12 10:24 07/13/12 Chrysene 0.20 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 Dibenz(a, h)anthracene 0.20 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 Dibenz(a, h)anthracene 0.20 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 Dibenz(a, h)aperylene 0.20 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 Dibenz(a, h)aperylene 0.20 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 Dibenz(a, h)aperylene 0.20 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 Denz(a, h)aperylene 0.20 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 Denz(a, h)aperylene 0.20 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12				0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	
4-Chlorophenyl phenyl ether 4-Chlorophenyl phenyl ether 5-20 UH 5-20 0.09 ug/L 07/10/12 10:24 07/13/12 Chrysene 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/13/12 Dibenzofuran 5-20 UH 5-20 0.099 ug/L 07/10/12 10:24 07/1	-					_		07/10/12 10:24	07/13/12 12:33	
Chrysene         0.20         U H         0.20         0.099         ug/L         07/10/12 10:24         07/13/12           Dibenz(a,h)anthracene         0.20         U H         0.20         0.099         ug/L         07/10/12 10:24         07/13/12           Dibenzofuran         0.99         U H         0.99         0.099         ug/L         07/10/12 10:24         07/13/12           Benzofaj,h,jlperylene         0.20         U H         0.20         0.099         ug/L         07/10/12 10:24         07/13/12           Di-n-butyl phthalate         0.99         U H         0.99         0.66         ug/L         07/10/12 10:24         07/13/12           1,2-Dichlorobenzene         0.99         U H         0.99         0.29         ug/L         07/10/12 10:24         07/13/12           1,3-Dichlorobenzene         0.99         U H         0.99         0.79         ug/L         07/10/12 10:24         07/13/12           2,4-Dichlorobenzeldine         5.0         U H         5.0         0.37         ug/L         07/10/12 10:24         07/13/12           1,3-Dichlorobenzeldine         5.0         U H         5.0         0.37         ug/L         07/10/12 10:24         07/13/12           2,4-Dichlorobenzelne <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>07/10/12 10:24</td> <td>07/13/12 12:33</td> <td></td>						-		07/10/12 10:24	07/13/12 12:33	
Dibenz(a,h)anthracene						-		07/10/12 10:24	07/13/12 12:33	
Dibenzofuran   0.99								07/10/12 10:24	07/13/12 12:33	
Benzo[g,h,i]perylene   0.20 U H   0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Benzo[g)pyrene   0.20 U H   0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Di-n-butyl phthalate   0.99 U H   0.99 0.66 ug/L 07/10/12 10:24 07/13/12 1.2-Di-n-butyl phthalate   0.99 U H   0.99 0.66 ug/L 07/10/12 10:24 07/13/12 1.3-Di-chlorobenzene   0.99 U H   0.99 0.79 ug/L 07/10/12 10:24 07/13/12 3.3-Uichlorobenzene   0.99 U H   0.99 0.79 ug/L 07/10/12 10:24 07/13/12 3.3-Uichlorobenzene   0.99 U H   0.99 0.79 ug/L 07/10/12 10:24 07/13/12 2.4-Di-chlorophenol   2.0 U H   2.0 0.79 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.99 U H   0.99 0.59 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.99 U H   0.99 0.59 ug/L 07/10/12 10:24 07/13/12 Sophorone   0.99 U H   0.99 0.27 ug/L 07/10/12 10:24 07/13/12 Sophorone   0.99 U H   0.99 0.27 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.20 U H   0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.99 0.27 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.99 0.27 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.20 U H   0.99 0.79 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.20 U H   0.99 0.79 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.99 0.79 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.99 0.79 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.20 U H   0.99 0.79 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.20 U H   0.99 0.79 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.90 0.79 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.90 0.79 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.90 0.90 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.90 0.90 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.90 0.90 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.90 0.90 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.90 0.90 ug/L 07/10/12 10:24 07/13/12 Di-thyl phthalate   0.90 U H   0.90 0.90 ug/L 07/10/12 10:24 07/13/12 Di-thyl phth	* . *					-		07/10/12 10:24	07/13/12 12:33	
Benzo[a]pyrene 0.20 U H 0.20 0.099 Ug/L 07/10/12 10:24 07/13/12 Di-n-butyl phthalate 0.99 U H 0.99 0.66 ug/L 07/10/12 10:24 07/13/12 1,2-Dichlorobenzene 0.99 U H 0.99 0.66 ug/L 07/10/12 10:24 07/13/12 1,3-Dichlorobenzene 0.99 U H 0.99 0.79 ug/L 07/10/12 10:24 07/13/12 3,3-Dichlorobenzidine 5.0 U H 5.0 0.37 ug/L 07/10/12 10:24 07/13/12 2,4-Dichlorobenzidine 5.0 U H 5.0 0.37 ug/L 07/10/12 10:24 07/13/12 2,4-Dichlorobenzidine 0.99 U H 0.99 0.69 ug/L 07/10/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13									07/13/12 12:33	
Din-hutyl phthalate  0.99 U H  0.99 0.66 Ug/L  0.7/10/12 10:24 07/13/12 1.32-Dichlorobenzene  0.99 U H  0.99 0.66 Ug/L  0.7/10/12 10:24 07/13/12 1.33-Dichlorobenzene  0.99 U H  0.99 0.79 Ug/L  0.7/10/12 10:24 07/13/12 1.33-Dichlorobenzene  0.99 U H  0.99 0.79 Ug/L  0.7/10/12 10:24 07/13/12 1.33-Dichlorobenzene  0.90 U H  0.90 0.79 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorobenzene  0.90 U H  0.90 0.69 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.69 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90 U H  0.90 0.90 Ug/L  0.7/10/12 10:24 07/13/12 1.34-Dichlorophenol  0.90						-			07/13/12 12:33	
1,2-Dichlorobenzene 0,99 U.H 0,99 0,29 ug/L 07/10/12 10:24 07/13/12 3,3'-Dichlorobenzene 0,99 U.H 0,99 0,79 ug/L 07/10/12 10:24 07/13/12 3,3'-Dichlorobenzene 5.0 U.H 5.0 0,37 ug/L 07/10/12 10:24 07/13/12 2,4-Dichlorobenzene 0,99 U.H 0,99 0,59 ug/L 07/10/12 10:24 07/13/12 Diathyl phthalate 0,99 U.H 0,99 0,59 ug/L 07/10/12 10:24 07/13/12 indenof1,2,3-cdjpyrene 0,20 U.H 0,20 0,099 ug/L 07/10/12 10:24 07/13/12 (sophorone 0,99 U.H 0,99 0,27 ug/L 07/10/12 10:24 07/13/12 2-Methylnaphthalene 0,20 U.H 0,99 0,79 ug/L 07/10/12 10:24 07/13/12 2-Methylphenol 0,99 U.H 0,99 0,79 ug/L 07/10/12 10:24 07/13/12 2-Methylphenol 0,99 U.H 0,99 0,79 ug/L 07/10/12 10:24 07/13/12 2-Methylphenol 0,99 U.H 0,20 0,99 ug/L 07/10/12 10:24 07/13/12 2-Methylphenol 0,99 U.H 0,20 0,99 ug/L 07/10/12 10:24 07/13/12 3-Naphthalene 0,20 U.H 0,20 0,99 ug/L 07/10/12 10:24 07/13/12 3-Naphthalene 0,20 U.H 0,20 0,99 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 2,0 U.H 2,0 0,79 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 2,0 U.H 2,0 0,79 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 2,0 U.H 2,0 0,79 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 2,0 U.H 2,0 0,79 ug/L 07/10/12 10:24 07/13/12 2-Nitroaniline 2,0 U.H 2,0 0,79 ug/L 07/10/12 10:24 07/13/12 2-Nitroaniline 2,0 U.H 2,0 0,79 ug/L 07/10/12 10:24 07/13/12 2-Nitroaniline 3,0 U.H 3,09 0,040 ug/L 07/10/12 10:24 07/13/12 2-Nitroaniline 3,0 U.H 5,0 0,24 ug/L 07/10/12 10:24 07/13/12 2-Nitroane 0,99 U.H 0,99 0,040 ug/L 07/10/12 10:24 07/13/12 2-Nitroane 0,99 U.H 0,20 0,99 ug/L 07/10/12 10:24 07/13/12 2-Nitroane 0,99 U.H 0,20 0,99 ug/L 07/10/12 10:24 07/13/12 2-Nitroane 0,90 U.H 0,20 0,99 ug/L 07/10/12 10:24 07/13/12 0-Nitroane 0,90 U.H 0,90 0,90 ug/L 07/10/12 10:24 07/13/12 0-Nitroane 0,90 U.H 0,90 0,90 ug/L 07/10/12 10:24 07/13/12 0-Nitroane 0,90 U.H 0,90 0,90 ug/L 07/10/12 10:24 07/13/12 0-Nitroane 0,90 U.H 0,90 0,90 ug/L 07/10/12 10:24 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12 07/13/12	* **					_			07/13/12 12:33	
1,3-Dichlorobenzene 0.99 U.H 0.99 0.78 ug/L 07/10/12 10:24 07/13/12 3,3'-Dichlorobenzidine 5.0 U.H 5.0 0.37 ug/L 07/10/12 10:24 07/13/12 2,4-Dichlorophenol 2.0 U.H 0.99 0.59 ug/L 07/10/12 10:24 07/13/12 Diethyl phthalate 0.99 U.H 0.99 0.59 ug/L 07/10/12 10:24 07/13/12 Indeno[1,2,3-cd]pyrene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Isophorone 0.99 U.H 0.99 0.27 ug/L 07/10/12 10:24 07/13/12 Isophorone 0.99 U.H 0.99 0.27 ug/L 07/10/12 10:24 07/13/12 2-Methylpaphthalene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 2-Methylpaphthalene 0.20 U.H 0.99 0.79 ug/L 07/10/12 10:24 07/13/12 Naphthalene 0.20 U.H 0.99 0.79 ug/L 07/10/12 10:24 07/13/12 Naphthalene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Naphthalene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 2.0 U.H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U.H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U.H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U.H 2.0 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 0.09 U.H 0.99 0.040 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.99 0.040 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.99 0.040 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.09 0.040 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.09 0.040 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.09 0.040 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.00 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.00 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.00 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.00 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.00 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.00 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.00 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.00 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.00 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 0.09 U.H 0.00 0.099 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol									07/13/12 12:33	
3,3'-Dichlorobenzidine						-			07/13/12 12:33	
2,4-Dichlorophenol 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 lndeno[1,2,3-cd]pyrene 0.20 U H 0.99 0.59 ug/L 07/10/12 10:24 07/13/12 lndeno[1,2,3-cd]pyrene 0.20 U H 0.99 0.27 ug/L 07/10/12 10:24 07/13/12 lsophorone 0.99 U H 0.99 0.27 ug/L 07/10/12 10:24 07/13/12 2-Methylnaphthalene 0.20 U H 0.99 0.79 ug/L 07/10/12 10:24 07/13/12 2-Methylphenol 0.99 U H 0.99 0.79 ug/L 07/10/12 10:24 07/13/12 2-Methylphenol 0.99 U H 0.99 0.79 ug/L 07/10/12 10:24 07/13/12 2-Methylphenol 0.99 U H 0.99 0.79 ug/L 07/10/12 10:24 07/13/12 2-Methylphenol 0.99 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 2-Nitroaniline 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 0.20 U H 0.20 0.79 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 0.20 U H 0.20 0.79 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 0.20 U H 0.90 0.79 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 0.90 U H 0.99 0.40 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 0.99 U H 0.99 0.40 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 0.90 U H 0.99 0.40 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 0.90 U H 0.99 0.40 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 0.90 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 0.90 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 Pyrene 0.20 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 Prenanthrene 0.20 U H 0.20 0.99 ug/L 07/10/12 10:24 07/13/12 Pentachlorophenol 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.99 U H 0.99 0.28 ug/L 07/1						-			07/13/12 12:33	
Diethyl phthelate						=			07/13/12 12:33	
Distript Inflation   Distript Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   District Inflation   Distric	•					-			07/13/12 12:33	
Sophorone   0.99 U H   0.99 0.27 ug/L   07/10/12 10:24 07/13/12   2-Methylnaphthalene   0.20 U H   0.20 0.099 ug/L   07/10/12 10:24 07/13/12   2-Methylphenol   0.99 U H   0.99 0.79 ug/L   07/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 07/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.7/13/12   0.20 0.099 ug/L   0.7/10/12 10:24 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/12   0.20 0.7/13/1	• •					-			07/13/12 12:33	
2-Methylnaphthalene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 2-Methylphenol 0.99 U H 0.99 0.79 ug/L 07/10/12 10:24 07/13/12 Naphthalene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Naphthalene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 2-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 2.0 U H 2.0 0.26 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 Nitrobenzene 0.99 U H 0.99 0.040 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 2.0 U H 2.0 0.28 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 5.0 U H 5.0 0.28 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Pyrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:						-			07/13/12 12:33	
2-Methylphenol 0.99 U H 0.99 0.79 ug/L 07/10/12 10:24 07/13/12 Naphthalene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 2-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 Nitrobenzene 0.99 U H 0.99 0.040 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 2.0 U H 2.0 0.28 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Pyrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Pentachlorophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13						_			07/13/12 12:33	
Naphthalene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 2-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 2.0 U H 2.0 0.26 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 Nitrobenzene 0.99 U H 0.99 0.040 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 2.0 U H 2.0 0.28 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Pyrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Pentachlorophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 1.2.4-Trichlorobenzene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 2.4.5-Trichlorophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12 2.4.5-Trichlorophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12 2.4.5-Trichlorophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12						-			07/13/12 12:33	
2-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 3-Nitroaniline 2.0 U H 2.0 0.26 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 Nitrobenzene 0.99 U H 0.99 0.040 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 2.0 U H 2.0 0.28 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Pyrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Pentachlorophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 10:24 07/13/12 2-Nitrophenol 5.0 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 5.0 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 0.20 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 5.0 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 5.0 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12						_			07/13/12 12:33	
3-Nitroaniline 2.0 U H 2.0 0.26 ug/L 07/10/12 10:24 07/13/12 4-Nitroaniline 2.0 U H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 Nitrobenzene 0.99 U H 0.99 0.040 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 2.0 U H 2.0 0.28 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Pyrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Pentachlorophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12									07/13/12 12:33	
4-Nitrobaniline 2.0 U.H 2.0 0.79 ug/L 07/10/12 10:24 07/13/12 Nitrobanzene 0.99 U.H 0.99 0.040 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 2.0 U.H 2.0 0.28 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 5.0 U.H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Pyrene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Pentachlorophenol 5.0 U.H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12 10:24 07/13/12									07/13/12 12:33	
Nitrobenzene 0.99 U.H 0.99 0.040 ug/L 07/10/12 10:24 07/13/12 2-Nitrophenol 2.0 U.H 2.0 0.28 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 5.0 U.H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Pyrene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Pentachlorophenol 5.0 U.H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 1.2.4-Trichlorobenzene 0.99 U.H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 2,4,5-Trichlorophenol 5.0 U.H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12									07/13/12 12:33	
2-Nitrophenol 2.0 U H 2.0 0.28 ug/L 07/10/12 10:24 07/13/12 4-Nitrophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Pyrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Pentachlorophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 1.2.4-Trichlorobenzene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 2,4,5-Trichlorophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12						-			07/13/12 12:33	
4-Nitrophenol 5.0 U.H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Pyrene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Pentachlorophenol 5.0 U.H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U.H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 1.2.4-Trichlorobenzene 0.99 U.H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 2,4,5-Trichlorophenol 5.0 U.H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12									07/13/12 12:33	
Pyrene         0.20 U H         0.20 0.099 ug/L         07/10/12 10:24 07/13/12         07/10/12 10:24 07/13/12           Pentachlorophenol         5.0 U H         5.0 2.4 ug/L         07/10/12 10:24 07/13/12           Phenanthrene         0.20 U H         0.20 0.099 ug/L         07/10/12 10:24 07/13/12           1,2,4-Trichlorobenzene         0.99 U H         0.99 0.28 ug/L         07/10/12 10:24 07/13/12           2,4,5-Trichlorophenol         5.0 U H         5.0 0.30 ug/L         07/10/12 10:24 07/13/12	•					-			07/13/12 12:33	
Pentachlorophenol 5.0 U H 5.0 2.4 ug/L 07/10/12 10:24 07/13/12 Phenanthrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 1,2,4-Trichlorophenol 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 2,4,5-Trichlorophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12	·					_			07/13/12 12:33	
Phenanthrene 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 1,2,4-Trichlorophenzene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 2,4,5-Trichlorophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12						_			07/13/12 12:33	
1,2,4-Trichlorobenzene 0.99 U H 0.99 0.28 ug/L 07/10/12 10:24 07/13/12 2,4,5-Trichlorophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12									07/13/12 12:33	
2,4,5-Trichlorophenol 5.0 U H 5.0 0.30 ug/L 07/10/12 10:24 07/13/12						-			07/13/12 12:33	
z _i -i,o-monorpheno						_				
A-A B A-7.60A AAA A-7.00A						-			07/13/12 12:33	
z _i -r _i -o Highlotopholiu	-Trichiorophenol								07/13/12 12:33	
1 Hollor	101					-			07/13/12 12:33 07/13/12 12:33	

**Client Sample Results** 

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00
Date Received: 06/26/12 12:45

Lab Sample ID: 240-12752-4

Matrix: Water

Method: 6270C - Semivolatile	Organic Compou	nds (GC/MS	S) - RE (Contii						
Analyte	Result	Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	Dil Fa
4-Chloroaniline	2.0	UK	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	
3 & 4 Methylphenol	2.0	UK	2.0	0.74			07/10/12 10:24	07/13/12 12:33	
Bis(2-ethylhexyl) phthalate	2,2	НВ	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	
Di-π-octyl phthalate	0.99	UH	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	•
4-Chloro-3-methylphenol	2.0	UK	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	•
2,2'-oxybis[1-chloropropane]	0.99	UН	0.99	0.40	ug/L		07/10/12 10:24	07/13/12 12:33	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	53		28 - 110				07/10/12 10:24	07/13/12 12:33	1
2-Fluorophenol (Surr)	61		10-110				07/10/12 10:24	07/13/12 12:33	•
Nitrobenzene-d5 (Suπ)	54		27 - 111				07/10/12 10:24	07/13/12 12:33	:
Terphenyl-d14 (Surr)	71		37 - 119				07/10/12 10:24	07/13/12 12:33	:
2,4,6-Tribromophenol (Surr)	64		22 - 120				07/10/12 10:24	07/13/12 12:33	1
Phenol-d5 (Surr)	66		10 - 110				07/10/12 10:24	07/13/12 12:33	1
Method: 8270C - Semivolatile	Organic Compou	nds (GC/MS	S) - TCLP						
Analyte		Qualifier	, RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0,0040	0.00034	mg/L		07/03/12 09:12	07/06/12 18:30	
2,4,5-Trichlorophenol	0.020		0.020	0.00030	mg/L		07/03/12 09:12	07/06/12 18:30	-
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/08/12 18:30	
2,4-Dinitrotoluene	0.020	u	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:30	
Hexachlorobenzene	0.020		0.020	0.00010	mg/L		07/03/12 09:12	07/06/12 18:30	
Hexachlorobutadiene	0.020		0.020	0,00027	_		07/03/12 09:12	07/06/12 18:30	
Hexachloroethane	0.020		0.020	0.00080	-		07/03/12 09:12	07/08/12 18:30	
3 & 4 Methylphenol	0.040		0,040	0.00075	_		07/03/12 09:12	07/06/12 18:30	
2-Methyiphenol	0.0040		0.0040	0.00080			07/03/12 09:12	07/06/12 18:30	
Nitropenzene	0.0040		0.0040	0,000040	7.		07/03/12 09:12	07/06/12 18:30	
	0.040		0.040	0.0024	_		07/03/12 09:12	07/06/12 18:30	
Pentachlorophenol Pyridine	0.020		0.020	0.00035	-		07/03/12 09:12	07/08/12 18:30	
Curranata	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Surrogate 2 Elucrobinhonul (Surr)	43	- Gaumer	22 - 110				07/03/12 09:12	07/06/12 18:30	-
2-Fluorobiphenyl (Surr)	12		10 - 110				07/03/12 09:12	07/06/12 18:30	
2-Fluorophenol (Surr)	71		17 - 117				07/03/12 09:12	07/06/12 18:30	
2,4,6-Tribromophenol (Surr)	45		29 - 111				07/03/12 09:12	07/06/12 18:30	
Nitrobenzene-d5 (Surr)			10 - 110				07/03/12 09:12	07/06/12 18:30	
Phenof-d5 (Surr)	42						07/03/12 09:12	07/06/12 18:30	
Terphenyl-d14 (Surr)	75		40 - 119				07/03/12 09.12	01700112 10.00	
Method: 8081A - Organochlor			RL	##DI	Unit	D	Prepared	Analyzed	Dil Fa
Analyte	0.051	Qualifler	0.051	0.0098	L		07/02/12 11:57	07/04/12 07:55	
4,4'-DDD					-		07/02/12 11:57	07/04/12 07:55	
4,4'-DDE	0.051		0.051	0.0099				07/04/12 07:55	
4,4'-DDT	0.051		0.051	0.016	-		07/02/12 11:57		
Aldrin	0.051		0.051	0.0084	-		07/02/12 11:57	07/04/12 07:55	
alpha-BHC	0.0093		0.051	0.0071	_		07/02/12 11:57	07/04/12 07:55	
alpha-Chlordane	0,051		0.051	0.014			07/02/12 11:57	07/04/12 07:55	
beta-BHC	0.012	J	0.051	0.0086	-		07/02/12 11:57	07/04/12 07:55	
delta-BHC	0.051	U	0.051	0.0089	_		07/02/12 11:57	07/04/12 07:55	
Dieldrin	0.051	U	0.051	0.0077	ug/L		07/02/12 11:57	07/04/12 07:55	
Endosulfan I	0.051	U	0.051	0.013	ug/L		07/02/12 11:57	07/04/12 07:55	
Endosulfan II	0.051	U	0.051	0.012	ug/L		07/02/12 11:57	07/04/12 07:55	
Endosulfan sulfate	0.051	11	0,051	0.044	ug/L		07/02/12 11:57	07/04/12 07:55	

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Matrix: Water

Method: 8081A - Organochio Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrîn	0.051		0.051	0.011	ug/L		07/02/12 11:57	07/04/12 07:55	î
Endrin aldehyde	0.051		0.051	0.011	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endrin ketone	0.051		0.051	0.0080	ug/L		07/02/12 11:57	07/04/12 07:55	1
gamma-BHC (Lindane)	0.051		0,051	0.0065			07/02/12 11:57	07/04/12 07:55	1
gamma-Chlordane	0.051		0.051	0.012	ug/L		07/02/12 11:57	07/04/12 07:55	1
Heptachlor	0.051		0.051	0.0082	-		07/02/12 11:57	07/04/12 07:55	1
Heptachlor epoxide	0.051		0.051	0.0072	ug/L		07/02/12 11:57	07/04/12 07:55	1
Methoxychlor	0.10		0.10	0.033	-		07/02/12 11:57	07/04/12 07:55	1
Toxaphene	2.0		2.0		ug/L		07/02/12 11:57	07/04/12 07:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DII Fac
DCB Decachlorobiphenyl	79		10 - 145				07/02/12 11:57	07/04/12 07:55	1
DCB Decachlorobiphenyl	66		10 - 145				07/02/12 11:57	07/04/12 07:55	1
Tetrachloro-m-xylene	88		30 - 141				07/02/12 11:57	07/04/12 07:55	1
Tetrachloro-m-xylene	82		30 - 141				07/02/12 11:57	07/04/12 07:55	1
Method: 8081A - Organochlo	orine Pesticides (G	C) - TCLP							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dli Fac
Chlordane (technical)	0,012	Ū	0.012	0,000079	mg/L		07/03/12 09:15	07/05/12 23:21	1
Endrin	0.0012	U	0.0012	0.000028	mg/L		07/03/12 09:15	07/05/12 23:21	1
Heptachlor	0.0012	U	0.0012	0,000019	mg/L		07/03/12 09:15	07/05/12 23:21	1
Heptachtor epoxide	0.0012	Ú	0.0012	0.000017	mg/L		07/03/12 09:15	07/05/12 23:21	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		07/03/12 09:15	07/05/12 23:21	1
Methoxychlor	0,0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/05/12 23:21	1
Toxaphene	0.048	Ú	0.048	0.00077	mg/L		07/03/12 09:15	07/05/12 23:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		46 - 122				07/03/12 09:15	07/05/12 23:21	1
Tetrachloro-m-xylene	68		46 - 122				07/03/12 09:15	07/05/12 23:21	1
DCB Decachlorobiphenyl	90		34 - 141				07/03/12 09:15	07/05/12 23:21	1
DCB Decachlorobiphenyl	88		34 _ 141				07/03/12 09:15	07/05/12 23:21	1
Method: 8082 - Polychlorina						_		4 t d	Dil Coo
Analyte		Qualifler	RL .		Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.51		0.51	0.17	_		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1221	0.51		0.51	0.13	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1232	0.51		0.51		-		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1242	0.51		0.51		ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1248	0.51		0.51		ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1254	0.51		0.51		ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1260	0.51	U	0.51	0.17	ug/L		07/02/12 11:53	07/03/12 17:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		23 _ 136				07/02/12 11:53	07/03/12 17:25	
DCB Decachlorobiphenyl	62		10 - 130				07/02/12 11:53	07/03/12 17:25	1
Method: 8151A - Herbicides					11.54	_	Burner	الامال	Dit Con
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dif Fac
2,4-D	0.0020		0.0020	0.00021	-		07/03/12 09:18	07/07/12 20:06	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 20:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DII Fac
			27 116				07/03/12 09:18	07/07/12 20:06	4

07/07/12 20:06

07/03/12 09:18

37 - 116

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2,4-Dichlorophenylacetic acid

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Lab Sample ID: 240-12752-4

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	58	Guanner	37 - 116				07/03/12 09:18	07/07/12 20:06	
- '									
Method: 8330 (Modified) - Org			.C - Dissolved RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
Analyte	20	Qualifier	20		ug/L		07/09/12 14:50	07/10/12 10:57	
Nitroguanîdine	20	U	20	۲.٦	ug/L		07100712 14.00	51716712 10:01	
Method: 8330/8330A - Nitroard	omatics & Nitrami	nes: Explos	sives (8330/A)						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Nitroglycerin	0.67	U	0.67	0.34	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
PETN	0.67	υ	0,67		ug/L		07/03/12 06:00	07/08/12 19:24	1.0
2-Amino-4,8-dinitrotoluene	0.21	u	0.21	0.018	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/08/12 19:24	1.0
1,3-Dinitrobenzene	0.10	u	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
2,4-Dinitrotoluene	0.10	U	0.10	0,052	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
2,6-Dinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/08/12 19:24	1.0
ХМН	0.10	U	0.10	0.037	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
Nitrobenzene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
2-Nitrotoluene	0.52	Ü	0.52	0.091	ug/L		07/03/12 08:00	07/06/12 19:24	1.0
3-Nitrotoiuene	0.081	J	0.52	0.059	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
4-Nitrotoluene	0.67	U	0,87	0.091	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
RDX	0.10	Ú	0.10	0.037	ug/L		07/03/12 06:00	07/08/12 19:24	1.0
Tetryl	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
1,3,5-Trinitrobenzene	0,10	U	0.10	0.031	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
								27/20/40 40 04	1.0
2,4,6-Trinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 08:00	07/06/12 19:24	
2,4,6-Trinitrotoluene				0,052	ug/L				
2,4,6-Trinitrotoluene Surrogate	%Recovery		0.10  **Limits** 79 - 111	0.052	ug/L		07/03/12 08:00  Prepared  07/03/12 06:00	Analyzed 07/06/12 19:24	DII Fa
2,4,6-Trinitrotoluene			Limits	0.052	ug/L		Prepared	Analyzed	DII Fa
2,4,6-Trinitrotoluene  Surrogate  3,4-Dinitrotoluene	%Recovery 101	Qualifier	Limits	0.052	ug/L		Prepared	Analyzed	DII Fa
2,4,6-Trinitrotoluene Surrogate	%Recovery 101 - Total Recoverab	Qualifier	Limits		ug/L Unit	D	Prepared	Analyzed	DII Fa 1.0
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP)	%Recovery 101 - Total Recoverab	<i>Qualifier</i> ble Qualifier	Limits 79 - 111	MDL		<u>D</u>	Prepared 07/03/12 06:00	Analyzed 07/06/12 19:24	DII Fa
2,4,6-Trinitrotoluene  Surrogate  3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte	%Recovery 101 - Total Recoverab Result	Qualifier  ole  Qualifier  J	Limits 79 - 111	MDL 3,2	Unit	<u>D</u>	Prepared 07/03/12 06:00 Prepared	Analyzed 07/06/12 19:24 Analyzed	DII Fa
2,4,6-Trinitrotoluene  Surrogate  3,4-Dinitrotoluene  Method: 6010B - Metals (ICP)  Analyte  Arsenic	%Recovery 101  - Total Recoverate Result 8.3	Qualifier Die Qualifier J	Limits 79 - 111  RL 10	MDL 3,2	Unit ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Gobalt	- Total Recoverate Result 8.3	Qualifier  Ple Qualifier J J	Limits 79 - 111  RL 10 5.0	MDL 3.2 2.2	Unit ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead	- Total Recoverate Result 8.3 3.7 7.0	Qualifier  Ole Qualifier J U U	### Company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the co	MDL 3.2 2.2 1.7	Unit ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium	#Recovery 101 - Total Recoveral: Result 8.3 3.7 7.0 3.0 5.0	Qualifier  Ole Qualifier J U U	Limits 79 - 111  RL 10 5.0 7.0 3.0	MDL 3.2 2.2 1.7 1.9 4.1	Unit ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	Dil Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver	#Recovery 101 - Total Recoveral: Result 8.3 3.7 7.0 3.0 5.0	Qualifier  Qualifier  J  U  U  U	### Company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the co	MDL 3.2 2.2 1.7 1.9 4.1 2.2	Unit ug/L ug/L ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	Dil Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium	#Recovery 101 - Total Recoveral: Result 8.3 3.7 7.0 3.0 5.0 5.0 1.9	Qualifier  Qualifier  J  U  U  U  U	## Company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the company of the com	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	Dil Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium	#Recovery 101 - Total Recoverals Result 8.3 3.7 7.0 3.0 5.0 5.0 1.9 56	Qualifier  Qualifier  J  U  U  U  U  J  J  J  B	RL 10 5.0 7.0 3.0 5.0 7.0 200	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Calcium	##Recovery 101  - Total Recoverals Result 8.3 3.7 7.0 3.0 5.0 5.0 1.9 56 43000	Qualifier Qualifier J U U U U J J B	RL 10 5.0 7.0 3.0 5.0 7.0 200 5000	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Calcium Copper	**Recovery 101 - Total Recoverals Result 8.3 3.7 7.0 3.0 5.0 1.9 56 43000 25	Qualifier Qualifier J U U U U J J B B U	RL 10 5.0 7.0 3.0 5.0 7.0 200 5000 25	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67 130 4.5	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Catcium Copper Magneslum	**Recovery 101 - Total Recoveral: Result  8.3 3.7 7.0 3.0 5.0 1.9 56 43000 25 10000	Qualifier Qualifier J U U U U J J B B U B	RL 10 5.0 7.0 3.0 5.0 7.0 200 5000 25 5000	MDL 3,2 2,2 1,7 1,9 4,1 2,2 0,64 0,67 130 4,5	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Calcium Copper Magneslum Manganese	#Recovery 101  - Total Recoveral:  Result  8.3 3.7 7.0 3.0 5.0 5.0 1.9 56 43000 25 10000 110	Qualifier Qualifier J U U U U J J B B U B B	RL 10 5.0 7.0 3.0 5.0 7.0 200 5000 25 5000 15	MDL 3,2 2,2 1,7 1,9 4,1 2,2 0,64 0,67 130 4,5 34 0,41	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Calcium Copper Magneslum Manganese Nickel	%Recovery 101 - Total Recoverate Result 8.3 3.7 7.0 3.0 5.0 5.0 1.9 56 43000 25 10000 110 3.2	Qualifier Qualifier J U U U U J J B B U B B	Limits  79 - 111  RL  10  5.0  7.0  3.0  5.0  7.0  200  5000  25  5000  15  40	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67 130 4.5 34 0.41 3.2	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Calcium Copper Magneslum Manganese	#Recovery 101  - Total Recoveral:  Result  8.3 3.7 7.0 3.0 5.0 5.0 1.9 56 43000 25 10000 110	Qualifier Qualifier J U U U U J J B B U B B	RL 10 5.0 7.0 3.0 5.0 7.0 200 5000 25 5000 15	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67 130 4.5 34 0.41 3.2	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Calcium Copper Magneslum Manganese Nickel	%Recovery 101  - Total Recoverate Result 8.3 3.7 7.0 3.0 5.0 5.0 1.9 56 43000 25 10000 110 3.2 19000	Qualifier Qualifier J U U U J J B B B J B	Limits  79 - 111  RL  10  5.0  7.0  3.0  5.0  7.0  200  5000  25  5000  15  40  5000	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67 130 4.5 34 0.41 3.2 72	Unit ug/l. ug/l. ug/l. ug/l. ug/l. ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Calcium Copper Magneslum Manganese Nickel Potasslum	#Recovery 101  - Total Recoverate Result 8.3 3.7 7.0 3.0 5.0 5.0 1.9 56 43000 25 10000 110 3.2 19000  - TCLP Result	Qualifier  Qualifier  J  U  U  U  J  J  B  B  B  C  Qualifier	### Public Plants    Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67 130 4.5 34 0.41 3.2 72	Unit ug/l. ug/l. ug/l. ug/l. ug/l. ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	<u>D</u>	Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	DII Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Calcium Copper Magneslum Manganese Nickel Potassium  Method: 6010B - Metals (ICP)	%Recovery 101  - Total Recoverate Result 8.3 3.7 7.0 3.0 5.0 5.0 1.9 56 43000 25 10000 110 3.2 19000	Qualifier  Qualifier  J  U  U  U  J  J  B  B  B  C  Qualifier	Limits  79 - 111  RL  10  5.0  7.0  3.0  5.0  7.0  200  5000  25  5000  15  40  5000	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67 130 4.5 34 0.41 3.2 72 MDL	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	Dil Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Calcium Copper Magneslum Manganese Nickel Potassium  Method: 6010B - Metals (ICP) Analyte	#Recovery 101  - Total Recoverate Result 8.3 3.7 7.0 3.0 5.0 5.0 1.9 56 43000 25 10000 110 3.2 19000  - TCLP Result	Qualifier  Qualifier  J  U  U  U  J  J  B  B  J  B  Qualifier  J	### Public Plants    Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure   Figure	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67 130 4.5 34 0.41 3.2 72 MDL 0.0032 0.00067	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 10:01	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	Dil Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barium Calcium Copper Magnesium Manganese Nickel Potassium  Method: 6010B - Metals (ICP) Analyte Arsenic	#Recovery 101  - Total Recoveral: Result 8.3 3.7 7.0 3.0 5.0 1.9 56 43000 25 10000 110 3.2 19000  - TCLP  Result 0.0054	Qualifier  Qualifier  J  U  U  U  J  J  B  B  J  B  Qualifier  J  B  A  A  B  A  A  A  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  B	### Control ### Page 12	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67 130 4.5 34 0.41 3.2 72 MDL	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	Dil Fa
2,4,6-Trinitrotoluene  Surrogate 3,4-Dinitrotoluene  Method: 6010B - Metals (ICP) Analyte Arsenic Chromium Cobalt Lead Selenium Silver Vanadium Barlum Calcium Copper Magnesium Manganese Nickel Potassium  Method: 6010B - Metals (ICP) Analyte Arsenic Barium	#Recovery 101  - Total Recoveral: Result 8.3 3.7 7.0 3.0 5.0 1.9 56 43000 25 10000 110 3.2 19000  - TCLP  Result 0.0054 0.052	Qualifier  Qualifier  J  U  U  U  J  B  B  C  Qualifier  J  J  B  B  J  B  C  D  D  D  D  D  D  D  D  D  D  D  D	### Control ### Page 14	MDL 3.2 2.2 1.7 1.9 4.1 2.2 0.64 0.67 130 4.5 34 0.41 3.2 72 MDL 0.0032 0.00067	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		Prepared 07/03/12 06:00  Prepared 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 08:18 07/10/12 10:01	Analyzed 07/06/12 19:24  Analyzed 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31 07/11/12 13:31	Dil Fac

**Client Sample Results** 

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-4

Matrix: Water

Method: 6010B - Metals (ICP) - TCLP Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 21:03	
Silver	0.50	U	0,50	0.0022	mg/L		07/03/12 10:01	07/05/12 21:03	1
Method: 6020 - Metals (ICP/MS) - Tot	al Recover	able							
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	580		50	19	ug/L		07/10/12 08:18	07/11/12 13:26	1
Antimony	2.3		2.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:26	1
Beryllium	1.0	U	1.0	0,20	ug/L		07/10/12 08:18	07/11/12 13:28	1
Cadmium	1.0	Ü	1.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:26	1
Iron	1300	^	100	26	ug/L		07/10/12 08:18	07/11/12 13:26	1
Sodium	28000	B	1000	6.9	ug/L		07/10/12 08:18	07/11/12 13:26	1
Thalilum	0.58	JВ	2.0	0.14	ug/L		07/10/12 08:18	07/11/12 13:26	1
Zinc	11	JB	20	2.3	ug/L		07/10/12 08:18	07/11/12 13:26	1
Method: 7470A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dii Fac
Mercury	0,20	U	0.20	0.12	ug/L		06/29/12 15:10	07/03/12 13:40	•
Method: 7470A - Mercury (CVAA) - T	CLP								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Mercury	0.0020	Ū	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 14:02	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	_ D	Prepared	Analyzed	Dii Fac
Flashpoint	>180		1.00	1,00	Degrees F			07/02/12 11:30	1
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		07/02/12 09:10	07/02/12 11:08	•
Sulfide	3.0	U	3.0	0.94	mg/L		07/03/12 07:56	07/03/12 13:48	•
pĤ	8.39		0.100	0.100	sú			06/28/12 16:18	•
		U			mg/L		07/11/12 06:00	07/11/12 13:05	1

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8260B - Volatile Organic Compounds (GC/MS)

Prep Type: Total/NA Matrix: Solid

				Percent Su	rrogate Recove	ery (Acceptance Limits)
		TOL	12DCE	BFB	DBFM	
Lab Sample ID	Client Sample ID	(67-125)	(58-123)	(62-136)	(37-132)	
240-12752-3	FWG-IDW-SBCOMP3-SO	112	98	121	89	
LCS 240-49421/5	Lab Control Sample	99	97	94	95	
MB 240-49421/6	Method Blank	98	95	91	91	

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroelhane-d4 (Surr) BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Prep Type: Total/NA Matrix: Solid

				Percent Su	rrogate Reco
		12DCE	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(80-121)	(90-115)	(70-124)	(84-128)
LCS 240-50127/12	Lab Control Sample	109	107	95	116

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Prep Type: TCLP Matrix: Solid

				Percent Sur	rogate Reco	overy (Acceptance Limits)
		12DCE	BFB	TOL	DBFM	
Lab Sample ID	Cilent Sample ID	(80-121)	(70-124)	(90-116)	(84-128)	
240-12752-3	FWG-IDW-SBCOMP3-SO	104	94	107	117	
LB 240-49973/1-A MB	Method Blank	102	97	106	116	

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

Prep Type: Total/NA Matrix: Water

		Percent Surrogate Recovery (Acceptance Limits)						
		TOL	12DCE	BF8	DBFM			
Lab Sample ID	Client Sample ID	(74-116)	(63-129)	(66-117)	(75-121)			
240-12752-1	TRIP BLANK	99	93	95	100			
240-12752-4	FWG-IDW-TANK3-GW	100	95	96	100			
LCS 240-50324/4	Lab Control Sample	104	96	103	99			
MB 240-50324/5	Method Blank	99	90	96	98			
Surrogate Legend								

TOL = Toluene-d8 (Surr)

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TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

	Recovery (Acceptance Limits)
12DCE TOL BFB DBF	М
Lab Sample ID Client Sample ID (80-121) (90-115) (70-124) (84-1	28)
LCS 240-49814/10 Lab Control Sample 110 107 93 11	9

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: TCLP

			Percent Surrogate Recovery (Acceptance Limits)					
		12DCE	BFB	TOL	DBFM			
Lab Sample ID	Client Sample ID	(80-121)	(70-124)	(90-115)	(84-128)			
240-12752-4	FWG-IDW-TANK3-GW	108	91	108	110			
240-12752-4 MS	FWG-IDW-TANK3-GW	113	98	108	116			
240-12752-4 MSD	FWG-IDW-TANK3-GW	107	97	109	118			
LB 240-49660/1-A MB	Method Blank	107	92	105	113			

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BF8 = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d6 (Surr)

DBFM = Dibromofluoromethane (Surr)

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: Total/NA

_				Percent Sur	rrogate Reco	very (Accept	ance Limits)
		FBP	2FP	NBZ	TPH	TBP	PHL
Lab Sample ID	Client Sample ID	(34-110)	(26-110)	(24-112)	(41-119)	(10-118)	(28-110)
240-12752-3	FWG-IDW-SBCOMP3-SO	53	69	53	75	46	71
LCS 240-49770/16-A	Lab Control Sample	55	73	61	79	50	77
MB 240-49770/15-A	Method Blank	46	60	51	63	39	64

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluoropheno! (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

PHL = Pheno!-d5 (Surr)

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

-		Percent Surrogate Recovery (Acceptance Limits)						
		FBP	2FP	TBP	NBZ	PHL	TPH	
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)	
LCS 240-49701/5-A	Lab Control Sample	48	51	71	52	42	74	
MB 240-49701/4-A	Method Blank	47	52	59	52	46	79	

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP ≈ 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: TCLP

Γ				Percent Su	rrogate Reco	very (Accept	ance Limits)	
		FBP	2FP	TBP	NBZ	PHL	TPH	
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)	A
240-12752-3	FWG-IDW-SBCOMP3-SO	46	13	68	46	46	71	

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenoi (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH ≈ Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

_		Percent Surrogate Recovery (Acceptance Limits)							
		FBP	2FP	NBZ	TPH	TBP	PHL		
Lab Sample ID	Client Sample ID	(28-110)	(10-110)	(27-111)	(37-119)	(22-120)	(10-110)		
240-12752-4	FWG-IDW-TANK3-GW	54	64	51	72	67	67		
240-12752-4 - RE	FWG-IDW-TANK3-GW	53	61	54	71	64	66		
LCS 240-49608/14-A	Lab Control Sample	57	65	56	82	79	71		
LCS 240-50344/14-A	Lab Control Sample	73	88	75	89	83	91		
MB 240-49608/13-A	Method Blank	14 X	17	13 X	19 X	16 X	18		
MB 240-50344/13-A	Method Blank	69	79	68	86	71	81		

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

PHL ≈ Phenol-d5 (Surr)

Project/Site: RVAAP (OH) - IDW

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Prep Type: Total/NA Matrix: Water

_				Percent Su	rrogate Reco	very (Accept	ance Limits
		2FP	PHL	FBP	TBP	NBZ	TPH
Lab Sample ID	Client Sample ID	(10-110)	(10-110)	(22-110)	(17-117)	(29-111)	(40-119)
LCS 240-49703/16-A	Lab Control Sample	23	62	56	97	60	95
MB 240-49703/15-A	Method Blank	31	56	49	77	51	81

Surrogate Legend

2FP = 2-Fluorophenol (Surr)

PHL = Phenol-d5 (Surr)

FBP = 2-Fluorobiphenyl (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ ≈ Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Prep Type: TCLP Matrix: Water

				Percent Su	rrogate Reco	very (Accept	tance Limits)	
		F8P	2FP	TBP	NBZ	PHL	TPH	
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)	
240-12752-4	FWG-IDW-TANK3-GW	43	12	71	45	42	75	

Surrogate Legend

FBP = 2-Fluorobiphenyi (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

#### Method: 8081A - Organochlorine Pesticides (GC)

Prep Type: Total/NA Matrix: Solid

Lab Sample ID         Client Sample ID         DCB1 (32-176)         DCB2 (32-175)         TCX1 TCX2 (24-150)           240-12752-3         FWG-IDW-SBCOMP3-SO         97         110         95         91					Percent Sur	rrogate Reco
240-12752-3 FWG-IDW-SBCOMP3-SO 97 110 95 91			DCB1	DCB2	TCX1	TCX2
	Lab Sample ID	Client Sample ID	(32-176)	(32-175)	(24-150)	(24-150)
and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	240-12752-3	FWG-IDW-SBCOMP3-SO	97	110	95	91
LCS 240-49758/11-A Lab Control Sample 98 82 110 113	LCS 240-49758/11-A	Lab Control Sample	98	82	110	113
MB 240-49756/10-A Method Blank 93 104 180 X	MB 240-49756/10-A	Method Blank		93	104	180 X
	Surrogate Legend					

DCB = DCB Decachlorobiphenyl

TCX ≈ Tetrachloro-m-xylene

#### Method: 8081A - Organochlorine Pesticides (GC)

Prep Type: TCLP Matrix: Solid

•				Percent Sur	rogate Reco	very (Acceptance Limits)	
		TCX1	TCX2	DCB1	DCB2		
Lab Sample ID	Client Sample ID	(46-122)	(46-122)	(34-141)	(34-141)		 
240-12752-3	FWG-IDW-SBCOMP3-SO	77	74	102	100		

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

				Percent Sur	rrogate Rec
		DCB1	DCB2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(10-145)	(10-145)	(30-141)	(30-141)
240-12752-4	FWG-IDW-TANK3-GW	79	66	88	82
LCS 240-49B15/3-A	Lab Control Sample	56	48	96	90
MB 240-49615/2-A	Method Blank	94	86	63	76
Surrogate Legend					

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Prep Type: Total/NA Matrix: Water

				Percent Sur	rrogate Reco	overy (Acceptance Limits)
		DCB1	DCB2	TCX1	TCX2	
Lab Sample ID	Client Sample ID	(34-141)	(34-141)	(46-122)	(46-122)	
LCS 240-49705/8-A	Lab Control Sample	В9	93	70	65	
MB 240-49705/7-A	Method Blank	93	92	65	61	

Surrogate Legend

DCB = DCB Decach!orobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Prep Type: TCLP Matrix: Water

				Percent Su	rrogate Reco	very (Acceptance Limits)
		TCX1	TCX2	DCB1	DCB2	
Lab Sample ID	Client Sample ID	(46-122)	(46-122)	(34-141)	(34-141)	
240-12752-4	FWG-IDW-TANK3-GW	71	68	90	68	
l						

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Prep Type: Total/NA Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		TCX1	DCB1	
Lab Sample ID	Client Sample ID	(29-151)	(14-163)	
240-12752-3	FWG-IDW-SBCOMP3-SO	60	58	
LCS 240-49755/20-A	Lab Control Sample	62	67	
MB 240-49755/19-A	Method Blank	69	66	
Surrogate Legend				

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Project/Site: RVAAP (OH) - IDW

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Prep Type: Total/NA Matrix: Water

				Percent Surrogate Recovery (Acceptance Limits)
		TCX1	DCB1	
Lab Sample ID	Client Sample ID	(23-136)	(10-130)	
240-12752-4	FWG-IDW-TANK3-GW	74	62	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
LCS 240-49612/12-A	Lab Control Sample	70	71	
MB 240-49612/11-A	Method Blank	72	81	
Surrogate Legend				
TCX = Tetrachtoro-m-xy	lene			
DCB = DCB Decachloro	binhenvi			

Method: 8151A - Herbicides (GC)

Prep Type: TCLP Matrix: Solid

f				Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCPA1 (37-116)	DCPA2 (37-116)	
240-12752-3	FWG-IDW-SBCOMP3-SO	53	63	
Surrogate Legend				
DCPA = 2,4-Dichloroph	enylacetic acid			

Method: 8151A - Herbicides (GC)

Prep Type: Total/NA Matrix: Water

				Percent Surrogate Recovery (Acceptance Limits)
		DCPA1	DCPA2	
Lab Sample ID	Client Sample ID	(37-116)	(37-116)	
LCS 240-49707/8-A	Lab Control Sample	55	86	
MB 240-49707/7-A	Method Blank	51	57	
Surrogate Legend				
DCPA = 2,4-Dichloroph	ienylacetic acid			

Method: 8151A - Herbicides (GC)

Matrix: Water

			P	ercent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCPA1 (37-116)	DCPA2 (37-116)	
240-12752-4	FWG-IDW-TANK3-GW	52	58	
Surrogate Legend				
DCPA = 2,4-Dichloroph	enylacetic acid			

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Prep Type: Total Matrix: Water

			Percent Surrogate Recovery (Acceptance Limits)
		DNT	
Lab Sample ID	Client Sample ID	(79-111)	
240-12752-4	FWG-IDW-TANK3-GW	101	
G2G030000016B	Method Blank	101	
G2G030000016C	Lab Contro! Sample	105	
Surrogate Legend			

Prep Type: TCLP

# **Surrogate Summary**

Client: Environmental Quality Mgt., Inc.

TestAmerica Job ID: 240-12752-1

Project/Site: RVAAP (OH) - IDW

DNT = 3,4-Dinitrotoluene

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)	

Prep Type: Total Matrix: Solid

			Percent Surrogate Recovery (Acceptance Limits)
		DNT	
Lab Sample ID	Client Sample ID	(76-116)	
240-12752-3	FWG-IDW-SBCOMP3-SO	99	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	101	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	101	
G2G090000108B	Method Blank	102	
G2G090000108C	Lab Control Sample	100	
Surrogate Legend			

DNT = 3,4-Dinitrotoluene

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

# Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: Method Blank Lab Sample ID: MB 240-49421/6 Prep Type: Total/NA Matrix: Solid

Analysis Batch: 49421									
		MB	DI.	uni	11=:4	<b>D</b>	Decorated	Analyzed	Dil Fac
Analyte		Qualifier U	5.0	0.58	Unit	D _	Prepared	06/29/12 13:33	1
1,1,1-Trichloroethane	5.0 5.0		5.0 5.0		ug/Kg			06/29/12 13:33	1
1,1,2,2-Tetrachloroethane	5.0		5.0 5.0		ug/Kg ug/Kg			06/29/12 13:33	1
1,1,2-Trichloroethane			5.0	4.4	ug/Kg ug/Kg			06/29/12 13:33	1
1,1-Dichloroethane	5.0							06/29/12 13:33	1
1,1-Dichloroethene	5.0		5.0		ug/Kg			06/29/12 13:33	1
1,2-Dichloroethane	5.0		5.0		ug/Kg			06/29/12 13:33	1
1,2-Dichloroethene, Total	10	-	10		ug/Kg			06/29/12 13:33	1
1,2-Dichloropropane	5.0		5.0		ug/Kg			06/29/12 13:33	1
2-Butanone (MEK)	20		20	1.4	ug/Kg				1
2-Hexanone	1.06		20		ug/Kg			06/29/12 13:33	
4-Methyl-2-pentanone (MIBK)	20	U	20		ug/Kg			06/29/12 13:33	1
Acetone	25.2		20		ug/Kg			06/29/12 13:33	1
Benzene	5.0		5.0	0.23	ug/Kg			06/29/12 13:33	1
Bromoform	5.0		5,0		ug/Kg			06/29/12 13:33	1
Bromomethane	5.0		5.0		ug/Kg			06/29/12 13:33	1
Carbon disulfide	3,36		5.0		ug/Kg			06/29/12 13:33	1
Carbon tetrachtoride	5.0	U	5.0	0.37				06/29/12 13:33	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			06/29/12 13:33	1
Chloromethane	5.0	υ	5.0	0.41	ид/Кд			06/29/12 13:33	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.36	ug/Kg			06/29/12 13:33	1
cis-1,3-Dichloropropene	5.0	υ	5.0	0.34	ug/Kg			08/29/12 13:33	1
Dibromochloromethane	5.0	Ü	5.0	0.55	ug/Kg			06/29/12 13:33	1
Bromodichloromethana	5.0	U	5.0	0.28	ug/Kg			08/29/12 13:33	1
Ethylbenzene	5.0	U	5,0	0.28	ug/Kg			06/29/12 13:33	1
Methylene Chloride	1.78	J	5.0	0.67	ug/Kg			08/29/12 13:33	1
m-Xylene & p-Xylene	10	υ	10	1.2	ug/Kg			06/29/12 13:33	1
o-Xylene	5.0	U	5.0	0.35	ug/Kg			06/29/12 13:33	1
Styrene	0.192	J	5.0	0.15	ug/Kg			06/29/12 13:33	1
Tetrachloroethene	5.0	υ	5.0	0.52	ug/Kg			06/29/12 13:33	1
Toluene	5.0	U	5.0	0.27	ug/Kg			06/29/12 13:33	1
trans-1,2-Dichloroethene	5.0	υ	5.0	0.41	ug/Kg			06/29/12 13:33	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.54	ug/Kg			06/29/12 13:33	1
Trichloroethene	5.0	U	5,0	0.42	ug/Kg			06/29/12 13:33	1
Vinyl chlonde	5.0	ΰ	5.0	0.39	ug/Kg			06/29/12 13:33	1
Xylenes, Total	10	U	10	0.67	ug/Kg			06/29/12 13:33	1
Chloroform	5.0	υ	5.0	0.29	ug/Kg			06/29/12 13:33	1
Bromochloromethane	5.0	U	5.0	0.71	ug/Kg			06/29/12 13:33	1
1,2-Dibromoethane	5.0	U	5.0	0,50	ug/Kg			06/29/12 13:33	1
Chloroethane	5.0	U	5.0	0.86	ug/Kg			06/29/12 13:33	1
	MB	МВ							
Surrogate	%Recovery		Limits				Prepared	Analyzed	Dii Fac
1,2-Dichloroethane-d4 (Surr)	95		58 - 123			_		06/29/12 13:33	1
Toluene-d8 (Surr)	98		67 ₋ 125					06/29/12 13:33	1

	MB I	MB			
Surrogate	%Recovery (	Qualifier	Limits	Prepared Analys	zed Dli Fac
1,2-Dichloroethane-d4 (Surr)	95		58 - 123	06/29/12	13:33 1
Toluene-d8 (Surr)	98		67 ₋ 125	06/29/12	13:33 1
4-Bromofluorobenzene (Surr)	91		52 - 136	06/29/12	13:33 1
Dibromofluoromethane (Surr)	91		37 - 132	06/29/12	13:33 1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49421/5

Matrix: Solid

Analysis Batch: 49421

Client Sample ID: Lab Control Sample Prep Type: Total/NA

•	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	50.0	50.7	·	ug/Kg		101	77 - 126
1,1,2,2-Tetrachloroethane	50.0	53.6		ug/Kg		107	77 - 123
1,1,2-Trichloroethane	50.0	55.3		ug/Kg		111	83 - 112
1,1-Dichloroethane	50.0	56.2		ug/Kg		112	76 - 115
1,1-Dichloroethene	50.0	59.6		ug/Kg		119	75 - 135
1,2-Dichloroethane	50.0	54.9		ug/Kg		110	72 - 120
1,2-Dichloroethene, Total	100	108		ug/Kg		108	78 ₋ 115
1,2-Dichloropropane	50.0	55.1		ug/Kg		110	67 - 113
2-Butanone (MEK)	100	105		ug/Kg		105	52 ₋ 131
2-Hexanone	100	106		ug/Kg		106	64 - 136
4-Methyl-2-pentanone (MIBK)	100	118		ug/Kg		118	67 _ 135
Acetone	100	128		ug/Kg		128	41 - 137
Benzene	50.0	53.8		ug/Kg		108	79 - 112
Bromoform	50.0	46.8		ug/Kg		94	62 _ 133
Bromomethane	50.0	49.0		ug/Kg		98	42 - 136
Carbon disulfide	50.0	45.8		ug/Kg		92	62 - 146
Carbon tetrachloride	50.0	51.2		ug/Kg		102	71 _ 129
Chlorobenzene	50.0	52.5		ug/Kg		105	78 - 110
Chloromethane	50.0	53.0		ug/Kg		106	50 - 110
cis-1,2-Dichloroethene	50.0	53.0		ug/Kg		106	76 - 113
cis-1,3-Dichloropropene	50.0	46.9		ug/Kg		94	74 - 128
Dibromochloromethane	50.0	48.4		ug/Kg		97	72 - 127
Bromodichloromethane	50.0	49.4		ug/Kg		99	84 - 122
Ethylbenzene	50.0	53.8		ug/Kg		108	79 - 117
Methylene Chloride	50.0	53.7		ug/Kg		107	75 - 118
m-Xylene & p-Xylene	100	106		ug/Kg		106	80 - 117
o-Xylene	50.0	55,3		ug/Kg		111	80 _ 120
Styrene	50.0	52.8		ug/Kg		106	87 - 117
Tetrachtoroethene	50.0	54.2		ug/Kg		108	79 - 114
Toluene	50.0	50.8		ug/Kg		102	75 ₋ 111
trans-1,2-Dichloroethene	50.0	55.3		ug/Kg		111	76 - 117
trans-1,3-Dichloropropene	50.0	50.6		ug/Kg		101	73 - 131
Trichloroethene	50.0	55.2		ug/Kg		110	79 - 113
Vinyl chlorids	50.0	53.1		ug/Kg		106	57 - 114
Xylenes, Total	150	161		ug/Kg		108	80 - 118
Chloroform	50.0	54.2		ug/Kg		108	77 - 114
Bromochloromethane	50.0	53.0		ug/Kg		106	79 - 111
1,2-Dibromoethane	50.0	51.4		ug/Kg		103	83 - 117
				- 00			

100	100
LCS	LÇS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		58 - 123
Toluene-d8 (Surr)	99		67 - 125
4-Bromofluorobenzene (Surr)	94		52 - 136
Dibromofluoromethane (Surr)	95		37 - 132

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49814/10

Matrix: Water

Analysis Batch: 49814

Client Sample ID: Lab Control Sample Prep Type: Total/NA

·	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	Ð	%Rec	Limits	
1,1-Dichloroethene	1,00	1,06		mg/L		106	71 - 133	
1,2-Dichloroethane	1.00	0.970		mg/L		97	81 - 114	
2-Bulanone (MEK)	2.00	1.91		mg/L		95	49 - 120	
Benzene	1.00	0.955		mg/L		98	84 - 120	
Carbon tetrachloride	1.00	1.09		mg/L		109	54 - 122	
Chlorobenzene	1.00	0.950		mg/L		95	86 - 111	
Tetrachloroethene	1.00	1.04		mg/L		104	79 - 134	
Trichloroethene	1.00	1.05		mg/L		105	76 - 130	
Vinyl chloride	1.00	0.955		mg/L		96	56 - 111	
Chloroform	1.00	0.960		mg/L		96	87 - 123	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		80 - 121
Toluene-d8 (Surr)	107		90 - 115
4-Bromofluorobenzene (Surr)	93		70 - 124
Dibromofluoromethane (Surr)	119		84 - 128

Lab Sample ID: LCS 240-50127/12

Matrix: Solid

Vinyl chloride Chloroform

Analysis Batch: 50127

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Allarysis Batolii 00121	Spike	LCS	LCS		%Rec.
Analyte	Added	Result	Qualifier Unit	D %Rec	Limits
1,1-Dichloroethene	1.00	1.04	mg/L	104	71 _ 133
1,2-Dichloroethane	1.00	0.955	mg/L	98	81 - 114
2-Butanone (MEK)	2.00	1.53	mg/L	76	49 _ 120
Benzene	1.00	0.920	mg/L	92	84 - 120
Carbon tetrachloride	1.00	1.08	mg/L	108	54 - 122
Chlorobenzene	1.00	0.940	mg/L	94	86 - 111
Tetrachloroethene	1.00	1.06	mg/L	106	79 - 134
Trichloroethene	1.00	1.05	mg/L	105	78 - 130
Vinvl chloride	1.00	0.970	mg/L	97	56 - 111
Chloreform	1.00	0.935	ma/l	94	87 - 123

LCS LCS

Surrogate	%Recovery	Qualifler	Limits
1,2-Dichloroethane-d4 (Surr)	109		80 - 121
Toluene-d8 (Surr)	107		90 - 115
4-Bromofluorobenzene (Surr)	95		70 - 124
Dibromofluoromethane (Surr)	116		84 - 128

Lab Sample ID: MB 240-50324/5

Analysis Batch: 50324

Matrix: Water

Client Sample ID: Method Blank

Prep Type: Total/NA

,	мв мв					
Analyte R	esult Qualifler	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
1,1,1-Trichlorcethane	1.0 U	1.0	0.22 ug/L		07/10/12 10:57	1
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0,18 ug/L		07/10/12 10:57	1
1,1,2-Trichtoroethane	1.0 U	1.0	0.27 ug/L		07/10/12 10:57	1
1.1-Dichloroethane	1,0 U	1.0	0.15 ug/L		07/10/12 10:57	1
1.1-Dichloroethene	1.0 U	1.0	0.19 ug/L		07/10/12 10:57	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-50324/5

Matrix: Water

Analysis Batch: 50324

MB MB

MB MB

	MB	MB							
Analyte	Result	Qualifler	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 10:57	. 1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			07/10/12 10:57	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 10:57	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			07/10/12 10:57	1
2-Hexanone	10	Ú	10	0.41	ug/L			07/10/12 10:57	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 10:57	1
Acetone	10	U	10	1.1	ug/l.			07/10/12 10:57	1
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
Bromoform	1.0	U	1.0	0.64	ug/L			07/10/12 10:57	1
Bromomethane	1.0	U	1.0	0.41	ug/L			07/10/12 10:57	1
Carbon disulfide	1.0	Ú	1.0	0.13	ug/L			07/10/12 10:57	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
Chiorobenzene	1.0	U	1.0	0.15	ug/L			07/10/12 10:57	1
Chloromethane	1.0	Ü	1.0	0.30	ug/L			07/10/12 10:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 10:57	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			07/10/12 10:57	1
Dibromochloromethane	1.0	Ü	1.0	0.18	ug/L			07/10/12 10:57	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			07/10/12 10:57	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			07/10/12 10:57	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			07/10/12 10:57	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			07/10/12 10:57	1
o-Xylene	1.0	U	1.0	0.14	ug/L			07/10/12 10:57	1
Styrene	1.0	U	1.0	0.11	ug/L.			07/10/12 10:57	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			07/10/12 10:57	1
Toluene	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
trans-1,2-Dichloroethene	1.0	Ü	1.0	0.19	ug/L			07/10/12 10:57	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			07/10/12 10:57	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 10:57	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			07/10/12 10:57	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			07/10/12 10:57	1
Chloroform	1.0	U	1.0	0.16	ug/L			07/10/12 10:57	1
Bromochloromethane	1.0	Ú	1.0	0.29	ug/L			07/10/12 10:57	1
1.2-Dibromoethane	1.0	U	1.0	0.24	ug/L			07/10/12 10:57	1
Chloroethane	1.0	U	1.0	0.29	ug/L			07/10/12 10:57	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		63 _ 129		07/10/12 10:57	1
Toluene-d8 (Suπ)	99		74 - 115		07/10/12 10:57	1
4-Bromofluorobenzene (Surr)	96		66 - 117		07/10/12 10:57	1
Dibromofluoromethane (Surr)	96		75 - 121		07/10/12 10:57	1

Lab Sample ID: LCS 240-50324/4

Matrix: Water

Analysis Batch: 50324

	Allalysis Datell. 30324	Spike	LCS	LCS				%Rec.	
1	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
l	1,1,1-Trichloroethane	10.0	9.85		ug/L		99	74 - 118	
ŀ	1,1,2,2-Tetrachloroethane	10.0	9.37		ug/L		94	68 - 118	
t	1,1,2-Trichloroethene	10,0	10.4		ug/L		104	80 - 112	

TestAmerica Canton 7/16/2012

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-50324/ Matrix: Water Analysis Batch: 50324	4						Client	i Sample	ID: Lab Control Samp Prep Type: Total/N
Analysis Batch: 50324			Spike Added		LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane			10,0	10.0		ug/L		100	82 - 115
1,1-Dichloroethene		•	10.0	11.0		ug/L		110	78 - 131
1,2-Dichloroethane			10.0	9.62		ug/L		96	71 - 127
1,2-Dichloroethene, Total			20,0	20.3	-	ug/L	•	101	82 - 114
1,2-Dichloropropane			10.0	10.1		ug/L		101	81 - 115
2-Butanone (MEK)			20.0	17.8		ug/L		89	60 ₋ 126
2-Hexanone		•	20.0	18.8		ug/L	* *	94	55 - 133
4-Methyl-2-pentanone (MIBK)			20.0	17.9		ug/L		90	63 - 128
Acetone			20.0	20.5		ug/L		103	43 - 138
Benzene			10.0	9,92		ug/L		99	83 - 112
Bromoform			10.0	10.9		ug/L		109	40 - 131
Bromomethane			10.0	9.21		ug/L		92	11 - 185
Carbon disulfide			10.0	10,3		ug/L		103	82 - 142
Carbon tetrachloride			10.0	10.5		ug/L		105	66 - 128
Chlorobenzene			10.0	9.78		ug/L		98	85 - 110
Chloromethane			10.0	9.04		ug/L		90	44 - 128
cis-1,2-Dichloroethene			10.0	9.58		ug/L		96	80 - 113
cis-1,3-Dichloropropene			10.0	9,65		ug/L		97	61 - 115
Dibromochloromethane			10.0	10.7		ug/L		107	64 - 119
Bromodichloromethane			10.0	10.3		ug/L		103	72 - 121
Ethylbenzene			10.0	9,93		ug/L		99	83 _ 112
Methylene Chloride			10.0	10.6		ug/L		106	66 - 131
m-Xylene & p-Xylene			20.0	20.0		ug/L		100	83 - 113
o-Xylene			10.0	9.96		ug/L		100	83 - 113
Styrene			10.0	10.2		ug/L		102	79 - 114
Tetrachloroethene			10.0	10.1		ug/L		101	79 - 114
Toluene			10.0	10.2		ug/L		102	84 - 111
trans-1,2-Dichloroethene			10.0	10.7		ug/L		107	83 - 117
trans-1,3-Dichloropropene			10.0	10.2		ug/L		102	58 ₋ 117
Trichloroethene			10.0	9.78		ug/L		98	76.117
Vinyl chloride			10.0	9.16		ug/L		92	53 - 127
•			30.0	30.0		ug/L		100	83 - 112
Xylenes, Total			10.0	9.56		ug/L		96	79 - 117
Chloroform			10.0	9.68		ug/L		97	77 ₋ 120
Bromochloromethane			10.0	9,84		ug/L		98	79 - 113
1,2-Dibromoethane			10.0	9.75		ug/L		98	25 - 153
Chloroethane			10.0	9.70		ugru		•	207100
	LCS	LCS							
Surrogate	%Песочегу	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	96	-	63 - 129						
Toluene-d8 (Sun)	104		74 - 115						
4-Bromofluorobenzene (Surr)	103		66 - 117						
Dibromofluoromethane (Surr)	99		75 - 121						

Matrix: Water

Analysis Batch: 49814									
-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0,025	Ü	0.025	0.0095				07/03/12 21:21	1

TestAmerica Canton 7/16/2012

Prep Type: TCLP

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 240-49660/1-A MB

Matrix: Water

Analysis Batch: 49814

Client Sample ID: Method Blank Prep Type: TCLP

MB	MB							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0,025	U	0,025	0.011	mg/L	,		07/03/12 21:21	1
0.25	U	0.25	0,029	mg/L			07/03/12 21:21	1
0.025	Ú	0,025	0.0065	mg/L			07/03/12 21:21	1
0.025	U	0.025	0.0065	mg/L			07/03/12 21:21	1
0.025	U	0.025	0.0075	mg/L			07/03/12 21:21	1
0,025	U	0.025	0.015	mg/L			07/03/12 21:21	1
0.025	U	0.025	0,0085	mg/L			07/03/12 21:21	1
0,025	U	0.025	0.011	mg/L			07/03/12 21:21	1
0.025	U	0,025	0.0080	mg/L			07/03/12 21:21	1
	Result 0.025 0.25 0.025 0.025 0.025 0.025 0.025 0.025	MB MB Result Qualifier  0.025 U 0.025 U 0.025 U 0.025 U 0.025 U 0.025 U 0.025 U 0.025 U 0.025 U 0.025 U	Result         Qualifier         RL           0.025         U         0.025           0.25         U         0.25           0.025         U         0.025           0.025         U         0.025           0.025         U         0.025           0.025         U         0.025           0.025         U         0.025           0.025         U         0.025           0.025         U         0.025	Result         Qualifier         RL         MDL           0.025         U         0.025         0.011           0.25         U         0.25         0.029           0.025         U         0.025         0.0065           0.025         U         0.025         0.0065           0.025         U         0.025         0.0075           0.025         U         0.025         0.015           0.025         U         0.025         0.0085           0.025         U         0.025         0.0011	Result         Qualifier         RL         MDL         Unit           0.025         U         0.025         0.011         mg/L           0.25         U         0.25         0.029         mg/L           0.025         U         0.025         0.0065         mg/L           0.025         U         0.025         0.0065         mg/L           0.025         U         0.025         0.0075         mg/L           0.025         U         0.025         0.015         mg/L           0.025         U         0.025         0.0085         mg/L           0.025         U         0.025         0.011         mg/L	Result         Qualifier         RL         MDL         Unit         D           0.025         U         0.025         0.011         mg/L         mg/L           0.25         U         0.25         0.029         mg/L           0.025         U         0.025         0.0065         mg/L           0.025         U         0.025         0.0065         mg/L           0.025         U         0.025         0.0075         mg/L           0.025         U         0.025         0.015         mg/L           0.025         U         0.025         0.0085         mg/L           0.025         U         0.025         0.011         mg/L	Result         Qualifier         RL         MDL         Unit         D         Prepared           0.025         U         0.025         0.011         mg/L         Frepared           0.025         U         0.25         0.029         mg/L         Frepared           0.025         U         0.025         0.0065         mg/L         Frepared           0.025         U         0.025         0.0065         mg/L         Frepared           0.025         U         0.025         0.0065         mg/L         Frepared           0.025         U         0.025         0.0075         mg/L         Frepared           0.025         U         0.025         0.015         mg/L         Frepared           0.025         U         0.025         0.015         mg/L         Frepared           0.025         U         0.025         0.0085         mg/L         Frepared           0.025         U         0.025         0.011         mg/L	Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed           0.025         U         0.025         0.011         mg/L         07/03/12 21:21           0.025         U         0.25         0.029         mg/L         07/03/12 21:21           0.025         U         0.025         0.0065         mg/L         07/03/12 21:21           0.025         U         0.025         0.0065         mg/L         07/03/12 21:21           0.025         U         0.025         0.0075         mg/L         07/03/12 21:21           0.025         U         0.025         0.015         mg/L         07/03/12 21:21           0.025         U         0.025         0.0085         mg/L         07/03/12 21:21           0.025         U         0.025         0.0085         mg/L         07/03/12 21:21           0.025         U         0.025         0.0085         mg/L         07/03/12 21:21

мв мв

ı	Surrogate	%Recovery Qua	alifier Limits	Prepared	Analyzed	Dil Fac
ı	1,2-Dichloroethane-d4 (Surr)	107	80 - 121		07/03/12 21:21	1
ı	Toluene-d8 (Surr)	105	90 - 115		07/03/12 21:21	1
ı	4-Bromofluorobenzene (Surr)	92	70 - 124		07/03/12 21:21	1
ı	Dibromofluoromethane (Surr)	113	84 - 128		07/03/12 21:21	1

Lab Sample ID: 240-12752-4 MS

Matrix: Water

Analysis Batch: 49814

Client Sample ID: FWG-IDW-TANK3-GW

Prep Type: TCLP

,	Sample	Sample	Spike	MS	MS			%Rec.	
Analyte	Result	Qualifier	Added	Added Result Q	Qualifier	Unit	D %Rec	Limits	
1,1-Dichloroethene	0,025	Ü	1.00	1.02		mg/L	102	67 - 139	
1,2-Dichloroethane	0.025	U	1.00	0.930		mg/L	93	80 - 115	
2-Butanone (MEK)	0.25	U	2.00	1.80		mg/L	90	49 - 117	
Benzene	0.025	U	1.00	0.910		mg/L	91	85 _ 119	
Carbon tetrachloride	0.025	U	1.00	0.975		mg/L	98	60 - 110	
Ch!orobenzene	0,025	U	1.00	0.915		mg/L	92	85 - 113	
Tetrachloroethene	0.025	Ü	1.00	1.01		mg/L	101	74 - 138	
Trichloroethene	0.025	U	1.00	1.03		mg/L	103	75 - 134	
Vinyl chloride	0.025	U	1.00	0.925		mg/L	93	51 - 118	
Chloroform	0.025	U	1.00	0.915		mg/L	92	86 - 124	

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	113		80 - 121
Toluene-d8 (Sun)	108		90_115
4-Bromofluorobenzene (Surr)	98		70 ₋ 124
Dibromofluoromethane (Surr)	116		84 - 128

Lab Sample ID: 240-12752-4 MSD

Matrix: Water

Analysis Batch: 49814

Client Sample ID: FWG-IDW-TANK3-GW

Prep Type: TCLP

Analysis Batch: 49814	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.025	Ū .	1.00	1.02	•	mg/L		102	67 - 139	0	30
1,2-Dichloroethane	0,025	U	1.00	0.905		mg/L		91	80 - 115	3	30
2-Butanone (MEK)	0.25	U	2.00	1.95		mg/L		98	49 - 117	8	30
Велхеле	0,025	U	1.00	0,925		mg/L		93	85 - 119	2	30
Carbon tetrachloride	0,025	U	1.00	1.04		mg/L		104	60 - 110	6	30
Chlorobenzene	0.025	U	1.00	0.935		mg/L		94	85 - 113	2	30

Prep Type: TCLP

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-12752-4 MSD Client Sample ID: FWG-IDW-TANK3-GW

Matrix: Water Analysis Batch: 49814

%Rec. Spike MSD MSD Sample Sample RPD Limit %Rec Limits Result Qualifier Added Result Qualifier Unît Analyte 30 74 - 138 5 Tetrachloroethene 0.025 Ū 1.00 1.06 mg/L 106 30 Trichloroethene 0.025 U 1.00 1.03 mg/L 103 75 _ 134 0 51 - 118 1 30 Vinyl chloride 0.025 U 1.00 0.915 mg/L 92 95 86 - 124 3 Chloroform 0.025 U 1.00 0.945 mg/L

MSD MSD Limits %Recovery Qualifier Surrogate 80 - 121 1,2-Dichloroethane-d4 (Surr) 107 109 90 - 115 Toluene-d8 (Suπ) 70 - 124 97 4-Bromofluorobenzene (Surr) 84 - 128 Dibromofluoromethane (Surr) 118

Lab Sample ID: LB 240-49973/1-A MB

Matrix: Solid

Toluene-d8 (Suπ)

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Analysis Batch: 50127

Client Sample ID: Method Blank

Prep Type: TCLP

07/06/12 20:29

07/06/12 20:29

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0,0095	mg/L			07/06/12 20:29	1
1,2-Dichloroethane	0,025	U	0.025	0.011	mg/L			07/06/12 20:29	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/06/12 20:29	1
Benzene	0,025	U	0.025	0.0085	mg/L			07/06/12 20:29	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			07/06/12 20:29	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/08/12 20:29	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/06/12 20:29	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/08/12 20:29	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/06/12 20:29	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/06/12 20:29	1
	мв	мв							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dii Fac
1,2-Dichloroethane-d4 (Surr)	102	241144,222,011	80 - 121			_		07/06/12 20:29	1
Toluene-d8 (Surr)	106		90 - 115					07/06/12 20:29	1

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

97

116

Client Sample ID: Method Blank Lab Sample ID: MB 240-49608/13-A Prep Type: Total/NA Matrix: Water Prep Batch: 49608

70 - 124

84 - 128

Analysis Batch: 50188

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.20	Ū	0.20	0,10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Acenaphthylene	0,20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzolalanthracene	0.20	Ű	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzoic acid	25	U	25	10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzo(k)fluoranthene	0,20	Ú	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		07/02/12 11:43	07/09/12 10:05	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/02/12 11:43	07/09/12 10:05	1

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49608/13-A

Matrix: Water

Analysis Batch: 50188

Client Sample ID: Method Blank
Prep Type: Total/NA
Drop Ratch: 40608

Analysis Batch: 50188	МВ	МВ							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Bromophenyl phenyl ether	2.0	Ü	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Butyl benzyl phthalete	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dimethylphenol	2.0	Ű	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 10:05	1
4,6-Dinitro-2-methylphenol	5,0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dinitrophenol	5.0	Ü	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dinitrotoluene	5.0	U	5.0	0,27	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Fluoranthene	0.20	Ü	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Fluorene	0.20		0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachtorobenzene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachiorobutadiene	1.0		1.0	0.27	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachtorocyclopentadiene	10		10	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachloroethane	1.0		1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
N-Nitrosodiphenylamine	1.0		1.0	0.31	ug/L		07/02/12 11:43	07/09/12 10:05	1
N-Nitrosodi-n-propylamine	1.0		1.0	0.80	-		07/02/12 11:43	07/09/12 10:05	1
1,4-Dichlorobenzene	1.0		1.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Chloronaphthalene	1.0		1.0	0,10	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Chlorophenol	1.0		1.0	0.29	-		07/02/12 11:43	07/09/12 10:05	1
4-Chlorophenyl phenyl ether	2,0		2.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
Chrysene	0.20		0,20	0.10	•		07/02/12 11:43	07/09/12 10:05	1
Dibenz(a,h)anthracene	0,20		0.20	0.10	-		07/02/12 11:43	07/09/12 10:05	1
Dibenzofuran	1.0		1.0	0.10	_		07/02/12 11:43	07/09/12 10:05	1
Benzo(g,h,i]perylene	0.20		0.20		ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzo(a)pyrene	0.20		0.20	0.10	_		07/02/12 11:43	07/09/12 10:05	1
Di-n-butyl phthalate	1.0		1.0	0.67	-		07/02/12 11:43	07/09/12 10:05	1
1,2-Dichlorobenzene	1,0		1.0	0.29	-		07/02/12 11:43	07/09/12 10:05	1
1,3-Dichlorobenzene	1.0		1.0	0.80	_		07/02/12 11:43	07/09/12 10:05	1
3,3'-Dichlorobenzidine	5.0		5.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dichlorophenol	2.0		2.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
Diethyl phthalate	1.0		1.0	0.60	_		07/02/12 11:43	07/09/12 10:05	1
Indeno[1,2,3-cd]pyrene	0.20		0.20	0.10	-		07/02/12 11:43	07/09/12 10:05	1
Isophorone	1.0		1.0	0.27	_		07/02/12 11:43	07/09/12 10:05	1
2-Methylnaphthalene	0,20		0.20	0.10			07/02/12 11:43	07/09/12 10:05	1
2-Methylphenol	1.0		1.0	0.80	_		07/02/12 11:43	07/09/12 10:05	1
Naphthalene	0.20		0.20	0.10			07/02/12 11:43	07/09/12 10:05	1
2-Nitroaniline	2.0		2.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
3-Nitroaniline	2.0		2.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Nitroaniline	2.0		2.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
	1.0		1.0	0.040			07/02/12 11:43	07/09/12 10:05	1
Nitrobenzene	2.0		2.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Nitrophenol	5.0		5.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Nitrophenol	0.20		0.20	0.10			07/02/12 11:43	07/09/12 10:05	1
Pyrene Restachlerenhesel	5.0		5.0	2.4	=		07/02/12 11:43	07/09/12 10:05	1
Pentachlorophenol	0.20	-	0.20	0.10			07/02/12 11:43	07/09/12 10:05	1
Phenanthrene	1.0		1.0		ug/L ug/L		07/02/12 11:43	07/09/12 10:05	1
1,2,4-Trichlorobenzene	5.0		5.0	0.28			07/02/12 11:43	07/09/12 10:05	1
2,4,5-Trichlorophenol	5.0		5.0 5.0	0.80			07/02/12 11:43	07/09/12 10:05	1
2,4,6-Trichlorophenol	5.0	U	0.0	0.00	~g. c		31, IN 1111V		1

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49608/13-A

Matrix: Water

Analysis Batch: 50188

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49608

	WR	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	1.0	U	1.0	0,28	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chloroaniline	2.0	Ü	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/02/12 11:43	07/09/12 10:05	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Di-n-octyl phthalate	1.0	Ü	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		07/02/12 11:43	07/09/12 10:05	1

	МВ	мв				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	14	X	28 - 110	07/02/12 11:43	07/09/12 10:05	1
2-Fluorophenol (Surr)	17		10-110	07/02/12 11:43	07/09/12 10:05	1
2,4,6-Tribromophenol (Surr)	16	X	22 - 120	07/02/12 11:43	07/09/12 10:05	1
Nitrobenzene-d5 (Sun)	13	X	27 - 111	07/02/12 11:43	07/09/12 10:05	1
Phenol-d5 (Surr)	18		10 - 110	07/02/12 11:43	07/09/12 10:05	1
Terphenyl-d14 (Surr)	19	X	37 - 119	07/02/12 11:43	07/09/12 10:05	1

Lab Sample ID: LCS 240-49608/14-A

Matrix: Water

Analysis Batch: 50188

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49608

	Analysis Batch: 50766							1 TOP BUTO	
	Analysis Batom so res	Spike	LCS	LCS				%Rec.	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Acenaphthene	20.0	14.1		ug/L		70	40 - 110	
	Acenaphthylene	20.0	14.2		ug/L		71	43 - 110	
	Anthracene	20.0	15.4		ug/L		77	54 - 114	
	Benzolalanthracene	20.0	14.6		ug/L		73	55 ₋ 115	
	Benzoic acid	20.0	25	U	ug/L		35	10 - 129	
	Benzo[b]fluoranthene	20.0	14.6		ug/L		73	43 - 122	
	Benzo[k]fluoranthene	20.0	15.7		ug/L		78	43 _ 124	
	Benzyl alcohol	20.0	12.9		ug/L		65	10 - 130	
	Bis(2-chloroethoxy)methane	20.0	11.7		ug/L		59	39 _ 110	
i	Bis(2-chloroethyl)ether	20.0	11.9		ug/L		59	34 - 113	
	4-Bromophenyl phenyl ether	20.0	13.6		ug/L		68	51 _ 114	
	Butyl benzyl phthalate	20,0	15.7		ug/L		78	53 - 126	
	2,4-Dimethylphenol	20.0	10.8		ug/L		54	12 - 110	
	Dimethyl phthalate	20.0	16.0		ug/L		80	15 - 143	
	4,6-Dinitro-2-methylphenol	20.0	13.1		ug/L		66	28 - 112	
	2,4-Dinitrophenol	20.0	9.54		ug/L		48	17 - 112	
	2,4-Dinitrotoluene	20.0	14.5		ug/L		72	52 ₋ 123	
	2,6-Dinitrotoluene	20.0	14.5		ug/L		73	52 - 119	
	Fluoranthene	20.0	16.1		ug/L		81	54 - 122	
	Fluorene	20.0	15,1		ug/L		75	47 - 112	
	Hexachlorobenzene	20,0	14.8		ug/L		74	51 - 112	
	Hexachlorobutadiene	20.0	10.2		ug/L		51	13 - 110	
	Hexachlorocyclopentadiene	20.0	5.24	J	ug/L		26	10 - 110	
	Hexachloroethane	20.0	11.0		ug/L		55	12 - 110	
	N-Nitrosodiphenylamine	20.0	14.9		ug/Ĺ		75	53 _ 113	
	N-Nitrosodi-n-propylamine	20.0	13.2		ug/L		68	37 - 121	
	1,4-Dichtorobenzene	20.0	12.4		ug/L		62	19 - 110	
	2-Chloronaphthalene	20.0	12.0		ug/L		60	39 _ 110	
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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: Lab Control Sample

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49608/14-A Prep Type: Total/NA Matrix: Water Prep Batch: 49608 Analysis Batch: 50188 Spike LCS LCS %Rec Limits Added Qualifier Unit D Analyte Result 65 27 . 110 20.0 13.1 ug/l. 2-Chlorophenol 20.0 13.3 ug/L 67 50 - 115 4-Chlorophenyl phenyl ether 81 55 - 115 20.0 16.2 ug/L Chrysene 77 46 - 122 20.0 15.3 ug/L Dibenz(a,h)anthracene 20.0 14.6 ug/L 73 46 _ 111 Dibenzofuran 20,0 15.3 ug/L 77 45.120 Benzo[g,h,i]perylene 66 43 - 116 20.0 13.2 ug/L Benzo[a]pyrene 83 55 - 122 Di-n-butyl phthalate 20.0 16.5 ug/L 23 - 110 20,0 11.3 ug/L 56 1,2-Dichlorobenzene 55 19 - 110 20.0 10.9 ug/L 1,3-Dichlorobenzene 53 19 - 110 10.5 ug/L 3,3'-Dichlorobenzidine 20.0 69 33 - 110 20.0 13.7 ug/L 2,4-Dichlorophenol 20.0 18.2 ug/L 81 33 _ 134 Diethyl phthalate ug/L 74 46.121 14.6 20.0 Indeno[1,2,3-cd]pyrene 44 - 128 ug/L 68 20.0 13.6 Isophorone 20,0 ug/L 66 35 - 1102-Methylnaphthalene 20.0 13.3 ug/L 67 30.110 2-Methylphenol ug/L 67 31 - 110 13.3 Naphthalene 20.0 72 43 - 130 20.0 14.4 ug/L 2-Nitroaniline 15.9 ug/L 79 45 - 116 20.0 3-Nitroaniline 16.6 83 45 - 120 20.0 ug/L 4-Nitroaniline 55 37 - 115 20.0 11.0 ug/L Nitrobenzene 20.0 13.4 ug/L 67 29 - 110 2-Nitrophenol 20.0 13.8 ug/L 69 12 - 130 4-Nitrophenol ug/L 75 55 - 120 15.0 20.0 Pyrene 61 26 _ 110 20.0 12.2 ug/L Pentachlorophenol ug/L 79 52 _ 114 20.0 15.7 Phenanthrene ug/L 54 25 - 110 20,0 10.7 1,2,4-Trichlorobenzene 75 39 - 110 20.0 14.9 ug/L 2,4,5-Trichlorophenol 73 35 - 110 14.6 ug/L 20.0 2,4,6-Trichlorophenol ug/L 68 14 - 112 13.5 20.0 Phenol 81 53 - 120 ug/L 18.1 Carbazole 20.0 63 10 - 110ug/L 20.0 12.7 4-Chloroaniline 28.0 ug/L 70 32.110 40.0 3 & 4 Methylphenol 72 38 - 163 14.3 ug/L 20.0 Bis(2-ethylhexyl) phthalate 71 44 - 128 14.2 ug/L Di-n-octyl phthalate 20,0 76 39 - 110 20.0 15.1 ug/L 4-Chloro-3-methylphenol 53 25 _ 128 20.0 ug/L 2,2'-oxybis[1-chloropropane]

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Surrogate	%Recovery	Qualifier	Limits		
2-Fluorobiphenyl (Surr)	57		28 - 110		
2-Fluorophenol (Surr)	65		10 - 110		
2,4,6-Tribromophenol (Surr)	79		22 - 120		
Nitrobenzene-d5 (Surr)	56		27 - 111		
Phenol-d5 (Surr)	71		10 - 110		
Terphenyl-d14 (Surr)	82		37 - 119		

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49701/4-A

Matrix: Solid

Analysis Batch: 49827

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 49701

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* •	naryore zatom 100z.	MB	мв						•	
A	nalyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	ridine	0.020	U	0.020	0,00035	mg/L		07/03/12 09:09	07/04/12 12:12	1
2,	4-Dinitrotoluene	0.020	U	0,020	0.00027	mg/L		07/03/12 09:09	07/04/12 12:12	1
He	exachiorobenzene	0.020	U	0,020	0.00010	mg/L		07/03/12 09:09	07/04/12 12:12	1
H	exachtorobutadiene	0.020	Ū	0.020	0,00027	mg/L		07/03/12 09:09	07/04/12 12:12	1
H	exachioroethane	0,020	U	0,020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1
1.	4-Dichtorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:09	07/04/12 12:12	1
2-	Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1
Ni	trobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:09	07/04/12 12:12	1
Pe	entachtorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:09	07/04/12 12:12	1
2.	4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:09	07/04/12 12:12	1
1 1	4,6-Trichlorophenol	0.020	U	0,020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1
1 '	& 4 Methylchenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:09	07/04/12 12:12	1

мв мв

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dll Fac
2-Fluorobiphenyl (Surr)	47	22 - 110	07/03/12 09:09	07/04/12 12:12	1
2-Fluorophenol (Surr)	52	10 _ 110	07/03/12 09:09	07/04/12 12:12	1
2,4,6-Tribromophenol (Surr)	59	17 - 117	<i>07/03/12 0</i> 9:09	07/04/12 12:12	1
Nitrobenzene-d5 (Surr)	52	29 - 111	07/03/12 09:09	07/04/12 12:12	1
Phenol-d5 (Surr)	46	10 - 110	07/03/12 09:09	07/04/12 12:12	1
Terphenyl-d14 (Surr)	79	40 - 119	07/03/12 09:09	07/04/12 12:12	1

Lab Sample ID: LCS 240-49701/5-A

Matrix: Solid

Analysis Batch: 49827

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49701

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Pyridine	0.0800	0.0444		mg/L		56	10 - 110	
2,4-Dinitrotoluene	0.0800	0.0599		mg/L		75	45 - 126	
Hexachlorobenzene	0,0800	0.0559		mg/L		70	47 - 116	
Hexachlorobutadiene	0.0800	0.0416		mg/L		52	10 - 110	
Hexachloroethane	0.0800	0.0452		mg/L		57	10 - 110	
2-Methylphenol	0.080.0	0.0524		mg/L		66	24 - 110	
Nitrobenzene	0.0800	0.0434		mg/L		54	35 - 117	
Pentachlorophenol	0.0800	0.0429		mg/L		54	12 - 110	
2,4,5-Trichlorophenol	0.0800	0.0538		mg/L		67	35 - 111	
2,4,6-Trichlorophenol	0.0800	0.0505		mg/L		63	32 _ 110	
3 & 4 Methylphenol	0.160	0.0936		mg/L		59	27 - 110	

LCS	LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	48		22 - 110
2-Fluorophenol (Surr)	51		10 - 110
2,4,6-Tribromophenol (Surr)	71		17 - 117
Nitrobenzene-d5 (Surr)	52		29 - 111
Phenol-d6 (Surr)	42		10 - 110
Terphenyl-d14 (Surr)	74		40 - 119

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49703/15-A

Matrix: Water

Analysis Batch: 50054

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49703

	МВ	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:12	07/06/12 12:30	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 12:30	1
Нехасиютовеплене	0.020	U	0.020	0.00010	mg/L		07/03/12 09:12	07/06/12 12:30	1
Hexachlorobutadiene	0.020	Ü	0.020	0.00027	mg/L		07/03/12 09:12	07/08/12 12:30	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 12:30	1
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:12	07/06/12 12:30	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:12	07/06/12 12:30	1
Nitrobenzene	0.0040	U	0,0040	0.000040	mg/L		07/03/12 09:12	07/06/12 12:30	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:12	07/06/12 12:30	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:12	07/06/12 12:30	1
2.4.6-Trichlorophenol	0,020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 12:30	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:12	07/06/12 12:30	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	49	22 - 110	07/03/12 09:12	07/06/12 12:30	1
2-Fluorophenol (Surr)	31	10 - 110	07/03/12 09:12	07/06/12 12:30	1
2,4,6-Tribromophenol (Surr)	77	17 - 117	07/03/12 09:12	07/06/12 12:30	1
Nitrobenzene-d5 (Surr)	51	29 - 111	07/03/12 09:12	07/06/12 12:30	1
Phenol-d5 (Surr)	56	10 - 110	07/03/12 09:12	07/06/12 12:30	1
Terphenyl-d14 (Surr)	81	40 - 119	07/03/12 09:12	07/06/12 12:30	1

Lab Sample ID: LCS 240-49703/16-A

Matrix: Water

Analysis Batch: 50054

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 49703

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifler	Unit	D	%Rec	Limits	
Pyridine	0.0800	0.0529	******	mg/L		66	10 - 110	
2,4-Dinitrotoluene	0.0800	0.0656		mg/L		82	45 - 126	
Hexachlorobenzene	0.0800	0,0650		mg/L		81	47 - 116	
Hexachlorobutadieпе	0.0800	0.0362		mg/L		45	10 - 110	
Hexachloroethane	0.0800	0.0378		mg/L		47	10 - 110	
2-Methylphenol	0.0800	0.0570		mg/L		71	24 - 110	
Nitrobenzene	0.0800	0.0497		mg/L		62	35 - 117	
Pentachlorophenol	0.0800	0.0864		mg/L		108	12 - 110	
2,4,5-Trichtorophenol	0.0800	0.0665		mg/L		83	35 - 111	
2,4,6-Trichtorophenol	0.0800	0.0673		mg/L		84	32 ₋ 110	
3 & 4 Methylphenol	0.160	0.122		mg/L		77	27 - 110	
1								

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	56		22 - 110
2-Fluorophenol (Surr)	23		10-110
2,4,6-Tribromophenol (Surr)	97		17 - 117
Nitrobenzene-d5 (Surr)	60		29 - 111
Phenol-d5 (Surr)	62		10-110
Terphenyl-d14 (Surr)	95		40 - 119

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49770/15-A

Matrix: Solid

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49770

Analyte         Result         Qualifier         R.L.         MDL         Unit         D         Propared         Analyzed           Acenaphthene         6.7         U         6.7         3.3         ug/Kg         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:56         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59         07/09/12 13:59	Dil Fac  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Acenaphthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Acenaphthylene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Acenaphthylene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Benzolalphtylene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Benzolalphtylene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Benzolalphtylene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Benzolalphtylene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Benzolphtyloranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Benzolphtyloranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Benzolphtyloranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Benzylphtoranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Benzylphtoranthene 100 U 100 22 ug/Kg 07/03/12 13:56 07/06/12 11:53 Bis(2-chloreothy)jether 100 U 100 22 ug/Kg 07/03/12 13:56 07/06/12 11:53 Bis(2-chloreothylphthene) 50 U 50 13 ug/Kg 07/03/12 13:56 07/06/12 11:53 Butyl benzyl phthalate 50 U 50 10 ug/Kg 07/03/12 13:56 07/06/12 11:53 Butyl benzyl phthalate 50 U 50 U 10 U 100 20 ug/Kg 07/03/12 13:56 07/06/12 11:53 Butyl benzyl phthalate 50 U 50 U 50 U 50 U 50 U 50 U 50 U 50	1 1 1 1 1 1 1 1 1 1 1
Acenaphthylene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Anthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Benzo[a]nthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Benzo[a]nthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Benzo[b]thuoranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Benzo[b]thuoranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Benzo[b]thuoranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Benzo[b]thuoranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Benzo[b]thuoranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Bis(2-chloroethoxy)methane 100 U 100 22 ug/Kg 07/03/12 13:56 07/08/12 11:53 Bis(2-chloroethoxy)methane 100 U 100 2.0 ug/Kg 07/03/12 13:56 07/08/12 11:53 Bis(2-chloroethoxy)methane 100 U 100 2.0 ug/Kg 07/03/12 13:56 07/08/12 11:53 Bis(2-chloroethyl)ghthre 100 U 100 2.0 ug/Kg 07/03/12 13:56 07/08/12 11:53 Bis(2-chloroethyl)ghthre 150 U 50 13 ug/Kg 07/03/12 13:56 07/08/12 11:53 Bis(2-chloroethyl)ghthre 50 U 50 10 ug/Kg 07/03/12 13:56 07/08/12 11:53 Bis(2-chloroethyl)ghthralate 50 U 50 17 ug/Kg 07/03/12 13:56 07/08/12 11:53 Dimethyl)ghtholate 50 U 50 17 ug/Kg 07/03/12 13:56 07/08/12 11:53 Dimethylphenol 150 U 150 20 ug/Kg 07/03/12 13:56 07/08/12 11:53 Dimethylphenol 150 U 150 20 ug/Kg 07/03/12 13:56 07/08/12 11:53 24-Dimethylphenol 330 U 330 80 ug/Kg 07/03/12 13:56 07/08/12 11:53 24-Dimitrofuluene 200 U 200 27 ug/Kg 07/03/12 13:56 07/08/12 11:53 24-Dimitrofuluene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Pluoranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Pluoranthene 6.0 U 6.7 2.1 ug/Kg 07/03/12 13:56 07/08/12 11:53 Pluoranthene 50 U 50 20 ug/Kg 07/03/12 13:56 07/08/12 11:53 Pluoranthene 50 U 50 20 ug/Kg 07/03/12 13:56 07/08/12 11:53 Pluoranthene 50 U 50 20 ug/Kg 07/03/12 13:56 07/08/12 11:53 Pluoranthene 50 U 50 20 ug/Kg 07/03/12 13:56 07/08/12 11:53 Pluoranthene 50 U 50 20 ug/Kg 07/03/12 13:56 07/08/12 11:53 Pluoranthene 50 U 50 20 ug/Kg 07/03/12 13:56 07/08/12 11:53 Pluoranthene 50 U 50	1 1 1 1 1 1 1 1 1 1
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Benzok/Rjudranthene         6.7         U         6.7         3.3         ug/Kg         07/03/12 13:56         07/09/12 11:53           Benzyl alcohol         330         U         330         21         ug/Kg         07/03/12 13:56         07/06/12 11:53           Bis(2-chloroetbxy)methane         100         U         100         22         ug/Kg         07/03/12 13:56         07/06/12 11:53           6-Bromophenyl phenyl ether         50         U         50         13         ug/Kg         07/03/12 13:56         07/06/12 11:53           Bulyl benzyl phthalate         50         U         50         10         ug/Kg         07/03/12 13:56         07/06/12 11:53           2,4-Dinethylphenol         150         U         150         20         ug/Kg         07/03/12 13:56         07/06/12 11:53           2,4-Dinitrophenol         350         U         150         80         ug/Kg         07/03/12 13:56         07/06/12 11:53           2,4-Dinitrophenol         330         U         150         80         ug/Kg         07/03/12 13:56         07/06/12 11:53           2,4-Dinitrophenol         330         U         200         21         ug/Kg         07/03/12 13:56         07/06/12 11:53           2,4-Di	1 1 1 1 1
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2,6-Dinitrotoluene       200       U       200       21       ug/Kg       07/03/12 13:56       07/06/12 11:53         Fluoranthene       6.7       U       6.7       3.3       ug/Kg       07/03/12 13:56       07/06/12 11:53         Fluorene       6.7       U       6.7       3.3       ug/Kg       07/03/12 13:56       07/06/12 11:53         Hexachlorobenzene       6.7       U       6.7       2.1       ug/Kg       07/03/12 13:56       07/06/12 11:53         Hexachlorobutadiene       50       U       50       27       ug/Kg       07/03/12 13:56       07/06/12 11:53         Hexachlorocyclopentadiene       330       U       330       27       ug/Kg       07/03/12 13:56       07/06/12 11:53         Hexachlorocyclopentadiene       50       U       50       9.0       ug/Kg       07/03/12 13:56       07/06/12 11:53         Hexachlorocyclopentadiene       50       U       50       9.0       ug/Kg       07/03/12 13:56       07/06/12 11:53         Hexachlorocyclopentadiene       50       U       50       9.0       ug/Kg       07/03/12 13:56       07/06/12 11:53         N-Nitrosodiphenylamine       50       U       50       27       ug/Kg       07/03/12 13:	1
Fluoranthene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Fluorene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Hexachlorobenzene 6.7 U 6.7 2.1 ug/Kg 07/03/12 13:56 07/06/12 11:53 Hexachlorobutadiene 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 Hexachlorocyclopentadiene 330 U 330 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 Hexachlorocythane 50 U 50 9.0 ug/Kg 07/03/12 13:56 07/06/12 11:53 N-Nitrosodiphenylamine 50 U 50 21 ug/Kg 07/03/12 13:56 07/06/12 11:53 N-Nitrosodiphenylamine 50 U 50 21 ug/Kg 07/03/12 13:56 07/06/12 11:53 N-Nitrosodi-n-propylamine 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 1,4-Dichlorobenzene 50 U 50 20 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chloronaphthalene 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 4-Chlorophenyl phenyl ether 50 U 50 13 ug/Kg 07/03/12 13:56 07/06/12 11:53 Chrysene 6.7 U 6.7 1.1 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenz(unan 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenz(unan 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
Fluorene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/08/12 11:53 Hexachlorobenzene 6.7 U 6.7 2.1 ug/Kg 07/03/12 13:56 07/08/12 11:53 Hexachlorobutadiene 50 U 50 27 ug/Kg 07/03/12 13:56 07/08/12 11:53 Hexachlorocyclopentadiene 330 U 330 27 ug/Kg 07/03/12 13:56 07/08/12 11:53 Hexachlorocyclopentadiene 50 U 50 9.0 ug/Kg 07/03/12 13:56 07/08/12 11:53 N-Nitrosodiphenylamine 50 U 50 21 ug/Kg 07/03/12 13:56 07/06/12 11:53 N-Nitrosodi-n-propylamine 50 U 50 21 ug/Kg 07/03/12 13:56 07/06/12 11:53 N-Nitrosodi-n-propylamine 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 1,4-Dichlorobenzene 50 U 50 20 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chloronaphthalene 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 31 ug/Kg 07/03/12 13:56 07	1
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Hexachlorobenzene         6.7 U         6.7 Dumon         2.1 ug/Kg         07/03/12 13:56         07/06/12 11:53           Hexachlorobutadiene         50 U         50 27 ug/Kg         07/03/12 13:56         07/06/12 11:53           Hexachlorocyclopentadiene         330 U         330 27 ug/Kg         07/03/12 13:56         07/06/12 11:53           Hexachloroethane         50 U         50 9.0 ug/Kg         07/03/12 13:56         07/06/12 11:53           N-Nitrosodiphenylamine         50 U         50 21 ug/Kg         07/03/12 13:56         07/06/12 11:53           N-Nitrosodi-n-propylamine         50 U         50 27 ug/Kg         07/03/12 13:56         07/06/12 11:53           1,4-Dichlorobenzene         50 U         50 20 ug/Kg         07/03/12 13:56         07/06/12 11:53           2-Chloronaphthalene         50 U         50 3.3 ug/Kg         07/03/12 13:56         07/06/12 11:53           2-Chlorophenol         50 U         50 27 ug/Kg         07/03/12 13:56         07/06/12 11:53           4-Chlorophenyl phenyl ether         50 U         50 27 ug/Kg         07/03/12 13:56         07/06/12 11:53           Chrysene         6.7 U         6.7 1.1 ug/Kg         07/03/12 13:56         07/06/12 11:53           Dibenz(a,h)anthracene         6.7 U         6.7 3.3 ug/Kg         07/03/12 13:56	1
Hexachlorobutadiene         50         U         50         27         ug/Kg         07/03/12 13:56         07/08/12 11:53           Hexachlorocyclopentadiene         330         U         330         27         ug/Kg         07/03/12 13:56         07/06/12 11:53           Hexachloroethane         50         U         50         9.0         ug/Kg         07/03/12 13:56         07/06/12 11:53           N-Nitrosodi-n-propylamine         50         U         50         21         ug/Kg         07/03/12 13:56         07/06/12 11:53           N-Nitrosodi-n-propylamine         50         U         50         27         ug/Kg         07/03/12 13:56         07/06/12 11:53           1,4-Dichlorobenzene         50         U         50         20         ug/Kg         07/03/12 13:56         07/06/12 11:53           2-Chloronaphthalene         50         U         50         3.3         ug/Kg         07/03/12 13:56         07/06/12 11:53           2-Chlorophenol         50         U         50         27         ug/Kg         07/03/12 13:56         07/06/12 11:53           4-Chlorophenyl phenyl ether         50         U         50         13         ug/Kg         07/03/12 13:56         07/06/12 11:53           Chr	1
Hexachlorocyclopentadiene         330         U         330         27         ug/Kg         07/03/12 13:56         07/06/12 11:53           Hexachloroethane         50         U         50         9.0         ug/Kg         07/03/12 13:56         07/06/12 11:53           N-Nitrosodiphenylamine         50         U         50         21         ug/Kg         07/03/12 13:56         07/06/12 11:53           N-Nitrosodi-n-propylamine         50         U         50         27         ug/Kg         07/03/12 13:56         07/06/12 11:53           1,4-Dichlorobenzene         50         U         50         20         ug/Kg         07/03/12 13:56         07/06/12 11:53           2-Chloronaphthalene         50         U         50         3.3         ug/Kg         07/03/12 13:56         07/06/12 11:53           2-Chlorophenol         50         U         50         27         ug/Kg         07/03/12 13:56         07/06/12 11:53           4-Chlorophenyl phenyl ether         50         U         50         13         ug/Kg         07/03/12 13:56         07/06/12 11:53           Chrysene         6.7         U         6.7         1.1         ug/Kg         07/03/12 13:56         07/06/12 11:53           Dibenz(a,h)ant	1
Hexachloroethane         50         U         50         9.0         ug/Kg         07/03/12 13:56         07/06/12 11:53           N-Nitrosodiphenylamine         50         U         50         21         ug/Kg         07/03/12 13:56         07/06/12 11:53           N-Nitrosodi-n-propylamine         50         U         50         27         ug/Kg         07/03/12 13:56         07/06/12 11:53           1,4-Dichlorobenzene         50         U         50         20         ug/Kg         07/03/12 13:56         07/06/12 11:53           2-Chloronaphthalene         50         U         50         3.3         ug/Kg         07/03/12 13:56         07/06/12 11:53           2-Chlorophenol         50         U         50         27         ug/Kg         07/03/12 13:56         07/06/12 11:53           4-Chlorophenyl phenyl ether         50         U         50         13         ug/Kg         07/03/12 13:56         07/06/12 11:53           Chrysene         6.7         U         6.7         1.1         ug/Kg         07/03/12 13:56         07/06/12 11:53           Dibenz(a,h)anthracene         6.7         U         6.7         3.3         ug/Kg         07/03/12 13:56         07/06/12 11:53           Dibenzofuran	1
N-Nitrosodiphenylamine 50 U 50 21 ug/Kg 07/03/12 13:56 07/06/12 11:53 N-Nitrosodi-n-propylamine 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 1,4-Dichlorobenzene 50 U 50 20 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chloronaphthatene 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 4-Chlorophenyl phenyl ether 50 U 50 13 ug/Kg 07/03/12 13:56 07/06/12 11:53 4-Chlorophenyl phenyl ether 50 U 50 13 ug/Kg 07/03/12 13:56 07/06/12 11:53 Chrysene 6.7 U 6.7 1.1 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenz(a,h)anthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
N-Nitrosodi-n-propylamine 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 1,4-Dichlorobenzene 50 U 50 20 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chloronaphthalene 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 4-Chlorophenyl phenyl ether 50 U 50 13 ug/Kg 07/03/12 13:56 07/06/12 11:53 Chrysene 6.7 U 6.7 1.1 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenz(a,h)anthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
1,4-Dichlorobenzene 50 U 50 20 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chloronaphthalene 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 2-Chlorophenol 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 4-Chlorophenyl phenyl ether 50 U 50 13 ug/Kg 07/03/12 13:56 07/06/12 11:53 Chrysene 6.7 U 6.7 1.1 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenz(a,h)anthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
2-Chloronaphthalene 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 22-Chlorophenol 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 4-Chlorophenyl phenyl ether 50 U 50 13 ug/Kg 07/03/12 13:56 07/06/12 11:53 Chrysene 6.7 U 6.7 1.1 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenz(a,h)anthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:5	1
2-Chlorophenol 50 U 50 27 ug/Kg 07/03/12 13:56 07/06/12 11:53 4-Chlorophenyl phenyl ether 50 U 50 13 ug/Kg 07/03/12 13:56 07/06/12 11:53 Chrysene 6.7 U 6.7 1.1 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenz(a,h)anthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
4-Chlorophenyl phenyl ether 50 U 50 13 ug/Kg 07/03/12 13:56 07/06/12 11:53 Chrysene 6.7 U 6.7 1.1 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dībenz(a,h)anthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dībenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12 11:53 07/06/12	1
Chrysene 6.7 U 6.7 1.1 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenz(a,h)anthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
Dibenz(a,h)anthracene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53 Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
Dibenzofuran 50 U 50 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
07/04/04/07/07/07/04/04/07/07/07/07/07/07/07/07/07/07/07/07/07/	1
Benzolg,n,liperylene 6.7 0 6.7 3.3 bg/ng 67703712 10.30 67700712 11.00	1
Renzolalovrene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
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27 Day, printing 0	1
1,2-Dichtorobenzene 50 U 50 9.7 ug/Kg 07/03/12 13:56 07/06/12 11:53	
1,3-Dichlorobenzene 50 U 50 11 ug/Kg 07/03/12 13:56 07/08/12 11:53	1
3,3'-Dichlorobenzidine 100 U 100 18 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
2,4-Dichlorophenal 150 U 150 20 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
Diethyl phthalate 50 U 50 16 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
Indeno[1,2,3-cd]pyrene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
Isophorone 50 U 50 13 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
2-Methylnaphthalene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
2-Methylphenol 200 U 200 80 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
Naphthalene 6.7 U 6.7 3.3 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
2-Nitroaniline 200 U 200 9.1 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
3-Nitroaniline 200 U 200 16 ug/Kg 07/03/12 13:56 07/06/12 11:53	1
4-Nitroaniline 200 U 200 26 ug/Kg 07/03/12 13:56 07/06/12 11:53	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49770/15-A

Matrix: Solid

Analysis Batch: 50054

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49770

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	100	U -	100	2.2	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Nitrophenol	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Nitrophenol	330	Ú	330	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Pyrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Pentachtorophenol	150	U	, 150	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Phenanthrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,2,4-Trichlorobenzene	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4,5-Trichlorophenol	150	U	150	25	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4,6-Trichlorophenol	150	U	150	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Phenol	50	U	50	27	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
Carbazole	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chloroaniline	150	U	150	17	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
3 & 4 Methylphenol	400	U	400	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Bis(2-ethylhexyl) phthalate	50.9		50	19	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Di-n-octyl phthalate	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chloro-3-methylphenol	150	U	150	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,2'-oxybis[1-chloropropane]	100	U	100	9.5	ug/Kg		07/03/12 13:56	07/06/12 11:53	1

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	MB	MB					
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	DII Fac
2-Fluorobiphenyl (Surr)	46		34 - 110	-	07/03/12 13:66	07/06/12 11:53	1
2-Fluorophenol (Surr)	60		26 - 110	1	07/03/12 13:56	07/06/12 11:53	1
2,4,6-Tribromophenol (Surr)	39		10 - 118		07/03/12 13:56	07/06/12 11:53	1
Nitrobenzene-d5 (Surr)	51		24 - 112		07/03/12 13:56	07/06/12 11:53	1
Phenol-d5 (Surr)	64		28 - 110		07/03/12 13:56	07/06/12 11:53	1
Terphenyl-d14 (Surr)	83		41 - 119	i	07/03/12 13:56	07/06/12 11:53	1

Lab Sample ID: LCS 240-49770/16-A

Matrix: Solid

Analysis Batch: 50054

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 49770

Analysis Baton: 0000+							P/ 73	
	Spike		LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Acenaphthene	667	429		ug/Kg		64	46 _ 110	
Acenaphthylene	667	437		ug/Kg		66	47 - 110	
Anthracene	667	476		ug/Kg		71	56 - 111	
Benzo[a]anthracene	667	497		ug/Kg		74	58 - 111	
Benzoic acid	667	403	J	ug/Kg		60	10 - 124	
Benzo[b]fluoranthene	667	511		ug/Kg		77	43 - 124	
Benzo[k]fluoranthene	667	490		ug/Kg		73	38 - 122	
Benzyl alcohol	667	522		ug/Kg		78	10 - 130	
Bis(2-chloroethoxy)methane	667	399		ug/Kg		60	42 _ 110	
Bis(2-chloroethyl)ether	667	403		ug/Kg		60	41 - 110	
4-Bromophenyl phenyl ether	667	425		ug/Kg		64	53 - 112	
Butyl benzyl phthalate	667	513		ug/Kg		77	57 - 121	
2,4-Dimethylphenol	667	412		ug/Kg		62	28 - 110	
Dimethyl phthalate	667	505		ug/Kg		76	54 - 112	
4,6-Dinitro-2-methylphenol	667	560		ug/Kg		84	21 - 110	
2,4-Dinitrophenol	667	621		ug/Kg		93	10 - 110	
2,4-Dinitrotoluene	667	485		ug/Kg		73	55 - 118	
2.6-Dinitrotoluene	667	445		ug/Kg		67	54 - 115	

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

2,2'-oxybis[1-chloropropane]

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49770/16-A Client Sample ID: Lab Control Sample Prep Type: Total/NA Matrix: Solid Prep Batch: 49770 Analysis Batch: 50054 Spike LCS LCS Limits Unit D %Rec Analyte Added Result Qualifier 55 - 118 667 489 ug/Kg 73 Fluoranthene 667 474 ug/Kg 71 51 - 110 Fluorene 667 455 ug/Kg 66 51 - 110 Hexachlorobenzene 667 390 ug/Kg 58 39 - 110 Hexachlorobutadiene 667 403 ug/Kg 60 10 _ 110 Hexachlorocyclopentadiene 667 409 ug/Kg 61 38 - 110 Hexachloroethane 70 54 - 112 467 ug/Kg N-Nitrosodiphenylamine 667 74 40 _ 114 667 498 ug/Kg N-Nitrosodi-n-propylamine 667 446 ug/Kg 67 38.110 1,4-Dichlorobenzene 59 392 ug/Kg 46 - 110 667 2-Chloronaphthalene 73 39 - 110 667 487 ug/Kg 2-Chlorophenol 419 ug/Kg 63 53 - 110 667 4-Chlorophenyl phenyl ether 522 ug/Kg 78 56 - 111 667 Chrysene ug/Kg 74 45 - 122 495 667 Dibenz(a,h)anthracene 69 50 - 110 667 458 ug/Kg Dibenzofuran ug/Kg 76 44 - 120 667 509 Benzo(g,h,i)perylene ug/Kg 68 44 - 115 452 Benzo(a)pyrene 667 80 57 - 119 ug/Kg Di-n-butyl phthalate 667 532 61 42.110 407 ug/Kg 1,2-Dichlorobenzene 667 57 40 - 110 667 363 ug/Kg 1,3-Dichlorobenzene ug/Kg 61 31 - 110 667 409 3,3'-Dichlorobenzidine 72 40 _ 110 667 482 ug/Kg 2,4-Dichlorophenol 529 ug/Kg 79 55 - 114 667 Diethyl phthalate 507 ug/Kg 76 45 - 121 667 Indeno[1,2,3-cd]pyrene 71 48 - 117 475 ug/Kg 667 Isophorone 64 46 . 110 667 430 ug/Kg 2-Methylnaphthalene 72 36 _ 110 667 479 ug/Kg 2-Methylphenol 66 42 - 110 ug/Kg 667 453 Naphthalene 74 47 - 124 667 494 ug/Kg 2-Nitroaniline 73 44 - 110 485 ug/Kg 667 3-Nitroaniline 74 50 - 110 493 ug/Kg 667 4-Nitroaniline 61 40 - 110 408 ug/Kg 667 Nitrobenzene 73 35 - 110 667 465 ug/Kg 2-Nitrophenol 79 24 - 117 667 525 ug/Kg 4-Nitrophenol 58 - 113 77 512 ug/Kg 667 Pyrene 10 - 110 82 Pentachlorophenol 667 547 ug/Kg 493 ug/Kg 74 54 - 110 667 Phenanthrene 57 43 - 110 363 ug/Kg 667 1,2,4-Trichlorobenzene 59 42 - 110 394 ug/Kg 2,4,5-Trichlorophenol 667 48 667 318 ug/Kg 37 _ 110 2.4.6-Trichlorophenol 667 510 ug/Kg 76 39 - 110 Phenol 502 ug/Kg 75 56 - 115 667 Carbazole 59 25 _ 110 396 ug/Kg 667 4-Chloroaniline 77 40 _ 110 1330 1020 ug/Kg 3 & 4 Methylphenol 80 56 - 123 667 531 ug/Kg Bis(2-ethylhexyl) phthalate 77 45 - 123 ug/Kg 667 514 Di-n-octyl phthalate 78 42 - 110 667 523 ug/Kg 4-Chloro-3-methy!phenol

36 - 116

62

667

415

ug/Kg

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49770/16-A

Matrix: Solid

Analysis Batch: 50054

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 49770

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	55		34 - 110
2-Fluorophenol (Suπ)	73		26 - 110
2,4,6-Tribromophenol (Surr)	50		10 - 118
Nitrobenzene-d5 (Surr)	61		24 - 112
Phenol-d5 (Surr)	77		28 - 110
Terphenyl-d14 (Surr)	79		41 - 119

Lab Sample ID: MB 240-50344/13-A

Matrix: Water

Analysis Batch: 50708

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 50344

Analysis Editin serse	мв	MB						•	
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0,20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Acenaphthylene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Anthracene	0,20	U	0,20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[a]anthracene	0.20	Ū	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzoic acid	25	U	25	10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzyl alcohol	5.0	U	5,0	0.38	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Butyl benzyl phthalate	0.902	J	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dimethylphenol	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dimethyl phthalate	1.0	U	1.0	0,29	ug/L		07/10/12 10:24	07/13/12 10:39	1
4,6-Dinitro-2-methylphenol	5.0	υ	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,6-Dinitrotoluene	5,0	U	5,0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorobutadiene	1.0	Ú	1.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachforoethane	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
N-Nitrosodiphenylamine	1.0	Ú	1.0	0.31	ug/L		07/10/12 10:24	07/13/12 10:39	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Chloronaphthalene	1.0	U	1,0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		07/10/12 10:24	07/13/12 10:39	1
Chrysene	0,20	U	0,20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dibenz(a,h)anthracene	0.20	U	. 0,20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[g,h,i]perylene	0,20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[a]pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Di-n-butyl phthalate	1.0	U	1.0	0.67	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,2-Dichlorobenzene	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-50344/13-A	Client Sample ID: Method Blank
Matrix: Water	Prep Type: Total/NA
Analysis Batch: 50708	Prep Batch: 50344
MB MB	

Analysis Batch: 50708								Prep Batch	1: 50344
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlarobenzene	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dichlorophenol	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		07/10/12 10:24	07/13/12 10:39	1
Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Isophorone	1.0	U	1.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Naphthalene	0.20	Ü	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Nitroaniline	2.0	Ü	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Nitrobenzene	1.0	U	1.0	0.040	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
Pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4,5-Trichlorophanol	5.0	U	5.0	0.30	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4,6-Trichlorophenol	5,0	Ü	5.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Phenol	1.0	U	1.0	0.60	ug/L		07/10/12 10:24	07/13/12 10:39	1
Carbazole	1.0	U	1.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chloroaniline	2.0	U	2,0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-ethylhexyl) phthalate	1.97	J	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chloro-3-methylphenol	2,0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,2'-oxybis[1-chloropropane]	1.0	U	1,0	0.40	ug/L		07/10/12 10:24	07/13/12 10:39	1
	MB								
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	69		28 - 110				07/10/12 10:24	07/13/12 10:39	1
2-Fluorophenol (Surr)	79		10-110				07/10/12 10:24	07/13/12 10:39	1
2.4.6-Tribromonhenol (Surr)	71		22 - 120				07/10/12 10:24	07/13/12 10:39	1

Surrogate	%Recovery (	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	69		28 - 110	07/10/12 10:24	07/13/12 10:39	1
2-Fluorophenol (Surr)	79		10-110	07/10/12 10:24	07/13/12 10:39	1
2,4,6-Tribromophenol (Surr)	71		22 - 120	07/10/12 10:24	07/13/12 10:39	1
Nitrobenzene-d5 (Surr)	68		27 - 111	07/10/12 10:24	07/13/12 10:39	1
Phenol-d5 (Surr)	81		10-110	07/10/12 10:24	07/13/12 10:39	1
Terphenyl-d14 (Surr)	86		37 - 119	07/10/12 10:24	07/13/12 10:39	1
L_						

Lab Sample ID: LCS 240-50344/14-A

Matrix: Water

Analysis Batch: 50708

Client Sample ID:	Lab Control Sample
	Prep Type: Total/NA

Prep Batch: 50344

Anayola Batom oor oo	Spike	LCS LC	s			%Rec.	
Analyte	Added	Result Qu	ıalifier Unit	D	%Rec	Limits	
Acenaphthene	20.0	17.1	ug/L		86	40 - 110	. ,
Acenaphthylene	20.0	17.2	ug/L		86	43 - 110	
Anthracene	20.0	17.2	ug/L		86	54 - 114	
Benzo[a]anthracene	20.0	16.5	ug/L		82	55 - 115	
Benzoic acid	20.0	17.2 J	ug/L		86	10.129	
Benzo[b]fluoranthene	20.0	16.1	ug/L		81	43 - 122	

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-50344/14-A Matrix: Water					Clien	t Sample	Prep T	ontrol Sampl ype: Total/N/ Batch: 5034
Analysis Batch: 50708	0-11	1.00	LCS				Prep %Rec.	Batch: 5034
	Spike			Jnit	D	%Rec	Limits	
Analyte	Added	17.0		ig/L	<del>_</del>	85	43 - 124	
Benzo[k]fluoranthene	20.0	18.8		ig/L		94	10 - 130	
Benzyl alcohol				-		79	39 - 110	
Bis(2-chloroethoxy)methane	20.0	15.7 15.2		ıg/L ıg/L		76	34 - 113	
Bis(2-chloroethyl)ether	20.0	15.2		ig/L		76	51 - 114	
4-Bromophenyl phenyl ether	20.0	18.3		ug/L.		91	53 - 126	
Butyl benzyl phthalate	20.0			ig/L		71	12 - 110	
2,4-Dimethylphenol	20.0	14.2 18.0				90	15 - 143	
Dimethyl phthalate	20.0			ug/L		91	28 - 112	
4,6-Dinitro-2-methylphenol	20.0	18.2		ig/L ig/L		82	17 - 112	
2,4-Dinitrophenol	20.0	16.4		-		80	52 ₋ 123	
2,4-Dinitrotoluene	20.0	16.1		ug/L		82	52 - 123 52 - 119	
2,6-Dinitrotoluene	20.0	16.4		ıg/L		87	54 - 118	
Fluoranthene	20.0	17.5		ug/L . = /1				
Fluorene	20.0	17.3		ıg/L		87	47 - 112	
Hexachlorobenzene	20.0	16.8		ıg/L		84	51 - 112	
Hexachlorobutadiene	20.0	15.1		ıg/L		75	13 - 110	
Hexachlorocycłopentadiene	20.0	8,56		ıg/L		43	10 - 110	
Hexachloroethane	20,0	16.4		ıg/L		82	12 - 110	
N-Nitrosodiphenylamine	20.0	16.1		ug/L.		81	53 _ 113	
N-Nitrosodi-n-propylamine	20.0	17.7		ıg/L		88	37 - 121	
1,4-Dichlorobenzene	20.0	16.9		ıg/L		85	19 - 110	
2-Chloronaphthalene	20.0	15.2		ug/L		76	39 - 110	
2-Chlorophenol	20.0	17.5		ug/L 		88	27 - 110	
4-Chlorophenyl phenyl ether	20.0	15.7		ug/L		78	50 - 115	
Chrysene	20.0	17.6		ug/L		88	55 - 115	
Dibenz(a,h)anthracene	20.0	16.2		ug/L		81	46 - 122	
Dibenzofuran	20.0	17.4		ug/L		87	46 - 111	
Benzo[g,h,i]perylene	20.0	16.9		ug/L		84	45 - 120	
Benzo[a]pyrene	20.0	14.5		ug/L		72	43 - 118	
Di-n-butyl phthalate	20.0	18.1		ug/L		91	55 - 122	
1,2-Dichlorobenzene	20.0	15.8		ug/L		79	23 - 110	
1,3-Dichlorobenzene	20.0	15,5		⊔g/L		78	19 - 110	
3,3'-Dichlorobenzidine	20,0	10.3		µg/L		52	19 - 110	
2,4-Dichlorophenol	20.0	17.6	•	ug/L		88	33 - 110	
Diethyl phthalate	20,0	18.3		ug/L		92	33 - 134	
Indeno[1,2,3-cd]pyrene	20.0	15.9		ug/L		80	46 - 121	
Isophorone	20,0	17.9	ı	ug/L		90	44 - 128	
2-Methylnaphthalene	20.0	16.9	ı	ug/L		85	35 - 110	
2-Methylphenol	20.0	17.6	ı	ug/L		88	30 _ 110	
Naphthalene	20.0	17.8	ı	ug/L		69	31 - 110	
2-Nitroanitine	20.0	17.4	ı	ug/L		87	43 - 130	
3-Nitroaniline	20.0	16.4	ı	ug/L		82	45 - 118	
4-Nitroaniline	20.0	17.7		ug/L		88	45 - 120	
Nitrobenzene	20.0	16.0		ug/L		80	37 - 115	
2-Nitrophenol	20.0	17.8	į	ug/L		89	29 - 110	
4-Nitrophenol	20.0	17.6		ug/L		88	12 - 130	
Pyrene	20.0	16.7		ug/L		84	55 ₋ 120	
Pentachlorophenol	20.0	18.1		ug/L		90	26 - 110	
Phenanthrene	20.0	17.2		ug/L		86	52 - 114	
1,2,4-Trichlorobenzene	20.0	14.6		ug/L		73	25 - 110	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LGS 240-50344/14-A

Matrix: Water

Analysis Batch: 50708

Solve LGS LGS

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50344

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
2,4,5-Trichlorophenol	20.0	17.4		ug/L.		87	39 - 110	
2,4,6-Trichtorophenol	20,0	17.4		ug/L		87	35 - 110	
Phenol	20.0	17.9		ug/L		89	14 - 112	
Carbazole	20,0	17.4		ug/L		87	53 - 120	
4-Chloroaniline	20,0	15.3		ug/L		76	10 - 110	
3 & 4 Methylphenol	40.0	34.8		ug/L		87	32 ₋ 110	
Bis(2-ethylhexyl) phthalate	20.0	15.0		ug/L		75	36 - 163	
Di-n-octyl phthalate	20.0	13.3		ug/L		66	44 - 128	
4-Chloro-3-methylphenol	20.0	17.3		ug/L		87	39 _ 110	
2,2'-oxybis[1-chloropropane]	20.0	15.6		ug/L		78	25 - 128	

LCS LCS %Recovery Qualifler Limits Surrogate 2-Fluorobiphenyl (Surr) 73 28 - 110 2-Fluorophenol (Surr) 88 10-110 22 - 120 2,4,6-Tribromophenol (Surr) 83 27 - 111 Nitrobenzene-d5 (Sum) 75 Phenol-d5 (Surr) 91 10 - 110 Terphenyl-d14 (Surr) 89 37 - 119

## Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-49615/2-A

Matrix: Water

Analysis Batch: 49739

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49615

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dli Fac
4,4'-DDD	0.050	U	0.050	0.0096	ug/L	2.00	07/02/12 11:57	07/04/12 08:18	1
4,4'-DDE	0.050	U	0.050	0.0097	ug/L		07/02/12 11:57	07/04/12 08:18	1
4,4'-DDT	0.050	U	0.050	0.016	ug/L		07/02/12 11:57	07/04/12 08:18	1
Aldrin	0.050	U	0.050	0,0082	ug/L		07/02/12 11:57	07/04/12 08:18	1
alpha-BHC	0.050	U	0.050	0.0070	ug/L		07/02/12 11:57	07/04/12 08:18	1
alpha-Chlordane	0.050	U	0.050	0.014	ug/L		07/02/12 11:57	07/04/12 08:18	1
beta-BHC	0.050	Ü	0.050	0.0084	ug/L		07/02/12 11:57	07/04/12 08:18	1
delta-BHC	0,050	U	0.050	0.0087	ug/L		07/02/12 11:57	07/04/12 08:18	1
Dieldrin	0.050	U	0.050	0.0075	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan I	0,050	Ú	0.050	0.013	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan II	0.050	U	0,050	0.012	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan sulfate	0.050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin	0,050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin aldehyde	0.050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin ketone	0.050	U	0.050	0.0078	ug/L		07/02/12 11:57	07/04/12 08:18	1
gamma-BHC (Lindane)	0.050	U	0.050	0.0064	ug/L		07/02/12 11:57	07/04/12 08:18	1
gamma-Chlordane	0.050	U	0.050	0.012	ug/L		07/02/12 11:57	07/04/12 08:18	1
Heptachlor	0.050	U	0.050	0.0080	ug/L		07/02/12 11:57	07/04/12 08:18	1
Heptachlor epoxide	0,050	U	0.050	0.0071	ug/L		07/02/12 11:57	07/04/12 08:18	1
Methoxychior	0.10	U	0.10	0,032	ug/L		07/02/12 11:57	07/04/12 08:18	1
Toxaphene	2.0	U	2.0	0.32	ug/L		07/02/12 11:57	07/04/12 08:18	1

Project/Site: RVAAP (OH) - IDW

## Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49615/2-A

Matrix: Water

Analysis Batch: 49739

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 49615

	mB i	mo				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	94		10 - 145	07/02/12 11:57	07/04/12 08:18	1
DCB Decachlorobiphenyl	86		10 - 145	07/02/12 11:57	07/04/12 08:18	1
Tetrachloro-m-xylene	83		30 - 141	07/02/12 11:57	07/04/12 08:18	1
Tetrachloro-m-xylene	76		30 - 141	07/02/12 11:57	07/04/12 08:18	1
-						

Lab Sample ID: LCS 240-49615/3-A

Matrix: Water

Analysis Batch: 49739

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49615

	Spike	LCS	LCS			%Rec.
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits
4,4'-DDD	0.500	0.649	ug/L		130	53 - 168
4,4'-DDE	0,500	0.574	ug/L		115	66 - 136
4,4'-DDT	0.500	0.576	ug/L		115	42 - 140
Aldrin	0,500	0.544	ug/L		109	61 - 127
elpha-BHC	0,500	0.569	ug/L		114	65 - 132
alpha-Chlordana	0.500	0.559	ug/L		112	60 - 134
beta-BHC	0.500	0.579	ug/L		116	59 - 134
delta-BHC	0.500	0.603	ug/L		121	45 - 143
Dieldrin	0,500	0,598	ug/L		120	61 - 142
Endosulfan I	0.500	0.416	ug/L		83	35 - 110
Endosulfan II	0.500	0.449	ug/L		90	39 - 110
Endosulfan sulfate	0,500	0.610	ug/L		122	54 - 143
Endrin	0.500	0,586	ug/L		117	57 - 148
Endrin aldehyde	0,500	0.553	ug/L		111	44 - 116
Endrin ketone	0.500	0.604	ug/L		121	52 - 135
gamma-BHC (Lindane)	0.500	0.612	ug/L		122	58 - 140
gamma-Chlordane	0.500	0.588	ug/L		118	59 - 139
- Heptachlor	0.500	0.530	ug/L		108	60 - 132
Heptachlor epoxide	0.500	0.593	ug/L		119	60 _ 138
Methoxychlor	0.500	0.541	ug/L		108	45 - 139

rrogate	%Recovery	Qualifier

Surrogate	%Recovery	Qualifier	Limits
D <b>C</b> B Decachlorobiphenyl	56		10 - 145
D <b>C</b> B Decachlorobiphenyl	48		10 - 145
Tetrachloro-m-xylene	96		30 _ 141
Tetrachloro-m-xylene	90		30 - 141

Lab Sample ID: MB 240-49705/7-A

Matrix: Water

Analysis Batch: 49922

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49705

	MB	MB							
Analyte	Result	Qualifler	RL	MDL	Unit	D	Prepared	Analyzed	Dii Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		07/03/12 09:15	07/08/12 00:21	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		07/03/12 09:15	07/08/12 00:21	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0,000015	mg/L		07/03/12 09:15	07/06/12 00:21	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		07/03/12 09:15	07/06/12 00:21	1
Heptachlor epoxide	0.0012	U	0.0012	0,000017	mg/L		07/03/12 09:15	07/06/12 00:21	1
Methoxychlor	0,0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/06/12 00:21	1
Toyanhana	0.048	П	0.048	0.00077	ma/L		07/03/12 09:15	07/06/12 00:21	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

## Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49705/7-A

Matrix: Water

Analysis Batch: 49922

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49705

		MB	MB				
	Surrogate	%Recovery	Qualifler	Limits	Prepared	Analyzed	Dil Fac
	DCB Decachlorobiphenyl	93		34 - 141	07/03/12 09:15	07/06/12 00:21	1
	DCB Decachlorobiphenyl	92		34 - 141	07/03/12 09:15	07/06/12 00:21	1
	Tetrachloro-m-xylene	65		46 - 122	07/03/12 09:15	07/06/12 00:21	1
	Tetrachloro-m-xylene	61		46 - 122	07/03/12 09:15	07/06/12 00:21	1
ı							

Lab Sample ID: LCS 240-49705/8-A

Matrix: Water

Analysis Batch: 49922

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49705

·	Splke	LCS LCS			%Rec.	
Analyte	Added	Result Qualifler	Unit	D %Rec	Limits	
Endrin	0.00200	0.00193	mg/L	96	59 - 136	
gamma-BHC (Lindane)	0,00200	0.00204	mg/L	102	59 - 137	
Heptachlor	0.00200	0.00139	mg/L	69	63 _ 123	
Heptachlor epoxide	0.00200	0.00212	mg/L	106	59 ₋ 141	
Methoxychlor	0,00400	0.00366	mg/L	92	42 - 141	
•						

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
DCB Decachlorobiphenyl	89	14.00-1911	34 - 141
DCB Decachlorobiphenyl	93		34 - 141
Tetrachloro-m-xylene	70		46 - 122
Tetrachloro-m-xylene	65		46 - 122

Lab Sample ID: MB 240-49756/10-A

Matrix: Solid

Analysis Batch: 50336

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49756

Analysis batch; 50330								i tob Bater	
	МВ	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dli Fac
4,4'-DDD	1.7	U	1.7	0.62	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
4,4'-DDE	1.7	U	1.7	0,39	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
4,4'-DDT	1.7	U	1.7	0.63	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Aldrin	1.7	Ü	1.7	1.2	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
alpha-BHC	1.7	U	1.7	0.73	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
alpha-Chlordane	1.7	U	1.7	0.94	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
beta-BHC	1.7	Ü	1.7	1.1	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
delta-BHC	1.7	U	1.7	1.2	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Dieldrin	1.7	U	1.7	0.47	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endosulfan I	1.7	U	1.7	0,52	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endosulfan II	1.7	U	1.7	0.82	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endosulfan sulfate	1.7	U	1.7	0.87	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endrin	1.7	Ü	1.7	0.50	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endrin eldehyde	1.7	U	1.7	1.0	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endrin ketone	1.7	U	1.7	0.63	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
gamma-BHC (Lindane)	1.7	U	1.7	0.74	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
gamma-Chlordane	1.7	U	1.7	0.42	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Heptachlor	1.7	U	1.7	1.1	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Heptachlor epoxide	1.7	U	1.7	0.80	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Methoxychlor	3.3	U	3.3	1.5	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Toxaphene	67		67	19	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									

### Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49756/10-A

Matrix: Solid

Analysis Batch: 50336

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49756

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fa
DCB Decachlorobiphenyl	93		32 - 175	07/03/12 12:02	07/09/12 11:12	
Tetrachloro-m-xylene	104		24 - 150	07/03/12 12:02	07/09/12 11:12	
Tetrachloro-m-xylene	180	X	24 - 150	07/03/12 12:02	07/09/12 11:12	

Lab Sample ID: LCS 240-49756/11-A

Matrix: Solid

Analysis Batch: 50336

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 49756

, maryone Batom cocco			Spike	LCS	LCS				%Rec.
Analyte			Added	Resuit	Qualifier	Unit	D	%Rec	Limits
4,4'-DDD	k		33,3	35.1		ug/Kg		105	38 - 160
4,4'-DDE			33,3	27.2		ug/Kg		82	41 - 137
4,4'-DDT			33.3	33,3		ug/Kg		100	34 - 139
Aldrin			33.3	25.2		ug/Kg		76	52 - 119
alpha-BHC			33.3	26,0		ug/Kg		78	50 - 129
alpha-Chiordane			33.3	26.0		ug/Kg		78	43 - 130
beta-BHC			33,3	26.0		ug/Kg		78	51 - 127
delta-BHC			33.3	29.1		ug/Kg		87	54 - 134
Diełdrin			33,3	29.0		ug/Kg		87	45 - 140
Endosulfan I			33.3	18.9		ug/Kg		57	13 - 110
Endosulfan II			33.3	20,6		ug/Kg		62	22 _ 115
Endosulfan sulfate			33.3	32.0		ug/Kg		96	44 - 143
Endrin	-		33.3	30.5		ug/Kg		92	48 - 143
Endrin aldehyde			33.3	32.7		ug/Kg		98	31 - 126
Endrin ketone			33.3	29.5		ug/Kg		89	39 - 137
gamma-BHC (Lindane)			33,3	27.2		ug/Kg		82	41 - 137
gamma-Chlordane			33.3	25.4		ug/Kg		76	53 - 129
Heptachlor			33.3	29,9		ug/Kg		90	37 - 127
Heptachlor epoxide			33.3	26.0		ug/Kg		78	53 - 132
Methoxychlor			33.3	34.8		ug/Kg		104	33 - 151
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						

32 - 175 32.175

24 - 150

24.150

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

98

82

110

113

Lab Sample ID: MB 240-49612/11-A

Matrix: Water

DCB Decachlorobiphenyl

DCB Decachlorobiphenyl

Tetrachioro-m-xylene

Tetrachloro-m-xylene

Analysis Batch: 49764

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49612

-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0,50	U	0.50	0.17	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1221	0.50	U	0.50	0.13	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1232	0,50	U	0.50	0.16	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1242	0.50	U	0.50	0.22	ug/L		07/02/12 11:53	07/03/12 17:39	1
Arodor-1248	0.50	U	0.50	0.10	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1254	0.50	U	0.50	0.16	ug/L		07/02/12 11:53	07/03/12 17:39	1

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP (OH) - IDW

### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

81

33

Client Sample ID: Method Blank Lab Sample ID: MB 240-49612/11-A Prep Type: Total/NA Matrix: Water Prep Batch: 49612 Analysis Batch: 49764 мв мв Dil Fac Prepared Analyzed

Qualifier Result RL MDL Unit Analyte 0.50 0.50 0.17 ug/L 07/02/12 11:53 07/03/12 17:39 Aroclor-1260 мв мв Dil Fac Analyzed Qualifier Limits Prepared Surrogate %Recovery 07/03/12 17:39 23 - 136 07/02/12 11:53 72 Tetrachloro-m-xylene

10 - 130

Lab Sample ID: LCS 240-49612/12-A

Matrix: Water

Analysis Batch: 49852

DCB Decachlorobiphenyl

Client Sample ID: Lab Control Sample Prep Type: Total/NA

07/03/12 17:39

07/02/12 11:53

Prep Batch: 49612

Spike LCS LCS Added Result Qualifier Unit %Rec Limits Analyte 5.00 5.95 ug/L 119 66 - 120 Aroclar-1016 ug/L 84 55 - 120 Aroclar-1260 5.00 4.18

LCS LCS Limits Surrogate %Recovery Qualifier 23 - 136 Tetrachloro-m-xylene 70 71 10.130 DCB Decachlorobiphenyl

Lab Sample ID: MB 240-49755/19-A

Matrix: Solid

Analysis Batch: 49992

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 49755

MR MR Analyzed Dil Fac RL MDL Unit D Prepared Result Qualifier Analyte 07/06/12 12:12 07/03/12 11:53 1 33 Ü 33 21 ug/Kg Aroclar-1016 07/06/12 12:12 33 U 33 16 ug/Kg 07/03/12 11:53 Aroclar-1221 07/03/12 11:53 07/06/12 12:12 33 ug/Kg 33 u 14 Aroclar-1232 07/03/12 11:53 07/06/12 12:12 33 Ù 33 13 ug/Kg Aroclor-1242 07/06/12 12:12 33 07/03/12 11:53 1 ug/Kg Aroclor-1248 33 ug/Kg 07/03/12 11:53 07/08/12 12:12 1 33 u 17 Aroclor-1254

MB MB Analyzed Dil Fac Qualifier Limits Prepared Surrogate %Recovery 07/08/12 12:12 07/03/12 11:53 29 - 151 Tetrachloro-m-xylene 69 07/06/12 12:12 07/03/12 11:53 DCB Decachlorobiphenyl 66 14.163

33

17 ug/Kg

Lab Sample ID: LCS 240-49755/20-A

Matrix: Solid

Aroctor-1260

Analysis Batch: 49992

Client Sample ID: Lab Control Sample

07/06/12 12:12

07/03/12 11:53

Prep Type: Total/NA

Prep Batch: 49755

Spike LCS LCS %Rec. Result Qualifler Unit D %Rec Limits Added Analyte 62 - 120 ug/Kg 68 Aroclor-1016 333 225 333 228 ug/Kg 68 56 - 122 Aroctor-1260

LCS LCS %Recovery Qualifier Limits Surrogate 29 - 151 62 Tetrachloro-m-xylene 67 14 - 163 DCB Decachlorobiphenyl

Client Sample ID: Method Blank

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP (OH) - IDW

Method: 8151A - Herbicides (G	C)							4	
Lab Sample ID: MB 240-49707/7-A Matrix: Water Analysis Batch: 50094							Client Sa	mple ID: Metho Prep Type: T Prep Batch	otal/NA
	МВ	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 21:18	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0,00010	mg/L		07/03/12 09:18	07/07/12 21:18	1
	МВ	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	51	to account of the	37-116				07/03/12 09:18	07/07/12 21:18	1
2,4-Dichlorophenylacelic acid	57		37 - 116				07/03/12 09:18	07/07/12 21:18	1

Lab Sample ID: LCS 240-49	707/8-A						Client	Sample	ID: Lab Cor	itrol Sample
Matrix: Water									Prep Ty	pe: Total/NA
Analysis Batch: 50094									Prep E	3atch: 49707
			Spike	LCS	LCS				%Rec.	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
2,4-D			0.0200	0.0135		mg/L		67	35 _ 136	
Silvex (2,4,5-TP)			0.00500	0.00325		mg/L		65	46 - 112	
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
2,4-Dichlorophenylacetic acid	55		37 - 116							
2,4-Dichlorophenylacetic acid	66		37 - 116							

Method: 8330 (Modified) - Organic Compounds by UV/HPLC

0.25 Ü

Result Qualifier

Lab Sample ID: G2G060000020B

Analyte

Nitroguanidine

Lab gample in azgronomozon												-,,,,,,	ab.12 12.		
Matrix: Solid													Pr	ep Type	: Tota
Analysis Batch: 2188020													Prep Bate	ch: 2188	3020_F
Analysis Batom 2100020		МВ	MB										•		
Analyte	R	esult	Qualifier		RL		MDL	Unit		D	Pr	epared	Analy	zed	Dil Fac
Nitroguanidine		0.25	U	,,	0,25		0.020	mg/kg		07	7/06	/12 06:00	07/10/12	11:54	1
Lab Sample ID: G2G060000020C										Clie	nt	Sample	ID: Lab C	ontrol S	Sample
Matrix: Solid													Pr	ер Туре	: Total
Analysis Batch: 2188020													Prep Bate	ch: 2188	3020_P
				Spike		LCS	LCS						%Rec.		
Analyte				Added		Resuit	Quai	Mer	Unit	1	D	%Rec	Limits		
Nitroguanidine				1.00		0.973			mg/kg			97	72 - 121		
Lab Sample ID: G2F280490026D										Client	Sa	mple ID	: Matrix S	pike Du	plicate
Matrix: Solid													Pr	ер Туре	: Total
Analysis Batch: 2188020													Prep Bate	ch: 2188	3020_P
	Sample	Samp	ole	Spike		SD1	SD1						%Rec.		RPD
Analyte	Result	Quali	ifler	Added		Result	Qual	lifler	Unit		D	%Rec	Limits	RPD	Limit
Nitroguanidine	0.25	U	A	1,00		0.822			mg/kg			82	72 _ 121	1.4	20
Lab Sample ID: G2F280490026S												Client	Sample IE	): Matrix	(Spike
Matrix: Solid													Pr	ер Туре	: Total
Analysis Batch: 2188020													Prep Bat	ch: 2188	3020_P
, =													-		
	Sample	Samp	ole	Spike		MS1	MS1						%Rec.		

%Rec

Unit

mg/kg

Result Qualifier

0.833

Limits

72 - 121

Added

1.00

([0]

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8330 (Modified) - Organic Compounds by UV/HPLC (Continued)

Lab Sample ID: G2G090000129B Client Sample ID: Method Blank

Matrix: Water Analysis Batch: 2191129

мв мв

Prep Type: Dissolved Prep Batch: 2191129_P

Dil Fac Analyte Result Qualifier RL MDL Unit Prepared Analyzed 07/10/12 10:28 20 2.4 ug/L 07/09/12 14:50 Nitroguanidine 20

Client Sample ID: Lab Control Sample Lab Sample ID: G2G090000129C Prep Type: Dissolved

Matrix: Water

Prep Batch: 2191129_P Analysis Batch: 2191129 LCS LCS %Rec. Spike

Limits Added Result Qualifier Unit D %Rec 250 ug/L 96 73 - 117 Nitroguanidine 240

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MS Prep Type: Dissolved

Matrix: Water

Prep Batch: 2191129_P Analysis Batch: 2191129

%Rec. Spike MS MS Sample Sample

Limits Result Qualifier Added Result Qualifler Unit D %Rec Analyte 73 - 117 20 U 250 244 ug/L 98 Nitroguanidine

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MSD Prep Type: Dissolved

Matrix: Water

Prep Batch: 2191129_P Analysis Batch: 2191129 Spike MSD MSD %Rec. RPD Sample Sample

Result Qualifler Added Result Qualifier Unit D %Rec Limits RPD Limit Analyte Nitroguanidine 20 250 244 ug/L 98 73 - 117 0.16 15

#### Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Client Sample ID: Method Blank Lab Sample ID: G2G030000016B Prep Type: Total Matrix: Water

Prep Batch: 2185016 P Analysis Ratch: 2185016

Analysis Batch: 2185016								rep Batch: Zto	0010_P
				MBI	11.44	_	Dunmanad	ā mah ma d	Dil Fac
Analyte		Qualifier			Unit	D	Prepared	Analyzed	DH P80
Nitroglycerin	0.65	U	0.65	0.33	ug/L		07/03/12 06:00	07/06/12 17:23	1
PETN	0.65	U	0.65	0.30	ug/L		07/03/12 06:00	07/06/12 17:23	1
2-Amino-4,6-dinitrotoluene	0.20	U	0.20	0.017	ug/L		07/03/12 06:00	07/06/12 17:23	1
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
1,3-Dinitrobenzene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
2,4-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
2,6-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
HMX	0,10	U	0.10	0.036	ug/L		07/03/12 06:00	07/06/12 17:23	1
Nitrobenzene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/08/12 17:23	1
2-Nitrotoluene	0.50	Ü	0.50	0.088	ug/L		07/03/12 06:00	07/06/12 17:23	1
3-Nitrotoluene	0,50	U	0.50	0.057	ug/L		07/03/12 06:00	07/06/12 17:23	1
4-Nitrotoluene	0.65	U	0.65	0.088	ug/L		07/03/12 06:00	07/06/12 17:23	1
RDX	0.10	U	0.10	0.038	ug/L		07/03/12 06:00	07/06/12 17:23	1
Tetryl	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
1,3,5-Trinitrobenzene	0.10	U	0.10	0.030	ug/L		07/03/12 06:00	07/08/12 17:23	1
2,4,6-Trinitrotoluene	0.10	Ú	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DII Fac
3,4-Dinitrotoluene	101		79 - 111			•	07/03/12 06:00	07/06/12 17:23	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A) (Continued)

Lab Sample ID: G2G030000016 Matrix: Water						Client Sample ID: Lab Control Sample Prep Type: Total			
Analysis Batch: 2185016									Prep Batch: 2185016_P
Timalyono Batom Breso.			Spike	LCS	LCS				%Rec.
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits
Nitroglycerin			5.00	5.69		ug/L		114	85 - 115
PETN			5,00	4.97		ug/L		99	84 - 117
2-Amino-4,6-dinitrotoluene			1.00	1.11		ug/L		111	50 ₋ 155
4-Amino-2,6-dinitrotoluene			1,00	1.10		ug/L		110	55 - 155
1,3-Dinitrobenzene			1.00	1.17		ug/L		117	45 _ 160
2,4-Dinitrotoluene			1.00	1.09		ug/L		109	60 _ 135
2,8-Dinitrotoluene			1.00	1.09		ug/L		109	60 _ 135
нмх			1.00	1.11		ug/L		111	60 ₋ 115
Nitrobenzene			1.00	1.17		ug/L		117	50 - 140
2-Nitrotoluene			1.00	1.08		ug/L		108	45 _ 135
3-Nitrotoluene			1.00	1.08		ug/L		106	50 _ 130
4-Nitrotoluene			1,00	1.07		ug/L		107	50 - 130
RDX			1.00	1.18		ug/L		116	50 _ 160
Tetryl			1.00	0.974		ug/L		97	20 - 175
1,3,5-Trinitrobenzene			1.00	1.13		ug/L		113	65 ₋ 140
2,4,6-Trinitrotoluene			1.00	0,986		ug/L.		99	50 - 145
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
3,4-Dinitrotoluene	105		79 - 111						

## Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)

Lab Sample ID: G2G090000108B							Client Sample ID: Method Blank					
Matrix: Solid								Ргер Тур	e: Total			
Analysis Batch: 2191108							ı	Prep Batch: 219	1108_P			
	MB	MB										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac			
1,3,5-Trinitrobenzene	0,25	Ü	0,25	0.010	mg/kg		07/09/12 12:45	07/10/12 16:06	1			
1,3-Dinitrobenzene	0.25	U	0.25	0,0042	mg/kg		07/09/12 12:45	07/10/12 16:06	1			
2,4,6-Trinitrotoluene	0.25	U	0.25	0.019	mg/kg		07/09/12 12:45	07/10/12 18:06	1			
2,4-Dinitrotoluene	0.25	U	0.25	0,0053	mg/kg		07/09/12 12:45	07/10/12 16:06	1			
2,8-Dinitrotoluene	0.25	U	0.25	0.0073	mg/kg		07/09/12 12:45	07/10/12 18:06	1			
2-Amino-4,6-dinitrotoluene	0.25	U	0,25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:08	1			
2-Nitrotoluene	0.25	U	0.25	0.013	mg/kg	•	07/09/12 12:45	07/10/12 16:06	1			
3-Nitrotoluene	0.25	U	0.25	0.016	mg/kg		07/09/12 12:45	07/10/12 16:08	1			
4-Amino-2,6-dinitrotoluene	0,25	U	0,25	0.010	mg/kg		07/09/12 12:45	07/10/12 16:06	1			
4-Nitrotoluene	0.25	Ú	0.25	0.025	mg/kg		07/09/12 12:45	07/10/12 16:06	1			
НМХ	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:06	1			
Nitrobenzene	0.25	U	0.25	0.018	mg/kg		07/09/12 12:45	07/10/12 16:06	1			
Nitroglycerin	0.50	U	0.50	0.015	mg/kg		07/09/12 12:45	07/10/12 16:06	1			
PETN	0.50	U	0.50	0.025	mg/kg		07/09/12 12:45	07/10/12 16:06	1			
RDX	0,25	U	0,25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:08	1			
Tetryl	0.25	U	0.25	0.010	mg/kg		07/09/12 12:45	07/10/12 16:06	1			
	МВ	MB										
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac			
3,4-Dinitrotoluene	102		75 - 115				07/09/12 12:45	07/10/12 16:06	1			

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Prep Type: Total

Prep Batch: 2191108_P

## Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

Client Sample ID: Lab Control Sample Lab Sample ID: G2G090000108C Prep Type: Total Matrix: Solid Prep Batch: 2191108_P Analysis Batch: 2191108 LCS LCS %Rec. Spike Limits Added Result Qualifier Unit %Rec Analyte 101 81 - 121 0.500 0.507 mg/kg 1,3,5-Trinitrobenzene 81 - 121 103 0.500 0.517 mg/kg 1,3-Dinitrobenzene 65 - 105 2,4,6-Trinitrotoluene 0.500 0.445 mg/kg 89 79 - 119 0.500 0.499 mg/kg 100 2,4-Dinitrotoluene 99 79.119 0.496 mg/kg 2,6-Dinitrotoluene 0.500 100 79 - 119 0,502 mg/kg 2-Amino-4,6-dinitrotoluene 0.500 78 - 118 0.500 0.495 mg/kg 99 2-Nitrotoluene 0.500 0,500 mg/kg 100 77 - 117 3-Nitrotoluene 0.510 81 - 121 0.500 mg/kg 102 4-Amino-2,6-dinitrotoluene 78 - 118 0.500 0.497 mg/kg 99 4-Nitrotoluene 0,500 0.513 mg/kg 103 80 _ 120 HMX 0.500 0.520 mg/kg 104 80 - 120 Nitrobenzene 76 - 116 1.06 mg/kg 106 1.00 Nitroglycerin 76 - 116 1.00 1.02 mg/kg 102 PETN 0.500 0.500 mg/kg 100 82 - 122 RDX 87 63 - 120 0,437 mg/kg 0,500 Tetryl LCS LCS Limits %Recovery Qualifier Surrogate 75 - 115 3,4-Dinitrotoluene 100

Lab Sample ID: 240-12752-3 MS

Matrix: Solid

Analysis Batch: 2191108

Analyte	<del>-</del>	Sample Qualifier	Spike Added		MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	
1,3,5-Trinitrobenzene	0.25	U	0.498	0.503		mg/kg		101	81 - 121	
1,3-Dinitrobenzene	0.25	U	0.498	0.523		mg/kg		105	81 - 121	
2,4,6-Trinitrotoluene	0.25	U	0.498	0,450		mg/kg		90	65 ₋ 105	
2,4-Dinitrotoluene	0.25	Ü	0.498	0.501		mg/kg		101	79 - 119	
2,6-Dinitrotoluene	0.25	U	0.498	0,506		mg/kg		102	79 - 119	
2-Amino-4,6-dinitrotoluene	0.25	U	0.498	0.506		mg/kg		102	79 - 119	
2-Nitrotoluene	0.25	U	0.498	0.502		mg/kg		101	78 - 118	
3-Nitrotoluene	0.25	U	0.498	0.504		mg/kg		101	77 - 117	
4-Amino-2,6-dinitrotoluene	0,25	U	0.498	0.514		mg/kg		103	81 - 121	
4-Nitrotoluene	0.25	U	0.498	0.497		mg/kg		100	78 - 118	
HMX	0.25	U	0.498	0.522		mg/kg		105	80 - 120	
Nitrobenzene	0,25	U	0.498	0.520		mg/kg		104	80 - 120	
Nitroglycenn	0.50	U	0,998	1.07		mg/kg		107	76 - 116	
PETN	0,50	U	0.996	1.00		mg/kg		101	76 - 116	
RDX	0.25	U	0.498	0.486		mg/kg		98	82 - 122	
Tetryl	0.25	U	0.498	0.418		mg/kg		84	63 - 120	

Surrogate%RecoveryQualifierLimits3,4-Dinitrotoluene10175 - 115

MS MS

Prep Type: Total

Client Sample ID: FWG-IDW-SBCOMP3-SO

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

_____ Lab Sample ID: 240-12752-3 MSD

Matrix: Solid

Prep Batch: 2191108 P Analysis Batch: 2191108 MSD MSD %Rec. RPD Sample Sample Spike %Rec Limits RPD Limit Result Qualifier Added Result Qualifier Unit Analyte 0.25 U 100 81 - 121 1.0 20 0.498 1,3,5-Trinitrobenzene 0.500 mg/kg 1,3-Dinitrobenzene 0.25 U 0.500 0,522 mg/kg 104 81 - 121 0.24 20 89 65 - 105 0.80 20 2.4.6-Trinitrotoluene 0.25 U 0.500 0.446 mg/kg 100 79 - 119 0.22 20 0.500 2,4-Dinitrotoluene 0.25 U 0.500 mg/kg 20 2,6-Dinitrotoluene 0.25 U 0.500 0.502 mg/kg 100 79 _ 119 0.71 2-Amino-4,6-dinitrotoluene 0.25 U 0.500 0.503 mg/kg 101 79 - 119 0,53 20 78 - 118 20 2-Nitrotoluene 0.25 U 0.500 0.493 mg/kg 99 1.7 100 77 - 117 0.63 20

0,500 0.501 3-Nitrotoluene 0.25 U mg/kg 0.090 20 4-Amino-2,6-dinitrotoluene 0.25 U 0,500 0.513 mg/kg 103 81 - 121 99 76 - 118 0.76 20 4-Nitrotoluene 0.25 U 0.500 0.493 mg/kg HMX 103 80 - 120 1.1 20 0.500 0.516 mg/kg 0.25 U 80 - 120 0.63 20 105 Nitrobenzene 0,25 U 0.500 0.524 mg/kg Nitroglycenn 0.50 U 1.08 mg/kg 108 76 - 116 1.2 20 1.00 100 0,10 20 PETN 0.50 U 1.00 1.00 mg/kg 76 - 116 97 82 - 122 0.47 20 RDX 0.25 U 0.500 0.484 mg/kg 20 63 - 120 1.7 Tetryl 0.25 U 0.500 0.411 mg/kg 82

 MSD
 MSD

 Surrogate
 %Recovery
 Qualifier
 Limits

 3,4-Dinitrotoluene
 101
 75 - 115

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-49412/1-A

Matrix: Solid

Analysis Batch: 49675

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49412

Analysis Datoli. 40070									–
•	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	Đ	Prepared .	Analyzed	Dil Fac
Arsenic	1.0	U	1.0	0.30	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Cobalt	5.0	U	5.0	0.16	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Chromium	0.50	U	0.50	0.20	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Lead	0.30	U	0.30	0.19	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Selenium	0.50	U	0,50	0.45	mg/Kg		08/29/12 11:17	07/02/12 17:37	1
Silver	0,50	U	0.50	0.10	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Vanadium	0.212	J	5.0	0.12	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Barium	0.242	J	20	0.071	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Calcium	34,0	J	500	16	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Copper	2.5	U	2.5	0.74	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Magnesium	500	U	500	5.1	mg/Kg		08/29/12 11:17	07/02/12 17:37	1
Manganese	1.5	U	1.5	0.074	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Nickel	0.429	J	4.0	0.27	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Potassium	20.7	J	500	6.2	mg/Kg		08/29/12 11:17	07/02/12 17:37	1
	Analyte Arsenic Cobalt Chromium Lead Selenium Silver Vanadium Barium Calcium Copper Magnesium Manganese Nickel	Analyte         Result           Arsenic         1.0           Cobalt         5.0           Chromium         0.50           Lead         0.30           Selenium         0.50           Silver         0.50           Vanadium         0.212           Barium         0.242           Celcium         34.0           Copper         2.5           Magnesium         500           Manganese         1.5           Nickel         0.429	Analyte         Result         Qualifier           Arsenic         1.0         U           Cobalt         5.0         U           Chromium         0.50         U           Lead         0.30         U           Selenium         0.50         U           Silver         0.50         U           Vanadium         0.212         J           Barium         0.242         J           Celcium         34.0         J           Copper         2.5         U           Magnesium         500         U           Manganese         1.5         U           Nickel         0.429         J	Analyte         Result         Qualifier         RL           Arsenic         1.0         U         1.0           Cobalt         5.0         U         5.0           Chromium         0.50         U         0.50           Lead         0.30         U         0.30           Selenium         0.50         U         0.50           Silver         0.50         U         0.50           Vanadium         0.212         J         5.0           Barium         0.242         J         20           Celcium         34.0         J         500           Copper         2.5         U         2.5           Magnesium         500         U         500           Manganese         1.5         U         1.5           Nickel         0.429         J         4.0	Analyte         Result         Qualifier         RL         MDL           Arsenic         1.0         U         1.0         0.30           Cobalt         5.0         U         5.0         0.16           Chromium         0.50         U         0.50         0.20           Lead         0.30         U         0.30         0.19           Selenium         0.50         U         0.50         0.45           Silver         0.50         U         0.50         0.10           Vanadium         0.212         J         5.0         0.12           Barium         0.242         J         20         0.071           Celcium         34.0         J         500         16           Copper         2.5         U         2.5         0.74           Magnesium         500         U         500         5.1           Manganese         1.5         U         1.5         0.074           Nickel         0.429         J         4.0         0.27	Analyte         Result         Qualifier         RL         MDL         Unit           Arsenic         1.0         U         1.0         0.30         mg/Kg           Cobalt         5.0         U         5.0         0.16         mg/Kg           Chromium         0.50         U         0.50         0.20         mg/Kg           Lead         0.30         U         0.30         0.19         mg/Kg           Selenium         0.50         U         0.50         0.45         mg/Kg           Silver         0.50         U         0.50         0.10         mg/Kg           Vanadium         0.212         J         5.0         0.12         mg/Kg           Barium         0.242         J         20         0.071         mg/Kg           Celcium         34.0         J         500         16         mg/Kg           Copper         2.5         U         2.5         0.74         mg/Kg           Magnesium         500         U         500         5.1         mg/Kg           Nickel         0.429         J         4.0         0.27         mg/Kg	Analyte         Result         Qualifier         RL         MDL         Unit         D           Arsenic         1.0         U         1.0         0.30         mg/Kg         D           Cobalt         5.0         U         5.0         0.16         mg/Kg         Mg/Kg         D           Chromium         0.50         U         0.50         0.20         mg/Kg         Mg/Kg         D         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg         Mg/Kg <td< td=""><td>Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared           Arsenic         1.0         U         1.0         0.30         mg/Kg         06/29/12 11:17           Cobalt         5.0         U         5.0         0.16         mg/Kg         06/29/12 11:17           Chromium         0.50         U         0.50         0.20         mg/Kg         06/29/12 11:17           Lead         0.30         U         0.30         0.19         mg/Kg         06/29/12 11:17           Selenium         0.50         U         0.50         0.45         mg/Kg         06/29/12 11:17           Silver         0.50         U         0.50         0.10         mg/Kg         06/29/12 11:17           Vanadium         0.212         J         5.0         0.12         mg/Kg         06/29/12 11:17           Barium         0.242         J         20         0.071         mg/Kg         06/29/12 11:17           Colcium         34,0         J         500         16         mg/Kg         06/29/12 11:17           Copper         2.5         U         2.5         0.74         mg/Kg         06/29/12 11:17</td><td>Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed           Arsenic         1.0         U         1.0         0.30         mg/Kg         06/29/12 11:17         07/02/12 17:37           Cobalt         5.0         U         5.0         0.16         mg/Kg         06/29/12 11:17         07/02/12 17:37           Chromium         0.50         U         0.50         0.20         mg/Kg         06/29/12 11:17         07/02/12 17:37           Lead         0.30         U         0.50         0.45         mg/Kg         06/29/12 11:17         07/02/12 17:37           Selenium         0.50         U         0.50         0.45         mg/Kg         06/29/12 11:17         07/02/12 17:37           Silver         0.50         U         0.50         0.10         mg/Kg         06/29/12 11:17         07/02/12 17:37           Vanadium         0.212         J         5.0         0.12         mg/Kg         06/29/12 11:17         07/02/12 17:37           Calcium         0.242         J         20         0.071         mg/Kg         06/29/12 11:17         07/02/12 17:37           Copper         2.5         0.74         mg/Kg</td></td<>	Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared           Arsenic         1.0         U         1.0         0.30         mg/Kg         06/29/12 11:17           Cobalt         5.0         U         5.0         0.16         mg/Kg         06/29/12 11:17           Chromium         0.50         U         0.50         0.20         mg/Kg         06/29/12 11:17           Lead         0.30         U         0.30         0.19         mg/Kg         06/29/12 11:17           Selenium         0.50         U         0.50         0.45         mg/Kg         06/29/12 11:17           Silver         0.50         U         0.50         0.10         mg/Kg         06/29/12 11:17           Vanadium         0.212         J         5.0         0.12         mg/Kg         06/29/12 11:17           Barium         0.242         J         20         0.071         mg/Kg         06/29/12 11:17           Colcium         34,0         J         500         16         mg/Kg         06/29/12 11:17           Copper         2.5         U         2.5         0.74         mg/Kg         06/29/12 11:17	Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed           Arsenic         1.0         U         1.0         0.30         mg/Kg         06/29/12 11:17         07/02/12 17:37           Cobalt         5.0         U         5.0         0.16         mg/Kg         06/29/12 11:17         07/02/12 17:37           Chromium         0.50         U         0.50         0.20         mg/Kg         06/29/12 11:17         07/02/12 17:37           Lead         0.30         U         0.50         0.45         mg/Kg         06/29/12 11:17         07/02/12 17:37           Selenium         0.50         U         0.50         0.45         mg/Kg         06/29/12 11:17         07/02/12 17:37           Silver         0.50         U         0.50         0.10         mg/Kg         06/29/12 11:17         07/02/12 17:37           Vanadium         0.212         J         5.0         0.12         mg/Kg         06/29/12 11:17         07/02/12 17:37           Calcium         0.242         J         20         0.071         mg/Kg         06/29/12 11:17         07/02/12 17:37           Copper         2.5         0.74         mg/Kg

Lab Sample ID: LCS 240-49412/2-A

Matrix: Solid

Analysis Batch: 49675

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 49412

%Rec. Spike LCS LCS Analyte Added Result Qualifler Unit D %Rec Limits 200 188 mg/Kg 94 80 - 120 Arsenic 50.0 90 80 - 120 Cobalt 45.1 mg/Kg

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 6010B - Metals (ICP) (Continued)

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 240-49412/2-A Prep Type: Total/NA Matrix: Solid Prep Batch: 49412 Analysis Batch: 49675 LCS LCS Spike

	Opino	LOO	LUU				7011001	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chromium	20.0	18.9		mg/Kg		95	80 - 120	
Lead	50.0	46.2		mg/Kg		92	80 _ 120	
Selenium	200	187		mg/Kg		94	80 - 120	
Silver	5.00	5.06		mg/Kg		101	80 - 120	
Vanadium	50.0	49.8		mg/Kg		100	80 _ 120	
Barium	200	211		mg/Kg		105	80 - 120	
Calcium	5000	5110		mg/Kg		102	80 - 120	
Copper	25.0	23.4		mg/Kg		93	80 - 120	
Magnesium	5000	4880		mg/Kg		98	80 - 120	
Manganese	50.0	46.5		mg/Kg		93	80 - 120	
Nickel	50.0	46.0		mg/Kg		92	80 - 120	
Potassium	5000	4990		mg/Kg		100	80 - 120	

Lab Sample ID: 240-12752-3 MS

Matrix: Solid

Client Sample ID: FWG-IDW-SBCOMP3-SO

Prep Type: Total/NA

Analysis Batch: 50003									Prep Bat	ch: 4941;
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	11	**************************************	245	229		mg/Kg	Þ	89	75 - 125	
Cobalt	10		61.4	72.0		mg/Kg	₩	101	75 - 125	
Chromium	15		24.5	40.0		mg/Kg	¢	103	75 ₋ 125	
Lead	11		61.4	62,6		mg/Kg	ø	84	75 - 125	
Selenium	0.61	U	245	212		mg/Kg	₽	86	75 ₋ 125	
Silver	0.61	U	6.14	5,61		mg/Kg	¢	91	75 ₋ 125	
Vanadium	17	В	61.4	78.0		mg/Kg	₽	99	75 - 125	
Barium	120	В	245	367		mg/Kg	₽	102	75 ₋ 125	
Calcium	16000	В	6140	25800	F	mg/Kg	₩	162	75 - 125	
Copper	21		30.7	50.3		mg/Kg	Ф	95	75 ₋ 125	
Magnesium	4500		6140	11000		mg/Kg	₩	106	75 ₋ 125	
Manganese	430		61.4	472	4	mg/Kg	₿	63	75 - 125	
Nickel	24	В	61.4	67,9		mg/Kg	₽	103	75 ₋ 125	
Potassium	1500	В	6140	7510		mg/Kg	♥	98	75 - 125	

Lab Sample ID: 240-12752-3 MSD

Matrix: Solid

Analysis Batch: 50003

Client Sample ID: FWG-IDW-SBCOMP3-SO Prep Type: Total/NA

Prep Batch: 49412

Analysis Batch: 50003									1100	Datoni	TU-TIM
,,	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	11		245	225		mg/Kg	<u> </u>	87	75 ₋ 125	2	20
Cobalt	10		61.4	70.2		mg/Kg	Ħ	98	75 - 125	3	20
Chromium	15		24.5	39.5		mg/Kg	£.	101	75.125	1	20
Lead	11		61.4	61.3		mg/Kg	ø	81	75 - 125	2	20
Selenium	0,61	U	245	207		mg/Kg	ø	84	75 - 125	2	20
Silver	0.61	U	6.14	5.48		mg/Kg	ø	89	75.125	2	20
Vanadium	17	В	61.4	78.4		mg/Kg	₩	100	75 _ 125	0	20
Barjum	120	В	245	360		mg/Kg	ø	99	75 - 125	2	20
Calcium	16000	В	6140	29200	F	mg/Kg	¢	217	75 _ 125	12	20
Copper	21		30.7	48,3		mg/Kg	ø	88	75 ₋ 125	4	20
Magnesium	4500		6140	10700		mg/Kg	¢	101	75 - 125	2	20
Manganese	430		61.4	672	4 F	mg/Kg	¢	389	75 - 125	35	20
1 ~											

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Client Sample ID: FWG-IDW-SBCOMP3-SO

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-12752-3 MSD

Matrix: Solid	-							_	Prep T	ype: To	tal/NA
Analysis Batch: 50003									Prep	Batch:	49412
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nickel	24	В	81.4	84.7		mg/Kg	**	98	75 - 125	4	20
Potassium	1500	В	6140	7440	•	mg/Kg	₽	97	75 ₋ 125	1	20

Lab Sample ID: MB 240-49727/2-A

Matrix: Water

Potassium

Analysis Batch: 50003

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 49727

	MB	WB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dll Fac
Arsenic	0,50	U .	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:20	1
Cadmium	0.10	U	0.10	0.00086	mg/L		07/03/12 10:01	07/05/12 17:20	1
Chromium	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:20	1
Lead	0.50	Ú	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:20	1
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 17:20	1
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:20	1
Barium	10	Ú	10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:20	1

Lab Sample ID: LCS 240-49727/3-A

Matrix: Water

Analysis Batch: 50003

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 49727

•	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifler	Unit	D	%Rec	Limits	
Arsenic	2.00	2,16		mg/L		106	50 - 150	
Cadmium	0.0500	0.0524	J	mg/L		105	50 - 150	
Chromium	0.200	0.206	J	mg/L		103	50 - 150	
Lead	0.500	0.485	J	mg/L		97	50 - 150	
Selenium	2.00	2.16		mg/L		108	50 - 150	
Silver	0,0500	0,0551	J	mg/L		110	50 - 150	
Barium	2.00	2.22	J	mg/L		111	50 150	

Lab Sample ID: MB 240-50314/1-A

Matrix: Water

Analysis Batch: 50581

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 50314

Aligiyala Dutolli 00001								•	
•	WB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dli Fac
Arsenic		Ü	10	3.2	ug/L		07/10/12 08:18	07/11/12 13:20	1
Cobalt	7.0	U	7.0	1.7	ug/L		07/10/12 08:18	07/11/12 13:20	1
Chromium	5.0	U	5,0	2.2	ug/L		07/10/12 08:18	07/11/12 13:20	1
Lead	3,0	U	3.0	1.9	ug/L		07/10/12 08:18	07/11/12 13:20	1
Selenium	5.0	U	5.0	4.1	ug/L		07/10/12 08:18	07/11/12 13:20	1
Silver	5.0	U	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:20	1
Vanadium	7.0	U	7.0	0.64	ug/L		07/10/12 08:18	07/11/12 13:20	1
Barium	0.891	J	200	0.67	ug/L		07/10/12 08:18	07/11/12 13:20	1
Calcium	235	J	5000	130	ug/L		07/10/12 08:18	07/11/12 13:20	1
Copper	25	U	25	4.5	ug/L		07/10/12 08:18	07/11/12 13:20	1
Magnestum	47.4	J	5000	34	ug/L		07/10/12 08:18	07/11/12 13:20	1
Manganese	1.09	J	15	0.41	ug/L		07/10/12 08:18	07/11/12 13:20	1
Nickel	40	U	40	3.2	ug/L		07/10/12 08:18	07/11/12 13:20	1
Potassium	191	J	5000	72	ug/L		07/10/12 08:18	07/11/12 13:20	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-50314/2-A

Matrix: Water

Analysis Batch: 50581

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Prep Batch: 50314

•	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Ųnit	D	%Rec	Limits	
Arsenic	2000	2040		ug/L		102	80 - 120	
Cobalt	500	508		ug/L		101	80 _ 120	
Chromium	200	205		ug/L		103	80 _ 120	
Lead	Sõo	509		ug/L		102	80 - 120	
Selenium	2000	2070		ug/L		103	80 _ 120	
Silver	50.0	52.4		ug/L		105	80 - 120	
Vanadium	500	505		ug/L		101	80 _ 120	
Barium	2000	2170		ug/L		108	80 - 120	
Calcium	50000	52400		ug/L		105	80 - 120	
Copper	250	254		ug/L		102	80 - 120	
Magnesium	50000	51800		ug/L		104	80 - 120	
Manganese	500	522		ug/L		104	80 - 120	
Nickel	500	476		ug/L		95	80 - 120	
Potassium	50000	52100		ug/L		104	80 - 120	

Lab Sample ID: 240-12752-4 MS

Matrix: Water

Analysis Batch: 50581

Client Sample ID: FWG-IDW-TANK3-GW Prep Type: Total Recoverable

Prep Batch: 50314

•	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifler	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	6.3	J	2000	2060		ug/L		103	75 _ 125	
Cobalt	7.0	U	500	506		ug/L		101	75 - 125	
Chromium	3.7	J	200	208		ug/L		102	75 - 125	
Lead	3.0	U	500	507		ug/L		101	75 - 125	
Selenium	5.0	U	2000	2070		ug/L		103	75 - 125	
Silver	5.0	U	50.0	52.1		ug/l.		104	75 ₋ 125	
Vanadium	1.9	J	500	506		ug/L		101	75 - 125	
Barium	56	JB	2000	2230		ug/L		109	75 ₋ 125	
Calcium	43000	В	50000	94600		ug/L		104	75 - 125	
Copper	25	U	250	256		ug/L		103	75 - 125	
Magnesium	10000	В	50000	62200		ug/L		104	75 ₋ 125	
Мапganese	110	В	500	628		ug/L		104	75 - 125	
Nickel	3.2	J	500	478		ug/L		96	75 - 125	
Potassium	19000	В	50000	70900		ug/L		105	75 - 125	
-	*****					-				

Lab Sample ID: 240-12752-4 MSD

Matrix: Water

Analysis Batch: 50581

Client Sample ID: FWG-IDW-TANK3-GW

Prep Type: Total Recoverable

Prep Batch: 50314

Analysis Datoin 60001											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Llmit
Arsenic	8.3	J	2000	1990		ug/L		99	75 - 125	3	20
Cobalt	7.0	Ų	500	487		ug/l.		97	75 - 125	4	20
Chromium	3.7	J	200	200		ug/l.		98	75 _ 125	4	20
Lead	3.0	U	500	486		ug/L		97	75 - 125	4	20
Selenium	5.0	U	2000	1990		ug/L		100	75 _ 125	4	20
Silver	5.0	U	50,0	50.4		ug/l.		101	75 - 125	3	20
Vanadium	1.9	J	500	488		ug/L		97	75 _ 125	4	20
Barium	56	JB	2000	2170		ug/L		108	75 _ 125	3	20
Calcium	43000	В	50000	91300		ug/L		98	75 - 125	4	20
Copper	25	U	250	250		ug/l.		100	75 _ 125	3	20

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### QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-12752-4 MSD

Client Sample ID: FWG-IDW-TANK3-GW Prep Type: Total Recoverable Matrix: Water Analysis Batch: 50581

Prep Batch: 50314

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unît	D	%Rec	Limits	RPD	Limit
Magnesium	10000	В	50000	60000	* */	ug/L		100	75 - 125	4	20
Manganese	110	В	500	608		ug/L		100	75 - 125	3	20
Nickel	3,2	J	500	458		ug/L	•	92	75 _ 125	4	20
Potassium	19000	В	50000	69400		ug/L		102	75 - 125	2	20

Lab Sample ID: LB 240-49653/1-D LB

Matrix: Water

Analysis Batch: 50003

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 49727

	LB	LB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:16	1
Cadmium	0,10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 17:16	1
Chromium	0.50	U	0.50	0,0022	mg/L		07/03/12 10:01	07/05/12 17:16	1
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:18	1
Selenium	0.25	U	0.25	0,0041	mg/L		07/03/12 10:01	07/05/12 17:16	1
Silver	0.50	U	0.50	0,0022	mg/L		07/03/12 10:01	07/05/12 17:16	1
Banum	0.00405		10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:16	1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-49412/1-A

Matrix: Solid

Analysis Batch: 50210

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 49412

мв мв Prepared Analyzed DII Fac RL MDL Unit Result Qualifler Analyte 07/09/12 09:37 0.10 06/29/12 11:17 0.10 Ü 0.047 mg/Kg Beryllium

Lab Sample ID: LCS 240-49412/3-A

Matrix: Solid

Analysis Batch: 49993

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49412

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aluminum	1000	966		mg/Kg		97	80 - 120	
Antimony	10.0	9.29		mg/Kg		93	68 _ 113	
Cadmium	100	88.4		mg/Kg		88	74 - 110	
Iron	1000	1010		mg/Kg		101	80 - 120	
Sodium	1000	933		mg/Kg		93	80 - 120	
Thallium	25.0	26.9		mg/Kg		108	71 - 110	
Zinc	100	88.4		mg/Kg		88	72 - 113	

Lab Sample ID: LCS 240-49412/3-A

Matrix: Solid

Analysis Batch: 50210

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49412

Spike	LCS	LCS				%Rec.	
Analyte Added	Result	Qualifier	Unit	D	%Rec	Limits	
Beryllium 100	100		mg/Kg		100	79 - 110	

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Client Sample ID: FWG-IDW-SBCOMP3-SO

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 6020 - Metals (ICP/MS) (Continued)

ab Sample ID: 240-12752-3 MS	Client Sample ID: FWG-IDW-SBCOMP3-SO
and the same of the same	Dron Tunos Total/NA

Lab Prep Type: Total/NA Matrix: Solid Prep Batch: 49412 Analysis Batch: 49993

Analysis Batch. 49995	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Aluminum	11000	В	1180	14900	4	mg/Kg	₽	365	70 - 130
Antimony	0.13	JB	11.8	3.40	F	mg/Kg	Đ.	28	75 ₋ 125
Cadmium	0.14		118	96,7		mg/Kg	₿	82	58 ₋ 110
Iron	25000	В	1180	28500	4	mg/Kg	ø	335	70 - 130
Sodium	90	JВ	1180	1100		mg/Kg	⋫	86	70 ₋ 130
Thallium	0.17	J	29.5	28.6		mg/Kg	φ	96	62 - 110
Zinc	63	В	118	154		mg/Kg	⋫	77	10 - 199

Client Sample ID: FWG-IDW-SBCOMP3-SO Lab Sample ID: 240-12752-3 MS Prep Type: Total/NA

Matrix: Solid

Prep Batch: 49412 Analysis Batch: 50210 Spike MS MS %Rec. Sample Sample Limits Result Qualifier Unit D %Rec

Added Result Qualifier Analyte Ω 58 - 112 mg/Kg 84 0.57 118 100 Beryllium

Lab Sample ID: 240-12752-3 MSD

Matrix: Solid

Prep Type: Total/NA Prep Batch: 49412 Analysis Batch: 49993

Allayolo Batom 10000	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	11000	В	1180	13700	4	mg/Kg	- ₽	262	70 - 130	9	20
Antimony	0.13	JB	11.8	3.37	F	mg/Kg	₽	27	75 - 125	1	20
Cadmium	0.14		118	94.6		mg/Kg	r)	80	58 - 110	2	20
Iron	25000	В	1180	27100	4	mg/Kg	¤	220	70 - 130	5	20
Sodium	90	JB	1180	1100		mg/Kg	ø	86	70 - 130	0	20
Thallium	0.17		29.5	28.1		mg/Kg	⋫	95	62 - 110	2	20
Zinc	63		118	152		mg/Kg	ø	75	10 - 199	1	20

Client Sample ID: FWG-IDW-SBCOMP3-SO Lab Sample ID: 240-12752-3 MSD Prep Type: Total/NA

Matrix: Solid

Prep Batch: 49412 Analysis Batch: 50210 RPD %Rec. Sample Sample Spike MSD MSD Limit RPD Added Unit D %Rec Limits Result Qualifier Result Qualifier 20  $\overline{\phi}$ 84 58 - 112 mg/Kg 118 99.4 Beryllium 0.57

Lab Sample ID: MB 240-50314/1-A

Matrix: Water

Analysis Batch: 50556

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 50314

	•	MB	MB							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prapared	Analyzed	Dil Fac
l	Aluminum	50	U	50	19	ug/L		07/10/12 08:18	07/11/12 13:13	1
l	Antimony	2.0	U	2.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:13	1
l	Beryllium	1.0	บ	1.0	0.20	ug/L		07/10/12 08:18	07/11/12 13:13	1
l	Cadmium	1.0	Ü	1.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:13	1
	Iron		U^	100	26	ug/L		07/10/12 08:18	07/11/12 13:13	1
	Sodium	55.2	=	1000	6.9	ug/L		07/10/12 08:18	07/11/12 13:13	1
		0.293		2.0	0.14			07/10/12 08:18	07/11/12 13:13	1
	Thallium	9.16		20		ug/L		07/10/12 08:18	07/11/12 13:13	1
ı	Zinc	9.10	5	20	2,0	~8				

101

101

80 - 120

80 - 120

80 - 120

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

#### Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-50314/3-A	Client Sample ID: Lab Control Sample							
Matrix: Water						Prep	Type: Total Re	ecoverable
Analysis Batch: 50556							Prep Ba	itch: 50314
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifler	Unit	D	%Rec	Limits	
Aluminum	10000	9340		ug/L		93	80 - 120	
Antimony	100	93.3		ug/L		93	80 - 120	
Beryllium	1000	93B		ug/L		94	80 - 120	
Cadmium	1000	927		ug/L		93	80 - 120	
Iron	10000	9670	٨	ug/L		97	80 - 120	

10000

250

1000

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MS Prep Type: Total Recoverable Matrix: Water

10100

253

990

ug/L

ug/L

ug/L

Sodium

Thallium

Zinc

Analysis Batch: 50556

Prep Batch: 50314 %Rec. Spike MS MS Sample Sample Analyte Result Qualifier Added Resuit Qualifier Unit D %Rec Limits Aluminum 580 10000 9240 ug/L 87 63 - 128 ug/L Antimony 89.9 88 44 - 153 2,3 100 77 - 124 Beryllium 1.0 U 1000 894 ug/L 89 Cadmium 1.0 U 1000 866 ug/L 87 78 - 117 10300 ^ ug/L 22 - 169 Iron 1300 10000 ug/L Sodium 28000 B 10000 35200 F 74 80 - 120 95 69 - 117 Thallium 0.58 JB 250 238 ug/L Zinc 1000 901 ug/L 49 - 156

Lab Sample ID: 240-12752-4 MSD Client Sample ID: FWG-IDW-TANK3-GW Prep Type: Total Recoverable

Matrix: Water

Mercury

								- J F		
								Prep	Batch:	50314
Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Result	Qualifier	Added	Result	Qualifier	Unit	Đ	%Rec	Limits	RPD	Limit
580		10000	9750		ug/L		92	63 - 128	5	20
2.3		100	94.2		ug/L		92	44 - 153	5	20
1.0	U	1000	939		ug/L.		94	77 - 124	5	20
1.0	U	1000	898		ug/L		90	78 _ 117	4	20
1300	Λ	10000	10900	٨	ug/L		97	22 - 169	6	20
28000	8	10000	37600		ug/L		98	80 _ 120	7	20
0.58	JB	250	250		ug/L		100	69 - 117	5	20
11	JB	1000	965		ug/L		95	49 - 156	7	20
	Result 580 2.3 1.0 1.0 1300 28000 0.58	•	Result         Qualifier         Added           580         10000           2.3         100           1.0         U         1000           1.0         U         1000           1300         ^         10000           28000         B         10000           0.58         JB         250	Result         Qualifier         Added         Result           580         10000         9750           2.3         100         94.2           1.0         U         1000         939           1.0         U         1000         898           1300         ^         10000         10900           28000         B         10000         37600           0.58         JB         250         250	Result         Qualifier         Added         Result         Qualifier           580         10000         9750           2.3         100         94.2           1.0         U         1000         939           1.0         U         1000         898           1300         ^         10000         10900         ^           28000         B         10000         37600           0.58         JB         250         250	Result         Qualifier         Added         Result         Qualifier         Unit           580         10000         9750         ug/L           2.3         100         94.2         ug/L           1.0         U         1000         939         ug/L           1.0         U         1000         898         ug/L           1300         ^         10000         10900         ^         ug/L           28000         B         10000         37600         ug/L           0.58         J B         250         250         ug/L	Result         Qualifier         Added         Result         Qualifier         Unit         D           580         10000         9750         ug/L           2.3         100         94.2         ug/L           1.0         U         1000         939         ug/L           1.0         U         1000         898         ug/L           1300         ^         10000         10900         ^         ug/L           28000         B         10000         37600         ug/L           0.58         JB         250         250         ug/L	Sample Result Qualifier         Spike Added Result Qualifier         MSD Unit         D %Rec           580         10000         9750         ug/L         92           2.3         100         94.2         ug/L         92           1.0         U         1000         939         ug/L         94           1.0         U         1000         898         ug/L         90           1300         ^         10000         10900         ^         ug/L         97           28000         B         10000         37600         ug/L         98           0.56         JB         250         250         ug/L         100	Sample   Sample   Spike   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MSD   MS	Sample Sample         Spike MSD MSD         Prep Batch: %Rec.           Result Qualifier         Qualifier Added         Result Qualifier         Unit Unit Unit Unit Unit Unit Unit Unit

#### Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-49356/1-A Matrix: Water Analysis Batch: 49867							Client S	ample ID: Metho Prep Type: T Prep Batch	otal/NA
•	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

0.20

0.12 ug/L

0.20 U

TestAmerica Canton 7/16/2012

07/03/12 12:55

06/29/12 15:10

Project/Site: RVAAP (OH) - IDW

Lab Campia ID: LCC 040 40256/0 A										Cli	ent	Sample	ID: Lab Control	Samn
Lab Sample ID: LCS 240-49356/2-A Matrix: Water										Citi	enı	Sample	Prep Type:	Total/N
Analysis Batch: 49867													Prep Batc	h: 493
•				Spike		LCS	LCS						%Rec.	
Anaiyte				Added		Result	Qual	ifier	Unit		D	%Rec	Limits	
Mercury				5,00		4.47			ug/L			89	81 - 123	
Lab Sample ID: MB 240-49732/2-A												Client Sa	ample ID: Metho	od Blai
Matrix: Water													Prep Type:	
Analysis Batch: 49962													Prep Batc	
Allalysis Batch, 45502		МВ	MB											
Analyte	Re		Qualifier		RL		MDL	Unit		D	Pr	repared	Analyzed	Dil I
Mercury	0.0	020	U		0,0020	0.0	0012	mg/L		_ (	07/03	3/12 14:30	07/05/12 13:46	
4										Cii	A 71 6	Cample	ID. Lab Cantral	l Cami
Lab Sample ID: LCS 240-49732/3-A										Cili	ent	Sample	ID: Lab Control	
Matrix: Water													Prep Type:	
Analysis Batch: 49962													Prep Batc	n: 497
				Spike			LCS				_	41-	%Rec.	
Analyte				Added		Result	Qual	itier	Unit		<u>D</u> .	%Rec	Limits	
fercury .				0.00500		0.00452			mg/L			90	50 - 150	
ab Sample ID: LB 240-49653/1-E LB												Client Sa	ample ID: Metho	od Bla
Natrix: Water													Prep Typ	e: TC
Analysis Batch: 49962													Prep Batc	
analysis batom 40002		LB	LB										•	
Analyte	Re	sult	Qualifier		RL		MDL	Unit		D	Pi	repared	Analyzed	Dil
Mercury	0.0	020	U		0.0020	0.0	0012	mg/L		_ (	07/0:	3/12 14:30	07/05/12 13:45	
ethod: 7471A - Mercury (CVAA)	<u> </u>		>		· · · · · · · · · · · · · · · · · · ·									
												Oliant C	In ID: Moth	od Die
_ab Sample ID: MB 240-49425/1-A												Chent Sa	ample ID: Metho	
Matrix: Solid													Prep Type:	
Analysis Batch: 50031													Prep Batc	n: 494
	_	MB								_	ь.		Amalumad	Dil
Analyte			Qualifier		RL	±	MDL			<u> </u>		repared 9/12 14:00	Analyzed 07/05/12 16:24	
Mercury	'	0.10	U		0.10	,	J.U 15	mg/Kg		,	JO/2:	3/12 14.00	07/03/12 10:24	
_ab Sample ID: LCS 240-49425/2-A										Cli	ent	Sample	ID: Lab Contro	Sam
Matrix: Solid												- -	Prep Type:	Total/
Analysis Batch: 50031													Prep Bato	
analysis batom 60001				Spike		LCS	LCS						%Rec.	
Analyte				Added		Result		ifler	Unit		D	%Rec	Limits	
Mercury				0.833		0.738			mg/Kg		_	88	73 - 121	
									<b>~</b> !!		٠	nia ID. T	SMO IDM SECO	MD2
_ab Sample ID: 240-12752-3 MS									Cli	ent S	am	ipie IU: F	WG-IDW-SBCC	
Matrix: Solid													Prep Type:	
													Prep Bato	n: 494
		_											0/ Dac	
	mple esult			Spike Added		MS Result	MS		Unit		D	%Rec	%Rec. Limits	

Lab Sample ID: 240-12752-3 MSD

Method: 7471A - Mercury (CVAA) (Continued)

Project/Site: RVAAP (OH) - IDW


Client Sample ID: FWG-IDW-SBCOMP3-SO Prep Type: Total/NA

Prep Batch: 49425

RPD

Limit Limits RPD 11 - 192 20 mg/Kg

### Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Sample Sample

0.027 J

Result Qualifier

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 240-49377/1 Prep Type: Total/NA Matrix: Solid

MSD MSD

0.189

Result Qualifier

Analysis Batch: 49377

Matrix: Solid

Analyte

Mercury

Analysis Batch: 50031

LCS LCS %Rec. Spike Limits Added Result Qualifier Unit %Rec Analyte 81.0 82.00 Degrees F 101 97 _ 103 Flashpoint

Spike

Added

0.196

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 240-49569/1 Prep Type: Total/NA Matrix: Water

Analysis Batch: 49569

Cyanide, Total

%Rec. Spike LCS LCS Limits Added Result Qualifier Unit ם %Rec Analyte Flashpoint 81.0 82,00 Degrees F 101 97 - 103

#### Method: 9012A - Cyanide, Total and/or Amenable

Client Sample ID: Method Blank Lab Sample ID: MB 240-49572/1-A Prep Type: Total/NA Matrix: Water Prep Batch: 49572 Analysis Batch: 49633 мв мв

Dil Fac Analyzed RL MDL Unit Prepared Result Qualifier 07/02/12 13:00 07/02/12 09:10 Cyanide, Total 0.010 U 0.010 0.0050 mg/L

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 240-49572/2-A Prep Type: Total/NA Matrix: Water Prep Batch: 49572

Analysis Batch: 49633 LCS LCS Spike Limits Added Result Qualifler %Rec Unit Analyte 103 69 - 118

Client Sample ID: Lab Control Sample Lab Sample ID: MRL 240-49633/12 MRL Prep Type: Total/NA Matrix: Water

0.0465

mg/L

Analysis Batch: 49633 MRL MRL %Rec. Spike D %Rec Limits Added Result Qualifier Unit 70 - 130 0.0102 102 0.0100 mg/L

0.0449

Cyanide, Total Client Sample ID: Method Blank Lab Sample ID: MB 240-50183/1-A Prep Type: Total/NA Matrix: Solid

Prep Batch: 50183 Analysis Batch: 50243 MB MB Result Qualifier RI. MDL Unit Prepared Analyzed Analyte 07/09/12 08:07 07/09/12 10:23 0.49 0.098 mg/Kg Cyanide, Total 0.49 U

Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769	MB		Spike Added 2.22  Spike Added 0.0100		Result 2,20 MRL Result 0,00849	MRL Qual		Unit mg/Kg Unit mg/L	C	D —	%Rec 99 Sample %Rec 85	Prep Type: 1 Prep Batcl %Rec. Limits 68 - 123  ID: Lab Control Prep Type: 1 %Rec. Limits 70 - 130	h: 50183 ————————————————————————————————————
Analyte Cyanide, Total  Lab Sample ID: MRL 240-50243/6 MRL Matrix: Solid Analysis Batch: 50243  Analyte Cyanide, Total  Method: 9034 - Sulfide, Acid soluble a Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	MB		Added 2.22  Spike Added 0.0100		Result 2,20 MRL Result 0,00849	Qual MRL Qual		mg/Kg Unit	C	lient	99 Sample %Rec	%Rec. Limits 68 - 123  ID: Lab Control Prep Type: 1  %Rec. Limits	Sample
Lab Sample ID: MRL 240-50243/6 MRL Matrix: Solid Analysis Batch: 50243  Analyte Cyanide, Total  Method: 9034 - Sulfide, Acid soluble a Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	MB		Added 2.22  Spike Added 0.0100		Result 2,20 MRL Result 0,00849	Qual MRL Qual		mg/Kg Unit	c	lient	99 Sample %Rec	Limits 68 - 123 ID: Lab Control Prep Type: 1 %Rec. Limits	
Lab Sample ID: MRL 240-50243/6 MRL Matrix: Solid Analysis Batch: 50243  Analyte Cyanide, Total  Method: 9034 - Sulfide, Acid soluble a Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	MB		Spike Added 0.0100		2.20 MRL Result 0.00849	MRL Qual		mg/Kg Unit	c	lient	99 Sample %Rec	68 - 123 ID: Lab Control Prep Type: 1 %Rec. Limits	
Lab Sample ID: MRL 240-50243/6 MRL Matrix: Solid Analysis Batch: 50243  Analyte Cyanide, Total  Method: 9034 - Sulfide, Acid soluble a Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	MB		Spike Added 0.0100		MRL Result 0.00849	Qual		Unit	c		Sample %Rec	ID: Lab Control Prep Type: 1 %Rec. Limits	
Matrix: Solid Analysis Batch: 50243  Analyte Cyanide, Total  Method: 9034 - Sulfide, Acid soluble at Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Sulfide Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	MB		Added 0,0100		Result 0.00849	Qual		*****	C		%Rec	Prep Type: 1  %Rec. Limits	
Analysis Batch: 50243  Analyte Cyanide, Total  Method: 9034 - Sulfide, Acid soluble a Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	MB		Added 0,0100		Result 0.00849	Qual		*****				%Rec. Limits	rotal/NA
Analyte Cyanide, Total  Method: 9034 - Sulfide, Acid soluble a Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Sulfide Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	MB		Added 0,0100		Result 0.00849	Qual		*****				Limits	
Method: 9034 - Sulfide, Acid soluble a Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Re Sulfide Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Re Sulfide Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	MB		Added 0,0100		Result 0.00849	Qual		*****				Limits	
Method: 9034 - Sulfide, Acid soluble a Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Re Sulfide Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Re Sulfide Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	MB		0,0100		0.00849		ifler	*****		. <u>D</u>			
Method: 9034 - Sulfide, Acid soluble a  Lab Sample ID: MB 240-49677/14-A  Matrix: Water Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: MB 240-49677/1-A  Matrix: Solid Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: LCS 240-49677/15-A  Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A  Matrix: Solid	MB					J		mg/L 			85	70 - 130	
Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	MB		ole (Titri	met	ric)								
Matrix: Water Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid													
Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid											Client Sa	ample ID: Metho	
Analyte Resulfide  Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Resulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid												Prep Type: 1	
Sulfide  Lab Sample ID: MB 240-49677/1-A  Matrix: Solid  Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: LCS 240-49677/15-A  Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A  Matrix: Solid												Prep Batcl	n: 49677
Sulfide  Lab Sample ID: MB 240-49677/1-A  Matrix: Solid  Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: LCS 240-49677/15-A  Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A  Matrix: Solid		MB											
Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	sult	Qualifler		RL		MDL	Unit		D	P	repared	Analyzed	Dll Fac
Matrix: Solid Analysis Batch: 49769  Analyte Re Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	3.0	U		3.0		0.94	mg/L			07/0	3/12 07:56	07/03/12 13:48	1
Matrix: Solid Analysis Batch: 49769  Analyte Resulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid											Client Sa	ample ID: Metho	d Blank
Analyte Re Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid												Prep Type: 1	ſotal/NA
Analyte Re Sulfide  Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid												Prep Batcl	h: 49677
Sulfide  Lab Sample ID: LCS 240-49677/15-A  Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A  Matrix: Solid	MB	MB											
Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	sult	Qualifier		RL		MDL	Unit		D	P	repared	Analyzed	Dil Fac
Matrix: Water Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid	30	Ū		30	A	22	mg/Kg	,		07/0	3/12 07:56	07/03/12 13:48	1
Analysis Batch: 49769  Analyte Sulfide  Lab Sample ID: LCS 240-49677/2-A Matrix: Solid									С	lient	Sample	ID: Lab Control	
Analyte Sulfide Lab Sample ID: LCS 240-49677/2-A Matrix: Solid												Prep Type: 1	
Sulfide  Lab Sample ID: LCS 240-49677/2-A  Matrix: Solid												Prep Batcl	n: 49677
Sulfide  Lab Sample ID: LCS 240-49677/2-A  Matrix: Solid			Spike		LCS	LCS						%Rec.	
Lab Sample ID: LCS 240-49677/2-A Matrix: Solid			Added		Result	Qual	ifler	Unit		. <u>D</u>	%Rec	Limits	
Matrix: Solid			8,27		8.67			mg/L			105	70 - 130	
									С	lient	Sample	ID: Lab Control	
Analysis Batch: 49769												Prep Type: 1	
												Prep Batcl	n: 49677
			Spike		LCS	LCS						%Rec.	
Analyte			Added		Result	Qual	ifier	Unit		D	%Rec	Limits	
Sulfide			83.2		79.1	••••		mg/Kg			95	70 - 130	
 Lab Sample ID: 240-12752-4 MS									Clie	ent S	ample ID	); FWG-IDW-TAI	
Matrix: Water												Prep Type: 1	
Analysis Batch: 49769 Sample			Spike			MS						Prep Batcl %Rec.	ր։ 49677

D %Rec

Limits

27 - 124

Added

8.27

Result Qualifier

3.0 U

Analyte

Sulfide

Result Qualifier

7.87

Unit

mg/L

Project/Site: RVAAP (OH) - IDW

Method: 9034 - Sulfide, Acid s	oluble	and Insolut	ole (Titrin	netric) (C	ontinued	l)		79.11			
Lab Sample ID: 240-12752-4 MSD Matrix: Water							Client S	Sample II	D: FWG-IDW-	e: Tot	al/NA
Analysis Batch: 49769									Prep Ba	itch:	
	•	Sample	Spike	MSD					%Rec.		RPD
Analyte		Qualifier	Added		Qualifier	Unit	<u>D</u>	%Rec		RPD	Limit
Sulfide	3.0	U	8.27	7.87		mg/L		95	27 - 124	0	20
Method: 9040B - pH				~							
Lab Sample ID: LCS 240-49216/2 Matrix: Water							Clien	t Sample	ID: Lab Cont Prep Type		
Analysis Batch: 49216											
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
pH			7.49	7.490		SU		100	97 - 103		
Lab Sample ID: 240-12752-4 DU Matrix: Water							Client 9	Sample II	D: FWG-IDW- Prep Typ		
Analysis Batch: 49216											
	Sample	Sample			DU						RPD
Analyte		Qualifier	,		Qualifier	Unit	D			RPD	Limit
рН	8.39			8.390		SU				0	20
Method: 9045C - pH											
Lab Sample ID: LCS 240-49470/2 Matrix: Solid Analysis Batch: 49470							Clien	t Sample	ID: Lab Cont Prep Typ		
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limils		
Corrosivity			7.49	7.470		SU		100	97 - 103		
Method: WS-WC-0050 - Nitroc	ellulos	e as N by W	/S-WC-00	50							
Lab Sample ID: G2G090000104B								Client S	ample ID: Me		
Matrix: Solid		-							•		Total
Analysis Batch: 2191104		мв мв							Prep Batch:	2191	104_P
Analyte	R	esult Qualifier		RL	MDL Unit		D I	Prepared	Analyzed		Dil Fac
Nitrocellulose		1.9 J		5.0	0.78 mg/kg			09/12 12:15	07/11/12 11:0	07	1
Lab Sample ID: G2G090000104C Matrix: Solid							Clien	t Sample	_	Type	Total
Analysis Batch: 2191104									Prep Batch:	2191	104 <u></u> P
			Spike		LCS				%Rec.		
Analyte			Added		Qualifior	Unit	D	%Rec	Limits		
Nitrocellulose			50.7	42,2		mg/kg		83	34 - 115		
Lab Sample ID: 240-12752-3 MS Matrix: Solid						С	lient Sar	npie ID: I		Type	Total
Analysis Batch: 2191104									Prep Batch:	2191	104_P
	•	Sample	Spike		MS		_	A/ E	%Rec.		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Nitrocellulose	1.7	JB	64.3	23.2		mg/kg	ņ	34	34 - 115		

Client: Environmental Quality Mot., Inc.

lethod: WS-WC-0050 - Nitroc	ellulos	e as N by	WS-WC-00	50 (Conti	nued)
Lab Sample ID: 240-12752-3 MSD					
Matrix: Solid					
Analysis Batch: 2191104					
•	Sample	Sample	Spike	MSD	MSD
Analyte	Result	Qualifier	Added	Result	Quatifie
Nitrocellulose	1.7	JB	64.6	16.5	N

Lab Sample ID: G2G110000012B

Analysis Batch: 2193012

Matrix: Water

Client Sample ID: FWG-IDW-SBCOMP3-SO

23

ö

mg/kg

Prep Type: Total Prep Batch: 2191104_P %Rec. Llmit Limits RPD %Rec

34

71

Client Sample ID: Method Blank Prep Type: Total

34 - 115

Prep Batch: 2193012_P

мв мв Dil Fac Prepared Analyzed RL MDL Unit Result Qualifier Analyte 07/11/12 13:01 2.0 0.48 mg/L 07/11/12 08:00 2.0 U Nitrocellulose

Client Sample ID: Lab Control Sample Lab Sample ID: G2G110000012C Prep Type: Total Matrix: Water Prep Batch: 2193012_P Analysis Batch: 2193012 %Rec. LCS LCS Spike Limits Added Result Qualifier Unit %Rec Analyte 26 - 144 mg/L 107 5.07 5.41 Nitrocellulose

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MS Prep Type: Total Matrix: Water Prep Batch: 2193012_P Analysis Batch: 2193012 MS MS %Rec. Sample Sample Spike Added Result Qualifler Unit D %Rec Limits Result Qualifier Analyte 26 - 144 2,0 Ü 5.07 5.26 mg/L 100 Nitrocellulose

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MSD Prep Type: Total Matrix: Water Prep Batch: 2193012_P Analysis Batch: 2193012 RPD %Rec. MSD MSD Sample Sample Spike RPD Limit Limits Added Result Qualifier Unit D %Rec Result Qualifier Analyte 26 - 144 1.9 45 mg/L 102 2.0 U 5.07 5.36 Nitrocellulose

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

GC/MS VOA					
Analysis Batch: 49421					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8260B	
LCS 240-49421/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-49421/6	Method Blank	Total/NA	Solid	82608	
∟each Batch: 49660					
– Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	
240-12752-4 MS	FWG-IDW-TANK3-GW	TCLP	Water	1311	
240-12752-4 MSD	FWG-IDW-TANK3-GW	TCLP	Water	1311	
LB 240-49660/1-A MB	Method Blank	TCLP	Water	1311	
− Analysis Batch: 49814					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
240-12752-4 MS	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
240-12752-4 MSD	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
LB 240-49660/1-A MB	Method Blank	TCLP	Water	8260B	
LCS 240-49814/10	Lab Control Sample	Total/NA	Water	8260B	
each Batch: 49973					
– Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
LB 240-49973/1-A MB	Method Blank	TCLP	Solid	<b>1</b> 311	
- Analysis Batch: 50127					
_ Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8260B	
LB 240-49973/1-A MB	Method Blank	TCLP	Solid	8260B	
LCS 240-50127/12	Lab Control Sample	Total/NA	Solid	8260B	
Analysis Batch: 50324					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-12752-1	TRIP BLANK	Total/NA	Water	82608	
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8260B	
LCS 240-50324/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-50324/5	Method Blank	Total/NA	Water	8260B	
GC/MS Semi VOA					
Prep Batch: 49608					
Lab Sample ID	Cilent Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49608/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49608/13-A	Method Blank	Total/NA	Water	3520C	
each Batch: 49653					
Lab Sample ID	Cilent Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

GC/MS Semi VOA	(Continued)	- J - I - I - I - I - I - I - I - I - I	all de l'		
Prep Batch: 49701					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Solid	3520C	
MB 240-49701/4-A	Method Blank	Total/NA	Solid	3520C	
Prep Batch: 49703					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3520C	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3520C	49653
LCS 240-49703/16-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49703/15-A	Method Blank	Total/NA	Water	3520C	
– Prep Batch: 49770					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49770/16-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-49770/15-A	Method Blank	Tota!/NA	Solid	3540C	
– Analysis Batch: 49827	•				
– Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Solid	8270C	49701
MB 240-49701/4-A	Method Blank	Total/NA	Solid	8270C	49701
– Analysis Batch: 50054					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8270C	49703
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8270C	49770
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8270C	49703
LCS 240-49703/16-A	Lab Control Sample	Total/NA	Water	8270C	49703
LCS 240-49770/16-A	Lab Control Sample	Total/NA	Solid	8270C	49770
MB 240-49703/15-A	Method Blank	Total/NA	Water	8270C	49703
MB 240-49770/15-A	Method Blank	Total/NA	Solid	8270C	49770
_ Analysis Batch: 50188	1				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8270C	49608
LCS 240-49608/14-A	Lab Control Sample	Tota!/NA	Water	8270C	49608
MB 240-49608/13-A	Method Blank	Total/NA	Water	8270C	49808
 Prep Batch: 50344					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4 - RE	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-50344/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-50344/13-A	Method Blank	Total/NA	Water	3520C	
Analysis Batch: 50708	3				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4 - RE	FWG-IDW-TANK3-GW	Total/NA	Water	8270C	50344
LCS 240-50344/14-A	Lab Control Sample	Total/NA	Water	8270C	50344
MB 240-50344/13-A	Method Blank	Total/NA	Water	8270C	50344

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Prep Batch: 49612					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49812/12-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49612/11-A	Method Blank	Total/NA	Water	3520C	
Prep Batch: 49615					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49615/3-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49615/2-A	Method Blank	Total/NA	Water	3520C	
- .each Batch: 49653					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	
Prep Batch: 49705					
- Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bato
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3520C	4968
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3520C	4965
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49705/7-A	Method Blank	Total/NA	Water	3520C	
rep Batch: 49707					
Lab Sample ID	Cilent Sample ID	Prep Type	Matrix	Method	Prep Bate
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8151A	4965
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8151A	4965
LCS 240-49707/8-A	Lab Control Sample	Total/NA	Water	8151A	
MB 240-49707/7-A	Method Blank	Total/NA	Water	8151A	
Analysis Batch: 49739					
Lab Sample ID	Cilent Sample ID	Prep Type	Matrix	Method	Prep Bate
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8081A	4961
LCS 240-49615/3-A	Lab Control Sample	Total/NA	Water	8081A	4961
MB 240-49615/2-A	Method Blank	Tota!/NA	Water	8081A	496
Prep Batch: 49755					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49755/20-A	Lab Control Sample	Tota!/NA	Solid	3540C	
MB 240-49755/19-A	Method Blank	Total/NA	Solid	3540C	
rep Batch: 49756					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bate
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49756/11-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-49756/10-A	Method Blank	Total/NA	Solid	3540C	
nalysis Batch: 49764					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bate
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8082	4961
MB 240-49612/11-A	Method Blank	Total/NA	Water	8082	4961

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Analysis Batch: 49852	2				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49612/12-A	Lab Control Sample	Total/NA	Water	8082	49612
Analysis Batch: 4992;	2				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8081A	49705
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	8081A	49705
MB 240-49705/7-A	Method Blank	Total/NA	Water	8081A	49705
Analysis Batch: 49992	2				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8082	49755
LCS 240-49755/20-A	Lab Control Sample	Total/NA	Solid	8082	49755
MB 240-49755/19-A	Method Blank	Total/NA	Solid	8082	49755
— Analysis Batch: 50084	1				
— Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8081A	49705
Analysis Batch: 50094	1				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8151A	49707
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8151A	49707
LCS 240-49707/8-A	Lab Control Sample	Tota!/NA	Water	8151A	49707
MB 240-49707/7-A	Method Blank	Total/NA	Water	8151A	49707
– Analysis Batch: 50336	3				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8081A	49756
LCS 240-49756/11-A	Lab Control Sample	Total/NA	Solid	8081A	49756
M8 240-49756/10-A	Method Blank	Total/NA	Solid	8081A	49756
UDI C					
HPLC					
Analysis Batch: 21850					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	8330/8330A	
G2G030000016B G2G030000016C	Method Blank Lab Control Sample	Total Total	Water Water	8330/8330A 8330/8330A	
Analysis Batch: 21880	·	Total	Water	0000/00007	
		<b>D D</b>	<b>00</b> - 5 - 6	Matter d	Draw Betal
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-\$BCOMP3-SO	Total	Solid	8330 (Modified)	
G2F280490028D	Matrix Spike Duplicate	Total	Solid	8330 (Modified)	
G2F280490026S	Matrix Spike	Total	Solid	8330 (Modified)	
G2G060000020B	Method Blank	Total	Solid	8330 (Modified)	
G2G060000020C	Lab Control Sample	Total	Solid	8330 (Modified)	
Analysis Batch: 21911	08				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
		Prep Type Total	Matrix Solid	8330B	Prep Batch
Lab Sample ID	Client Sample ID				Prep Batch

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HPLC (Continued)		- A and V			-976
Analysis Batch: 2191	108 (Continued)				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batci
G2G090000108B	Method Blank	Total	Solid	8330B	
G2G090000108C	Lab Control Sample	Total	Solid	8330B	
Analysis Batch: 2191	129				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
240-12752-4 MS	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
G2G090000129B	Method Blank	Dissolved	Water	8330 (Modified)	
G2G090000129C -	Lab Control Sample	Dissolved	Water	8330 (Modified)	
Prep Batch: 2185016_	.P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	3535	
G2G030000016B	Method Blank	Total	Water	3535	
G2G030000016C	Lab Control Sample	Total	Water	3535	
Prep Batch: 2188020_	.P				
Lab Sample ID	Client Sample iD	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	3550A	
G2F280490026D	Matrix Spike Duplicate	Total	Solid	3550A	
G2F280490026S	Matrix Spike	Total	Solid	3550A	
G2G080000020B	Method Blank	Total	Solid	3550A	
G2G060000020C	Lab Control Sample	Total	Solid	3550A	
Prep Batch: 2191108_	_P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
G2G090000108B	Method Blank	Total	Solid	8330B	
G2G090000108C	Lab Control Sample	Total	Solid	8330B	
Prep Batch: 2191129_	.P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Dissolved	Water	FILTRATION	
240-12752-4 MS	FWG-IDW-TANK3-GW	Dissolved	Water	(DISS) FILTRATION	
				(DISS)	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Dissolved	Water	FILTRATION (DISS)	
G2G090000129B	Method Blank	Dissolved	Water	FILTRATION	
G2G090000129C	Lab Control Sample	Dissolved	Water	(DISS) FILTRATION	
G2G090000129C	Lab Control Cample	Dissolved	•••••	(DISS)	
Metals					
Prep Batch: 49356					
- Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	7470A	
LCS 240-49356/2-A	Lab Control Sample	Total/NA	Water	7470A	

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Prep Batch: 49412					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
LCS 240-49412/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 240-49412/3-A	Lab Control Sample	Total/NA	Solid	3050B	•
MB 240-49412/1-A	Method Blank	Total/NA	Solid	3050B	
rep Batch: 49425					
Lab Sampie ID	Client Sample 1D	Prep Type	Matrix	Method	Prep Bat
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	<del></del>
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	
LCS 240-49425/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 240-49425/1-A	Method Blank	Total/NA	Solid	7471A	
each Batch: 49653					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bat
240-12752 <b>-</b> 3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	
.B 240-49653/1-D LB	Method Blank	TCLP	Water	1311	
LB 240-49653/1-E LB	Method Blank	TCLP	Water	1311	
nalysis Batch: 49675					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bat
LCS 240-49412/2-A	Lab Control Sample	Total/NA	Solid	6010B	494
MB 240-49412/1-A	Method Blank	Total/NA	Solid	6010B	494
rep Batch: 49727					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bat
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3010A	496
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3010A	496
LB 240-49653/1-D LB	Method Blank	TCLP	Water	3010A	496
LCS 240-49727/3-A	Lab Control Sample	Total/NA	Water	3010A	
MB 240-49727/2-A	Method Blank	Total/NA	Water	3010A	
rep Batch: 49732					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bal
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	7470A	496
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	7470A	496
LB 240-49653/1-E LB	Method Blank	TCLP	Water	7470A	496
LCS 240-49732/3-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-49732/2-A	Method Blank	Total/NA	Water	7470A	
nalysis Batch: 49867					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Ba
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	7470A	493
LCS 240-49356/2-A	Lab Control Sample	Total/NA	Water	7470A	493
					493

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Metals (Continued)	)		A. 1981		
Analysis Batch: 49962					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	7470A	49732
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	7470A	49732
LB 240-49653/1-E LB	Method Blank	TCLP	Water	7470A	49732
LCS 240-49732/3-A	Lab Control Sample	Total/NA	Water	7470A	49732
MB 240-49732/2-A	Method Blank	Total/NA	Water	7470A	49732
Analysis Batch: 49993					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
LCS 240-49412/3-A	Lab Control Sample	Total/NA	Solid	6020	49412
Analysis Batch: 50003					
Lab Sample ID	Cilent Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	6010B	49727
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	6010B	49727
LB 240-49653/1-D LB	Method Blank	TCLP	Water	6010B	49727
LCS 240-49727/3-A	Lab Control Sample	Total/NA	Water	6010B	49727
MB 240-49727/2-A	Method Blank	Total/NA	Water	6010B	49727
Analysis Batch: 50031		,, ,			
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Tota!/NA	Solid	7471A	49425
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
LCS 240-49425/2-A	Lab Control Sample	Total/NA	Solid	7471A	49425
MB 240-49425/1-A	Method Blank	Total/NA	Solid	7471A	49425
Analysis Batch: 50210					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
LCS 240-49412/3-A	Lab Control Sample	Total/NA	Solid	6020	49412
MB 240-49412/1-A	Method Blank	Total/NA	Solid	6020	49412
Prep Batch: 50314					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MSD		Total Recoverable	Water	3005A	
LCS 240-50314/2-A	Lab Control Sample	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	Water	3005A	
LCS 240-50314/3-A	Lab Control Sample	Total Recoverable			
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	3005A	

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Metals (Continued)	- 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 Au - 10 A				
Analysis Batch: 50556					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
LCS 240-50314/3-A	Lab Control Sample	Total Recoverable	Water	6020	50314
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	6020	50314
Analysis Batch: 50581					
Lab Sample ID	Cilent Sample ID	Prep Type	Metrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	60108	50314
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
LCS 240-50314/2-A	Lab Control Sample	Total Recoverable	Water	6010B	50314
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	60108	50314
General Chemistry					
Analysis Batch: 49216					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9040B	
240-12752-4 DU	FWG-IDW-TANK3-GW	Total/NA	Water	9040B	
LCS 240-49216/2	Lab Control Sample	Total/NA	Water	9040B	
Analysis Batch: 49377					
Lab Sample ID	Cilent Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	1010	
LCS 240-49377/1	Lab Control Sample	Total/NA	Solid	1010	
Analysis Batch: 49467					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	Moisture	
Analysis Batch: 49470					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9045C	
LCS 240-49470/2	Lab Control Sample	Total/NA	Solid	9045C	
Analysis Batch: 49569				•	
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	1010	
LCS 240-49569/1	Lab Control Sample	Total/NA	Water	1010	
Prep Batch: 49572					
Lab Sample ID	Citent Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9012A	
LC\$ 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	
Analysis Batch: 49633					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9012A	49572
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	49572
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	49572

TestAmerica Canton 7/16/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

General Chemistry	(Continued)		and desired		
Analysis Batch: 49633	(Continued)				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 240-49633/12 MRL	Lab Control Sample	Total/NA	Water	9012A	
Prep Batch: 49677					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	So!id	9030B	
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	90308	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total/NA	Water	90308	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total/NA	Water	9030B	
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9030B	
LCS 240-49677/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 240-49677/14-A	Method Blank	Total/NA	Water	9030B	
MB 240-49677/1-A	Method Blank	Total/NA	Solid	9030B	
Analysis Batch: 49769					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9034	49877
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
240-12752-4 MS	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49877
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9034	49677
LCS 240-49677/2-A	Lab Control Sample	Total/NA	Solid	9034	49677
MB 240-49677/14-A	Method Blank	Total/NA	Water	9034	49877
MB 240-49677/1-A	Method Blank	Total/NA	Solid	9034	49677
Prep Batch: 50183					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Tota!/NA	Solid	9012A	
LCS 240-50183/2-A	Lab Control Sample	Tota!/NA	Solid	9012A	
MB 240-50183/1-A	Method Blank	Total/NA	Solid	9012A	
Analysis Batch: 50243					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9012A	50183
LCS 240-50183/2-A	Lab Control Sample	Total/NA	Solid	9012A	50183
MB 240-50183/1-A	Method Blank	Total/NA	Solid	9012A	50183
MRL 240-50243/6 MRL	Lab Control Sample	Total/NA	Solid	9012A	
Analysis Batch: 219110	)4				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
G2G090000104B	Method Blank	Total	Solid	WS-WC-0050	
G2G090000104C	Lab Control Sample	Total	Solid	WS-WC-0050	
Analysis Batch: 219301	2				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
G2G110000012B	Method Blank	Total	Water	WS-WC-0050	
G2G110000012C	Lab Control Sample	Total	Water	WS-WC-0050	

Client: Environmental Quality Mgt., Inc.

TestAmerica Job ID: 240-12752-1

SOLID PHASE

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Project/Site: RVAAP (OH) - IDW	

General Chemistr	y (Continued)	Andrews Maria	4.00		(A)
Analysis Batch: 21950	066				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	160.3 MOD	
Prep Batch: 2191104_	P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION,	•
				SOLID/SOLVEN	
			5 W)	T (Manual)	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
			0 "1	T (Manual)	
G2G090000104B	Method Blank	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
			0-04	T (Manual)	
G2G090000104C	Lab Control Sample	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
rep Batch: 2193012_	.P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION,	
				SOLID PHASE	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION,	
				SOLID PHASE	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION,	
				SOLID PHASE	
G2G110000012B	Method Blank	Total	Water	EXTRACTION,	
				SOLID PHASE	
G2G110000012C	Lab Control Sample	Total	Water	EXTRACTION,	

### Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: TRIP BLANK

Date Collected: 06/28/12 08:00 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-1

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type Total/NA	Type Analysis	Method 8260B	Run	Factor	Number 50324	or Analyzed 07/10/12 12:54	Analyst RQ	Lab TAL NC

Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15

Date Received: 06/28/12 12:45

Lab Sample ID: 240-12752-3

Matrix: Solid

Percent Solids: 78.3

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	49421	06/29/12 19:38	SM	TAL NC
TCLP	Leach	1311			49973	07/05/12 16:15	BF	TAL NC
TCLP	Analysis	8260B		1	50127	07/06/12 21:42	TL	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49703	07/03/12 09:12	вм	TAL NC
TCLP	Analysis	8270C		1	50054	07/06/12 18:11	JG	TAL NC
Total/NA	Prep	3540C			49770	07/03/12 13:56	BM	TAL NC
Total/NA	Analysis	8270C		1	50054	07/06/12 19:27	JG	TAL NC
Total/NA	Prep	3540C			49755	07/03/12 11:53	SE	TAL NC
Total/NA	Analysis	8082		1	49992	07/06/12 09:43	RK	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49705	07/03/12 09:15	вМ	TAL NC
TCLP	Analysis	8081A		5	50084	07/06/12 14:52	AR	TAL NC
TCLP	Prep	8151A			49707	07/03/12 09:18	SE	TAL NO
TCLP	Analysis	8151A		1	50094	07/07/12 19:42	AR	TAL NO
Total/NA	Prep	3540C			49756	07/03/12 12:02	SE	TAL NC
Fotal/NA	Analysis	8081A		10	50336	07/09/12 08:27	AR	TAL NO
Total	Prep	3550A			2188020 P	07/08/12 08:00	TQP	TAL WSC
Total	Analysis	8330 (Modified)		0.99	2188020	07/10/12 12:23	RN	TAL WSC
Total	Prep	8330B			2191108_P	07/09/12 12:45	HJA	TAL WSC
Total	Analysis	6330B		0.99	2191108	07/10/12 14:06	RN	TAL WSC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	7470A			49732	07/03/12 14:30	AS	TAL NO
TCLP	Analysis	7470A		1	49962	07/05/12 13:58	SG	TAL NO
Fotal/NA	Prep	3050B			49412	06/29/12 11:17	DE	TAL NC
Total/NA	Analysis	6020		1	49993	07/05/12 21:15	BD	TAL NC
Total/NA	-	6010B		1	50003	07/05/12 20:27	NJM	TAL NC
	Analysis –			•			AS	TAL NC
TCLP	Prep	3010A 6010B		1	49727 50003	07/03/12 10:01 07/05/12 20:59	NJM	TAL NO
TCLP	Analysis			•				
Total/NA	Prep	7471A			49425	06/29/12 14:00	DE 8D	TAL NC TAL NC
rotal/NA	Analysis	7471A		1	50031	07/05/12 16:29		
Total/NA	Analysis	6020		1	50210	07/09/12 09:43	8D	TAL NC
rotal/NA	Analysis	1010		1	49377	06/29/12 14:17	TH	TAL NO
Γotal/NA	Analysis	Moisture		1	49467	08/29/12 14:27	JB	TAL NO
Total/NA	Analysis	9045C		1	49470	06/29/12 16:15	LG	TAL NC
「otal/NA	Prep	9030B			49877	07/03/12 07:56	BW	TAL NC
Total/NA	Analysis	9034		1	49769	07/03/12 13:48	BW	TAL NO

### Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-3

Matrix: Solid

Percent Solids: 78.3

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	9012A			50183	07/09/12 08:07	MJC	TAL NC
Total/NA	Analysis	9012A		1	50243	07/09/12 10:24	BW	TAL NC
Total	Prep	EXTRACTION, SOLID/SOLVENT			2191104_P	07/09/12 12:15	HJA	TAL WSC
Total	Analysis	(Manual) WS-WC-0050		1	2191104	07/11/12 11:11	LW	TAL WSC
Total	Analysis	160.3 MOD		1	2195066	07/02/12 00:00	JS	TAL NC

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-4

Matrix: Water

-	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
TCLP	Leach	1311			49660	07/03/12 10:53	Δl	TAL NC
TCLP	Analysis	8260B		1	49814	07/04/12 03:00	TL	TAL NC
Total/NA	Analysis	8260B		1	50324	07/10/12 13:16	RQ	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49703	07/03/12 09:12	BM	TAL NO
TCLP	Analysis	8270C		1	50054	07/06/12 18:30	JG	TAL NC
Total/NA	Prep	3520C			49608	07/02/12 11:43	CC	TAL NC
Total/NA	Analysis	8270C		1	50188	07/09/12 11:21	JG	TAL NC
Total/NA	Prep	3520C	RE		50344	07/10/12 10:24	SE	TAL NC
Total/NA	Analysis	8270C	RE	1	50708	07/13/12 12:33	JG	TAL NC
Total/NA	Prep	3520C			49615	07/02/12 11:57	cc	TAL NC
Total/NA	Analysis	8081A		1	49739	07/04/12 07:55	AR-	TAL NC
Total/NA	Prep	3520C			49612	07/02/12 11:53	cc	TAL NC
Total/NA	Analysis	8082		1	49764	07/03/12 17:25	CR	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49705	07/03/12 09:15	вм	TAL NC
TCLP	Analysis	8081A		1	49922	07/05/12 23:21	AR	TAL NO
TCLP	Prep	8151A			49707	07/03/12 09:18	SE	TAL NC
TCLP	Analysis	8151A		1	50094	07/07/12 20:06	AR	TAL NC
Total	Prep	3535			2185016_P	07/03/12 06:00	TQP	TAL WSC
Total	Analysis	8330/8330A		1,03	2185016	07/06/12 19:24	RN	TAL WSC
Dissolved	Prep	FILTRATION (DISS)			2191129_P	07/09/12 14:50	HJA	TAL WSC
Dissolved	Analysis	8330 (Modified)		1	2191129	07/10/12 10:57	RN	TAL WSC
Total/NA	Prep	7470A			49356	06/29/12 15:10	LM	TAL NC
Total/NA	Analysis	7470A		1	49867	07/03/12 13:40	RT	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	7470A			49732	07/03/12 14:30	AS	TAL NO
TCLP	Analysis	7470A		1	49962	07/05/12 14:02	SG	TAL NC
TCLP	Prep	3010A			49727	07/03/12 10:01	AS	TAL NC
TCLP	Analysis	6010B		1	50003	07/05/12 21:03	NJM	TAL NC
Total Recoverable	Prep	3005A			50314	07/10/12 08:18	LM	TAL NC
Total Recoverable	Analysis	6020		1	50556	07/11/12 13:26	BD	TAL NC

### Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-4

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6010B		1	50581	07/11/12 13:31	NJM	TAL NC
Total/NA	Analysis	9040B		1	49216	06/28/12 16:18	LG	TAL NC
Total/NA	Analysis	1010		1	49569	07/02/12 11:30	TH	TAL NC
Total/NA	Prep	9012A			49572	07/02/12 09:10	MJC	TAL NC
Total/NA	Analysis	9012A		1	49633	07/02/12 11:06	CN	TAL NO
Total/NA	Prep	9030B			49677	07/03/12 07:56	вW	TAL NC
Total/NA	Analysis	9034		1	49769	07/03/12 13:48	BW	TAL NC
Total	Prep	EXTRACTION, SOLID PHASE			2193012_P	07/11/12 06:00	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	2193012	07/11/12 13:05	LW	TAL WSC

#### Laboratory References:

TAL NC = TestAmerica Cariton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95805, TEL (916)373-5600



### **Certification Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

aboratory	Authority	Program	EPA Region	Certification ID
estAmerica Canton	California	NELAC	9	01144C <b>A</b>
estAmerica Canton	Connecticut	State Program	1	PH-0590
estAmerica Canton	Florida	NELAC	4	E87225
estAmerica Canton	Georgia	State Program	4	N/A
estAmerica Canton	Illinois	NELAC	5	200004
estAmerica Cantoл	Kansas	NELAC	7	E-10336
estAmerica Canton	Kentucky	State Program	4	58
estAmerica Canton	L-A-B	DoD ELAP		L2315
estAmerica Canton	Minnesota	NELAC	5	039-999-348
estAmerica Canton	Nevada	State Program	9	OH-000482008A
estAmerica Canton	New Jersey	NELAC	2	OH001
estAmerica Canton	New York	NELAC	2	10975
estAmerica Canton	Ohio VAP	State Program	5	CL0024
estAmerica Canton	Pennsylvania	NELAC	3	68-00340
estAmerica Canton	USDA	Federal		P330-11-00328
estAmerica Canton	Virginia	NELAC	3	460175
estAmerica Canton	Washington	State Program	10	C971
estAmerica Canton	West Virginia DEP	State Program	3	210
estAmerica Canton	Wisconsin	State Program	5	999518190
estAmerica West Sacramento	A2LA	DoD ELAP		2928-01
estAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
estAmerica West Sacramento	Arizona	State Program	9	AZ0708
estAmerica West Sacramento	California	NELAC	9	1119CA
estAmerica West Sacramento	Colorado	State Program	8	N/A
estAmerica West Sacramento	Connecticut	State Program	1	PH-0691
estAmerica West Sacramento	Florida	NELAC	4	E87570
estAmerica West Sacramento	Georgia	State Program	4	960
estAmerica West Sacramento	Guam	State Program	9	N/A
estAmerica West Sacramento	Hawaii	State Program	9	N/A
estAmerica West Sacramento	Illinois	NELAC	5	200060
estAmerica West Sacramento	Kansas	NELAC	7	E-10375
estAmerica West Sacramento	Louisiana	NELAC	6	30612
estAmerica West Sacramento	Michigan	State Program	5	9947
estAmerica West Sacramento	Nevada	State Program	9	CA44
estAmerica West Sacramento	New Jersey	NELAC	2	CA005
estAmerica West Sacramento	New Mexico	State Program	6	N/A
estAmerica West Sacramento	New York	NELAC	2	11666
estAmerica West Sacramento	Northern Manana Islands	State Program	9	MP0007
estAmerica West Sacramento	Oregon	NELAC	10	CA200005
estAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
estAmerica West Sacramento	South Carolina	State Program	4	87014
estAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
estAmerica West Sacramento	US Fish & Wildlife	Federal		LE148388-0
estAmerica West Sacramento	USDA	Federal		P330-11-00436
estAmerica West Sacramento	Utah	NELAC	8	QUAN1
	Washington	State Program	10	C581
estAmerica West Sacramento		State Program	3	9930C
estAmerica West Sacramento	West Virginia	State Program	3	334
estAmerica West Secremento	West Virginia DEP	<del>-</del>	5	998204680
estAmerica West Sacramento	Wisconsin	State Program	J	000201000

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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TestAmerica North Canton Sample Receipt Form/Narrative		1
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Cooler Received on	Other	ignature)
13. Was a trip blank present in the cooler(s)?		er
Contacted PM Date by via Verba	1 10100 Hint Office	
Concerning  14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES		
14. CHAIN OF CUSTODY & SAMPLE DISCRETATIONS		
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TO A COMPLETION		
15. SAMPLE CONDITION  Sample(s) were received after the recommended	holding time had	expired.
were rec	eived in a broken :	container.
Sample(s) were received with bubble >6	mm in diameter. (	Notify PM)
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	16, SAMPLE P	RESERVATION		
Sample(s)			Sample Receiving	to meet
Nat 1H1 HV0f0chiofic Acid 1	Vitric Acid Lot# 110410-HNO3; Sulfu Lot# 041911-HCl; Sodium Hydroxide	tric Acid Lot# 041911-Fi2504; Sc and Zinc Acetate Lot# 100108-(C	H3COO)2ZN/NaC	OH. What
time was preservative added	1 to sample(s):		Date	<u>Initials</u>
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### 16

### Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-12752-1

List Source: TestAmerica Canton

Login Number: 12752

List Number: 1

Creator: Livengood, Chris

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing,	True	
Residual Chlorine Checked.	N/A	



May 22, 2012

Mr. Mark Patterson Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266

Reference:

Contract No. GS-10F-0293K

Delivery Order No. W912QR-1-F-0266

Subject:

Facility-Wide Groundwater Monitoring Program Plan

RVAAP-66 Facility-Wide Groundwater Tank #1 IDW Letter Report – Draft

Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI) began on February 27, 2012, and was conducted pursuant to the approved *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum* (FWGWMP Addendum; EQM, January 2012). These activities resulted in the generation of decontamination fluids from well installation operations. The purpose of this letter is to characterize and classify IDW from Tank #1 for disposal and to provide recommendations for disposing of the IDW.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (EPA) regarding IDW disposition at RVAAP, including the IDW disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations* (FWSAP; SAIC, 2011), and the FWGWMP Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material pending waste characterization and classification based on analytical results. The FWSAP and the FWGWMP Addendum describe approved procedures used for containerizing and handling IDW.

#### **Liquid IDW Discussion**

Accumulated indigenous liquid IDW was containerized in a 2,450-gallon poly tank (Tank #1) on site pending transport and disposal to an offsite disposal facility. Tank #1 contained decontamination fluid generated during cleaning of downhole drilling equipment. This liquid was generated from February 27, 2012, through April 8, 2012. (Purge water was stored in a

different onsite tank that will be handled under a separate report). An unfiltered composite sample for disposal characterization was collected from Tank #1. The tank was opened and a composite sample was collected by gently lowering a new, disposable Teflon bailer attached to new polypropylene rope into the holding vessel. The bailer was lowered into the vessel several times, and to different depths, to collect a sufficient representative sample of the water to submit to the laboratory for waste characterization analysis. The retrieved sample was collected and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the sample container was sealed with minimum head space. New, disposable nitrile sample gloves were worn during sampling. The gloves, bailers, and rope were discarded appropriately in accordance with the FWGWMP Addendum after collection of each composite sample.

The indigenous IDW contained in Tank #1 was characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite totals analysis and Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 1. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1 – Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24) and Table 8-2 – Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23), as presented in the FWSAP, the Maximum Contaminant Levels (MCLs), and United States Environmental Protection Agency (USEPA) Risk Screening Levels (RSLs) for tap water and/or background criteria. Table 2 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP and RVAAP full suite totals analysis for Tank #1.

The following summarizes the IDW Tank #1 analyses:

- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 140 degrees F. Reactive sulfide and reactive cyanide were not detected above the reporting limit. The pH level was slightly elevated as a result of concrete and bentonite residue.
- Three volatile organic compounds and one semivolatile organic constituent were detected in the wastewater sample, although none exceeded their respective MCLs or RSLs.
- No explosives/propellants, pesticides, or polychlorinated biphenyl constituents were detected in the sample.
- Several metals were detected in the IDW sample. Two metals exceeded their USEPA
  RSL: arsenic (7.0 μg/L) and thallium (0.71 μg/L). The concentrations for both metals
  were estimated. No metals were identified at concentrations exceeding their
  corresponding MCLs. Antimony, chromium, nickel, potassium, sodium, thallium, and
  vanadium were identified at concentrations exceeding their corresponding RVAAP
  background criteria.

### **Recommended Disposal Pathways for IDW**

After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. Arsenic exceeded the USEPA RSL, but it was below the MCL (10  $\mu$ g/L) and RVAAP background criteria (11.7  $\mu$ g/L). Thallium slightly exceeded the USEPA RSL (0.16  $\mu$ g/L) and background criteria (0.0  $\mu$ g/L), but it was below the MCL of 2.0  $\mu$ g/L. The concentrations for antimony, chromium (total), nickel, potassium, sodium, and vanadium exceeded the RVAAP background criteria, but these metals were below their respective MCLs and RSLs.

Given the observed analytical results, and the previous approval of land application based upon similar constituent levels from SAIC during the 2009 Well Installation into the Basal Sharon Conglomerate and Tank #2 from the current well installation, it is recommended that the liquid IDW from Tank #1 be classified as non-hazardous, non-contaminated. EQM understands that normally it is not Ohio EPA policy to land discharge decontamination water, however given the analytical results it is proposed to land apply the liquid IDW near Tank #1 (in the gravel parking area adjacent to, and immediately north of Building 1036) provided that RVAAP and Ohio EPA concur with the preliminary characterization and that no RCRA listings apply. The liquid IDW will be pumped from the tank through an in-line 100-µm bag filter and through a straw bale at the effluent end as a finishing filter and to prevent erosion before discharging to the ground surface in a well vegetated area. The IDW liquid will be released at a rate that will prevent ponding of water and/or runoff. The IDW will not be released directly to surface water features, such as creeks, ditches, or streams or to storm/sanitary sewer lines. Prior to initiating land application of the liquid IDW, the procedure and setup will be reviewed by the RVAAP Facility Manager or designee for final approval.

Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with the appropriate land application. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

John M. Miller, CHMM

Project Manager

cc: Vicki Deppisch – Ohio EPA Mark Nichter – USACE

EQM PN - 030174.0016.001.02

Table 1. Summary of Analytical Suite of Chemicals

Constituents	Methods				
TCLP mercury	EPA Method SW-846 1311/7470A				
TCLP metals (silver, arsenic, barium,	EPA Method SW-846 1311/6010B				
cadmium, chromium, lead, and selenium)					
TCLP semivolatile organic compounds	EPA Method SW-846 1311/8270C				
(SVOCs)					
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B				
TCLP pesticides	EPA Method SW-846 1311/8081A				
TCLP herbicides	EPA Method SW-846 1311/8151A				
Total cyanide	EPA Method SW-846 9012A				
Sulfide	EPA Method SW-846 9034				
Flashpoint	EPA Method SW-846 1010				
рН	EPA Method SW-846 9040B				
Polychlorinated biphenyls (PCBs)	EPA Method SW-846 8082				
Pesticides	EPA Method SW-846 8081A				
Base/Neutrals and Acids (SVOCs)	EPA Method SW-846 8270C				
Volatile Organic Compounds (VOCs)	EPA Method SW-846 8260B				
Nitroguanidine (Propellant)	EPA Method SW-846 8330 modified				
Nitroaromatics & Nitramines (Explosives)	EPA Method SW-846 8330				
Nitrocellulose as N (Propellant)	General Chemistry (WS-WC-0050)				
Nitrate/Nitrites	General Chemistry (353.2)1				
Metals (Magnesium, Manganese, Barium,	EPA Method SW-846 6010B				
Nickel, Potassium, Silver, Sodium,					
Vanadium, Chromium, Calcium, Cobalt,					
Copper, Arsenic, Lead, Selenium)					
Metals (Antimony, Iron, Beryllium,	EPA Method SW-846 6020				
Thallium, Zinc, Cadmium, Aluminum)					
Mercury .	EPA Method SW-846 7470A				

¹ EPA Methods for Chemical Analysis of Water and Waste

Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels
Tank 1 Decontamination Fluids, RVAAP-66, Ravenna, Ohio

Analyte Group	Analyte	Cas#	Units	Lab Results	Lab Qualifier	MCL	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
Total Metals	Aluminum	7429-90-5	μg/L	64		200^	16000	0	NA
Total Metals	Antimony	7440-36-0	μg/L	2.0		6	6	0	NA
Total Metals	Arsenic	7440-38-2	μg/L	7.0	J	10	0.045	11.7	NA
Total Metals	Barium	7440-39-3	μg/L	42	J,B	2000	2900	82.1	NA
Total Metals	Calcium	7440-70-2	μg/L	53000	В	NS	NS	115000	NA
Total Metals	Chromium	7440-47-3	μg/L	9.5		100	16000**	7.3	NA
Total Metals	Iron	7439-89-6	μg/L	72	J	300^	11000	279	NA
Total Metals	Magnesium	7439-95-4	μg/L	14000	В	NS	NS	43300	NA
Total Metals	Manganese	7439-96-5	μg/L	2.1	J,B	50^	320	1020	NA
Total Metals	Nickel	7440-02-0	μg/L	5.2	J	NS	300	0	NA
Total Metals	Potassium	9/7/7440	μg/L	25000	В	NS	NS	2890	NA
Total Metals	Sodium	7440-23-5	μg/L	100000	В	NS	NS	45700	NA
Total Metals	Thallium	7440-28-0	μg/L	0.71	J	2.0	0.16	0	NA
Total Metals	Vanadium	7440-62-2	μg/L	25	J	NS	78	0	NA
VOCs	2-Butanone (MEK)	78-93-3	μg/L	1.5	J	NS	4900	NA	NA
VOCs	Acetone	67-64-1	μg/L	8.2	J	NS	_12000	NA	NA
VOCs	Toluene	108-88-3	μg/L	0.16	J	1000	860	NA	NA
SVOCs	Diethyl phthalate	84-66-2	μg/L	1.0		NS	11000	NA	NA
TCLP-Metals	Arsenic	7440-38-2	mg/L	0.0071	J,B	NA	NA	NA	5.0
TCLP-Metals	Barium	7440-39-3	mg/L	0.037	J,B	NA	NA	NA	100
TCLP-Metals	Chromium	7440-47-3	mg/L	0.0039	J	NA	NA	NA	5.0
TCLP-Metals	Lead	7439-92-1	mg/L	0.0022	J,B	15	NA	NA	5.0

continued

# Table 2 (continued). Detected Analytical Results Compared to Regulatory Characteristic Levels Tank 1 Decontamination Fluids, RVAAP-66, Ravenna, Ohio

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	MCL	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
						6.5-			
TCLP-Misc.	Corrosivity	N/A	S.U.	9.47		8.5^	NA	NA	NA
TCLP-Mise.	Flashpoint	N/A	F	>180		NA	NA	NA	<140

#### Note:

Methylene chloride (0.46  $\mu\text{g/L})$  was detected in the Trip Blank.

Bold concentrations exceed Drinking Water Stand - Maximum Contaminant Levels (MCLs).

Italics concentrations exceed USEPA Risk Screening Levels (RSLs).

Shaded concentrations exceed the lowest criteria level for RVAAP unfiltered groundwater.

J = estimated result. Result is less than reporting limit.

B = method blank contamination

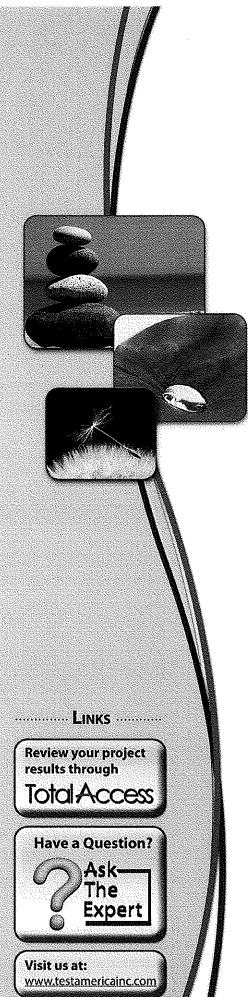
NA = not applicable

^{*} The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1 - Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24) and Table 8-2 - Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23).

[^] National Secondary Drinking Water standard.

^{**} Chromium, insoluble salts.

### ATTACHMENT 1. LABORATORY ANALYTICAL DATA SHEETS



# **TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

## **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc. TestAmerica Canton 4101 Shuffel Street NW North Canton, OH 44720 Tel: (330)497-9396

TestAmerica Job ID: 240-10547-1 Client Project/Site: RVAAP 66

For:

Environmental Quality Mgt., Inc. 1800 Carillon Blvd Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin

Authorized for release by: 5/21/2012 12:35:25 PM

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Project/Site: RVAAP 66

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### **Definitions/Glossary**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

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### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
U	Indicates the analyte was analyzed for but not detected,
*	LCS or LCSD exceeds the control limits
Н	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
HPLC	
Qualifier	Qualifier Description
II	Indicates the analyte was analyzed for but not detected

Metals	
Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
В	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

### **General Chemistry**

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F	RPD of the MS and MSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
₩	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL.	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

#### **Case Narrative**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Job ID: 240-10547-1

Laboratory: TestAmerica Canton

Narrative

#### **CASE NARRATIVE**

Client: Environmental Quality Mgt., Inc.

**Project: RVAAP 66** 

Report Number: 240-10547-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 8330 Explosives, Nitrocellulose as N, and UV/HPLC-SOP Nitroguanidine analysis were performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

#### **RECEIPT**

The samples were received on 04/24/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.3 and 3.9 C.

#### TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 04/26/2012 and analyzed on 04/30/2012.

The laboratory control sample (LCS) for batch 42231 exceeded control limits for the following analytes: 4-methyl-2-pentanone, and 2-hexanone. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42231.

No other difficulties were encountered during the VOCs analysis. All quality control parameters were within the acceptance limits.

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#### **Case Narrative**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

#### Job ID: 240-10547-1 (Continued)

#### Laboratory: TestAmerica Canton (Continued)

#### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples FWG-IDW-TANK 1-TB (240-10547-1) and FWG-IDW-TANK 1-GW (240-10547-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/01/2012.

2-Hexanone and 4-Methyl-2-pentanone (MIBK) failed the recovery criteria high for LCS 240-42231/5. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42231.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

#### TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 04/26/2012, prepared on 04/27/2012 and analyzed on 05/02/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

#### SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 04/25/2012 and analyzed on 04/27/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

#### TCLP CHLORINATED PESTICIDES

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/8081A. The samples were leached on 04/26/2012, prepared on 04/27/2012 and 05/04/2012 and analyzed on 04/30/2012 and 05/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

The laboratory control sample (LCS) for batch 41948 exceeded control limits. The associated sample FWG-IDW-TANK 1-GW was re-prepared and re-analyzed outside holding time. Both sets of data have been reported.

The grand mean exception, as outlined in EPA Method 8000B, was applied to the continuing calibration verification (CCV) standard associated with batch. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to %D. The following compounds are affected.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42735.

No other difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

#### **CHLORINATED PESTICIDES**

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 04/25/2012 and analyzed on 04/27/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

#### **Case Narrative**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-

#### Job ID: 240-10547-1 (Continued)

#### Laboratory: TestAmerica Canton (Continued)

DCB Decachlorobiphenyl failed the surrogate recovery criteria low for FWG-IDW-TANK 1-GW (240-10547-2). Refer to the QC report for details.

Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: FWG-IDW-TANK 1-GW. These results have been reported and qualified.

The opening and closing continuing calibration verifications (CCVs) associated with batch 41756 recovered some analytes above the upper control limits. The samples associated with these CCVs were non-detects for the affected analytes; therefore the data have been reported. FWG-IDW-TANK 1-GW.

No other difficulties were encountered during the pesticides analysis. All other quality control parameters were within the acceptance limits

#### POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 04/25/2012 and analyzed on 04/27/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the PCBs analysis. All quality control parameters were within the acceptance limits.

#### **TCLP CHLORINATED HERBICIDES**

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/ 8151A. The samples were leached on 04/26/2012, prepared on 04/27/2012 and analyzed on 04/28/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the herbicides analysis. All quality control parameters were within the acceptance limits.

#### TCLP METALS (ICP)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 04/26/2012, prepared on 04/27/2012 and analyzed on 04/28/2012.

Arsenic, Barium and Lead were detected in method blank LB 240-41791/1-C at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### TOTAL RECOVERABLE METALS (ICP)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 04/26/2012 and analyzed on 04/27/2012.

Several analytes were detected in method blank MB 240-41806/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### **TOTAL RECOVERABLE METALS (ICPMS)**

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method

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#### TestAmerica Job ID: 240-10547-1

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

#### Job ID: 240-10547-1 (Continued)

#### Laboratory: TestAmerica Canton (Continued)

6020. The samples were prepared on 04/26/2012 and analyzed on 04/27/2012.

Sodium was detected in method blank MB 240-41806/1-A at a level exceeding the reporting limit. Zinc was detected in method blank MB 240-41806/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Sodium failed the recovery criteria low for the MS/MSD of sample FWG-IDW-TANK 1-GWMS/MSD (240-10547-2) in batch 240-41991. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### **TCLP MERCURY**

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 04/26/2012, prepared on 04/27/2012 and analyzed on 04/28/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

#### **TOTAL MERCURY**

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

#### **FLASHPOINT**

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 05/01/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

#### **TOTAL CYANIDE**

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 04/26/2012.

Total Cyanide failed the recovery criteria low for the MSD of sample 240-10555-1 in batch 240-41804. Total Cyanide exceeded the rpd limit. Refer to the QC report for details.

No other difficulties were encountered during the cyanide analysis. All other quality control parameters were within the acceptance limits.

#### SULFIDE

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 04/25/2012.

Sulfide exceeded the rpd limit for the MSD of sample FWG-IDW-TANK 1-GWMSD (240-10547-2) in batch 240-41617. Refer to the QC report for details.

No other difficulties were encountered during the sulfide analysis. All other quality control parameters were within the acceptance limits.

#### PH

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for pH in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 04/24/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

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### **Method Summary**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

flethod .	Method Description	Protocol	Laboratory
260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
081A	Organochlorine Pesticides (GC)	SW846	TAL NC
082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
151A	Herbicides (GC)	SW846	TAL NC
330 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
330/8330A	Nitroaromatics & Nitramines: Explosives (8330/A)	SW846	TAL WSC
)10B	Metals (ICP)	SW846	TAL NC
20	Metals (ICP/MS)	SW846	TAL NC
170A	Mercury (CVAA)	SW846	TAL NC
010	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL NC
012A	Cyanide, Total and/or Amenable	SW846	TAL NC
034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
040B	pH	SW846	TAL NC
/S-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

#### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates. TAL-SOP = TAL-SOP

#### Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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### **Sample Summary**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Łab Sample ID	Client Sample ID	Matrix	Collected	Received			
240-10547-1	FWG-IDW-TANK 1-TB	Water	04/24/12 11:30	04/24/12 14:35			
240-10547-2	FWG-IDW-TANK 1-GW	Water	04/24/12 12:00	04/24/12 14:35			

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Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

### Client Sample ID: FWG-IDW-TANK 1-TB

Lah	Samn	le ID	· 240.	10547-1
Lau	Jaiii	עו סוי	. 4-7U-	10341-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type	
Methylene Chloride	0.46	J	1.0	0.33	ug/L	1		8260B	 Total/NA	-

### Client Sample ID: FWG-IDW-TANK 1-GW

### Lab Sample ID: 240-10547-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1.5	J	10	0,57	ug/L	1	_	8260B	Total/NA
Acetone	8.2	J	10	1.1	ug/L	1		8260B	Total/NA
Toluene	0.16	J	1.0	0.13	ug/L	1		8260B	Total/NA
Diethyl phthalate	1.0		1.0	0.62	ug/L	1		8270C	Total/NA
Arsenic	7.0	J	10	3.2	ug/L	1		6010B	Total
					v				Recoverable
Chromium	9.5		5.0	2.2	ug/L	1		6010B	Total
									Recoverabl
Vanadium	25		7.0	0.64	ug/L	1		6010B	Total
									Recoverabl
Barium	42	1B	200	0.67	ug/L	1		6010B	Totai
		_							Recoverabl
Calcium	53000	В	5000	130	ug/L	1		6010B	Total
· ·	14000		rono					codón	Recoverabl
Magnesium	14000	В	5000	34	ug/L	1		6010B	Total
Manganese	2.1	JВ	15	0.41	ug/L	1		6010B	Recoverabl Total
wanganese	2.1	3.0	15	0.41	ug/L	!		00100	Recoverabl
Nickel	5.2	J	40	3.2	ug/L	1		6010B	Total
		-							Recoverabl
Potassium	25000	В.	5000	72	ug/L	1		6010B	Total
									Recoverabl
Arsenic	0.0071	JВ	0.50	0.0032	mg/L	1		6010B	TCLP
Barium	0.037	JB	10	0.00067	mg/L	1		6010B	TCLP
Chromium	0.0039	J	0.50	0.0022	mg/L	1		6010B	TCLP
Lead	0.0022	JB	0.50	0.0019	mg/L	1		6010B	TCLP
Aluminum	64		50		ug/L	1		6020	Total
					ŭ				Recoverab
Antimony	2.0		2.0	0.13	ug/L	1	٠.	6020 .	Total
-									Recoverab
lron .	72	J	100	26	ug/L	1		6020	Total
			•						Recoverab
Sodium	100000	в.	1000	6.9	ug/L	1		6020	Total
									Recoverabl
Thallium	0.71	J	2.0	0.14	ug/L	1		6020	Total
E) 1 1 1			4.00		D 5			4040	Recoverabl
Flashpoint	>180		1.00		Degrees F	1		1010	Total/NA
pΗ	9.47		0.100	0.100	SU	1		9040B	Total/NA

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-TB Lab Sample ID: 240-10547-1

Date Collected: 04/24/12 11:30 Date Received: 04/24/12 14:35 Matrix: Water

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			05/01/12 02:07	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/01/12 02:07	
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			05/01/12 02:07	
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			05/01/12 02:07	
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/01/12 02:07	
1,2-Dichloroethane	1.0	υ	1.0	0.22	ug/L			05/01/12 02:07	
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			05/01/12 02:07	
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			05/01/12 02:07	
2-Butanone (MEK)	10	U	10	0.57	ug/L			05/01/12 02:07	
-Hexanone	10	U *	10	0.41	ug/L			05/01/12 02:07	
I-Methyl-2-pentanone (MIBK)	10	U *	10	0.32	ug/L			05/01/12 02:07	
Acetone	10	U	10	1.1	ug/L			05/01/12 02:07	
Benzene	1.0	Ü	1.0	0.13	ug/L			05/01/12 02:07	
Bromoform	1.0	U	1.0	0.64	ug/L			05/01/12 02:07	
Bromomethane	1.0	U	1.0	0.41	ug/L			05/01/12 02:07	
Carbon disulfide	1.0	Ü	1.0	0.13	ug/L			05/01/12 02:07	
Carbon tetrachloride	1.0	υ	1.0	0.13	ug/L			05/01/12 02:07	
Chlorobenzene	1.0	U	1.0	0.15	ug/L			05/01/12 02:07	
Chloromethane	1.0	Ü	1.0	0.30	ug/L		•	05/01/12 02:07	
is-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			05/01/12 02:07	
is-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			05/01/12 02:07	
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			05/01/12 02:07	
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			05/01/12 02:07	
Ethylbenzen <del>e</del>	1.0	U	1.0	0.17	ug/L			05/01/12 02:07	
Methylene Chloride	0.46		1.0	0.33	ug/L			05/01/12 02:07	•
n-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			05/01/12 02:07	
-Xylene	1.0	U	1.0	0.14	ug/L			05/01/12 02:07	
Styrene	1.0	Ü	1.0	0.11	ug/L			05/01/12 02:07	•
etrachloroethene	1.0	U	1.0	0,29	ug/L	4		05/01/12 02:07	
oluene	1.0	U	1.0	0.13	ug/L			05/01/12 02:07	
rans-1,2-Dichloroethene	1,0	U	1.0	0.19				05/01/12 02:07	
rans-1,3-Dichloropropene	1.0	U ·	1.0	0.19	ug/L			05/01/12 02:07	
Frichloroethene	1.0	U	1.0	0.17	=			05/01/12 02:07	
/inyl chloride	1.0	Ü	1.0		ug/L	-		05/01/12 02:07	
(ylenes, Total	2.0	U	2.0	0.28				05/01/12 02:07	
Chloroform		U	1.0		ug/L			05/01/12 02:07	
Bromochloromethane	1.0	ΰ	1.0		ug/L			05/01/12 02:07	
,2-Dibromoethane	1.0		1.0		ug/L			05/01/12 02:07	
Chloroethane	1.0		1.0		ug/L			05/01/12 02:07	
Gurrogate	%Recovery	Qualifier	Limits			•	Prepared	Analyzed	Dil F
Foluene-d8 (Surr)	89		74 115			_		05/01/12 02:07	
1,2-Dichloroethane-d4 (Surr)	92		63 _ 129					05/01/12 02:07	
4-Bromofluorobenzene (Surr)	84		66 - 117					05/01/12 02:07	

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Lab Sample ID: 240-10547-2

Matrix: Water

### Client Sample ID: FWG-IDW-TANK 1-GW

Date Collected: 04/24/12 12:00 Date Received: 04/24/12 14:35

Analyte	Resuit	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	Ū	1.0	0,22	ug/L			05/01/12 02:31	-
1,1,2,2-Tetrachloroethane	1.0	υ	1.0	0.18	ug/L			05/01/12 02:31	
1,1,2-Trichloroethane	1.0	υ	1.0	0.27	ug/L			05/01/12 02:31	
1,1-Dichloroethane	1.0	ΰ	1.0	0.15	ug/L			05/01/12 02:31	•
1,1-Dichloroethene	1.0	υ	1.0	0.19	ug/L			05/01/12 02:31	-
1,2-Dichloroethane	1.0	U	1.0	0,22	ug/L			05/01/12 02:31	
1,2-Dichloroethene, Total	2.0	U	2,0	0.34	ug/L			05/01/12 02:31	
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			05/01/12 02:31	
2-Butanone (MEK)	1.5	J	10	0.57	ug/L			05/01/12 02:31	-
2-Hexanone	10	U *	10	0.41	ug/L			05/01/12 02:31	
4-Methyl-2-pentanone (MIBK)	10	U *	10	0,32	ug/L			05/01/12 02:31	
Acetone	8.2	J	10	1.1	ug/L			05/01/12 02:31	
Benzene	1.0	Ū	1.0	0.13	ug/L			05/01/12 02:31	
Bromoform	1.0	U	1.0	0.64	ug/L			05/01/12 02:31	,
Bromomethane	1.0	U	1.0	0.41	ug/L			05/01/12 02:31	
Carbon disulfide	1.0	Ü	1.0	0.13	ug/L			05/01/12 02:31	•
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			05/01/12 02:31	
Chlorobenzene	1.0	U	1.0	0.15	ug/L			05/01/12 02:31	
Chloromethane	1.0	U	1.0	0.30	ug/L			05/01/12 02:31	
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			05/01/12 02:31	
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			05/01/12 02:31	
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			05/01/12 02:31	
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			05/01/12 02:31	
Ethylbenzene	1.0	U	1.0	0.17	ug/L			05/01/12 02:31	
Methylene Chloride	1.0	Ü	1.0	0.33	ug/L			05/01/12 02:31	
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			05/01/12 02:31	
o-Xylene	1.0	U	1.0	0.14	üg/L			05/01/12 02:31	
Styrene	1.0	Ü	1.0	0.11	ug/L			05/01/12 02:31	,
Tetrachloroethene	1.0	U	1.0	0.29	ug/L	•		05/01/12 02:31	
Toluene	0.16	J	1.0	0.13	ug/L			05/01/12 02:31	,
trans-1,2-Dichloroethene	1.0	U	1.0 ·	0.19	ug/L			05/01/12 02:31	
trans-1,3-Dichloropropene	1.0	υ .	1.0	0.19	ug/L			05/01/12 02:31	
Trichlaraethene	1.0	U	1.0	0.17	ug/L			05/01/12 02:31	,
Vinyl chloride	1.0	ับ	1,0	0.22	ug/L		•	05/01/12 02:31	,
Xylenes, Total	2.0	U	2.0	0.28	ug/L			05/01/12 02;31	
Chloroform	1.0	υ	1.0	0.16	ug/L			05/01/12 02:31	•
Bromochloromethane	1.0	U	1.0	0.29	ug/L			05/01/12 02:31	,
1,2-Dibromoethane	1.0	υ	1.0	0.24	ug/L			05/01/12 02:31	
Chloroethane	1.0	U	1.0	0.29	ug/L			05/01/12 02:31	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Toluene-d8 (Surr)	90		74 - 115					05/01/12 02:31	
1,2-Dichloroethane-d4 (Surr)	89		63 - 129					05/01/12 02:31	
4-Bromofluorobenzene (Surr)	84		66 - 117					05/01/12 02:31	

Method: 8260B - Volatile Organi	c Compounds (GC/MS) -	TCLP						
Anaiyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0,025 U	0.025	0,0095	mg/L			04/30/12 19:30	1
1,2-Dichloroethane	0.025 U	0.025	0.011	mg/L			04/30/12 19:30	1
2-Butanone (MEK)	0.25 U	0.25	0.029	ma/l			04/30/12 19:30	1

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Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Lab Sample ID: 240-10547-2

Matrix: Water

Client Sample ID: FWG-IDW-TANK 1-GW

Date Collected: 04/24/12 12:00 Date Received: 04/24/12 14:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0,025	U	0.025	0.0065	mg/L			04/30/12 19:30	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			04/30/12 19:30	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			04/30/12 19:30	1
Chloroform	0.025	U	0.025	0.0080	mg/L			04/30/12 19:30	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			04/30/12 19:30	1
Trichloroethene	0,025	U	0,025	0.0085	mg/L			04/30/12 19:30	1
Vinyl chloride	0.025	υ	0.025	0.011	mg/L			04/30/12 19:30	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107	,	80 - 121			04/30/12 19:30	1
4-Bromofluorobenzene (Surr)	103		70  124			04/30/12 19:30	1
Toluene-d8 (Surr)	113		90 - 115			04/30/12 19:30	1
Dibromofluoromethane (Surr)	120		84 - 128	j me		04/30/12 19:30	1

	120		07-720					04/00/12 70:30	•
Method: 8270C - Semivolatile C Analyte		inds (GC/M Qualifier	S) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Acenaphthylene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Anthracene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzo[a]anthracene	0.21	Ü	0,21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzoic acid	26	U	26	10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzo[b]fluoranthene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzo[k]fluoranthene	0.21	U	0.21	0.10	ug/L	* *	04/25/12 08:09	04/27/12 16:47	1
Benzył alcohol	5.2	U	5.2	0.39	ug/L		04/25/12 08:09	04/27/12 16:47	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.33	ug/L		04/25/12 08:09	04/27/12 16:47	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
4-Bromophenyl phenyl ether	2.1	U	2.1	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Butyl benzył phthalate	1.0	U	1.0	0,82	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,4-Dimethylphenol	2.1	Ü	2.1	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Dimethyl phthalate	1.0	U	1.0	0.30	ug/L		04/25/12 08:09	04/27/12 16:47	1
4,6-Dinitro-2-methylphenol	5.2	U	5.2	2.5	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,4-Dinitrophenol	5.2	Ü	5.2	2.5	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,4-Dinitrotoluene	5.2	U '	5,2	0.28	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,6-Dinitrotoluene	5.2	U	5.2	0,82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Fluoranthene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Fluorene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Hexachlorobenzene	0.21	U	0.21	0,10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Hexachlorobutadiene	1.0	Ü	1.0	0.28	ug/L		04/25/12 08:09	04/27/12 16:47	1
Hexachlorocyclopentadiene	10	U	10	0,82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Hexachloroethane	1.0	U	1.0	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
N-Nitrosodiphenylamine	1.0	Ü	1.0	0.32	ug/L		04/25/12 08:09	04/27/12 16:47	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
1,4-Dichlorobenzene	1.0	υ	1.0	0.35	ug/L		04/25/12 08:09	04/27/12 16:47	1
2-Chloronaphthalene	1,0	Ü	1.0	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
2-Chlorophenol	1.0	U	1.0	0.30	ug/L		04/25/12 08:09	04/27/12 16:47	1
4-Chlorophertyl phenyl ether	2.1	υ	2.1	0.31	ug/L		04/25/12 08:09	04/27/12 16:47	1
Chrysene	0.21	U	0,21	0,10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Dibenz(a,h)anthracene	0.21	υ	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Dibenzofuran	1.0	U	1.0	0,10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzo[g,h,i]perylene	0.21	· υ	0.21	0.10	ug/L	-	04/25/12 08:09	04/27/12 16:47	1
Benzo[a]pyrene	0.21	υ	0.21		ug/L		04/25/12 08:09	04/27/12 16:47	1
· · · · · · · · · · · · · · · · · · ·					-				

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Lab Sample ID: 240-10547-2

Matrix: Water

### Client Sample ID: FWG-IDW-TANK 1-GW

Date Collected: 04/24/12 12:00 Date Received: 04/24/12 14:35

Analyte	Result	Qualifier	RL	MDL	Unit D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	1.0	U	1.0	0.69	ug/L	04/25/12 08:09	04/27/12 16:47	
1,2-Dichlorobenzene	1.0	U	1.0	0.30	ug/L	04/25/12 08:09	04/27/12 16:47	•
1,3-Dichlorobenzene	1.0	U	1.0	0.82	ug/L	04/25/12 08:09	04/27/12 16:47	1
3,3'-Dichlorobenzidine	5.2	U	5.2	0.38	ug/L	04/25/12 08:09	04/27/12 16:47	1
2,4-Dichlorophenol	2.1	U	2.1	0.82	ug/L	04/25/12 08:09	04/27/12 16:47	,
Diethyl phthalate	1.0		1.0	0.62	ug/L	04/25/12 08:09	04/27/12 16:47	•
ndeno[1,2,3-cd]pyrene	0.21	U	0.21	0,10	ug/L	04/25/12 08:09	04/27/12 16:47	
sophorone	1.0	U	1.0	0.28	ug/L	04/25/12 08:09	04/27/12 16:47	
2-Methylnaphthalene	0.21	U	0.21	0,10	ug/L	04/25/12 08:09	04/27/12 16:47	1
2-Methylphenol	1.0	U	1.0	0.82	ug/L	04/25/12 08:09	04/27/12 16:47	1
Naphthaiene	0.21	Ū	0.21	0,10	ug/L	04/25/12 08:09	04/27/12 16:47	
2-Nitroaniline	2.1	U	2.1	0.82	ug/L	04/25/12 08:09	04/27/12 16:47	
3-Nitroaniline	2.1	υ	2.1	0.29	ug/L	04/25/12 08:09	04/27/12 16:47	
4-Nitroaniline	2.1	ΰ	2.1	0.82	ug/L	04/25/12 08:09	04/27/12 16:47	
Nitrobenzene	1.0	υ	1.0	0.041	ug/L	04/25/12 08:09	04/27/12 16:47	
2-Nitrophenol	2.1	υ	2.1	0.29	ug/L	04/25/12 08:09	04/27/12 16:47	
4-Nitrophenol	5.2	υ	5.2	2.5	ug/L	04/25/12 08:09	04/27/12 16:47	
^D yrene	0.21	υ	0,21	0.10	ug/L	04/25/12 08:09	04/27/12 16:47	1
Pentachlorophenol	5.2	U	5.2	2.5	ug/L	04/25/12 08:09	04/27/12 16:47	1
Phenanthrene	0.21	υ	0.21	0.10	ug/L	04/25/12 08:09	04/27/12 16:47	•
1,2,4-Trichlorobenzene	1.0	U	1.0	0.29	ug/L	04/25/12 08:09	04/27/12 16:47	•
2,4,5-Trichlorophenol	5.2	Ų	5.2	0.31	ug/L	04/25/12 08:09	04/27/12 16:47	•
2,4,6-Trichlorophenol	5.2	U	5.2	0.82	ug/L	04/25/12 08:09	04/27/12 16:47	
Phenol	1.0	U	1.0	0.62	ug/L	04/25/12 08:09	04/27/12 16:47	•
Carbazole	1.0	U	1.0	0.29	ug/L	04/25/12 08:09	04/27/12 16:47	
4-Chloroaniline	2.1	Ų	2.1	0.82	ug/L	04/25/12 08:09	04/27/12 16:47	•
3 & 4 Methylphenol	2.1	U	2.1	0.77	ug/L	04/25/12 08:09	04/27/12 16:47	
Bis(2-ethylhexyl) phthalate	2.1	U	2.1	0.82	ug/L	04/25/12 08:09	04/27/12 16:47	•
Di-n-octyl phthalate	1.0	Ü	1.0	0.82	ug/L	04/25/12 08:09	04/27/12 16:47	
4-Chloro-3-methylphenol	2.1	Ų	2.1	0.82	ug/L	04/25/12 08:09	04/27/12 16:47	
2,2'-oxybis[1-chloropropane]	1.0	U	1.0.	0.41	ug/L	04/25/12 08:09	04/27/12 16:47	•
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
2-Fluorobiphenyl (Surr)	59		28 - 110			04/25/12 08:09	04/27/12 16:47	
2-Fluorophenol (Surr)	58		10 - 110			04/25/12 08:09	04/27/12 16:47	•
Nitrobenzene-d5 (Surr)	59		27 - 111			04/25/12 08:09	04/27/12 16:47	
Terphenyl-d14 (Surr)	56	•	37 - 119			04/25/12 08:09	04/27/12 16:47	
2,4,6-Tribromophenol ( <b>S</b> urr)	71		22 - 120			04/25/12 08:09	04/27/12 16:47	
Phenol-d5 (Surr)	63		10 - 110			04/25/12 08:09	04/27/12 16:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L	2001	04/27/12 13:11	05/02/12 16:53	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		04/27/12 13:11	05/02/12 16:53	1
2,4,6-Trichlorophenol	0,020	υ	0,020	0.00080	mg/L		04/27/12 13:11	05/02/12 16:53	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		04/27/12 13:11	05/02/12 16:53	1
Hexachlorobenzene	0,020	υ	0,020	0.00010	mg/L		04/27/12 13:11	05/02/12 16:53	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		04/27/12 13:11	05/02/12 16:53	1
Hexachloroethane	0,020	ΰ	0.020	0.00080	mg/L	•	04/27/12 13:11	05/02/12 16:53	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		04/27/12 13:11	05/02/12 16:53	1
2-Methylphenol	0.0040	U	0,0040	0,00080	mg/L		04/27/12 13:11	05/02/12 16:53	1

Dil Fac

### Client Sample Results

RL

0.0040

MDL Unit

0.000040 mg/L

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

Analyte

Analyte

Endrin

Heptachlor

Methoxychlor

Toxaphene

Chlordane (technical)

Heptachlor epoxide

gamma-BHC (Lindane)

Nitrobenzene

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-GW

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP (Continued)

Result Qualifier

0,0040 U

Date Collected: 04/24/12 12:00 Date Received: 04/24/12 14:35 Lab Sample ID: 240-10547-2

Analyzed

05/02/12 16:53

Prepared

04/27/12 13:11

Matrix: Water

Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		04/27/12 13:11	05/02/12 16:53	
Pyridine	0.020	U	0.020	0.00035	mg/L		04/27/12 13:11	05/02/12 16:53	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
2-Fluorobiphenyl (Surr)	52		22 - 110				04/27/12 13:11	05/02/12 16:53	
2-Fluorophenol (Surr)	45		10 - 110				04/27/12 13:11	05/02/12 16:53	
2,4,6-Tribromophenol (Surr)	52		17 - 117				04/27/12 13:11	05/02/12 16:53	
Nitrobenzene-d5 (Surr)	54		29 - 111				04/27/12 13:11	05/02/12 16:53	
Phenol-d5 (Surr)	41		10_110				04/27/12 13:11	05/02/12 16:53	
Terphenyl-d14 (Surr)	80		40 - 119				04/27/12 13:11	05/02/12 16:53	
Method: 8081A - Organochlorine	Pesticides (G	C)			1				
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
4,4'-DDD	0.052	U	0.052	0.0099	ug/L		04/25/12 08:23	04/27/12 09:04	
4,4'-DDE	0.052	U	0.052	0.010	ug/L		04/25/12 08:23	04/27/12 09:04	
4,4'-DDT	0.052	U	0.052	0.016	ug/L		04/25/12 08:23	04/27/12 09:04	
Aldrin	0.052	U	0.052	0.0085	ug/L		04/25/12 08:23	04/27/12 09:04	
alpha-BHC	0,052	U	0.052	0.0072	ug/L		04/25/12 08:23	04/27/12 09:04	
alpha-Chlordane	0.052	U	0.052	0.014	ug/L		04/25/12 08:23	04/27/12 09:04	
beta-BHC	0.052	Ü	0.052	0.0087	ug/L		04/25/12 08:23	04/27/12 09:04	•
delta-BHC	0.052	U	0.052	0.0090	ug/L		04/25/12 08:23	04/27/12 09:04	
Dieldrin	0,052	U	0.052	0,0077	ug/L		04/25/12 08;23	04/27/12 09:04	
Endosulfan I	0.052	υ	0.052	0.013	ug/L		04/25/12 08:23	04/27/12 09:04	
Endosulfan II	0.052	U	0.052	0.012	ug/L		04/25/12 08;23	04/27/12 09:04	
Endosulfan sulfate	0.052	υ	0.052	0.011	ug/L		04/25/12 08:23	04/27/12 09:04	
Endrin	0,052	ັບ	0,052	0.011	ug/L		04/25/12 08:23	04/27/12 09:04	
Endrin aldehyde	0.052	υ	0.052	0.011	ug/L		04/25/12 08:23	04/27/12 09:04	
Endrin ketone	0.052	U	0,052	0.0080	ug/L		04/25/12 08;23	04/27/12 09:04	
gamma-BHC (Lindane)	0.052	υ	0.052	0.0066	ug/L		04/25/12 08:23	04/27/12 09:04	
gamma-Chlordane	0.052	U	0.052	0.012	ug/L		04/25/12 08:23	04/27/12 09:04	
Heptachlor	0.052	U	0.052	0.0082	ug/L		04/25/12 08:23	04/27/12 09:04	
Heptachlor epoxide	0.052	U '	0.052	0.0073	ug/L		04/25/12 08:23	04/27/12 09:04	
Methoxychlor	0.10	υ	0.10	0.033	ug/L		04/25/12 08:23	04/27/12 09:04	
Toxaphene	2.1	U	2.1	0.33	ug/L		04/25/12 08:23	04/27/12 09:04	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
DCB Decachlorobiphenyl	9	X	10 - 145				04/25/12 08:23	04/27/12 09:04	
DCB Decachlorobiphenyl	9	X	10 - 145				04/25/12 08:23	04/27/12 09:04	
Tetrachloro-m-xylene	40		30 - 141				04/25/12 08:23	04/27/12 09:04	
Tetrachloro-m-xylene	39		30 - 141				04/25/12 08:23	04/27/12 09:04	

Analyzed

04/30/12 13:44 04/30/12 13:44

04/30/12 13:44

04/30/12 13:44

04/30/12 13:44

04/30/12 13:44

04/30/12 13:44

Dil Fac

1

1

1

1

RL

0.012

0.0012

0.0012

0.0012

0.0012

0.0024

0.048

MDL Unit

0,000079 mg/L

0.000026 mg/L

0.000019 mg/L

0.000017 mg/L

0.000015 mg/L

0.000077 mg/L

0.00077 mg/L

Prepared

04/27/12 13:16

04/27/12 13:16

04/27/12 13:16

04/27/12 13:16

04/27/12 13:16

04/27/12 13:16

04/27/12 13:16

Result Qualifier

0.012 U

0.0012 U*

0.0012 U *

0.0012 U*

0.0012 U *

0,0024 U

0.048 U

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

Client Sample ID: FWG-IDW-TANK 1-GW

Date Collected: 04/24/12 12:00 Date Received: 04/24/12 14:35 Lab Sample ID: 240-10547-2

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		46 - 122				04/27/12 13:16	04/30/12 13:44	1
Tetrachloro-m-xylene	78		46 - 122				04/27/12 13:16	04/30/12 13:44	1
DCB Decachlorobiphenyl	47		34 _ 141				04/27/12 13:16	04/30/12 13:44	1
DCB Decachlorobiphenyl	49		34 . 141				04/27/12 13:16	04/30/12 13:44	1
Method: 8081A - Organochlorine	Pesticides (G	C) - TCLP - RE	ŀ						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chiordane (technical)	0.012	UH	0.012	0.000079	mg/L		05/04/12 06:43	05/04/12 20:08	1
Endrin	0,0012	UН	0.0012	0,000026	mg/L		05/04/12 06:43	05/04/12 20:08	1
Heptachlor	0,0012	UН	0.0012	0.000019	mg/L		05/04/12 06:43	05/04/12 20:08	1
leptachlor epoxide	0,0012	UΉ	0,0012	0,000017	mg/L		05/04/12 06:43	05/04/12 20:08	1
gaπma-BHC (Lindane)	0.0012	UΗ	0.0012	0.000015	mg/L		05/04/12 06:43	05/04/12 20:08	1
Methoxychlor	0.0024	UН	0.0024	0.000077	mg/L		05/04/12 06:43	05/04/12 20:08	1
Toxaphene	0.048	UН	0.048	0.00077	mg/L		05/04/12 06:43	05/04/12 20:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	63		46 - 122				05/04/12 06:43	05/04/12 20:08	1
Tetrachloro-m-xylene	65		46 - 122				05/04/12 06:43	05/04/12 20:08	1
DCB Decachlorobiphenyl	52		34 _ 141				05/04/12 06:43	05/04/12 20:08	1
DCB Decachlorobi <b>p</b> henyl	50		34 - 141				05/04/12 06:43	05/04/12 20:08	1
Method: 8082 - Polychlorinated B	liphenvis (PCI	3s) by Gas Ch	romatograd	hv					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.52	U –	0.52	0.18	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1221	0.52	U	0.52	0,13	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1232	0.52	U	0.52	0.16	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1242	0.52	Ü	0.52	0,23	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1248	0.52	U	0,52	0.10	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1254	0.52	U	0.52	0.16	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1260	0.52	U	0.52	0.18	ug/L		04/25/12 08:21	04/27/12 00:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	38		23 - 136				04/25/12 08:21	04/27/12 00:42	
DCB Decachlorobi <b>p</b> henyl	11	i.	10 - 130				04/25/12 08:21	04/27/12 00:42	1
Method: 8151A - Herbicides (GC)	- TCLP								
		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Milalyte							0.1/07/10 10 00	04/28/12 14:53	***************************************
<u> </u>	0,0020	U -	0.0020	0.00021	mg/L		04/27/12 13:08	04/20/12 14.33	
2,4-D	0,0020 0,00050	U -	0,0020 0.00050	0,00021 0,00010	mg/L mg/L		04/27/12 13:08	04/28/12 14:53	
2,4-D Silvex (2,4,5-TP)		U U			-				1
2,4-D Silvex (2,4,5-TP) Surrogate	0.00050	U U	0.00050		-		04/27/12 13:08	04/28/12 14:53	Dil Fac
2,4-D Silvex (2,4,5-TP) Surrogate 2,4-Dichlorophenylacetic acid	0.00050 %Recovery	U U	0.00050 <i>Limits</i>		-		04/27/12 13:08  Prepared	04/28/12 14:53  Analyzed	Dil Fac
2,4-D Silvex (2,4,5-TP) Surrogate 2,4-Dichlorophenylacetic acid 2,4-Dichlorophenylacetic acid	0.00050 <b>%Recovery</b> 63 62	U U <b>Qualifier</b>	0.00050  Limits  37 - 116  37 - 116	0.00010	-		04/27/12 13:08  Prepared  04/27/12 13:08	04/28/12 14:53  Analyzed  04/28/12 14:53	Dil Fac
2,4-D Silvex (2,4,5-TP) Surrogate 2,4-Dichlorophenylacetic acid 2,4-Dichlorophenylacetic acid Method: 8330 (Modified) - Organi	0.00050  **Recovery 63 62  c Compounds	U U <b>Qualifier</b>	0.00050  Limits  37 - 116  37 - 116	0.00010	mg/L	D	04/27/12 13:08  Prepared  04/27/12 13:08	04/28/12 14:53  Analyzed  04/28/12 14:53	Dil Fac
2,4-D Silvex (2,4,5-TP) Surrogate 2,4-Dichlorophenylacetic acid 2,4-Dichlorophenylacetic acid Method: 8330 (Modified) - Organi Analyte	0.00050  **Recovery 63 62  c Compounds	U Qualifier  by UV/HPLC Qualifier	0.00050  Limits  37 116  37 116	0.00010	mg/L	D	04/27/12 13:08  Prepared  04/27/12 13:08  04/27/12 13:08	04/28/12 14:53  Analyzed  04/28/12 14:53  04/28/12 14:53	Dil Fac
2,4-D Silvex (2,4,5-TP)  Surrogate 2,4-Dichlorophenylacetic acid 2,4-Dichlorophenylacetic acid  Method: 8330 (Modified) - Organi Analyte  Nitroguanidine	0.00050  %Recovery 63 62 c Compounds Result	U U Qualifier by UV/HPLC Qualifier U	0.00050  Limits  37 116  37 - 116  - Dissolved  RL  20	0.00010 MDL 2.4	mg/L	<b>D</b>	04/27/12 13:08  Prepared  04/27/12 13:08  04/27/12 13:08  Prepared	04/28/12 14:53  Analyzed  04/28/12 14:53  04/28/12 14:53  Analyzed	Dil Fac
2,4-D Silvex (2,4,5-TP)  Surrogate 2,4-Dichlorophenylacetic acid 2,4-Dichlorophenylacetic acid  Method: 8330 (Modified) - Organi Analyte Nitroguanidine  Method: 8330/8330A - Nitroaroma	0.00050  %Recovery 63 62 c Compounds Result 20 atics & Nitram	U U Qualifier by UV/HPLC Qualifier U	0.00050  Limits  37 116  37 - 116  - Dissolved  RL  20	0.00010 MDL 2.4	mg/L  Unit ug/L	D	04/27/12 13:08  Prepared  04/27/12 13:08  04/27/12 13:08  Prepared	04/28/12 14:53  Analyzed  04/28/12 14:53  04/28/12 14:53  Analyzed	Dil Fac
2,4-D Silvex (2,4,5-TP)  Surrogate 2,4-Dichlorophenylacetic acid 2,4-Dichlorophenylacetic acid  Method: 8330 (Modified) - Organi Analyte Nitroguanidine  Method: 8330/8330A - Nitroaroma	0.00050  %Recovery 63 62 c Compounds Result 20 atics & Nitram	U Qualifier by UV/HPLC Qualifier U ines: Explosiv Qualifier	0.00050  Limits  37 116  37 - 116  - Dissolved RL 20  es (8330/A)	0.00010  MDL 2.4	mg/L  Unit ug/L		04/27/12 13:08  Prepared  04/27/12 13:08  04/27/12 13:08  Prepared  05/07/12 14:00	04/28/12 14:53  Analyzed  04/28/12 14:53  04/28/12 14:53  Analyzed  05/08/12 16:11	Dil Fac
Analyte 2,4-D Silvex (2,4,5-TP)  Surrogate 2,4-Dichlorophenylacetic acid 2,4-Dichlorophenylacetic acid Method: 8330 (Modified) - Organi Analyte Nitroguanidine Method: 8330/8330A - Nitroaroma Analyte Nitroglycerin PETN	%Recovery 63 62 c Compounds Result 20 attics & Nitrams	U Qualifier  by UV/HPLC Qualifier U  ines: Explosiv Qualifier U	0.00050  Limits 37 116 37 - 116 - Dissolved RL 20 es (8330/A) RL	0.00010  MDL 2.4  MDL 0.34	mg/L Unit ug/L Unit		04/27/12 13:08  Prepared  04/27/12 13:08  04/27/12 13:08  Prepared  05/07/12 14:00  Prepared	04/28/12 14:53  Analyzed  04/28/12 14:53  04/28/12 14:53  Analyzed  05/08/12 16:11  Analyzed	Dil Fac

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Lab Sample ID: 240-10547-2

Matrix: Water

Client Sample ID: FWG-IDW-TANK 1-GW

Date Collected: 04/24/12 12:00 Date Received: 04/24/12 14:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
1,3-Dinitrobenzene	0.10	Ú	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
2,4-Dinitrotoluene	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1,02
2,6-Dinitrotoluene	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
HMX	0.10	U	0.10	0.037	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
Nitrobenzene	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
2-Nitrotoluene	0.51	Ü	0.51	0.090	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
3-Nitrotoluene	0.51	U	0.51	0.058	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
4-Nitrotoluene	0.66	U	0.66	0.090	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
RDX	0.10	U	0.10	0.037	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
Tetryl	0.10	U	0.10	0,051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
1,3,5-Trinitrobenzene	0.10	U	0.10		ug/L		05/01/12 09:00	05/10/12 15:48	1.02
2,4,6-Trinitrotoluene	0.10	Ü	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	101		79 - 111				05/01/12 09:00	05/10/12 15:48	1.02

Method: 6010B - Metals (IC Analyte	•	le Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	And other contracts								- Dil Fac
Arsenic	7.0	J	10	3.2	ug/L		04/26/12 17:08	04/27/12 10:46	1
Chromium	9.5		5.0	2.2	ug/L		04/26/12 17:08	04/27/12 10:46	1
Cobalt	7.0	υ	7.0	1.7	ug/L		04/26/12 17:08	04/27/12 10:46	1
Lead	3.0	Ü	3.0	1.9	ug/L		04/26/12 17:08	04/27/12 10:46	1
Selenium	5.0	U	5.0	4.1	ug/L		04/26/12 17:08	04/27/12 10:46	1
Silver	5.0	U	5.0	2.2	ug/L		04/26/12 17:08	04/27/12 10:46	1
Vanadium	25		7.0	0.64	ug/L		04/26/12 17:08	04/27/12 10:46	1
Barium	42	JB	200	0.67	ug/L		04/26/12 17:08	04/27/12 10:46	1
Calcium	53000	В	5000	130	ug/L		04/26/12 17:08	04/27/12 10:46	1
Copper	25	Ü	25	4.5	ug/L		04/26/12 17:08	04/27/12 10:46	1
Magnesium	14000	В	5000	34	ug/L		04/26/12 17:08	04/27/12 10:46	1
Manganese	2.1	JB	15	0.41	ug/L		04/26/12 17:08	04/27/12 10:46	1
Nickel	5.2	J	40	3.2	ug/L		04/26/12 17:08	04/27/12 10:46	1
Potassium	25000	в ,	5000	72	ug/L		04/26/12 17:08	04/27/12 10:46	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared 1 4 1	Analyzed	Dil Fac
Arsenic	0.0071	JB	0.50	0.0032	mg/L		04/27/12 12:55	04/28/12 15:44	1
Barium	0.037	JB	10	0.00067	mg/L		04/27/12 12:55	04/28/12 15:44	1
Cadmium	0.10	U	0.10	0.00066	mg/L		04/27/12 12:55	04/28/12 15:44	1
Chromium	0.0039	J	0.50	0.0022	mg/L		04/27/12 12:55	04/28/12 15:44	1
Lead	0.0022	JB	0.50	0,0019	mg/L		04/27/12 12:55	04/28/12 15:44	1
Selenium	0.25	U	0.25	0.0041	mg/L		04/27/12 12:55	04/28/12 15:44	1
Silver	0.50	Ü	0.50	0,0022	mg/L		04/27/12 12:55	04/28/12 15:44	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Faç
Aluminum	64		50	19	ug/L		04/26/12 17:08	04/27/12 20:15	1
Antimony	2.0		2.0	0.13	ug/L		04/26/12 17:08	04/27/12 20:15	1
Beryllium	1.0	U	1.0	0.20	ug/L		04/26/12 17:08	04/27/12 20:15	1
Cadmium	1.0	υ	1.0	0.13	ug/L		04/26/12 17:08	04/27/12 20:15	1
Iron	72	J	100	26	ug/L		04/26/12 17:08	04/27/12 20:15	1
Sodium	100000	В	1000	6.9	ug/L		04/26/12 17:08	04/27/12 20:15	1

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

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Nitrocellulose

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

04/24/12 17:04

05/15/12 14:33

05/11/12 05:00

Matrix: Water

		_						
Date	Colle	ected	: 0	4/2	4/1	2	12:	:00

Date Received: 04/24/12 14:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.71	J	2.0	0.14	ug/L		04/26/12 17:08	04/27/12 20:15	1
Zinc	20	U	20	2.3	ug/L		04/26/12 17:08	04/27/12 20:15	1
Method: 7470A - Mercury (CVAA)									
Analyte	Resuit	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.12	ug/L		04/27/12 16:25	04/28/12 10:40	1
: Method: 7470A - Mercury (CVAA) - 7	CLP								
Method: 7470A - Mercury (CVAA) - 7		Qualifier	PI	MDI	l Init	n	Propagad	Anahizad	Dil Ess
Method: 7470A - Mercury (CVAA) - 7 Analyte Mercury		Qualifier U		MDL 0,00012		_ <u>D</u>	Prepared 04/27/12 16:25	Analyzed 04/28/12 11:48	Dil Fac
Analyte Mercury	Result					_ <u>D</u>			Dil Fac
Analyte	0.0020			0,00012		_ <u>D</u>			Dil Fac
Analyte  Mercury  General Chemistry	0.0020	U	0.0020	0,00012 MDL	mg/L		04/27/12 16:25	04/28/12 11:48	1
Analyte  Mercury  General Chemistry  Analyte	Result 0.0020 Result	U Qualifier	0.0020 RL	0,00012 MDL	mg/L Unit Degrees F		04/27/12 16:25	04/28/12 11:48 Analyzed	1

0.100

0.100 SU

0.48 mg/L

9.47

2.0 U

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### **Surrogate Summary**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Prep Type: Total/NA

				Percent Su	rrogate Reco	very (Accept	ance Limits)		
		TOL	12DCE	BFB	DBFM	DBFM	BFB	DBFM	DBFM
Lab Sample ID	Client Sample ID	(74-115)	(63-129)	(66-117)	(75-121)	(75-121)	(70-124)	(75-121)	(84-128)
240-10547-1	FWG-IDW-TANK 1-TB	89	92	84	87	87		87	
240-10547-2	FWG-IDW-TANK 1-GW	90	89	84	88	88		88	
LCS 240-42231/5	Lab Control Sample	94	89	90	90	90		90	
MB 240-42231/4	Method Blank	91	90	82	90	90		90	

#### Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Percent Surrogate Recovery (Acceptance Limits) 12DCF TOL BFB DBFM Lab Sample ID Client Sample ID (80-121)(90-115)(70-124)(84-128) LCS 240-42229/5 Lab Control Sample 115 112 101

### Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: TCLP

_				Percent Su	rrogate Reco
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(80-121)	(70-124)	(90-115)	(84-128)
240-10547-2	FWG-IDW-TANK 1-GW	107	103	113	120
LB 240-41793/1-A MB	Method Blank	ຳ 108	100	110	115

#### Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

				Percent Sur	rogate Reco	very (Accept	ance Limits)
		FBP	2FP	NBZ	TPH	TBP	PHL
Lab Sample ID	Client Sample ID	(28-110)	(10-110)	(27-111)	(37-119)	(22-120)	(10-110)
240-10547-2	FWG-IDW-TANK 1-GW	59	58	59	56	71	63
LCS 240-41464/16-A	Lab Control Sample	72	83	78	79	76	86
MB 240-41464/15-A	Method Blank	69	80	77	85	65	79
Surrogate Legend							

FBP = 2-Fluorobiphenyl (Surr)

TestAmerica Job ID: 240-10547-1

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

PHL ≈ Phenol-d5 (Surr)

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

_				Percent Sur	rogate Reco	very (Accept	ance Limits)
		2FP	PHL	FBP	<b>TB</b> P	NBZ	TPH
Lab Sample ID	Client Sample ID	(10-110)	(10-110)	(22-110)	(17-117)	(29-111)	(40-119)
LCS 240-41946/5-A	Lab Control Sample	64	54	68	85	67	89
MB 240-41946/4-A	Method Blank	71	62	74	84	74	99

#### Surrogate Legend

2FP = 2-Fluorophenol (Surr)

PHL = Phenol-d5 (Surr)

FBP = 2-Fluorobiphenyl (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

·					Percent Sur	rrogate Reco	very (Accept	ance Limit
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s			FBP	2FP	TBP	NBZ	PHL	TPH
240-10547-2 FWG-IDW-TANK 1-GW 52 45 52 54 41 80	Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)
	240-10547-2	FWG-IDW-TANK 1-GW	52	45	52	54	41	80
Surrogate Legend	Surrogate Legend							

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

#### Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

				Percent Sur	rrogate Red
		DCB1	DCB2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(10-145)	(10-145)	(30-141)	(30-141)
240-10547-2	FWG-IDW-TANK 1-GW	9 X	9 X	40	39
LCS 240-41473/3-A	Lab Control Sample	34	30	. B2	80
MB 240-41473/2-A	Method Blank	85	84	88	81

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xytene

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Project/Site: RVAAP 66

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water Prep Type: Total/NA

•				Percent Su	rrogate Rec
		DCB1	DCB2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(34-141)	(34-141)	(46-122)	(46-122)
LCS 240-41948/4-A	Lab Control Sample	106	97	127 X	B6
LCS 240-42735/3-A	Lab Control Sample	117	103	B2	B8
MB 240-41948/3-A	Method Blank	91	94	B1	B5
MB 240-42735/2-A	Method Blank	97	99	76	81
Surrogate Legend					
DCB = DCB Decachlor	obiphenyl				

TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water Prep Type: TCLP

				Percent Sui	rogate Reco
		TCX1	TCX2	DCB1	DCB2
Lab Sample ID	Client Sample ID	(46-122)	(46-122)	(34-141)	(34-141)
240-10547-2	FWG-IDW-TANK 1-GW	75	78	47	49
240-10547-2 - RE	FWG-IDW-TANK 1-GW	63	65	52	50
240-10547-2 MS	FWG-IDW-TANK 1-GW	171	82	65	57

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		TCX2	DCB2	•
_ab Sample ID	Client Sample ID	(23-136)	(10-130)	•
240-10547-2	FWG-IDW-TANK 1-GW	38	11	
_CS 240-41471/3-A	Lab Control Sample	73	82	
VIB 240-41471/2-A	Method Blank	74	B4	

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

#### Method: 8151A - Herbicides (GC)

Matrix: Water Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCPA1 (37-116)	DCPA2 (37-116)	
LCS 240-41945/6-A	Lab Control Sample	72	71	
MB 240-41945/5-A	Method Blank	67	68	
Surrogate Legend				

DCPA = 2,4-Dichlorophenylacetic acid

### **Surrogate Summary**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: TCLP

				Percent Surrogate Recovery (Acceptance Limits)
		DCPA1	DCPA2	
Lab Sample ID	Client Sample ID	(37-116)	(37-116)	
240-10547-2	FWG-IDW-TANK 1-GW	63	62	

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Matrix: Water Prep Type: Total

=			Percent Surrogate Recovery (Acceptance Limits)
		ÐNT	
Lab Sample ID	Client Sample ID	(79-111)	
240-10547-2	FWG-IDW-TANK 1-GW	101	
G2E010000063B	Method Blank	100	$f_{m}$
G2E010000063C	Lab Control Sample	101	
Surrogate Legend			
DNT = 3,4-Dinitrotolue	ene		

TestAmerica Job ID: 240-10547-1

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 240-42229/5 Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total/NA

Analysis Batch: 42229

	Spike	LCS I	LCS				%Rec.	
Analyte	Added	Result (	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	1.00	1.19		mg/L		119	71 - 133	
1,2-Dichloroethane	1.00	1.03		mg/L		103	81 - 114	
2-Butanone (MEK)	2,00	2.37		mg/L		118	49 - 120	
Benzene	1.00	1.00		mg/L		100	84 - 120	
Carbon tetrachloride	1.00	1.19		mg/L		119	54 - 122	
Chlorobenzene	1.00	0.985		mg/L		99	86 111	
Tetrachloroethene	1.00	0,940		mg/L		94	79 ₋ 134	
Trichloroethene	1.00	1.07		mg/L		107	78 - 130	
Vinyl chloride	1.00	1.05		mg/L		105	56 - 111	
Chloroform	1.00	1.01		mg/L		101	87 _ 123	

LCS LCS

Surrogate	%Recovery Qu	ualifler	Limits
1,2-Dichloroethane-d4 (Surr)	115		80 - 121
Taluene-d8 (Surr)	112		90 _ 115
4-Bromofluorobenzene (Surr)	101		70 - 124
Dibromofluoromethane (Surr)	121		84 - 128

Lab Sample ID: MB 240-42231/4

Matrix: Water

Analysis Batch: 42231

Client Sample ID: Method Blank

Prep Type: Total/NA

RL         MDL           1.0         0.22           1.0         0.18	. Unit D —	Prepared Analyzed	Dìl Fac
	. ug/L		
1.0 0.18		04/30/12 18:56	1
	ug/L	04/30/12 18:56	1
1.0 0.27	μg/L	04/30/12 18:56	1
1.0 0.15	ug/L	04/30/12 18:56	1
1.0 0.19	ug/L	04/30/12 18:56	1
1.0 0.22	! ug/L	04/30/12 18:56	1
2.0 0.34	ug/L	04/30/12 18:56	1
1.0 0.18	ug/L	04/30/12 18:56	1
10 0.57	′ ug/L	04/30/12 18:56	1
10 0.41	ug/L	04/30/12 18:56	1
10 0.32	ug/L	04/30/12 18:56	1
10 1.1	ug/L	04/30/12 18:56	1
1.0 0.13	ug/L	04/30/12 18:56	1
1.0 0.64	ug/L	04/30/12 18:56	1
1.0 0.41	ug/L	04/30/12 18:56	1
1.0 0.13	ug/L	04/30/12 18:56	1
1.0 0.13	ug/L	04/30/12 18:56	1
1.0 0.15	ug/L	04/30/12 18:56	1
1.0 0,30	) ug/L	04/30/12 18:56	1
1.0 0.17	ug/L	04/30/12 18:56	1
1.0 0.14	ug/L	04/30/12 18:56	1
1.0 0.18	ug/L	04/30/12 18:56	1
1.0 0.15	ug/L	04/30/12 18:56	1
1.0 0.17	ug/L	04/30/12 18:56	1
1.0 0.33	ug/L	04/30/12 18:56	1
2.0 0.24	ug/L	04/30/12 18:56	1
1.0 0.14	ug/L	04/30/12 18:56	1
	1.0 0.13 1.0 0.15 1.0 0.30 1.0 0.17 1.0 0.14 1.0 0.15 1.0 0.15 1.0 0.15 1.0 0.15 1.0 0.15 1.0 0.15 1.0 0.20	1.0 0.13 ug/L 1.0 0.15 ug/L 1.0 0.30 ug/L 1.0 0.17 ug/L 1.0 0.14 ug/L 1.0 0.18 ug/L 1.0 0.15 ug/L 1.0 0.17 ug/L 1.0 0.33 ug/L 1.0 0.33 ug/L 2.0 0.24 ug/L	1.0     0.13     ug/L     04/30/12 18:56       1.0     0.15     ug/L     04/30/12 18:56       1.0     0.30     ug/L     04/30/12 18:56       1.0     0.17     ug/L     04/30/12 18:56       1.0     0.14     ug/L     04/30/12 18:56       1.0     0.18     ug/L     04/30/12 18:56       1.0     0.15     ug/L     04/30/12 18:56       1.0     0.17     ug/L     04/30/12 18:56       1.0     0.33     ug/L     04/30/12 18:56       2.0     0.24     ug/L     04/30/12 18:56

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: Lab Control Sample

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-42231/4 Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA

Analysis Batch: 42231

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Faç
Styrene	1.0	U	1.0	0.11	ug/L			04/30/12 18:56	1
Tetrachloroethene	1.0	ΰ	1.0	0.29	ug/L	•		04/30/12 18:56	1
Toluene	1.0	U	1.0	0.13	ug/L			04/30/12 18:56	1
trans-1,2-Dichloroethene	1.0	Ü	1.0	0.19	ug/L			04/30/12 18:56	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			04/30/12 18:56	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			04/30/12 18:56	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			04/30/12 18:56	1
Xylenes, Total	2.0	U	2.0	0,28	ug/L			04/30/12 18:56	1
Chloroform	1.0	U	1.0	0.16	ug/L			04/30/12 18:56	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			04/30/12 18:56	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			04/30/12 18:56	1
Chloroethane	1.0	U	1.0	0.29	ug/L			04/30/12 18:56	1

MB MB Dil Fac Surrogate Qualifier Limits Prepared Analyzed 1,2-Dichloroethane-d4 (Surr) 90 63 - 129 04/30/12 18:56 Toluene-d8 (Surr) 74 - 115 04/30/12 18:56 91 66 - 117 04/30/12 18:56 4-Bromofluorobenzene (Surr) 82 Dibromofluoromethane (Surr) 75 - 121 04/30/12 18:56 90 Dibromofluoromethane (Surr) 90 75 - 121 04/30/12 18:56

Lab Sample ID: LCS 240-42231/5

Mat

Ana

atrix: Water						Prep Type: Total/NA
nalysis Batch: 42231						
	Spike	LCS LCS				%Rec.
alyte	Added	Result Qualifier	Unit	D	%Rec	Limits

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1-Trichloroethane	20.0	21.7		ug/L		109	74 - 118	
1,1,2,2-Tetrachloroethane	20,0	23.0		ug/L		· 115	68 - 118	
1,1,2-Trichloroethane	20.0	21.1		ug/L		106	80 112	
1,1-Dichloroethane	20.0	20.6		ug/L		103	82 - 115	
1,1-Dichloroethene	20.0	21.2		ug/L		106	78 - 131	
1,2-Dichloroethane	20,0	20.1		ug/L		101	71 - 127	
1,2-Dichloroethene, Total	40.0	40,5	•	ug/L		101	82 - 114	
1,2-Dichloropropane	20,0	21.2		ug/L		106	81 - 115	
2-Butanone (MEK)	40.0	46.4		ug/L		116	60 - 126	
2-Hexanone	40.0	57.0	*	ug/L		143	55 ₋ 133	•
4-Methyl-2-pentanone (MIBK)	40.0	51.5	*	ug/L		129	63 - 128	
Acetone	40.0	49.5		ug/L		124	43 ₋ 136	
Benzene	20,0	20,9		ug/L		105	83 _ 112	
Bromoform	20.0	15.1		ug/L		76	40 - 131	
Bromomethane	20.0	18.3		ug/L		92	11 - 185	
Carbon disulfide	20.0	20.8		ug/L		104	62 - 142	
Carbon tetrachloride	20.0	22.6		ug/L		113	66 - 128	
Chlorobenzene	20.0	18.7		ug/L		94	85 _ 110	
Chloromethane	20.0	19.2		ug/L		96	44 - 126	
cis-1,2-Dichloroethene	20.0	19.8		ug/L		99	80 - 113	
cis-1,3-Dichloropropene	20.0	19.0		ug/L		95	61 - 115	
Dibromochioromethane	20.0	17.6		ug/L		88	64 - 119	
Bromodichloromethane	20.0	20.1		ug/L		101	72 - 121	
Ethylbenzene	20.0	18.6		ug/L		93	83 . 112	

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-42231/5 Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total/NA

Analysis Batch: 42231

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Methylene Chioride	20,0	19.3		ug/L		97	66 _ 131	
m-Xylene & p-Xylene	40.0	38.3		ug/L		96	83 113	
o-Xylene	20,0	18.7		ug/L		94	83 - 113	
Styrene	20.0	20.1		ug/L		101	79 - 114	
Tetrachloroethene	20.0	18.9		ug/L		95	79 _ 114	
Toluene	20,0	19.7		ug/L		99	84 _ 111	
trans-1,2-Dichloroethene	20.0	20.7		ug/L		104	83 - 117	
trans-1,3-Dichloropropene	20,0	19.2		ug/L		96	58 ₋ 117	
Trichloroethene	20.0	19.9		ug/L		100	76 - 117	
Vinyl chloride	20.0	18.8		ug/L		94	53 - 127	
Xylenes, Total	60.0	57.0	1	ug/L		95	83 _ 112	
Chloroform	20.0	18.7	,	ug/L		94	79 - 117	
Bromochloromethane	20.0	20.9		ug/L		105	77 ₋ 120	
1,2-Dibromoethane	20.0	20.6		ug/L		103	79 ₋ 113	
Chloroethane	20.0	20.7		ug/L		104	25 _ 153	

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
1,2-Dichloroethane-d4 (Surr)	89		63 129
Toluene-d8 (Surr)	94		74 _ 115
4-Bromofluorobenzene (Surr)	90		66 - 117
Dibromofluoromethane (Surr)	90		75 - 121

Lab Sample ID: LB 240-41793/1-A MB Client Sample ID: Method Blank Matrix: Water Prep Type: TCLP

Analysis Batch: 42229

	MB	MB							
Analyte	Result	Qualifier	RĻ	MDL	Unit	· D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0,025	U	0,025	0.0095	mg/L		•	04/30/12 18:28	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			04/30/12 18:28	1
2-Butanone (MEK)	0,25	U	0.25	0.029	mg/L			04/30/12 18:28	1
Benzene	0.025	ט '	0.025	0.0065	mg/L			04/30/12 18:28	1
Carbon tetrachloride	0,025	υ	0.025	0,0065	mg/L			04/30/12 18:28	1
Chlorobenzene	0.025	υ	0.025	0.0075	mg/L			04/30/12 18:28	1
Tetrachloroethene	0.025	ט	0.025	0.015	mg/L			04/30/12 18:28	. 1
Trichloroethene	0.025	υ	0.025	0.0085	mg/L			04/30/12 18:28	1
Vinyl chloride	0.025	υ	0.025	0.011	mg/L			04/30/12 18:28	1
Chloroform	0,025	U	0.025	0.0080	mg/L			04/30/12 18:28	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 121	<b>-</b>	04/30/12 18:28	1
Toluene-d8 (Surr)	110		90 - 115		04/30/12 18:28	1
4-Bromofluorobenzene (Surr)	100		70 - 124		04/30/12 18:28	1
Dibromofluoromethane (Surr)	115		84 - 128	· · · · · · · · · · · · · · · · · · ·	04/30/12 18:28	1

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-41464/15-A Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA

Analysis Batch: 41841								Prep Batch	n: 41464
		MB							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Acenaphthylene	0.20		0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Anthracene	0,20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzo[a]anthracene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzoic acid	25	υ	25	10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzo[b]fluoranthene	0,20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzo[k]fluoranthene	0.20	υ	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		04/25/12 08:09	04/27/12 10:43	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		04/25/12 08:09	04/27/12 10:43	1
Bis(2-chloroethyl)ether	1.0	υ	1.0	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Bromophenyl phenyl ether	2.0	υ	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Butyl benzyl phthalate	1.0	U	1.0	0,80	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4-Dimethylphenol	2.0	Ü	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Dimethyl phthalate	1.0	υ	1.0	0.29	ug/L		04/25/12 08:09	04/27/12 10:43	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4-Dinitrotoluene	5.0	υ	5.0	0.27	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Fluoranthene	0.20	Ü	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Fluorene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Hexachlorobenzene	0.20	U	0,20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Hexachlorobutadiene	1.0	Ü	1.0	0.27	ug/L		04/25/12 08:09	04/27/12 10:43	. 1
Hexachlorocyclopentadiene	10	U	10	0.80	-		04/25/12 08:09	04/27/12 10:43	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
N-Nitrosodiphenylamine	1.0	Ü	1.0	0.31	ug/L		04/25/12 08:09	04/27/12 10:43	1
N-Nitrosodi-n-propylamine	1.0	Ü	1.0	0,80	ug/L		04/25/12 08:09	04/27/12 10:43	1
1,4-Dichlorobenzene	1.0		1.0	0.34	ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Chlorophenol	1.0	U	1.0	0.19	=		04/25/12 08:09	04/27/12 10:43	1
· ·	2.0		2.0		ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Chlorophenyl phenyl ether	0.20		0.20				04/25/12 08:09	04/27/12 10:43	1
Chrysene  Diboarda bloothrough	0.20				ug/L			04/27/12 10:43	
Dibenz(a,h)anthracene		U	0.20		ug/L		04/25/12 08:09		1
Dibenzofuran	1.0		1.0	0.10	- 7		04/25/12 08:09	04/27/12 10:43	1
Benzo[g,h,i]perylene	0.20	U	0.20	0.10	-		04/25/12 08:09	04/27/12 10:43	1
Benzo[a]pyrene	0,20		0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Di-n-butyl phthalate	1.0		1.0		ug/L		04/25/12 08:09	04/27/12 10:43	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L		04/25/12 08:09	04/27/12 10:43	1
1,3-Dichlorobenzene	1.0		1.0		ug/L 		04/25/12 08:09	04/27/12 10:43	1
3,3'-Dichlorobenzidine	5.0		5.0		ug/L		04/25/12 08:09	04/27/12 10:43	. 1
2,4-Dichlorophenol	2,0		2.0		ug/L		04/25/12 08:09	04/27/12 10:43	1
Diethyl phthalate	1.0		1.0		ug/L		04/25/12 08:09	04/27/12 10:43	1
Indeno[1,2,3-cd]pyrene	0.20		0.20		ug/L		04/25/12 08:09	04/27/12 10:43	1
Isophorone	1.0		1.0		ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Methylnaphthalene	0.20		0.20		ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Methylphenol	1.0		1.0	0,80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Naphthalene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Nitroaniline	2.0	U	2.0		ug/L		04/25/12 08:09	04/27/12 10:43	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Nitroaniline	2.0	U	2.0	0,80	ug/L		04/25/12 08:09	04/27/12 10:43	1

TestAmerica Job ID: 240-10547-1

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-41464/15-A

Matrix: Water

Client Sample ID: Method Blank

Prep Type: Total/NA

Analysis Batch: 41841 Prep Batch: 41464

Analysis Batom Trott								op Date.	
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	1.0	U	1.0	0.040	ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Nitrophenol	5.0	Ü	5.0	2.4	ug/L		04/25/12 08:09	04/27/12 10:43	1
Pyrene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Pentachlorophenol	5.0	U	5,0	2.4	ug/L		04/25/12 08:09	04/27/12 10:43	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	. 1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4,6-Trichlorophenol	5.0	ΰ	5.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Phenol	1.0	U	1.0	0.60	ug/L		04/25/12 08:09	04/27/12 10:43	1
Carbazole	1.0	U	1.0	0.28	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Chloroaniline	2.0	Ū	2,0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
3 & 4 Methylphenol	2.0	υ	2.0	0.75	ug/L		04/25/12 08:09	04/27/12 10:43	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Di-n-octyl phthalate	1.0	υ	1.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Chloro-3-methylphenol	2.0	U	2,0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		04/25/12 08:09	04/27/12 10:43	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	69		28 110	04/25/12 08:09	04/27/12 10:43	1
2-Fluorophenal (Surr)	80		10 - 110	04/25/12 08:09	04/27/12 10:43	1
2,4,6-Tribromophenol (Surr)	65		22 - 120	04/25/12 08:09	04/27/12 10:43	1
Nitrobenzene-d5 (Surr)	77		27 - 111	 04/25/12 08:09	04/27/12 10:43	1
Phenol-d5 (Surr)	79		10-110	04/25/12 08:09	04/27/12 10:43	1
Terphenyl-d14 (Surr)	85		37 ₋ 119	04/25/12 08:09	04/27/12 10:43	1

Lab Sample ID: LCS 240-41464/16-A

Client Sample ID: Lab Control Sample
Matrix: Water

Prep Type: Total/NA

Analysis Batch: 41841 Prep Batch: 41464

Allarysis Datell. 4 1041							1 Tep Daten. 4 1404
	Spike	LC\$	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Acenaphthene	20.0	14.0		ug/L		70	40 - 110
Acenaphthylene	20.0	14.9		ug/L		75	43 - 110
Anthracene	20,0	14.5		ug/L		72	54 - 114
Benzo[a]anthracene	20.0	13.9		ug/L		70	55 - 115
Benzoic acid	40.0	19.6	J	ug/L		49	10 - 129
Benzo[b]fluoranthene	20,0	14.9		ug/L		75	43 - 122
Benzo[k]fluoranthene	20.0	14.1		ug/L		70	43 - 124
Benzyl alcohoi	20.0	16,3		ug/L		82	10 - 130
Bis(2-chloroethoxy)methane	20,0	16.7		ug/L		84	39 _ 110
Bis(2-chloroethyl)ether	20.0	17.4		ug/L		87	34 - 113
4-Bromaphenyl phenyl ether	20.0	15.6		ug/L		78	51 - 114
Butyl benzyl phthalate	20.0	15.9		ug/L		79	53 _ 126
2,4-Dimethylphenol	20.0	12.9		ug/L		64	12 - 110
Dimethyl phthalate	20.0	15.9		ug/L		79	15 - 143
4,6-Dinitro-2-methylphenol	20.0	13.7		ug/L		69	28 - 112
2,4-Dinitrophenol	40.0	24.8		ug/L	-	62	17 - 112
2,4-Dinitrotoluene	20.0	16,9		цg/L		85	52 - 123
2,6-Dinitrotoluene	20.0	16.4		ug/L		82	52 _ 119

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Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-41464/16-A Matrix: Water Analysis Batch: 41841					Client Sample	Prep Ty	ntroi Sample pe: Total/NA Batch: 41464
· · · · · · · · · · · · · · · · · · ·	Spike	LCS	LCS			%Rec.	
Analyte A	Added	Result	Qualifier	Unit	D %Rec	Limits	
Fluoranthene	20.0	15.1		ug/L	75	54 - 122	
Fluorene	20.0	15.1		ug/L	75	47 - 112	
Hexachlorobenzene	20.0	14.5		ug/L	73	51 - 112	
Hexachlorobutadiene	20.0	13.5		ug/L	67	13 - 110	
Hexachlorocyclopentadiene	20.0	7.62	J	ug/L	38	10 110	
Hexachioroethane	20.0	14.6		ug/L	73	12 - 110	
N-Nitrosodiphenylamine	20.0	14.2		ug/L	71	53 ₋ 113	
N-Nitrosodi-n-propylamine	20.0	18.5		ug/L	93	37 - 121	
1,4-Dichlorobenzene	20.0	14.6		ug/L	73	19 - 110	
2-Chloronaphthalene	20.0	14.8		ug/L	74	39 110	
2-Chlorophenol	20.0	16.6	(	ug/L	83	27 - 110	
4-Chlorophenyl phenyl ether	20.0	15.5		ug/L	77	50 - 115	
Chrysene	20.0	14.7		ug/L	73	55 ₋ 115	
Dibenz(a,h)anthracene	20.0	15.1		ug/L	75	46 - 122	
Dibenzofuran	20,0	14.5		ug/L	72	46 - 111	
Benzo[g,h,i]perylene	20.0	15.1		ug/L	76	45 - 120	
Benzo[a]pyrene	20.0	12.7		ug/L	64	43 - 116	
Di-n-butyi phthalate	20.0	16.4	•	ug/L	82	55 - 122	
1,2-Dichlorobenzene	20.0	15.1		ug/L	76	23 _ 110	
1,3-Dichlorobenzene	20.0	14.5		ug/L	72	19 - 110	
3,3'-Dichlorobenzidine	20,0	8.92		ug/L	45	19 _ 110	
2,4-Dichlorophenol	20.0	15.4		ug/L	77	33 - 110	
Diethyl phthalate	20.0	16,0		ug/L	80	33 _ 134	
Indeno[1,2,3-cd]pyrene	20.0	14.8		ug/L	74	46 - 121	
Isophorone	20.0	16,2		ug/L	81	44 - 128	
2-Methylnaphthalene	20.0	14.4		ug/L	72	35 - 110	
2-Methylphenol	20.0	16.6		ug/L	83	30 . 110	
Naphthalene	20.0	14.8		ug/L	74	31 - 110	-
2-Nitroaniline	20,0	16.6		ug/L	83	43 - 130	
3-Nitroaniline	20.0	14.9		ug/L	74	45 - 116	
4-Nitroaniline	20.0	15.1		ug/L	76	45 . 120	
Nitrobenzene	20.0	16.4		ug/L	82	37 - 115	
2-Nitrophenol	20.0	15.5		ug/L	78	29 - 110	
4-Nitrophenol	20.0	14.6		ug/L	73	12 - 130	
B	20.0	14.2		ug/L	71	55 - 120	
Pyrene Pentachlorophenol	40,0	25,2			63	26 - 110	
	20.0	14.5		ug/L ug/L	72	52 ₋ 114	
Phenanthrene	20.0				68		
1,2,4-Trichlorobenzene	20.0	13.6		ug/L		25 - 110	
2,4,5-Trichiorophenoi		15.3		ug/L	. 76	39 - 110	
2,4,6-Trichlorophenol	20.0	14.7		ug/L	73	35 ₋ 110	
Phenol	20.0	17.3		ug/L	87	14 112	
Carbazole  4 Chloroppiline	20.0	15.1		ug/L	76 72	53 - 120 10 - 110	
4-Chloroaniline	20.0	14.3		ug/L	72	10 110	
3 & 4 Methylphenol	40,0	35,0		ug/L	88	32 - 110	
Bis(2-ethylhexyl) phthalate	20.0	13.1		ug/L	66	36 - 163	
Di-n-octyl phthalate	20.0	13.5		ug/L	67	44 - 128	
4-Chloro-3-methylphenol	20.0	16.2		ug/L	81	39 - 110	
2,2'-oxybis[1-chloropropane]	20.0	18.1		ug/L	90	25 - 128	

Project/Site: RVAAP 66

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-41464/16-A

Matrix: Water

Analysis Batch: 41841

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41464

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	72		28 - 110
2-Fluorophenol (Surr)	83		10-110
2,4,6-Tribromophenol (Surr)	76		22 - 120
Nitrobenzene-d5 (Suπ)	78		27 - 111
Phenol-d5 (Surr)	86		10_110
Terphenyl-d14 (Surr)	79		37 - 119

Lab Sample ID: MB 240-41946/4-A

Matrix: Water

Analysis Batch: 42450

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 41946

	MR	MR			forms.				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	0.020	U	0.020	0,00035	mg/L		04/27/12 13:11	05/02/12 13:18	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		04/27/12 13:11	05/02/12 13:18	1
Hexachlorobenzene	0,020	U	0,020	0,00010	mg/L		04/27/12 13:11	05/02/12 13:18	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		04/27/12 13:11	05/02/12 13:18	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		04/27/12 13:11	05/02/12 13:18	1
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		04/27/12 13:11	05/02/12 13:18	1
2-Methylphenol	0,0040	U	0.0040	0,00080	mg/L		04/27/12 13:11	05/02/12 13:18	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		04/27/12 13:11	05/02/12 13:18	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		04/27/12 13:11	05/02/12 13:18	1
2,4,5-Trichlorophenol	0.020	ΰ	0.020	0.00030	mg/L		04/27/12 13:11	05/02/12 13:18	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		04/27/12 13:11	05/02/12 13:18	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		04/27/12 13:11	05/02/12 13:18	1

	MB	MB		•		
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	74		22 - 110	04/27/12 13:11	05/02/12 13:18	1
2-Fluorophenol (Surr)	71		10 - 110	04/27/12 13:11	05/02/12 13:18	1
2,4,6-Tribromophenol (Surr)	84		17-117 .	04/27/12 13:11	05/02/12 13:18	1
Nitrobenzene-d5 (Surr)	74	ŧ	29 - 111	04/27/12 13:11	05/02/12 13:18	1
Phenol-d5 (Surr)	62		10-110	04/27/12 13:11	05/02/12 13:18	1
Terphenyl-d14 (Surr)	99		40 - 119	04/27/12 13:11	05/02/12 13:18	1

Lab Sample ID: LCS 240-41946/5-A

Matrix: Water

Analysis Batch: 42450

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 41946

	Spike	LCS	LCS			%Rec.
Analyte	Added	Result	Qualifier	Unit E	%Rec	Līmits
Pyridine	0,080,0	0.0480		mg/L	60	10 _ 110
2,4-Dinitrotoluene	0.0800	0.0686		mg/L	86	45 _ 126
Hexachlorobenzene	0,0800	0.0667		mg/L	83	47 - 116
Hexachlorobutadiene	0.0800	0.0546		mg/L	68	10 - 110
Hexachloroethane	0.080.0	0.0502		mg/L	63	10 - 110
1,4-Dichlorobenzene	0.0800	0.0529		mg/L	66	16 _ 110
2-Methylphenol	0.0800	0.0545	•	mg/L	68	24 - 110
Nitrobenzene	0.080.0	0,0568		mg/L	71	35 _ 117
Pentachlorophenol	0.0800	0.0522		mg/L	65	12 _ 110
2,4,5-Trichlorophenol	0.0800	0.0610		mg/L	76	35 - 111
2,4,6-Trichlorophenol	0.0800	0.0563		mg/L	70	32 - 110

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Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-41946/5-A

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 42450 Prep Batch: 41946
Spike LCS LCS %Rec.

 Analyte
 Added
 Result
 Qualifier
 Unit
 D
 %Rec
 Limits

 3 & 4 Methylphenol
 0.160
 0.114
 mg/L
 72
 27 - 110

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	68		22 _ 110
2-Fluorophenol (Surr)	64		10 - 110
2,4,6-Tribromophenol (Surr)	85		17 - 117
Nitrobenzene-d5 (Surr)	67		29 - 111
Phenol-d5 (Surr)	54		10 - 110
Terphenyl-d14 (Surr)	89		40 - 119

### Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-41473/2-A Client Sample ID: Method Blank
Matrix: Water Prep Type: Total/NA

Analysis Batch: 41756 Prep Batch: 41473

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.050	Ū	0.050	0,0096	ug/L		04/25/12 08:23	04/27/12 09:28	1
4,4'-DDE	0,050	U	0.050	0.0097	ug/L		04/25/12 08:23	04/27/12 09:28	1
4,4'-DDT	0.050	U	0.050	0.016	ug/L		04/25/12 08:23	04/27/12 09:28	1
Aldrin	0,050	U	0.050	0.0082	ug/L		04/25/12 08:23	04/27/12 09:28	1
alpha-BHC	0.050	U	0.050	0.0070	ug/L		04/25/12 08:23	04/27/12 09:28	1
alpha-Chlordane	0,050	U	0.050	0.014	ug/L		04/25/12 08:23	04/27/12 09:28	1
beta-BHC	0.050	U	0.050	0.0084	ug/L		04/25/12 08:23	04/27/12 09:28	1
delta-BHC	0.050	U	0.050	0.0087	ug/L		04/25/12 08:23	04/27/12 09:28	1
Dieidrin	0.050	υ	0.050	0.0075	ug/L		04/25/12 08:23	04/27/12 09:28	1
Endosulfan I	0.050	ΰ	0.050	0,013	ug/L		04/25/12 08:23	04/27/12 09:28	1
Endosulfan II	0.050	υ	0.050	0.012	ug/L		04/25/12 08:23	04/27/12 09:28	1
Endosulfan sulfate	0,050	U	0,050	0.011	ug/L		04/25/12 08:23	04/27/12 09;28	1
Endrin	0.050	υ	0.050	0.011	ug/L		04/25/12 08:23	04/27/12 09:28	1
Endrin aldehyde	0.050	U	0.050	0.011	ug/L		04/25/12 08;23	04/27/12 09:28	1
Endrin ketone	0.050	U	0.050	0.0078	ug/L		04/25/12 08:23	04/27/12 09:28	1
gamma-BHC (Lindane)	0.050	ΰ	0.050	0,0064	ug/L		04/25/12 08:23	04/27/12 09:28	1
gamma-Chlordane	0.050	υ	0.050	0.012	ug/L		04/25/12 08:23	04/27/12 09:28	1
Heptachlor	0.050	υ	0.050	0.0080	ug/L		04/25/12 08:23	04/27/12 09:28	1
Heptachlor epoxide	0.050	Ü	0.050	0.0071	ug/L		04/25/12 08:23	04/27/12 09:28	1
Methoxychior	0.10	U	0.10	0.032	ug/L		04/25/12 08:23	04/27/12 09:28	1
Toxaphene	2.0	υ	2.0	0,32	ug/L		04/25/12 08:23	04/27/12 09:28	1
1									

2.0	•	2.0	0,02	ug, L		04/25/12 00.20
MB	MB					

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	85		10 - 145	04/25/12 08:23	04/27/12 09:28	1
DCB Decachlorobiphenyl	84		10 - 145	04/25/12 08:23	04/27/12 09:28	1
Tetrachioro-m-xylene	88		30 - 141	04/25/12 08:23	04/27/12 09:28	1
Tetrachloro-m-xylene	81		30 - 141	04/25/12 08:23	04/27/12 09:28	1

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

### Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 240-41473/3-A Matrix: Water				Client	Sample	ID: Lab Control Sample
Analysis Batch: 41756						Prep Type: Total/NA Prep Batch: 41473
Analysis Batch: 41150	Spike	LCS	LCS			%Rec.
Analyte	Added		Qualifier Unit	D	%Rec	Limits
4,4'-DDD	0.500	0.526	ug/L		105	53 _ 168
4,4'-DDE	0.500	0.461	ug/L		92	66 - 136
4,4'-DDT	0,500	0.590	ug/L		118	42 - 140
Aldrin	0.500	0.447	ug/L		89	61 - 127
alpha-BHC	0.500	0.486	ug/L		97	65 - 132
alpha-Chlordane	0.500	0.452	ug/L		90	60 - 134
beta-BHC	0,500	0.494	ug/L		99	59 - 134
delta-BHC	0.500	0.480	ug/L		96	45 _ 143
Dieldrin	0,500	0.481	ug/L		96	61 - 142
Endosulfan I	0.500	0.347	ug/L		69	35_110
Endosulfan II	0.500	0.379	∤ ug/L		76	39 _ 110
Endosulfan sulfate	0.500	0.482	ug/L		96	54 - 143
Endrin	0,500	0.487	ug/L		97	57 _ 148
Endrin aldehyde	0.500	0.476	ug/L		95	44 - 116
Endrin ketone	0,500	0,472	ug/L		94	52 _ 135
gamma-BHC (Lindane)	0.500	0.506	ug/L		101	58 - 140
gamma-Chlordane	0.500	0,477	ug/L		95	59 - 139
Heptachlor	0.500	0.519	ug/L		104	60 - 132
Heptachior epoxide	0.500	0.469	ug/L		94	60 - 138
Methoxychlor	0.500	0.616	ug/L		123	45 - 139

LUS LUS	
%Recovery Qua	lifier Limits
34	10 - 145
30	10 _ 145
82	30 - 141
80	30 _ 141
	%Recovery Qua. 34 30 82

						*		•	
Lab Sample ID: MB 240-41948/3-A Matrix: Water Analysis Batch: 42028	MD						Client Sa	mple ID: Metho Prep Type: T Prep Batch	otal/NA
Analyte		MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0,012		0.012	0,000079		<u>_</u>	04/27/12 13:16	04/30/12 13:20	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		04/27/12 13:16	04/30/12 13:20	1
gamma-BHC (Lindane)	0.0012	υ .	0.0012	0.000015	mg/L		04/27/12 13:16	04/30/12 13:20	1
Heptachlor	0.0012	υ	0.0012	0.000019	mg/L		04/27/12 13:16	04/30/12 13:20	. 1
Heptachlor epoxide	0.0012	υ	0.0012	0.000017	mg/L		04/27/12 13:16	04/30/12 13:20	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		04/27/12 13:16	04/30/12 13:20	1
Toxaphene	0.048	υ	0.048	0.00077	mg/L		04/27/12 13:16	04/30/12 13;20	1
	мв	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	91		34 - 141				04/27/12 13:16	04/30/12 13:20	1
DCB Decachlorobiphenyl	94		34 - 141				04/27/12 13:16	04/30/12 13:20	1
Tetrachloro-m-xylene	81		46 - 122				04/27/12 13:16	04/30/12 13:20	1
Tetrachloro-m-xylene	85		46 - 122				04/27/12 13:16	04/30/12 13:20	1

### Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LC\$ 240-41948/4-A Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total/NA

Analysis Batch: 42028						Prep Batch: 4			
_	Spike	LCS	LCS				%Rec.		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Endrin	0.00400	0.00184	J*	mg/L		46	59 - 136		
gamma-BHC (Lindane)	0.00400	0.00184	J *	mg/L		46	59 _ 137		
Heptachior	0,00400	0.00182	J*	mg/L		45	63 - 123		
Heptachlor epoxide	0.00400	0.00193	J*	mg/L		48	59 _ 141		
Methoxychlor	0.00400	0.00363	J	mg/L		91	42 - 141		

LCS LCS Surrogate %Recovery Qualifier Limits DCB Decachiorobiphenyl 106 34 _ 141 DCB Decachlorobiphenyl 97 34 . 141 Tetrachloro-m-xylene 127 X 46 - 122 Tetrachloro-m-xylene 86 46 - 122

Lab Sample ID: MB 240-42735/2-A

Matrix: Water

Analysis Batch: 42869

Analysis Batch: 42869

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 42735

	IND	MD							
Analyte	Result	Qualifier	RL	MDL,	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		05/04/12 06:43	05/04/12 20:33	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		05/04/12 06:43	05/04/12 20:33	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		05/04/12 06:43	05/04/12 20:33	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		05/04/12 06:43	05/04/12 20:33	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		05/04/12 06:43	05/04/12 20:33	1
Methoxychlor	0,0024	U	0.0024	0.000077	mg/L		05/04/12 06:43	05/04/12 20:33	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		05/04/12 06:43	05/04/12 20:33	1

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	97		34 - 141	05/04/12 06:43	05/04/12 20:33	
DCB Decachlorobiphenyl	99		34 - 141	05/04/12 06:43	05/04/12 20:33	1
Tetrachloro-m-xylene	76		46 - 122	05/04/12 06:43	05/04/12 20:33	1
Tetrachloro-m-xylene	81		46 - 122	 05/04/12 06:43	05/04/12 20:33	1

Lab Sample ID: LCS 240-42735/3-A Client Sample ID: Lab Control Sample **Matrix: Water** 

Prep Type: Total/NA

Prep Batch: 42735

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Endrin	0.00200	0.00180	J	mg/L		90	59 - 136	
gamma-BHC (Lindane)	0.00200	0.00179	J	mg/L		89	59 - 137	
Heptachlor	0.00200	0.00173	J	mg/L		87	63 - 123	
Heptachlor epoxide	0.00200	0.00190		mg/L		95	59 - 141	
Methoxychlor	0.00400	0.00364	J	mg/L		91	42 - 141	

•	CC	•	CC.	

Surrogate	%Recovery	Qualifier	Limits		
DCB Decachlorobiphenyl	117		34 - 141		
DCB Decachlorobiphenyl	103		34 - 141		
Tetrachloro-m-xylene	82		46 - 122		
Tetrachloro-m-xylene	88		46 - 122		

TestAmerica Job ID: 240-10547-1

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

### Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 240-10547-2 MS Client Sample ID: FWG-IDW-TANK 1-GW Matrix: Water Prep Type: TCLP

Analysis Batch: 42028 Prep Batch: 41948

• • • • • • • • • • • • • • • • • • • •	Sample	Sample	Spike	MS	MS				%Rec.	•
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Endrin	0.0012	U *	0.00400	0.00172	J	mg/L		NaN	50 - 150	
gamma-BHC (Lindane)	0.0012	U *	0.00400	0.00174	J	mg/L		NaN	50 - 150	
Heptachlor	0.0012	U *	0.00400	0.00177	J	mg/L		NaN	50 - 150	
Heptachlor epoxide	0.0012	U *	0.00400	0.00181	J	mg/L		NaN	50 - 150	
Methoxychlor	0.0024	U	0.00400	0.00354	J	mg/L		NaN	50 - 150	

MS MS Qualifier Limits Surrogate %Recovery DCB Decachlorobiphenyl 65 34 .. 141 DCB Decachlorobiphenyl 57 34 - 141 Tetrachloro-m-xylene 171 46 - 122 Tetrachloro-m-xylene 82 46 - 122

#### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-41471/2-A Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA

Prep Batch: 41471 Analysis Batch: 41798 MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0,50	υ	0.50	0.17	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1221	0.50	U	0.50	0.13	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1232	0.50	U	0.50	0.16	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1242	0.50	Ü	0.50	0.22	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1248	0,50	U	0.50	0.10	ug/L		04/25/12 08:21	04/27/12 00:56	1
Arodor-1254	0.50	U	0.50	0.16	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1260	0,50	U	0,50	0.17	ug/L		04/25/12 08:21	04/27/12 00:56	1
/(IOOIDI-1200	0,00	J	0,00	0.11	ug/L		07/E0/ 12 00.21	0-7/2// 12 00.00	1

MB MB Dil Fac Surrogate Qualifier Limits Prepared Analyzed %Recovery 04/25/12 08:21 04/27/12 00:56 Tetrachloro-m-xylene 74 23 - 136 DCB Decachlorobiphenyl 84 10 - 130 04/25/12 08:21 04/27/12 00:56

Lab Sample ID: LCS 240-41471/3-A Client Sample ID: Lab Control Sample

Matrix: Water Prep Type: Total/NA Analysis Batch: 41798 Prep Batch: 41471

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits Aroclor-1016 5.00 4.04 81 66 - 120 ug/L

Aroclor-1260 5.00 4.19 ug/L 84 55 - 120 LCS LCS Surrogate Qualifier Limits %Recovery

Tetrachloro-m-xylene 73 23 - 136 DCB Decachlorobiphenyl 82 10 _ 130

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-41945/5-A

Matrix: Water

Analysis Batch: 42031

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 41945

Result Qualifier RL MDL Unit D Analyzed Dil Fac Prepared 0,0020 0.0020 11 0.00021 mg/L 04/27/12 13:08 04/28/12 16:26 0.00050 U 0.00050 0.00010 mg/L 04/27/12 13:08 04/28/12 16:26

MB MB

мв мв

Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 37 - 116 2,4-Dichlorophenylacetic acid 67 04/27/12 13:08 04/28/12 16:26 37 - 116 04/27/12 13:08 04/28/12 16:26 2,4-Dichlorophenylacetic acid 68

Lab Sample ID: LCS 240-41945/6-A

Matrix: Water

Analyte

Silvex (2,4,5-TP)

2,4-D

Analysis Batch: 42031

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41945

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits 2,4-D 0.0200 0.0144 mg/L 72 35 - 136 0.00500 0.00370 mg/L 74 46 - 112 Silvex (2,4,5-TP)

LCS LCS

MB MB

 Surrogate
 %Recovery
 Qualifier
 Limits

 2,4-Dichlorophenylacetic acid
 72
 37 - 116

 2,4-Dichlorophenylacetic acid
 71
 37 . 116

Method: 8330 (Modified) - Organic Compounds by UV/HPLC

Lab Sample ID: G2E070000155B

Matrix: Water

Analysis Batch: 2128155

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 2128155_P

 Analyte
 Result
 Qualifier
 RL
 MDL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Nitroguanidine
 20
 U
 20
 2.4
 ug/L
 05/07/12 14:00
 05/08/12 15:41
 1

Lab Sample ID: G2E070000155C Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Dissolved

Analysis Batch: 2128155 Prep Batch: 2128155_P

Spike LCS LCS %Rec. Added Qualifier Limits Result Unit %Rec Analyte 250 106 73 - 117 Nitroguanidine 265 ug/L

Lab Sample ID: G2E030407009D Client Sample ID: Matrix Spike Duplicate
Matrix: Water Prep Type: Dissolved

Analysis Batch: 2128155 Prep Batch: 2128155_P

SD1 SD1 %Rec. RPD Sample Sample Spike Result Qualifier Added Qualifier Unit %Rec Limits RPD Limit Analyte Result D 20 U 15 Nitroguanidine 250 266 107 73 - 117 1.8 ug/L

Lab Sample ID: G2E030407009S Client Sample ID: Matrix Spike
Matrix: Water Prep Type: Dissolved

Analysis Batch: 2128155 Prep Batch: 2128155_P

Sample Sample Spike MS1 MS1 S1 SRec.

Alyte Result Qualifier Added Result Qualifier Unit D %Rec Limits

 Analyte
 Result
 Qualifier
 Added
 Result
 Qualifier
 Unit
 D
 %Rec
 Limits

 Nitroguanidine
 20
 U
 250
 262
 ug/L
 105
 73 - 117

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

# Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Lab Sample ID: G2E010000063B Client Sample ID: Method Blank Matrix: Water Prep Type: Total

Analysis Batch: 2122063 Prep Batch: 2122063 P

Analysis Daten. 2122003	MB	мв					!	riep Dateil. 212	42003_P
Anaiyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroglycerin	0.65	U -	0.65	0.33	ug/L		05/01/12 09:00	05/10/12 14:27	1
PETN	0.65	U	0.65	0.30	ug/L		05/01/12 09:00	05/10/12 14:27	1
2-Amino-4,6-dinitrotoluene	0.20	υ	0,20	0.017	ug/L		05/01/12 09:00	05/10/12 14:27	1
4-Amino-2,6-dinitrotoluene	0.10	Ü	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
1,3-Dinitrobenzene	0.10	υ	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
2,4-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
2,6-Dinitrotoluene	0.10	υ	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
нмх	0.10	U	0.10	0.036	ug/L		05/01/12 09:00	05/10/12 14:27	1
Nitrobenzene	0.10	υ	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
2-Nitrotoluene	0.50	Ü	0.50	0.088	ug/L		05/01/12 09:00	05/10/12 14:27	1
3-Nitrotoluene	0.50	υ	0.50	0.057	ug/L		05/01/12 09:00	05/10/12 14:27	1
4-Nitrotoluene	0.65	υ	0.65	0.088	ug/L		05/01/12 09:00	05/10/12 14:27	1
RDX	0.10	ับ	0.10	0.036	ug/L		05/01/12 09:00	05/10/12 14:27	1
Tetryl	0.10	υ	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
1,3,5-Trinitrobenzene	0.10	υ	0.10	0.030	ug/L		05/01/12 09:00	05/10/12 14:27	1
2,4,6-Trinitrotoluene	0.10	υ	0,10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1

MB MB Limits Surrogate %Recovery Qualifier Prepared Analyzed Dil Fac 3,4-Dinitrotoluene 100 79 - 111 05/01/12 09:00 05/10/12 14:27

Lab Sample ID: G2E010000063C

Matrix: Water

Analysis Batch: 2122063

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 2122063_P

•	Spike	LC\$	LC\$				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Nitroglycerin	5.00	5.54		ug/L		111	85 _ 115	
PETN	5.00	4.80		ug/L		96	84 - 117	
2-Amino-4,6-dinitrotoluene	1.00	1.07		ug/L		107	50 _ 155	
4-Amino-2,6-dinitrotoluene	1.00	1.06		ug/L		106	55 155	
1,3-Dinitrobenzene	1.00	1.13		ug/L		113	45 _ 160	
2,4-Dinitrotoluene	1.00	1.04		ug/L		104	60 - 135	
2,6-Dinitrotoluene	1.00	1.05		ug/L		105	60 _ 135	
HMX	1.00	1.08		ug/L		108	80 - 115	
Nitrobenzene	1.00	1.10		ug/L		110	50 - 140	
2-Nitrotoluene	1.00	1.02		ug/L		102	45 - 135	
3-Nitrotoluene	1.00	1.00		ug/L		100	50 ₋ 130	
4-Nitrotoluene	1.00	0.994		ug/L		99	50 - 130	
RDX	1.00	1.12		ug/L		112	50 - 160	
Tetryl	1.00	0,900		ug/L		90	20 - 175	
1,3,5-Trinitrobenzene	1.00	1.10		ug/L		110	65 - 140	
2,4,6-Trinitrotoluene	1.00	0.909		ug/L		91	50 - 145	

Surrogate %Recovery Qualifier Limits 3,4-Dinitrotoluene 101 79 - 111

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-41936/2-A

Matrix: Water

Analysis Batch: 42120

Client Sample ID: Method Blank
Prep Type: Total/NA
D D-4-L: 44020

Prep Batch: 41936

	MR	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	Ū .	0.50	0,0032	mg/L		04/27/12 12:55	04/28/12 15:13	1
Cadmium	0,10	U	0.10	0.00066	mg/L		04/27/12 12:55	04/28/12 15:13	1
Chromium	0.50	U	0.50	0.0022	mg/L		04/27/12 12:55	04/28/12 15:13	1
Lead	0.50	U	0.50	0.0019	mg/L		04/27/12 12:55	04/28/12 15:13	1
Selenium	0.25	U	0.25	0.0041	mg/L		04/27/12 12:55	04/28/12 15:13	1
Silver	0.50	U	0.50	0,0022	mg/L		04/27/12 12:55	04/28/12 15:13	1
Barium	10	U	10	0.00067	mg/L		04/27/12 12:55	04/28/12 15:13	1

Lab Sample ID: LCS 240-41936/3-A Matrix: Water

Analysis Batch: 42120

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 41936

· ····································									
	Spike	LCS	LCS				%Rec.		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Arsenic	2.00	2.15	400	mg/L		107	50 - 150		
Cadmium	0.0500	0,0508	J	mg/L		102	50 - 150		
Chromium	0,200	0.207	J	mg/L		104	50 - 150		
Lead	0.500	0,496	J	mg/L		99	50 _ 150		
Selenium	2.00	2.20		mg/L		110	50 - 150		
Silver	0.0500	0.0513	J	mg/L		103	50 - 150		

Lab Sample ID: LCS 240-41936/3-A

Matrix: Water

Analysis Batch: 42425

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 41936

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Barium	2.00	2.14	J ·	mg/L		107	50 - 150	 

Lab Sample ID: MB 240-41806/1-A

Matrix: Water

Analysis Batch: 42006

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 41806

	MB	MB .							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10	3.2	ug/L		04/26/12 17:08	04/27/12 10:23	1
Cobalt	7.0	U	7.0	1.7	ug/L		04/26/12 17:08	04/27/12 10:23	1
Chromium	5.0	U	5.0	2.2	ug/L		04/26/12 17:08	04/27/12 10:23	1
Lead	3.0	Ú	3.0	1.9	ug/L		04/26/12 17:08	04/27/12 10:23	1
Selenium	5.0	U	5.0	4.1	ug/L		04/26/12 17:08	04/27/12 10:23	1
Sitver	5.0	Ū	5,0	2.2	ug/L		04/26/12 17:08	04/27/12 10:23	1
Vanadium	7.0	U	7.0	0.64	ug/L		04/26/12 17:08	04/27/12 10:23	1
Barium	1.41	J	200	0.67	ug/L		04/26/12 17:08	04/27/12 10:23	1
Calcium	392	J	5000	130	ug/L		04/26/12 17:08	04/27/12 10:23	1
Copper	25	U	25	4.5	ug/L		04/26/12 17:08	04/27/12 10:23	1
Magnesium	92.2	J	5000	34	ug/L		04/26/12 17:08	04/27/12 10:23	1
Manganese	0.529	J	15	0.41	ug/L		04/26/12 17:08	04/27/12 10:23	1
Nickel	40	Ü	40	3.2	ug/L		04/26/12 17:08	04/27/12 10:23	1
Potassium	168	J	5000	72	ug/L		04/26/12 17:08	04/27/12 10:23	1

# **QC Sample Results**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-41806/2-A Matrix: Water				Client S	-	ID: Lab Control Sample Type: Total Recoverable
Analysis Batch: 42006					-	Prep Batch: 41806
	Spike	LCS	LCS			%Rec.
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits
Arsenic	2000	2030	ug/L		101	80 - 120
Cobait	500	519	ug/L		104	80 - 120
Chromium	200	207	ug/L		103	80 - 120
Lead	500	508	ug/L		102	80 - 120
Selenium	2000	2100	ug/L		105	80 - 120
Silver	50.0	49.7	ug/L		99	80 - 120
Vanadium	500	512	ug/L		102	80 - 120
Barium	2000	2130	ug/L		106	80 - 120
Calcium	50000	52100	ug/L		104	80 - 120
Copper	250	258	ug/L	•	103	80 - 120
Magnesium	50000	51300	∮ ug/L		103	80 _ 120
Manganese	500	530	ug/L		106	B0 ₋ 120
Nickel	500	511	ug/L		102	80 - 120
Potassium	50000	52100	ug/L		104	B0 _ 120

Lab Sample ID: 240-10547-2 MS

Matrix: Water

Client Sample ID: FWG-IDW-TANK 1-GW
Prep Type: Total Recoverable

Prep Batch: 41806

Analysis Batch: 42006									Prep Ba	atcn: 41806
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limīts	
Arsenic	7.0	J	2000	2160		ug/L		108	75 - 125	
Cobalt	7.0	U	500	544		ug/L		109	75 - 125	
Chromium	9.5		200	224		ug/L		107	75 ₋ 125	
Lead	3.0	U	500	531		ug/L		106	75 _ 125	
Selenium	5.0	U	2000	2200		ug/L		110	75 ₋ 125	
Silver	5.0	U	50.0	52.8		ug/L		106	75 - 125	
Vanadium	25		500	561		ug/L		. 107	75 ₋ 125	
Barium	42	JB	2000	2300		ug/L		` 113	75 . 125	
Calcium	53000	В	50000	106000		ug/L		105	75 ₋ 125	
Copper	25	υ	250	280		ug/L		112	75 - 125	
Magnesium	14000	В	50000	67200		ug/L		107	75 ₋ 125	
Manganese	2.1	JB	500	560		ug/L		112	75 125	
Nickel	5.2	J	500	532		ug/L		105	75 ₋ 125	
Potassium	25000	В	50000	B0300		ug/L		110	75 125	

Lab Sample ID: 240-10547-2 MSD

Matrix: Water

Analysis Batch: 42006

Client Sample ID: FWG-IDW-TANK 1-GW

Prep Type: Total Recoverable

Prep Batch: 41806

Analysis Datch: 42000									rteh	Daten,	41000
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	7.0	J	2000	2120		ug/L		106	75 - 125	2	20
Cobalt	7.0	υ	500	533		ug/L		107	75 - 125	2	20
Chromium	9.5		200	221		ug/L		106	75 - 125	2	20
Lead	3.0	υ	500	520		ug/L		104	75 - 125	2	20
Selenium	5.0	υ	2000	2150		ug/L		108	75 - 125	2	20
Silver	5.0	υ	50.0	51.3		ug/L		103	75 - 125	3	20
Vanadium	25		500	549		ug/L		105	75 _ 125	2	20
Barium	42	JB	2000	2240		ug/L		110	75 - 125	3	20
Calcium	53000	В	50000	104000		ug/L		102	75 - 125	2	20
Соррег	25	υ	250	275		ug/L		110	75 125	2	20

Project/Site: RVAAP 66

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-10547-2 MSD Client Sample ID: FWG-IDW-TANK 1-GW Matrix: Water Prep Type: Total Recoverable Analysis Batch: 42006 Prep Batch: 41806 Sample Sample Spike MSD MSD %Rec. RPD Added Result Qualifier Result Qualifier Analyte Unit D %Rec Limits RPD Limit 14000 B 50000 Magnesium 66200 ug/L 105 75 - 12520 Manganese 2.1 JB 500 548 109 75 - 125 2 20 ug/L Nickel 5.2 500 522 ug/L 103 75 - 125 2 20

Lab Sample ID: LB 240-41791/1-C LB Client Sample iD: Method Blank

78400

ug/L

50000

Matrix: Water

Potassium

Analysis Batch: 42120

25000 B

Prep Type: TCLP Prep Batch: 41936

75 - 125

107

		LB	LB							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Arsenic	0,00364	J	0,50	0.0032	mg/L		04/27/12 12:55	04/28/12 15:09	1
	Cadmium	0,10	U	0.10	0.00066	mg/L		04/27/12 12:55	04/28/12 15:09	1
	Chromium	0.50	U	0.50	0,0022	mg/L		04/27/12:12:55	04/28/12 15:09	1
	Lead	0.00192	J	0.50	0.0019	mg/L		04/27/12 12:55	04/28/12 15:09	1
	Selenium	0.25	U	0,25	0.0041	mg/L		04/27/12 12:55	04/28/12 15:09	1
	Silver	0,50	U	0.50	0.0022	mg/L		04/27/12 12:55	04/28/12 15:09	1
	Barium	0.00174	J	10	0.00067	mg/L		04/27/12 12:55	04/28/12 15:09	1
ľ	_									

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-41806/1-A

Matrix: Water

Analysis Batch: 41991

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 41806

MB MB Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Aluminum 50 U 04/26/12 17:08 04/27/12 20:02 50 19 ug/L 2.0 U 04/26/12 17:08 04/27/12 20:02 Antimony 2.0 0.13 ug/L Beryllium 1.0 U 04/26/12 17:08 04/27/12 20:02 1.0 0.20 ug/L Cadmium 1.0 U 1.0 04/26/12 17:08 04/27/12 20:02 0.13 ug/L Iron 100 U 100 04/26/12 17:08 04/27/12 20:02 26 ug/L Sodium 64.2 J 1000 04/26/12 17:08 04/27/12 20:02 6.9 ug/L Thallium 2.0 U 2.0 0.14 ug/L 04/26/12 17:08 04/27/12 20:02 04/27/12 20:02 Zinc 13.2 J 20 2.3 ug/L 04/26/12 17:08

Lab Sample ID: LCS 240-41806/3-A Client Sample ID: Lab Control Sample
Matrix: Water Prep Type: Total Recoverable

Analysis Batch: 41991 Prep Batch: 41806

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aluminum	10000	9620		ug/L		96	80 - 120	
Antimony	100	99.0		ug/L		99	80 - 120	
Bery#ium	1000	929		ug/L		93	80 - 120	
Cadmium	1000	1000		ug/Ĺ		100	80 - 120	
Iron	10000	10000		ug/L		100	80 - 120	
Sodium	10000	10500		ug/L		105	80 - 120	
Thallium	250	242		ug/L		97	80 - 120	•
Zinc	1000	1000		ug/L		100	80 - 120	

11/8

Project/Site: RVAAP 66

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-10547-2 MS Matrix: Water

Analysis Batch: 41991

Client Sample ID: FWG-IDW-TANK 1-GW Prep Type: Total Recoverable Prep Batch: 41806

Result 10000 104 973 1010		Unit ug/L ug/L ug/L	D %Rec 99 102 97	Limits 63 - 128 44 - 153 77 - 124	
104 973		ug/L ug/L	102 97	44 ₋ 153 77 ₋ 124	
973		ug/L	97	77 - 124	
<del></del>					
1010		ua/I			
		ug/L	101	78 - 117	
10500		ug/L	104	22 - 169	
105000	4	ug/L	37	80 - 120	
251		ug/L	100	69 _ 117	
		ug/L	99	49 - 156	
			•	·	Ÿ

Lab Sample ID: 240-10547-2 MSD

Matrix: Water

Client Sample ID: FWG-IDW-TANK 1-GW Prep Type: Total Recoverable

Analysis Batch: 41991									Prep	Batch:	41806
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	64		10000	10000		ug/L		100	63 - 128		20
Antimony	2.0		100	104		ug/L		102	44 - 153	1	20
Beryllium	1.0	U	1000	951		ug/L		95	77 - 124	2	20
Cadmium	1.0	U	1000	1020		ug/L		102	78 - 117	· i	20
Iron	72	J	10000	10600		ug/L		105	22 - 169	1	20
Sodium	100000		10000	107000	4	ug/L		59	80 - 120	2	20
Thallium	0.71	j	250	258		ug/L		103	69 - 117	3	20
Zinc	20	U	1000	993		ug/L		99	49 - 156	0	20
-											

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-41939/2-A

Matrix: Water

Analysis Batch: 42155

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 41939

MB MB

Analyte 0.0020 U Мегсигу

Result Qualifier

RI. 0,0020

MDL Unit 0.00012 mg/L D

Prepared Analyzed 04/27/12 16:25 04/28/12 11:37

Dil Fac

Lab Sample ID: LCS 240-41939/3-A

Matrix: Water

Analysis Batch: 42155

Spike Added LCS LCS

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Prep Batch: 41939 %Rec.

Analyte Result Qualifier Unit %Rec Limits Мегсигу 0.00500 0.00492 mg/L 98 50 - 150

Lab Sample ID: MB 240-41958/1-A

Matrix: Water

Analysis Batch: 42155

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41958

MB MB Dil Fac Result Qualifler RL Analyzed Analyte MDL Unit Prepared 0.20 U 0.20 04/27/12 16:25 **Mercury** 0.12 ug/L 04/28/12 10:30

Analyte

Cyanide, Total

Lab Sample ID: LCS 240-41958/2-A	١			•				Clie	nt Sample	ID: Lab Control	
Matrix: Water										Prep Type: 1	
Analysis Batch: 42155										Prep Batcl	1: 4195
			Spike		S LCS					%Rec.	
Analyte			Added		It Qua	lifier	Unit	[	Rec	Limits	
Mercury			5.00	4.5	6		ug/L		91	81 - 123	
- Lab Sample ID: LB 240-41791/1-D	LB								Client Sa	mple ID: Metho	d Blan
Matrix: Water										Prep Typ	e: TCLI
Analysis Batch: 42155										Prep Batcl	
	LB	LB									
Analyte	Result	Qualifier		RL	MDL	Unit		D	Prepared	Analyzed	Dil Fa
Mercury	0,0020	U	0.00	020 (	.00012	mg/L		04	1/27/12 16:25	04/28/12 11:35	
lethod: 1010 - Ignitability, Pe	nsky-Marte	ens Clos	ed-Cup l	Vethod							
Lab Sample ID: LCS 240-42303/1						3		Clie	nt Sample	ID: Lab Control	Sampi
Matrix: Water									•	Prep Type: 1	
Analysis Batch: 42303											
•			Spike	LC	S LCS	5				%Rec.	
Analyte			Added	Resu	ilt Qua	lifier	Unit	ī	) %Rec	Limits	
Flashpoint			81.0	83.0	10		Degrees	F	102	97 - 103	= =====
Lab Sample ID: 240-10547-2 DU							C	lient	Sample ID:	FWG-IDW-TAN	K 1-GV
Matrix: Water										Prep Type: 1	
Analysis Batch: 42303										F <b>&gt; F</b>	
	Sample Sam	ple		D	U DU						RPI
Ameliate	Result Qua	lifier		Resu	it Qua	lifier	Unit	ı	)	RPI	) Lim
Allalyte	nesun Qua				******						
	>180			>18	10		Degrees	F		NO	2
Analyte Flashpoint Method: 9012A - Cyanide, Tot	>180	menable	)	>18			Degrees	F		NO	2
Flashpoint Nethod: 9012A - Cyanide, Tot	>180	menable	)	>18			Degrees	F	Client Sa	no umple ID: Metho	
Flashpoint Tethod: 9012A - Cyanide, Tot Lab Sample ID: MB 240-41705/1-A	>180	menable	)	>18		,	Degrees	F	Client Sa		d Blan
Flashpoint Tethod: 9012A - Cyanide, Tot Lab Sample ID: MB 240-41705/1-A Matrix: Water	>180	menable	)	>18			Degrees	F	Client Sa	ımple ID: Metho	d Blan otal/N
Flashpoint Tethod: 9012A - Cyanide, Tot Lab Sample ID: MB 240-41705/1-A Matrix: Water	>180 al and/or A	menable	)	>18			Degrees	F	Client Sa	ımple ID: Metho Prep Type: 1	d Blan
Flashpoint Nethod: 9012A - Cyanide, Tot Lab Sample ID: MB 240-41705/1-A Matrix: Water Analysis Batch: 41804 Analyte	>180 al and/or A MB Result	MB ⁴ Qualifier	)	>18	MDL	Unit	Degrees	D	Prepared	imple ID: Metho Prep Type: T Prep Batcl Analyzed	d Blani otal/N/
Flashpoint lethod: 9012A - Cyanide, Tot Lab Sample ID: MB 240-41705/1-A Matrix: Water Analysis Batch: 41804 Analyte	>180  al and/or A	MB ⁴ Qualifier					Degrees	D		imple ID: Metho Prep Type: 1 Prep Batcl	d Blan otal/N/ n: 4170
Flashpoint  lethod: 9012A - Cyanide, Tot  Lab Sample ID: MB 240-41705/1-A  Matrix: Water  Analysis Batch: 41804  Analyte  Cyanide, Total	>180  al and/or A  MB  Result  0.010	MB ⁴ Qualifier		RL	MDL		Degrees	<u>D</u>	<b>Prepared</b> 4/26/12 10:40	Imple ID: Metho Prep Type: T Prep Batcl Analyzed	d Blan otal/N/ 1: 4170 Dil Fa
Flashpoint  Jethod: 9012A - Cyanide, Tot  Lab Sample ID: MB 240-41705/1-A  Matrix: Water  Analysis Batch: 41804  Analyte  Cyanide, Total  Lab Sample ID: LCS 240-41705/2-A	>180  al and/or A  MB  Result  0.010	MB ⁴ Qualifier		RL	MDL		Degrees	<u>D</u>	<b>Prepared</b> 4/26/12 10:40	Imple ID: Metho Prep Type: Prep Batcl Analyzed 04/26/12 17:01	d Blani otal/N/ 1: 4170 Dil Fa
Flashpoint  Tethod: 9012A - Cyanide, Tot  Lab Sample ID: MB 240-41705/1-A  Matrix: Water  Analysis Batch: 41804  Analyte  Cyanide, Total  Lab Sample ID: LCS 240-41705/2-A  Matrix: Water	>180  al and/or A  MB  Result  0.010	MB ⁴ Qualifier		RL	MDL		Degrees	<u>D</u>	<b>Prepared</b> 4/26/12 10:40	Imple ID: Metho Prep Type: T Prep Batcl Analyzed 04/26/12 17:01 ID: Lab Control Prep Type: T	d Blani otal/N/n: 4170: Dil Fa Sample
Flashpoint  Method: 9012A - Cyanide, Tot  Lab Sample ID: MB 240-41705/1-A  Matrix: Water  Analysis Batch: 41804  Analyte  Cyanide, Total  Lab Sample ID: LCS 240-41705/2-A  Matrix: Water	>180  al and/or A  MB  Result  0.010	MB ⁴ Qualifier		RL 010	MDL	mg/L	Degrees	<u>D</u>	<b>Prepared</b> 4/26/12 10:40	Imple ID: Metho Prep Type: Prep Batcl Analyzed 04/26/12 17:01	d Blani otal/N/ n: 4170 Dil Fa Sample otal/N/
Flashpoint  Tethod: 9012A - Cyanide, Tot  Lab Sample ID: MB 240-41705/1-A  Matrix: Water  Analysis Batch: 41804  Analyte  Cyanide, Total  Lab Sample ID: LCS 240-41705/2-A  Matrix: Water  Analysis Batch: 41804	>180  al and/or A  MB  Result  0.010	MB ⁴ Qualifier	0,1	RL 010	MDL 0.0050	mg/L	Degrees	D O	<b>Prepared</b> 4/26/12 10:40	Imple ID: Methor Prep Type: The Prep Batch Analyzed 04/26/12 17:01 ID: Lab Control Prep Type: The Prep Batch	d Blani otal/N/ n: 4170 Dil Fa Sample otal/N/
Flashpoint	>180  al and/or A  MB  Result  0.010	MB ⁴ Qualifier	O.4 Spike	RL 010	MDL 0.0050 S LCS sit Qua	mg/L		D O	Prepared 1/26/12 10:40 nt Sample	Imple ID: Methor Prep Type: The Prep Batch Analyzed 04/26/12 17:01 ID: Lab Control Prep Type: The Prep Batch %Rec.	d Blani otal/N/n: 4170: Dil Fa Sample
Flashpoint  Jethod: 9012A - Cyanide, Tot  Lab Sample ID: MB 240-41705/1-A  Matrix: Water  Analysis Batch: 41804  Analyte  Cyanide, Total  Lab Sample ID: LCS 240-41705/2-A  Matrix: Water  Analysis Batch: 41804  Analyte	>180  al and/or A  MB  Result  0.010	MB ⁴ Qualifier	0.d Spike Added	RL 010 LC Resu	MDL 0.0050 S LCS sit Qua	mg/L	Unit	D	Prepared 1/26/12 10:40  nt Sample  0 %Rec 100	Imple ID: Methor Prep Type: The Prep Batch Analyzed 04/26/12 17:01 ID: Lab Control Prep Type: The Prep Batch %Rec. Limits	d Blan fotal/N/n: 4170 Dil Fa Sampl fotal/N/n: 4170
Flashpoint  Jethod: 9012A - Cyanide, Tot  Lab Sample ID: MB 240-41705/1-A  Matrix: Water  Analysis Batch: 41804  Analyte  Cyanide, Total  Lab Sample ID: LCS 240-41705/2-A  Matrix: Water  Analysis Batch: 41804  Analyte  Cyanide, Total	>180  al and/or A  MB  Result  0.010	MB ⁴ Qualifier	0.d Spike Added	RL 010 LC Resu	MDL 0.0050 S LCS sit Qua	mg/L	Unit	D	Prepared 1/26/12 10:40  nt Sample  0 %Rec 100	Imple ID: Methor Prep Type: Telep Batcl  Analyzed  04/26/12 17:01  ID: Lab Control Prep Type: Telep Batcl %Rec. Limits  69 - 118	d Blant otal/N/n: 4170 Dil Fa Sample otal/N/n: 4170

%Rec.

Limits

70 - 130

%Rec

87

Result Qualifier

0.00870 J

Unit

mg/L

Spike

Added

0.0100

# QC Sample Results

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 9034 - Sulfide, A	Acid soluble and	Insoluble (Titrimetric)
TWO INC.		<del>-</del>

Lab Sample ID: MB 240-41511/12-A Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA Analysis Batch: 41617

Prep Batch: 41511

мв мв RL MDL Unit D

Result Qualifier Dil Fac Analyte Prepared Analyzed 3.0 04/25/12 10:02 Sulfide 3.0 U 0.94 mg/L 04/25/12 14:45

Lab Sample ID: LCS 240-41511/13-A Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total/NA

Analysis Batch: 41617 Prep Batch: 41511 LCS LCS Spike %Rec.

Added Result Qualifier Unit Analyte %Rec Limits Sulfide 8.80 6.40 mg/L 70 .. 130

Lab Sample ID: 240-10547-2 MS Client Sample ID: FWG-IDW-TANK 1-GW Matrix: Water Prep Type: Total/NA

Prep Batch: 41511 Analysis Batch: 41617 Sample Sample Spike MS MS %Rec.

Result Qualifier Added Limits Analyte Result Qualifier Unit %Rec Sulfide 3.0 U 8.80 4.80 mg/L 55 27 .. 124

Lab Sample ID: 240-10547-2 MSD Client Sample ID: FWG-IDW-TANK 1-GW Prep Type: Total/NA

Matrix: Water

Analysis Batch: 41617 Prep Batch: 41511 MSD MSD %Rec. RPD Spike Sample Sample

Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Sulfide 3.0 Ū 8.80 6.40 F mg/L 27 - 124 20

Method: 9040B - pH

Lab Sample ID: LCS 240-41411/5 Client Sample ID: Lab Control Sample Prep Type: Total/NA

Matrix: Water

Analysis Batch: 41411

Spike LCS LCS %Rec. Added Result Qualifier Limits Analyte Unit D %Rec pН 7.67 7.660 SU 100 97 - 103

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Client Sample ID: Method Blank Lab Sample ID: G2E110000019B Matrix: Water Prep Type: Total Prep Batch: 2132019_P Analysis Batch: 2132019

мв мв Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Analyte Nitrocellulose 2.0 Ū 2.0 0.48 05/11/12 05:00 05/15/12 14:01 mg/L

Lab Sample ID: G2E110000019C Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total

Prep Batch: 2132019_P Analysis Batch: 2132019 Spike LCS LCS %Rec.

Added Limits Result Qualifier D %Rec Analyte Unit 26 - 144 Nitrocellulose 5.07 5,20 103 mg/L

# **QC Sample Results**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

# Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050 (Continued)

Lab Sample ID: G2E030407009D							Client Sa	ample II	D: Matrix Sp	ike Dup	licate
Matrix: Water									Pre	p Type:	Total
Analysis Batch: 2132019									Prep Batc	h. 2132	019_P
	Sample	Sample	Spike	SD1	SD1				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nitrocellulose	2.0	U	5.07	5,30		mg/L		103	26 - 144	0.75	45

Nitrocellulose	2.0	U	5.07	5,30		mg/L		103	26 - 144	0.75	45
Lab Sample	ID: G2E030407009S							Client	Sample ID:	: Matrix S	pike
Matrix: Wate	г								Pre	p Type: 1	Total
Analysis Bat	tch: 2132019								Prep Batc	h: 21320 [,]	19_P
	Sample	Sample	Spike	MS1	MS1				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Nitrocellulose	2.0	υ	5.07	5.26	TO AND THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF	mg/L	_	102	26 - 144		

l. Va

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

GC/MS VOA					
Leach Batch: 41793					
— Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	1311	
LB 240-41793/1-A MB	Method Blank	TCLP	Water	1311	
Analysis Batch: 42229					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	8260B	
LB 240-41793/1-A MB	Method Blank	TCLP	Water	8260B	
LCS 240-42229/5	Lab Control Sample	Total/NA	Water	8260B	
Analysis Batch: 42231					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-1	FWG-IDW-TANK 1-TB	Total/NA	Water	8260B	
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	8260B	
LCS 240-42231/5	Lab Control Sample	Total/NA	/ Water	8260B	
MB 240-42231/4	Method Blank	Total/NA	Water	8260B	
GC/MS Semi VOA					
Prep Batch: 41464			The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s		
_ •	Client Samula ID	Drop Tune	Matrix	Method	Prep Batch
Lab Sample ID 240-10547-2	Client Sample ID FWG-IDW-TANK 1-GW	Prep Type Total/NA	Water	3520C	Prep Batch
LCS 240-41464/16-A MB 240-41464/15-A	Lab Control Sample Method Blank	Total/NA Total/NA	Water Water	3520C 3520C	
└ Leach Batch: 41791					
Г	Olivert Germanie ID	B T	Matrix	Method	Pues Petals
Lab Sample ID 240-10547-2	Client Sample ID FWG-IDW-TANK 1-GW	Prep Type TCLP	Water	<del>Metriou</del> 1311	Prep Batch
Analysis Batch: 41841					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	8270C	41464
LCS 240-41464/16-A	Lab Control Sample	Total/NA	Water	8270C	41464
MB 240-41464/15-A	Method Blank	Total/NA	Water	8270C	41464
Prep Batch: 41946					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	3510C	41791
LCS 240-41946/5-A	Lab Control Sample	Total/NA	Water	3510C	-17101
MB 240-41946/4-A	Method Blank	Total/NA	Water	3510C	
─ Analysis Batch: 42450					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	8270C	41946
LCS 240-41946/5-A	Lab Control Sample	Total/NA	Water	8270C	41946
MB 240-41946/4-A	Method Blank	Total/NA	Water	8270C	41946
GC Semi VOA					
Prep Batch: 41471			# 0 0000000 A 1 1 1 0 0		
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	3520C	
LCS 240-41471/3-A	Lab Control Sample	Total/NA	Water	3520C	

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

GC Semi VOA (Co	ntinued)				
Prep Batch: 41471 (Co	ontinued)				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-41471/2-A	Method Blank	Total/NA	Water	3520C	
Prep Batch: 41473					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	3520C	
LCS 240-41473/3-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-41473/2-A	Method Blank	Total/NA	Water	3520C	
Analysis Batch: 41756	3				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	8081A	41473
LCS 240-41473/3-A	Lab Control Sample	Total/NA	Water	8081A	41473
MB 240-41473/2-A	Method Blank	Total/NA	Water	8081A	41473
Leach Batch: 41791			1 mm		
Lab Sample ID	Cifent Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	1311	
240-10547-2 - RE	FWG-IDW-TANK 1-GW	TCLP	Water	1311	
240-10547-2 MS 	FWG-IDW-TANK 1-GW	TCLP	Water	1311	
Analysis Batch: 41798	3				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	8082	41471
LCS 240-41471/3-A	Lab Control Sample	Total/NA	Water	8082	41471
MB 240-41471/2-A	Method Blank	Total/NA	Water	8082	41471
Prep Batch: 41945					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	8151A	41791
LCS 240-41945/6-A	Lab Control Sample	Total/NA	Water	8151A	
MB 240-41945/5-A 	Method Blank	Total/NA	Water	8151A	
Prep Batch: 41948					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	3510C	41791
240-10547-2 MS	FWG-IDW-TANK 1-GW	TCLP	Water	3510C	41791
LCS 240-41948/4-A	Lab Control Sample	Totał/NA	Water	3510C	
MB 240-41948/3-A	Method Blank	Total/NA	Water	3510C	
Analysis Batch: 42028	В				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	8081A	41948
240-10547-2 MS	FWG-IDW-TANK 1-GW	TCLP	Water	8081A	41948
LCS 240-41948/4-A	Lab Control Sample	Total/NA	Water	8081A	41948
MB 240-41948/3-A 	Method Blank	Total/NA	Water	8081A	41948
Analysis Batch: 4203	1				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	8151A	41945
LCS 240-41945/6-A	Lab Control Sample	Total/NA	Water	8151A	41945
MB 240-41945/5-A	Method Blank	Total/NA	Water	8151A	41945
LCS 240-41945/6-A	Lab Control Sample	Total/NA	Water	8151A	

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Prep Batch: 42735					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2 - RE	FWG-IDW-TANK 1-GW	TCLP	Water	3510C	41791
LCS 240-42735/3-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-42735/2-A 	Method Blank	Total/NA	Water	3510C	
Analysis Batch: 42869					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2 - RE	FWG-IDW-TANK 1-GW	TCLP	Water	8081A	4273
LCS 240-42735/3-A	Lab Control Sample	Total/NA	Water	8081A	4273
MB 240-42735/2-A	Method Blank	Total/NA	Water	8081A	4273
HPLC					
Analysis Batch: 21220	63				
Lab Sample ID	Client Sample ID	Prep Type	/ ··· Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total	Water	8330/8330A	
G2E010000063B	Method Biank	Total	Water	8330/8330A	
G2E010000063C	Lab Control Sample	Total	Water	8330/8330A	
Analysis Batch: 21281	55				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batcl
240-10547-2	FWG-IDW-TANK 1-GW	Dissolved	Water	8330 (Modified)	
G2E030407009D	Matrix Spike Duplicate	Dissolved	Water	8330 (Modified)	
G2E030407009S	Matrix Spike	Dissolved	Water	8330 (Modified)	
G2E070000155B	Method Blank	Dissolved	Water	8330 (Modified)	
G2E070000155C	Lab Control Sample	Dissolved	Water	8330 (Modified)	
Prep Batch: 2122063_I _	P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-10547-2	FWG-IDW-TANK 1-GW	Total	Water	3535	
G2E010000063B	Method Blank	Total	Water	3535	
G2E010000063C	Lab Control Sample	Total	Water	3535	
Prep Batch: 2128155_I -	P ,				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-10547-2	FWG-IDW-TANK 1-GW	Dissolved	Water	FILTRATION	
G2E030407009D	Matrix Spike Duplicate	Dissolved	Water	(DISS) FILTRATION	
G2E030407009S	Matrix Spike	Dissolved	Water	(DISS) FILTRATION	
G2E070000155B	Method Blank	Dissolved	Water	(DISS) FILTRATION	
G2E070000155C	Lab Control Sample	Dissolved	Water	(DISS) FILTRATION	
_				(DISS)	
Metals					
Leach Batch: 41791					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	1311	
LB 240-41791/1-C LB	Method Blank	TCLP	Water	1311	

TCLP

Water

1311

Method Blank

LB 240-41791/1-D LB

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Metals (Continued)		***************************************			
Prep Batch: 41806					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bate
240-10547-2	FWG-IDW-TANK 1-GW	Total Recoverable	Water	3005A	
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total Recoverable	Water	3005A	
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total Recoverable	Water	3005A	
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total Recoverable	Water	3005A	
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total Recoverable	Water	3005A	
LCS 240-41806/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-41806/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-41806/1-A	Method Blank	Total Recoverable	Water	3005A	
rep Batch: 41936					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bate
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	3010A	4179
LB 240-41791/1-C LB	Method Blank	TCLP	Water	3010A	4179
LCS 240-41936/3-A	Lab Control Sample	Total/NA /	Water	3010A	
MB 240-41936/2-A	Method Blank	Total/NA	Water	3010A	
rep Batch: 41939		,			
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bate
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	7470A	417
LB 240-41791/1-D LB	Method Blank	TCLP	Water	7470A	4179
LCS 240-41939/3-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-41939/2-A	Method Blank	Totai/NA	Water	7470A	
rep Batch: 41958					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bate
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	7470A	
LCS 240-41958/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-41958/1-A	Method Blank	Total/NA	Water	7470A	
nalysis Batch: 41991			· ·		
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bat
240-10547-2	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6020	4180
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6020	418
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6020	418
LCS 240-41806/3-A	Lab Control Sample	Total Recoverable	Water	6020	418
MB 240-41806/1-A	Method Blank	Total Recoverable	Water	6020	418
nalysis Batch: 42006					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bat
240-10547-2	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6010B	418
240-10547-2 MS	FWG-JDW-TANK 1-GW	Total Recoverable	Water	6010B	418
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6010B	418
LCS 240-41806/2-A	Lab Control Sample	Total Recoverable	Water	6010B	41B
MB 240-41806/1-A	Method Blank	Total Recoverable	Water	6010B	418
nalysis Batch: 42120					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bat
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	6010B	419
LB 240-41791/1-C LB	Method Blank	TCLP	Water	6010B	419
LCS 240-41936/3-A	Lab Control Sample	Total/NA	Water	6010B	4193
MB 240-41936/2-A	Method Blank	Total/NA	Water	6010B	4193

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Metals (Continued)			7115/212 - 1 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171 171-		
Analysis Batch: 42155					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	7470A	41958
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	7470A	41939
LB 240-41791/1-D LB	Method Blank	TCLP	Water	7470A	41939
LCS 240-41939/3-A	Lab Control Sample	Total/NA	Water	7470A	41939
LCS 240-41958/2-A	Lab Control Sample	Total/NA	Water	7470A	41958
MB 240-41939/2-A	Method Blank	Total/NA	Water	7470A	41939
MB 240-41958/1-A	Method Blank	Total/NA	Water	7470A	41958
– Analysis Batch: 42425					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-41936/3-A	Lab Control Sample	Total/NA	Water	6010B	41936
General Chemistry	b b b b b b b b b b b b b b b b b b b			- 11 - 12 - 12 - 13 - 13 - 14 - 15 - 15 - 15 - 15 - 15 - 15 - 15	
Analysis Batch: 41411			£		
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	9040B	
LCS 240-41411/5	Lab Control Sample	Total/NA	Water	9040B	
Prep Batch: 41511					•
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	9030B	
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total/NA	Water	9030B	
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total/NA	Water	9030B	
LCS 240-41511/13-A	Lab Control Sample	Total/NA	Water	9030B	
MB 240-41511/12-A	Method Blank	Total/NA	Water	9030B	
Analysis Batch: 41617			,		
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	. 9034	41511
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total/NA	Water	9034	41511
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total/NA	Water	9034	41511
LCS 240-41511/13-A	Lab Control Sample	Total/NA	Water	9034	41511
MB 240-41511/12-A	Method Blank	Total/NA	Water	9034	41511
Prep Batch: 41705					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	9012A	_
LCS 240-41705/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-41705/1-A	Method Blank	Total/NA	Water	9012A	
Analysis Batch: 41804					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	9012A	41705
LCS 240-41705/2-A	Lab Control Sample	Total/NA	Water	9012A	41705
MB 240-41705/1-A	Method Blank	Total/NA	Water	9012A	41705
MRL 240-41804/3 MRL	Lab Control Sample	Total/NA	Water	9012A	
Analysis Batch: 42303					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	1010	
240-10547-2 DU	FWG-IDW-TANK 1-GW	Total/NA	Water	1010	

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Analysis Bate	ch: 42303 (	(Continued)
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-42303/1	Lab Control Sample	Total/NA	Water	1010	

#### Analysis Batch: 2132019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total	Water	WS-WC-0050	
G2E030407009D	Matrix Spike Duplicate	Total	Water	WS-WC-0050	
G2E030407009S	Matrix Spike	Total	Water	WS-WC-0050	
G2E110000019B	Method Blank	Total	Water	WS-WC-0050	
G2E110000019C	Lab Control Sample	Total	Water	WS-WC-0050	

#### Prep Batch: 2132019_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total	Water	EXTRACTION,	V
			Jones .	SOLID PHASE	
G2E030407009D	Matrix Spike Duplicate	Total	Water	EXTRACTION,	
				SOLID PHASE	
G2E030407009S	Matrix Spike	Total	Water	EXTRACTION,	
				SOLID PHASE	
G2E110000019B	Method Blank	Total	Water	EXTRACTION,	
				SOLID PHASE	
G2E110000019C	Lab Control Sample	Total	Water	EXTRACTION,	
				SOLID PHASE	

#### Lab Chronicle

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-TB

Date Collected: 04/24/12 11:30

Lab Sample ID: 240-10547-1

Matrix: Water

Date Received: 04/24/12 14:35

Dilution Batch Batch Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Total/NA Analysis 8260B 42231 05/01/12 02:07 TL

Lab Sample ID: 240-10547-2

Lab

TAL NC

Matrix: Water

Client Sample ID: FWG-IDW-TANK 1-GW

Date Collected: 04/24/12 12:00 Date Received: 04/24/12 14:35

٠	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
TCLP	Leach	1311			41793	04/26/12 15:10	BF	TAL NC
TCLP	Analysis	8260B		1	42229	04/30/12 19:30	TL	TAL NC
Total/NA	Analysis	8260B		1	42231	05/01/12 02:31	TL	TAL NC
Total/NA	Prep	3520C			41464	04/25/12 08:09	вм	TAL NC
Total/NA	Analysis	8270C		1	41841	04/27/12 16:47	MU	TAL NC
TCLP	Leach	1311			41791	04/26/12 15:10	BF	TAL NC
TCLP	Prep	3510C			41946	04/27/12 13:11	CC	TAL NC
TCLP	Analysis	8270C		1	42450	05/02/12 16:53	MU	TAL NC
Total/NA	Prep	3520C			41473	04/25/12 08:23	вм	TAL NC
Total/NA	Analysis	8081A		1	41756	04/27/12 09:04	AR	TAL NC
Total/NA	Prep	3520C			41471	04/25/12 08:21	вм	TAL NC
Total/NA	Analysis	8082		1	41798	04/27/12 00:42	LH	TAL NC
TCLP	Leach	1311			41791	04/26/12 15:10	BF	TAL NC
TCLP	Prep	3510C			41948	04/27/12 13:16	cc	TAL NC
TCLP	Analysis	8081A		1	42028	04/30/12 13:44	CV	TAL NC
TCLP	Prep	8151A			41945	04/27/12 13:08	AK	TAL NC
TCLP	Analysis	8151A		1	42031	04/28/12 14:53	AR	TAL NC
TCLP	Leach	1311	RE		41791	04/26/12 15:10	BF	TAL NC
TCLP	Prep	3510C	RE		42735	05/04/12 06:43	AK	TAL NC
TCLP	Analysis	8081A	RE	1	42869	05/04/12 20:08	AR	TAL NC
Total	Prep	3535	•		2122063_P	05/01/12 09:00	TQP	TAL WSC
Total	Analysis	8330/8330A		1.02	2122063	05/10/12 15:48	VN	TAL WSC
Dissolved	Prep	FILTRATION (DISS)			2128155_P	05/07/12 14:00	HJA	TAL WSC
Dissolved	Analysis	8330 (Modified)		1	2128155	05/08/12 16:11	VN	TAL WSC
Total Recoverable	Prep	3005A			41806	04/26/12 17:08	AS	TAL NC
Total Recoverable	Analysis	6020		1	41991	04/27/12 20:15	KC	TAL NC
Total Recoverable	Analysis	6010B		1	42006	04/27/12 10:46	NJM	TAL NC
TCLP	Leach	1311			41791	04/26/12 15:10	BF	TAL NC
TCLP	Prep	3010A			41936	04/27/12 12:55	AS	TAL NC
TCLP	Analysis	6010B		1	42120	04/28/12 15:44	BD	TAL NC
Total/NA	Prep	7470A			41958	04/27/12 16:25	AS	TAL NC
Total/NA	Analysis	7470A		1	42155	04/28/12 10:40	AS	TAL NC
TCLP	Prep	7470A			41939	04/27/12 16:25	AS	TAL NC
TCLP	Analysis	7470A		1	42155	04/28/12 11:48	AS	TAL NC
Total/NA	Analysis	9040B		1	41411	04/24/12 17:04	BR	TAL NC
Total/NA	Prep	9030B			41511	04/25/12 10:02	AM	TAL NC
Total/NA	Алаlysis	9034		1	41617	04/25/12 14:51	AM	TAL NC
Total/NA	Prep	9012A			41705	04/26/12 10:40	BR	TAL NC

#### Lab Chronicle

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Lab Sample ID: 240-10547-2

Matrix: Water

Clie	nt	Sa	m	pΙε	ID:	F۷	۷G	-IDW-TANK	1-GW
	_								

Date Collected: 04/24/12 12:00 Date Received: 04/24/12 14:35

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	9012A	_	1	41804	04/26/12 17:01	BR	TAL NC
Total/NA	Analysis	1010		1	42303	05/01/12 09:28	JM	TAL NC
Total	Pre <b>p</b>	EXTRACTION, SOLID PHASE			2132019_P	05/11/12 05:00	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	2132019	05/15/12 14:33	JB	TAL WSC

#### Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC 1	. <b>3</b>	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190
1000 monea canton	FILOCOTION	State 1 Togram		000010100
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas DEQ	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	 1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	and the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second o	-	
TestAmerica West Sacramento	New York	NELAC	2	11666 MP0007
TestAmerica West Sacramento	Northern Mariana Islands	State Program	9	
TestAmerica West Sacramento	Oregon	NELAC		CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	Federal		LE148388-0
TestAmerica West Sacramento	USDA	Federal		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	State Program	3	9930C
TestAmerica West Sacramento	West Virginia DEP	State Program	3	334
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

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# **Certification Summary**

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

	1			
Laboratory	Authority	Program	EPA Region	Certification ID
= 4400.44019			<u> </u>	

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

14.

TestAmerica Laboratories, Inc. COC No: 1/24/12 MS THE LEADER IN ENVIRONMENTAL TESTING of Z 5000s Sample Specific Notes Special Instructions: TAL-0018 (1008) Date/Time: Date/Time: Months 9396 4 Company: Company: ed if samples are retained longer than 1 month)

Jisposal By Lab しょり Telephone: 330 497 Lab Contact: Oether รอสตีย( Sample Disposal ( A fee may be. Site Conjact:

E, Corbin
Tolephone:

Same 2 days \oAnZ HOay Received by: RCRA Received by: HOAM J. V.V. 9 HCS 1gnory TestAmerica Laboratory location: N. C. AD N. Regulatory program: DW NPDES EONH FOS7H Unknown ecorbin aleginicom pHes Date/Time: រភេសស្រែទ . รนออกอิง Telephone: 5138757550 Email: Jient Project Manager: Oohn Müller ηįγ 2.00 Poison B Sample Time Method of Shipment/Carrier: -TB 14/2 1130 hipping/Fracking No: Sample Date Skin Irritant - TANK 1- GW incurran 074 45240 Seriller Blyd DIN-TANK  $\mathcal{A}$ 30174,0016.001. 513 826 1600 KVAN LO telinquished by Page 53 of 57 5/21/2012

**TestAmerica** 

Chain of Custody Record

C2008, Tuskevoka Lubardalia, Inc. "Aliajas maerest. Testvenina & Dasici ^{ne} era bedemaria of Tostvandes Cabaralaries, Inc.

Date Time: 143

Date/Time:

02200107 PLHL 330 497 9396 Company: Lab Contact: M. LOCB 14 **2**2 );pet: Sample Disposal ( A fee may be asse Felephone: \$15 825 7530 esargnU Site Contact

Corbin TestAmerica Laboratory location: N . CONTON Regulatory program: DW CINFOR loAπ5 HOπγ eceived by: Received by: HORN ЮH Shark L 3 ALM. 4-14-12 1435 EONH #S2O¢ CHeat Project Manager:

John Miller

Telephone:

513825 7500 X320
Email: Únknown aau)( ecorbing egmicom

Sample Specific Notes, Special Instructions:

pitos

Sample Time

1200

4/24/12 Sample Date

CP-PRICE

, Z Z

Page 54 of 57

tannibai

Method of Shipment/Carrier;

Unionnah OH45240

\$12 88 826 150L

shipping/Tracking No:

20174,0016,001.2

LAKE DO

TANK-10WR12

TestAmerica Laboratories, In-

**TestAmerica** THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

02000, Teathemina Lubandorina, ing. 'Ali dights resemed. Tentkandan & Dodon ''' sin trademanks of Teathandor Laboratorina, inc.

Date/Time:

Company:

elinquished by:

Ompatry:

NO EDD ONCLARGE

12X9

Poison B

. 🗀 Skín Irritant

ble Hazard Identification

S400 NO.	

TestAmerica North Canton Sample Receipt Form/Narrative	Login # :
Client COM Site Name	Ву:/_
Cooler Received on 4-24-12 Opened on 4-24-12  FedEx: 1st Grd Cooler UPS FAS Stetson Client Drop Off TestAmerica Courie  TestAmerica Cooler Foam Box Client Cooler Box Other  Packing material used Bubble Wap Foam Plastic Bag None Other  COOLANT: Wet Ice Blue Ice Dry Ice Water None	(Signature)
-Were custody seals on the outside of the cooler(s) signed & dated? -Were custody seals on the bottle(s)?  3. Shippers' packing slip attached to the cooler(s)?  4. Did custody papers accompany the sample(s)?	Temp. °C Multiple Temp. °C on Back
11. Were VOAs on the COC?  12. Were air bubbles >6 mm in any VOA vials?  13. Was a trip blank present in the cooler(s)?  Contacted PM by via Verbal	es No es No es No es No es No es No es No voice Mail Other
Concerning  14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES	
14. CHAIN OF COSTODY & BARRESS DISCRESS TRACES	
	<u></u>
1	
15 SAMPI E CONDITION	
15. SAMPLE CONDITION  Sample(s) were received after the recommended	nolding time had expired.
Sample(s) were received after the recommended	eived in a broken container.

	TE CARACT	E PRESERVATION		
	16. SAIVITA	were further preserved i	in Sample Receiv	ing to meet
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### 15

# Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-10547-1

List Source: TestAmerica Canton

Login Number: 10547 List Number: 1

Creator: Gambone, Mike

Question	Answer Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A
The cooler's custody seal, if present, is intact.	True
The cooler or samples do not appear to have been compromised or tampered with.	True
Samples were received on ice.	True
Cooler Temperature is acceptable.	True
Cooler Temperature is recorded.	True
COC is present.	True
COC is filled out in ink and legible.	True
COC is filled out with all pertinent information.	True
Is the Field Sampler's name present on COC?	True
There are no discrepancies between the sample IDs on the containers and the COC.	True
Samples are received within Holding Time.	True
Sample containers have legible labels.	True
Containers are not broken or leaking.	True
Sample collection date/times are provided.	True
Appropriate sample containers are used.	True
Sample bottles are completely filled.	True
Sample Preservation Verified.	True
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True ·
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True
Multiphasic samples are not present.	True
Samples do not require splitting or compositing.	True



July 10, 2012

Mr. Mark Patterson Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266

Reference:

Contract No. GS-10F-0293K

Delivery Order No. W912QR-1-F-0266

Subject:

Facility-Wide Groundwater Monitoring Program Plan

**RVAAP-66 Facility-Wide Groundwater** 

Draft Tank #1 IDW Letter Report - TCLP Results

#### Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI) began on February 27, 2012, and was conducted pursuant to the approved *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum* (FWGWMP Addendum; EQM, January 2012). These activities resulted in the generation of decontamination fluids from well installation operations. This letter supplements our previous Tank #1 IDW Letter Report dated May 22, 2012.

Based on the analytical results, the May 22 letter recommended land application of the decontamination fluid, which was subsequently approved by the Ohio Environmental Protection Agency (EPA). On June 6, 2012, Environmental Quality Management, Inc. (EQM) personnel began discharging the Tank #1 fluids to the land surface; however, during discharge, EQM personnel noted that soap suds were being produced from aeration of the effluent by the flow control valve at the discharge point. Consequently, the land application procedure was immediately halted. Additional decontamination fluids were generated and placed into Tank #1 during installation of the final seven RI wells in June 2012. At the completion of these activities, EQM resampled Tank #1 for Toxicity Characteristic Leaching Procedure (TCLP) analyses; the RVAAP full suite total analysis was previously performed in May, and little additional decontamination fluid was added to the tank in June 2012. The purpose of this letter is to characterize and classify IDW from Tank #1 for disposal and to provide recommendations for disposing of the IDW.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio EPA regarding IDW disposition at RVAAP, including the IDW

disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations* (FWSAP; SAIC, 2011), and the FWGWMP Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material pending waste characterization and classification based on analytical results. The FWSAP and the FWGWMP Addendum describe approved procedures used for containerizing and handling IDW.

#### **Liquid IDW Discussion**

Accumulated indigenous liquid IDW was containerized in a 2,450-gallon poly tank (Tank #1) on site pending transport and disposal to an offsite disposal facility. Tank #1 contained decontamination fluid generated during cleaning of downhole drilling equipment. This liquid was generated from February 27, 2012, through June 28, 2012. (Purge water was stored in a different onsite tank that will be handled under a separate report). An unfiltered composite sample for disposal characterization was collected from Tank #1. The tank was opened and a composite sample was collected by gently lowering a new, disposable Teflon bailer attached to new polypropylene rope into the holding vessel. The bailer was lowered into the vessel several times, and to different depths, to collect a sufficient representative sample of the water to submit to the laboratory for waste characterization analysis. The retrieved sample was collected and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the sample container was sealed with minimum head space. New, disposable nitrile sample gloves were worn during sampling. The gloves, bailers, and rope were discarded appropriately in accordance with the FWGWMP Addendum after collection of each composite sample.

The indigenous IDW contained in Tank #1 was characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 1. (As mentioned previously, full suite totals analysis was performed in May 2012, and the results are provided in our letter report dated May 22, 2012). In addition, the IDW sample was also analyzed for sulfide, cyanide, pH, and flashpoint. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1 – Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24) and Table 8-2 – Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23), as presented in the FWSAP and the Maximum Contaminant Levels (MCLs). Table 2 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP full suite analysis for Tank #1.

The following summarizes the IDW Tank #1 analyses:

None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 140 degrees F. Reactive sulfide and reactive cyanide were detected above the reporting limit; however, they were detected at concentrations insufficient to generate toxic gases, vapors, or fumes in a quantity that

would present a danger to human health or the environment (40 CFR 261.23). The pH level was slightly elevated as a result of concrete and bentonite residue.

# **Recommended Disposal Pathways for IDW**

After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded.

Given the observed analytical results, it is recommended that the liquid IDW from Tank #1 be classified as non-hazardous, non-contaminated. EQM was previously permitted to land apply the liquid IDW from this tank, and the recent results indicate that this remains a viable alternative. However, in order to more effectively remove the residual sediment from the tank bottom and to prevent potential generation and release of soap suds to the receiving stream, we recommend that the liquid IDW in Tank #1 be removed by a licensed waste hauler for offsite treatment and disposal.

Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with contracting a waste disposal company to remove the liquid IDW and residual sediment from Tank #1. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

John M. Miller, CHMM

Project Manager

cc: Vicki Deppisch – Ohio EPA

Mark Nichter - USACE

EOM PN - 030174.0016.001.02

Table 1. Summary of Analytical Suite of Chemicals

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium, cadmium, chromium, lead, and selenium)	EPA Method SW-846 1311/6010B
TCLP semivolatile organic compounds (SVOCs)	EPA Method SW-846 1311/8270C
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
рН	EPA Method SW-846 9040B

¹ EPA Methods for Chemical Analysis of Water and Waste

Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels
Tank 1 Decontamination Fluids, RVAAP-66, Ravenna, Ohio

Analyte Group	Analyte	Cas#	Units	Lab Results	Lab Qualifier	MCL	*Maximum Toxicity Concentration
TCLP-Metals	Arsenic	7440-38-2	mg/L	0.016	J	NA	5.0
TCLP-Metals	Barium	7440-39-3	mg/L	0.39	J,B	NA	100
TCLP-Metals	Chromium	7440-47-3	mg/L	0.0043	J	NA	5.0
TCLP-Misc.	Cyanide, total	57-12-5	mg/L	0.0055	J	NA	NA
TCLP-Misc.	Sulfide	18496-25-8	mg/L	1.1	J	NA	NA
TCLP-Misc.	Corrosivity (pH)	N/A	S.U.	9.44		6.5-8.5^	NA
TCLP-Misc.	Flashpoint	Q376	F	>180		NA	<140

#### Note

**Bold** concentrations exceed Drinking Water Stand – Maximum Contaminant Levels (MCLs).

J = estimated result. Result is less than reporting limit.

B = method blank contamination

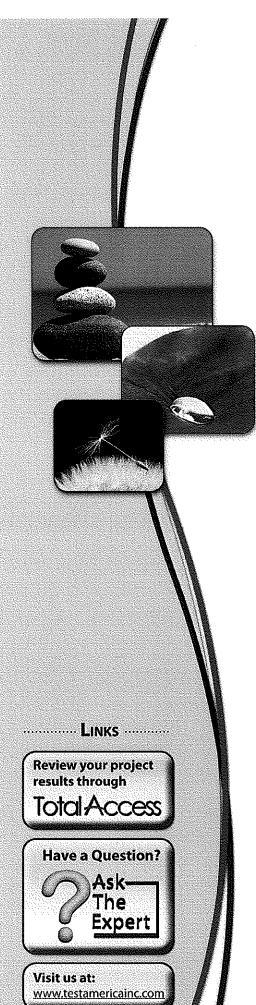
NA = not applicable

^{*} The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1 - Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24) and Table 8-2 - Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23).

[^] National Secondary Drinking Water standard.

^{**} Chromium, insoluble salts.

# ATTACHMENT 1. LABORATORY ANALYTICAL DATA SHEETS



# <u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc. TestAmerica Canton 4101 Shuffel Street NW North Canton, OH 44720 Tel: (330)497-9396

TestAmerica Job ID: 240-12752-2 Client Project/Site: RVAAP (OH) - IDW

Environmental Quality Mgt., Inc. 1800 Carillon Blvd Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin

Authorized for release by: 7/9/2012 4:57:28 PM

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

# **Table of Contents**

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# **Definitions/Glossary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Κ,

#### Qualifiers

#### GC/MS VOA

Qualifier

Qualifier Description

U Indicates the analyte was analyzed for but not detected.

#### GC/MS Semi VOA

Qualifier

**Qualifier Description** 

II Indicates th

Indicates the analyte was analyzed for but not detected.

#### GC Semi VOA

Qualifier υ **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

Metals

etais

Qualifier Qualifier Description

U Indicates the analyte was analyzed for but not detected.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Relative Percent Difference, a measure of the relative difference between two points

B Compound was found in the blank and sample.

#### **General Chemistry**

Qualifier	<b>Qualifier Description</b>

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Indicates the analyte was analyzed for but not detected.

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

#### Glossary

RL RPD

TEF

TEQ

Abbreviation	These commonly used abbreviations may or may not be present in this report.
₩	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
ac	Quality Control
RL	Reporting Limit

TestAmerica Canton 7/9/2012

#### **Case Narrative**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW TestAmerica Job ID: 240-12752-2

Job ID: 240-12752-2

Laboratory: TestAmerica Canton

Narrative

#### **CASE NARRATIVE**

Client: Environmental Quality Mgt., Inc.

Project: RVAAP (OH) - IDW

Report Number: 240-12752-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

#### RECEIPT

The samples were received on 06/28/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 5.6, 5.9, 6.0 and 6.0 C.

Method(s) 9040B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: FWG-IDW-TANK1A-GW.

#### TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 07/02/2012 and analyzed on 07/03/2012.

No difficulties were encountered during the VOCs analysis. All quality control parameters were within the acceptance limits.

#### TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and

#### **Case Narrative**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

////

#### Job ID: 240-12752-2 (Continued)

#### Laboratory: TestAmerica Canton (Continued)

no corrective action is required.

Method 1311 TCLP Extraction: The reference method requires at least 100g of the solid portion of a multiphase sample be leached. Greater than 100g of total homogenized sample, including both solid and filterable portions, was used in the preparation of each multiphase sample. However, due to matrix and/or volume limitations, less than 100g of the solid portion was obtained during the multiphase preparation for the following sample(s): FWG-IDW-TANK1A-GW. The volume of leaching fluid used was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits are not affected.

No other difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

#### TCLP CHLORINATED PESTICIDES

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/8081A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

Method 1311 TCLP Extraction: The reference method requires at least 100g of the solid portion of a multiphase sample be leached. Greater than 100g of total homogenized sample, including both solid and filterable portions, was used in the preparation of each multiphase sample. However, due to matrix and/or volume limitations, less than 100g of the solid portion was obtained during the multiphase preparation for the following sample(s): FWG-IDW-TANK1A-GW. The volume of leaching fluid used was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits are not affected.

No other difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

#### TCLP CHLORINATED HERBICIDES

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/8151A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/07/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Method 1311 TCLP Extraction: The reference method requires at least 100g of the solid portion of a multiphase sample be leached. Greater than 100g of total homogenized sample, including both solid and filterable portions, was used in the preparation of each multiphase sample. However, due to matrix and/or volume limitations, less than 100g of the solid portion was obtained during the multiphase preparation for the following sample(s): FWG-IDW-TANK1A-GW. The volume of leaching fluid used was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits are not affected.

No other difficulties were encountered during the herbicides analysis. All quality control parameters were within the acceptance limits.

#### TCLP METALS (ICP)

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

Barium was detected in method blank LB 240-49653/1-D at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Method 1311 TCLP Extraction: The reference method requires at least 100g of the solid portion of a multiphase sample be leached. Greater than 100g of total homogenized sample, including both solid and filterable portions, was used in the preparation of each multiphase sample. However, due to matrix and/or volume limitations, less than 100g of the solid portion was obtained during the multiphase preparation for the following sample(s): FWG-IDW-TANK1A-GW. The volume of leaching fluid used was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits are not affected.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### **TCLP MERCURY**

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A.

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

#### Job ID: 240-12752-2 (Continued)

#### Laboratory: TestAmerica Canton (Continued)

The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

Method 1311 TCLP Extraction: The reference method requires at least 100g of the solid portion of a multiphase sample be leached. Greater than 100g of total homogenized sample, including both solid and filterable portions, was used in the preparation of each multiphase sample. However, due to matrix and/or volume limitations, less than 100g of the solid portion was obtained during the multiphase preparation for the following sample(s): FWG-IDW-TANK1A-GW. The volume of leaching fluid used was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits are not affected.

No other difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

#### **FLASHPOINT**

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 07/02/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

#### **TOTAL CYANIDE**

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 07/02/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

#### SULFIDE

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 07/03/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

#### РΗ

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for pH in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 06/28/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method	Method Description	Protocol	Laboratory
B260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
B270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
B0B1A	Organochlorine Pesticides (GC)	SW846	TAL NC
B151A	Herbicides (GC)	SW846	TAL NC
6010B	Metals (ICP)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC
1010	Ignilability, Pensky-Martens Closed-Cup Method	SW846	TAL NC
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
9040B	pH	SW846	TAL NC

#### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

# Sample Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

	<del></del>			
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-12752-2	FWG-IDW-TANK1A-GW	Water	06/28/12 10:00	06/28/12 12:45

A

# **Detection Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Lab Sample ID: 240-12752-2

Client Sample ID: FWG-IDW-TANK1A-GW

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D M	lethod	Prep Type
Arsenic	0.016	J	0,50	0.0032	mg/L	1	6	010B	TCLP
Bartum	0.39	JB	10	0.00067	mg/L	1	6	010B	TCLP
Chromium	0.0043	J	0.50	0,0022	mg/L	1	6	010B	TCLP
Flashpoint	>180		1.00	1.00	Degrees F	1	1	010	Total/NA
Cyanide, Total	0.0055	J	0.010	0.0050	mg/L	1	9	012A	Total/NA
Sulfide	1.1	J	3.0	0.94	mg/L	1	9	034	Total/NA
рН	9,44		0.100	0.100		1		040B	Total/NA

# **Client Sample Results**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Client Sample ID: FWG-IDW-TANK1A-GW

Date Collected: 06/28/12 10:00 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-2

Matrix: Water

Analyte	•	(GC/MS) - T Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0,0095	mg/L			07/03/12 22:56	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/03/12 22:56	
2-Butanone (MEK)	0,25	U	0,25	0.029	mg/L			07/03/12 22:56	1
Benzene	0.025	Ü	0.025	0,0065	mg/L			07/03/12 22:56	
Carbon tetrachloride	0,025	U	0,025	0,0065	mg/L			07/03/12 22:56	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/03/12 22:56	1
Chloroform	0.025	ΰ	0.025	0.0080	mg/L			07/03/12 22:56	•
Tetrachloroethene	0,025	U	0.025	0.015	mg/L			07/03/12 22:56	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/03/12 22:56	1
Vinyl chloride	0,025	U	0.025	0.011	mg/L			07/03/12 22:56	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	110	···	80 - 121					07/03/12 22:56	
4-Bromofluorobenzene (Surr)	93		70 - 124					07/03/12 22:56	
Toluene-d8 (Surr)	106		90 - 115					07/03/12 22:56	
Dibromofluoromethane (Surr)	115		84 - 128					07/03/12 22:56	
: Method: 8270C - Semivolatile Orga	nia Campau	nde (CC/MS	E) TOLD						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0,0040	0,00034	mg/L		07/03/12 09:09	07/04/12 14:27	
2,4,5-Trichtorophenol	0,020	Ų	0.020	0.00030	mg/L		07/03/12 09:09	07/04/12 14:27	•
2,4,6-Trichiorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 14:27	,
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 14:27	•
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		07/03/12 09:09	07/04/12 14:27	•
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 14:27	,
Hexachloroethane	0.020	Ü	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 14:27	•
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:09	07/04/12 14:27	•
2-Methylphenol	0,0040	U	0,0040	0,00080	mg/L		07/03/12 09:09	07/04/12 14:27	•
Nitrobenzene	0.0040	Ü	0.0040	0.000040	mg/L		07/03/12 09:09	07/04/12 14:27	
Pentachlorophenol	0.040	U	0.040	0,0024	mg/L		07/03/12 09:09	07/04/12 14:27	•
Pyridine	0.020	υ	0.020	0.00035	mg/L		07/03/12 09:09	07/04/12 14:27	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
2-Fluorobiphenyl (Surr)	46		22 - 110				07/03/12 09:09	07/04/12 14:27	
2-Fluorophenol (Surr)	48		10 - 110				07/03/12 09:09	07/04/12 14:27	
2,4,6-Tribromophenol (Surr)	61		17_117				07/03/12 09:09	07/04/12 14:27	
Nitrobenzene-d5 (Surr)	52	•	29 - 111				07/03/12 09:09	07/04/12 14:27	
Phenol-d5 (Surr)	39		10-110				07/03/12 09:09	07/04/12 14:27	
Terphenyl-d14 (Surr)	77		40 - 119				07/03/12 09:09	07/04/12 14:27	•
- Method: 8081A - Organochlorine F	Pesticides (G	C) - TCLP				-			
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		07/03/12 09:15	07/05/12 22:40	
Endrin	0.0012	U	0.0012	0.000026	mg/L		07/03/12 09:15	07/05/12 22:40	
Heptachlor	0.0012	บ	0.0012	0.000019	mg/L		07/03/12 09:15	07/05/12 22:40	
Heptachlor epoxide	0.0012	บั	0.0012	0.000017	mg/L		07/03/12 09:15	07/05/12 22:40	
gamma-BHC (Lindane)	0.0012	υ	0.0012	0.000015	mg/L		07/03/12 09:15	07/05/12 22:40	
Methoxychior	0.0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/05/12 22:40	
Toxaphene	0.048	ับ	0.048	0.00077	mg/L	٠	07/03/12 09:15	07/05/12 22:40	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
	-								

# **Client Sample Results**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Client Sample ID: FWG-IDW-TANK1A-GW

Date Collected: 06/28/12 10:00 Date Received: 06/28/12 12:45

**General Chemistry** 

Analyte

Sulfide

pН

Flashpoint

Cyanide, Total

Lab Sample ID: 240-12752-2

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	54		46 - 122				07/03/12 09:15	07/05/12 22:40	1
DCB Decachlorobiphenyl	85		34 - 141				07/03/12 09:15	07/05/12 22:40	1
DCB Decachlorobiphenyl	83		34 - 141				07/03/12 09:15	07/05/12 22:40	1
Method: 8151A - Herbicides (G	C) - TCLP								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0,0020	U	0.0020	0,00021	mg/L		07/03/12 09:18	07/07/12 19:18	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 19:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	49		37 - 116				07/03/12 09:18	07/07/12 19:18	1
2,4-Dichlorophenylacetic acid	55		37-116				07/03/12 09:18	07/07/12 19:18	1
2,4-Dichlorophenylacetic acid  Method: 6010B - Metals (ICP) -			37 - 116				07/03/12 09;18	07/07/12 19:18	1
Method: 6010B - Metals (ICP) -	TCLP	Qualifier	37 ₋ 116 RL	MDL	Unit	D	07/03/12 09:18  Prepared	07/07/12 19:18 Analyzed	
Method: 6010B - Metals (ICP) - Analyte	TCLP	********************		MDL 0.0032	Unit mg/L	<u>D</u>			
Method: 6010B - Metals (ICP) - Analyte Arsenic	TCLP Result	********************	RL			<u>D</u>	Prepared	Analyzed	
Method: 6010B - Metals (ICP) -	TCLP Result	J JB	RL 0.50	0.0032	mg/L	<u>D</u>	Prepared 07/03/12 10:01	Analyzed 07/05/12 17:52	Dil Fac
Method: 6010B - Metals (ICP) - Analyte Arsenic Barium	TCLP  Result  0.016  0.39	J JB U	RL 0.50 10	0.0032 0.00067	mg/L mg/L	<u>D</u>	Prepared 07/03/12 10:01 07/03/12 10:01	Analyzed 07/05/12 17:52 07/05/12 17:52	Dil Fac
Method: 6010B - Metals (ICP) - Analyte Arsenic Barium Cadmium Chromium	TCLP  Result 0.016 0.39 0.10 0.0043	J JB U J	RL 0.50 10 0.10	0.0032 0.00067 0.00066	mg/L mg/L mg/L	<u> </u>	Prepared 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01	Analyzed 07/05/12 17:52 07/05/12 17:52 07/05/12 17:52	Dil Fac 1 1 1
Method: 6010B - Metals (ICP) - Analyte Arsenic Barium Cadmium	TCLP  Result 0.016 0.39 0.10 0.0043	J JB U J	RL 0.50 10 0.10 0.50	0.0032 0.00067 0.00066 0.0022	mg/L mg/L mg/L mg/L	<u>D</u>	Prepared 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01	Analyzed 07/05/12 17:52 07/05/12 17:52 07/05/12 17:52 07/05/12 17:52	Dil Fac 1 1 1 1
Method: 6010B - Metals (ICP) - Analyte Arsenic Barium Cadmium Chromium Lead	TCLP  Result 0.016 0.39 0.10 0.0043 0.50	J J B U	RL 0.50 10 0.10 0.50 0.50	0.0032 0.00067 0.00066 0.0022 0.0019	mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	Prepared 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01	Analyzed 07/05/12 17:52 07/05/12 17:52 07/05/12 17:52 07/05/12 17:52 07/05/12 17:52	Dil Fac 1 1 1 1 1 1 1 1 1
Method: 6010B - Metals (ICP) - Analyte Arsenic Barium Cadmium Chromium Lead Selenium	TCLP  Result  0.016  0.39  0.10  0.0043  0.50  0.25  0.50	J J B U	RL 0.50 10 0.10 0.50 0.50 0.25	0.0032 0.00067 0.00066 0.0022 0.0019 0.0041	mg/L mg/L mg/L mg/L mg/L mg/L	<u> </u>	Prepared 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01	Analyzed  07/05/12 17:52  07/05/12 17:52  07/05/12 17:52  07/05/12 17:52  07/05/12 17:52  07/05/12 17:52	Dil Fac 1 1 1 1 1 1 1 1 1 1

RL,

1.00

0.010

0.100

3.0

MDL Unit

0,0050 mg/L

0.100 SU

0.94

1.00 Degrees F

P*r*epared

07/02/12 09:10

07/03/12 07:56

Analyzed

07/02/12 11:07 07/02/12 11:06

07/03/12 13:48

06/28/12 16:20

Dil Fac

1

Result Qualifier

>180

0.0055 J

9.44

1.1 J

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP (OH) - IDW

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

				Percent Sur	rogate Reco	very (Acceptance Limits)
		12DCE	BFB	TOL	DBFM	
Lab Sample ID	Client Sample ID	(80-121)	(70-124)	(90-115)	(84-128)	
LCS 240-49814/10	Lab Control Sample	110	93	107	119	

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-dB (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)				
		12DCE	BFB	TOL	DBFM	
Lab Sample ID	Client Sample ID	(80-121)	(70-124)	(90-115)	(84-128)	
240-12752-2	FWG-IDW-TANK1A-GW	110	93	106	115	
LB 240-49660/1-A MB	Method Blank	107	92	105	113	

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

				Percent Su	rrogate Recov	ery (Accepta	nce Limits)
		FBP	2FP	TBP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)
LCS 240-49701/5-A	Lab Control Sample	48	51	71	52	42	74
MB 240-49701/4-A	Method Blank	47	52	59	52	46	79

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ ≈ Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)						
		FBP	2FP	TBP	NBZ	PHL	TPH	
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)	
240-12752-2	FWG-IDW-TANK1A-GW	46	4B	61	52	39	77	

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

TestAmerica Canton 7/9/2012

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Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP (OH) - IDW

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TCX1	TCX2	DCB1	DCB2		
Lab Sample ID	Client Sample ID	(46-122)	(46-122)	(34-141)	(34-141)		
LCS 240-49705/B-A	Lab Control Sample	70	65	89	93		
MB 240-49705/7-A	Method Blank	65	61	93	92		

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8081A - Organochlorine Pesticides (GC)

Prep Type: TCLP Matrix: Water

PLANTAGE AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRESS AND ADDRE				Percent Su	rrogate Reco	overy (Acceptance Limits)
***************************************		TCX1	TCX2	DCB1	DCB2	
Lab Sample ID	Client Sample ID	(46-122)	(46-122)	(34-141)	{34-141}	
240-12752-2	FWG-IDW-TANK1A-GW	59	54	B5	B3	

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Water Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		DCPA1	DCPA2						
Lab Sample ID	Client Sample ID	(37-116)	(37-116)						
LCS 240-49707/8-A	Lab Control Sample	55	66						
MB 240-49707/7-A	Method Blank	51	57						
Surrogate Legend									

Method: 8151A - Herbicides (GC)

Matrix: Water Prep Type: TCLP

				Percent Surrogate Recovery (Acceptance Limits)
		DCPA1	DCPA2	
Lab Sample ID	Client Sample ID	(37-116)	(37-116)	
240-12752-2	FWG-IDW-TANK1A-GW	49	55	A manufacture of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 240-49814/10

Matrix: Water

Analysis Batch: 49814

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Analysis Buton. 40014	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	1.00	1.06		mg/L		106	71 - 133	Wallette Walter Laboratory
1,2-Dichloroethane	1.00	0,970		mg/L		97	81 - 114	
2-Butanone (MEK)	2.00	1.91		mg/L		95	49 - 120	
Benzene	1.00	0.955		mg/L		96	84 _ 120	
Carbon tetrachloride	1.00	1,09		mg/L		109	54 - 122	
Chłorobenzene	1.00	0.950		mg/L		95	B6 - 111	
Chloroform	1.00	0.960		mg/L		96	87 - 123	
Tetrachloroethene	1.00	1.04		mg/L		104	79 - 134	
Trichloroethene	1.00	1,05		mg/L		105	78 - 130	
Vinyl chloride	1.00	0.955		mg/L	•	96	56 _ 111	

LCS LCS %Recovery Qualifier Surrogate Limits 1,2-Dichloroethane-d4 (Surr) 110 80 - 121 4-Bromofluorobenzene (Surr) 93 70 - 124 Toluene-d8 (Surr) 107 90 - 115 Dibromofluoromethane (Surr) 119 84 - 128

Lab Sample ID: LB 240-49660/1-A MB

Matrix: Water

Analysis Batch: 49814

Client Sample ID: Method Blank

Prep Type: TCLP

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/03/12 21:21	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/03/12 21:21	1
2-Butanone (MEK)	0.25	U	0,25	0.029	mg/L			07/03/12 21:21	1
Benzene	0.025	Ü	0.025	0.0065	mg/L			07/03/12 21:21	1
Carbon tetrachloride	0.025	U	0.025	0,0065	mg/L		•	07/03/12 21:21	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/03/12 21:21	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/03/12 21:21	1
Tetrachloroethene	0.025	U .	0.025	0.015	mg/L			07/03/12 21:21	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/03/12 21:21	1
Vinyl chloride	0.025	U	0,025	0.011	mg/L			07/03/12 21:21	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1.2 Diablamathana d4 (Cure)	107		PO 424			-		07/02/42 24:24	

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 _ 121			07/03/12 21:21	1
4-Bromofluorobenzene (Surr)	92		70 124			07/03/12 21:21	1
Toluene-d8 (Surr)	105		90 _ 115			07/03/12 21:21	1
Dibromofluoromethane (Surr)	113		84 - 128			07/03/12 21:21	1

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-49701/4-A Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA Prep Batch: 49701 Analysis Batch: 49827

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0,0040	0.00034	mg/L	 ,,-	07/03/12 09:09	07/04/12 12:12	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:09	07/04/12 12:12	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1

TestAmerica Canton

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# Project/Site: RVAAP (OH) - IDW

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49701/4-A	Client Sample ID: Method Blank
Matrix: Water	Prep Type: Total/NA

Analysis Batch: 49827 Prep Batch: 49701

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 12:12	1
Hexachlorobenzene	0.020	υ	0.020	0.00010	mg/L		07/03/12 09:09	07/04/12 12:12	1
Hexachlorobutadiene	0.020	υ	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 12:12	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1
3 & 4 Methylphenol	0.040	υ	0.040	0,00075	mg/L		07/03/12 09:09	07/04/12 12:12	1
2-Methylphenol	0.0040	υ	0.0040	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1
Nitrobenzene	0,0040	U	0,0040	0.000040	mg/L		07/03/12 09:09	07/04/12 12:12	1
Pentachlorophenol	0.040	υ	0.040	0.0024	mg/L		07/03/12 09:09	07/04/12 12:12	1
Pyridine	0.020	υ	0.020	0.00035	mg/L		07/03/12 09:09	07/04/12 12:12	1

	MB MB				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	47	22 - 110	07/03/12 09:09	07/04/12 12:12	
2-Fluorophenol (Surr)	52	10 - 110	07/03/12 09:09	07/04/12 12:12	1
2,4,6-Tribromophenol (Surr)	59	17 - 117	07/03/12 09:09	07/04/12 12:12	1
Nitrobenzene-d5 (Surr)	52	29 - 111	07/03/12 09:09	07/04/12 12:12	1
Phenol-d5 (Surr)	46	10 - 110	07/03/12 09:09	07/04/12 12:12	1
Terphenyl-d14 (Surr)	79	40 119	07/03/12 09:09	07/04/12 12:12	1

Lab Sample ID: LCS 240-49701/5-A

Matrix: Water

Analysis Batch: 49827

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49701

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
2,4,5-Trichlorophenol	0.0800	0.0538		mg/L		67	35 _ 111	
2,4,6-Trichlorophenol	0.0800	0,0505		mg/L		63	32 - 110	
2,4-Dinitrotoluene	0.0800	0.0599		mg/L		75	45 - 126	
Hexachlorobenzene	0.0800	0.0559		mg/L		70	47 - 116	
Hexachlorobutadiene	0.0800	0.0416		mg/L		52	10 - 110	
Hexachloroethane	0.0800	0,0452		mg/L		57	10 - 110	
3 & 4 Methylphenol	0.160	0.0936		mg/L		59	27 - 110	•
2-Methylphenol	0.0800	0.0524		mg/L		66	24 - 110	
Nitrobenzene	0.0800	0.0434		mg/L		54	35 _ 117	
Pentachlorophenol	0.0800	0.0429		mg/L		54	12 - 110	
Pyridine	0.0800	0.0444		mg/L		56	10 - 110	
I .								

***************************************		LCS	LCS	
*	Surrogate	%Recovery	Qualifier	Limits
-	2-Fluorobiphenyl (Surr)	48		22 - 110
]	2-Fluorophenol (Surr)	51		10_110
1	2,4,6-Tribromophenol (Surr)	71		17 - 117
1	Nitrobenzene-d5 (Surr)	52		29 _ 111
	Phenol-d5 (Surr)	42		10-110
ı	Terphenyl-d14 (Surr)	74		40 - 119

TestAmerica Canton 7/9/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

#### Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-49705/7-A

Matrix: Water

Analysis Batch: 49922

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49705

	1110	****							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	Ũ	0.012	0.000079	mg/L		07/03/12 09:15	07/06/12 00:21	1
Endrin	0,0012	U	0.0012	0.000026	mg/L		07/03/12 09:15	07/06/12 00:21	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		07/03/12 09:15	07/06/12 00:21	1
Heptachlor epoxide	0.0012	U	0,0012	0.000017	mg/L		07/03/12 09:15	07/06/12 00:21	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		07/03/12 09:15	07/06/12 00:21	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/06/12 00:21	1
Toxaphene	0.048	U	0.048	0,00077	mg/L		07/03/12 09:15	07/06/12 00:21	1

MB MB

MR MR

Surrogate	%Recovery (	Qualifier Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	65	46 - 122	07/03/12 09:15	07/06/12 00:21	1
Tetrachloro-m-хуlепе	61	46 - 122	07/03/12 09:15	07/06/12 00:21	1
DCB Decachlorobiphenyl	93	34 _ 141	07/03/12 09:15	07/06/12 00:21	1
DCB Decachlorobiphenyl	92	34 - 141	07/03/12 09:15	07/06/12 00:21	1

Lab Sample ID: LCS 240-49705/8-A

Matrix: Water

Analysis Batch: 49922

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 49705

Spike LCS LCS %Rec. Result Qualifier %Rec Limits Analyte Added Unit Endrin 0.00200 0.00193 mg/L 96 59 - 136 Heptachlor 0.00200 0.00139 69 63 - 123 mg/L Heptachlor epoxide 0.00200 106 59 .. 141 0.00212 mg/L gamma-BHC (Lindane) 0.00200 0.00204 mg/L 102 59 _ 137 Methoxychlor 0.00400 0.00366 mg/L 42 - 141

LCS LCS

MB MB

Result Qualifier

Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene	70		46 - 122
Tetrachloro-m-xylene	65		46 - 122
DCB Decachlorobiphenyl	89		34 - 141
DCB Decachlorobi <b>p</b> henyl	93		34 - 141

#### Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-49707/7-A

Matrix: Water

Analyte

Analysis Batch: 50094

Client Sample ID: Method Blank Prep Type: Total/NA

Analyzed

Prepared

Prep Batch: 49707

Dil Fac

2,4-D	0.0020	U	0.0020	0.00021	mg/L	 07/03/12 09:18	07/07/12 21:18	1
Silvex (2,4,5-TP)	0.00050	U	0,00050	0.00010	mg/L	07/03/12 09:18	07/07/12 21:18	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	51		37 - 116			07/03/12 09:18	07/07/12 21:18	1
2,4-Dichlorophenylacetic acid	57		37 - 116			07/03/12 09:18	07/07/12 21:18	1

RL

MDL Unit

TestAmerica Canton 7/9/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

#### Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 240-497 Matrix: Water Analysis Batch: 50094	707/8-A						Client	Sample	ID: Lab Control Samp Prep Type: Total/N Prep Batch: 4970	Α
			Spike	LCS	LCS				%Rec.	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
2,4-D			0.0200	0.0135		mg/L		67	35 - 136	_
Silvex (2,4,5-TP)			0.00500	0,00325		mg/L		65	46 _ 112	
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
2,4-Dichlorophenylacetic acid	55	- Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction	37 _ 116							
2,4-Dichlorophenylacetic acid	66		37 - 116							

#### Method: 6010B - Metals (ICP)

_	
Lab Sample ID: MB 240-49727/2-A	Client Sample ID: Method Blank
Matrix: Water	Prep Type: Total/NA
Analysis Batch: 50003	Prep Batch: 49727
MB MB	

	IND	,n_							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:20	1
Barium	10	U	10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:20	1
Cadmium	0.10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 17:20	1
Chromium	0.50	Ü	0.50	0.0022	mg/L	•	07/03/12 10:01	07/05/12 17:20	1
Lead	0.50	υ	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:20	1
Selenium	0.25	υ	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 17:20	1
Silver	0.50	υ	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:20	1
L									

Lab Sample ID: LCS 240-49727/3-A					Clien	t Sampi	e ID: Lab C	ontrol Sample
Matrix: Water							Prep T	ype: Total/NA
Analysis Batch: 50003							Prep	Batch: 49727
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Límits	
Arsenic	2.00	2.16		mg/L		108	50 - 150	#22

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Límits
Arsenic	2.00	2.16		mg/L		108	50 _ 150
Barium	2.00	2.22	J	mg/L		111	50 - 150
Cadmium	0.0500	0.0524		mg/L		105	50 150
Chromium	0.200	0.206		mg/L		103	50 - 150
Lead	0,500	0,485	J	mg/L		97	50 - 150
Selenium	2.00	2.16		mg/L		108	50 - 150
Silver	0.0500	0.0551	J	mg/L		110	50 _ 150

Lab Sample ID: LB 240-49653/1-D LB	Client Sample ID: Method Blank
Matrix: Water	Prep Type: TCLP

Matrix: Water		Prep Type: ICLP
Analysis Batch: 50003		Prep Batch: 49727

	LB	LB		4					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:16	1
Barium	0,00405	J	10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:16	1
Cadmium	0.10	U	0.10	0,00066	mg/L		07/03/12 10:01	07/05/12 17:16	1
Chromium	0,50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:16	1
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:16	1
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 17:16	1
Silver	0.50		0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:16	1

180

TestAmerica Canton 7/9/2012

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 49732

Prep Type: TCLP

Prep Batch: 49732

Prep Type: Total/NA

Prep Batch: 49732

Project/Site: RVAAP (OH) - IDW

#### Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-49732/2-A

Matrix: Water

Analyte

Mercury

Analysis Batch: 49962

MB MB

Result Qualifier 0.0020 U

RL. 0.0020

Spike Added

0.00500

MDL Unit 0,00012 mg/L

LCS LCS

0.00452

Result Qualifier

Unit

mg/L

Prepared 07/03/12 14:30

Analyzed 07/05/12 13:46

Client Sample ID: Lab Control Sample

Limits

50 _ 150

Dil Fac

Lab Sample ID: LCS 240-49732/3-A

Matrix: Water

Analysis Batch: 49962

Analyte Mercury

Lab Sample ID: LB 240-49653/1-E LB

Matrix: Water

Analysis Batch: 49962

LB LB

Analyte Mercury

Result Qualifier

0.0020 U

RL 0.0020

0,00012 mg/L

MDL Unit

D

Prepared 07/03/12 14:30

%Rec

90

Analyzed 07/05/12 13:45

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

Dil Fac

#### Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 240-49569/1

Matrix: Water

Analysis Batch: 49569

Analyte

Flashpoint

Spike Added

81.0

LCS LCS Result Qualifier 82.00

LCS LCS

MRL MRL

Qualifier

Result

0,0102

0.0465

Result Qualifier

Unit Degrees F %Rec

%Rec. Limits 101 97 _ 103

#### Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-49572/1-A

Matrix: Water

Analysis Batch: 49633

MB MB

Analyte Cyanide, Total 0.010 U

Result Qualifier

RL 0.010

Spike

Added

0.0449

Spike Added

0,0100

MDL Unit 0.0050 mg/L

Unit

mg/L

Prepared Analyzed 07/02/12 09:10 07/02/12 13:00

Dil Fac

Prep Type: Total/NA Prep Batch: 49572

Lab Sample ID: LCS 240-49572/2-A

Matrix: Water

Analysis Batch: 49633

Cyanide, Total

Lab Sample ID: MRL 240-49633/12 MRL

Matrix: Water Analysis Batch: 49633

Analyte

Cyanide, Total

Client Sample ID: Lab Control Sample

%Rec

103

Prep Type: Total/NA

Prep Batch: 49572 %Rec.

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Limits

69 - 118

%Rec.

Unit %Rec Limits 102 mg/L 70 - 130

> TestAmerica Canton 7/9/2012

Client: Environmental Quality Mgt., Inc.

TestAmerica Job ID: 240-12752-2

Project/Site: RVAAP (OH) - IDW

Lab Sample ID: MB 240-49677/14-A

Matrix: Water

Analysis Batch: 49769

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49677

мв мв Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Sulfide 3.0 U 3.0 0.94 mg/L 07/03/12 07:56 07/03/12 13:48

Lab Sample ID: LCS 240-49677/15-A

Matrix: Water

Analysis Batch: 49769

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Prep Batch: 49677

Prep Type: Total/NA

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits Sulfide 8.27 8.67 mg/L 105 70 - 130

Method: 9040B - pH

Lab Sample ID: LCS 240-49216/2

Matrix: Water

Analysis Batch: 49216

LCS LCS %Rec. Spike Analyte Added Result Qualifier Unit %Rec Limits pН 7.49 7,490 SU 100 97 .. 103

# **QC Association Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

GC/MS VOA			and the deal what of the office of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second		
Leach Batch: 49660					
— Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	1311	<del></del>
LB 240-49660/1-A MB	Method Blank	TCLP	Water	1311	
– Analysis Batch: 49814					
_	Client Sample ID	Duan Toma	84 adulu	Markhad	Duan Batak
Lab Sample ID 240-12752-2	FWG-IDW-TANK1A-GW	Prep Type TCLP	Matrix Water	Method 8260B	Prep Batch
LB 240-49660/1-A MB	Method Blank	TCLP	Water	8260B	
LCS 240-49814/10	Lab Control Sample	Total/NA	Water	8260B	
LC3 240-49014710	Lab Control Sample	Total/NA	AAdrei	02005	
GC/MS Semi VOA		- AMERICAN STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE O			
Leach Batch: 49653					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	1311	
Prep Batch: 49701					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	3510C	49653
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Water	3510C	•
MB 240-49701/4-A	Method Blank	Total/NA	Water	3510C	
Analysis Batch: 49827					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	8270C	49701
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Water	8270C	49701
MB 240-49701/4-A	Method Blank	Total/NA	Water	8270C	49701
GC Semi VOA				Talkonto e de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de	
Leach Batch: 49653					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	1311	4+6
Prep Batch: 49705					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	3520C	49653
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49705/7-A	Method Blank	Total/NA	Water	3520C	
Prep Batch: 49707					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	8151A	49653
LCS 240-49707/8-A	Lab Control Sample	Total/NA	Water	8151A	
MB 240-49707/7-A	Method Blank	Total/NA	Water	8151A	
Analysis Batch: 49922					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	8081A	49705
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	8081A	49705
MB 240-49705/7-A	Method Blank	Total/NA	Water	8081A	49705

# **QC Association Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

LCS 240-49707/8-A	TANK1A-GW I Sample nk  pie ID  TANK1A-GW nk nk  ple ID  TANK1A-GW nk I Sample nk  ple ID  TANK1A-GW	Prep Type TCLP Total/NA Total/NA  Prep Type TCLP TCLP TCLP TCLP TCLP TCLP TCLP TCLP	Matrix Water Water Water  Matrix Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water	Method 8151A 8151A 8151A 8151A 8151A  Method 1311 1311 1311 1311 1311  Method 3010A 3010A 3010A 3010A 3010A	Prep Batcl 49653 49653 Prep Batcl 49653
240-12752-2 LCS 240-49707/8-A MB 240-49707/7-A Method Bla  Metals  Leach Batch: 49653  Lab Sample ID 240-12752-2 LB 240-49653/1-E LB Method Bla  Prep Batch: 49727  Lab Sample ID 240-12752-2 LB 240-49653/1-D LB LCS 240-49727/3-A MB 240-49732/2-A  MB 240-49653/1-E LB Method Bla  Prep Batch: 49732  Lab Sample ID 240-12752-2 LB 240-49727/3-A Method Bla  LCS 240-49732/3-A MB 240-49732/2-A  MB 240-49732/2-A  Method Bla  Analysis Batch: 49962  Lab Sample ID 240-12752-2 LB 240-49732/3-A MB 240-49732/3-A MB 240-49732/3-A MB 240-49732/3-A MB 240-49732/3-A MB 240-49653/1-E LB Method Bla  Analysis Batch: 50003  Lab Sample ID 240-12752-2 LB 240-49653/1-B LB Method Bla  CS 240-49732/3-A Method Bla  Analysis Batch: 50003  Lab Sample ID 240-12752-2 LB 240-49653/1-D LB LCS 240-49732/3-A Method Bla  Analysis Batch: 50003  Lab Sample ID 240-12752-2 LB 240-49653/1-D LB LCS 240-49727/3-A Method Bla  Method Bla  Method Bla  Method Bla  Analysis Batch: 50003  Lab Sample ID 240-12752-2 LB 240-49653/1-D LB LCS 240-49727/3-A Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla	TANK1A-GW I Sample nk  pie ID  TANK1A-GW nk nk  ple ID  TANK1A-GW nk I Sample nk  ple ID  TANK1A-GW	TCLP Total/NA Total/NA  Prep Type TCLP TCLP TCLP TCLP TCLP Total/NA Total/NA  Prep Type TCLP TCLP Total/NA Total/NA	Matrix Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water	8151A 8151A 8151A 8151A Method 3311 1311 1311 1311 Method 3010A 3010A 3010A 3010A 3010A 7470A	49707 49707 49707 Prep Batcl 49653 49653
MB 240-49707/7-A  Method Bla  Metals  Leach Batch: 49653  Lab Sample ID 240-12752-2  LB 240-49653/1-E LB  Method Bla  LB 240-49653/1-E LB  Method Bla  Prep Batch: 49727  Lab Sample ID 240-12752-2  LB 240-49653/1-D LB  LCS 240-49727/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/3-A  MB 240-49727/3-A  MB 240-49727/3-A  MB 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla	ple ID TANK1A-GW nk ple ID TANK1A-GW ink I Sample ink ple ID TANK1A-GW	Prep Type TCLP TCLP TCLP TCLP TCLP TCLP TCLP TCLP	Matrix Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water Water	Method 1311 1311 1311  Method 3010A 3010A 3010A 3010A  Method 7470A 7470A	Prep Batcl  Prep Batcl  49653  49653  Prep Batcl  49654
Lab Sample ID	ple ID TANK1A-GW nk nk ple ID TANK1A-GW nk I Sample nk ple ID TANK1A-GW	Prep Type TCLP TCLP TCLP TCLP TCLP TCLP TCLP Total/NA Total/NA Prep Type TCLP TCLP TCLP TCLP TCLP TCLP	Matrix Water Water Water  Matrix Water Water Water Water Water Water Water Water Water Water Water	Method 1311 1311 1311  Method 3010A 3010A 3010A 3010A  Method 7470A 7470A	Prep Batcl Prep Batcl 49653 49653
Lab Sample ID Client Sam Lab Sample ID Client Sam Lab Sample ID Client Sam Lab 240-49653/1-D LB Method Bla LB 240-49653/1-E LB Method Bla Prep Batch: 49727  Lab Sample ID Client Sam LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla CS 240-49732/3-A Lab Contro MB 240-49732/3-A Lab Contro MB 240-49732/3-A Lab Contro MB 240-49732/3-A Lab Contro MB 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla CS 240-49732/3-A Method Bla LCS 240-49732/3-A Lab Contro MB 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49653/1-D LB Method Bla LCS 240-49653/1-D LB Method Bla LCS 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/3-A Method Bla LCS 240-49727/3-A Method Bla LCS 240-49727/3-A Method Bla	TANK1A-GW nk  ple ID  TANK1A-GW nk I Sample nk  ple ID  TANK1A-GW	TCLP TCLP TCLP  Prep Type TCLP Total/NA Total/NA  Prep Type TCLP TCLP TCLP TCLP TCLP TCLP TCLP	Water Water Water  Matrix Water Water Water Water Water Water Water Water Water Water Water Water	1311 1311 1311 1311 Method 3010A 3010A 3010A Method 7470A 7470A	Prep Batcl 49653 49653 Prep Batcl 49653
Lab Sample ID Client Sam Lab Sample ID Client Sam Lab Sample ID Hethod Bla LB 240-49653/1-E LB Method Bla LB 240-49653/1-E LB Method Bla Prep Batch: 49727  Lab Sample ID Client Sam LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla LCS 240-49732/3-A Lab Contro LB 240-49653/1-E LB Method Bla LCS 240-49732/3-A Lab Contro MB 240-49732/3-A Lab Contro MB 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49653/1-D LB Method Bla LCS 240-49653/1-D LB Method Bla LCS 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Method Bla LCS 240-49727/3-A Method Bla LCS 240-49727/3-A Method Bla LCS 240-49727/3-A Method Bla	TANK1A-GW nk  ple ID  TANK1A-GW nk I Sample nk  ple ID  TANK1A-GW	TCLP TCLP TCLP  Prep Type TCLP Total/NA Total/NA  Prep Type TCLP TCLP TCLP TCLP TCLP TCLP TCLP	Water Water Water  Matrix Water Water Water Water Water Water Water Water Water Water Water Water	1311 1311 1311 1311 Method 3010A 3010A 3010A Method 7470A 7470A	Prep Batcl 49653 49653 Prep Batcl 49653
Client Sample ID   Client Sample ID   EWG-IDW-	TANK1A-GW nk  ple ID  TANK1A-GW nk I Sample nk  ple ID  TANK1A-GW	TCLP TCLP TCLP  Prep Type TCLP Total/NA Total/NA  Prep Type TCLP TCLP TCLP TCLP TCLP TCLP TCLP	Water Water Water  Matrix Water Water Water Water Water Water Water Water Water Water Water Water	1311 1311 1311 1311 Method 3010A 3010A 3010A Method 7470A 7470A	49653 49653 Prep Batch 49653
240-12752-2  LB 240-49653/1-E LB  Prep Batch: 49727  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  LCS 240-49727/2-A  Method Bla  Prep Batch: 49727  Lab Sample ID  240-12752-2  LB 240-49727/2-A  Method Bla  Prep Batch: 49732  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  LCS 240-49732/3-A  MB 240-49732/3-A  MB 240-49732/2-A  Method Bla  Analysis Batch: 49962  LB 240-49653/1-E LB  LCS 240-49732/3-A  Method Bla  LCS 240-49732/3-A  Method Bla  Analysis Batch: 49962  LB 240-49653/1-E LB  LCS 240-49732/3-A  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla	TANK1A-GW nk  ple ID  TANK1A-GW nk I Sample nk  ple ID  TANK1A-GW	TCLP TCLP TCLP  Prep Type TCLP Total/NA Total/NA  Prep Type TCLP TCLP TCLP TCLP TCLP TCLP TCLP	Water Water Water  Matrix Water Water Water Water Water Water Water Water Water Water Water Water	1311 1311 1311 1311 Method 3010A 3010A 3010A Method 7470A 7470A	Prep Batcl 49653 49653 Prep Batcl 49653
LB 240-49653/1-E LB Method Bla  Prep Batch: 49727  Lab Sample ID Client Sam  240-12752-2 FWG-IDW- LB 240-49653/1-D LB Method Bla  LCS 240-49727/2-A Method Bla  Prep Batch: 49732  Lab Sample ID Client Sam  Prep Batch: 49732  Lab Sample ID Client Sam  240-12752-2 FWG-IDW- LB 240-49653/1-E LB Method Bla  LCS 240-49732/3-A Method Bla  Analysis Batch: 49962  Lab Sample ID Client Sam  240-12752-2 FWG-IDW- LB 240-49653/1-E LB Method Bla  LCS 240-49732/3-A Method Bla  LCS 240-49732/3-A Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam  Analysis Batch: 50003  Lab Sample ID Client Sam  Experimental Control  Analysis Batch: 50003  Lab Sample ID Client Sam  FWG-IDW-  Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam  FWG-IDW-  Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam  FWG-IDW-  Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam  FWG-IDW-  Analysis Batch: 50003  Lab Sample ID Client Sam  FWG-IDW-  Analysis Batch: 50003  Lab Sample ID Client Sam  FWG-IDW-  Analysis Batch: 50003	nk  ple ID  TANK1A-GW  I Sample  Ink  ple ID  TANK1A-GW	TCLP TCLP  Prep Type TCLP Total/NA Total/NA  Prep Type TCLP TCLP TCLP TCLP TCLP TCLP	Water Water Water Water Water Water Water Water Water Water Water Water Water Water	Method 3010A 3010A 3010A 3010A 3010A 7010A	4965: 4965: Prep Batcl 4965:
Lab Sample ID   Client Sam	ple ID TANK1A-GW ink I Sample ink ple ID TANK1A-GW	Prep Type TCLP TCLP Total/NA Total/NA  Prep Type TCLP TCLP TCLP Total/NA	Matrix Water Water Water Water Water Water Water Water Water Water Water	Method 3010A 3010A 3010A 3010A 3010A  Method 7470A 7470A	4965: 4965: Prep Batcl 4965:
Prep Batch: 49727  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  LCS 240-49727/2-A  Method Bla  Prep Batch: 49732  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  LCS 240-49732/3-A  MB 240-49732/2-A  Method Bla  Analysis Batch: 49962  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  Method Bla  Analysis Batch: 49962  Lab Sample ID  240-12752-2  LB 240-49732/3-A  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49732/3-A  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla	ple ID TANK1A-GW ink I Sample ink ple ID TANK1A-GW	Prep Type TCLP TCLP Total/NA Total/NA  Prep Type TCLP TCLP TCLP Total/NA	Matrix Water Water Water Water Water Water  Matrix Water Water	Method 3010A 3010A 3010A 3010A Method 7470A 7470A	49653 49653 Prep Batcl 49653
Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  LCS 240-49727/3-A  MB 240-49727/2-A  Method Bla  Prep Batch: 49732  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  LCS 240-49732/3-A  MB 240-49732/2-A  Method Bla  Analysis Batch: 49962  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  Method Bla  Analysis Batch: 49962  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49732/2-A  Method Bla  Client Sam  PWG-IDW-  Method Bla  CS 240-49732/2-A  Method Bla  CS 240-49732/2-A  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  LCS 240-49653/1-D LB  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  Method Bla  LCS 240-49727/3-A  Method Bla  Method Bla  LCS 240-49727/3-A  Method Bla  Method Bla  LCS 240-49727/3-A  Method Bla	TANK1A-GW ink I Sample ink  ple ID  TANK1A-GW ink	TCLP TCLP Total/NA Total/NA  Prep Type TCLP TCLP Total/NA	Water Water Water Water  Matrix Water  Water	3010A 3010A 3010A 3010A Method 7470A 7470A	49653 49653 Prep Batcl 49653
240-12752-2 FWG-IDW- LB 240-49653/1-D LB Method Bla LCS 240-49727/2-A Method Bla  Prep Batch: 49732  Lab Sample ID Client Sam Lab Contro MB 240-49653/1-E LB Method Bla LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bla  Analysis Batch: 49962  Lab Sample ID Client Sam Lab Contro MB 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla LCS 240-49732/3-A Method Bla Analysis Batch: 50003  Lab Sample ID Client Sam Analysis Batch: 50003  Lab Sample ID Client Sam MB 240-49653/1-D LB Method Bla LCS 240-49653/1-D LB Method Bla LCS 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/3-A Lab Contro MB 240-49727/3-A Method Bla LCS 240-49727/3-A Method Bla	TANK1A-GW ink I Sample ink  ple ID  TANK1A-GW ink	TCLP TCLP Total/NA Total/NA  Prep Type TCLP TCLP Total/NA	Water Water Water Water  Matrix Water  Water	3010A 3010A 3010A 3010A Method 7470A 7470A	Prep Batch 49653 49653 Prep Batch 49653 49653
LB 240-49653/1-D LB  LCS 240-49727/2-A  MB 240-49727/2-A  Method Bla  Prep Batch: 49732  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  LCS 240-49732/2-A  Method Bla  Analysis Batch: 49962  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  Method Bla  Client Sam  PWG-IDW-  Method Bla  Analysis Batch: 49962  Lab Sample ID  Client Sam  Analysis Batch: 49962  LB 240-49653/1-E LB  Method Bla  LCS 240-49732/2-A  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-A  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-A  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla	nk I Sample nk <b>ple ID</b> TANK1A-GW nk	TCLP Total/NA Total/NA  Prep Type TCLP TCLP Total/NA	Water Water Water  Matrix  Water  Water	3010A 3010A 3010A Method 7470A 7470A	Prep Batcl 4965
LCS 240-49727/3-A  MB 240-49727/2-A  Method Bla  Prep Batch: 49732  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  LCS 240-49732/3-A  Method Bla  Analysis Batch: 49962  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  Method Bla  Analysis Batch: 49962  Lab Sample ID  Client Sam  240-12752-2  FWG-IDW-  Method Bla  LCS 240-49732/3-A  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla	I Sample ink ple ID TANK1A-GW ink	Total/NA Total/NA  Prep Type TCLP TCLP Total/NA	Water Water  Matrix  Water  Water	3010A 3010A Method 7470A 7470A	Prep Batcl 4965:
Prep Batch: 49732  Lab Sample ID 240-12752-2  LB 240-49653/1-E LB  LCS 240-49732/3-A  Analysis Batch: 49962  Lab Sample ID 240-12752-2  LB 240-49653/1-E LB  Method Bla  Analysis Batch: 49962  Lab Sample ID 240-12752-2  LB 240-49653/1-E LB  LCS 240-49732/3-A  Method Bla  Analysis Batch: 50003  Lab Sample ID 240-12752-2  LB 240-49653/1-D LB  Analysis Batch: 50003  Lab Sample ID 240-12752-2  LB 240-49653/1-D LB  LCS 240-49653/1-D LB  LCS 240-49727/3-A  Method Bla  Method Bla  Method Bla  Analysis Batch: 50003	nk ple ID TANK1A-GW nk	Total/NA  Prep Type TCLP TCLP Total/NA	Water  Matrix  Water  Water	3010A  Method  7470A  7470A	49653
Prep Batch: 49732  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  LCS 240-49732/3-A  Analysis Batch: 49962  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  Method Bla  LCS 240-49732/3-A  Method Bla  Analysis Batch: 49962  Lab Sample ID  Client Sam  FWG-IDW-  Method Bla  LCS 240-49732/3-A  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  LCS 240-49653/1-D LB  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  LCS 240-49727/3-A  Method Bla  Method Bla  LCS 240-49727/3-A  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla	ple ID TANK1A-GW nk	Prep Type TCLP TCLP TCLP Total/NA	Matrix Water Water	<b>Method</b> 7470A 7470A	49653
Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  LCS 240-49732/3-A  Analysis Batch: 49962  Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  Method Bla  Analysis Batch: 49962  Lab Sample ID  Client Sam  PWG-IDW-  Method Bla  LCS 240-49653/1-E LB  Method Bla  LCS 240-49732/2-A  Method Bla  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  LCS 240-49653/1-D LB  LCS 240-49653/1-D LB  LCS 240-49727/3-A  Method Bla  Method Bla  LCS 240-49727/3-A  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla  Method Bla	TANK1A-GW nk	TCLP TCLP Total/NA	Water Water	7470A 7470A	49653
240-12752-2 FWG-IDW- LB 240-49653/1-E LB Method Bia LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bia Analysis Batch: 49962  Lab Sample ID Client Sam Lab Contro MB 240-49653/1-E LB Method Bia LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bia Analysis Batch: 50003  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- MEthod Bia LCS 240-49653/1-D LB Method Bia LCS 240-49727/3-A Lab Contro MB 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bia	TANK1A-GW nk	TCLP TCLP Total/NA	Water Water	7470A 7470A	49653
LB 240-49653/1-E LB Method Bla LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bla  Analysis Batch: 49962  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- LB 240-49653/1-E LB Method Bla LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla	nk	TCLP Total/NA	Water	7470A	
LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bla  Analysis Batch: 49962  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- MB 240-49653/1-E LB Method Bla LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- MB 240-49653/1-D LB Method Bla LCS 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla		Total/NA			49653
Analysis Batch: 49962  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- LB 240-49653/1-E LB Method Bla LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bla Analysis Batch: 50003  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/3-A Method Bla	¹ Sample		Water	74704	
Analysis Batch: 49962  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- LB 240-49653/1-E LB Method Bla LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla		Total/NA	******	7470A	
Lab Sample ID  240-12752-2  LB 240-49653/1-E LB  LCS 240-49732/3-A  MB 240-49732/2-A  Analysis Batch: 50003  Lab Sample ID  240-12752-2  LB 240-49653/1-D LB  LCS 240-49727/3-A  MB 240-49727/2-A  MEthod Bla	nk	(Otal/NA	Water	7470A	
240-12752-2 FWG-IDW- LB 240-49653/1-E LB Method Bla LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla					
LB 240-49653/1-E LB Method Bla LCS 240-49732/3-A Lab Contro MB 240-49732/2-A Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam 240-12752-2 FWG-IDW LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla	ple ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49732/3-A Lab Control MB 240-49732/2-A Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Control MB 240-49727/2-A Method Bla	TANK1A-GW	TCLP	Water	. 7470A	49732
MB 240-49732/2-A Method Bla  Analysis Batch: 50003  Lab Sample ID Client Sam 240-12752-2 FWG-IDW LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla	nk	TCLP	Water	7470A	49732
Analysis Batch: 50003  Lab Sample ID Client Sam 240-12752-2 FWG-IDW- LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla	Sample	Total/NA	Water	7470A	49732
Lab Sample ID Client Sam 240-12752-2 FWG-IDW- LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla	nk .	Total/NA	Water	7470A	49732
240-12752-2 FWG-IDW- LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla					
LB 240-49653/1-D LB Method Bla LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla	ple ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49727/3-A Lab Contro MB 240-49727/2-A Method Bla	TANK1A-GW	TCLP	Water	6010B	49727
MB 240-49727/2-A Method Bia	.nk	TCLP	Water	6010B	4972
	l Sample	Total/NA	Water	6010B	4972
General Chemistry	nk	Total/NA	Water	6010B	4972
Analysis Batch: 49216		,			
- Lab Sample ID Client Sam	ple ID	Prep Type	Matrix	Method	Prep Batcl
240-12752-2 FWG-IDW-	TANK1A-GW	Total/NA	Water	9040B	
LCS 240-49216/2 Lab Confro	l Sample	Total/NA	Water	9040B	
Analysis Batch: 49569					
Lab Sample ID Client Sam			Matrix	Method	Prep Batcl
240-12752-2 FWG-IDW-	ple ID	Prep Type		1010	

# **QC Association Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Analysis Batch: 49769

Client Sample ID

Lab Control Sample

Method Blank

FWG-IDW-TANK1A-GW

Lab Sample ID

LCS 240-49677/15-A

MB 240-49677/14-A

240-12752-2

TestAmerica Job ID: 240-12752-2

General Chemistry	(Continued)				
Prep Batch: 49572					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	Total/NA	Water	9012A	
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	
Analysis Batch: 49633					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	Total/NA	Water	9012A	49572
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	49572
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	49572
MRL 240-49633/12 MRL	Lab Control Sample	Total/NA	Water	9012A	
Prep Batch: 49677					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	Total/NA	Water	9030B	
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9030B	
MB 240-49677/14-A	Method Blank	Total/NA	Water	9030B	

Prep Type

Total/NA

Total/NA

Total/NA

Matrix

Water

Water

Water

Method

9034

9034

9034

Prep Batch

49677

49677

49677

TestAmerica Canton 7/9/2012

# **Lab Chronicle**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Client Sample ID: FWG-IDW-TANK1A-GW

Date Collected: 06/28/12 10:00 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-2

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
TCLP	Leach	1311			49660	07/02/12 15:35	DJ	TAL NC
TCLP	Analysis	8260B		1	49814	07/03/12 22:56	TL	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3510C			49701	07/03/12 09:09	CC	TAL NC
TCLP	Analysis	8270C		1	49827	07/04/12 14:27	MU	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49705	07/03/12 09:15	ВМ	TAL NC
TCLP	Analysis	8081A		1	49922	07/05/12 22:40	AR	TAL NC
TCLP	Prep	8151A			49707	07/03/12 09:18	SE	TAL NC
TCLP	Analysis	8151A		1	50094	07/07/12 19:18	AR	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	7470A			49732	07/03/12 14:30	AS	TAL NC
TCLP	Analysis	7470A		1	49962	07/05/12 13:57	SG	TAL NC
TCLP	Prep	3010A			49727	07/03/12 10:01	AS	TAL NC
TCLP	Analysis	6010B		1	50003	07/05/12 17:52	NJM	TAL NC
Total/NA	Analysis	9040B		1	49216	06/28/12 16:20	LG	TAL NC
Total/NA	Analysis	1010		1	49569	07/02/12 11:07	TH	TAL NC
Total/NA	Prep	9012A			49572	07/02/12 09:10	MJC	TAL NC
Total/NA	Analysis	9012A		1	49633	07/02/12 11:06	CN	TAL NC
Total/NA	Prep	9030B			49677	07/03/12 07:56	BW	TAL NC
Total/NA	Analysis	9034		1	49769	07/03/12 13:48	BW	TAL NO

#### Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TestAmerica Canton 7/9/2012

# **Certification Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Cariton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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TestAmerica	TestAmerica Laboratories, Inc.		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TestAmerica North Canton Sample R	eceipt Form/Narrative	Login # : 12752	
Client FRM	Site Name RUAAP	By: Deny Burn	+
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	16. SAMPLE PI	RESERVATION		
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imple(s)	itric Acid Lot# 110410-HNO3; Sulfu	· · · · · · · · · · · · · · · · · · ·	saluum laistattavitie i t	さんしょうしゃいしゅうし
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1127	5.6	5.6	1	
L127 L436 S099 C429	5,6 5,9 6,0	5.6	1	
L127 L436 S099	5,6 5,9 6,0	5.6	1	
L127 L436 S099 C429	5,6 5,9 6,0	5.6	1	
L127 L436 S099 C429	5,6 5,9 6,0	5.6	1	
L127 L436 S099 C429	5,6 5,9 6,0	5.6	1	
L127 L436 S099 C429	5,6 5,9 6,0	5.6	1	

# Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-12752-2

Login Number: 12752

List Number: 1

Creator: Livengood, Chris

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	·
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**TestAmerica Canton** 



April 20, 2012

Mr. Mark Patterson Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266

Reference: Contract No. GS-10F-0293K

Delivery Order No. W912QR-1-F-0266

Subject: Facility-Wide Groundwater Monitoring Program Plan

RVAAP-66 Facility-Wide Groundwater Tank #2 IDW Letter Report – Draft

Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI), installation of monitoring wells, approved per the *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum, EQM, Jan 2012* (Addendum) began on February 27, 2012. These activities resulted in the generation of liquid (groundwater) from well installation operations. The purpose of this letter is to characterize and classify IDW from Tank #2 for disposal and to propose methods for disposing the IDW. This report includes a summary of IDW generated and its origin, a summary of the analysis and methods (Table 1), a summary of detected analytical results compared to regulatory characteristic levels (Table 2) and recommendations for disposal. The laboratory data sheets are included in Attachment 1.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (EPA) regarding IDW disposition at RVAAP, including the IDW disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations*, *SAIC 2011* (FWSAP), and the Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material pending waste characterization and classification based on analytical results. The FWSAP and the Addendum describe approved procedures used for containerizing and handling IDW.

#### **Liquid IDW Discussion**

Accumulated indigenous liquid IDW was containerized in a 10,000-gallon frac tank (Tank #2) on site pending transport and disposal to an offsite disposal facility. Tank #2 contained liquid

IDW generated during field activities consisting of recovered water from drilling operations, and purged groundwater from well development. This liquid was generated from February 27, 2012 through March 21, 2012. (Decontamination water is stored in a different onsite tank that will be handled under a separate report). An unfiltered composite sample for disposal characterization was collected from Tank #2. The tank was opened and a composite sample was collected by gently lowering a new, disposable Teflon bailer attached to new polypropylene rope into the holding vessel. The bailer was lowered into the vessel several times, and to different depths, to collect a sufficient representative sample of the water to submit to the laboratory for waste characterization analysis. The retrieved sample was collected using a gloved hand and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the sample container was sealed with minimum head space.

New, disposable nitrile gloves Teflon bailers, and rope was used and discarded appropriately in accordance the Addendum after collection of each composite sample.

The indigenous IDW contained Tank #2 was characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite totals analysis and Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 1. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1. Maximum Concentration of Contaminants for Toxicity Characteristic (40 *CFR* 261.24), and Table 8-2. Maximum Concentration of Hazardous Waste Characterization Analytes (40 *CFR* 261.21-23), as presented in the FWSAP; and against Maximum Contaminant Levels (MCLs), USEPA Risk Screening Levels (RSLs) for tap water and/ or background criteria. Table 2 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP and RVAAP full suite totals analysis for Tank #2.

The following summarizes the IDW Tank #2 analyses:

- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 140 degrees F. Reactive sulfide and reactive cyanide were not detected above the reporting limit.
- Several organic concentrations were detected for the RVAAP full suite totals sample, although they did not exceed the MCLs, or the USEPA RSLs.
- Several explosives concentrations were detected for the RVAAP full suite totals sample, although they did not exceed the MCLs, or the USEPA RSLs.
- Several metals were detected for the RVAAP full suite totals sample. The metals that
  exceeded the MCL, and/or the USEPA RSL are: aluminum (2000 ug/L), antimony (11
  ug/L), arsenic (4.9 ug/L), iron (2300 ug/L), and thallium (0.26 ug/L). However, iron is
  considered an essential nutrient and not indicative of contamination.

#### Recommended Disposal Pathways for IDW

After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. Although arsenic and thallium exceeded USEPA RSLs it did not exceed the MCL. Arsenic exceeds the USEPA RSL but was below the RVAAP background criteria (11.7 ug/L). The thallium concentration was below the MCL and only slightly exceeded the USEPA RSL (0.16 ug/L) and background criteria. Although aluminum exceeded the MCL it was significantly below the USEPA RSL (16000 ug/L). The concentration for antimony exceeded the MCL, RSL, and background criteria, however the detected concentration in the unfiltered IDW sample only slightly exceeded the MCL and RSL.

Given the observed analytical results, and the previous approval of land application based upon similar constituent levels from SAIC during the 2009 Well Installation into the Basal Sharon Conglomerate, it is recommended that the liquid IDW from Tank #2 be classified as non-hazardous, non-contaminated. It is proposed to land apply the liquid IDW near Tank #2 (in the gravel parking area adjacent to, and immediately north of Building 1036) provided that RVAAP and Ohio EPA concur with the preliminary characterization and that no Resource Conservation and Recovery Act (RCRA) listings apply. The liquid IDW will be pumped from the Frac tank through a bag filter and through a straw bale before being discharged to a well vegetated area. Liquid IDW will pass through a 100 µm bag filter before the end of the outlet hose inserted into the straw as a further filtering mechanism and to prevent erosion. The IDW liquid will be released at a rate that will prevent ponding of water and/or runoff and will not be released directly to surface water features, such as creeks, ditches, or streams, or to storm/sanitary sewer lines. Prior to initiating land application of the liquid IDW, the procedure and setup will be reviewed by the RVAAP Facility Manager or designee for final approval.

Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with the appropriate land application. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

John M. Miller, CHMM

Project Manager

cc: Vicki Deppisch – Ohio EPA Mark Nichter – USACE

be M. Mille.

EQM PN - 030174.0016.001.02

**Table 1. Summary of Analytical Suite of Chemicals** 

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium, cadmium, chromium, lead, and selenium)	EPA Method SW-846 1311/6010B
TCLP semivolatile organic compounds (SVOCs)	EPA Method SW-846 1311/8270C
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
pH	EPA Method SW-846 9040B
Polychlorinated biphenyls (PCBs)	EPA Method SW-846 8082
Pesticides	EPA Method SW-846 8081A
Base/Neutrals and Acids (SVOCs)	EPA Method SW-846 8270C
Volatile Organic Compounds (VOCs)	EPA Method SW-846 8260B
Nitroguanidine (Propellant)	EPA Method SW-846 8330 modified
Nitroaromatics & Nitramines (Explosives)	EPA Method SW-846 8330
Nitrocellulose as N (Propellant)	General Chemistry (WS-WC-0050)
Nitrate/Nitrites	General Chemistry (353.2)1
Metals (Magnesium, Manganese, Barium, Nickel, Potassium, Silver, Sodium, Vanadium, Chromium, Calcium, Cobalt, Copper, Arsenic, Lead, Selenium)	EPA Method SW-846 6010B
Metals (Antimony, Iron, Beryllium, Thallium, Zinc, Cadmium, Aluminum)	EPA Method SW-846 6020
Mercury	EPA Method SW-846 7470A

1 EPA Methods for Chemical Analysis of Water and Waste

Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	MCL	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
Total Metals	Aluminum	7429-90-5	ug/L	2000		200	16000	0	NA
Total Metals	Antimony	7440-36-0	ug/L	11		6	6	0	NA
Total Metals	Arsenic	7440-38-2	ug/L	4.9	J	10	0.045	11.7	NA
Total Metals	Barium	7440-39-3	ug/L	38	JB	2000	2900	82.1	NA
Total Metals	Calcium	7440-70-2	ug/L	30000	В	NS	NS	115000	NA
Total Metals	Chromium	7440-47-3	ug/L	6.3		100	16000	7.3	NA
Total Metals	Iron	7439-89-6	ug/L	2300		300	11000	279	NA
Total Metals	Lead	7439-92-1	ug/L	3.5		15	NS	0	NA
Total Metals	Magnesium	7439-95-4	ug/L	10000	В	NS	NS	43300	NA
Total Metals	Manganese	7439-96-5	ug/L	48		50	320	1020	NA
Total Metals	Nickel	7440-02-0	ug/L	3.9	J	NS	760	0	NA
Total Metals	Potassium	9/7/7440	ug/L	7400		NS	NS	2890	NA
Total Metals	Sodium	7440-23-5	ug/L	11000	В	NS	NS	45700	NA
Total Metals	Thallium	7440-28-0	ug/L	0.26	J	2	0.16	0	NA
Total Metals	Vanadium	7440-62-2	ug/L	4.6	J	NS	78	0	NA
Total Metals	Zinc	7440-66-6	ug/L	21	В	5000	4700	60.9	NA
VOCs	2-Butanone (MEK)	78-93-3	ug/L	26		NS	4900	NA	NA
VOCs	4-Methyl-2- pentanone (MIBK)	108-10-1	ug/L	0.42	J	NS	1000	NA	NA
VOCs	Acetone	67-64-1	]=	5.6	J	NS	12000	NA	NA
VOCs	Ethylbenzene	100-41-4	ug/L	0.19	J	700	1.3	NA	NA
VOCs	m-Xylene & p- Xylene	179601- 23-1	ug/L	0.84	J	NS	190	NA	NA
VOCs	o-Xylene	95-47-6	ug/L	0.52	J	NS	190	NA	NA
VOCs	Toluene	108-88-3	ug/L	5.6		1000	860	NA	NA
VOCs	Xylenes, Total	1330-20-7	ug/L	1.4	J	10000	190	NA	NA
SVOCs	Benzoic acid	65-85-0	ug/L	20	J	NS	58000	NA	NA
SVOCs	Benzyl alcohol	100-51-6	ug/L	71		NS	1500	NA	NA

Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels (continued)

Analyte Group	Analyte	Cas#	Units	Lab Results	Lab Qualifier	MCL	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
Explosives	2-Amino-4,6- dinitrotoluene	35572-78- 2	ug/L	0.36	PG	NS	30	NA	NA
Explosives	4-Amino-4,6- dinitrotoluene	19406-51- 0	ug/L	0.24		NS	30	NA	NA
Explosives	RDX	121-82-4	ug/L	0.19	PG CON	NS	0.61	NA	NA
Explosives	Tetryl	479-45-8	ug/L	0.51	PG	NS	63	NA	NA
TCLP-Metals	Arsenic	7440-38-2	mg/L	0.0043	J	NA	NA	NA	5
TCLP-Metals	Barium	7440-39-3	mg/L	0.017	JB	NA	NA	NA	100
TCLP-Metals	Chromium	7440-47-3	mg/L	0.0036	J	NA	NA	NA	5
TCLP-Misc.	Corrosivity	N/A	SU	9.67		NA	NA	NA	NA
TCLP-Misc.	Flashpoint	N/A	F	>176.0		NA	NA	NA	<140
TCLP-SVOCs	2-Methylphenol	95-48-7	mg/L	0.0019	J	NA	NA	NA	200
TCLP-VOCs	2-Butanone (MEK)	78-93-3	mg/L	0.033	J	NA	NA	NA	200

#### Note:

Chloroform (0.17 ug/L J) and Acetone (12 ug/L) was detected in the Trip blank.

Bold concentrations exceed Drinking Water Stand - Maximum Contaminate Levels (MCLs).

Italics concentrations exceed USEPA Risk Screening Levels (RSLs).

Shaded concentrations exceed the lowest criteria level for RVAAP unfiltered groundwater.

J = estimated result. Result is less than reporting limit.

B = method blank contamination

PG = The percent difference between the original and confirmation analyses is greater than 40%.

CON = Confirmation analysis.

NA = not applicable

^{*} The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1. Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24), and Table 8-2. Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23).

# ATTACHMENT 1. LABORATORY ANALYTICAL DATA SHEETS

# <u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc. TestAmerica North Canton 4101 Shuffel Street NW North Canton, OH 44720 Tel: (330)497-9396

TestAmerica Job ID: 240-9429-1 Client Project/Site: RVAAP 66 RAVENNA OHIO

Environmental Quality Mgt., Inc. 1800 Carillon Blvd Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin

Authorized for release by: 4/16/2012 5:39:24 PM

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com

Review your project results through
Total Access

Have a Question?



Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Definitions/Glossary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

#### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

#### GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### HPLC

Qualifier	Qualifier Description	
PG	The percent difference between the original and confirmation analyses is greater than 40%.	
U	Indicates the analyte was analyzed for but not detected.	
CON	Confirmation analysis	

#### Metals

Qualifier	Qualifier Description	
Qualitier		
0	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.	
U	Indicates the analyte was analyzed for but not detected.	
В	Compound was found in the blank and sample,	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	

#### **General Chemistry**

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
<b>\$</b> :	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL. RA, RE. IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
rea	Toxicity Equivalent Quotient (Dioxin)

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#### Case Narrative

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Job ID: 240-9429-1

Laboratory: TestAmerica North Canton

Narrative

#### CASE NARRATIVE

Client: Environmental Quality Mgt., Inc.

Project: RVAAP 66 RAVENNA OHIO

Report Number: 240-9429-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

#### RECEIPT

#### Receipt

The samples were received on 3/21/2012 3:17 PM; the samples arrived in good conditions, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.40 C and 4.80 C.

#### TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 03/26/2012 and analyzed on 03/28/2012.

The continuing calibration verification (CCV) for vinyl chloride associated with batch 38205 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No other difficulties were encountered during the VOCs analysis. All other quality control parameters were within the acceptance limits.

#### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples FWG-IDW-TANK 2 TB (240-9429-1) and FWG-IDW-TANK 2 GW (240-9429-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/30/2012.

No difficulties were encountered during the VOCs analyses. All quality control parameters were within the acceptance limits.

TestAmerica Job ID: 240-9429-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

Job ID: 240-9429-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

#### TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 03/26/2012, prepared on 03/27/2012 and analyzed on 03/28/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

#### SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 03/22/2012 and analyzed on 03/30/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for FWG-IDW-TANK 2 GW (240-9429-2). Refer to the QC report for details.

Sample FWG-IDW-TANK 2 GW (240-9429-2)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

#### TCLP CHLORINATED PESTICIDES

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/8081A. The samples were leached on 03/26/2012, prepared on 03/27/2012 and analyzed on 03/29/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

#### CHLORINATED PESTICIDES

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 03/22/2012 and analyzed on 03/25/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

#### POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 03/22/2012 and analyzed on 03/23/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the PCBs analysis. All other quality control parameters were within the acceptance limits.

#### TCLP CHLORINATED HERBICIDES

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/8151A. The samples were leached on 03/26/2012, prepared on 03/27/2012 and analyzed on 03/29/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are

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#### Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

#### Job ID: 240-9429-1 (Continued)

#### Laboratory: TestAmerica North Canton (Continued)

diluted out and no corrective action is required.

No difficulties were encountered during the herbicides analysis. All quality control parameters were within the acceptance limits.

#### TCLP METALS (ICP)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/ 6010B. The samples were leached on 03/26/2012, prepared on 03/27/2012 and analyzed on 03/29/2012.

Barium and Selenium were detected in method blank LB 240-38031/1-D at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Barium was detected in method blank MB 240-38070/2-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### TOTAL RECOVERABLE METALS (ICP)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 03/26/2012 and analyzed on 03/29/2012.

Barium, Calcium and Magnesium were detected in method blank MB 240-38006/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

The continuing calibration verification (CCV) for Beryllium associated with batch 38210 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-TANK 2 GW

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### TOTAL RECOVERABLE METALS (ICPMS)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 03/26/2012 and analyzed on 03/27/2012.

Sodium was detected in method blank MB 240-38006/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Zinc was detected in method blank MB 240-38006/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### TCLP MERCURY

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 03/26/2012, prepared on 03/27/2012 and analyzed on 03/28/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

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#### Case Narrative

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

#### Job ID: 240-9429-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

#### TOTAL MERCURY

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 03/26/2012 and analyzed on 03/27/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

#### FLASHPOINT

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 03/29/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

#### TOTAL CYANIDE

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 03/22/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

#### SULFIDE

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 03/27/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

#### PH

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for pH in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 03/21/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

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## **Method Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Method	Method Description	Protocol	Laboratory
260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NO
270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NO
181A	Organochlorine Pesticides (GC)	SW846	TAL NO
182	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
51A	Herbicides (GC)	SW846	TAL NO
30 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
30/8330A	Nitroaromatics & Nitramines: Explosives (8330/A)	SW846	TAL WSC
10B	Metals (ICP)	SW846	TAL NC
20	Metals (ICP/MS)	SW846	TAL NC
70A	Mercury (CVAA)	SW846	TAL NC
10	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL BUF
12A	Cyanide, Total and/or Amenable	SW846	TAL NO
134	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
40B	pH	SW846	TAL NC
S-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

#### Protocol References

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And its Updates. TAL-SOP = TAL-SOP

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL NC = TestAmerica North Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Sample Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-9429-1	FWG-IDW-TANK 2 TB	Water	03/21/12 00:00	03/21/12 15:17
240-9429-2	FWG-IDW-TANK 2 GW	Water	03/21/12 11:15	03/21/12 15:17

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### **Detection Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Lab Sample ID: 240-9429-1

Lab Sample ID: 240-9429-2

Client Sam	ple ID:	FWG-II	DW-TA	NK 2 TE
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Analyte	Result Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	12	10	1.1	ug/L	1	Ξ	8260B	Total/NA
Chloroform	0.17 J	1.0	0.16	ug/L	1		8260B	Total/NA

#### Client Sample ID: FWG-IDW-TANK 2 GW

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	26		10	0.57	ug/L	1		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	0.42	J	10	0.32	ug/L	-1		8260B	Total/NA
Acetone	5.6	J	10	1.1	ug/L	-1		8260B	Total/NA
Ethylbenzene	0.19	J	1.0	0.17	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	0.84	J	2.0	0.24	ug/L	1		8260B	Total/NA
o-Xylene	0.52	J	1.0	0.14	ug/L	1		8260B	Total/NA
Toluene	5.6		1.0	0.13	ug/L	1.		8260B	Total/NA
Xylenes, Total	1.4	J	2.0	0.28	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	0.033	J	0.25	0.029	mg/L	1		8260B	TCLP
Benzoic acid	20	J	50	20	ug/L	2		8270C	Total/NA
Benzyl alcohol	71		9.9	0.75	ug/L	2		8270C	Total/NA
2-Methylphenol	0.0019	J	0.0040	0.00080	mg/L	1		8270C	TCLP
2-Amino-4,6-dinitrotoluene	0.39	PG	0.20	0.10	ug/L	1		8330/8330A	Total
4-Amino-2,6-dinitrotoluene	0.24		0.10	0.050	ug/L	1		8330/8330A	Total
RDX	0.19	PG CON	0.10	0.036	ug/L	-1		8330/8330A	Total
Tetryl	0.51	PG	0.10	0.050	ug/L	1		8330/8330A	Total

reuyi	0.51	ru	0.10	0.050	ug/L	-	0330/0330A	Total
Arsenic	4.9	J	10	3.2	ug/L	1	6010B	Total Recovera
Chromium	6.3		5.0	2.2	ug/L	1	6010B	Total Recovera
Lead	3.5		3.0	1.9	ug/L	1	6010B	Total Recovera
Vanadium	4.6	J	7.0	0.64	ug/L	1	6010B	Total Recovera
Barium	38	JB	200	0.67	ug/L	1	6010B	Total Recovera
Calcium	30000	В	5000	130	ug/L	1	6010B	Total Recovera
Magnesium	10000	В	5000	34	ug/L	1	6010B	Total Recovera
Manganese	48		15	0.41	ug/L	1	6010B	Total Recovera
Minkel	2.0	10	10	22	riall.	4	6010B	Total Bassyara

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Lab Sample ID: 240-9429-1

Matrix: Water

Client Sample ID: FWG-IDW-TANK 2 TB

Date Collected: 03/21/12 00:00 Date Received: 03/21/12 15:17

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Method: 8260B - Volatile Orga Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0		ug/L			03/30/12 17:25	
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			03/30/12 17:25	1
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			03/30/12 17:25	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			03/30/12 17:25	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			03/30/12 17:25	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			03/30/12 17:25	1
1,2-Dichloroethene, Total	2.0	U	2.0		ug/L			03/30/12 17:25	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			03/30/12 17:25	1
2-Butanone (MEK)	10	U	10	0.57				03/30/12 17:25	1
2-Hexanone	10	U	10	0.41	ug/L			03/30/12 17:25	1
4-Methyl-2-pentanone (MIBK)	10	U	10		ug/L			03/30/12 17:25	1
Acetone	12		10		ug/L			03/30/12 17:25	1
Benzene	1.0	U	1.0		ug/L			03/30/12 17:25	1
Bromoform	1.0	U	1.0		ug/L			03/30/12 17:25	1
Bromomethane	1.0	U	1.0		ug/L			03/30/12 17:25	1
Carbon disulfide	1.0	U	1.0		ug/L			03/30/12 17:25	1
Carbon tetrachloride	1.0	U	1.0		ug/L			03/30/12 17:25	1
Chlorobenzene	1.0	U	1.0		ug/L			03/30/12 17:25	1
Chloromethane	1.0	U	1.0		ug/L			03/30/12 17:25	1
cis-1,2-Dichloroethene	1.0	U	1.0		ug/L			03/30/12 17:25	1
cis-1,3-Dichloropropene	1.0	U	1.0		ug/L			03/30/12 17:25	1
Dibromochloromethane	1.0	U	1.0	0.18				03/30/12 17:25	1
Bromodichloromethane	1.0	U	1.0	0.15				03/30/12 17:25	1
Ethylbenzene	1.0	U	1.0		ug/L			03/30/12 17:25	1
Methylene Chloride	1.0	U	1.0		ug/L			03/30/12 17:25	1
m-Xylene & p-Xylene	2.0	U	2.0		ug/L			03/30/12 17:25	1
o-Xylene	1.0	U	1.0		ug/L			03/30/12 17:25	1
Styrene	1.0	U	1.0		ug/L			03/30/12 17:25	1
Tetrachloroethene	1.0	U	1.0		ug/L			03/30/12 17:25	1
Toluene	1.0	U	1.0		ug/L			03/30/12 17:25	1
trans-1,2-Dichloroethene	1.0	U	1.0		ug/L			03/30/12 17:25	1
trans-1,3-Dichloropropene	1.0	U	1.0		ug/L			03/30/12 17:25	1
Trichloroethene	1.0	U	1.0	0.17				03/30/12 17:25	1
Vinyl chloride	1.0	U	1.0		ug/L			03/30/12 17:25	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			03/30/12 17:25	1
Chloroform	0.17	J	1.0	0.16	ug/L			03/30/12 17:25	1
Bromochloromethane	1.0		1.0		ug/L			03/30/12 17:25	1
1,2-Dibromoethane	1.0	U	1.0		ug/L			03/30/12 17:25	1
Chloroethane	1.0		1.0		ug/L			03/30/12 17:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		74 - 115			-		03/30/12 17:25	1
1,2-Dichloroethane-d4 (Surr)	104		63 - 129					03/30/12 17:25	7.

03/30/12 17:25

03/30/12 17:25

66 - 117

75 - 121

94

99

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Lab Sample ID: 240-9429-2

Matrix: Water

Client Sample ID: FWG-IDW-TANK 2 GW

Date Collected: 03/21/12 11:15 Date Received: 03/21/12 15:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			03/30/12 17:48	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			03/30/12 17:48	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			03/30/12 17:48	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			03/30/12 17:48	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/30/12 17:48	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			03/30/12 17:48	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			03/30/12 17:48	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			03/30/12 17:48	1
2-Butanone (MEK)	26		10	0.57	ug/L			03/30/12 17:48	1
2-Hexanone	10	U	10	0.41	ug/L			03/30/12 17:48	1
4-Methyl-2-pentanone (MIBK)	0.42	J	10	0.32	ug/L			03/30/12 17:48	1
Acetone	5.6	J	10	1.1	ug/L			03/30/12 17:48	1
Benzene	1.0	U	1.0	0.13	ug/L			03/30/12 17:48	1
Bromoform	1.0	U	1.0	0.64	ug/L			03/30/12 17:48	1
Bromomethane	1.0	U	1.0	0.41	ug/L			03/30/12 17:48	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			03/30/12 17:48	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			03/30/12 17:48	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			03/30/12 17:48	1
Chloromethane	1.0	U	1.0	0.30	ug/L			03/30/12 17:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/30/12 17:48	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			03/30/12 17:48	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			03/30/12 17:48	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			03/30/12 17:48	1
Ethylbenzene	0.19	J	1.0	0.17	ug/L			03/30/12 17:48	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			03/30/12 17:48	1
m-Xylene & p-Xylene	0.84	J	2.0	0.24	ug/L			03/30/12 17:48	1
o-Xylene	0.52	J	1.0	0.14	ug/L			03/30/12 17:48	1
Styrene	1.0	U	1.0	0.11	ug/L			03/30/12 17:48	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			03/30/12 17:48	1
Toluene	5.6		1.0	0.13	ug/L			03/30/12 17:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/30/12 17:48	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/30/12 17:48	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			03/30/12 17:48	
Vinyl chloride	1.0	U	1.0	0.22	ug/L			03/30/12 17:48	1
Xylenes, Total	1.4	J	2.0	0.28	ug/L			03/30/12 17:48	1
Chloroform	1.0	U	1.0	0.16	ug/L			03/30/12 17:48	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			03/30/12 17:48	1
1,2-Dibromoethane	1.0	Ų	1.0	0.24	ug/L			03/30/12 17:48	1
Chloroethane	1.0	U	1.0	0.29	ug/L			03/30/12 17:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		74 - 115					03/30/12 17:48	1
1 2-Dichlomethane-d4 (Surr)	106		63 129					03/30/12 17:48	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		74 - 115		03/30/12 17:48	1
1,2-Dichloroethane-d4 (Surr)	106		63 - 129		03/30/12 17:48	1
4-Bromofluorobenzene (Surr)	97		66 - 117		03/30/12 17:48	1
Dibromofluoromethane (Surr)	101		75 - 121		03/30/12 17:48	7

Method: 8260B	Volatile (	Organic	Compounds	(GC/MS)	TCIP
MICHIOU. OZOUD	- Volatile	Oluanic	Compounds	COC/INIO	ICL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			03/28/12 00:57	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			03/28/12 00:57	4
2-Butanone (MEK)	0.033	J	0.25	0.029	mg/L			03/28/12 00:57	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 GW Lab Sample ID: 240-9429-2

Date Collected: 03/21/12 11:15

Matrix: Water

Date Collected: 03/21/12 11:15

Date Received: 03/21/12 15:17

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0.025	0.0065	mg/L			03/28/12 00:57	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			03/28/12 00:57	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			03/28/12 00:57	1
Chloroform	0.025	U	0.025	0.0080	mg/L			03/28/12 00:57	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			03/28/12 00:57	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			03/28/12 00:57	1
Vinyl chloride	0.025	U	0,025	0.011	mg/L			03/28/12 00:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 121					03/28/12 00:57	1
4-Bromofluorobenzene (Surr)	97		70 - 124					03/28/12 00:57	4
Toluene-d8 (Surr)	104		90 - 115					03/28/12 00:57	1
Dibromofluoromethane (Surr)	116		84 - 128					03/28/12 00:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Acenaphthylene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Anthracene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzo[a]anthracene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzoic acid	20	J	50	20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzo[b]fluoranthene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzo[k]fluoranthene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzyl alcohol	71		9.9	0.75	ug/L		03/22/12 08:59	03/30/12 20:29	2
Bis(2-chloroethoxy)methane	2.0	U	2.0	0.63	ug/L		03/22/12 08:59	03/30/12 20:29	2
Bis(2-chloroethyl)ether	2.0	U	2.0	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Bromophenyl phenyl ether	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Butyl benzyl phthalate	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4-Dimethylphenol	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Dimethyl phthalate	2.0	U	2.0	0.57	ug/L		03/22/12 08:59	03/30/12 20:29	2
4,6-Dinitro-2-methylphenol	9.9	U	9.9	4.8	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4-Dinitrophenol	9.9	U	9.9	4.8	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4-Dinitrotoluene	9.9	U	9.9	0.53			03/22/12 08:59	03/30/12 20:29	2
2,6-Dinitrotoluene	9.9	U	9.9	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Fluoranthene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Fluorene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Hexachlorobenzene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Hexachlorobutadiene	2.0	U	2.0	0.53	ug/L		03/22/12 08:59	03/30/12 20:29	2
Hexachlorocyclopentadiene	20	U	20	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Hexachloroethane	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
N-Nitrosodiphenylamine	2.0	U	2.0	0.61	ug/L		03/22/12 08:59	03/30/12 20:29	2
N-Nitrosodi-n-propylamine	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
1,4-Dichlorobenzene	2.0	U	2.0	0.67	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Chloronaphthalene	2.0	U	2.0	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Chlorophenol	2.0	U	2.0	0.57	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Chlorophenyl phenyl ether	4.0	U	4.0	0.59	ug/L		03/22/12 08:59	03/30/12 20:29	2
Chrysene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Dibenz(a,h)anthracene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Dibenzofuran	2.0	U	2.0	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzo[g,h,i]perylene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzo[a]pyrene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Lab Sample ID: 240-9429-2

Matrix: Water

Client Sample ID: FWG-IDW-TANK 2 GW

Date Collected: 03/21/12 11:15 Date Received: 03/21/12 15:17

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	2.0	U	2.0	1.3	ug/L		03/22/12 08:59	03/30/12 20:29	2
1,2-Dichlorobenzene	2.0	U	2.0	0.57	ug/L		03/22/12 08:59	03/30/12 20:29	2
1,3-Dichlorobenzene	2.0	Ü	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
3,3'-Dichlorobenzidine	9.9	U	9.9	0.73	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4-Dichlorophenol	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Diethyl phthalate	2.0	U	2.0	1.2	ug/L		03/22/12 08:59	03/30/12 20:29	2
Indeno[1,2,3-cd]pyrene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Isophorone	2.0	U	2.0	0.53	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Methylnaphthalene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Methylphenol	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Naphthalene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Nitroaniline	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
3-Nitroaniline	4.0	U	4.0	0.55	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Nitroaniline	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Nitrobenzene	2.0	U	2.0	0.079	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Nitrophenol	4.0	U	4.0	0.55	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Nitrophenol	9.9	U	9.9	4.8	ug/L		03/22/12 08:59	03/30/12 20:29	2
Pyrene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Pentachlorophenol	9.9	U	9.9	4.8	ug/L		03/22/12 08:59	03/30/12 20:29	2
Phenanthrene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.55	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4,5-Trichlorophenol	9.9	U	9.9	0.59	ug/L		03/22/12 08:59	03/30/12 20;29	2
2,4,6-Trichlorophenol	9.9	U	9.9	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Phenol	2.0	U	2.0	1.2	ug/L		03/22/12 08:59	03/30/12 20:29	2
Carbazole	2.0	U	2.0	0.55	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Chloroaniline	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
3 & 4 Methylphenol	4.0	U	4.0	1.5	ug/L		03/22/12 08:59	03/30/12 20:29	2
Bis(2-ethylhexyl) phthalate	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Di-n-octyl phthalate	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Chloro-3-methylphenol	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,2'-oxybis[1-chloropropane]	2.0	U	2.0	0.79	ug/L		03/22/12 08:59	03/30/12 20:29	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2 Elyasahinkanyi (Cyral	40		22 440				00/00/40 00:00	00/00/40 00:00	

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	46	28 - 110	03/22/12 08:59	03/30/12 20:29	2
2-Fluorophenol (Surr)	59	10 - 110	03/22/12 08:59	03/30/12 20:29	2
Nitrobenzene-d5 (Surr)	49	27 - 111	03/22/12 08:59	03/30/12 20:29	2
Terphenyl-d14 (Surr)	36 X	37 - 119	03/22/12 08:59	03/30/12 20:29	2
2,4,6-Tribromophenol (Surr)	49	22 - 120	03/22/12 08:59	03/30/12 20:29	2
Phenol-d5 (Surr)	59	10 - 110	03/22/12 08:59	03/30/12 20:29	2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		03/27/12 08:40	03/28/12 14:18	- 1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		03/27/12 08:40	03/28/12 14:18	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		03/27/12 08:40	03/28/12 14:18	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		03/27/12 08:40	03/28/12 14:18	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		03/27/12 08:40	03/28/12 14:18	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		03/27/12 08:40	03/28/12 14:18	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		03/27/12 08:40	03/28/12 14:18	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		03/27/12 08:40	03/28/12 14:18	1
2-Methylphenol	0.0019	J	0.0040	0.00080	mg/L		03/27/12 08:40	03/28/12 14:18	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Lab Sample ID: 240-9429-2

Matrix: Water

### Client Sample ID: FWG-IDW-TANK 2 GW

Date Collected: 03/21/12 11:15 Date Received: 03/21/12 15:17

Heptachlor epoxide

Methoxychlor

Toxaphene

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP (Continued) Analyte Result Qualifier MDL Unit Prepared Analyzed Dil Fac 0.0040 U Nitrobenzene 0.0040 0.000040 mg/L 03/27/12 08:40 03/28/12 14:18 0.040 U 0.040 Pentachlorophenol 0.0024 mg/L 03/27/12 08:40 03/28/12 14:18 Pyridine 0.020 U 0.020 0.00035 mg/L 03/27/12 08:40 03/28/12 14:18

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzea	DII Fac
2-Fluorobiphenyl (Surr)	72	22 - 110	03/27/12 08:40	03/28/12 14:18	1
2-Fluorophenol (Surr)	64	10 - 110	03/27/12 08:40	03/28/12 14:18	1
2,4,6-Tribromophenol (Surr)	80	17 - 117	03/27/12 08:40	03/28/12 14:18	1
Nitrobenzene-d5 (Surr)	72	29 - 111	03/27/12 08:40	03/28/12 14:18	1
Phenol-d5 (Surr)	55	10 - 110	03/27/12 08:40	03/28/12 14:18	1
Terphenyl-d14 (Surr)	86	40 - 119	03/27/12 08:40	03/28/12 14:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.051	Ü	0.051	0.0098	ug/L		03/22/12 09:10	03/25/12 10:35	1
4,4'-DDE	0.051	U	0.051	0.0099	ug/L		03/22/12 09:10	03/25/12 10:35	- 1
4,4'-DDT	0.051	U	0.051	0.016	ug/L		03/22/12 09:10	03/25/12 10:35	1
Aldrin	0.051	U	0.051	0.0084	ug/L		03/22/12 09:10	03/25/12 10:35	1
alpha-BHC	0.051	U	0.051	0.0071	ug/L		03/22/12 09:10	03/25/12 10:35	1
alpha-Chlordane	0.051	U	0.051	0.014	ug/L		03/22/12 09:10	03/25/12 10:35	1
beta-BHC	0.051	U	0.051	0.0086	ug/L		03/22/12 09:10	03/25/12 10:35	1
delta-BHC	0.051	U	0.051	0.0089	ug/L		03/22/12 09:10	03/25/12 10:35	- 1
Dieldrin	0.051	U	0.051	0.0077	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endosulfan I	0.051	U	0.051	0.013	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endosulfan II	0.051	U	0.051	0.012	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endosulfan sulfate	0.051	U	0.051	0.011	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endrin	0.051	U	0.051	0.011	ug/L		03/22/12 09:10	03/25/12 10:35	9
Endrin aldehyde	0.051	U	0.051	0.011	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endrin ketone	0.051	U	0,051	0.0080	ug/L		03/22/12 09:10	03/25/12 10:35	1
gamma-BHC (Lindane)	0.051	U	0.051	0.0065	ug/L		03/22/12 09:10	03/25/12 10:35	1
gamma-Chlordane	0.051	U	0.051	0.012	ug/L		03/22/12 09:10	03/25/12 10:35	1
Heptachlor	0.051	U	0.051	0.0082	ug/L		03/22/12 09:10	03/25/12 10:35	1

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	13	10 - 145	03/22/12 09:10	03/25/12 10:35	1
DCB Decachlorobiphenyl	13	10 - 145	03/22/12 09:10	03/25/12 10:35	1
Tetrachloro-m-xylene	75	30 - 141	03/22/12 09:10	03/25/12 10:35	1
Tetrachloro-m-xylene	48	30 - 141	03/22/12 09:10	03/25/12 10:35	1

0.051

0.10

2.0

0.051 U

0.10 U

2.0 U

0.0072 ug/L

0.033 ug/L

0.33 ug/L

03/22/12 09:10

03/22/12 09:10

03/22/12 09:10

03/25/12 10:35

03/25/12 10:35

03/25/12 10:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0,000079	mg/L		03/27/12 08:42	03/29/12 22:08	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		03/27/12 08:42	03/29/12 22:08	- 1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		03/27/12 08:42	03/29/12 22:08	. 1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		03/27/12 08:42	03/29/12 22:08	9
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		03/27/12 08:42	03/29/12 22:08	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		03/27/12 08:42	03/29/12 22:08	d.
Toxaphene	0.048	U	0.048	0.00077	mg/L		03/27/12 08:42	03/29/12 22:08	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Lab Sample ID: 240-9429-2

Matrix: Water

### Client Sample ID: FWG-IDW-TANK 2 GW

Date Collected: 03/21/12 11:15 Date Received: 03/21/12 15:17

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		46 - 122	03/27/12 08:42	03/29/12 22:08	1
Tetrachloro-m-xylene	81		46 - 122	03/27/12 08:42	03/29/12 22:08	1
DCB Decachlorobiphenyl	61		34 - 141	03/27/12 08:42	03/29/12 22:08	1
DCB Decachlorobiphenyl	64		34 - 141	03/27/12 08:42	03/29/12 22:08	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.51	U	0.51	0.17	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1221	0.51	U	0.51	0.13	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1232	0.51	U	0.51	0.16	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1242	0.51	U	0.51	0.22	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1248	0.51	U	0.51	0.10	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1254	0.51	U	0.51	0.16	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1260	0.51	U	0.51	0.17	ug/L		03/22/12 09:16	03/23/12 17:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	56		23 - 136				03/22/12 09:16	03/23/12 17:36	1
DCB Decachlorobiphenyl	13		10 - 130				03/22/12 09:16	03/23/12 17:36	1

Method: 8151A - Herbicides (C	SC) - TCLP								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0,0020	U	0.0020	0.00021	mg/L		03/27/12 08:46	03/29/12 23:32	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		03/27/12 08:46	03/29/12 23:32	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	74		37 - 116				03/27/12 08:46	03/29/12 23:32	1
2,4-Dichlorophenylacetic acid	70		37 - 116				03/27/12 08:46	03/29/12 23:32	7

Method: 8330 (Modified) -	Organic Compounds	by UV/HPLC	- Dissolved						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	20	U	20	2.4	ug/L		03/28/12 09:45	03/29/12 11:43	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroglycerin	0,65	U	0.65	0.33	ug/L		03/27/12 07:00	03/31/12 01:42	1
PETN	0.65	U	0.65	0.30	ug/L		03/27/12 07:00	03/31/12 01:42	1
2-Amino-4,6-dinitrotoluene	0.39	PG	0.20	0.10	ug/L		03/27/12 07:00	03/31/12 01:42	1
4-Amino-2,6-dinitrotoluene	0.24		0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
1,3-Dinitrobenzene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
2,4-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
2,6-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
HMX	0.10	U	0.10	0.036	ug/L		03/27/12 07:00	03/31/12 01:42	1
Nitrobenzene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
2-Nitrotoluene	0.50	U	0.50	0.088	ug/L		03/27/12 07:00	03/31/12 01:42	1
3-Nitrotoluene	0.50	U	0.50	0.057	ug/L		03/27/12 07:00	03/31/12 01:42	1
4-Nitrotoluene	0.65	U	0.65	0.088	üg/L		03/27/12 07:00	03/31/12 01:42	1
RDX	0.19	PG CON	0.10	0,036	ug/L		03/27/12 07:00	03/31/12 01:42	1
Tetryl	0.51	PG	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
1,3,5-Trinitrobenzene	0.10	U	0.10	0.030	ug/L		03/27/12 07:00	03/31/12 01:42	1
2,4,6-Trinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	98		79 - 111				03/27/12 07:00	03/31/12 01:42	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Lab Sample ID: 240-9429-2

Client Sample ID: FWG-IDW-TANK 2 GW

Matrix: Water

Date Collected: 03/21/12 11:15 Date Received: 03/21/12 15:17

Method: 6010B - Metals (ICP) - Total Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
rsenic	4.9	J	10	3.2	ug/L		03/26/12 10:29	03/29/12 11:37	
Chromium	6.3		5.0	2.2	ug/L		03/26/12 10:29	03/29/12 11:37	
Cobalt	7.0	U	7.0	1.7	ug/L		03/26/12 10:29	03/29/12 11:37	
Lead	3.5		3.0	1.9	ug/L		03/26/12 10:29	03/29/12 11:37	
Selenium	5.0	U	5.0	4.1	ug/L		03/26/12 10:29	03/29/12 11:37	
Silver	5.0		5.0	2.2	ug/L		03/26/12 10:29	03/29/12 11:37	
Vanadium	4.6		7.0	0.64			03/26/12 10:29	03/29/12 11:37	
Barium		JB	200	0.67			03/26/12 10:29	03/29/12 11:37	
Calcium	30000		5000	130	ug/L		03/26/12 10:29	03/29/12 11:37	
Copper	25		25		ug/L		03/26/12 10:29	03/29/12 11:37	
Magnesium	10000		5000	34	ug/L		03/26/12 10:29	03/29/12 11:37	
Carlotte and the carlotte	48	В	15	0.41	ug/L		03/26/12 10:29	03/29/12 11:37	
Manganese	3.9	J	40	3.2	110.0		03/26/12 10:29	03/29/12 11:37	
Nickel		J	5000		ug/L ug/L		03/26/12 10:29	03/29/12 11:37	
Potassium	7400		5000	12	ug/L		03/26/12 10:29	03/29/12 11:37	
Method: 6010B - Metals (ICP) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Arsenic	0.0043	J	0.50	0.0032	mg/L		03/27/12 05:58	03/29/12 17:10	-
Barium	0.017	JB	10	0.00067	mg/L		03/27/12 05:58	03/29/12 17:10	
Cadmium	0.10	U	0.10		mg/L		03/27/12 05:58	03/29/12 17:10	
Chromium	0.0036	J	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 17:10	
Lead	0.50	U	0.50	0.0019	mg/L		03/27/12 05:58	03/29/12 17:10	
Selenium	0.25	U	0.25	0.0041	mg/L		03/27/12 05:58	03/29/12 17:10	
Silver	0.50	U	0.50	0.0022			03/27/12 05:58	03/29/12 17:10	
Method: 6020 - Metals (ICP/MS) - Tot Analyte Aluminum		Qualifier	RL 50	MDL 19	Unit ug/L	D	Prepared 03/26/12 10:29	Analyzed 03/27/12 20:13	Dil Fa
Antimony	11		2.0	0.13	ug/L		03/26/12 10:29	03/27/12 20:13	
Beryllium		U^	1.0	0.20	ug/L		03/26/12 10:29	03/27/12 20:13	
Cadmium	1.0		1.0	0.13			03/26/12 10:29	03/27/12 20:13	
		0	100	26	ug/L		03/26/12 10:29	03/27/12 20:13	
lron	2300	D	1000	6.9	ug/L		03/26/12 10:29	03/27/12 20:13	
Sodium	11000		2.0				03/26/12 10:29	03/27/12 20:13	
Thallium	0.26			0.14	ug/L		03/26/12 10:29	03/27/12 20:13	
The s	24		20	2.2	um/I		03/20/12 10:29	03/2//12 20:13	
Zinc	21	В	20	2.3	ug/L				
	21	В	20	2.3	ug/L				
Method: 7470A - Mercury (CVAA)	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	
Method: 7470A - Mercury (CVAA) Analyte Mercury		Qualifier			Unit	D	Prepared 03/26/12 14:30	Analyzed 03/27/12 14:48	Dil Fa
Method: 7470A - Mercury (CVAA) Analyte Mercury  Method: 7470A - Mercury (CVAA) - To	Result 0.20	Qualifier U	RL 0.20	MDL 0.12	Unit ug/L		03/26/12 14:30	03/27/12 14:48	
Method: 7470A - Mercury (CVAA) Analyte Mercury  Method: 7470A - Mercury (CVAA) - To Analyte	Result 0.20 CLP Result	Qualifier U	RL 0.20	MDL 0.12	Unit ug/L Unit	D	03/26/12 14:30 Prepared	03/27/12 14:48 Analyzed	Dil Fa
Method: 7470A - Mercury (CVAA) Analyte Mercury  Method: 7470A - Mercury (CVAA) - To Analyte	Result 0.20	Qualifier U	RL 0.20	MDL 0.12	Unit ug/L Unit		03/26/12 14:30	03/27/12 14:48	Dil Fa
Method: 7470A - Mercury (CVAA) Analyte Mercury  Method: 7470A - Mercury (CVAA) - Te Analyte Mercury	Result 0.20 CLP Result	Qualifier U	RL 0.20	MDL 0.12	Unit ug/L Unit		03/26/12 14:30 Prepared	03/27/12 14:48 Analyzed	Dil Fa
Method: 7470A - Mercury (CVAA) Analyte Mercury  Method: 7470A - Mercury (CVAA) - To Analyte Mercury  General Chemistry	Result 0.20  CLP Result 0.0020  Result	Qualifier U	RL 0.20 RL 0.0020	MDL 0.12	Unit ug/L Unit mg/L		03/26/12 14:30 Prepared	03/27/12 14:48  Analyzed 03/28/12 14:45  Analyzed	Dii Fa
Method: 7470A - Mercury (CVAA) Analyte Mercury  Method: 7470A - Mercury (CVAA) - To Analyte Mercury  General Chemistry Analyte	Result 0.20 CLP Result 0.0020	Qualifier U Qualifier U	RL 0.20 RL 0.0020	MDL 0.00012 MDL	Unit ug/L Unit mg/L	D	03/26/12 14:30 Prepared 03/27/12 15:20	03/27/12 14:48  Analyzed 03/28/12 14:45	Dil Fa
Method: 7470A - Mercury (CVAA) Analyte Mercury  Method: 7470A - Mercury (CVAA) - Te Analyte Mercury  General Chemistry Analyte Flashpoint	Result 0.20  CLP Result 0.0020  Result	Qualifier U Qualifier U	RL 0.20 RL 0.0020	MDL 0.00012 MDL	Unit ug/L Unit mg/L Unit Degrees F	D	03/26/12 14:30 Prepared 03/27/12 15:20	03/27/12 14:48  Analyzed 03/28/12 14:45  Analyzed	Dil Fa
Method: 7470A - Mercury (CVAA) Analyte Mercury  Method: 7470A - Mercury (CVAA) - To Analyte Mercury  General Chemistry Analyte Flashpoint Cyanide, Total	Result 0.20 CLP Result 0.0020 Result >176.0	Qualifier U Qualifier U	RL 0.20 RL 0.0020 RL 50.0	MDL 0.12 MDL 0.00012 MDL 50.0	Unit ug/L Unit mg/L Unit Degrees F	D	03/26/12 14:30  Prepared 03/27/12 15:20  Prepared	03/27/12 14:48  Analyzed 03/28/12 14:45  Analyzed 03/29/12 13:44	
Method: 7470A - Mercury (CVAA) Analyte Mercury	Result 0.20  CLP  Result 0.0020  Result >176.0 0.010	Qualifier U Qualifier U	RL 0.20 RL 0.0020 RL 50.0 0.010	MDL 0.12 MDL 0.00012 MDL 50.0	Unit ug/L Unit mg/L Unit Degrees F mg/L mg/L	D	03/26/12 14:30  Prepared  03/27/12 15:20  Prepared  03/22/12 11:15	03/27/12 14:48  Analyzed 03/28/12 14:45  Analyzed 03/29/12 13:44 03/22/12 15:26	Dil Fa

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

				Percent Sur	rrogate Reco
		TOL	12DCE	BFB	DBFM
Lab Sample ID	Client Sample ID	(74-115)	(63-129)	(66-117)	(75-121)
240-9429-1	FWG-IDW-TANK 2 TB	100	104	94	99
240-9429-2	FWG-IDW-TANK 2 GW	100	106	97	101
LCS 240-38578/4	Lab Control Sample	96	100	102	103
MB 240-38578/5	Method Blank	97	106	94	102
Surrogate Legend					

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

				Percent Sur	rogate Recovery (Acceptance Lim
		12DCE	TOL	BFB	DBFM
Sample ID	Client Sample ID	(80-121)	(90-115)	(70-124)	(84-128)
5 240-38205/5	Lab Control Sample	106	107	102	115
S 240-38205/5 Surrogate Legend	Lab Control Sample	106	107	102	115

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)						
		12DCE	BFB	TOL	DBFM			
ab Sample ID	Client Sample ID	(80-121)	(70-124)	(90-115)	(84-128)			
40-9429-2	FWG-IDW-TANK 2 GW	107	97	104	116			
B 240-38052/1-A MB	Method Blank	100	97	104	108			

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)						
		FBP	2FP	NBZ	TPH	TBP	PHL		
Lab Sample ID	Client Sample ID	(28-110)	(10-110)	(27-111)	(37-119)	(22-120)	(10-110)		
240-9429-2	FWG-IDW-TANK 2 GW	46	59	49	36 X	49	59		
LCS 240-37618/23-A	Lab Control Sample	69	72	74	77	71	73		
MB 240-37618/24-A	Method Blank	57	60	62	73	48	59		

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

### **Surrogate Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

PHL = Phenol-d5 (Surr)

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		2FP	PHL	FBP	TBP	NBZ	TPH			
ample ID	Client Sample ID	(10-110)	(10-110)	(22-110)	(17-117)	(29-111)	(40-119)			
40-38099/2-A	Lab Control Sample	67	60	69	76	67	72			
0-38099/1-A	Method Blank	66	60	63	69	63	67			

Surrogate Legend

2FP = 2-Fluorophenol (Surr)

PHL = Phenol-d5 (Surr)

FBP = 2-Fluorobiphenyl (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)								
		FBP	2FP	TBP	NBZ	PHL	TPH			
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)			
240-9429-2	FWG-IDW-TANK 2 GW	72	64	80	72	55	86			
240-9429-2 MS	FWG-IDW-TANK 2 GW	74	70	83	73	63	85			

#### Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

#### Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
		DCB1	DCB2	TCX1	TCX2			
Lab Sample ID	Client Sample ID	(10-145)	(10-145)	(30-141)	(30-141)			
240-9429-2	FWG-IDW-TANK 2 GW	13	13	75	48			
LCS 240-37621/11-A	Lab Control Sample	72	69	61	64			
MB 240-37621/12-A	Method Blank	71	73	59	60			
Surrogate Legend								

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

TestAmerica North Canton 4/16/2012 Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

TestAmerica Job ID: 240-9429-1

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water Prep Type: Total/NA

				Percent Sur	rrogate Reco
		DCB1	DCB2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(34-141)	(34-141)	(46-122)	(46-122)
LCS 240-38100/2-A	Lab Control Sample	95	80	99	69
MB 240-38100/1-A	Method Blank	82	84	76	84
Surrogate Legend					

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)						
		TCX1	TCX2	DCB1	DCB2			
Lab Sample ID	Client Sample ID	(46-122)	(46-122)	(34-141)	(34-141)			
240-9429-2	FWG-IDW-TANK 2 GW	75	81	61	64			
240-9429-2 MS	FWG-IDW-TANK 2 GW	120	86	100	83			
Surrogate Legend								

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water Prep Type: Total/NA

	TCX2	DCB2	Percent Surrogate Recovery (Acceptance Limits)
Client Sample ID	(23-136)	(10-130)	
FWG-IDW-TANK 2 GW	56	13	
Lab Control Sample	81	77	
Method Blank	80	76	
ene			
piphenyl			
	Lab Control Sample Method Blank	FWG-IDW-TANK 2 GW 56 Lab Control Sample 81 Method Blank 80	Client Sample ID         (23-136)         (10-130)           FWG-IDW-TANK 2 GW         56         13           Lab Control Sample         81         77           Method Blank         80         76

Method: 8151A - Herbicides (GC)

Matrix: Water Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		DCPA1	DCPA2	
Lab Sample ID	Client Sample ID	(37-116)	(37-116)	
LCS 240-38102/2-A	Lab Control Sample	75	73	
MB 240-38102/1-A	Method Blank	71	67	
Surrogate Legend				

## **Surrogate Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Method: 8151A - Herbicides (GC)

Matrix: Water Prep Type: TCLP

				Percent Surrogate Recovery (Acceptance Limits)
and a state of	000010001010	DCPA1 (37-116)	DCPA2 (37-116)	
Lab Sample ID	Client Sample ID	(37-110)	(37-110)	
240-9429-2	FWG-IDW-TANK 2 GW	74	70	
Surrogate Legend				

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Matrix: Water Prep Type: Total

			Percent Surrogate Recovery (Acceptance Limits)
		DNT	
ab Sample ID	Client Sample ID	(79-111)	
40-9429-2	FWG-IDW-TANK 2 GW	98	
G2C270000022B	Method Blank	102	
32C270000022C	Lab Control Sample	105	
Surrogate Legend			

TestAmerica North Canton 4/16/2012

## QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 240-38205/5

Matrix: Water

Analysis Batch: 38205

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	1,00	1.06		mg/L		106	71 - 133	
1,2-Dichloroethane	1,00	0.910		mg/L		91	81 - 114	
2-Butanone (MEK)	2.00	1.74		mg/L		87	49 _ 120	
Benzene	1.00	0.890		mg/L		89	84 - 120	
Carbon tetrachloride	1.00	1.05		mg/L		105	54 - 122	
Chlorobenzene	1.00	0.925		mg/L		93	86 - 111	
Tetrachloroethene	1.00	0.905		mg/L		91	79 _ 134	
Trichloroethene	1.00	0.945		mg/L		95	78 _ 130	
Vinyl chloride	1.00	1.01		mg/L		101	56 - 111	
Chloroform	1.00	0.885		mg/L		89	87 _ 123	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		80 - 121
Toluene-d8 (Surr)	107		90 - 115
4-Bromofluorobenzene (Surr)	102		70 - 124
Dibromofluoromethane (Surr)	115		84 - 128

Lab Sample ID: MB 240-38578/5

Matrix: Water

Client Sample ID: Method Blank

Prep Type: Total/NA

Analysis Batch: 38578		un.							
Analyte		MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0		1.0	0.22	ug/L		0277707	03/30/12 11:27	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			03/30/12 11:27	4
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			03/30/12 11:27	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			03/30/12 11:27	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			03/30/12 11:27	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			03/30/12 11:27	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			03/30/12 11:27	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			03/30/12 11:27	- 1
2-Butanone (MEK)	10	U	10		ug/L			03/30/12 11:27	1
2-Hexanone	10	U	10	0.41	ug/L			03/30/12 11:27	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			03/30/12 11:27	1
Acetone	10	U	10	1.1	ug/L			03/30/12 11:27	1
Benzene	1.0	U	1.0	0.13	ug/L			03/30/12 11:27	1
Bromoform	1.0	U	1.0	0.64	ug/L			03/30/12 11:27	1
Bromomethane	1.0	U	1.0	0.41	ug/L			03/30/12 11:27	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			03/30/12 11:27	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			03/30/12 11:27	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			03/30/12 11:27	1
Chloromethane	1.0	U	1.0	0.30	ug/L			03/30/12 11:27	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/30/12 11:27	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			03/30/12 11:27	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			03/30/12 11:27	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			03/30/12 11:27	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			03/30/12 11:27	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			03/30/12 11:27	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			03/30/12 11:27	1
o-Xylene	1.0	U	1.0	0.14	ug/L			03/30/12 11:27	1

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-38578/5

Matrix: Water

Analysis Batch: 38578

Client Sample ID: Method Blank Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	1.0	U	1.0	0.11	ug/L			03/30/12 11:27	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			03/30/12 11:27	1
Toluene	1.0	U	1.0	0.13	ug/L			03/30/12 11:27	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/30/12 11:27	- 1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/30/12 11:27	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			03/30/12 11:27	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			03/30/12 11:27	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			03/30/12 11:27	1
Chloroform	1.0	U	1.0	0.16	ug/L			03/30/12 11:27	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			03/30/12 11:27	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			03/30/12 11:27	1
Chloroethane	1.0	U	1.0	0.29	ug/L			03/30/12 11:27	1

MB MB

%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
106		63 - 129		03/30/12 11:27	1
97		74 - 115		03/30/12 11:27	1
94		66 - 117		03/30/12 11:27	1
102		75 - 121		03/30/12 11:27	1
	106 97 94	97 94	106 63 - 129 97 74 - 115 94 66 - 117	106 63 - 129 97 74 - 115 94 66 - 117	106     63 - 129     03/30/12 11:27       97     74 - 115     03/30/12 11:27       94     66 - 117     03/30/12 11:27

Lab Sample ID: LCS 240-38578/4

Matrix: Water

Analysis Batch: 38578

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analysis Batch: 38578							
Water Section 2	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	10.0	9.89		ug/L		99	74 - 118
1,1,2,2-Tetrachloroethane	10.0	8.96		ug/L		90	68 - 118
1,1,2-Trichloroethane	10.0	9.15		ug/L		92	80 - 112
1,1-Dichloroethane	10.0	10.6		ug/L		106	82 - 115
1,1-Dichloroethene	10.0	10.7		ug/L		107	78 - 131
1,2-Dichloroethane	10.0	10.3		ug/L		103	71 - 127
1,2-Dichloroethene, Total	20.0	21.1		ug/L		106	82 - 114
1,2-Dichloropropane	10.0	9.76		ug/L		98	81 _ 115
2-Butanone (MEK)	20.0	19.6		ug/L		98	60 _ 126
2-Hexanone	20.0	16.0		ug/L		80	55 - 133
4-Methyl-2-pentanone (MIBK)	20.0	18.7		ug/L		94	63 - 128
Acetone	20.0	25.2		ug/L		126	43 _ 136
Benzene	10.0	10.1		ug/L		101	83 - 112
Bromoform	10.0	7.01		ug/L		70	40 - 131
Bromomethane	10.0	10.4		ug/L		104	11 - 185
Carbon disulfide	10.0	10.2		ug/L		102	62 - 142
Carbon tetrachloride	10.0	9.50		ug/L		95	66 - 128
Chlorobenzene	10.0	9.51		ug/L		95	85 - 110
Chloromethane	10.0	8.20		ug/L		82	44 - 126
cis-1,2-Dichloroethene	10.0	10.5		ug/L		105	80 - 113
cis-1,3-Dichloropropene	10.0	8.37		ug/L		84	61 - 115
Dibromochloromethane	10.0	7.65		ug/L		77	64 _ 119
Bromodichloromethane	10.0	9.81		ug/L		98	72 _ 121
Ethylbenzene	10.0	9,36		ug/L		94	83_112
Methylene Chloride	10.0	10.5		ug/L		105	66 - 131

TestAmerica Job ID: 240-9429-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-38578/4

Matrix: Water

m-Xylene & p-Xylene

Tetrachloroethene

Trichloroethene

Vinyl chloride

Xylenes, Total

Chloroethane

Bromochloromethane

1,2-Dibromoethane

Chloroform

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

Analyte

o-Xylene

Styrene

Toluene

Analysis Batch: 38578

Client Sample ID: Lab Control Sample Prep Type: Total/NA

LCS LCS Spike %Rec. Added Result Qualifier Unit %Rec Limits 20.0 19.1 ug/L 96 83 - 113 10.0 9.76 ug/L 98 83 - 113 9.92 99 10.0 ug/L 79 - 114 10.0 9.59 ug/L 96 79 _ 114 10.0 9.31 93 84 _ 111 ug/L 10.0 10.6 ug/L 106 83 - 117 58 - 117 10.0 6.99 70 ug/L 10.0 10.1 ug/L 101 76 - 117 10.0 8.65 ug/L 87 53 - 127 30.0 28.9 ug/L 96 83 - 112 10.0 10.4 ug/L 104 79 - 117 104 77 - 120 10.0 10.4 ug/L

ug/L

ug/L

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		63 - 129
Toluene-d8 (Surr)	96		74 - 115
4-Bromofluorobenzene (Surr)	102		66 - 117
Dibromofluoromethane (Surr)	103		75 - 121

Lab Sample ID: LB 240-38052/1-A MB

Matrix: Water

Analysis Batch: 38205

Client Sample ID: Method Blank

90

90

79 - 113

25 - 153

Prep Type: TCLP

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			03/27/12 18:35	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			03/27/12 18:35	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			03/27/12 18:35	1
Benzene	0.025	U	0.025	0.0065	mg/L			03/27/12 18:35	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			03/27/12 18:35	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			03/27/12 18:35	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			03/27/12 18:35	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			03/27/12 18:35	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			03/27/12 18:35	1
Chloroform	0.025	U	0.025	0.0080	mg/L			03/27/12 18:35	1

10.0

10.0

8.96

9.02

IVIB	IVIB				
%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
100		80 - 121		03/27/12 18:35	1
104		90 - 115		03/27/12 18:35	7
97		70 - 124		03/27/12 18:35	7
108		84 - 128		03/27/12 18:35	1
	%Recovery 100 104 97	%Recovery Qualifier  100  104  97	%Recovery         Qualifier         Limits           100         80 - 121           104         90 - 115           97         70 - 124	100 80 - 121 104 90 - 115 97 70 - 124	%Recovery         Qualifier         Limits         Prepared         Analyzed           100         80 - 121         03/27/12 18:35           104         90 - 115         03/27/12 18:35           97         70 - 124         03/27/12 18:35

## QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-37618/24-A

Matrix: Water

Analysis Batch: 38105

Client Sample ID: Method Blank Prep Type: Total/NA

4.51.50		MB			Tuesday.			1000	
Analyte		Qualifier	RL	MDL	-	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Acenaphthylene	0.20		0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Anthracene	0.20		0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzo[a]anthracene	0.20		0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzoic acid	25		25		ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzo[b]fluoranthene	0.20		0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzo[k]fluoranthene	0.20		0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		03/22/12 08:59	03/27/12 12:56	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		03/22/12 08:59	03/27/12 12:56	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Butyl benzyl phthalate	1.0	U	1.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4-Dimethylphenol	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		03/22/12 08:59	03/27/12 12:56	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Fluoranthene	0.20	U	0.20				03/22/12 08:59	03/27/12 12:56	1
Fluorene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Hexachlorobutadiene	1.0	U	1.0	0.27	ug/L		03/22/12 08:59	03/27/12 12:56	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	4
N-Nitrosodiphenylamine	1.0	U	1.0	0.31	ug/L		03/22/12 08:59	03/27/12 12:56	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Chloronaphthalene	1.0		1.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Chlorophenol	1.0		1.0	0.29	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Chlorophenyl phenyl ether	2.0		2.0	0.30	ug/L		03/22/12 08:59	03/27/12 12:56	1
Chrysene	0.20		0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Dibenz(a,h)anthracene	0.20		0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Dibenzofuran	1.0		1.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzo[g,h,i]perylene	0.20		0.20		ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzo[a]pyrene	0.20		0.20		ug/L		03/22/12 08:59	03/27/12 12:56	9
Di-n-butyl phthalate	1.0		1.0	0.67			03/22/12 08:59	03/27/12 12:56	1
1,2-Dichlorobenzene	1.0		1.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
1,3-Dichlorobenzene	1.0		1.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
3,3'-Dichlorobenzidine							03/22/12 08:59		
	5.0		5.0		ug/L			03/27/12 12:56	1
2,4-Dichlorophenol	2.0		2.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
Diethyl phthalate	1.0		1.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
Indeno[1,2,3-cd]pyrene	0.20		0.20		ug/L		03/22/12 08:59	03/27/12 12:56	1
Isophorone	1.0		1.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Methylnaphthalene	0.20		0.20		ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Methylphenol	1.0		1.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
Naphthalene	0.20		0.20		ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Nitroaniline	2.0		2.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
3-Nitroaniline	2.0		2.0		ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1

TestAmerica Job ID: 240-9429-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-37618/24-A

Matrix: Water

Analysis Batch: 38105

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 37618

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	1.0	U	1.0	0.040	ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		03/22/12 08:59	03/27/12 12:56	1
Pyrene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		03/22/12 08:59	03/27/12 12:56	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4,6-Trichlorophenol	5.0	U	5.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	9
Phenol	1.0	U	1.0	0.60	ug/L		03/22/12 08:59	03/27/12 12:56	1
Carbazole	1.0	U	1.0	0.28	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Chloroaniline	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	- 1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		03/22/12 08:59	03/27/12 12:56	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		03/22/12 08:59	03/27/12 12:56	1

MB MB

Surrogate	%Recovery Qualifie	er Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	57	28 - 110	03/22/12 08:59	03/27/12 12:56	1
2-Fluorophenol (Surr)	60	10 - 110	03/22/12 08:59	03/27/12 12:56	1
2,4,6-Tribromophenol (Surr)	48	22 - 120	03/22/12 08:59	03/27/12 12:56	1
Nitrobenzene-d5 (Surr)	62	27 - 111	03/22/12 08:59	03/27/12 12:56	1
Phenol-d5 (Surr)	59	10 - 110	03/22/12 08:59	03/27/12 12:56	1
Terphenyl-d14 (Surr)	73	37 - 119	03/22/12 08:59	03/27/12 12:56	1

Lab Sample ID: LCS 240-37618/23-A

Matrix: Water

Analysis Batch: 38105

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

7,1111111111111111111111111111111111111							
	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Acenaphthene	20.0	12.6		ug/L		63	40 - 110
Acenaphthylene	20.0	14.1		ug/L		71	43 - 110
Anthracene	20.0	14.2		ug/L		71	54 - 114
Benzo[a]anthracene	20.0	13.3		ug/L		67	55 - 115
Benzoic acid	20,0	25	U	ug/L		44	10 _ 129
Benzo[b]fluoranthene	20.0	12.3		ug/L		62	43 _ 122
Benzo[k]fluoranthene	20.0	12.6		ug/L		63	43 - 124
Benzyl alcohol	20.0	11.4		ug/L		57	10 - 130
Bis(2-chloroethoxy)methane	20.0	14.0		ug/L		70	39 - 110
Bis(2-chloroethyl)ether	20.0	15.0		ug/L		75	34 - 113
4-Bromophenyl phenyl ether	20.0	14.3		ug/L		72	51 - 114
Butyl benzyl phthalate	20.0	14.9		ug/L		74	53 - 126
2,4-Dimethylphenol	20.0	11.7		ug/L		58	12 - 110
Dimethyl phthalate	20.0	14.5		ug/L		72	15 - 143
4,6-Dinitro-2-methylphenol	20.0	12.1		ug/L		61	28 - 112
2,4-Dinitrophenol	20.0	9.06		ug/L		45	17 - 112
2,4-Dinitrotoluene	20.0	15.9		ug/L		80	52 _ 123
2,6-Dinitrotoluene	20.0	16.3		ug/L		81	52 - 119

## QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-37618/23-A

Matrix: Water

Analysis Batch: 38105

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Analysis Batch: 38105	Spike	LCS	LCS			%Rec.	Batch: 37
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	
Fluoranthene	20.0	14.7	ug/L		73	54 - 122	
Fluorene	20.0	13.6	ug/L		68	47 - 112	
Hexachlorobenzene	20.0	15.0	ug/L		75	51 - 112	
Hexachlorobutadiene	20.0	13.1	ug/L		65	13 - 110	
Hexachlorocyclopentadiene	20.0	6.42	J ug/L		32	10 - 110	
Hexachloroethane	20.0	11.9	ug/L		60	12 - 110	
N-Nitrosodiphenylamine	20.0	12.4	ug/L		62	53 - 113	
N-Nitrosodi-n-propylamine	20.0	14.0	ug/L		70	37 - 121	
1,4-Dichlorobenzene	20.0	12.3	ug/L		62	19 - 110	
2-Chloronaphthalene	20.0	13.6	ug/L		68	39 _ 110	
2-Chlorophenol	20.0	14.1	ug/L		71	27 - 110	
4-Chlorophenyl phenyl ether	20.0	14.5	ug/L		73	50 - 115	
Chrysene	20.0	15.1	ug/L		76	55 _ 115	
Dibenz(a,h)anthracene	20.0	11.9	ug/L		60	46 _ 122	
Dibenzofuran	20.0	14.4	ug/L		72	46 - 111	
Benzo[g,h,i]perylene	20.0	12.6	ug/L		63	45 _ 120	
Benzo[a]pyrene	20.0	10.9	ug/L		55	43_116	
Di-n-butyl phthalate	20.0	16.3	ug/L		82	55 _ 122	
1,2-Dichlorobenzene	20.0	12.5	ug/L		63	23 - 110	
1,3-Dichlorobenzene	20.0	12.2	ug/L		61	19 - 110	
3,3'-Dichlorobenzidine	20.0	8.12	ug/L		41	19 - 110	
2,4-Dichlorophenol	20.0	14.9	ug/L		75	33 - 110	
Diethyl phthalate	20.0	14.8	ug/L		74	33 - 134	
Indeno[1,2,3-cd]pyrene	20.0	11.7	ug/L		58	46 _ 121	
Isophorone	20.0	14.0	ug/L		70	44 - 128	
2-Methylnaphthalene	20.0	13.8	ug/L		69	35 _ 110	
2-Methylphenol	20.0	13.6	ug/L		68	30 - 110	
Naphthalene	20.0	14.7	ug/L		74	31 - 110	
2-Nitroaniline	20.0	14.5	ug/L		73	43 _ 130	
3-Nitroaniline	20.0	14.6	ug/L		73	45 _ 116	
4-Nitroaniline	20.0	12.9	ug/L		65	45 _ 120	
Nitrobenzene	20.0	14.4	ug/L		72	37 - 115	
2-Nitrophenol	20.0	13.6	ug/L		68	29 _ 110	
4-Nitrophenol	20.0	14.1	ug/L		71	12 - 130	
Pyrene	20.0	15.0	ug/L		75	55 _ 120	
Pentachlorophenol	20.0	5.62	ug/L		28	26 - 110	
Phenanthrene	20.0	14.2	ug/L		71	52 - 114	
1,2,4-Trichlorobenzene	20.0	12.3			62	25 - 110	
2,4,5-Trichlorophenol	20.0	14.5			73	39 - 110	
2,4,6-Trichlorophenol	20.0	13.6			68	35 - 110	
Phenol	20.0	14.2			71	14 - 112	
Carbazole	20.0	14.1	ug/L		71	53 - 120	
4-Chloroaniline	20.0	12.7			64	10 _ 110	
3 & 4 Methylphenol	40.0	30.2			76	32 - 110	
Bis(2-ethylhexyl) phthalate	20.0	10.1	ug/L		51	36 _ 163	
Di-n-octyl phthalate	20,0	10.2			51	44 _ 128	
4-Chloro-3-methylphenol	20.0	16.0	ug/L		80	39 - 110	
2,2'-oxybis[1-chloropropane]	20.0	12.8			64	25 - 128	

TestAmerica Job ID: 240-9429-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-37618/23-A

Matrix: Water

Analysis Batch: 38105

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 37618

LCS	LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	69	quanno	28 - 110
2-Fluorophenol (Surr)	72		10 - 110
2,4,6-Tribromophenol (Surr)	71		22 - 120
Nitrobenzene-d5 (Surr)	74		27 - 111
Phenol-d5 (Surr)	73		10-110
Terphenyl-d14 (Surr)	77		37 - 119

Lab Sample ID: MB 240-38099/1-A

Matrix: Water

Analysis Batch: 38218

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38099

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	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	0.020	U	0.020	0.00035	mg/L		03/27/12 08:40	03/28/12 09:45	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		03/27/12 08:40	03/28/12 09:45	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		03/27/12 08:40	03/28/12 09:45	1
Hexachlorobutadiene	0,020	U	0.020	0.00027	mg/L		03/27/12 08:40	03/28/12 09:45	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		03/27/12 08:40	03/28/12 09:45	1
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		03/27/12 08:40	03/28/12 09:45	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		03/27/12 08:40	03/28/12 09:45	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		03/27/12 08:40	03/28/12 09:45	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		03/27/12 08:40	03/28/12 09:45	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		03/27/12 08:40	03/28/12 09:45	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		03/27/12 08:40	03/28/12 09:45	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		03/27/12 08:40	03/28/12 09:45	1

MR MR

	INIT	MD				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	63		22 - 110	03/27/12 08:40	03/28/12 09:45	1
2-Fluorophenol (Surr)	66		10 - 110	03/27/12 08:40	03/28/12 09:45	1
2,4,6-Tribromophenol (Surr)	69		17 - 117	03/27/12 08:40	03/28/12 09:45	1
Nitrobenzene-d5 (Surr)	63		29 - 111	03/27/12 08:40	03/28/12 09:45	1
Phenol-d5 (Surr)	60		10 - 110	03/27/12 08:40	03/28/12 09:45	1
Terphenyl-d14 (Surr)	67		40 - 119	03/27/12 08:40	03/28/12 09:45	1

Lab Sample ID: LCS 240-38099/2-A

Matrix: Water

Analysis Batch: 38218

Client Samp	le ID:	Lab	Control	Sample
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Prep Type: Total/NA

Analysis Baton. ooz io							I TOP DUCOIL
	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Pyridine	0.0800	0.0582		mg/L		73	10 - 110
2,4-Dinitrotoluene	0.0800	0.0608		mg/L		76	45 _ 126
Hexachlorobenzene	0.0800	0.0576		mg/L		72	47 _ 116
Hexachlorobutadiene	0.0800	0.0608		mg/L		76	10 - 110
Hexachloroethane	0.0800	0.0572		mg/L		72	10 - 110
2-Methylphenol	0.0800	0.0630		mg/L		79	24 _ 110
Nitrobenzene	0.0800	0.0550		mg/L		69	35 - 117
Pentachlorophenol	0.0800	0.0533		mg/L		67	12 - 110
2,4,5-Trichlorophenol	0.0800	0.0578		mg/L		72	35 - 111
2,4,6-Trichlorophenol	0.0800	0.0554		mg/L		69	32 - 110
3 & 4 Methylphenol	0.160	0.124		mg/L		78	27 - 110

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-38099/2-A

Matrix: Water

Analysis Batch: 38218

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 38099

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	69		22 - 110
2-Fluorophenol (Surr)	67		10 - 110
2,4,6-Tribromophenol (Surr)	76		17 - 117
Nitrobenzene-d5 (Surr)	67		29 - 111
Phenol-d5 (Surr)	60		10-110
Terphenyl-d14 (Surr)	72		40 - 119

Client Sample ID: FWG-IDW-TANK 2 GW

Prep Type: TCLP

Prep Batch: 38099

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Analysis Batch: 38218

Matrix: Water

Lab Sample ID: 240-9429-2 MS

	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Pyridine	0.020	U	0.0800	0.0528		mg/L		66	10 - 148
2,4-Dinitrotoluene	0.020	U	0.0800	0.0666		mg/L		83	31 - 131
Hexachlorobenzene	0.020	U	0.0800	0.0650		mg/L		81	36 - 132
Hexachlorobutadiene	0.020	U	0.0800	0.0645		mg/L		81	18 - 116
Hexachloroethane	0.020	U	0.0800	0.0498		mg/L		62	18 _ 110
2-Methylphenol	0.0019	J	0.0800	0.0633		mg/L		77	33 _ 115
Nitrobenzene	0.0040	U	0.0800	0.0596		mg/L		75	19 - 199
Pentachlorophenol	0.040	U	0.0800	0.0262	J	mg/L		33	10 - 140
2,4,5-Trichlorophenol	0.020	U	0.0800	0.0614		mg/L		77	24 - 143
2,4,6-Trichlorophenol	0.020	U	0.0800	0.0621		mg/L		78	36 - 135
3 & 4 Methylphenol	0.040	U	0.160	0.122		mg/L		77	46 - 110

MS MS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	74		22 - 110
2-Fluorophenol (Surr)	70		10-110
2,4,6-Tribromophenol (Surr)	83		17 - 117
Nitrobenzene-d5 (Surr)	73		29 - 111
Phenol-d5 (Surr)	63		10-110
Terphenyl-d14 (Surr)	85		40 - 119

### Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-37621/12-A

Matrix: Water

Analysis Batch: 37892

Client Sample	e ID:	Method	Blank
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Prep Type: Total/NA Prep Batch: 37621

	MB	MB						3,000	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.050	U	0.050	0.0096	ug/L		03/22/12 09:10	03/25/12 10:58	1
4,4'-DDE	0.050	U	0.050	0.0097	ug/L		03/22/12 09:10	03/25/12 10:58	1
4,4'-DDT	0.050	U	0.050	0.016	ug/L		03/22/12 09:10	03/25/12 10:58	1
Aldrin	0.050	U	0.050	0.0082	ug/L		03/22/12 09:10	03/25/12 10:58	1
alpha-BHC	0.050	U	0.050	0.0070	ug/L		03/22/12 09:10	03/25/12 10:58	1
alpha-Chlordane	0.050	U	0.050	0.014	ug/L		03/22/12 09:10	03/25/12 10:58	1
beta-BHC	0.050	U	0.050	0.0084	ug/L		03/22/12 09:10	03/25/12 10:58	. 1
delta-BHC	0.050	U	0.050	0.0087	ug/L		03/22/12 09:10	03/25/12 10:58	1
Dieldrin	0,050	U	0.050	0.0075	ug/L		03/22/12 09:10	03/25/12 10:58	1
Endosulfan I	0.050	U	0.050	0.013	ug/L		03/22/12 09:10	03/25/12 10:58	1

TestAmerica Job ID: 240-9429-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

### Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-37621/12-A

Matrix: Water

Analysis Batch: 37892

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37621

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan II	0.050	U	0,050	0.012	ug/L		03/22/12 09:10	03/25/12 10:58	1
Endosulfan sulfate	0.050	U	0.050	0.011	ug/L		03/22/12 09:10	03/25/12 10:58	1
Endrin	0.050	U	0.050	0.011	ug/L		03/22/12 09:10	03/25/12 10:58	1
Endrin aldehyde	0.050	U	0,050	0.011	ug/L		03/22/12 09:10	03/25/12 10:58	1
Endrin ketone	0.050	U	0.050	0.0078	ug/L		03/22/12 09:10	03/25/12 10:58	1
gamma-BHC (Lindane)	0.050	U	0.050	0.0064	ug/L		03/22/12 09:10	03/25/12 10:58	1
gamma-Chlordane	0,050	U	0.050	0.012	ug/L		03/22/12 09:10	03/25/12 10:58	1
Heptachlor	0,050	U	0.050	0.0080	ug/L		03/22/12 09:10	03/25/12 10:58	1
Heptachlor epoxide	0.050	U	0.050	0.0071	ug/L		03/22/12 09:10	03/25/12 10:58	9
Methoxychlor	0.10	U	0.10	0.032	ug/L		03/22/12 09:10	03/25/12 10:58	- 1
Toxaphene	2.0	U	2.0	0.32	ug/L		03/22/12 09:10	03/25/12 10:58	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	71	10 - 145	03/22/12 09:10	03/25/12 10:58	1
DCB Decachlorobiphenyl	73	10 - 145	03/22/12 09:10	03/25/12 10:58	1
Tetrachloro-m-xylene	59	30 - 141	03/22/12 09:10	03/25/12 10:58	1
Tetrachloro-m-xylene	60	30 - 141	03/22/12 09:10	03/25/12 10:58	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 37621

Lab Sample ID: LCS 240-37621/11-A

Matrix: Water

Analysis Batch: 37892

Analysis Batch: 37892	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
4,4'-DDD	0.500	0.447		ug/L		89	53 - 168
4,4'-DDE	0.500	0.411		ug/L		82	66 - 136
4,4'-DDT	0.500	0.428		ug/L		86	42 - 140
Aldrin	0.500	0.381		ug/L		76	61 - 127
alpha-BHC	0.500	0.395		ug/L		79	65 _ 132
alpha-Chlordane	0.500	0.388		ug/L		78	60 - 134
beta-BHC	0.500	0.397		ug/L		79	59 _ 134
delta-BHC	0.500	0.440		ug/L		88	45 - 143
Dieldrin	0.500	0.411		ug/L		82	61 - 142
Endosulfan I	0.500	0.284		ug/L		.57	35 _ 110
Endosulfan II	0.500	0.323		ug/L		65	39_110
Endosulfan sulfate	0.500	0.421		ug/L		84	54 - 143
Endrin	0.500	0.406		ug/L		81	57 - 148
Endrin aldehyde	0.500	0.399		ug/L		80	44 - 116
Endrin ketone	0.500	0.395		ug/L		79	52 - 135
gamma-BHC (Lindane)	0.500	0.401		ug/L		80	58 _ 140
gamma-Chlordane	0.500	0.405		ug/L		81	59 - 139
Heptachlor	0.500	0.352		ug/L		70	60 - 132
Heptachlor epoxide	0.500	0.395		ug/L		79	60 - 138
Methoxychlor	0.500	0.469		ug/L		94	45 - 139

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	72		10 - 145
DCB Decachlorobiphenyl	69		10 - 145
Tetrachloro-m-xylene	61		30 - 141
Tetrachloro-m-xylene	64		30 - 141

TestAmerica Job ID: 240-9429-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

#### Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-38100/1-A

Matrix: Water

Analysis Batch: 38405

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38100

	WB	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L	77	03/27/12 08:42	03/29/12 22:55	- 1
Endrin	0.0012	U	0.0012	0,000026	mg/L		03/27/12 08:42	03/29/12 22:55	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		03/27/12 08:42	03/29/12 22:55	1
Heptachlor	0,0012	U	0,0012	0,000019	mg/L		03/27/12 08:42	03/29/12 22:55	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		03/27/12 08:42	03/29/12 22:55	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		03/27/12 08:42	03/29/12 22:55	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		03/27/12 08:42	03/29/12 22:55	1

MB MB

%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
82	34 - 141	03/27/12 08:42	03/29/12 22:55	1
84	34 - 141	03/27/12 08:42	03/29/12 22:55	1
76	46 - 122	03/27/12 08:42	03/29/12 22:55	1
84	46 - 122	03/27/12 08:42	03/29/12 22:55	1
	82	82 34 - 141 84 34 - 141 76 46 - 122	82     34 - 141     03/27/12 08:42       84     34 - 141     03/27/12 08:42       76     46 - 122     03/27/12 08:42	82     34 - 141     03/27/12 08:42     03/29/12 22:55       84     34 - 141     03/27/12 08:42     03/29/12 22:55       76     46 - 122     03/27/12 08:42     03/27/12 08:42     03/29/12 22:55

LCS LCS

0.00163 J

0.00165 J

0.00151 J

0.00172 J

0.00319 J

Result Qualifier

Unit

mg/L

mg/L

mg/L

mg/L

mg/L

Spike

Added

0.00200

0.00200

0.00200

0.00200

0.00400

Lab Sample ID: LCS 240-38100/2-A

Matrix: Water

Analyte

Heptachlor

Methoxychlor

Endrin

Analysis Batch: 38405

gamma-BHC (Lindane)

Heptachlor epoxide

Client Sample ID: Lab Control Sample Prep Type: Total/NA

59 - 141

42 - 141

Prep Batch: 38100

%Rec Limits 81 59_136 83 59 - 137 75 63 - 123

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	95		34 - 141
DCB Decachlorobiphenyl	80		34 - 141
Tetrachloro-m-xylene	99		46 - 122
Tetrachloro-m-xylene	69		46 - 122

Lab Sample ID: 240-9429-2 MS

Matrix: Water

Analysis Batch: 38405

Client Sample ID: FWG-IDW-TANK 2 GW

86

80

Prep Type: TCLP

Sample	Sample	Spike	MS	MS				%Rec.
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
0.0012	U	0.00200	0.00187	J	mg/L	_	94	50 _ 150
0.0012	U	0.00200	0.00199	J	mg/L		99	50 - 150
0.0012	U	0.00200	0.00179	J	mg/L		89	50 - 150
0.0012	U	0.00200	0.00199	J	mg/L		100	50 - 150
0.0024	U	0.00400	0.00368	J	mg/L		92	50 _ 150
	Result 0.0012 0.0012 0.0012 0.0012	Result Qualifier  0.0012 U  0.0012 U  0.0012 U  0.0012 U  0.0012 U  0.0012 U	Result         Qualifier         Added           0.0012         U         0.00200           0.0012         U         0.00200           0.0012         U         0.00200           0.0012         U         0.00200           0.0012         U         0.00200	Result         Qualifier         Added         Result           0.0012         U         0.00200         0.00187           0.0012         U         0.00200         0.00199           0.0012         U         0.00200         0.00179           0.0012         U         0.00200         0.00199	Result         Qualifier         Added         Result         Qualifier           0.0012         U         0.00200         0.00187         J           0.0012         U         0.00200         0.00199         J           0.0012         U         0.00200         0.00179         J           0.0012         U         0.00200         0.00199         J	Result         Qualifier         Added         Result         Qualifier         Unit           0.0012         U         0.00200         0.00187         J         mg/L           0.0012         U         0.00200         0.00199         J         mg/L           0.0012         U         0.00200         0.00179         J         mg/L           0.0012         U         0.00200         0.00199         J         mg/L	Result 0.0012         Qualifier Unit 0.00200         Result 0.00187         Qualifier Unit mg/L         D           0.0012         U 0.00200         0.00199         J mg/L           0.0012         U 0.00200         0.00179         J mg/L           0.0012         U 0.00200         0.00179         J mg/L           0.0012         U 0.00200         0.00199         J mg/L	Result Qualifier         Added October 100         Result Qualifier         Unit Unit Unit Unit Unit Unit Unit Unit

	100-	****	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	100		34 - 141
DCB Decachlorobiphenyl	83		34 - 141
Tetrachloro-m-xylene	120		46 - 122
Tetrachloro-m-xylene	86		46 - 122

QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

#### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-37623/6-A

Matrix: Water

Analysis Batch: 37884

Client Sample ID: Method Blank

TestAmerica Job ID: 240-9429-1

Prep Type: Total/NA

Prep Batch: 37623

4-1	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.50	U	0.50	0.17	ug/L	= =	03/22/12 09:16	03/23/12 17:51	-1
Aroclor-1221	0.50	U	0.50	0.13	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1232	0.50	U	0.50	0.16	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1242	0.50	U	0.50	0.22	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1248	0.50	U	0.50	0.10	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1254	0.50	U	0.50	0.16	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1260	0.50		0.50	0.17	ug/L		03/22/12 09:16	03/23/12 17:51	1

MB MB

	mb mb				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80	23 - 136	03/22/12 09:16	03/23/12 17:51	1
DCB Decachlorobiphenyl	76	10 - 130	03/22/12 09:16	03/23/12 17:51	1

Lab Sample ID: LCS 240-37623/5-A

Matrix: Water

Analysis Batch: 37884

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 37623

	эріке	LUS	LUS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	5,00	4.80		ug/L		96	66 - 120
Aroclor-1260	5.00	4.39		ug/L		88	55 - 120

LCS LCS

MB MB

Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene	81		23 - 136
DCB Decachlorobiphenyl	77		10 - 130

#### Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-38102/1-A

Matrix: Water

Analysis Batch: 38454

Client Sample ID: Method Blank
Prep Type: Total/NA

Prep Batch: 38102

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		03/27/12 08:46	03/29/12 21:58	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		03/27/12 08:46	03/29/12 21:58	1
	MB	MB							

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	71	37 - 116	03/27/12 08:46	03/29/12 21:58	7
2,4-Dichlorophenylacetic acid	67	37 - 116	03/27/12 08:46	03/29/12 21:58	1

Lab Sample ID: LCS 240-38102/2-A

Matrix: Water

Analysis Batch: 38454

Client Sample II	: Lab Control Sample
	Pren Type: Total/NA

Prep Batch: 38102

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
2,4-D	0.0200	0.0157		mg/L		78	35 _ 136	
Silvex (2,4,5-TP)	0.00500	0.00378		mg/L		76	46_112	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2,4-Dichlorophenylacetic acid	75		37 - 116

TestAmerica North Canton 4/16/2012 Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

#### Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 240-38102/2-A

Matrix: Water

Analysis Batch: 38454

LCS LCS

Surrogate %Recovery Qualifier Limits 2,4-Dichlorophenylacetic acid 73 37 - 116 Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38102

#### Method: 8330 (Modified) - Organic Compounds by UV/HPLC

Lab Sample ID: G2C280000056B

Matrix: Water

Nitroguanidine

Analyte

Analysis Batch: 2088056

MB MB

20

Result Qualifier

U

Spike

Added

Spike

Added

250

Spike

Added

250

250

RL 20 2.4

LCS LCS

MS MS

SD1 SD1

267

Result Qualifier

Qualifier

Result

265

263

Result Qualifier

MDL Unit D ug/L

Unit

ug/L

Unit

ug/L

Unit

ug/L

Prepared 03/28/12 09:45

Analyzed 03/29/12 11:14

Dil Fac

Lab Sample ID: G2C280000056C

Matrix: Water

Analysis Batch: 2088056

Analyte

Lab Sample ID: 240-9429-2 MS

Matrix: Water

Nitroguanidine

Nitroguanidine

Nitroguanidine

Analysis Batch: 2088056

Analyte

Lab Sample ID: G2C230472001D

Matrix: Water

Analysis Batch: 2088056

Analyte

Lab Sample ID: G2C270000022B

Matrix: Water

Analysis Batch: 2097022

Client Sample ID: Method Blank Prep Type: Dissolved

Prep Batch: 2088056_P

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 2088056 P %Rec.

%Rec Limits 105 73 - 117

Client Sample ID: FWG-IDW-TANK 2 GW

Prep Type: Dissolved

Prep Batch: 2088056_P

%Rec. %Rec Limits

73 - 117

Client Sample ID: FWG-IDW-TANK 2 GW

106

%Rec

107

D

Prep Type: Dissolved

Prep Batch: 2088056 P

%Rec. RPD

Limits RPD Limit 73 - 117 0.72

### Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Sample Sample

20 U

Sample Sample

20 U

Result Qualifier

Result Qualifier

Client Sample ID: Method Blank

Prep Type: Total Prop Batch: 2097022 P

Analysis Batch: 208/022	MB						Prep Batch: 208	3/UZZ_P	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroglycerin	0.65	U	0.65	0.33	ug/L		03/27/12 07:00	03/31/12 00:22	1
PETN	0.65	U	0.65	0.30	ug/L		03/27/12 07:00	03/31/12 00:22	4
2-Amino-4,6-dinitrotoluene	0.20	U	0.20	0.10	ug/L		03/27/12 07:00	03/31/12 00:22	1
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	4
1,3-Dinitrobenzene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1
2,4-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1
2,6-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1
HMX	0.10	U	0.10	0.036	ug/L		03/27/12 07:00	03/31/12 00:22	1
Nitrobenzene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1
2-Nitrotoluene	0,50	U	0.50	0.088	ug/L		03/27/12 07:00	03/31/12 00:22	1
3-Nitrotoluene	0.50	U	0.50	0.057	ug/L		03/27/12 07:00	03/31/12 00:22	1

TestAmerica Job ID: 240-9429-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A) (Continued)

Lab Sample ID: G2C270000022B

Lab Sample ID: G2C270000022C

Matrix: Water

Matrix: Water

Analysis Batch: 2087022

Client Sample ID: Method Blank Prep Type: Total

Prep Batch: 2087022 P

MB MB Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac 4-Nitrotoluene 0.65 U 0.65 0.088 ug/L 03/27/12 07:00 03/31/12 00:22 RDX 0.10 U 0.10 0.036 ug/L 03/27/12 07:00 03/31/12 00:22 0.10 U 0.10 Tetryl 0.050 ug/L 03/27/12 07:00 03/31/12 00:22 1,3,5-Trinitrobenzene 0.10 U 0.10 0.030 ug/L 03/27/12 07:00 03/31/12 00:22 2,4,6-Trinitrotoluene 0.10 U 0.10 0.050 ug/L 03/27/12 07:00 03/31/12 00:22

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 3,4-Dinitrotoluene 79 - 111 03/27/12 07:00 03/31/12 00:22 102

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 2087022_P

10

Analysis Batch: 2087022 LCS LCS Spike %Rec. Analyte Result Qualifier %Rec Limits Added Unit 5.00 5.34 107 85 _ 115 Nitroglycerin ug/L PETN 5.00 5.06 ug/L 101 84 - 117 2-Amino-4,6-dinitrotoluene 1.00 1.07 107 50 - 155 ug/L 4-Amino-2,6-dinitrotoluene 1.00 1.05 ug/L 105 55 - 155 1,3-Dinitrobenzene 1.00 1.14 ug/L 114 45 - 160 2,4-Dinitrotoluene 1.00 1.06 ug/L 106 60 - 135 107 2,6-Dinitrotoluene 1.00 1.07 ug/L 60 - 135 HMX 1.00 1.05 ug/L 105 80 - 115 1.00 113 50 - 140 Nitrobenzene 1.13 ug/L 1.00 45 - 135 2-Nitrotoluene 1.05 ug/L 105 3-Nitrotoluene 1.00 1.06 ug/L 106 50 - 130 4-Nitrotoluene 1.00 1.05 ug/L 105 50 - 130 RDX 1.00 1.08 ug/L 108 50 - 160

1.00

1.00

1.00

1.00

1.10

0.931

ug/L

ug/L

ug/L

100

110

93

20 - 175

65 - 140

50 _ 145

LCS LCS

Limits Surrogate %Recovery Qualifier 3,4-Dinitrotoluene 105 79 - 111

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-38070/2-A

Matrix: Water

Tetryl

1,3,5-Trinitrobenzene

2,4,6-Trinitrotoluene

Analysis Batch: 38521

Client Sample ID: Method Blank	
Prep Type: Total/NA	

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.0032	mg/L		03/27/12 05:58	03/29/12 15:03	1
Cadmium	0.10	U	0.10	0.00066	mg/L		03/27/12 05:58	03/29/12 15:03	1
Chromium	0.50	U	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 15:03	1
Lead	0.50	U	0.50	0.0019	mg/L		03/27/12 05:58	03/29/12 15:03	1
Selenium	0.25	U	0.25	0.0041	mg/L		03/27/12 05:58	03/29/12 15:03	
Silver	0.50	U	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 15:03	1
Barium	0.00126	J	10	0.00067	mg/L		03/27/12 05:58	03/29/12 15:03	1

TestAmerica Job ID: 240-9429-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

#### Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-38070/3-A

Matrix: Water

Analysis Batch: 38521

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 38070

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	2.00	2.03		mg/L	_	102	50 - 150	
Cadmium	0.0500	0.0517	J	mg/L		103	50 - 150	
Chromium	0.200	0.205	J	mg/L		103	50 - 150	
Lead	0.500	0,507		mg/L		101	50 - 150	
Selenium	2.00	2.06		mg/L		103	50 - 150	
Silver	0.0500	0.0524	J	mg/L		105	50 - 150	
Barium	2.00	2.08		mg/L		104	50 - 150	

Lab Sample ID: MB 240-38006/1-A

Matrix: Water

Analysis Batch: 38353

Client Sample ID: Method Blank

Prep Type: Total Recoverable
Prep Batch: 38006

Analysis Baton, 55555	MB	MB						ricp Bator	1. 00000
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10	3.2	ug/L		03/26/12 10:29	03/28/12 14:31	1
Cobalt	7.0	Ü	7.0	1.7	ug/L		03/26/12 10:29	03/28/12 14:31	1
Chromium	5.0	U	5.0	2.2	ug/L		03/26/12 10:29	03/28/12 14:31	1
Lead	3.0	U	3.0	1.9	ug/L		03/26/12 10:29	03/28/12 14:31	1
Selenium	5.0	U	5.0	4.1	ug/L		03/26/12 10:29	03/28/12 14:31	1
Silver	5.0	U	5.0	2.2	ug/L		03/26/12 10:29	03/28/12 14:31	1
Vanadium	7.0	U	7.0	0.64	ug/L		03/26/12 10:29	03/28/12 14:31	1
Barium	10.3	J	200	0.67	ug/L		03/26/12 10:29	03/28/12 14:31	1
Calcium	238	J	5000	130	ug/L		03/26/12 10:29	03/28/12 14:31	1
Copper	25	U	25	4.5	ug/L		03/26/12 10:29	03/28/12 14:31	1
Magnesium	43.1	J	5000	34	ug/L		03/26/12 10:29	03/28/12 14:31	1
Manganese	15	U	15	0.41	ug/L		03/26/12 10:29	03/28/12 14:31	1
Nickel	40	U	40	3.2	ug/L		03/26/12 10:29	03/28/12 14:31	1
Potassium	5000	U	5000	72	ug/L		03/26/12 10:29	03/28/12 14:31	1

Lab Sample ID: LCS 240-38006/2-A

Matrix: Water

Analysis Batch: 38353

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 38006

Analysis Batch. 30000	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Arsenic	2000	1880		ug/L		94	80 - 120
Cobalt	500	464		ug/L		93	80 _ 120
Chromium	200	184		ug/L		92	80 _ 120
Lead	500	452		ug/L		90	80 _ 120
Selenium	2000	1890		ug/L		95	80 _ 120
Silver	50.0	47.4		ug/L		95	80 _ 120
Vanadium	500	445		ug/L		89	80 - 120
Barium	2000	1840		ug/L		92	80 - 120
Calcium	50000	45300		ug/L		91	80 - 120
Copper	250	222		ug/L		89	80 - 120
Magnesium	50000	44700		ug/L		89	80 - 120
Manganese	500	468		ug/L		94	80 _ 120
Nickel	500	463		ug/L		93	80 - 120
Potassium	50000	46900		ug/L		94	80 - 120

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

#### Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LB 240-38031/1-D LB

Matrix: Water

Analysis Batch: 38521

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 38070

	LB	LB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.0032	mg/L	= =	03/27/12 05:58	03/29/12 14:58	- 1
Cadmium	0.10	U	0.10	0.00066	mg/L		03/27/12 05:58	03/29/12 14:58	1
Chromium	0.50	U	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 14:58	1
Lead	0.50	U	0.50	0.0019	mg/L		03/27/12 05:58	03/29/12 14:58	1
Selenium	0.00490	J	0.25	0.0041	mg/L		03/27/12 05:58	03/29/12 14:58	1
Silver	0.50	U	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 14:58	1
Barium	0.00180	J	10	0.00067	mg/L		03/27/12 05:58	03/29/12 14:58	1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-38006/1-A

Matrix: Water

Analysis Batch: 38210

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 38006

and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of th	MB	MB							7
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	19	ug/L		03/26/12 10:29	03/27/12 16:51	1
Antimony	2.0	U	2.0	0.13	ug/L		03/26/12 10:29	03/27/12 16:51	1
Beryllium	1.0	U	1.0	0.20	ug/L		03/26/12 10:29	03/27/12 16:51	1
Cadmium	1.0	U	1.0	0.13	ug/L		03/26/12 10:29	03/27/12 16:51	1
Iron	100	U	100	26	ug/L		03/26/12 10:29	03/27/12 16:51	1
Sodium	139	J	1000	6.9	ug/L		03/26/12 10:29	03/27/12 16:51	1
Thallium	2.0	U	2.0	0.14	ug/L		03/26/12 10:29	03/27/12 16:51	1
Zinc	5.25	J	20	2.3	ug/L		03/26/12 10:29	03/27/12 16:51	1

Lab Sample ID: LCS 240-38006/3-A

Matrix: Water

Analysis Batch: 38210

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Prep Batch: 38006

Analysis Batom sozia	Spike	LCS	LCS				%Rec.
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
Aluminum	10000	9530		ug/L		95	80 - 120
Antimony	100	97.3		ug/L		97	80 - 120
Beryllium	1000	987		ug/L		99	80 - 120
Cadmium	1000	997		ug/L		100	80 _ 120
Iron	10000	9260		ug/L		93	80 _ 120
Sodium	10000	9240		ug/L		92	80 _ 120
Thallium	250	271		ug/L		108	80 - 120
Zinc	1000	1010		ug/L		101	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-38002/1-A

Matrix: Water

Analysis Batch: 38264

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 38002

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.12	ug/L		03/26/12 14:30	03/27/12 14:11	-1

Spike

Added

5.00

Spike

Added

0.00500

RL

0.0020

TestAmerica Job ID: 240-9429-1

D

D

%Rec

Prepared

03/27/12 15:20

%Rec

98

Unit

ug/L

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-38002/2-A Matrix: Water

Analysis Batch: 38264

Analyte

Mercury Lab Sample ID: MB 240-38071/2-A

Matrix: Water Analysis Batch: 38403

Analyte Mercury

Lab Sample ID: LCS 240-38071/3-A

Matrix: Water

Analysis Batch: 38403

Lab Sample ID: LB 240-38031/1-E LB

Mercury

Matrix: Water

Analysis Batch: 38403

Analyte

Mercury

IR IR

Result Qualifier

MB MB Result Qualifier

0.0020 U

0.0020 U

0.0020

LCS LCS

4.91

Result Qualifier

MDL Unit

0.00012 mg/L

LCS LCS

0.00481

Result Qualifier

0.00012 mg/L

MDL Unit

Unit

mg/L

Prepared

03/27/12 15:20

Client Sample ID: Lab Control Sample

%Rec.

Limits

Client Sample ID: Lab Control Sample

Limits

81 - 123

Client Sample ID: Method Blank

Analyzed

03/28/12 14:00

Client Sample ID: Lab Control Sample

Limits

50 - 150

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 38071

Prep Type: TCLP

Prep Batch: 38071

Prep Batch: 38071

Dil Fac

10

Prep Batch: 38002

Dil Fac Analyzed 03/28/12 13:58

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

4/16/2012

Prep Batch: 37671

Dil Fac

Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 480-57354/1

Matrix: Water

Analysis Batch: 57354

Analyte

Flashpoint

Spike Added

81.0

80.00

LCS LCS Result Qualifier

Unit Degrees F

%Rec D

Prepared

03/22/12 11:15

97.5 - 102

5

Client Sample ID: Method Blank

Analyzed

03/22/12 16:57

Client Sample ID: Lab Control Sample

69 - 118

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-37671/1-A

Matrix: Water

Analysis Batch: 37738

Analyte Cyanide, Total

Lab Sample ID: LCS 240-37671/2-A

Matrix: Water Analysis Batch: 37738

Spike Added Analyte 0.0449 Cyanide, Total

RL Result Qualifier 0.010 U 0.010

MR MR

LCS LCS Result Qualifier 0.0354

Unit

mg/L

MDL Unit

0.0050 mg/L

%Rec 79

Prep Batch: 37671 %Rec. Limits

TestAmerica North Canton

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: MRL 240-37738/6 MRL

Matrix: Water

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analysis Batch: 37738

Spike MRL MRL %Rec. Analyte Added Limits Result Qualifier Unit D %Rec 0.0100 Cyanide, Total 0.00923 J mg/L 92 70 - 130

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

MB MB

Lab Sample ID: MB 240-38115/1-A

Matrix: Water

Analysis Batch: 38168

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 38115

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac 3.0 U 3.0 03/27/12 09:29 03/27/12 14:00 Sulfide 0.94 mg/L

Lab Sample ID: LCS 240-38115/2-A

Matrix: Water

Analysis Batch: 38168

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 38115

Spike ICS ICS Analyte Added Result Qualifier Unit %Rec Limits Sulfide 7.87 7,86 mg/L 100 70 _ 130

Method: 9040B - pH

Lab Sample ID: LCS 240-37567/5

Matrix: Water

Prep Type: Total/NA Analysis Batch: 37567 Spike LCS LCS %Rec.

Result Qualifier

5.530

Added

5.50

Lab Sample ID: 240-9429-2 DU

Matrix: Water

Analyte

pH

Analysis Batch: 37567

Unit %Rec Limits D SU 101 97 - 103

> Client Sample ID: FWG-IDW-TANK 2 GW Prep Type: Total/NA

Client Sample ID: Lab Control Sample

DU DU RPD Sample Sample Result Qualifier RED Result Qualifier Heit n Limit Analyte 9.67 9 670 SU 20

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G2C280000040B

Matrix: Water

Analysis Batch: 2088040

Client Sample ID: Method Blank Prep Type: Total

Prep Batch: 2088040_P

MB MB

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Nitrocellulose 2.0 U 2.0 0.48 mg/L 03/28/12 06:00 03/29/12 14:41

LCS LCS

Lab Sample ID: G2C280000040C

Matrix: Water

Analysis Batch: 2088040

Client Sample ID: Lab Control Sample Prep Type: Total Prep Batch: 2088040 P

%Rec.

Added Result Qualifier Limits Analyte Unit %Rec Nitrocellulose 5.07 4.96 mg/L 98 26 - 144

Spike

### QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

### Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050 (Continued)

Lab Sample ID: 240-9429-2 MS	Client Sample ID: FWG-IDW-TANK 2 GW
Matrix: Water	Prep Type: Total

Analysis Batch: 2088040 Prep Batch: 2088040_P
Sample Sample Spike Ms Ms 
%Rec.

Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits

Nitrocellulose 2.0 U 5.07 4.06 mg/L 79 26 - 144

Lab Sample ID: G2C230472001D Client Sample ID: FWG-IDW-TANK 2 GW

Matrix: Water Prep Type: Total

Analysis Batch: 2088040 Prep Batch: 2088040_P Spike SD1 SD1 %Rec. Sample Sample Limit Analyte Result Qualifier Added Result Qualifier Limits Unit %Rec RPD Nitrocellulose 2.0 U 5.07 4.96 mg/L 26 - 144 20

> TestAmerica North Canton 4/16/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

Lab Sample ID

240-9429-2

Client Sample ID

FWG-IDW-TANK 2 GW

TestAmerica Job ID: 240-9429-1

GC/MS VOA					
Leach Batch: 38052					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	1311	
LB 240-38052/1-A MB	Method Blank	TCLP	Water	1311	
Analysis Batch: 38205					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	8260B	
LB 240-38052/1-A MB	Method Blank	TCLP	Water	8260B	
LCS 240-38205/5	Lab Control Sample	Total/NA	Water	8260B	
Analysis Batch: 38578					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-9429-1	FWG-IDW-TANK 2 TB	Total/NA	Water	8260B	
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	8260B	
LCS 240-38578/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-38578/5	Method Blank	Total/NA	Water	8260B	
GC/MS Semi VOA					
Prep Batch: 37618					
	Cilent Comple ID	David Town	********	*******	Description Description
Lab Sample ID 240-9429-2	FWG-IDW-TANK 2 GW	Prep Type	Matrix Water	Method 3520C	Prep Bato
		Total/NA			
LCS 240-37618/23-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-37618/24-A	Method Blank	Total/NA	Water	3520C	
each Batch: 38031					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	1311	
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	1311	
Prep Batch: 38099					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	3510C	3803
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	3510C	3803
LCS 240-38099/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-38099/1-A	Method Blank	Total/NA	Water	3510C	
Analysis Batch: 38105					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
LCS 240-37618/23-A	Lab Control Sample	Total/NA	Water	8270C	3761
MB 240-37618/24-A	Method Blank	Total/NA	Water	8270C	3761
Analysis Batch: 38218					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	8270C	3809
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	8270C	3809
LCS 240-38099/2-A	Lab Control Sample	Total/NA	Water	8270C	3809
MB 240-38099/1-A	Method Blank	Total/NA	Water	8270C	3809
Analysis Batch: 38531					
Series Series					

Prep Batch

37618

Method

8270C

Prep Type

Total/NA

Matrix

Water

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

GC Semi VOA					
Prep Batch: 37621					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	3520C	
LCS 240-37621/11-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-37621/12-A	Method Blank	Total/NA	Water	3520C	
Prep Batch: 37623					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	3520C	гтер вассп
LCS 240-37623/5-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-37623/6-A	Method Blank	Total/NA	Water	3520C	
analysis Batch: 37884	A CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY O				
		David Town	4644-2	T MANAGE AT	Book Batal
Lab Sample ID 240-9429-2	Client Sample ID FWG-IDW-TANK 2 GW	Prep Type Total/NA	Matrix Water	Method 8082	Prep Batch 37623
LCS 240-37623/5-A				8082	
	Lab Control Sample	Total/NA	Water		37623
MB 240-37623/6-A	Method Blank	Total/NA	Water	8082	37623
Analysis Batch: 37892					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	8081A	37621
LCS 240-37621/11-A	Lab Control Sample	Total/NA	Water	8081A	37621
MB 240-37621/12-A	Method Blank	Total/NA	Water	8081A	37621
each Batch: 38031					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	1311	
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	1311	
rep Batch: 38100					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	3510C	38031
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	3510C	38031
LCS 240-38100/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-38100/1-A	Method Blank	Total/NA	Water	3510C	
Prep Batch: 38102					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	8151A	38031
LCS 240-38102/2-A	Lab Control Sample	Total/NA	Water	8151A	
MB 240-38102/1-A	Method Blank	Total/NA	Water	8151A	
nalysis Batch: 38405					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	8081A	38100
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	8081A	38100
LCS 240-38100/2-A	Lab Control Sample	Total/NA	Water	8081A	38100
MB 240-38100/1-A	Method Blank	Total/NA	Water	8081A	38100
analysis Batch: 38454					
		Prep Type	Mateix	Method	Prop Datab
Lab Sample ID 240-9429-2	Client Sample ID FWG-IDW-TANK 2 GW	TCLP	Matrix Water	8151A	Prep Batch 38102
LCS 240-38102/2-A		Total/NA	Water	8151A	38102
	Lab Control Sample				
MB 240-38102/1-A	Method Blank	Total/NA	Water	8151A	38102
t and					

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

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Anal	ysis	Batch	: 2087	022
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total	Water	8330/8330A	
G2C270000022B	Method Blank	Total	Water	8330/8330A	
G2C270000022C	Lab Control Sample	Total	Water	8330/8330A	

#### Analysis Batch: 2088056

V. F. 4			
lved	Water	8330 (Modified)	
lved	Water	8330 (Modified)	
lved	Water	8330 (Modified)	
lved	Water	8330 (Modified)	
ived	Water	8330 (Modified)	
ol	olved olved olved	blved Water	olved Water 8330 (Modified) olved Water 8330 (Modified)

#### Prep Batch: 2087022_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total	Water	3535	
G2C270000022B	Method Blank	Total	Water	3535	
G2C270000022C	Lab Control Sample	Total	Water	3535	

#### Prep Batch: 2088056_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Dissolved	Water	FILTRATION	
				(DISS)	
240-9429-2 MS	FWG-IDW-TANK 2 GW	Dissolved	Water	FILTRATION	
				(DISS)	
G2C230472001D	FWG-IDW-TANK 2 GW	Dissolved	Water	FILTRATION	
				(DISS)	
G2C280000056B	Method Blank	Dissolved	Water	FILTRATION	
				(DISS)	
G2C280000056C	Lab Control Sample	Dissolved	Water	FILTRATION	
				(DISS)	

#### Metals

#### Prep Batch: 38002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	7470A	
LCS 240-38002/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-38002/1-A	Method Blank	Total/NA	Water	7470A	

#### Prep Batch: 38006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total Recoverable	Water	3005A	
LCS 240-38006/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-38006/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-38006/1-A	Method Blank	Total Recoverable	Water	3005A	

#### Leach Batch: 38031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	1311	
LB 240-38031/1-D LB	Method Blank	TCLP	Water	1311	
LB 240-38031/1-E LB	Method Blank	TCLP	Water	1311	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

Analysis Batch: 37567

Client Sample ID

FWG-IDW-TANK 2 GW

Lab Sample ID

240-9429-2

TestAmerica Job ID: 240-9429-1

Prep Batch: 38070					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	3010A	3803
LB 240-38031/1-D LB	Method Blank	TCLP	Water	3010A	3803
LCS 240-38070/3-A	Lab Control Sample	Total/NA	Water	3010A	
MB 240-38070/2-A	Method Blank	Total/NA	Water	3010A	
Prep Batch: 38071					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	7470A	3803
LB 240-38031/1-E LB	Method Blank	TCLP	Water	7470A	3803
LCS 240-38071/3-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-38071/2-A	Method Blank	Total/NA	Water	7470A	
				10161	
Analysis Batch: 38210					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-9429-2	FWG-IDW-TANK 2 GW	Total Recoverable	Water	6020	3800
LCS 240-38006/3-A	Lab Control Sample	Total Recoverable	Water	6020	3800
MB 240-38006/1-A	Method Blank	Total Recoverable	Water	6020	3800
Analysis Batch: 38264					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	7470A	3800
LCS 240-38002/2-A	Lab Control Sample	Total/NA	Water	7470A	3800
MB 240-38002/1-A	Method Blank	Total/NA	Water	7470A	3800
Analysis Batch: 38353					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
LCS 240-38006/2-A	Lab Control Sample	Total Recoverable	Water	6010B	38000
MB 240-38006/1-A	Method Blank	Total Recoverable	Water	6010B	3800
Analysis Batch: 38403					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	7470A	3807
LB 240-38031/1-E LB	Method Blank	TCLP	Water	7470A	3807
LCS 240-38071/3-A	Lab Control Sample	Total/NA	Water	7470A	3807
MB 240-38071/2-A	Method Blank	Total/NA	Water	7470A	3807
Analysis Batch: 38470					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
240-9429-2	FWG-IDW-TANK 2 GW	Total Recoverable	Water	6010B	3800
Analysis Batch: 38521					
	Client Semule ID	Oran Turns	Madelly	Mathed	Brow Bate
Lab Sample ID 240-9429-2	Client Sample ID FWG-IDW-TANK 2 GW	Prep Type	Matrix	Method 6010B	Prep Batc 3807
		TCLP	Water	6010B	
LB 240-38031/1-D LB	Method Blank	TCLP	Water	6010B	3807
LCS 240-38070/3-A	Lab Control Sample	Total/NA	Water	6010B	3807
MB 240-38070/2-A	Method Blank	Total/NA	Water	6010B	3807

Prep Batch

Method

9040B

Prep Type

Total/NA

Matrix

Water

# QC Association Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

General	Chemistry	(Continued)

Analy	ISIS	Batch:	37567	(Continued)
Allal	1212	Daton.	3/30/	(Comunica)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2 DU	FWG-IDW-TANK 2 GW	Total/NA	Water	9040B	
LCS 240-37567/5	Lab Control Sample	Total/NA	Water	9040B	

#### Prep Batch: 37671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	9012A	
LCS 240-37671/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-37671/1-A	Method Blank	Total/NA	Water	9012A	

#### Analysis Batch: 37738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	9012A	37671
LCS 240-37671/2-A	Lab Control Sample	Total/NA	Water	9012A	37671
MB 240-37671/1-A	Method Blank	Total/NA	Water	9012A	37671
MRL 240-37738/6 MRL	Lab Control Sample	Total/NA	Water	9012A	

#### Prep Batch: 38115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	9030B	
LCS 240-38115/2-A	Lab Control Sample	Total/NA	Water	9030B	
MB 240-38115/1-A	Method Blank	Total/NA	Water	9030B	

#### Analysis Batch: 38168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	9034	38115
LCS 240-38115/2-A	Lab Control Sample	Total/NA	Water	9034	38115
MB 240-38115/1-A	Method Blank	Total/NA	Water	9034	38115

#### Analysis Batch: 57354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	1010	
LCS 480-57354/1	Lab Control Sample	Total/NA	Water	1010	

#### Analysis Batch: 2088040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total	Water	WS-WC-0050	
240-9429-2 MS	FWG-IDW-TANK 2 GW	Total	Water	WS-WC-0050	
G2C230472001D	FWG-IDW-TANK 2 GW	Total	Water	WS-WC-0050	
G2C280000040B	Method Blank	Total	Water	WS-WC-0050	
G2C280000040C	Lab Control Sample	Total	Water	WS-WC-0050	

#### Prep Batch: 2088040_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total	Water	EXTRACTION,	
				SOLID PHASE	
240-9429-2 MS	FWG-IDW-TANK 2 GW	Total	Water	EXTRACTION,	
				SOLID PHASE	
G2C230472001D	FWG-IDW-TANK 2 GW	Total	Water	EXTRACTION,	
				SOLID PHASE	
G2C280000040B	Method Blank	Total	Water	EXTRACTION,	
				SOLID PHASE	
G2C280000040C	Lab Control Sample	Total	Water	EXTRACTION,	
				SOLID PHASE	

#### Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Lab Sample ID: 240-9429-1

Matrix: Water

Client Sample ID: FWG-IDW-TANK 2 TB

Date Collected: 03/21/12 00:00 Date Received: 03/21/12 15:17

Dilution Batch Batch Batch Prepared Prep Type Method Factor Number or Analyzed Lab Type Run Analyst Total/NA Analysis 8260B 38578 03/30/12 17:25 LE TAL NC

Client Sample ID: FWG-IDW-TANK 2 GW

Date Collected: 03/21/12 11:15

Date Received: 03/21/12 15:17

Lab	Sampl	e ID:	240-9	1429-2

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
TCLP	Leach	1311			38052	03/26/12 15:11	BF	TAL NO
TCLP	Analysis	8260B		1.	38205	03/28/12 00:57	TL	TAL NO
Total/NA	Analysis	8260B		1	38578	03/30/12 17:48	LE	TAL NC
TCLP	Leach	1311			38031	03/26/12 12:05	BF	TAL NO
TCLP	Prep	3510C			38099	03/27/12 08:40	EM	TAL NO
TCLP	Analysis	8270C		1	38218	03/28/12 14:18	MU	TAL NC
Total/NA	Prep	3520C			37618	03/22/12 08:59	BM	TAL NC
Total/NA	Analysis	8270C		2	38531	03/30/12 20:29	TH	TAL NC
Total/NA	Prep	3520C			37623	03/22/12 09:16	BM	TAL NC
Total/NA	Analysis	8082		ì	37884	03/23/12 17:36	RK	TAL NO
Total/NA	Prep	3520C			37621	03/22/12 09:10	BM	TAL NC
Total/NA	Analysis	8081A		1	37892	03/25/12 10:35	CV	TAL NC
TCLP	Leach	1311			38031	03/26/12 12:05	BF	TAL NC
TCLP	Prep	3510C			38100	03/27/12 08:42	EM	TAL NO
TCLP	Analysis	8081A		i.	38405	03/29/12 22:08	AR	TAL NC
TCLP	Prep	8151A			38102	03/27/12 08:46	EM	TAL NO
TCLP	Analysis	8151A		ă.	38454	03/29/12 23:32	AR	TAL NO
Total	Prep	3535			2087022_P	03/27/12 07:00	TQP	TAL WSC
Total	Analysis	8330/8330A		30	2087022	03/31/12 01:42	RN	TAL WSC
Dissolved	Prep	FILTRATION (DISS)			2088056_P	03/28/12 09:45	TQP	TAL WSC
Dissolved	Analysis	8330 (Modified)		.1	2088056	03/29/12 11:43	RN	TAL WSC
Total Recoverable	Prep	3005A			38006	03/26/12 10:29	LM	TAL NO
Total Recoverable	Analysis	6020		Y	38210	03/27/12 20:13	KC	TAL NO
Total/NA	Prep	7470A			38002	03/26/12 14:30	LM	TAL NO
Total/NA	Analysis	7470A		1	38264	03/27/12 14:48	AS	TAL NC
TCLP	Leach	1311			38031	03/26/12 12:05	BF	TAL NC
TCLP	Prep	7470A			38071	03/27/12 15:20	LM	TAL NO
TCLP	Analysis	7470A		1	38403	03/28/12 14:45	AS	TAL NO
Total Recoverable	Analysis	6010B		1	38470	03/29/12 11:37	BD	TAL NC
TCLP	Prep	3010A			38070	03/27/12 05:58	LM	TAL NO
TCLP	Analysis	6010B		4	38521	03/29/12 17:10	NJM	TAL NC
Total/NA	Analysis	9040B		1	37567	03/21/12 16:12	JM	TAL NC
Total/NA	Prep	9012A			37671	03/22/12 11:15	KH	TAL NO
Total/NA	Analysis	9012A		ì	37738	03/22/12 15:26	KH	TAL NC
Total/NA	Prep	9030B			38115	03/27/12 09:29	AM	TAL NO
Total/NA	Analysis	9034		ž	38168	03/27/12 14:28	AM	TAL NO
Fotal/NA	Analysis	1010		10	57354	03/29/12 13:44	KS	TAL BUF

#### Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO

Client Sample ID: FWG-IDW-TANK 2 GW

TestAmerica Job ID: 240-9429-1

Lab Sample ID: 240-9429-2

Matrix: Water

Matrix: Wat

Date Collected: 03/21/12 11:15 Date Received: 03/21/12 15:17

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total	Prep	EXTRACTION, SOLID			2088040_P	03/28/12 06:00	TQP	TAL WSC
Total	Analysis	PHASE WS-WC-0050		1	2088040	03/29/12 14:45	JB	TAL WSC

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL NC = TestAmerica North Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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# **Certification Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

aboratory	Authority	Program	EPA Region	Certification ID
estAmerica North Canton	California	NELAC	9	01144CA
estAmerica North Canton	Connecticut	State Program	1	PH-0590
estAmerica North Canton	Florida	NELAC	4	E87225
estAmerica North Canton	Georgia	State Program	4	N/A
estAmerica North Canton	Illinois	NELAC	5	200004
estAmerica North Canton	Kansas	NELAC	7	E-10336
estAmerica North Canton	Kentucky	State Program	4	58
estAmerica North Canton	L-A-B	DoD ELAP		L2315
estAmerica North Canton	Minnesota	NELAC	5	039-999-348
estAmerica North Canton	Nevada	State Program	9	OH-000482008A
estAmerica North Canton	New Jersey	NELAC	2	OH001
stAmerica North Canton	New York	NELAC	2	10975
stAmerica North Canton	Ohio VAP	State Program	5	CL0024
stAmerica North Canton	Pennsylvania	NELAC	3	68-00340
stAmerica North Canton	USDA	Federal		P330-11-00328
stAmerica North Canton	Virginia	NELAC	3	460175
stAmerica North Canton	Washington	State Program	10	C971
estAmerica North Canton	West Virginia DEP	State Program	3	210
estAmerica North Canton	Wisconsin	State Program	5	999518190
estAmerica Buffalo	Arkansas DEQ	State Program	6	88-0686
estAmerica Buffalo	California	NELAC	9	1169CA
stAmerica Buffalo	Connecticut	State Program	1	PH-0568
estAmerica Buffalo	Florida	NELAC	4	E87672
estAmerica Buffalo	Georgia	State Program	4	956
estAmerica Buffalo	Georgia	State Program	4	N/A
estAmerica Buffalo	Illinois	NELAC	5	100325 / 200003
stAmerica Buffalo	lowa	State Program	7	374
stAmerica Buffalo	Kansas	NELAC	7	E-10187
stAmerica Buffalo	Kentucky	State Program	4	90029
estAmerica Buffalo	Louisiana	NELAC	6	02031
stAmerica Buffalo	Maine	State Program	1	NY0044
estAmerica Buffalo	Maryland	State Program	3	294
stAmerica Buffalo	Massachusetts	State Program	1	M-NY044
estAmerica Buffalo	Michigan	State Program	5	9937
stAmerica Buffalo	Minnesota	NELAC	5	036-999-337
estAmerica Buffalo	New Hampshire	NELAC	1	2337
stAmerica Buffalo	New Hampshire	NELAC	1	68-00281
estAmerica Buffalo	New Jersey	NELAC	2	NY455
estAmerica Buffalo	New York	NELAC	2	10026
stAmerica Buffalo	North Dakota	State Program	8	R-176
estAmerica Buffalo	Oklahoma	State Program	6	9421
estAmerica Buffalo	Oregon	NELAC	10	NY200003
estAmerica Buffalo	Pennsylvania	NELAC	3	68-00281
estAmerica Buffalo	Tennessee	State Program	4	TN02970
stAmerica Buffalo	Texas	NELAC	6	T104704412-08-TX
stAmerica Buffalo	USDA	Federal		P330-08-00242
stAmerica Buffalo	Virginia	NELAC	3	460185
stAmerica Buffalo	Virginia	State Program	3	278
estAmerica Buffalo	Washington	State Program	10	C1677
estAmerica Buffalo	West Virginia DEP	State Program	3	252
estAmerica Buffalo	Wisconsin	State Program	5	998310390
stAmerica West Sacramento	A2LA	DoD ELAP	V-b	2928-01
estAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055

# **Certification Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP 66 RAVENNA OHIO TestAmerica Job ID: 240-9429-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas DEQ	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
FestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Northern Mariana Islands	State Program	9	MP0007
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvanīa	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	Federal		LE148388-0
TestAmerica West Sacramento	USDA	Federal		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
estAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	State Program	3	9930C
TestAmerica West Sacramento	West Virginia DEP	State Program	3	334
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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Special Instructions/ Conditions of Receipt Time 15 (A fee may be assessed if samples are retained Months longer than 1 month) 0.02 = 0.04 = 0.3Shah of Custody Number 0.000414Time 2 1 Page Date 330-497-9396 Total CV PH PH Egnitability **TestAmerica** THE LEADER IN ENVIRONMENTAL TESTING more space is needed | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | Act | A O Day Analysis (Attach list if TOUR 200C Disposal By Lab Archive For ani level 11 no EDD p.K.d. 8500 NOC 613 825 7500 (First 1495) NAON HOBN Containers & Preservatives HOPN Lab Contact M. LUCD 3. Received By IDH EONH resdun ☐ Return To Client DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Slays with the Sample; PINK - Field Copy Shoet Ohn Mille Sample Disposal 1105 Sile Contact

- (OCBIN
Carrier/Waybill Number Matrix PAS snoonby 114 Other. Unknown Date Time □ 21 Days □ Poison B Date Solitation RAILANA OKIO Solitation of the Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of Solitation of So 1800 Carillon Blud ☐ 14 Days Sample I.D. No. and Description (Containers for each sample may be combined on one line) Skin Irritant FWG-IDW-TANK-ZIBGE FWG-TDW-TANK2-6W □ 7 Days Non-Hazard | Flammable Tum Around Time Required J DCL D (A. D. State) Custody Record との公 □ 48 Hours Possible Hazard Identification 3. Relinquished By alinquished By Chain of 24 Hours Comments 4/16/2012 Page 49 of 54

# **TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

Custody Record

Chain of

Special Instructions/ Conditions of Receipt (SI 29 1= 600414 Offerin of Custody Number 0000413 (A fee may be assessed if samples are retained Months: longer than 1 month) Time 330-497 9396 Page Date Analysis (Attach list if Lab Number 1808 2608 0558 Suoc Pest Pus OLZ8 0928 JON 5346 tas OC Requirements (Specify Containers & Preservatives HOPN 3. Received By IDH M.LOEB Telephone Number (Area Code)/Fax Number EONH DOSZH Whn Miller 825 7500 nubres ☐ Return To Cllent DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy いるでに Sample Disposal 1105 Time Matrix Carrier/Waybill Number E. CORBIN 26Q noenby 116 3/11/ Other. ☐ Unknown Date Time ☐ 21 Days □ Poison B Date OH 45240 T4 Days 1800 CARILLON BLVD Fort Tany 2 6020= 61-4 Ch (Containers for each sample may be combined on one line) Skin Irritant ANCINNATION (State) OH Project Name and Location (State)

KVIXAPPLAGE (ROWERLA OFFICE) Sample I.D. No. and Description FWG-1DW-TANK2-61W □ 7 Days ☐ Flammable Contract/Purchase Order/Quote No. 10.2100,4 LIOSING 48 Hours Possible Hazard Identification Turn Around Time Required FOR 1. Relinguished By 3. Relinquished By Non-Hazard 24 Hours TAL-4142 (0408) 4/16/2012 Page 50 of 54

#### Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-9429-1

List Source: TestAmerica North Canton

Login Number: 9429 List Number: 1 Creator: Maddux, Ann

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Question	Answer	Comment	
Radioactivity either was not measured or, if measured, is at or below background	N/A		
The cooler's custody seal, if present, is intact.	True		
The cooler or samples do not appear to have been compromised or tampered with.	True		
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		
Cooler Temperature is recorded.	True	4.8,4.4	
COC is present.	True		
COC is filled out in ink and legible.	True		
COC is filled out with all pertinent information.	True		
Is the Field Sampler's name present on COC?	True		
There are no discrepancies between the sample IDs on the containers and the COC.	True		
Samples are received within Holding Time.	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	True		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True		
Multiphasic samples are not present.	True		

True

N/A

**TestAmerica North Canton** 

Samples do not require splitting or compositing.

Residual Chlorine Checked.

#### Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-9429-1

List Source: TestAmerica Buffalo

List Creation: 03/23/12 03:26 PM

Login Number: 9429 List Number: 1 Creator: Robitaille, Zach L

oreator. Robitaine, Zuch L	
Question	Answer Comment
Radioactivity either was not measured or, if measured, is at or below background	True
The cooler's custody seal, if present, is intact.	True
The cooler or samples do not appear to have been compromised or tampered with.	True
Samples were received on ice.	True
Cooler Temperature is acceptable.	True
Cooler Temperature is recorded.	True
COC is present.	True
COC is filled out in ink and legible.	True
COC is filled out with all pertinent information.	True
Is the Field Sampler's name present on COC?	True
There are no discrepancies between the sample IDs on the containers and the COC.	True
Samples are received within Holding Time.	True
Sample containers have legible labels.	True
Containers are not broken or leaking.	True
Sample collection date/times are provided.	True
Appropriate sample containers are used.	True
Sample bottles are completely filled.	True
Sample Preservation Verified	True
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True
If necessary, staff have been informed of any short hold time or quick TAT needs	True
Multiphasic samples are not present.	True
Samples do not require splitting or compositing,	True
Sampling Company provided.	True
Samples received within 48 hours of sampling.	True
Samples requiring field filtration have been filtered in the field,	True
Chlorine Residual checked	True



July 18, 2012

Mr. Mark Patterson Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266

Reference:

Contract No. GS-10F-0293K

Delivery Order No. W912QR-1-F-0266

Subject:

Facility-Wide Groundwater Monitoring Program Plan

RVAAP-66 Facility-Wide Groundwater Tank #3 IDW Letter Report – Draft

Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI), installation of monitoring wells, approved per the *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum, EQM, Jan 2012* (Addendum) began on February 27, 2012. These activities resulted in the generation of liquid (groundwater) from well installation operations. The purpose of this letter is to characterize and classify IDW from Tank #3 for disposal and to propose methods for disposing of the IDW. This report includes a summary of IDW generated and its origin, a summary of the analysis and methods (Table 1), a summary of detected analytical results compared to regulatory characteristic levels (Table 2), and recommendations for disposal. The laboratory data sheets are included in Attachment 1.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (EPA) regarding IDW disposition at RVAAP, including the IDW disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations*, *SAIC 2011* (FWSAP), and the Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material pending waste characterization and classification based on analytical results. The FWSAP and the Addendum describe approved procedures used for containerizing and handling IDW.

#### **Liquid IDW Discussion**

Accumulated indigenous liquid IDW was containerized in a 21,000-gallon fractionation (frac) tank (Tank #3) on site pending characterization and disposal. Tank #3 was brought on site on

March 14, 2012, and was used to containerize liquid IDW generated during field activities, including recovered water from drilling operations and purged groundwater from well development. Liquid placed in Tank #3 was generated from March 14, 2012, through June 27, 2012. (Decontamination water was stored in a different onsite tank, which will be handled under a separate report.) An unfiltered composite sample for disposal characterization was collected from Tank #3. The tank was opened and a composite sample was collected by gently lowering a new, disposable Teflon bailer attached to new polypropylene rope into the holding vessel. The bailer was lowered into the vessel several times, and to different depths, to collect a sufficient representative sample of the water to submit to the laboratory for waste characterization analysis. The retrieved sample was collected using a gloved hand and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the sample container was sealed with minimum head space.

New, disposable nitrile gloves Teflon bailers, and rope was used and discarded appropriately in accordance the Addendum after collection of each composite sample.

The indigenous IDW contained in Tank #3 was characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite totals analysis and Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 1. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1 "Maximum Concentration of Contaminants for Toxicity Characteristic" (40 CFR 261.24) and Table 8-2 "Maximum Concentration of Hazardous Waste Characterization Analytes" (40 CFR 261.21-23) as presented in the FWSAP; and against Maximum Contaminant Levels (MCLs) and USEPA Risk Screening Levels (RSLs) for tap water and/ or background criteria. Table 2 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP and RVAAP full suite totals analysis for Tank #3.

The following summarizes the IDW Tank #3 analyses:

- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 140 degrees F. Reactive sulfide and reactive cyanide were not detected above the reporting limit.
- Two volatile organic compounds and two pesticides were identified above laboratory method detection limits in the RVAAP full suite totals sample, but they did not exceed their respective MCLs or USEPA RSLs.
- One explosive compound was detected in the RVAAP full suite totals sample, although it did not exceed its MCL or USEPA RSL.
- Several metals were detected in the RVAAP full suite totals sample. The metals that exceeded their MCL and/or USEPA RSL were: aluminum (580 μg/L), arsenic

(8.3  $\mu$ g/L), iron (1300  $\mu$ g/L), manganese (110  $\mu$ g/L), and thallium (0.58  $\mu$ g/L). Note that iron is considered an essential nutrient and not indicative of contamination.

#### Recommended Disposal Pathways for IDW

After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. Although arsenic and thallium exceeded their respective USEPA RSLs, they did not exceed their MCLs. Moreover, arsenic was below the RVAAP background criteria (11.7 µg/L). Aluminum, iron, and manganese exceeded their respective MCLs, but they were all below their USEPA RSLs.

Given the observed analytical results, and the previous approval of land application based upon similar constituent levels from SAIC during the 2009 Well Installation into the Basal Sharon Conglomerate, it is recommended that the liquid IDW from Tank #3 be classified as nonhazardous, non-contaminated. It is proposed to land apply the liquid IDW near Tank #3, which is located in the gravel parking area adjacent to and immediately north of Building 1036, provided that RVAAP and Ohio EPA concur with the preliminary characterization and that no Resource Conservation and Recovery Act (RCRA) listings apply. The liquid IDW will be pumped from the frac tank through a bag filter and through a straw bale before being discharged to a well vegetated area. Liquid IDW will pass through a 100-um bag filter before the end of the outlet hose inserted into the straw as a further filtering mechanism and to prevent erosion. The IDW liquid will be released at a rate that will prevent ponding of water and/or runoff and will not be released directly to surface water features, such as creeks, ditches, or streams, or to storm/sanitary sewer lines. Prior to initiating land application of the liquid IDW, the procedure and setup will be reviewed by the RVAAP Facility Manager or designee for final approval.

Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with the appropriate land application. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

John M. Miller, CHMM

Project Manager

cc: Vicki Deppisch – Ohio EPA Mark Nichter - USACE EOM PN - 030174,0016,001,02

Table 1. Summary of Analytical Suite of Chemicals

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium,	EPA Method SW-846 1311/6010B
cadmium, chromium, lead, and selenium)	
TCLP semivolatile organic compounds	EPA Method SW-846 1311/8270C
(SVOCs)	
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
pH	EPA Method SW-846 9040B
Polychlorinated biphenyls (PCBs)	EPA Method SW-846 8082
Pesticides	EPA Method SW-846 8081A
Base/Neutrals and Acids (SVOCs)	EPA Method SW-846 8270C
Volatile Organic Compounds (VOCs)	EPA Method SW-846 8260B
Nitroguanidine (Propellant)	EPA Method SW-846 8330 modified
Nitroaromatics & Nitramines (Explosives)	EPA Method SW-846 8330
Nitrocellulose as N (Propellant)	General Chemistry (WS-WC-0050)
Metals (Magnesium, Manganese, Barium,	EPA Method SW-846 6010B
Nickel, Potassium, Silver, Sodium,	
Vanadium, Chromium, Calcium, Cobalt,	
Copper, Arsenic, Lead, Selenium)	
Metals (Antimony, Iron, Beryllium,	EPA Method SW-846 6020
Thallium, Zinc, Cadmium, Aluminum)	
Mercury	EPA Method SW-846 7470A

1 EPA Methods for Chemical Analysis of Water and Waste

Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	MCL	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
Total Metals	Aluminum	7429-90-5	μg/L	580		200	16000	0	NA
Total Metals	Antimony	7440-36-0	μg/L	2.3		6.0	6.0	0	NA
Total Metals	Arsenic	7440-38-2	μg/L	8.3	J	10	0.045	11.7	NA
Total Metals	Barium	7440-39-3	μg/L	56	J,B	2000	2900	82.1	NA
Total Metals	Calcium	7440-70-2	µg/L	43000	В	NS	NS	115000	NA
Total Metals	Chromium	7440-47-3	μg/L	3.7	J	100	16000	7.3	NA
Total Metals	Iron	7439-89-6	μg/L	1300	٨	300	11000	279	NA
Total Metals	Magnesium	7439-95-4	μg/L	10000	В	NS	NS	43300	NA
Total Metals	Manganese	7439-96-5	μg/L	110	В	50	320	1020	NA
Total Metals	Nickel	7440-02-0	μg/L	3.2	J	NS	760	0	NA
Total Metals	Potassium	9/7/7440	μg/L	19000	В	NS	NS	2890	NA
Total Metals	Sodium	7440-23-5	μg/L	28000	В	NS	NS	45700	NA
Total Metals	Thallium	7440-28-0	μg/L	0.58	J,B	2.0	0.16	0	NA
Total Metals	Vanadium	7440-62-2	μg/L	1.9	J	NS	78	0	NA
Total Metals	Zinc	7440-66-6	μg/L	11	Ј,В	5000	4700	60.9	NA
VOCs	2-Butanone (MEK)	78-93-3	μg/L	0.94	J	NS	4900	NA	NA
VOCs	Bis(2-ethylhexyl) phthalate - RE	117-81-7	μg/L	2.2	Н,В	6.0	0.071	NA	NA
Pesticide	alpha-BHC	319-84-6	μg/L	0.0093	J	NS	0.0062	NA	NA
Pesticide	beta-BHC	319-85-7	μg/L	0.012		NS	0.022	NA	NA
Explosive	3-Nitrotoluene	99-08-1	μg/L	0.081	J	NS	1.3	NA	NA
TCLP-Metals	Arsenic	7440-38-2	mg/L	0.0054	J	NA	NA	NA	5.0
TCLP-Metals	Barium	7440-39-3	mg/L	0.052	J,B	NA	NA	NA	100
TCLP-Metals	Chromium	7440-47-3	mg/L	0.0029	J	NA	NA	NA	5.0
TCLP-Misc.	Corrosivity	NA	SU_	8.39		NA	NA	NA_	NA
TCLP-Misc.	Flashpoint	Q376	F	>180.0		NA	NA_	NA	<140

# Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels (continued)

#### Note:

Acetone (1.4 µg/L J) was detected in the Trip blank.

* The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1. Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24), and Table 8-2. Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23).

Bold concentrations exceed Drinking Water Standard - Maximum Contaminate Levels (MCLs).

Italics concentrations exceed USEPA Risk Screening Levels (RSLs).

Shaded concentrations exceed the lowest criteria level for RVAAP unfiltered groundwater.

J = estimated result. Result is less than reporting limit.

B = method blank contamination

H = sample was prepped or analyzed beyond the specified holding time.

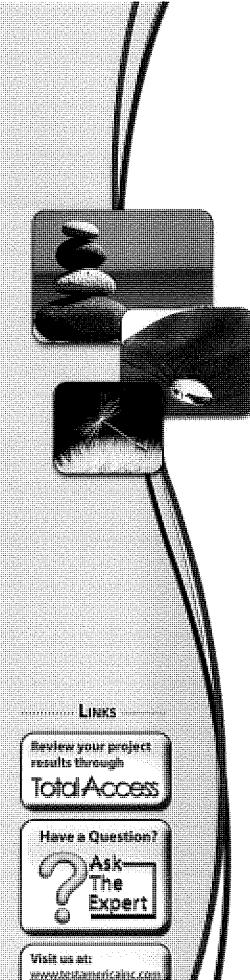
RE = re-extraction.

^ = Instrument related QC exceeds the control limits.

NS = no standard.

NA = not applicable

#### ATTACHMENT 1. LABORATORY ANALYTICAL DATA SHEETS



# **TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc. TestAmerica Canton 4101 Shuffel Street NW North Canton, OH 44720 Tel: (330)497-9396

TestAmerica Job ID: 240-12752-1 Client Project/Site: RVAAP (OH) - IDW

For:

Environmental Quality Mgt., Inc. 1800 Carillon Blvd Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin

Authorized for release by: 7/16/2012 12:10:41 PM

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Qualifiers	
GC/MS VOA	
Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
В	Compound was found in the blank and sample.
GC/MS Semi	VOA
Qualifier	Qualifier Description
Ü	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
В	Compound was found in the blank and sample.
н	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits
GC Semi VOA	
Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
HPLC	•
Qualifler	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Estimated result. Result is less than RL.
Metals	
Qualifier	Qualifler Description
υ	Indicates the analyte was analyzed for but not detected.
B .	Compound was found in the blank and sample.
J _	Result is fess than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not
<del>r</del>	applicable. RPD of the MS and MSD exceeds the control limits
•	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
General Chen	nistry
Qualifler	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Estimated result. Result is less than RL.
3	Method blank contamination. Analyte detected at a reportable level in blank.
٧	Spike sample recovery is outside control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
\$	Listed under the "D" column to designate that the result is reported on a dry weight basis
√ %R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicetes a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
PA .	United States Environmental Protection Agency
MDL.	Method Detection Limit
//L	Minimum Level (Dioxin)
	•
4D	Not detected at the reporting limit (or MDL or EDL if shown)

### **Definitions/Glossary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

## Glossary (Continued)

2.200 2.200		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
QC	Quality Control	
RL	Reporting Limit	20,000,000
RPD	Relative Percent Difference, a measure of the relative difference between two points	26%
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	

TestAmerica Canton 7/16/2012

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1

Laboratory: TestAmerica Canton

Narrative

#### **CASE NARRATIVE**

Client: Environmental Quality Mgt., Inc.

Project: RVAAP (OH) - IDW

Report Number: 240-12752-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Analyses for Explosive and Propellants were performed by TestAmerica West Sacracmento.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This taboratory report is confidential and is intended for the sole use of TestAmerica and its client.

#### RECEIPT

The samples were received on 6/28/2012 12:45 PM; the samples arrived in good condition, properly preserved and, where required, on lce. The temperatures of the 4 coolers at receipt time were 5.6° C, 5.9° C, 6.0° C and 6.0° C.

Method(s) 9040B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: FWG-IDW-TANK3-GW

#### TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 07/03/2012 and 07/05/2012 and analyzed on 07/04/2012 and 07/06/2012.

No difficulties were encountered during the VOCs analyses. All quality control parameters were within the acceptance limits.

#### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846

TestAmerica Canton 7/16/2012

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

#### Job ID: 240-12752-1 (Continued)

#### Laboratory: TestAmerica Canton (Continued)

Method 8260B. The samples were analyzed on 06/29/2012.

Acetone was detected in method blank MB 240-49421/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-49421/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Internal standard (ISTD) response for the following sample was outside control limits: FWG-IDW-SBCOMP3-SO. The sample was re-analyzed with concurring results. The original set of data has been reported.

No other analytical or quality issues were noted. All other quality control parameters were within the acceptance limits.

#### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TRIP BLANK (240-12752-1) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 07/10/2012.

No difficulties were encountered during the VOCs analyses. All quality control parameters were within the acceptance limits.

#### TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/06/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

#### SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/03/2012 and analyzed on 07/06/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-49770/15-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

#### SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/02/2012 and 07/10/2012 and analyzed on 07/09/2012 and 07/13/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate and Butyl benzyl phthalate were detected in method blank MB 240-50344/13-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl (Surr), Nitrobenzene-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for MB 240-49608/13-A. Refer to the QC report for details.

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

#### Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The associated Method Blank 49608 for sample FWG-IDW-TANK3-GW had surrogates out of control. Upon re-extraction and re-analysis all QC met acceptance criteria, however sample holding times had been exceeded. Both sets of data will be reported.

No other difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

#### **TCLP CHLORINATED PESTICIDES**

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/ 8081A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012 and 07/06/2012.

Sample FWG-IDW-SBCOMP3-SO (240-12752-3)[5X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

The closing continuing calibration verification (CCV) associated with batch 50336 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-SBCOMP3-SO

No other difficulties were encountered during the pesticides analyses. All other quality control parameters were within the acceptance limits.

#### CHLORINATED PESTICIDES

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 07/03/2012 and analyzed on 07/09/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Sample FWG-IDW-SBCOMP3-SO (240-12752-3)[10X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

#### CHLORINATED PESTICIDES

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 07/02/2012 and analyzed on 07/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

The continuing calibration verification (CCV) for alpha, gamma, beta and delta-BHC, Heptachlor, Aldrin, Heptachlor epoxide, gamma and alpha-Chlordane, Endosulfan I and II, DDE, Dieldrin, Endrin, DDD, Endosulfan sulfate and Endrin ketone associated with batch 49739 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-TANK3-GW

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 49615.

No difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

#### POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 07/03/2012 and analyzed on 07/06/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

4

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW



#### Job ID: 240-12752-1 (Continued)

#### Laboratory: TestAmerica Canton (Continued)

The opening continuing calibration verification (CCV) associated with this sample passed average. Since the samples were ND no corrective action is required.FWG-IDW-SBCOMP3-SO.

The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: FWG-IDW-SBCOMP3-SO. Lot # S65830

No difficulties were encountered during the PCBs analysis. All quality control parameters were within the acceptance limits.

#### POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 07/02/2012 and analyzed on 07/03/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 49612.

No other difficulties were encountered during the PCBs analysis. All other quality control parameters were within the acceptance limits.

#### TCLP CHLORINATED HERBICIDES

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/ 8151A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/07/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the herbicides analyses. All quality control parameters were within the acceptance limits.

#### TCLP METALS (ICP)

Samples FWG-IDW-SBCOMP3-SQ (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

Barium was detected in method blank LB 240-49653/1-D at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

#### **TOTAL METALS (ICP)**

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012.

Several analytes were detected in method blank MB 240-49412/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Manganese failed the recovery criteria low for the MS of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-50003. Calcium failed the recovery criteria high.

Calcium and Manganese failed the recovery criteria high for the MSD of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-50003. Manganese exceeded the rpd limit. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

#### Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

#### **TOTAL RECOVERABLE METALS (ICP)**

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/10/2012 and analyzed on 07/11/2012.

Several analytes were detected in method blank MB 240-50314/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits,

#### **TOTAL METALS (ICPMS)**

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012 and 07/09/2012.

Antimony failed the recovery criteria low for the MS and MSD of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-49993. Aluminum and Iron failed the recovery criteria high. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### **TOTAL RECOVERABLE METALS (ICPMS)**

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 07/10/2012 and analyzed on 07/11/2012.

Sodium was detected in method blank MB 240-50314/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Thallium and Zinc were detected in method blank MB 240-50314/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Sodium failed the recovery criteria low for the MS of sample FWG-IDW-TANK3-GW (240-12752-4) in batch 240-50556. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

#### TCLP MERCURY

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

#### TOTAL MERCURY

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/29/2012 and analyzed on 07/03/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

#### **TOTAL MERCURY**

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits,

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

#### Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

#### **FLASHPOINT**

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 06/29/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

#### **FLASHPOINT**

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 07/02/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

#### TOTAL AND AMENABLE CYANIDE

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total and amenable cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 07/09/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

#### **TOTAL CYANIDE**

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 07/02/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

#### SULFIDE

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 07/03/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

#### SULFIDE

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 07/03/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

#### РΗ

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for pH in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 06/28/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

#### PH

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for pH in accordance with EPA SW-846 Method 9045C. The samples were analyzed on 06/29/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

#### PERCENT SOLIDS

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/29/2012.

No difficulties were encountered during the % solids analysis. All quality control parameters were within the acceptance limits.

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

#### **WEST SACRAMENTO**

#### **CASE NARRATIVE**

#### **General Comments**

Please note that the percent solids analysis was performed by the TestAmerica Canton laboratory.

#### WATER, 8330, Explosives

Sample: FWG-IDW-TANK3-GW

There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

#### SOLID, Nitrocellulose

Sample: FWG-IDW-SBCOMP3-SO

The matrix spikes, which were performed on sample 2, have a low matrix spike duplicate recovery due to possible matrix interferences.

Since the laboratory control sample met acceptance criteria, no corrective action was performed.

There are no other anomalies associated with this project.

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#### **Method Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

8260B Volatile Organic Compounds (GC/MS) 8270C Semivolatile Organic Compounds (GC/MS) 8081A Organochlorine Pesticides (GC) 8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography 8151A Herbicides (GC)	SW846 SW846 SW846 SW846 SW846 SW846	TAL NC TAL NC TAL NC TAL NC TAL NC
8081A Organochlorine Pesticides (GC) 8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846 SW846 SW846	TAL NC
8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846 SW846	TAL NO
	SW846	
8151A Herbicides (GC)		TAL NC
	SW846	
8330 (Modified) Organic Compounds by UV/HPLC		TAL WSC
8330/8330A Nitroaromatics & Nitramines: Explosives (8330/A)	SW846	TAL WSC
8330B Nitroaromatics & Nitramines: Explosives (8330B)	SW846	TAL WSC
6010B Metals (ICP)	SW846	TAL NC
6020 Metals (ICP/MS)	SW846	TAL NC
7470A Mercury (CVAA)	SW846	TAL NC
7471A Mercury (CVAA)	SW846	TAL NC
1010 Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL NC
160.3 MOD Solids, Percent (as TS - 160.3 MOD) - Solids	MCAWW	TAL NO
9012A Cyanide, Total and/or Amenable	SW846	TAL NO
9034 Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
9040B pH	SW846	TAL NC
9045C pH	SW846	TAL NC
Moisture Percent Moisture	EPA	TAL NO
WS-WC-0050 Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

#### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-SOP = TAL-SOP

#### Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95805, TEL (916)373-5600

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# Sample Summary

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Lab Sample ID	Client Sample ID	Matrix	Collected Received
240-12752-1	TRIP BLANK	Water	06/28/12 08:00 08/28/12 12:45
240-12752-3	FWG-IDW-SBCOMP3-SO	Solid	06/28/12 10:15 06/28/12 12:45
240-12752-4	FWG-IDW-TANK3-GW	Water	06/28/12 11:00 06/28/12 12:45

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#### **Detection Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Zinc

Mercury

Flashpoint

Corrosivity

Nitrocellulose

restAmerica Job ID: 240-12752-1	
000 11101104 000 121 210 121 04 1	

Client Sample ID: TRIP BLANK	Lab S	Lab Sample ID: 240-12752-1					
Analyte Acetone	Result Qualifier	RL 10	MDL Unit	Dil Fac D	Method 8260B	Prep Type Total/NA	

#### Lab Sample ID: 240-12752-3 Client Sample ID: FWG-IDW-SBCOMP3-SO Dif Fac D Result Qualifier RL MDL Unit Method Prep Type Analyte ₩ 6.4 0.56 1 8260B Total/NA Carbon disulfide 5.4 JB ug/Kg 6.4 1 ₽ 8260B Total/NA 1.2 JB 0.86 ug/Kg Methylene Chloride 1 ₽ 8260B Total/NA 6.4 0.34 Toluene 0.43 J ug/Kg ₩ 8270C Total/NA 8.4 ug/Kg 1 Fluoranthene 7.4 ø 8270C Total/NA 8.4 4.2 ug/Kg 13 Benzo[g,h,i]perylene 1 ₽ 8270C Total/NA 4.2 8.4 ug/Kg Benzo[a]pyrene 6.3 J ₽ 8270C Total/NA 7.3 J 8.4 4.2 ug/Kg 2-Methylnaphthalene 4.2 ₽ 8270C Total/NA 4.5 8.4 ug/Kg Naphthalene ø 8270C Total/NA 4.2 ug/Kg 8.8 8.4 Pyrene 8270C Total/NA Bis(2-ethylhexyl) phthalate 140 R 63 24 ug/Kg ₽ Total/NA 6010B 11 1.2 0.37 mg/Kg Arsenic 15 0.61 0.25 mg/Kg 6010B Total/NA Chromium Total/NA 0,20 mg/Kg 6010B 10 6.1 Cobalt Total/NA Ü 6010B Lead 11 0.37 0.23 mg/Kg Total/NA 6.1 0.15 6010B 17 В mg/Kg Vanadium ø 6010B Total/NA 25 0.087 mg/Kg 120 R **Barium** 6010B Total/NA 20 Calcium 16000 В 610 mg/Kg ¢ Total/NA 6010B 21 3.1 0.91 mg/Kg Copper φ 6010B Total/NA 4500 610 6.3 mg/Kg Magnesium ¢ Total/NA 6010B 0.091 mg/Kg 1.8 Manganese 430 ¢ 60108 Total/NA 1 Nickel 24 B 4.9 0.33 mg/Kg à Total/NA 1500 610 7.6 mg/Kg 6010B Potassium 6010B TCLP 0.50 0.0032 mg/L 0.0048 J Arsenic 0.00067 mg/L 6010B TCLP Barium 0.88 JB 10 TCLP 6010B 0.0024 0.10 0.00066 mg/L Cadmium **TCLP** 0.0022 mg/L 6010B 0.0037 J 0.50 Chromium 6010B TCLP 0.0035 0.50 0.0019 mg/L Lead 6020 Total/NA ₿ Aluminum 11000 B в,1 1.6 mg/Kg 1 ₿ Total/NA Antimony 0.13 0.25 0.029 mg/Kg 1 6020 ₩ 6020 Total/NA 0.57 0.12 0.058 mg/Kg Beryllium ₩ Total/NA 0.0096 1 6020 0.12 mg/Kg Cadmium 0.14 ₩ 6020 Total/NA 25000 В 12 1.2 mg/Kg 1 fron 120 ø 6020 Total/NA 90 J8 2.9 mg/Kg Sodium ₩ 6020 Total/NA 0.25 0.17 J 0.016 mg/Kg Thallium

Client Sample ID: FWG-IDW-TANK3-GW							Lab Sample ID: 240-1					
 Analyte	Result	Qualifier	RL	MDL	Unit	Dii Fac	D	Method	Prep Type			
2-Bulanone (MEK)	0.94	J	10	0.57	ug/L	1	F-1-14	8260B	Total/NA			
Bis(2-ethylhexyl) phthalate - RE	2.2	H B	2.0	0.79	ug/L	1		8270C	Total/NA			
alpha-BHC	0.0093	J	0.051	0.0071	ug/L	1		8081A	Total/NA			
beta-BHC	0.012	J	0.051	0.0086	ug/L	1		8081A	Total/NA			
3-Nitrotoluene	0.081	J	0.52	0.059	ug/L	1.03		8330/8330A	Tota!			

2.5

0.13

1.00

6.4

0.100

0.25

0.019

1.00

0.100 SU

1.0 mg/kg

mg/Kg

mg/Kg

Degrees F

63 B

1.7 JB

0.027

>180

10.0

Total/NA

Total/NA

Total/NA

Total/NA

Total

ņ 6020

7471A

1010

9045C

WS-WC-0050

Client: Environmental Quality Mgt., Inc.

Project/Site: RVAAP (OH) - IDW

lient Sample ID: FWG-IDW-TANK3-GW (Continued)							Lab Sample ID: 240-12752				
Anaiyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Ргер Туре			
Arsenic	8.3	J	10	3.2	ug/L	1	6010B	Total			
			-					Recoverable			
Chromium	3.7	J	5.0	2.2	ug/L	1	6010B	Total			
								Recoverable			
Vanadium	1.9	J	7.0	0.64	ug/L	1	6010B	Total			
					_			Recoverable			
Barium	56	JB	200	0.67	ug/L	1	6010B	Total			
	.::	_			-		مدينه	Recoverable			
Calcium	43000	8	5000	130	ug/L	1	6010B	Total			
	(0000		5000				6010B	Recoverable			
Magnesium	10000	В	5000	34	ug/L	1	80108	Total			
14	110	Б	15	0.44		1	60108	Recoverable Total			
Manganese	110	В	15	0.41	ug/L	ı	80102	Recoverable			
Nickel	3.2	,	40	3.2	ug/L	1	6010B	Total			
Mickel	3,2	J	40	J.2	agr.	ļ	00100	Recoverable			
Potassium	19000	R	5000	72	ug/L	1	6010B	Total			
r otassion)	13000	5	0000	,,	og/L	•	00,00	Recoverable			
Arsenic	0,0054	.l	0.50	0,0032	ma/L	1	6010B	TCLP			
Barium	0.052		10	0,00067	T	1	6010B	TCLP			
	0.0029			0.0022	•	1	6010B	TCLP			
Chromium		J	0.50		-	=					
Aluminum	580		50	19	ug/L	1	6020	Total			
4				0.40		,	6020	Recoverable			
Antimony	2,3		2.0	0.13	ug/L	1	6020	Total			
1	1300		100	26	ug/L	1	6020	Recoverable Total			
tron	1300		100	20	ug/L	ı	0020	Recoverable			
Sodium	28000	ь	1000	ρâ	ug/L	1	6020	Total			
Sodinii	20000	Ь	1000	0.5	ogr		0020	Recoverable			
Thallium	0,58	JÄ	2.0	n 14	ug/L	1	6020	Total			
Halliani	0.00	0.5	2.0	0,11	<b>49</b> , 2			Recoverable			
Zinc	11	JВ	20	2.3	ug/L	1	6020	Total			
	•••			2.0	J. =	,		Recoverable			
Flashpoint	>180		1,00	1.00	Degrees F	1	1010	Total/NA			
рН	8,39		0.100	0.100	_	1	9040B	Tota!/NA			
	0,03		0.100	0.100			******	. • • • • • •			

#### **Client Sample Results**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Lab Sample ID: 240-12752-1

Matrix: Water

#### Client Sample ID: TRIP BLANK

Date Collected: 06/28/12 08:00 Date Received: 06/28/12 12:45

Method: 8260B - Volatile Organ Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1-Trichloroethane	1.0	Ū	1,0	0.22	ug/L		-11180	07/10/12 12:54	
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			07/10/12 12:54	
1,1,2-Trichloroethane	1.0	บ	1.0	0,27	ug/L			07/10/12 12:54	
1,1-Dichloroethane	1.0	Ú	1.0	0.15	ug/L			07/10/12 12:54	
1,1-Dichtoroethene	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 12:54	
1,2-Dichloroethene, Total	2.0	Ü	2.0	0.34	ug/L			07/10/12 12:54	
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 12:54	
2-Butanone (MEK)	10	U	10	0.57	ug/L			07/10/12 12:54	
2-Нехалопе	10	U	10	0.41	ug/L			07/10/12 12:54	•
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 12:54	
Acetone	1.4	J	10	1.1	ug/L			07/10/12 12:54	
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	
Bromoform	1.0	U	1.0	0.64	ug/L			07/10/12 12:54	
Вromomethane	1.0	U	1.0	0.41	ug/L			07/10/12 12:54	
Carbon disulfide	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	
Chlorobenzene	1.0	U	1.0	0.15	ug/L			07/10/12 12:54	
Chloromethane	1.0	Ü	1.0	0.30	ug/L			07/10/12 12:54	
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			07/10/12 12:54	
Dibromochloromethane	1,0	U ·	1.0	0.18	ug/L			07/10/12 12:54	
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			07/10/12 12:54	
Ethylbenzene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	
Methylene Chloride	1.0	U	1.0	0.33	ug/L			07/10/12 12:54	
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			07/10/12 12:54	
o-Xylene	1.0	U	1.0	0.14	ug/L			07/10/12 12:54	
Styrene	1.0	Ú	1.0	0.11	ug/L			07/10/12 12:54	
Tetrachloroethene	1.0	U	1.0	0,29	ug/L			07/10/12 12:54	
Toluene	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	
trans-1,3-Dichloropropeле	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	
Trichloroethene	1,0	U	1.0	0.17	ug/L			07/10/12 12:54	
Vinyl chloride	1.0	บ	1.0		ug/L			07/10/12 12:54	
Xylenes, Total			2.0		ug/L			07/10/12 12:54	
Chloroform	1.0		1.0		ug/L			07/10/12 12:54	
Bromochloromethane	1.0	Ü	1.0	0.29	ug/L			07/10/12 12:54	-
1,2-Dibromoethane	1.0		1.0		ug/L			07/10/12 12:54	
Chloroethane	1.0		1.0		ug/L			07/10/12 12:54	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Toluene-d8 (Surr)	99		74 - 115			-		07/10/12 12:54	
1,2-Dichloroethane-d4 (Surr)	93		63 _ 129					07/10/12 12:54	
4-Bromofluorobenzene (Surr)	95		66 - 117					07/10/12 12:54	
Dibromofluoromethane (Surr)	100		75 - 121					07/10/12 12:54	

#### **Client Sample Results**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Result Qualifier

0.025 U

0.025 U

0.25 U

Analyte

1,1-Dichloroethene

1,2-Dichloroethane

2-Butanone (MEK)

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-3

Matrix: Solid

Percent Solids: 78.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dii Fac
1,1,1-Trichloroethane	6.4	U	6.4	0.71	ug/Kg	\$		06/29/12 19:38	1
1,1,2,2-Tetrachloroethane	6.4	U	6.4	0.43	ug/Kg	₽		06/29/12 19:38	1
1,1,2-Trichloroethane	6.4	U	6.4	0.50	ug/Kg	₽		06/29/12 19:38	1
1,1-Dichloroethane	6.4	Ú	6.4	0.46	ug/Kg	*		06/29/12 19:38	1
1,1-Dichloroethene	6.4	U	6.4	0.66	ug/Kg	₽		06/29/12 19:38	1
1,2-Dichtoroethane	6.4	U	6.4	0.43	ug/Kg	₽		06/29/12 19:38	1
1,2-Dichloroethene, Total	13	Ú	13	0.98	ug/Kg	₽		06/29/12 19:38	1
1,2-Dichloropropane	6.4	U	6.4	0.88	ug/Kg	ø		06/29/12 19:38	1
2-Butanone (MEK)	26	U	26	1.8	ug/Kg	ø		06/29/12 19:38	1
2-Нехалоле	26	U	26	0.80	ug/Kg	ø		06/29/12 19:38	1
4-Methyl-2-pentaлопе (MIBK)	26	U	26	0.69	ug/Kg	ø		08/29/12 19:38	1
Acetone	28	U	26	8.0	ug/Kg	ø		06/29/12 19:38	1
Benzene	6.4	Ú	6.4	0.29	ug/Kg	₽		06/29/12 19:38	1
Bromoform	6.4	U	6.4	0.42	ug/Kg	ø		06/29/12 19:38	1
Bromomethane	6.4	U	6.4	0.69	ug/Kg	₽		06/29/12 19:38	1
Carbon disulfide	5.4	JB	6.4	0.56	ug/Kg	₽		08/29/12 19:38	1
Carbon tetrachloride	6.4	U	6.4	0.47	ug/Kg	ø		06/29/12 19:38	1
Chlorobenzene	6.4	U	6.4	0.42	ug/Kg	ø		06/29/12 19:38	1
Chloromethane	8,4	U	6.4	0.52	ug/Kg	ø		06/29/12 19:38	1
cis-1,2-Dichloroetherie	6.4	U	6.4	0.46	ug/Kg	\$		06/29/12 19:38	1
cis-1,3-Dichloropropene	6.4	U	6.4	0.43	ug/Kg	*		06/29/12 19:38	1
Dibromochloromethane	6.4		6.4		ug/Kg	ø		06/29/12 19:38	1
Bromodichloromethane	6.4	U	6.4	0.38		ø		06/29/12 19:38	1
Ethylbenzene	8.4	U	6.4		ug/Kg	ø		06/29/12 19:38	1
Methylene Chloride	1.2		6.4	0.86		⋫		06/29/12 19:38	1
m-Xylene & p-Xylene	13	U	13	1.5	ug/Kg	ø		06/29/12 19:38	1
o-Xylene	6.4	Ü	6.4	0.45		₽		06/29/12 19:38	1
Styrene	6.4	Ü	6.4	0.19	ug/Kg	ø		06/29/12 19:38	1
Tetrachloroethene	6.4	Ü	6.4	0,66	ug/Kg	ø		06/29/12 19:38	1
Toluene	0.43		6.4		ug/Kg	₽		06/29/12 19:38	1
trans-1,2-Dichloroethene		U	6.4	0,52		ø		06/29/12 19:38	1
trans-1,3-Dichloropropene	6,4	U	6.4	0.69	ug/Kg	#		06/29/12 19:38	1
Trichloroethene	6.4	U	6.4	0.54	ug/Kg	ø		06/29/12 19:38	1
•	6,4	U	6.4	0.50	ug/Kg	₽		06/29/12 19:38	1
Vinyl chloride	13	U	13	0.86		ø		06/29/12 19:38	1
Xylenes, Total	6,4	U	6.4	0.37	ug/Kg	ø		08/29/12 19:38	1
Chloroform				0.91		ø		06/29/12 19:38	1
Bromochloromethane	6.4		6.4		ug/Kg ug/Kg			06/29/12 19:38	1
1,2-Dibromoethane Chloroethane	6.4 6.4		6.4 6.4		ug/Kg ug/Kg	ø		06/29/12 19:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Sum)	112		67 - 125			*		06/29/12 19:38	1
1,2-Dichloroethane-d4 (Surr)	96		58 - 123					06/29/12 19:38	1
4-Bromafluorobenzene (Surr)	121		52 - 136					06/29/12 19:38	1
Dibromofluoromethene (Surr)	89		37 - 132					06/29/12 19:38	1

TestAmerica Canton 7/16/2012

Analyzed

07/06/12 21:42

07/06/12 21:42

07/06/12 21:42

Prepared

Dil Fac

1

RL

0.025

0.025

0.25

MDL Unit

0.0095 mg/L

0.011 mg/L

0.029 mg/L

Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Faç
Велгеле	0.025	U	0.025	0.0065	mg/L			07/06/12 21:42	1
Carbon tetrachloride	0.025	Ü	0.025	0.0065	mg/L			07/06/12 21:42	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/06/12 21:42	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/06/12 21:42	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/06/12 21:42	1
Trichloroethene	0,025	U	0,025	0.0085	mg/L			07/06/12 21:42	1
Vinyl chloride	0.025	Ü	0.025	0.011	mg/L			07/06/12 21:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121			-		07/06/12 21:42	1
4-Bromofluorobenzene (Surr)	94		70 - 124					07/06/12 21:42	1
Toluene-d8 (Surr)	107		90 - 115					07/06/12 21:42	1
Dibromofluoromethane (Surr)	117		84 - 128					07/06/12 21:42	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Асепарhthene	8.4	U	8.4	4.2	ug/Kg	<u> </u>	07/03/12 13:56	07/08/12 19:27	1
Acenaphthylene	8.4	U	8.4	4.2	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
Anthracene	8.4	U	8.4	4.2	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
Benzo[a]anthracene	8.4	U	8.4	4.2	ug/Kg	Ø	07/03/12 13:56	07/06/12 19:27	1
Benzoic acid	830	U	830	420	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
Велzo[b]fluoranthene	8.4	U	8.4	4.2	ug/Kg	₩	07/03/12 13:56	07/06/12 19:27	1
Benzolk]fluoranthene	8.4	U	8.4	4.2	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
Benzył alcohol	420	U	420	27	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
Bis(2-chloroethoxy)methane	130	U	130	28	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
Bis(2-chloroethyl)ether	130	U	130	2.5	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
4-Bromophenyl phenyl ether	63	U	63	16	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
Butyl benzyl phthalate	83	U	63	13	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
2,4-Dimethylphenol	190	Ú	190	25	ug/Kg	₿	07/03/12 13:56	07/06/12 19:27	1
Dimethyl phthalate	83	U	63	21	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
4,6-Dinitro-2-methylphenol	190	U	190	100	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
2,4-Dinitrophenol	420	U	420	100	ug/Kg	φ	07/03/12 13:56	07/06/12 19:27	1
2,4-Dinitrotoluene	250	U	250	34	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
2,6-Dinitrotoluene	250	U	250	27	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
Fluoranthene	7.4	J	8.4	4.2	ug/Kg	à	07/03/12 13:56	07/06/12 19:27	1
Fluorene	8.4	U	8.4	4.2	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
Hexachlorobenzene	8.4	U	8.4	2.7	ug/Kg	<b>D</b>	07/03/12 13:56	07/08/12 19:27	1
Hexachlorobutadiene	83	U	83	34	ug/Kg	Þ	07/03/12 13:58	07/06/12 19:27	1
Hexachterocyclopentadiene	420	U	420	34	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
Hexachteroethane	63	U	63	11	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
N-Nitrosodiphenylamine	63	U	63	27	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
N-Nitrosodi-п-ргоруlаmine	63	U	63	34	ug/Kg	Ð	07/03/12 13:56	07/06/12 19:27	1
1,4-Dichlorobenzene	63	U	63	25	ug/Kg	¤	07/03/12 13:56	07/06/12 19:27	1
2-Chloronaphthalene	63	U	63	4.2	ug/Kg	φ	07/03/12 13:56	07/06/12 19:27	1
2-Chloropheлol	63	U	63	34	ug/Kg	Þ	07/03/12 13:56	07/06/12 19:27	1
4-Chlorophenyl phenyl ether	63	U	63	16	ug/Kg	₽	07/03/12 13:56	07/06/12 19:27	1
Chrysene	8.4	U	8.4	1.4	ug/Kg	¢	07/03/12 13:56	07/06/12 19:27	1
Dibenz(a,h)anthracene	8.4	U	8.4	4.2	ug/Kg	ø	07/03/12 13:56	07/08/12 19:27	1
Dibenzofuran	63	U	63	4.2	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
Benzo[g,h,i]perylene	13		8.4	4.2	ug/Kg	ø	07/03/12 13:56	07/06/12 19:27	1
Benzo[a]pyrene	6.3	J	8.4	4.2	ug/Kg	Þ	07/03/12 13:56	07/06/12 19:27	1

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TestAmerica Canton 7/16/2012

## Client Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW TestAmerica Job ID: 240-12752-1

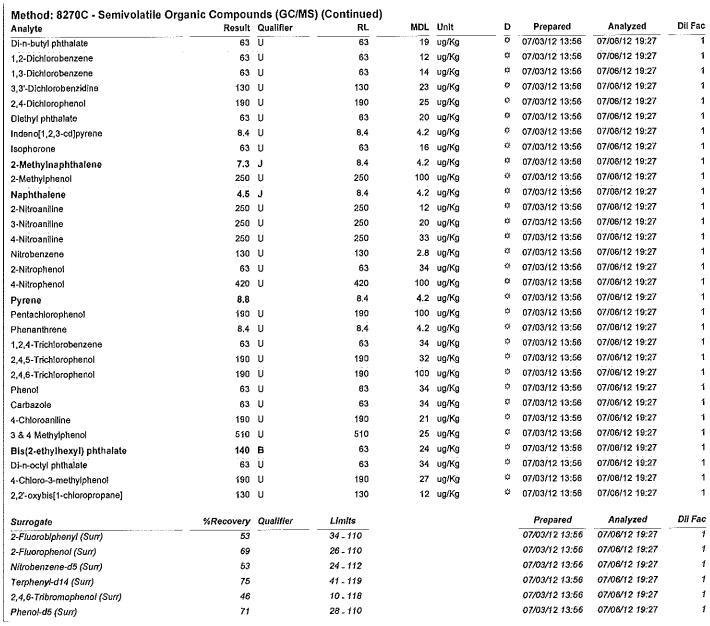
Lab Sample ID: 240-12752-3

Matrix: Solid

Percent Solids: 78.3

Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45



Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:12	07/06/12 18:11	1
2,4,5-Trichlorophenol	0.020	υ	0.020	0.00030	mg/L		07/03/12 09:12	07/06/12 18:11	1
2,4,6-Trichloropheлol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 18:11	1
2,4-Dinitrotoluene	0.020	ΰ	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:11	1
Hexachlorobenzeno	0.020	U	0,020	0.00010	mg/L		07/03/12 09:12	07/06/12 18:11	1
Hexachtorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:11	1
Hexachloroethane	0.020	υ	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 18:11	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:12	07/06/12 18:11	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:12	07/06/12 18:11	1

Project/Site: RVAAP (OH) - IDW

## Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-3

Matrix: Solid

Part	Method: 8270C - Semivolatile (		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Pyridina	Nitrobenzene	0,0040	U	0.0040	0.000040	mg/L		07/03/12 09:12	07/08/12 18:11	1
Surrogate   \$4,000	Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:12	07/06/12 18:11	1
2-Fiboraliphanyi (Surr)	Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:12	07/06/12 18:11	1
2-Fibrorophenis (Surr)	Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)   68   17117   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (09.12   07050/12 (81.11   0703/12 (91.12   07050/12 (81.11   0703/12 (91.12   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   07050/12 (81.11   070	-	46		22 - 110				07/03/12 09:12	07/06/12 18:11	1
24.6-Tri/to/monplened (Surr)   68		13		10 - 110				07/03/12 09:12	07/06/12 18:11	1
Nitrobanne-as   Surr   46   29		68		17 - 117				07/03/12 09:12	07/06/12 18:11	1
Method: 8081A - Organochlorine Pesticides (GC)   Analyte   Result   Qualifier   R.L.   MDL   Unit   D   Propared   Analyzed   L.		46		29 - 111				07/03/12 09:12	07/06/12 18:11	1
Method: 8081A - Organochlorine Pesticides (GC)	Phenol-d5 (Surr)	46		10 - 110				07/03/12 09:12	07/06/12 18:11	1
Analyte   Result   Cultifier   RL   MDL   Unit   D   Prepared   Analyzed   C   Ant-DDE   21   U   21   7.8   Up/Kg   D   O7/03/12/12/02   O7/09/12 08.27   A4-DDE   21   U   21   7.8   Up/Kg   D   O7/03/12/12/02   O7/09/12 08.27   A4-DDE   21   U   21   7.8   Up/Kg   D   O7/03/12/12/02   O7/09/12 08.27   A4-DDE   21   U   21   7.8   Up/Kg   D   O7/03/12/12/02   O7/09/12 08.27   A4-DDE   21   U   21   12   Up/Kg   D   O7/03/12/12/02   O7/09/12 08.27   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE   A1-DDE	• •	71		40 - 119				07/03/12 09:12	07/06/12 18:11	1
Analyte	Mathadi 9094A - Organachlari	no Posticidos (G	C)							
A4-DDD	_			RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
4,4-DDE         21         U         21         3,5         ug/Kg         0         07/03/12 1:020         77/09/12 08:27           4,4-DDT         21         U         21         7.9         ug/Kg         0         07/03/12 1:020         77/09/12 08:27           Aldrín         21         U         21         1.9         ug/Kg         0         07/03/12 1:020         07/09/12 08:27           alpha-BHC         21         U         21         1.2         ug/Kg         0         07/03/12 1:020         07/09/12 08:27           bela-BHC         21         U         21         1.5         ug/Kg         0         07/03/12 1:020         07/09/12 08:27           bela-BHC         21         U         21         1.5         ug/Kg         0         07/03/12 1:020         07/09/12 08:27           bela-BHC         21         U         21         1.5         ug/Kg         0         07/03/12 1:020         07/09/12 08:27           bela-BHC         21         U         21         1.5         ug/Kg         0         07/03/12 1:020         07/09/12 08:27           bela-BHC         21         U         21         1.0         ug/Kg         0         07/03/12 1:020 <t< td=""><td></td><td></td><td></td><td>21</td><td>7.8</td><td>ug/Kg</td><td><u> </u></td><td>07/03/12 12:02</td><td>07/09/12 08:27</td><td>10</td></t<>				21	7.8	ug/Kg	<u> </u>	07/03/12 12:02	07/09/12 08:27	10
4,4-DDT         21         U         21         7.9         ug/Kg         0         07/03/12 1:202         07/09/12 08:27           Aldrin         21         U         21         15         ug/Kg         0         07/03/12 1:202         07/09/12 08:27           alpha-Chlordane         21         U         21         12         ug/Kg         0         07/03/12 1:202         07/09/12 08:27           beta-BHC         21         U         21         14         ug/Kg         0         07/03/12 1:202         07/09/12 08:27           Dieldrin         21         U         21         15         ug/Kg         0         07/03/12 1:202         07/09/12 08:27           Dieldrin         21         U         21         5         ug/Kg         0         07/03/12 1:202         07/09/12 08:27           Endosulfan         21         U         21         6         ug/Kg         0         07/03/12 1:202         07/09/12 08:27           Endosulfan sulfate         21         U         21         1         ug/Kg         0         07/03/12 1:202         07/09/12 08:27           Endrin         21         U         21         1         ug/Kg         0         07/03/12 1:202		21	U	21	4.9	ug/Kg	ø	07/03/12 12:02	07/09/12 08:27	10
Ndifin	·	21	U	21	7.9	ug/Kg	₿	07/03/12 12:02	07/09/12 08:27	10
alpha-BHC			U		15		ά	07/03/12 12:02	07/09/12 08:27	10
Alpha-Chlordane							ø	07/03/12 12:02	07/09/12 08:27	10
Dela-BHC   21   U   21   14   UN   UN   UN   UN   UN   UN   UN   U	•						ø	07/03/12 12:02	07/09/12 08:27	10
Delladin	i com						ģ	07/03/12 12:02	07/09/12 08:27	10
Dieldrin							ø	07/03/12 12:02	07/09/12 08:27	10
Endosulfan I         21         U         21         6.6         ug/kg         0         07/03/12 12:02         07/09/12 08:27           Endosulfan II         21         U         21         10         ug/kg         0         07/03/12 12:02         07/09/12 08:27           Endosulfan sulfate         21         U         21         11         ug/kg         0         07/03/12 12:02         07/09/12 08:27           Endrin         21         U         21         6.3         ug/kg         0         07/03/12 12:02         07/09/12 08:27           Endrin aldehyde         21         U         21         13         ug/kg         0         07/03/12 12:02         07/09/12 08:27           Endrin ketone         21         U         21         7.9         ug/kg         0         07/03/12 12:02         07/09/12 08:27           Endrin ketone         21         U         21         9.3         ug/kg         0         07/03/12 12:02         07/09/12 08:27           Endrin ketone         21         U         21         0         21         0         21         0         21         0         21         0         21         0         21         0         21         0			_				₽		07/09/12 08:27	10
Endosulfan II         21         U         21         10         uplkg         © 07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 12:02         07/03/12 08:27           Endrin ketone         21         U         21         9.3         ug/Kg         © 07/03/12 12:02         07/03/12 08:27         07/03/12 12:02         07/03/12 08:27         07/03/12 12:02         07/03/12 08:27         07/03/12 12:02         07/03/12 08:27         07/03/12 12:02         07/03/12 08:27         07/03/12 12:02         07/03/12 08:27         07/03/12 12:02         07/03/12 08:27         07/03/12 12:02         07/03/12 08:27         07/03/12 08:27         07/03/12 08:27         07/03/12 08:27         07/03/12 08:27         07/03/12 08:27         07/03/12 08:27         07/03/12 08:27         07/03/12 08:27         07/03/12 08:27         07/03							ø		07/09/12 08:27	10
Endosulfan sulfate 21 U 21 11 ug/Kg \$ 07/03/12 12:02 07/09/12 08:27 Endrin 14th 14th 14th 14th 14th 14th 14th 14th							₽		07/09/12 08:27	10
Endrin         21         U         21         B.3         ug/Kg         \$\psi\$ 07/03/12 12:02         07/09/12 08:27           Endrin aldehyde         21         U         21         13         ug/Kg         \$\psi\$ 07/03/12 12:02         07/09/12 08:27           Endrin ketone         21         U         21         79         ug/Kg         \$\psi\$ 07/03/12 12:02         07/09/12 08:27           gamma-BHC (Lindane)         21         U         21         93         ug/Kg         \$\psi\$ 07/03/12 12:02         07/09/12 08:27           gamma-Chlordane         21         U         21         53         ug/Kg         \$\psi\$ 07/03/12 12:02         07/09/12 08:27           Heptachtor         21         U         21         14         ug/Kg         \$\psi\$ 07/03/12 12:02         07/09/12 08:27           Heptachtor epoxide         21         U         21         10         ug/Kg         \$\psi\$ 07/03/12 12:02         07/09/12 08:27           Heptachtor epoxide         21         U         21         10         ug/Kg         \$\psi\$ 07/03/12 12:02         07/09/12 08:27           Toxaphene         840         U         80         24         19         ug/Kg         \$\psi\$ 07/03/12 12:02         07/09/12 08:27			=				ø			10
Endrin aldehyde 21 U 21 7.9 ug/Kg 0703/12 12:02 0709/12 08:27  Endrin ketone 21 U 21 7.9 ug/Kg 0703/12 12:02 0709/12 08:27  gamma-BHC (Lindane) 21 U 21 9.3 ug/Kg 0703/12 12:02 0709/12 08:27  gamma-Chlordane 21 U 21 6.3 ug/Kg 0703/12 12:02 0709/12 08:27  Heptachlor 21 U 21 6.3 ug/Kg 0703/12 12:02 0709/12 08:27  Heptachlor epoxide 21 U 21 14 ug/Kg 0703/12 12:02 0709/12 08:27  Heptachlor epoxide 21 U 21 10 ug/Kg 0703/12 12:02 0709/12 08:27  Methoxychlor 42 U 42 19 ug/Kg 0703/12 12:02 0709/12 08:27  Toxaphene 840 U 840 240 ug/Kg 0703/12 12:02 0709/12 08:27  Surrogate 8/Recovery Qualifier Limits						- :	*	07/03/12 12:02	07/09/12 08:27	10
Endrin ketone         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U         21 U							₽	07/03/12 12:02	07/09/12 08:27	10
gamma-BHC (Lindane)         21 U         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         21 Us         22 Us         22 Us         23 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us         24 Us <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Ħ</td> <td></td> <td>07/09/12 08:27</td> <td>10</td>	•						Ħ		07/09/12 08:27	10
gamma-Chlordane         21         U         21         5.3         ug/Kg         xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx						7. 7	ģ		and a second second	10
Heptachlor 21 U 21 14 ug/Kg	• •		_							10
Heptachtor epoxide	•					- •				10
Methoxychlor         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U         42 U	•		=							10
Toxaphene   Sato   U	•		-							10
DCB Decachlorobiphenyl   97   32 - 175   07/03/12 12:02   07/09/12 08:27	•		-			• -				10
DCB Decachlorobiphenyl   97   32 - 175   07/03/12 12:02   07/09/12 08:27	Surragata	%Pecovery	Qualifier	l imite				Prepared	Analyzed	Dii Fac
DCB Decachlorobiphenyl   110   32 - 175   07/03/12 12:02   07/09/12 08:27     Tetrachloro-m-xylene   95   24 - 150   07/03/12 12:02   07/09/12 08:27     Tetrachloro-m-xylene   91   24 - 150   07/03/12 12:02   07/09/12 08:27     Tetrachloro-m-xylene   91   24 - 150   07/03/12 12:02   07/09/12 08:27     Method: 8081A - Organochlorine Pesticides (GC) - TCLP     Analyte   Result   Qualifier   RL   MDL   Unit   D   Prepared   Analyzed   E			Guamer							10
Tetrachloro-m-xylene         95         24 - 150         07/03/12 12:02         07/09/12 08:27           Method: 8081A - Organochlorine Pesticides (GC) - TCLP         Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         E           Chlordane (technical)         0.060         U         0.060         0.00040         mg/L         07/03/12 09:15         07/06/12 14:52           Endrin         0.0080         U         0.0060         0.00013         mg/L         07/03/12 09:15         07/06/12 14:52           Heptachlor         0.0060         U         0.0060         0.000096         mg/L         07/03/12 09:15         07/06/12 14:52           Heptachlor epoxide         0.0080         U         0.0060         0.000095         mg/L         07/03/12 09:15         07/06/12 14:52           gamma-BHC (Lindane)         0.0060         U         0.0060         0.000077         mg/L         07/03/12 09:15         07/06/12 14:52           Methoxychlor         0.012         U         0.012         0.00038         mg/L         07/03/12 09:15         07/06/12 14:52	• •									10
Tetrachloro-m-xylene         91         24 - 150         07/03/12 12:02         07/09/12 08:27           Method: 8081A - Organochlorine Pesticides (GC) - TCLP Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         E           Chlordane (technical)         0.060         U         0.060         0.00040         mg/L         07/03/12 09:15         07/06/12 14:52           Endrin         0.0080         U         0.0060         0.00013         mg/L         07/03/12 09:15         07/06/12 14:52           Heptachlor         0.0060         U         0.0060         0.000096         mg/L         07/03/12 09:15         07/06/12 14:52           Heptachlor epoxide         0.0080         U         0.0060         0.000095         mg/L         07/03/12 09:15         07/08/12 14:52           gamma-BHC (Lindane)         0.0060         U         0.0060         0.000077         mg/L         07/03/12 09:15         07/06/12 14:52           Methoxychlor         0.012         U         0.012         0.00038         mg/L         07/03/12 09:15         07/06/12 14:52	• •									10
Method: 8081A - Organochlorine Pesticides (GC) - TCLP           Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         D           Chlordane (technical)         0.060         U         0.060         0.00040         mg/L         07/03/12 09:15         07/06/12 14:52           Endrin         0.0060         U         0.0060         0.00013         mg/L         07/03/12 09:15         07/06/12 14:52           Heptachlor         0.0060         U         0.0060         0.000096         mg/L         07/03/12 09:15         07/06/12 14:52           Heptachlor epoxide         0.0080         U         0.0060         0.000085         mg/L         07/03/12 09:15         07/08/12 14:52           gamma-BHC (Lindane)         0.0060         U         0.0060         0.00007         mg/L         07/03/12 09:15         07/06/12 14:52           Methoxychlor         0.012         U         0.012         0.0003         mg/L         07/03/12 09:15         07/06/12 14:52										10
Analyte         Result Chlordane (technical)         Qualifier         RL OLOGIC (technical)         Unit Unit Unit Unit Unit Unit Unit Unit	тепастого-т-хутепе	31		24 - 100				01700712 12:02	0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Chlordane (technical)         0.060         U         0.060         0.0004         mg/L         07/03/12 09:15         07/08/12 14:52           Endrin         0.0080         U         0.0060         0.00013         mg/L         07/03/12 09:15         07/06/12 14:52           Heptachlor         0.0060         U         0.0060         0.000096         mg/L         07/03/12 09:15         07/06/12 14:52           Heptachlor epoxide         0.0080         U         0.0060         0.000085         mg/L         07/03/12 09:15         07/06/12 14:52           gamma-BHC (Lindane)         0.0060         U         0.0060         0.00007         mg/L         07/03/12 09:15         07/06/12 14:52           Methoxychlor         0.012         U         0.012         0.00038         mg/L         07/03/12 09:15         07/06/12 14:52				DI	Mini	Unit	ח	Prepared	Analyzed	Dil Fac
Endrin         0.0080         U         0.0060         0.0013         mg/L         07/03/12 09:15         07/06/12 14:52           Heptachlor         0.0060         U         0.0060         0.00096         mg/L         07/03/12 09:15         07/06/12 14:52           Heptachlor epoxide         0.0080         U         0.0060         0.000085         mg/L         07/03/12 09:15         07/06/12 14:52           gamma-BHC (Lindane)         0.0012         0.0012         0.0003         mg/L         07/03/12 09:15         07/06/12 14:52           Methoxychlor         0.012         U         0.012         0.0003         mg/L         07/03/12 09:15         07/06/12 14:52							<u>-</u>			5
Heptachlor 0.0060 U 0.0060 0.000096 mg/L 07/03/12 09:15 07/06/12 14:52 Heptachlor epoxide 0.0080 U 0.0060 0.000085 mg/L 07/03/12 09:15 07/06/12 14:52 gamma-BHC (Lindane) 0.0060 U 0.0060 0.000077 mg/L 07/03/12 09:15 07/06/12 14:52 Methoxychlor 0.012 U 0.012 0.00038 mg/L 07/03/12 09:15 07/06/12 14:52	•									5
Heptachlor epoxide 0.0080 U 0.0060 0.000085 mg/L 07/03/12 09:15 07/06/12 14:52 gamma-BHC (Lindane) 0.0060 U 0.0060 0.000077 mg/L 07/03/12 09:15 07/06/12 14:52 Methoxychlor 0.012 U 0.012 0.00038 mg/L 07/03/12 09:15 07/06/12 14:52						_				5
gamma-BHC (Lindane) 0.0060 U 0.0060 0.000077 mg/L 07/03/12 09:15 07/06/12 14:52  Methoxychlor 0.012 U 0.012 0.00038 mg/L 07/03/12 09:15 07/06/12 14:52						_				5
Methoxychlor 0.012 U 0.012 0.00038 mg/L 07/03/12 09:15 07/06/12 14:52	•					-				5
History shot	• •									5
Toxaphene 0.24 U 0.24 0.0038 mg/L 07/03/12 09:15 07/08/12 14:52	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s					1				5

## **Client Sample Results**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45

Lab Sample ID: 240-12752-3

Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DII Fac
Tetrachloro-m-xylene	77		46 - 122				07/03/12 09:15	07/06/12 14:52	5
Tetrachloro-m-хујеле	74		46 - 122				07/03/12 09:15	07/06/12 14:52	6
DCB Decachlorobiphenyl	102		34 - 141				07/03/12 09:15	07/06/12 14:52	5
DCB Decachlorobiphenyl	100		34 - 141				07/03/12 09:15	07/06/12 14:52	5
- -									
Method: 8082 - Polychlorinated Bip					18-14	_	Decreed	Analyzed	Dil Fac
Analyte		Qualifler	RL -	MDL		<u>D</u>	Prepared 07/03/12 11:53	07/06/12 09:43	1
Arodor-1018	42		42		ug/Kg	p.			1
Arodor-1221	42		42		ug/Kg		07/03/12 11:53	07/06/12 09:43	1
Arodor-1232	42		42	18	ug/Kg	<b>ウ</b>	07/03/12 11:53	07/06/12 09:43	
Arodor-1242	42		42		ug/Kg	. ☆	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1248	42		42	21	ug/Kg		07/03/12 11:53	07/06/12 09:43	1
Arodor-1254	42		42	21	ug/Kg		07/03/12 11:53	07/06/12 09:43	1
Arodor-1280	42	U	42	21	ug/Kg	⋫	07/03/12 11:53	07/06/12 09:43	1
Surrogale	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	60		29 - 151				07/03/12 11:53	07/06/12 09:43	1
DCB Decachlorobiphenyl	58		14 - 163				07/03/12 11:53	07/06/12 09:43	1
<del>-</del> -									
Method: 8151A - Herbicides (GC) - 1		Ovelliter	<b>5</b> 1	MDL	I Inti	D	Prepared	Analyzed	Dil Fac
Analyte		Qualifier	RL 0,0020	0.00021	mg/L		07/03/12 09:18	07/07/12 19:42	1
2,4-D	0.0020	U		0.00021	-		07/03/12 09:18	07/07/12 19:42	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:10	0//0//12 13.42	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	53	***	37 - 116				07/03/12 09:18	07/07/12 19:42	1
2,4-Dichlorophenylacetic acid	63		37 - 116				07/03/12 09:18	07/07/12 19:42	1
 Method: 8330 (Modified) - Organic (	Compounds	hv HV/HPI C	:						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Nitroguanidine	0.25		0.25	0,020	mg/kg	*	07/06/12 06:00	07/10/12 12:23	0,99
Method: 8330B - Nitroaromatics & N		Explosives () Qualifier	8330B) RL	MDI	Unit	D	Prepared	Analyzed	Dli Fac
Analyte	0,25		0.25	0,0099	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
1,3,5-Trinitrobenzena	0.25		0.25	0.0042			07/09/12 12:45	07/10/12 14:06	0.99
1,3-Dinitrobenzene	0.25		0,25		mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2,4,6-Trinitrotoluene	-		0.25	0.0052			07/09/12 12:45	07/10/12 14:08	0.99
2,4-Dinitrotoluene	0.25		0.25	0.0072			07/09/12 12:45	07/10/12 14:06	0.99
2,6-Dinitrotoluene	0.25						07/09/12 12:45	07/10/12 14:06	0.99
2-Amino-4,6-dinitrotolueпе	0,25		0.25		mg/kg		07/09/12 12:45	07/10/12 14:06	0.00
2-Nitrotoluene	0,25		0.25		mg/kg				0.99
3-Nitrotoluene	0.25		0.25		mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
4-Amino-2,6-dinitrotoluene	0.25		0.25	0.0099			07/09/12 12:45	07/10/12 14:06	
4-Nitrotoluene	0.25		0.25		mg/kg		07/09/12 12:45	07/10/12 14:08	0.99
НМХ	0.25		0.25		mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
Nitrobenzene	0.25		0.25		mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
Nitroglycerin	0,50		0.50		mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
PETN	0.50	U	0.50		mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
RDX	0.25	U	0.25		mg/kg		07/09/12 12:45	07/10/12 14:06	0,99
Tetryl	0.25	U	0.25	0.0099	mg/kg		07/09/12 12:45	07/10/12 14:08	0.99
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Project/Site: RVAAP (OH) - IDW

Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Collected: 06/28/12 10:15 Date Received: 06/28/12 12:45

Lab Sample ID: 240-12752-3

Matrix: Solid

Percent Solids: 78.3

Date Received: 06/28/12 12:45								Percent Son	us: /o.s
— Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Arsenic	11		1.2	0.37	mg/Kg	≎	06/29/12 11:17	07/05/12 20:27	1
Chromium	15		0.61	0.25	mg/Kg	₿	06/29/12 11:17	07/05/12 20:27	1
Cobalt	10		6.1	0,20	mg/Kg	⋫	06/29/12 11:17	07/05/12 20:27	1
Lead	11		0.37	0.23	mg/Kg	₽	06/29/12 11:17	07/05/12 20:27	1
Selenium	0.61	U	0.61	0.55	mg/Kg	ø	06/29/12 11:17	07/05/12 20:27	1
Silver	0.61	U	0.61	0.12	mg/Kg	₿	06/29/12 11:17	07/05/12 20:27	1
Vanadium	17	В	6.1	0.15	mg/Kg	ø	06/29/12 11:17	07/05/12 20:27	1
Barium	120	В	25	0,087	mg/Kg	₿	06/29/12 11:17	07/05/12 20:27	1
Calcium	16000	В	810	20	mg/Kg	₽	06/29/12 11:17	07/05/12 20:27	1
Copper	21		3.1	0.91	mg/Kg	ø	06/29/12 11:17	07/05/12 20:27	1
Magnesium	4500		810	6.3	mg/Kg	₽	06/29/12 11:17	07/05/12 20:27	1
Manganese	430		1.8	0.091	mg/Kg	₿	06/29/12 11:17	07/05/12 20:27	1
Nickel	24	В	4.9	0,33	mg/Kg	₿	06/29/12 11:17	07/05/12 20:27	1
Potassium	1500	В	610	7.6	mg/Kg	₽	06/29/12 11:17	07/05/12 20:27	1
 Method: 6010B - Metals (ICP) - TC	l P								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dll Fac
Arsenic	0.0048	J	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 20:59	1
Barium	0.88		10	0.00067	mg/L		07/03/12 10:01	07/05/12 20:59	1
Cadmium	0.0024		0.10	0,00066	mg/L		07/03/12 10:01	07/05/12 20:59	1
Chromium	0.0037		0,50	0.0022	mg/L		07/03/12 10:01	07/05/12 20:59	1
Lead	0.0035		0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 20:59	1
Selenium	0.25		0,25	0.0041	mg/L		07/03/12 10:01	07/05/12 20:59	1
Silver	0,50		0.50	0.0022			07/03/12 10:01	07/05/12 20:59	1
Method: 6020 - Metals (ICP/MS) Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	11000		6.1	1.6	mg/Kg	- <del>1</del>	06/29/12 11:17	07/05/12 21:15	1
Antimony	0.13		0.25	0,029	mg/Kg	₽	06/29/12 11:17	07/05/12 21:15	1
Beryllium	0.57	• •	0,12	0.058	mg/Kg	₽	06/29/12 11:17	07/09/12 09:43	1
Cadmium	0.14		0.12	0.0096	7	ø	06/29/12 11:17	07/05/12 21:15	1
Iron	25000	R	12		mg/Kg	₽	08/29/12 11:17	07/05/12 21:15	1
Sodium	•	JB	120	2.9	mg/Kg	ø	06/29/12 11:17	07/05/12 21:15	1
	. 11		0.25		mg/Kg	ø	06/29/12 11:17	07/05/12 21:15	1
Thailium	63		2,5		mg/Kg	₽	06/29/12 11:17	07/05/12 21:15	1
Zinc	93	В	2,3	0.20	mg/rvg		00/20/12 11:11	0770071221110	•
Method: 7470A - Mercury (CVAA)						_	B	Amalumad	Dil Eos
Analyte		Qualifler	RL	MDL		_ <u>D</u>	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0,0020	0.00012	mg/L		07/03/12 14:30	07/05/12 13:58	'
Method: 7471A - Mercury (CVAA)						_			D# F
Analyte		Qualifler	RL	MDL		— — —	Prepared	Analyzed	DII Fac
Mercury —	0.027	J	0.13	0.019	mg/Kg	₿	06/29/12 14:00	07/05/12 16:29	1
General Chemistry						_			B.: =
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Flashpoint	>180		1.00		Degrees F			06/29/12 14:17	1
Cyanide, Total	0.63	U	0.63		mg/Kg	ø	07/09/12 08:07	07/09/12 10:24	1
Sulfide	39	U	39	28	mg/Kg	≎	07/03/12 07:56	07/03/12 13:48	1
Corrosivity	10.0		0.100	0.100	SU mg/kg			06/29/12 16:15 07/11/12 11:11	1

Lab Sample ID: 240-12752-4 Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45

2-Butanone (MEK)

Matrix: Water

Method: 8260B - Volatile Orga Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1.1.1-Trichloroethane	1.0	Ü	1.0	0.22	ug/L			07/10/12 13:16	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			07/10/12 13:16	
1,1,2-Trichtoroethane	1.0	U	1.0	0.27	ug/L			07/10/12 13:16	
1,1-Dichloroethane	1.0	Ú	1.0	0.15	ug/L			07/10/12 13:16	
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 13:16	
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 13:16	
1,2-Dichloroethene, Total	2.0	Ü	2.0	0.34	ug/L			07/10/12 13:16	
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 13:16	
2-Butanone (MEK)	0.94	J	10	0.57	ug/L	1		07/10/12 13:16	
2-Hexanone	10		10	0.41	ug/L			07/10/12 13:18	
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 13:16	
Acetone	10	U	10	1.1	ug/L.			07/10/12 13:16	
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 13:18	
Bromoform	1.0		1.0	0.64	-			07/10/12 13:16	
Bromomethane	1.0		1.0		ug/L.			07/10/12 13:16	
Carbon disulfide	1.0		1,0		ug/L			07/10/12 13:16	
Carbon tetrachloride	1.0		1.0		ug/L			07/10/12 13:16	
Chlorobenzene	1.0		1.0		ug/L			07/10/12 13:16	•
Chloromethane	1.0		1.0	4.4	ug/L.			07/10/12 13:16	
cis-1,2-Dichloroethene	1.0		1.0		ug/L			07/10/12 13:16	
cls-1,3-Dichloropropene	1.0		1,0		ug/L			07/10/12 13:16	
Dibromochloromethane	1.0		1.0		ug/L			07/10/12 13:16	
Bromodichloromethane	1.0		1.0		ug/L			07/10/12 13:16	
	1.0		1.0		ug/L			07/10/12 13:16	
Ethylbenzene	1.0		1.0 1.0		ug/L			07/10/12 13:16	
Methylene Chloride	2.0		2.0	0.24	-			07/10/12 13:16	
m-Xylene & p-Xylene	1.0		1.0	0.14	ug/L			07/10/12 13:16	
o-Xylene	1.0		1.0		ug/L			07/10/12 13:16	
Styrene					ug/L			07/10/12 13:16	
Tetrachtoroethene	1.0		1.0		-			07/10/12 13:16	
Toluene	1.0		1.0	0.13	-			07/10/12 13:16	
trans-1,2-Dichloroethene	1.0		1.0	0.19	_			07/10/12 13:16	
trans-1,3-Dichloropropene	1.0		1.0		ug/L			07/10/12 13:16	
Trichloroethene	1.0		1.0		ug/L			and the second second	
Vinyl chloride	1.0		1.0		ug/L			07/10/12 13:16	
Xylenes, Total	2.0		2.0	0.28	-			07/10/12 13:18	
Chloroform	1.0		1,0	0.16	-			07/10/12 13:16	
Bromochloromethana	1.0	-	1.0		ug/L			07/10/12 13:16	
1,2-Dibromoethane	1.0		1.0		ug/iL			07/10/12 13:16	•
Chloroethane	1.0	U	1.0	0.29	ug/L			07/10/12 13:16	
Surrogate	%Recovery		Limits			_	Prepared	Analyzed	Dil Fa
Toluene-d8 (Suπ)	100		74 - 115					07/10/12 13:16	
1,2-Dichloroethane-d4 (Surr)	95		63 - 129					07/10/12 13:16	
4-Bromofluorobenzene (Surr)	96		66 - 117					07/10/12 13:16	
Dibromofluoromethane (Surr)	100		75 - 121					07/10/12 13:16	
Method: 8260B - Volatile Orga									<b></b>
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
1,1-Dichloroethene	0.025	U	0,025	0.0095	mg/L			07/04/12 03:00	
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/04/12 03:00	
			0.05	0.000				07/04/12 03:00	

07/04/12 03:00

0,25

0.029 mg/L

0.25 U

## **Client Sample Results**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0,025	0.0065	mg/L			07/04/12 03:00	1
Carbon tetrachloride	0.025	Ú	0,025	0.0065	mg/L			07/04/12 03:00	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/04/12 03:00	1
Chloroform	0.025	Ü	0,025	0.0080	mg/L			07/04/12 03:00	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/04/12 03:00	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/04/12 03:00	1
Vinyl chloride	0.025	Ü	0,025	0.011	mg/L			07/04/12 03:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 121			-		07/04/12 03:00	1
4-Bromofluorobenzene (Surr)	91		70 - 124					07/04/12 03:00	1
Toluene-d8 (Surr)	108		90 - 115					07/04/12 03:00	1
Dibromofluoromethane (Surr)	110		84 - 128					07/04/12 03:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.20	U	0,20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Acenaphthylene	0.20		0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Anthracene	0.20	υ	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[a]anthracene	0.20	υ	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzoic acid	25	υ	25	10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bulyl benzyl phthalate	1.0	U	1.0	0,80	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dimethylphenol	2.0	Ű	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dimethyi phthalate	1.0	U	1.0	0,29	ug/L		07/02/12 11:43	07/09/12 11:21	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dinitrophenol	5.0	U	5,0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dinitrotoluene	5,0	U	5.0	0.27	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,8-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Fluoranthene	0,20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorobutadiene	1.0	U	1.0	0,27	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
N-Nitrosodiphenylamine	1.0	υ	1.0	0.31	ug/L		07/02/12 11:43	07/09/12 11:21	1
N-Nitrosodi-π-propylamine	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Chloronaphthalene	1.0	υ	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/l.		07/02/12 11:43	07/09/12 11:21	1
Chrysene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dibenzofuran	1.0	U	1.0	0,10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[g,h,i]perylene	0.20	ΰ	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[a]pyrene	0,20	υ	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45

Lab Sample ID: 240-12752-4

Matrix: Water

Method: 8270C - Semivolatile Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Faç
Di-n-butyl phthalate	1.0	Ü	1.0	0.67	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,2-Dichlorobenzene	1.0	Ü	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,3-Dichlorobenzene	1.0	U	1.0	08.0	ug/L		07/02/12 11:43	07/09/12 11:21	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dichlorophenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 11:21	1
Indeno[1,2,3-cd]pyrene	0,20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Isophorone	1.0	U	1.0	0,27	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/08/12 11:21	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Naphthalene	0.20	Ú	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Nitroaniline	2,0	Ú	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Nitrobenzene	1.0	U	1.0	0.040	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
Pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
Phenanthrene	0,20	U	0,20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4,5-Trichlorophenol	5,0	U	5,0	0.30	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4,6-Trichlorophenol	5.0	Ü	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Phenol	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 11:21	1
Cerbazole	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chloroaniline	2.0	U	2.0	0,80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3 & 4 Methylphenol	2,0	U	2.0	0.75	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0,40	ug/L		07/02/12 11:43	07/09/12 11:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	54		28 - 110				07/02/12 11:43	07/09/12 11:21	1
2-Fluorophenol (Surr)	64		10 - 110				07/02/12 11:43	07/09/12 11:21	1
Nitrobenzene-d5 (Surr)	51		27 - 111				07/02/12 11:43	07/09/12 11:21	1
Terphenyl-d14 (Surr)	72		37 - 119				07/02/12 11:43	07/09/12 11:21	1
2,4,6-Tribromophenol (Surr)	67		22 - 120				07/02/12 11:43	07/09/12 11:21	1
Phenol-d5 (Surr)	67		10 - 110				07/02/12 11:43	07/09/12 11:21	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - RE Dlí Fac RL MOL Unit Prepared Analyzed Result Qualifier Analyte 0.20 U H 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 12:33 1 Acenaphthene 07/10/12 10:24 07/13/12 12:33 1 0.20 0.099 ug/L Acenaphthylene 0.20 UH 07/10/12 10:24 07/13/12 12:33 1 0.20 UH 0.20 0.099 ug/L Anthracene 0.20 UH 0.20 0.099 ug/L 07/10/12 10:24 07/13/12 12:33 1 Benzo[a]anthracene 9.9 ug/L 07/10/12 10:24 07/13/12 12:33 25 25 U H Benzoic acid 07/10/12 10:24 07/13/12 12:33 1 0.099 ug/L Benzo(b)fluoranthene 0.20 UH 0.20 07/13/12 12:33 1 0.20 UH 0.20 0.099 ug/L 07/10/12 10:24 Benzo[k]fluoranthene 07/10/12 10:24 07/13/12 12:33 1 5.0 0.38 ug/L 5.0 UH Benzyl alcohol 07/10/12 10:24 07/13/12 12:33 0.32 ug/L 0.99 UH 0.99 Bis(2-chloroethoxy)methane

## **Client Sample Results**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Lab Sample ID: 240-12752-4

Matrix: Water

## Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	0.99	U H	0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Bromophenyl phenyl ether	2.0	ÙΗ	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Butyl benzyl phthalate	0,99	UΗ	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dimethylphenol	2.0	ÚН	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Dimethyl phthalate	0.99	UΗ	0.99	0.29	ug/L		07/10/12 10:24	07/13/12 12:33	1
4,6-Dinitro-2-methy/phenol	5.0	UΗ	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dinitrophenol	5,0	ŪΉ	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dinitrotoluene	5.0	UΗ	5.0	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,6-Dinitrotoluene	5.0	UН	5.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Fluoranthene	0,20	UН	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Fluorene	0.20	UН	0.20	0,099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachlorobenzene	0.20	UН	0,20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachlorobutadiene	0.99	UН	0.99	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachlorocyclopentadiene	9.9	UΗ	9.9	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachloroethane	0.99	UН	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
N-Nitrosodiphenylamine	0.99	UН	0.99	0.31	ug/L		07/10/12 10:24	07/13/12 12:33	1
N-Nitrosodi-n-propylamine	0.99	UH	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,4-Dichlorobenzene	0,99		0.99	0.34	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Chloronaphthaiene		UH	0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Chlorophenol		UH	0,99	0.29	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Chlorophenyl phenyl ether		UH	2.0	0.30	ug/L		07/10/12 10:24	07/13/12 12:33	1
Chrysene		UH	0,20		ug/L		07/10/12 10:24	07/13/12 12:33	1
Dibenz(a,h)anthracene		UH	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Dibenzofuran		UH	0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[g,h,i]perylene		UH	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
** ** **		UH	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo(a)pyrene Di-n-butyl phthalate		UΗ	0.99	0.66	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,2-Dichlorobenzene		UH	0.99	0.29	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,3-Dichlorobenzene		UH	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
3,3'-Dichlorobenzidine		UH	5.0	0.13	ug/L		07/10/12 10:24	07/13/12 12:33	1
,		UH	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dichlorophenol		UH	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	
Diethyl phthalate		UH	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Indeno[1,2,3-cd]pyrene		UH	0.99	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	1
sophorone		UH	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Methylnaphthalene	0.99	UH	0.99	0.039	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Methylphenol		UH	0.99	0,099	-		07/10/12 10:24	07/13/12 12:33	1
Naphthalene					-		07/10/12 10:24	07/13/12 12:33	
2-Nitroaniline		UH	2,0		ug/L		07/10/12 10:24	07/13/12 12:33	1
3-Nitroaniline		UH	2.0		ug/L		07/10/12 10:24	07/13/12 12:33	-
4-Nitroaniline		UH	2.0		ug/L			07/13/12 12:33	1
Nitrobenzene		UH	0.99	0.040			07/10/12 10:24		
2-Nitrophenol		UH	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Nitrophenol		UH	5,0		ug/L		07/10/12 10:24	07/13/12 12:33	1
Pyrene		UH	0.20	0.099			07/10/12 10:24	07/13/12 12:33	1
Pentachiorophenol		UH	5.0		ug/L		07/10/12 10:24	07/13/12 12:33	1
Phenanthrene		UH	0.20	0.099			07/10/12 10:24	07/13/12 12:33	•
1,2,4-Trichlorobenzene		UH	0.99		ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4,5-Trichlorophenol		UH	5.0		ug/L		07/10/12 10:24	07/13/12 12:33	•
2,4,6-Trichlorophenol		UH	5.0		ug/L		07/10/12 10:24	07/13/12 12:33	1
Phenol	0.99	UH	0.99	0,59	ug/L		07/10/12 10:24	07/13/12 12:33	1
Carbazole	0.89	UH	0.99	0.28	ug/L		07/10/12 10:24	07/13/12 12:33	1

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## **Client Sample Results**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00

Lab Sample ID: 240-12752-4

Matrix: Water

2.0 2.0 2.2 0.99 2.0 0.99  %Recovery 53 61 54 71 64 66 anic Compou	U H U H <i>Qualifier</i>	RL 2.0 2.0 2.0 0.99 2.0 0.99  Limits 28 - 110 10 - 110 27 - 111 37 - 119 22 - 120 10 - 110	MDL 0.79 0.74 0.79 0.79 0.79 0.40	ug/L ug/L ug/L ug/L ug/L	D	Prepared  07/10/12 10:24  07/10/12 10:24  07/10/12 10:24  07/10/12 10:24  07/10/12 10:24  Prepared  07/10/12 10:24  07/10/12 10:24  07/10/12 10:24  07/10/12 10:24  07/10/12 10:24  07/10/12 10:24  07/10/12 10:24	Analyzed  07/13/12 12:33  07/13/12 12:33  07/13/12 12:33  07/13/12 12:33  07/13/12 12:33  Analyzed  07/13/12 12:33  07/13/12 12:33  07/13/12 12:33  07/13/12 12:33  07/13/12 12:33	Dil Fa
2.0 2.2 0.99 2.0 0.99  %Recovery 53 61 54 71 64 66 anic Compou	UH HB UH UH UH	2.0 2.0 0.99 2.0 0.99  Limits 28 - 110 10 - 110 27 - 111 37 - 119 22 - 120 10 - 110	0.74 0.79 0.79 0.79	ug/L ug/L ug/L ug/L		07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 Prepared 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24	07/13/12 12:33 07/13/12 12:33 07/13/12 12:33 07/13/12 12:33 07/13/12 12:33 Analyzed 07/13/12 12:33 07/13/12 12:33 07/13/12 12:33	Dil Fa
2.2 0.99 2.0 0.99 %Recovery 53 61 54 71 64 66 anic Compou	HB UH UH UH Qualifier	2.0 0.99 2.0 0.99 Limits 28 - 110 10 - 110 27 - 111 37 - 119 22 - 120 10 - 110	0.79 0.79 0.79	ug/l. ug/l. ug/l.		07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 Prepared 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24	07/13/12 12:33 07/13/12 12:33 07/13/12 12:33 07/13/12 12:33 Analyzed 07/13/12 12:33 07/13/12 12:33 07/13/12 12:33	Dil Fa
0.99 2.0 0.99 %Recovery 53 61 54 71 64 66 anic Compou	U H U H U H <b>Qualifier</b>	0.99 2.0 0.98  Limits 28 - 110 10 - 110 27 - 111 37 - 119 22 - 120 10 - 110	0.79 0.79	ug/L. ug/L.		07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 Prepared 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24	07/13/12 12:33 07/13/12 12:33 07/13/12 12:33 Analyzed 07/13/12 12:33 07/13/12 12:33 07/13/12 12:33	Dil Fa
2.0 0.99 %Recovery 53 61 54 71 64 66 anic Compou	U H U H <i>Qualifier</i>	2.0 0.98 Limits 28 - 110 10 - 110 27 - 111 37 - 119 22 - 120 10 - 110	0.79	ug/L		07/10/12 10:24 07/10/12 10:24 Prepared 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24	07/13/12 12:33 07/13/12 12:33 Analyzed 07/13/12 12:33 07/13/12 12:33 07/13/12 12:33	Dil Fa
0,99  **Recovery 53 61 54 71 64 66  anic Compou	U H  Qualifier	0.99  Limits  28 - 110 10 - 110 27 - 111 37 - 119 22 - 120 10 - 110		_		07/10/12 10:24  Prepared  07/10/12 10:24  07/10/12 10:24  07/10/12 10:24  07/10/12 10:24	07/13/12 12:33  Analyzed  07/13/12 12:33  07/13/12 12:33  07/13/12 12:33	Dil Fa
%Recovery 53 61 54 71 64 66 anic Compou	Qualifier	Limits  28 - 110  10 - 110  27 - 111  37 - 119  22 - 120  10 - 110	0.40	ug/L		Prepared 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24	Analyzed 07/13/12 12:33 07/13/12 12:33 07/13/12 12:33	Dil Fa
53 61 54 71 64 66 anic Compou Result		28 - 110 10 - 110 27 - 111 37 - 119 22 - 120 10 - 110				07/10/12 10:24 07/10/12 10:24 07/10/12 10:24 07/10/12 10:24	07/13/12 12:33 07/13/12 12:33 07/13/12 12:33	Dil Fa
61 54 71 64 66 anic Compou Result	nds (GC/MS	10 - 110 27 - 111 37 - 119 22 - 120 10 - 110				07/10/12 10:24 07/10/12 10:24 07/10/12 10:24	07/13/12 12:33 07/13/12 12:33	
54 71 64 66 anic Compou Result	nds (GC/MS	27 - 111 37 - 119 22 - 120 10 - 110				07/10/12 10:24 07/10/12 10:24	07/13/12 12:33	:
71 64 66 anic Compou Result	nds (GC/MS	37 - 119 22 - 120 10 - 110				07/10/12 10:24		
64 66 anic Compou Result	nds (GC/MS	22 - 120 10 - 110					07/13/12 12:33	
<i>66</i> anic Compou Result	nds (GC/MS	10 - 110				07/10/12 10:24		
anic Compou Result	nds (GC/MS						07/13/12 12:33	
Result	nds (GC/MS					07/10/12 10:24	07/13/12 12:33	1
		i) - TCLP						
0.0010	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0,0040	Ū	0,0040	0.00034	mg/L		07/03/12 09:12	07/06/12 18:30	•
0.020	U	0.020	0.00030	mg/L		07/03/12 09:12	07/06/12 18:30	
0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 18:30	
0.020	Ú	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:30	-
0.020	U	0.020	0.00010	mg/L		07/03/12 09:12	07/06/12 18:30	-
0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:30	1
0,020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 18:30	1
0.040	U	0.040	0.00075	mg/L		07/03/12 09:12	07/06/12 18:30	1
0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:12	07/06/12 18:30	1
0.0040	Ú	0.0040	0.000040	mg/L		07/03/12 09:12	07/06/12 18:30	1
		0.040	0.0024	mg/L		07/03/12 09:12	07/06/12 18:30	1
		0.020		-		07/03/12 09:12	07/06/12 18:30	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
43		22 - 110				07/03/12 09:12	07/06/12 18:30	1
12		10 - 110				07/03/12 09:12	07/06/12 18:30	1
71		17 - 117				07/03/12 09:12	07/06/12 18:30	1
45		29 - 111				07/03/12 09:12	07/06/12 18:30	1
		10 - 110				07/03/12 09:12	07/06/12 18:30	1
75		40 - 119				07/03/12 09:12	07/06/12 18:30	1
Pesticides (G	C)							
		RL	MDL	Unit	D	Prepared	Anatyzed	Dil Fac
		0.051	0.0098	ug/L		07/02/12 11:57	07/04/12 07:55	1
0.051	U	0.051	0.0099	ug/L		07/02/12 11:57	07/04/12 07:55	1
0.051	U	0.051	0.016	ug/L		07/02/12 11:57	07/04/12 07:55	1
						07/02/12 11:57	07/04/12 07:55	
				-				
				•				
				•				
				-				1
								1
<b>=</b>	0.020 0.020 0.020 0.020 0.020 0.040 0.0040 0.0040 0.0020  %Recovery 43 12 71 45 42 75  Pesticides (G  Result  0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051	12 71 45 42	0.020 U 0.020 0.020 U 0.020 0.020 U 0.020 0.020 U 0.020 0.020 U 0.020 0.020 U 0.020 0.020 U 0.020 0.040 U 0.040 0.040 U 0.040 0.040 U 0.040 0.040 U 0.020  %Recovery Qualitier Limits 43 22 - 110 12 10 - 110 71 17 - 117 46 29 - 111 42 10 - 110 75 40 - 119  Pesticides (GC) Result Qualifier RL 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051 0.051 U 0.051	0.020 U 0.020 0.00030 0.020 U 0.020 0.00080 0.020 U 0.020 0.00027 0.020 U 0.020 0.00010 0.020 U 0.020 0.00027 0.020 U 0.020 0.00080 0.040 U 0.040 0.00080 0.040 U 0.040 0.00040 0.040 U 0.040 0.00040 0.040 U 0.040 0.00035    **Recovery Qualitier Limits	0.020 U	0.020 U 0.020 0.0030 mg/L 0.020 U 0.020 0.00080 mg/L 0.020 U 0.020 0.00027 mg/L 0.020 U 0.020 0.00027 mg/L 0.020 U 0.020 0.00027 mg/L 0.020 U 0.020 0.00027 mg/L 0.020 U 0.020 0.00080 mg/L 0.020 U 0.020 0.00080 mg/L 0.040 U 0.040 0.0075 mg/L 0.0040 U 0.0040 0.00080 mg/L 0.0040 U 0.0040 0.00080 mg/L 0.0040 U 0.0040 0.000040 mg/L 0.0040 U 0.0040 0.00040 mg/L 0.020 U 0.020 0.00035 mg/L  **Recovery Qualifier Limits**  43 22 110 12 10 - 110 71 17 - 117 45 29 - 111 42 10 - 110 75 40 - 119  **Pesticides (GC) Result Qualifier RL MDL Unit D 0.051 U 0.051 0.0098 ug/L 0.051 U 0.051 0.0099 ug/L 0.051 U 0.051 0.0099 ug/L 0.051 U 0.051 0.0064 ug/L 0.0093 J 0.051 0.0064 ug/L 0.0093 J 0.051 0.0064 ug/L 0.0093 J 0.051 0.0064 ug/L 0.0093 J 0.051 0.0064 ug/L 0.0051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0066 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0089 ug/L 0.051 U 0.051 0.0077 ug/L 0.051 U 0.051 0.0071 ug/L 0.051 U 0.051 0.0071 ug/L 0.051 U 0.051 0.0071 ug/L 0.051 U 0.051 0.0071 ug/L	0.020   U   0.020   0.00030   mg/L   07/03/12 09:12	0.020   U   0.020   0.00030   mg/L   07/03/12 09:12   07/06/12 18:30

-11-1

Lab Sample ID: 240-12752-4

Matrix: Water

## Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45

2,4-Dichlorophenylacetic acid

Method: 8081A - Organochlorir Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dii Fa
Endrin	0.051		0.051	0.011	ug/L	<u> </u>	07/02/12 11:57	07/04/12 07:55	
	0.051		0,051	0.011			07/02/12 11:57	07/04/12 07:55	
Endrin aldehyde Endrin ketone	0,051		0,051	0.0080			07/02/12 11:57	07/04/12 07:55	
	0.051		0,051	0.0065			07/02/12 11:57	07/04/12 07:55	
gamma-BHC (Lindane)	0.051		0.051	0.012	-		07/02/12 11:57	07/04/12 07:55	
gamma-Chlordane	0,051		0.051	0.0082	-		07/02/12 11:57	07/04/12 07:55	
Heptachlor	0.051		0,051	0.0072	_		07/02/12 11:57	07/04/12 07:55	
Heptachlor epoxide				0.0072	-		07/02/12 11:57	07/04/12 07:55	
Methoxychlor ·	0.10 2.0		0.10 2.0		-		07/02/12 11:57	07/04/12 07:55	
Toxaphene	2.0	U	2.0	0.33	uy/L		07702712 11.57	07704712 07.00	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dii F
DCB Decachlorobi <b>p</b> hen <b>y</b> l	79		10 - 145				07/02/12 11:57	07/04/12 07:55	
DCB Decachlorobiphenyl	66		10 - 145				07/02/12 11:57	07/04/12 07:65	
Tetrachloro-m-xylene	88		30 - 141				07/02/12 11:57	07/04/12 07:65	
Tetrachloro-m-xylene	82		30 - 141				07/02/12 11:57	07/04/12 07:55	
Method: 8081A - Organochlorir	na Dantinidaa (C	C) TOLD							
Metriog: 6061A - Organocinom Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		07/03/12 09:15	07/05/12 23:21	
Endrin	0.0012	U	0.0012	0.000026	mg/L		07/03/12 09:15	07/05/12 23:21	
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		07/03/12 09:15	07/05/12 23:21	
deptachlor epoxide	0.0012	ΰ	0.0012	0.000017	mg/L		07/03/12 09:15	07/05/12 23:21	
gamma-BHC (Lindane)	0,0012	U	0.0012	0.000015	mg/L		07/03/12 09:15	07/05/12 23:21	
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/05/12 23:21	
Toxaphene	0.048		0.048	0.00077	mg/L		07/03/12 09:15	07/05/12 23:21	
Currence	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
Surrogate Tetrophics of surene	71	Quanner	46 - 122				07/03/12 09:15	07/05/12 23:21	
Tetrachloro-m-xylene	68		46 - 122				07/03/12 09:15	07/05/12 23:21	
Tetrachloro-m-xylene	90		34 - 141				07/03/12 09:16	07/05/12 23:21	
DCB Decachlorobiphenyl DCB Decachlorobiphenyl	88		34 - 141				07/03/12 09:15	07/05/12 23:21	
Method: 8082 - Polychlorinated		Re) hy Gas		าทั้ง					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Aroclor-1018	0.51	U	0.51	0.17	ug/L		07/02/12 11:53	07/03/12 17:25	
Aroclor-1221	0.51	U	0.51	0.13	ug/L		07/02/12 11:53	07/03/12 17:25	
Aroclor-1232	0.51	U	0.51	0.16	ug/L		07/02/12 11:53	07/03/12 17:25	
Aroclor-1242	0.51	Ü	0.51	0.22	ug/L		07/02/12 11:53	07/03/12 17:25	
Aroclor-1248	0.51	U	0.51	0.10	ug/L		07/02/12 11:53	07/03/12 17:25	
Aroclor-1254	0.51	U	0.51	0.16	ug/L		07/02/12 11:53	07/03/12 17:25	
Arodor-1260	0.51	U	0.51	0.17	ug/L		07/02/12 11:53	07/03/12 17:25	
0	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
Surrogate		Quanner	,				07/02/12 11:53	07/03/12 17:25	
Tetrachloro-m-xylene DCB Decachlorobiphenyl	74 62		23 ₋ 136 10 - 130				07/02/12 11:53	07/03/12 17:25	
505 Socacilloroupheny	02								
Method: 8151A - Herbicides (G						_			-» -
Analyte		Qualifier	RL	MDL	40-00004	D	Prepared	Analyzed	Dil F
2,4-D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 20:06	
-,-, 0									
Silvex (2,4,5-TP)	0.00050	U	0,00050	0.00010	mg/L		07/03/12 09:16	07/07/12 20:06	

Dil Fac

Analyzed

07/07/12 20:06

Prepared

07/03/12 09:18

Limits

37 - 116

%Recovery Qualifier

52

## Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45

Analyte

Arsenic

Barlum

Lead

Cadmium

Chromlum

Lab Sample ID: 240-12752-4

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
2,4-Dichlorophenylacetic acid	58		37 - 116				07/03/12 09:18	07/07/12 20:06	
Method: 8330 (Modified) - Org	ganic Compounds	by UV/HPL	C - Dissolved						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Nitroguanidine	20	U	20	2.4	ug/L		07/09/12 14:50	07/10/12 10:57	
Method: 8330/8330A - Nitroar	omatics & Nitrami	ines: Explo	sives (8330/A)						
Analyte		Qualifier	RL_	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Nitroglycerin	0.67	U	0.67	0.34	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
PETN	0.67	U	0.67	0.31	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
2-Amino-4,6-dinitrotoluene	0,21	U	0.21	0.018	ug/L		07/03/12 06:00	07/08/12 19:24	1.0
-Amino-2,6-dinitrotoluene	0.10	Ü	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
i,3-Dinitrobenzene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/08/12 19:24	1.0
,4-Dinitrotoluene	0.10	U	0,10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
,6-Dinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
IMX	0.10	U	0.10	0.037	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
litrobenzene	0.10	U	0.10	0.052	ug/L		07/03/12 08:00	07/06/12 19:24	1.0
-Nitrotoluene	0.52	Ü	0.52	0.091	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
-Nitrotoluene	0.081	J	0.52	0.059	ug/L		07/03/12 08:00	07/06/12 19:24	1.0
-Nitrotoluene	0.67	U	0.67	0,091	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
DX.	0.10	U	0.10	0.037	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
etryl	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
,3,5-Trinitrobenzene	0.10	U	0.10	0.031	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
,4,6-Trinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.0
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fe
3,4-Dinitrotoluene	101		79 - 111				07/03/12 06:00	07/06/12 19:24	1.0
Method: 6010B - Metals (ICP)	- Total Recoverat	ole							
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
rsenic	8.3	J	10	3.2	ug/L		07/10/12 08:18	07/11/12 13:31	
Chromlum	3.7	J	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:31	
Cobalt	7.0	U	7.0	1.7	ug/L		07/10/12 08:18	07/11/12 13:31	
ead	3.0	U	3.0	1.9	ug/L		07/10/12 08:18	07/11/12 13:31	
Selenium	5.0	U	5.0	4.1	ug/L		07/10/12 08:18	07/11/12 13:31	
Silver	5.0	U	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:31	
/anadium	1.9	J	7.0	0.64	ug/L		07/10/12 08:18	07/11/12 13:31	
3arium	56	JB	200	0.67	ug/L		07/10/12 08:18	07/11/12 13:31	
Calcium	43000	В	5000	130	ug/L		07/10/12 08:18	07/11/12 13:31	
Copper	25	U	25	4.5	ug/L		07/10/12 08:18	07/11/12 13:31	
//agnesium	10000	В	5000	34	ug/L		07/10/12 08:18	07/11/12 13:31	
- Manganese	110	В	15	0.41	ug/L		07/10/12 08:18	07/11/12 13:31	
lickel	3.2	J	40	3.2	ug/L		07/10/12 08:18	07/11/12 13:31	
Potassium	19000	В	5000	72	ug/L		07/10/12 08:18	07/11/12 13:31	
Method: 6010B - Metals (ICP)	- TCLP								
nethou, 00 10D - Metals (IOF)	- ICLF	Qualifier	ы		Linit	_	Propared	Analyzed	Dil E

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Analyzed

07/05/12 21:03

07/05/12 21:03

07/05/12 21:03

07/05/12 21:03

07/05/12 21:03

Prepared

07/03/12 10:01

07/03/12 10:01

07/03/12 10:01

07/03/12 10:01

07/03/12 10:01

Dil Fac

1

1

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RL

0.50

0.10

0.50

0.50

10

MDL Unit

0.0032 mg/L

0.00067 mg/L

0,00066 mg/L

0.0022 mg/L

0.0019 mg/L

Result Qualifier

0.0054 J

0.052 JB

0.10 U

0.50 U

0.0029 J

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00

Lab Sample ID: 240-12752-4

Matrix: Water

Method: 6010B - Metals (ICP) - TCLP	(Continue	d)							
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dll Fac
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 21:03	1
Silver	0.50	Ü	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 21:03	1
Method: 6020 - Metals (ICP/MS) - Tot	al Recover	rable							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	580		50	19	ug/L		07/10/12 08:18	07/11/12 13:26	1
Antimony	2.3		2.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:26	1
Beryllium	1,0	U	1.0	0.20	ug/L		07/10/12 08:18	07/11/12 13:26	1
Cadmium	1.0	Ü	1.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:28	1
Iron	1300	^	100	26	ug/L		07/10/12 08:18	07/11/12 13:26	1
Sodium	28000	В	1000	6.9	ug/L		07/10/12 08:18	07/11/12 13:26	1
Thaillum	0.58	JB	2.0	0.14	ug/L		07/10/12 08:18	07/11/12 13:26	1
Zinc	11	JB	20	2.3	ug/L		07/10/12 08:18	07/11/12 13:26	1
Method: 7470A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0,20	V	0,20	0.12	ug/L		06/29/12 15:10	07/03/12 13:40	1
Method: 7470A - Mercury (CVAA) - T	CLP								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	Ū	0,0020	0.00012	mg/L		07/03/12 14:30	07/05/12 14:02	1
General Chemistry									
Analyte	Result	Qualifler	RL	MDL	Unit	_ D	Prepared	Analyzed	Dli Fac
Flashpoint	>180	-	1,00	1.00	Degrees F			07/02/12 11:30	1
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		07/02/12 09:10	07/02/12 11:06	1
Sulfide	3.0	U	3.0	0.94	mg/L		07/03/12 07:56	07/03/12 13:48	1
μ̈́H	8.39		0,100	0.100	รบ			06/28/12 16:18	1
Nitrocellulose	2.0		2.0	0.48	mg/L		07/11/12 06:00	07/11/12 13:05	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
		TOL	12DCE	BFB	DBFM			
Lab Sample ID	Client Sample ID	(87-125)	(58-123)	(52-136)	(37-132)			
240-12752-3	FWG-IDW-SBCOMP3-SO	112	96	121	89			
LCS 240-49421/5	Lab Control Sample	99	97	94	95			
MB 240-49421/6	Method Blank	98	95	91	91			

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Prep Type: Total/NA Matrix: Solid

			ery (Acceptance			
		12DCE	TOL	BF8	DBFM	
Lab Sample ID	Client Sample ID	(80-121)	(90-115)	(70-124)	(84-128)	
LCS 240-50127/12	Lab Control Sample	109	107	95	116	

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB ≈ 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

Prep Type: TCLP Matrix: Solid

	Percent Su						
		12DCE	BFB	TOL	DBFM		
Lab Sample ID	Client Sample ID	(80-121)	(70-124)	(90-115)	(84-128)		
240-12752-3	FWG-IDW-SBCOMP3-SO	104	94	107	117		
LB 240-49973/1-A MB	Method Blank	102	97	106	116		

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL ≈ Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

Prep Type: Total/NA Matrix: Water

		Percent Surrogate Recovery (Acceptance Limits)							
		TOL	12DCE	BFB	DBFM				
Lab Sample ID	Client Sample ID	(74-115)	(63-129)	(88-117)	(75-121)				
240-12752-1	TRIP BLANK	99	93	95	100				
240-12752-4	FWG-IDW-TANK3-GW	100	95	96	100				
LCS 240-50324/4	Lab Control Sample	104	96	103	99				
MB 240-50324/5	Method Blank	99	90	96	96				
Surrogate Legend									

TOL = Toluene-d8 (Surr)

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

12DCE = 1,2-Dichloroethane-d4 (Surr) BFB = 4-Bromofluorobenzene (Surr) DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

			overy (Acceptance Limits)			
		12DCE	TOL	BFB	DBFM	
Lab Sample ID	Client Sample IO	(80-121)	(90-115)	(70-124)	(84-128)	
LCS 240-49B14/10	Lab Control Sample	110	107	93	119	

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzena (Surr)

DBFM = Dibromofluoromethane (Surr)

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)						
		12DCE	BF8	TOL	DBFM			
Lab Sample ID	Client Sample ID	(80-121)	(70-124)	(90-115)	(84-128)			
240-12752-4	FWG-IDW-TANK3-GW	108	91	108	110			
240-12752-4 MS	FWG-IDW-TANK3-GW	113	98	108	116			
240-12752-4 MSD	FWG-IDW-TANK3-GW	107	97	109	11B			
LB 240-49660/1-A MB	Method Blank	107	92	105	113			

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits							
		FBP	2FP	NBZ	TPH	TBP	PHL			
Lab Sample ID	Client Sample ID	(34-110)	(26-110)	(24-112)	(41-119)	(10-118)	(28-110)			
240-12752-3	FWG-IDW-SBCOMP3-SO	53	69	53	75	46	71			
LCS 240-49770/16-A	Lab Control Sample	55	73	61	79	50	77			
MB 240-49770/15-A	Method Blank	46	60	51	В3	39	64			

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluoropheno! (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

PHL = Phenol-d5 (Surr)

3

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Percent Surrogate Recovery (Acceptance Limits) FBP 2FP TBP NBZ PHL TPH (10-110)Lab Sample ID Client Sample ID (22-110)(10-110)(17-117)(29-111)(40-119)LCS 240-49701/5-A Lab Control Sample 48 51 71 52 42 74 MB 240-49701/4-A Method Blank 47 52 59 52 46

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL ≈ Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: TCLP

Γ		Percent Surrogate Recovery (Acceptance Limits)									
		FBP	2FP	TBP	NBZ	PHL	TPH				
Lab Sample ID	Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)				
240-12752-3	FWG-IDW-SBCOMP3-SO	46	13	68	46	46	71				

#### Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		FBP	2FP	NBZ	TPH	TBP	PHL		
Lab Sample ID	Cilent Sample ID	(28-110)	(10-110)	(27-111)	(37-119)	(22-120)	(10-110)		
240-12752-4	FWG-IDW-TANK3-GW	54	64	51	72	67	67		
240-12752-4 - RE	FWG-IDW-TANK3-GW	53	61	54	71	64	66		
LCS 240-49608/14-A	Lab Control Sample	57	65	56	82	79	71		
LCS 240-50344/14-A	Lab Control Sample	73	88	75	89	83	91		
MB 240-49608/13-A	Method Blank	14 X	17	13 X	19 X	16 X	18		
MB 240-50344/13-A	Method Blank	69	79	68	66	71	81		

#### Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

TBP = 2,4,6-Tribromopheno! (Surr)

PHL = Pheno!-d5 (Surr)

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Project/Site: RVAAP (OH) - IDW

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

_		Percent Surrogate Recovery (Acceptance Limits)							
		2FP	PHL	FBP	TBP	NBZ	TPH		
Lab Sample ID	Cilent Sample ID	(10-110)	(10-110)	(22-110)	(17-117)	(29-111)	(40-119)		
LCS 240-49703/16-A	Lab Control Sample	23	62	56	97	60	95		
MB 240-49703/15-A	Method Blank	31	56	49	77	51	81		

#### Surrogate Legend

2FP = 2-Fluorophenol (Surr)

PHL = Phenof-d5 (Surr)

FBP = 2-Fluorobiphenyl (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

_		Percent Surrogate Recovery (Acceptance Limits)									
	FBP	2FP	TBP	NBZ	PHL	TPH					
Lab Sample ID Client Sample ID	(22-110)	(10-110)	(17-117)	(29-111)	(10-110)	(40-119)	No. 100 100 100 100 100 100 100 100 100 10				
240-12752-4 FWG-IDW-TANK3-GW	43	12	71	45	42	75					

#### Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

#### Method: 8081A - Organochlorine Pesticides (GC)

Prep Type: Total/NA Matrix: Solid

				Percent Su	rrogate Rec
		DCB1	DCB2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(32-175)	(32-175)	(24-150)	(24-150)
240-12752-3	FWG-IDW-SBCOMP3-SO	97	110	95	91
LCS 240-49758/11-A	Lab Control Sample	98	82	110	113
MB 240-49756/10-A	Method Blank		93	104	180 X

#### Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

## Method: 8081A - Organochlorine Pesticides (GC)

Prep Type: TCLP Matrix: Solid

				Percent Su	rrogate Reco	overy (Acceptance Limits)	
		TCX1	TCX2	DCB1	DCB2		
Lab Sample ID	Citent Sample ID	(46-122)	(46-122)	(34-141)	(34-141)		
240-12752-3	FWG-IDW-SBCOMP3-SO	77	74	102	100		

#### Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

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Method: 8081A - Organochlorine Pesticides (GC)

Prep Type: Total/NA Matrix: Water

		Percent Surrogate Recovery (Acceptance Limits)					
		DCB1	DCB2	TCX1	TCX2		
Lab Sample ID	Client Sample ID	(10-145)	(10-145)	(30-141)	(30-141)		
240-12752-4	FWG-IDW-TANK3-GW	79	66	88	82		
LCS 240-49B15/3-A	Lab Control Sample	56	4B	96	90		
MB 240-49615/2-A	Method Blank	94	86	83	76		
Surrogate Legend							

TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Prep Type: Total/NA Matrix: Water

DCB1 DCB2 TCX1 TCX2 Lab Sample ID Client Sample ID (34-141) (34-141) (46-122) (46-122)
Clab Collings ID College Collings ID College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College C
LCS 240-49705/8-A Lab Control Sample 89 93 70 65
MB 240-49705/7-A Method Blank 93 92 65 61

DCB = DCB Decachforobiphenyl TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Prep Type: TCLP Matrix: Water

				Percent Sur	rogate Reco	overy (Acceptance Limits)
		TCX1	TCX2	DCB1	DCB2	
Lab Sample ID	Client Sample ID	(46-122)	(46-122)	(34-141)	(34-141)	
240-12752-4	FWG-IDW-TANK3-GW	71	68	90	88	

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

#### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Prep Type: Total/NA Matrix: Solid

		Percent Surrogate Recovery (Acceptance Limits)				
		TCX1	DCB1			
Lab Sample ID	Client Sample ID	(29-151)	(14-163)			
240-12752-3	FWG-IDW-SBCOMP3-SO	60	58			
LCS 240-49755/20-A	Lab Control Semple	62	67			
MB 240-49755/19-A	Method Blank	69	66			

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

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(1000) (1000)

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		TCX1	DCB1	
Lab Sample ID	Client Sample ID	(23-136)	(10-130)	
240-12752-4	FWG-IDW-TANK3-GW	74	62	
LCS 240-49612/12-A	Lab Control Sample	70	71	
MB 240-49612/11-A	Method Blank	72	81	
Surrogate Legend				
TCX = Tetrachloro-m-xy	lene			100 100 100 100 100 100 100 100 100 100
DCB = DCB Decachtoro	biphenyl			

Method: 8151A - Herbicides (GC)

Matrix: Solid Prep Type: TCLP

				Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID 240-12752-3	Cilent Sample ID FWG-IDW-SBCOMP3-SO	DCPA1 (37-116) 53	DCPA2 (37-116) 63	
Surrogate Legend DCPA = 2,4-Dichloroph	enylacetic ecid			

Method: 8151A - Herbicides (GC)

Matrix: Water Prep Type: Total/NA

_		Percent Surrogate Recovery (Acceptance Limits)					
		DCPA1	DCPA2				
Lab Sample ID	Client Sample ID	(37-116)	(37-116)				
LCS 240-49707/8-A	Lab Control Sample	55	66				
MB 240-49707/7-A	Method Blank	61	57				
Surrogate Legend							
DCPA = 2,4-Dichloroph	nenylacetic acid			and the control of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of			

Method: 8151A - Herbicides (GC)

Matrix: Water Prep Type: TCLP

				Percent Surrogate Recovery (Acceptance Limits)
		DCPA1	DCPA2	
Lab Sample ID	Client Sample ID	(37-116)	(37-116)	
240-12752-4	FWG-IDW-TANK3-GW	52	58	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
Surronata Lanand				

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Matrix: Water Prep Type: Total

			Percent Surrogate Recovery (Acceptance Limits)
		DNT	
Lab Sample ID	Client Sample ID	(79-111)	
240-12752-4	FWG-IDW-TANK3-GW	101	
G2G030000016B	Method Blank	101	
G2G030000016C	Lab Control Sample	105	
Surrogate Legend			

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## **Surrogate Summary**

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

DNT = 3,4-Dinitrotoluene

Method: 8330B	<ul> <li>Nitroaromatics 8</li> </ul>	Nitramines:	Explosives	(8330B)

Prep Type: Total Matrix: Solid

			Percent Surrogate Recovery (Acceptance Limits)
		DNT	
Lab Sample ID	Client Sample ID	(75-115)	
240-12752-3	FWG-IDW-SBCOMP3-SO	99	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	101	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	101	
G2G090000108B	Method Blank	102	
G2G090000108C	Lab Control Sample	100	
Surrogate Legend			
DNT ≈ 3.4-Dinitrotoluer	16		

# **QC Sample Results**

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-49421/ Matrix: Solid	<b>16</b>						Client Sa	ample ID: Metho Prep Type: T	
Analysis Batch: 49421									
		MB							
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Díl Fac
1,1,1-Trichloroethane	5,0	U	5.0	0.56	ug/Kg			06/29/12 13:33	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0		ug/Kg			06/29/12 13:33	1
1,1,2-Trichloroethane	5.0		5.0		ug/Kg			06/29/12 13:33	1
1,1-Dichloroethane	5.0		5.0		ug/Kg			06/29/12 13:33	1
1,1-Dichloroethene	5.0		5.0		ug/Kg			06/29/12 13:33	1
1,2-Dichloroethane	5.0		5.0		ug/Kg			06/29/12 13:33	1
1,2-Dichloroethene, Total	10	•	10	0.77				06/29/12 13:33	1
1,2-Dichloropropane	5.0	-	5.0		ug/Kg			06/29/12 13:33	1
2-Butanone (MEK)	20		20		ug/Kg			06/29/12 13:33	1
2-Hexanone	1.06		20		ug/Kg			06/29/12 13:33	1
4-Methyl-2-pentanone (MIBK)	20	Ų	20		ug/Kg			06/29/12 13:33	1
Acetone	25.2		20		ug/Kg			06/29/12 13:33	1
Benzene	5.0		5.0		ug/Kg			06/29/12 13:33	1
Bromoform	5.0	Ų	5.0		ug/Kg			06/29/12 13:33	1
Bromomethane	5.0	Ų	5.0		ug/Kg			06/29/12 13:33	1
Carbon disulfide	3.36		5.0		ug/Kg			06/29/12 13:33	1
Carbon tetrachloride	5.0		5,0	0.37				06/29/12 13:33	1
Chlorobenzene	5,0	U	5.0		ug/Kg			06/29/12 13:33	1
Chloromethane	5.0	U	5,0	0.41	ug/Kg			06/29/12 13:33	1
cis-1,2-Dichloroethene	5.0	U	5.0		ug/Kg			06/29/12 13:33	1
cis-1,3-Dichloropropene	5.0		5.0		ug/Kg			06/29/12 13:33	1
Dibromochloromethane	5,0		5.0		ug/Kg			06/29/12 13:33	1
Bromodichloromethane	5.0		5.0		ug/Kg			06/29/12 13:33	1
Ethylbenzene	5.0		5,0		ug/Kg			08/29/12 13:33	1
Methylene Chloride	1.76		5.0		ug/Kg			06/29/12 13:33	1
m-Xylene & p-Xylene	10	U	10		ug/Kg			08/29/12 13:33	1
o-Xylene	5,0	U	5.0		ug/Kg			06/29/12 13:33	1
Styrene	0.192	J	5.0		ug/Kg			06/29/12 13:33	1
Tetrachloroethene	5.0		5.0		ug/Kg			06/29/12 13:33	1
Toluene	5.0	U	5.0		ug/Kg			06/29/12 13:33	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.41	ug/Kg			06/29/12 13:33	1
trans-1,3-Dichtoropropene	5.0		5.0		ug/Kg			06/29/12 13:33	1
Trichloroethene	5.0	U	5.0		ug/Kg			06/29/12 13:33	1
Vinyl chloride	5.0	U	5,0		ug/Kg			06/29/12 13:33	1
Xylenes, Total	10	U	10		ug/Kg			06/29/12 13:33	1
Chloroform	5.0		5.0		ug/Kg			06/29/12 13:33	1
Bromochloromethane	5.0		5.0		ug/Kg			06/29/12 13:33	1
1,2-Dibromoethane	5,0	U	5.0		ug/Kg			06/29/12 13:33	1
Chloroethane	5.0	U	5.0	0.86	ug/Kg			06/29/12 13:33	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			_	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		58 - 123			_		06/29/12 13:33	1
Toluene-d8 (Surr)	98		67 - 125					06/29/12 13:33	1
4-Bromofluorobenzene (Surr)	91		52 ₋ 136					06/29/12 13:33	1
Dibromofluoromethane (Surr)	91		37 - 132					06/29/12 13:33	1

# Client: Environmental Quality Mgt., Inc.

# Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49421/5	Client Sample ID: Lab Control Sample
Matrix: Solid	Prep Type: Total/NA

Analysis Batch: 49421						-
	Spike	LCS	LCS			%Rec.
Analyte	Added	Result	Qualifier Unit	D %	Rec	Limits
1,1,1-Trichloroethane	50.0	50.7	ug/Kg		101	77 - 128
1,1,2,2-Tetrachloroethane	50.0	53.6	ug/Kg		107	77 - 123
1,1,2-Trichloroethane	50,0	55.3	ug/Kg		111	83 - 112
1,1-Dichloroethane	50.0	56.2	ug/Kg		112	76 - 115
1,1-Dichtoroethene	50.0	59.6	ug/Kg		119	75 ₋ 135
1,2-Dichloroethane	50.0	54.9	ug/Kg		110	72 - 120
1,2-Dichloroethene, Total	100	108	ug/Kg		108	78 - 115
1,2-Dichloropropane	50.0	55.1	ug/Kg		110	87 - 113
2-Bulanone (MEK)	100	105	ug/Kg		105	52 - 131
2-Hexanone	100	106	ug/Kg		106	64 - 136
4-Methyl-2-pentanone (MIBK)	100	118	ug/Kg		118	67 - 135
Acetone	100	128	ug/Kg		128	41 - 137
Benzene	50.0	53.8	ug/Kg		108	79 - 112
Bromoform	50.0	46.8	ug/Kg		94	62 - 133
Bromomethane	50.0	49.0	ug/Kg		98	42 - 136
Carbon disulfide	50.0	45.8	ug/Kg		92	62 - 146
Carbon tetrachloride	50.0	51.2	ug/Kg		102	71 - 129
Chlorobenzene	50.0	52.5	ug/Kg		105	78 ₋ 110
Chloromethane	50.0	53.0	ug/Kg		106	50 - 110
cis-1,2-Dichloroetheле	50.0	53.0	ug/Kg		106	76 - 113
cis-1,3-Dichloropropene	50,0	46.9	ug/Kg		94	74 - 128
Dibromochloromethane	50.0	48.4	ug/Kg		97	72 - 127
Bromodichloromethane	50,0	49.4	ug/Kg		99	84 - 122
Ethylbenzene	50.0	53.8	ug/Kg		108	79 - 117
Methylene Chloride	50,0	53.7	ug/Kg		107	75 - 118
m-Xylene & p-Xylene	100	108	ug/Kg		106	80 - 117
o-Xylene	50.0	55.3	ug/Kg		111	80 - 120
Styrene	50.0	52.8	ид/Кд		106	87 ₋ 117
Tetrachloroethene	50.0	54.2	ug/Kg		108	79 - 114
Toluene	50.0	50.8	ug/Kg		102	75 - 111
trans-1,2-Dichloroethene	50.0	55.3	ug/Kg		111	78 - 117
trans-1,3-Dichloropropene	50.0	50.6	ug/Kg		101	73 - 131
Trichloroethene	50.0	55.2	ug/Kg		110	79 - 113
Vinyl chloride	50.0	53,1	ug/Kg		106	57 - 114
Xylenes, Total	150	161	ug/Kg		108	80 - 118
Chloroform	50.0	54.2	ug/Kg		108	77 - 114
Bromochloromethane	50.0	53.0	ug/Kg		106	79 - 111
1,2-Dibromoethane	50.0	51.4	ug/Kg		103	83 ₋ 117
Chloroethane	50.0	51.1	ug/Kg		102	58.117

	LCS L	CS	
Surrogate	%Recovery Q	ualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		58 - 123
Toluene-d8 (Surr)	99		67 - 125
4-Bromofluorobenzene (Surr)	94		52 - 136
Dibromofluoromethane (Surr)	95		37 - 132

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49814/10	Client Sample ID: Lab Control Sample
Matrix: Water	Prep Type: Total/NA

Analysis Batch: 49814

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	1,00	1.06		mg/L		106	71 - 133	
1,2-Dichloroethane	1.00	0.970		mg/L		97	81 - 114	
2-Butanone (MEK)	2.00	1.91		mg/L		95	49 - 120	
Benzene	1,00	0,955		mg/L		96	84 - 120	•
Carbon tetrachloride	1.00	1.09		mg/L		109	54 - 122	
Chlorobenzene	1.00	0.950		mg/L		95	86 - 111	
Tetrachloroethene	1,00	1.04		mg/L		104	79 - 134	
Trichloroethene	1.00	1.05		mg/L		105	78 - 130	
Vinyl chloride	1.00	0.955		mg/L		96	56 - 111	
Chloroform	1.00	0,960		mg/L		86	87 - 123	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		80 - 121
Toluene-d8 (\$un)	107		90 - 115
4-Bromofluorobenzene (Surr)	93		70 - 124
Dibromofluoromethane (Surr)	119		84 - 128

Lab Sample ID: LCS 240-50127/12

Matrix: Solid

Analysis Batch: 50127

Client Sample ID: Lab Control Sample Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifler	Unit	D	%Rec	Limits
1,1-Dichloroethene	1,00	1.04		mg/L		104	71 - 133
1,2-Dichloroethane	1,00	0,955		mg/L		96	81 - 114
2-Butanone (MEK)	2.00	1.53		mg/L		76	49.120
Benzene	1,00	0,920		mg/L		92	84 - 120
Carbon tetrachloride	1.00	1.06		mg/L		108	54 - 122
Chlorobenzene	1.00	0.940		mg/L		94	86 - 111
Tetrachloroethene	1.00	1.06		mg/L		106	79 - 134
Trichloroethene	1.00	1.05		mg/L		105	78 - 130
Vinyl chloride	1.00	0.970		mg/L		97	56 - 111
Chloroform	1.00	0.935		mg/L		94	87 - 123
:							

LCS LCS

Surrogate	%Recovery	Qualifler	Limits
1,2-Dichloroethane-d4 (Surr)	109		80 - 121
Toluene-d8 (\$urr)	107		90 - 115
4-Bromofluorobenzene (Surr)	95		70 ₋ 124
Dibromofluoromethane (Surr)	116		84 - 128

Lab Sample ID: MB 240-50324/5

Matrix: Water

Analysis Batch: 50324

Client Sample ID: Method Blank Prep Type: Total/NA

МВ	MB							
Analyte Result	Qualifier	RL	MDL (	Unit	D	Prepared	Analyzed	Dil Faç
1,1,1-Trichloroethane 1.0	U	1.0	0.22	ug/L			07/10/12 10:57	1
1,1,2,2-Tetrachloroethane 1.0	U	1.0	0.18 ເ	ug/L			07/10/12 10:57	1
1,1,2-Trichloroethane 1.0	U	1.0	0.27 u	ug/L			07/10/12 10:57	1
1,1-Dichloroethane 1.0	Ú	1.0	0.15 ι	ug/L			07/10/12 10:57	1
1,1-Dichloroethene 1.0	U	1.0	0.19 ι	ug/L			07/10/12 10:57	1

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-50324/5

Matrix: Water

Analysis Batch: 50324

MB MB

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed DII Fac

	MB	MD							
Analyte	Result	Qualifler	F	L MDL	. Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	1.0	U	1	0.22	ug/L			07/10/12 10:57	1
1,2-Dichtoroethene, Total	2.0	U	2	0 0.34	ug/L			07/10/12 10:57	1
1,2-Dichloropropane	1.0	U	1	.0 0.18	ug/L			07/10/12 10:57	1
2-Butanone (MEK)	10	U	•	0 0.57	ug/L			07/10/12 10:57	1
2-Hexanone	10	U		0 0.41	ug/L			07/10/12 10:57	1
4-Methyl-2-pentanone (MIBK)	10	υ		0 0.32	ug/L			07/10/12 10:57	1
Acetone	10	U	•	0 1.1	ug/L			07/10/12 10:57	1
Benzene	1.0	U	1	.0 0.13	ug/L			07/10/12 10:57	1
Bromoform	1.0	U	1	.0 0.64	l ug/L			07/10/12 10:57	1
Bromomethane	1.0	U	1	.0 0.41	ug/L			07/10/12 10:57	1
Carbon disulfide	1.0	Ü	1	.0 0.13	ug/L			07/10/12 10:57	1
Carbon tetrachloride	1.0	U	1	.0 0.13	ug/L			07/10/12 10:57	1
Chlorobenzene	1.0	U	1	0.15	ug/L			07/10/12 10:57	1
Chloromethane	1.0	Ú	1	0.30	ug/L			07/10/12 10:57	1
cis-1,2-Dichloroethene	1.0	U	1	.0 0.17	ug/L			07/10/12 10:57	1
cis-1,3-Dichloropropene	1.0	υ	1	0 0.14	ug/L			07/10/12 10:57	1
Dibromochloromethane	1.0	υ	1	0 0.18	ug/L		•	07/10/12 10:57	1
Bromodichloromethane	1.0	υ	1	0.15	ug/L			07/10/12 10:57	1
Ethylbenzene	1.0	U	1	.0 0.17	ug/L			07/10/12 10:57	1
Methylene Chloride	1.0	υ	1	0 0.33	ug/L			07/10/12 10:57	1
m-Xylene & p-Xylene	2.0	U	2	0 0.24	ug/L			07/10/12 10:57	1
o-Xylene	1.0	U	1	0 0.14	ug/L			07/10/12 10:57	1
Styrene	1.0	U	1	0 0.11	ug/L			07/10/12 10:57	1
Tetrachloroethene	1.0	U	1	0 0.29	ug/L			07/10/12 10:57	1
Toluene	1.0	U	r 1	0 0.13	ug/L			07/10/12 10:57	1
trans-1,2-Dichloroethene	1.0	U	1	0 0.19	ug/L			07/10/12 10:57	1
trans-1,3-Dichloropropene	1.0	U	1	0 0.19	ug/L			07/10/12 10:57	1
Trichloroethene	1.0	U	1	0 0.17	ug/L			07/10/12 10:57	1
Vinyl chloride	1.0	U	1	0 0.22	ug/L			07/10/12 10:57	1
Xylenes, Total	2.0	U	2	0 0,28	ug/L			07/10/12 10:57	1
Chloroform	1.0	U .	1	0 0.16	ug/L			07/10/12 10:57	1
Bromochloromethane	1.0	U	1	0 0.29	ug/L			07/10/12 10:57	1
1,2-Dibromoethane	1.0	U	1	0 0.24	ug/L			07/10/12 10:57	1
Chloroethane	1.0	U	1	0 0.29	ug/L			07/10/12 10:57	1

	MB	MB					
Surrogate	%Recovery	Qualifier	Limits	ı	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		63 - 129			07/10/12 10:57	1
Toluene-d8 (Surr)	99		74 - 115			07/10/12 10:57	1
4-Bromofluorobenzene (Surr)	96		66 _ 117			07/10/12 10:57	1
Dibromofluoromethane (Surr)	96		75 - 121			07/10/12 10:57	1

Lab Sample ID: LCS 240-50324/4

Matrix: Water

Analysis Batch: 50324

7. maryono Eutom 00021	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1-Trichloroethane	10.0	9.85		ug/L		99	74 - 118	
1,1,2,2-Tetrachloroethane	10.0	9.37		ug/L		94	68.118	
1,1,2-Trichtoroethane	10.0	10.4		ug/L		104	80 - 112	

TestAmerica Canton 7/16/2012

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

# Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-503 Matrix: Water	324/4						Client	Sample	D: Lab Control San Prep Type: Total
Analysis Batch: 50324									
			Spike		LCS		_		%Rec.
Analyte			Added		Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethane			10.0	10.0		ug/L		100	82 - 115
1,1-Dichloroethene			10.0	11.0		ug/L		110	78 - 131
1,2-Dichloroethane			10.0	9.62		ug/L		96	71 - 127
1,2-Dichloroethene, Total			20,0	20.3		ug/L		101	82 - 114
1,2-Dichloropropane			10.0	10.1		ug/L		101	81 - 115
2-Butanone (MEK)		•	20.0	17.8		ug/L		89	60 - 126
2-Hexanone			20.0	18.8		ug/L		94	55 - 133
4-Methyl-2-pentanone (MIBK)			20.0	17.9		ug/L		90	63 - 128
Acetone			20.0	20.5		ug/L		103	43 - 138
Benzene			10.0	9,92		ug/L		99	83 - 112
Bromoform			10.0	10.9		ug/L		109	40 - 131
Bromomethane			10.0	9.21		ug/L		92	11 - 185
Carbon disulfide			10.0	10.3		ug/L		103	62 - 142
Carbon tetrachloride			10.0	10.5		ug/L		105	66 - 126
Chlorobenzene			10.0	9.78		ug/L		98	85 - 110
Chloromethane			10.0	9.04		ug/L		90	44 - 126
cis-1,2-Dichtoroethene			10.0	9.58		ug/L		96	80 - 113
sis-1,3-Dichtoropropene			10.0	9.65		ug/L		97	61 - 115
Dibromochloromethane			10.0	10.7		ug/L		107	64 - 119
Bromodichloromethane			10.0	10,3		ug/L		103	72 - 121
Ethylbenzene			10.0	9.93		ug/L		99	83 - 112
Methylene Chloride			10.0	10.6		ug/L		106	66 - 131
m-Xylene & p-Xylene			20.0	20.0		ug/L		100	83 _ 113
o-Xylene			10.0	9.96		ug/L		100	83 - 113
Styrene			10.0	10.2		ug/L		102	79 - 114
Tetrachloroethene			10.0	10.1		ug/L		101	79 - 114
Toluene			10.0	10.2		ug/L		102	84 - 111
trans-1,2-Dichloroethene			10.0	10.7		ug/L		107	83 . 117
rans-1,3-Dichloropropene			10.0	10.2		ug/L		102	58 - 117
Trichloroethene			10.0	9.78		ug/L		98	76  117
Vinyl chloride			10.0	9.16		ug/L		92	53 - 127
Kylenes, Total			30.0	30.0		ug/L		100	83 - 112
Chloroform			10.0	9.56		ug/L		96	79 - 117
Bromochloromethane			10.0	9.68		ug/L		97	77 - 120
1,2-Dibromoethane			10.0	9.84		ug/L		98	79 - 113
Chloroethane			10.0	9.75		ug/L		98	25 . 153
31,575 33,12,13				•		-0			
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	96		63 - 129						
Toluene-d8 (Surr)	104		74.115						
4-Bromofluorobenzene (Surr)	103		66 - 117						
Dibromofluoromethane (Surr)	99		75.121						

Matrix: Water

A	nalysis Batch: 49814									
	-	MB	MB							
Aı	nalyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Anatyzed	Dii Fac
1,	I-Dichloroethene	0.025	U	0.025	0.0095	mg/L	 		07/03/12 21:21	1

Prep Type: TCLP

#### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Method Blank Lab Sample ID: LB 240-49660/1-A MB Prep Type: TCLP Matrix: Water

Analysis Batch: 49814

MB	MB							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.025	U	0.025	0.011	mg/L			07/03/12 21:21	1
0,25	U	0.25	0.029	mg/L			07/03/12 21:21	1
0.025	U	0.025	0.0065	mg/L			07/03/12 21:21	1
0.025	U	0.025	0.0065	mg/L			07/03/12 21:21	1
0,025	U	0.025	0.0075	mg/L			07/03/12 21:21	1
0.025	U	0.025	0.015	mg/L			07/03/12 21:21	1
0.025	U	0.025	0.0085	mg/L			07/03/12 21:21	1
0,025	U	0,025	0.011	mg/L			07/03/12 21:21	1
0.025	Ū	0.025	0.0080	mg/L			07/03/12 21:21	1
	Result 0.025 0.25 0.025 0.025 0.025 0.025 0.025 0.025	MB MB Result Qualifier  0.025 U 0.025 U 0.025 U 0.025 U 0.025 U 0.025 U 0.025 U 0.025 U 0.025 U 0.025 U	Result         Qualifier         RL           0.025         U         0.025           0.25         U         0.025           0.025         U         0.025           0.025         U         0.025           0.025         U         0.025           0.025         U         0.025           0.025         U         0.025           0.025         U         0.025           0.025         U         0.025	Result         Qualifier         RL         MDL           0.025         U         0.025         0.011           0.25         U         0.25         0.029           0.025         U         0.025         0.0065           0.025         U         0.025         0.0085           0.025         U         0.025         0.0075           0.025         U         0.025         0.015           0.025         U         0.025         0.0085           0.025         U         0.025         0.0085           0.025         U         0.025         0.011	Result         Qualifier         RL         MDL         Unit           0.025         U         0.025         0.011         mg/L           0.25         U         0.25         0.029         mg/L           0.025         U         0.025         0.0065         mg/L           0.025         U         0.025         0.0085         mg/L           0.025         U         0.025         0.015         mg/L           0.025         U         0.025         0.0085         mg/L           0.025         U         0.025         0.011         mg/L           0.025         U         0.025         0.011         mg/L	Result         Qualifier         RL         MDL         Unit         D           0.025         U         0.025         0.011         mg/L           0.025         U         0.25         0.029         mg/L           0.025         U         0.025         0.0065         mg/L           0.025         U         0.025         0.0065         mg/L           0.025         U         0.025         0.0075         mg/L           0.025         U         0.025         0.0085         mg/L           0.025         U         0.025         0.0085         mg/L           0.025         U         0.025         0.011         mg/L	Result         Qualifier         RL         MDL         Unit         D         Prepared           0.025         U         0.025         0.011         mg/L           0.025         U         0.025         0.029         mg/L           0.025         U         0.025         0.0065         mg/L           0.025         U         0.025         0.0075         mg/L           0.025         U         0.025         0.015         mg/L           0.025         U         0.025         0.0085         mg/L           0.025         U         0.025         0.0085         mg/L           0.025         U         0.025         0.0085         mg/L           0.025         U         0.025         0.011         mg/L	Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed           0.025         U         0.025         0.011         mg/L         07/03/12 21:21           0.025         U         0.25         0.029         mg/L         07/03/12 21:21           0.025         U         0.025         0.0065         mg/L         07/03/12 21:21           0.025         U         0.025         0.0085         mg/L         07/03/12 21:21           0.025         U         0.025         0.0075         mg/L         07/03/12 21:21           0.025         U         0.025         0.015         mg/L         07/03/12 21:21           0.025         U         0.025         0.0085         mg/L         07/03/12 21:21           0.025         U         0.025         0.0085         mg/L         07/03/12 21:21           0.025         U         0.025         0.0085         mg/L         07/03/12 21:21

MB MB Dil Fac Prepared Analyzed Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 107 80 - 121 07/03/12 21:21 105 90.115 07/03/12 21:21 Toluene-d8 (Surr) 07/03/12 21:21 70 - 124 92 4-Bromofluorobenzene (Surr) 07/03/12 21:21 84 - 128 Dibromofluoromethane (Surr) 113

Lab Sample ID: 240-12752-4 MS

Matrix: Water

-	Sample	Sample	Spike	MS	MS			%Rec.
Analyte	Result	Qualifier	Added	Resuit	Qualifier Unit	D	%Rec	Limits
1,1-Dichloroethene	0.025	U	1.00	1.02	mg/L		102	67 - 139
1,2-Dichloroethane	0.025	U	1.00	0.930	mg/L		93	80 - 115
2-Butanone (MEK)	0.25	U	2.00	1.80	mg/L		90	49 _ 117
Benzene	0.025	U	1.00	0.910	mg/L		91	85 - 119
Carbon tetrachloride	0,025	U	1.00	0.975	mg/L		98	60 - 110
Chlorobenzene	0.025	U	1.00	0.915	mg/L		92	85 - 113
Tetrachloroethene	0.025	ប	1.00	1.01	mg/l		101	74 - 138
Trichloroethene	0.025	U	1.00	1.03	mg/L		103	75 ₋ 134
Vinyl chloride	0.025	U	1.00	0.925	mg/L		93	51 - 118
Chloroform	0.025	U	1.00	0.915	mg/L		92	86 - 124

MS MS Qualifier Limits %Recovery Surrogate 80 - 121 1,2-Dichloroethane-d4 (Surr) 113 90-115 108 Toluene-d8 (\$um) 70 - 124 4-Bromofluorobenzene (Surr) 98 84 - 128 Dibromofluoromethane (Surr) 116

Lab Sample ID: 240-12752-4 MSD

Matrix: Water

Analysis Batch: 49814

Client Sample ID: FW	G-JDW-TANK3-GW
	Prep Type: TCLP

Client Sample ID: FWG-IDW-TANK3-GW

Prep Type: TCLP

_	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifler	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethens	0,025	U	1.00	1.02		mg/L		102	67 - 139	0	30
1,2-Dichloroethane	0.025	U	1.00	0.905		mg/L		91	80 - 115	3	30
2-Butanone (MEK)	0.25	U	2.00	1.95		mg/l.		98	49 _ 117	8	30
Berizene	0.025	U	1.00	0.925		mg/L		93	85 - 119	2	30
Carbon tetrachloride	0.025	U	1.00	1.04		mg/L		104	60 _ 110	6	30
Chlorobenzene	0.025	ប	1.00	0.935		mg/L		94	<i>8</i> 5 ₋ 113	2	30

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MSD Prep Type: TCLP

Matrix: Water

Analysis Batch: 49814

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Tetrachloroethene	0.025	U	1.00	1.06		mg/L		106	74 - 138	5	30
Trichloroethene	0.025	U	1.00	1.03		mg/L		103	75 - 134	0	30
Vinyl chloride	0,025	U	1.00	0.915		mg/L		92	51 - 118	1	30
Chlaraform	0.025	Ü	1.00	0.945		mg/L		95	86 - 124	3	30

MSD MSD

110 110

0.025 U

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		80 - 121
Toluene-d8 (Surr)	109		90 - 115
4-Bromofluorobenzene (Surr)	97		70 - 124
Dibromofluoromethane (Surr)	118		84 - 128

Client Sample ID: Method Blank Lab Sample ID: LB 240-49973/1-A MB Prep Type: TCLP Matrix: Solid

Analysis Batch: 50127

Chloroform

	mo	nio							
Analyte	Result	Qualifler	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0,0095	mg/L			07/06/12 20:29	1
1,2-Dichloroethane	0,025	U	0.025	0.011	mg/L			07/08/12 20:29	1
2-Butanone (MEK)	0.25	U	0,25	0.029	mg/L			07/06/12 20:29	1
Benzene	0,025	Ú	0.025	0.0065	mg/L			07/08/12 20:29	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			07/06/12 20:29	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/06/12 20:29	1
Tetrachtoroethene	0.025	Ü	0.025	0.015	mg/L			07/06/12 20:29	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/06/12 20:29	1
Vinyl chloride	0,025	U	0.025	0.011	mg/L			07/08/12 20:29	1

MB MB %Recovery Qualifier Analyzed Dil Fac Surrogate Limits Prepared 1,2-Dichloroethane-d4 (Surr) 07/06/12 20:29 102 80 - 121 Toluene-d8 (Sun) 106 90 - 115 07/06/12 20:29 1 97 70 - 124 07/06/12 20:29 4-Bromofluorobenzene (Surr) 84 - 128 07/06/12 20:29 1 Dibromofluoromethane (Surr) 116

0.025

0.0080 mg/L

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: Method Blank Lab Sample ID: MB 240-49608/13-A Prep Type: Total/NA Matrix: Water

Prep Batch: 49608 Analysis Batch: 50188

MB	мв							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.20	Ú	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
0.20	Ú	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
25	U	25	10	ug/L		07/02/12 11:43	07/09/12 10:05	1
0.20	U	0,20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
5.0	U	5.0	0.38	ug/L		07/02/12 11:43	07/09/12 10:05	1
1.0	U	1.0	0.32	ug/L		07/02/12 11:43	07/09/12 10:05	1
	Result 0.20 0.20 0.20 0.20 0.20 0.20 0.20 5.0	MB MB Result Qualifier  0.20 U 0.20 U 0.20 U 0.20 U 25 U 0.20 U 0.20 U 5.0 U	Result         Qualifier         RL           0.20         U         0.20           0.20         U         0.20           0.20         U         0.20           0.20         U         0.20           25         U         25           0.20         U         0.20           0.20         U         0.20           5.0         U         5.0	Result         Qualifier         RL         MDL           0.20         U         0.20         0.10           0.20         U         0.20         0.10           0.20         U         0.20         0.10           0.20         U         0.20         0.10           25         U         25         10           0.20         U         0.20         0.10           0.20         U         0.20         0.10           5.0         U         5.0         0.38	Result         Qualifier         RL         MDL Unit           0.20         0.10         ug/L           0.20         0.10         ug/L           0.20         0.10         ug/L           0.20         0.10         ug/L           0.20         0.10         ug/L           25         10         ug/L           0.20         0.10         ug/L           0.20         0.10         ug/L           0.20         0.10         ug/L           5.0         0.38         ug/L	Result         Qualifier         RL         MDL         Unit         D           0.20         U         0.20         0.10         ug/L           0.20         U         0.20         0.10         ug/L           0.20         U         0.20         0.10         ug/L           25         U         25         10         ug/L           0.20         U         0.20         0.10         ug/L           0.20         U         0.20         0.10         ug/L           5.0         U         5.0         0.38         ug/L	Result         Qualifier         RL         MDL         Unit         D         Prepared           0.20         U         0.20         0.10         ug/L         07/02/12 11:43           0.20         U         0.20         0.10         ug/L         07/02/12 11:43           0.20         U         0.20         0.10         ug/L         07/02/12 11:43           0.20         U         0.20         0.10         ug/L         07/02/12 11:43           25         U         25         10         ug/L         07/02/12 11:43           0.20         U         0.20         0.10         ug/L         07/02/12 11:43           0.20         U         0.20         0.10         ug/L         07/02/12 11:43           5.0         U         5.0         0.38         ug/L         07/02/12 11:43	Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed           0.20         U         0.20         0.10         ug/L         07/02/12 11:43         07/09/12 10:05           0.20         U         0.20         0.10         ug/L         07/02/12 11:43         07/09/12 10:05           0.20         U         0.20         0.10         ug/L         07/02/12 11:43         07/09/12 10:05           0.20         U         0.20         0.10         ug/L         07/02/12 11:43         07/09/12 10:05           0.20         U         0.20         0.10         ug/L         07/02/12 11:43         07/09/12 10:05           0.20         U         0.20         0.10         ug/L         07/02/12 11:43         07/09/12 10:05           0.20         U         0.20         0.10         ug/L         07/02/12 11:43         07/09/12 10:05           5.0         U         5.0         0.38         ug/L         07/02/12 11:43         07/09/12 10:05

07/06/12 20:29

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49608/13-A Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA Analysis Batch: 50188 Prep Batch: 49608

Analysis Batch: 50188	MB	МВ						Prep Batch	1: 49608
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dli Fac
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Bromophenyi phenyi ether	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Butyl benzyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dimethylphenol	2.0	Ú	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Dimethyl phthalate	1.0	U	1.0	0,29	ug/L		07/02/12 11:43	07/09/12 10:05	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dinitrophenol	5.0	Ú	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dinitrotoluene	5.0	U	5,0	0,27	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Fluoranthene	0,20	Ú	0,20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Fluorene	0.20	U	0,20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachlorobenzene	0.20	U	0.20	0.10	_		07/02/12 11:43	07/09/12 10:05	1
Hexachtorobutadiene	1.0	U	1.0	0.27			07/02/12 11:43	07/09/12 10:05	1
Hexachlorocyclopentadiene	10	U	10	0.80			07/02/12 11:43	07/09/12 10:05	1
Hexachloroethane	1.0	U	1.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
N-Nitrosodiphenylamine		U	1.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	_		07/02/12 11:43	07/09/12 10:05	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	-		07/02/12 11:43	07/09/12 10:05	1
2-Chloronaphthalene	1.0	Ü	1.0	0.10			07/02/12 11:43	07/09/12 10:05	1
2-Chlorophenol	1.0		1.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chlorophenyl phenyl ether		U	2.0	0.30	-		07/02/12 11:43	07/09/12 10:05	1
Chrysene	0.20		0.20	0.10			07/02/12 11:43	07/09/12 10:05	1
Dibenz(a,h)anthracene		U	0,20	0.10	-		07/02/12 11:43	07/09/12 10:05	1
Dibenzofuran	1.0	U	1.0	0.10	-		07/02/12 11:43	07/09/12 10:05	1
Benzo[g,h,i]perylene	0.20		0,20	0,10			07/02/12 11:43	07/09/12 10:05	1
Benzo[a]pyrene		U	0.20	0.10	-		07/02/12 11:43	07/09/12 10:05	1
Di-n-butyl phthalate	1.0	U	1.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
1,2-Dichlorobenzene	1.0	Ü	1.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
1,3-Dichtorobenzene	1.0	U	1.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	-		07/02/12 11:43	07/09/12 10:05	1
2,4-Dichlorophenol	2.0	Ü	2.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
Diethyl phthalate	1.0	U	1.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
Indeno[1,2,3-cd]pyrene		U	0.20		ug/L		07/02/12 11:43	07/09/12 10:05	1
Isophorone	1.0		1.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Methylnaphthalene		U	0,20		ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Methylphenol	1.0	U	1.0		ug/L		07/02/12 11:43	07/09/12 10:05	1
Naphthalene	0.20		0.20	0.10	-		07/02/12 11:43	07/09/12 10:05	1
2-Nitroaniline	2,0		2.0	0.80	-		07/02/12 11:43	07/09/12 10:05	1
3-Nitroaniline	2.0		2.0	0.28			07/02/12 11:43	07/09/12 10:05	1
4-Nitroaniline	2.0		2.0	0.80			07/02/12 11:43	07/09/12 10:05	1
Nitrobanzene	1,0		1.0	0.040			07/02/12 11:43	07/09/12 10:05	1
2-Nitrophenol	2.0		2.0	0.28			07/02/12 11:43	07/09/12 10:05	1
4-Nitrophenol	5.0		5.0				07/02/12 11:43	07/09/12 10:05	1
Pyrene	0.20		0.20	0,10	ug/L ug/l		07/02/12 11:43	07/09/12 10:05	1
Pentachlorophenol	5.0		5.0				07/02/12 11:43	07/09/12 10:05	1
Phenanthrene	0.20		0.20	0.10	ug/L ug/l		07/02/12 11:43	07/09/12 10:05	1
	1.0		1.0				07/02/12 11:43	07/09/12 10:05	1
1,2,4-Trichtorobenzene	5.0			0.28			07/02/12 11:43	07/09/12 10:05	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		01/02/12 11:43	07109/12 10.00	ı
2.4.6.Trichlorophenel	E 0	TÍ.	E 0	0.00	um/l		07/09/19 11:49	07/00/12 10:05	4
2,4,6-Trichlorophenol Phenol	5.0 1.0		5.0 1.0	0.80 0.60			07/02/12 11:43 07/02/12 11:43	07/09/12 10:05 07/09/12 10:05	1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

	Lab Sample ID: MB 240-49608/13-A	Client Sample ID: Method Blank
	Matrix: Water	Prep Type: Total/NA
	Analysis Batch: 50188	Prep Batch: 49608
-	MB MB	

	MB	MB							
Analyte	Result	Qualifler	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chloroaniline	2.0	υ	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/02/12 11:43	07/09/12 10:05	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	08.0	ug/L		07/02/12 11:43	07/09/12 10:05	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		07/02/12 11:43	07/09/12 10:05	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	14	X	28 - 110	07/02/12 11:43	07/09/12 10:05	1
2-Fluorophenol (Surr)	17		10 - 110	07/02/12 11:43	07/09/12 10:05	1
2,4,6-Tribromophenol (Surr)	16	X	22 - 120	07/02/12 11:43	07/09/12 10:05	1
Nitrobenzene-d5 (Surr)	13	X	27 - 111	07/02/12 11:43	07/09/12 10:05	1
Phenol-d5 (Surr)	18		10 - 110	07/02/12 11:43	07/09/12 10:05	1
Terphenyl-d14 (Surr)	19	X	37 _ 119	07/02/12 11:43	07/09/12 10:05	1

Lab Sample ID: LCS 240-49608/14-A

Matrix: Water

Analysis Batch: 50188

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49608

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Acensphthene	20.0	14.1		ug/L		70	40 _ 110	
Acenaphthylene	20.0	14.2		ug/L		71	43 - 110	
Anthraceле	20.0	15,4		ug/L		77	54 - 114	
Benzo[a]anthracene	20.0	14.6		ug/L		73	55 - 115	
Benzoic acid	20,0	25	U	ug/L		35	10 - 129	
Benzo[b]fluoranthene	20.0	14.6		ug/L		73	43 - 122	
Benzo[k]fluoranthene	20.0	15.7		ug/L		78	43 - 124	
Benzyl alcohol	20.0	12.9		ug/L		65	10 _ 130	
Bis(2-chloroethoxy)methane	20.0	11.7		ug/L		59	39 - 110	
Bis(2-chloroethyi)ether	20.0	11.9		ug/l.		59	34 - 113	
4-Bromophenyl phenyl ether	20.0	13,6		ug/L		68	51 - 114	
Butyl benzyl phthalate	20.0	15.7		ug/L		78	53 - 126	
2,4-Dimethylphenol	20,0	10,6		ug/L		54	12 - 110	
Dimethyl phthafate	20.0	16,0		ug/L		80	15 - 143	
4,6-Dinitro-2-methylphenol	20.0	13.1		ug/l.		66	28 - 112	
2,4-Dinitrophenol	20.0	9,54		ug/L		48	17 - 112	
2,4-Dinitrotoluene	20.0	14.5		ug/L		72	52 - 123	
2,6-Dinitrotoluene	20.0	14.5		ug/L		73	52 - 119	
Fluoranthene	20.0	16.1		ug/L		81	54 - 122	
Fluorene	20.0	15.1		ug/L		75	47 - 112	
Hexachlorobenzene	20.0	14.8		ug/L		74	51.112	
Hexachlorobutadiene	20.0	10.2		ug/L		51	13 - 110	
Hexachlorocyclopentadiene	20.0	5.24	J	ug/L		26	10 - 110	
Hexachloroethane	20.0	11.0		ug/L		55	12 - 110	
N-Nitrosodiphenylamine	20.0	14.9		ug/L		75	53 - 113	
N-Nitrosodi-n-propylamine	20.0	13.2		ug/L		66	37 - 121	
1,4-Dichlorobenzene	20.0	12,4		ug/L		62	19 - 110	
2-Chloronaphthalene	20.0	12.0		ug/L		60	39 - 110	

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

# Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-4960 Matrix: Water	)8/14-A					Client Samp	le ID: Lab Control Sam    Prep Type: Total
Analysis Batch: 50188							Prep Batch: 496
		-		LCS		5 WD	%Rec.
Analyte		Add		Qualifler	Unit	D %Rec	Limits
2-Chlorophenol			0.0 13.1		ug/L	65	27 - 110
4-Chlorophenyl phenyl ether			0.0 13.3		ug/L	67	50 - 115
Chrysene			0.0 16.2		ug/L	81	55 ₋ 115
Dibenz(a,h)anthracene			0.0 15.3		ug/L	77	46 - 122
Dibenzofuran			0.0 14.6		ug/L	73	46 - 111
Benzo(g,h,i]perylene			0.0 15.3		ug/L	77	45 - 120
Benzo[a]pyrene			0.0 13.2		ug/L	66	43 - 116
DI-n-butyl phthalate			0.0 16.5		ug/L	83	55 - 122
1,2-Dichlorobenzene			0.0 11.3		ug/L	56	23 - 110
1,3-Dichlorobenzene			0.0 10.9		ug/L	55	19 - 110
3,3'-Dichlorobenzidine			0.0 10.5		ug/L	53	19 - 110
2,4-Dichlorophenol			0.0 13.7		ug/L	69	33 - 110
Diethyl phthalate			0,0 16.2		ug/L	81	33 _ 134
Indeno[1,2,3-cd]pyrene			0.0 14.8		ug/L	74	48 _ 121
Isophorone			0,0 13.6		ug/L	68	44 - 128
2-Methylnaphthalene			0.0 13.2		ug/L	68	35 - 110
2-Methylphenol		2	0.0 13.3		ug/L	67	30 - 110
Naphthalene		2	0.0 13.3		ug/L	67	31 - 110
2-Nitroaniline		2	0.0 14.4		ug/L	72	43 _ 130
3-Nitroaniline		2	0.0 15.9		ug/L	79	45 - 116
4-Nitroaniline		2	0.0 16.6		ug/L	83	45 ₋ 120
Nitrobenzene		2	0,0 11.0		ug/L	55	37 _ 115
2-Nitrophenol		2	0,0 13,4		ug/L	67	29 - 110
4-Nitrophenol		2	0,0 13.8		ug/L	69	12 - 130
Pyrene		2	0.0 15.0		ug/L	75	55 - 120
Pentachlorophenol		2	0.0 12.2		ug/L	61	26 _ 110
Phenanthrene		2	0.0 15.7		ug/L	79	52 - 114
1,2,4-Trichlorobenzene		2	0.0 10.7		ug/L	54	25 - 110
2,4,5-Trichlorophenol		2	0.0 14.9		ug/L	75	39 - 110
2,4,6-Trichlorophenol		. 2	0,0 14.6		ug/L	73	35 - 110
Phenol		2	0.0 13.5		ug/L	68	14 - 112
Carbazole		2	0,0 16.1		ug/L	81	53 - 120
4-Chloroaniline		2	0.0 12.7		ug/L	63	10 - 110
3 & 4 Methylphenol		4	0.0 28.0		ug/L	70	32 - 110
Bis(2-ethylhexyl) phthalate		2	0,0 14.3		ug/L	72	36 - 163
Di-n-octyl phthalate			0.0 14.2		ug/L	71	44 - 128
4-Chloro-3-methylphenol			0.0 15.1		ug/L	76	39 - 110
2,2'-oxybis[1-chloropropane]		2	0,0 10.6		ug/L	53	25 _ 128
	LC\$ L						,
Surrogate	%Recovery G		recommend and				•
2-Fluorobiphenyl (Surr)	57	28 -	110				
2-Fluorophenol (Surr)	65	10 -	110				
2,4,6-Tribromophenol (Surr)	79	22 -	120				
Nitrobenzene-d5 (Surr)	56	27 -	111				
Phenol-d5 (Surr)	71	10 -	110				
Terphenyl-d14 (Sum)	82	37.	119				

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

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Lab Sample ID: MB 240-49701/4-A Client Sample								mple ID: Metho	le ID: Method Blank		
Matrix: Solid								Prep Type: T	otal/NA		
Analysis Batch: 49827								Prep Batch	ւ: 49701		
•	MB	MB									
Analyte	Resuit	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Pyridine	0.020	Ų	0.020	0.00035	mg/L		07/03/12 09:09	07/04/12 12:12	1		
2,4-Dinitrotoluene	0.020	U	0.020	0,00027	mg/L		07/03/12 09:09	07/04/12 12:12	1		
Hexach!orobenzene	0.020	U	0,020	0.00010	mg/L		07/03/12 09:09	07/04/12 12:12	1		
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 12:12	1		
Hexach!oroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1		
1,4-Dichtorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:09	07/04/12 12:12	1		
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1		
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:09	07/04/12 12:12	1		
Pentachtorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:09	07/04/12 12:12	1		
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:09	07/04/12 12:12	1		
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1		
3 & 4 Methylphenol	0.040	υ	0.040	0.00075	mg/L		07/03/12 09:09	07/04/12 12:12	1		
	МВ	МВ									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac		
2-Fluorobiphenyl (Surr)	47		22 - 110				07/03/12 09:09	07/04/12 12:12	1		
2-Fluorophenol (Surr)	52		10.110				07/03/12 09:09	07/04/12 12:12	1		
2,4,6-Tribromophenol (Surr)	59		17 - 117				07/03/12 09:09	07/04/12 12:12	1		
								the second second second			

Lab Sample ID: LCS 240-49701/5-A

Matrix: Solid

Phenol-d5 (Surr)

Nitrobenzene-d5 (Surr)

Terphenyl-d14 (Surr)

Analysis Batch: 49827

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49701

07/03/12 09:09

07/03/12 09:09

07/03/12 09:09

07/04/12 12:12

07/04/12 12:12

07/04/12 12:12

1

-	Spike	LCS LCS	S			%Rec.	
Analyte	Added	Result Qua	alifier Unit	D %I	Rec	Limits	
Pyridine	0.0800	0.0444	mg/L		56	10 - 110	
2,4-Dinitrotoluene	0.080.0	0.0599	mg/L		75	45 - 126	
Hexachlorobenzene	0.080.0	0.0559	mg/L		70	47 - 116	
Hexachlorobutadiene	0.080.0	0,0416	mg/L		52	10 - 110	
Hexachloroethane	0.080.0	0.0452	mg/L		57	10 - 110	
2-Methylphenol	0.0800	0.0524	mg/L		66	24 - 110	
Nitrobenzene	0.0800	0.0434	mg/L		54	35 _ 117	
Pentachlorophenol	0.0800	0.0429	mg/L		54	12 - 110	
2,4,5-Trichlorophenol	0.0800	0.0538	mg/L		67	35 - 111	
2,4,6-Trichlorophenol	0.0800	0.0505	mg/L		63	32 _ 110	
3 & 4 Methylphenol	0.160	0.0936	mg/L		59	27 - 110	

29 - 111

10-110

40 - 119

	LCS L	.cs	
Surrogate	%Recovery C	Qualifier	Limits
2-Fluorobiphenyl (Surr)	48		22 - 110
2-Fluorophenol (Surr)	51		10-110
2,4,6-Tribromophenol (Surr)	71		17 - 117
Nitrobenzene-d5 (Surr)	52		29 - 111
Phenol-d5 (Surr)	42		10 - 110
Terphenyl-d14 (Surr)	74		40 - 119

TestAmerica Canton 7/16/2012

Client Sample ID: Method Blank

07/06/12 12:30

07/03/12 09:12

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Lab Sample ID: MB 240-49703/15-A

#### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

0.040 U

Prep Type: Total/NA Matrix: Water Prep Batch: 49703 Analysis Batch: 50054 мв мв Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Analyte 07/06/12 12:30 1 0.020 07/03/12 09:12 Pyridine 0.020 Ū 0.00035 mg/L 0.020 U 0.020 0.00027 mg/L 07/03/12 09:12 07/06/12 12:30 1 2,4-Dinitrotoluene 0.020 U 0.020 0.00010 mg/L 07/03/12 09:12 07/08/12 12:30 1 Hexachlorobenzene 0.00027 07/03/12 09:12 07/06/12 12:30 U 0.020 mg/L Hexachforobutadiene 0.020 07/03/12 09:12 07/08/12 12:30 Hexachloroethane 0.020 U 0.020 0.00080 mg/L 0.00034 07/03/12 09:12 07/06/12 12:30 1,4-Dichlorobenzene 0.0040 U 0.0040 mg/L 0.0040 0.00080 07/03/12 09:12 07/06/12 12:30 0.0040 U ma/L 2-Methylphenol 07/03/12 09:12 07/08/12 12:30 0.000040 mg/L Nitrobenzene 0.0040 U 0.0040 07/06/12 12:30 0.040 U 0.040 0.0024 mg/L 07/03/12 09:12 Pentachlorophenol 07/03/12 09:12 07/06/12 12:30 0.020 U 0.020 0.00030 mg/L 2,4,5-Trichlorophenol 07/03/12 09:12 07/08/12 12:30 0.020 0.00080 mg/L 2,4,6-Trichforophenol 0.020 U

MB MB Dil Fac Prepared Analyzed Surrogate %Recovery Qualifier Limits 07/06/12 12:30 07/03/12 09:12 2-Fluorobiphenyl (Surr) 49 22 - 110 07/06/12 12:30 31 10.110 07/03/12 09:12 1 2-Fluorophenol (Surr) 07/03/12 09:12 07/06/12 12:30 77 17 - 117 2,4,6-Tribromophenoi (Surr) 07/03/12 09:12 07/06/12 12:30 29 - 111 Nitrobenzene-d5 (Surr) 51 07/03/12 09:12 07/06/12 12:30 1 Phenol-d5 (Surr) 56 10-110 Terphenyl-d14 (Surr) 07/03/12 09:12 07/06/12 12:30 40 - 119

0.040

0.00075 mg/L

Lab Sample ID: LCS 240-49703/16-A

Matrix: Water

3 & 4 Methylphenol

Analysis Batch: 50054

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49703

LCS LCS %Rec. Spike Added Result Qualifier Unit D %Rec Limits Analyte 0.0529 66 10 - 110 Pyridine 0.0800 mg/L 0.0800 0.0656 82 45 - 126 mg/L 2,4-Dinitrotoluene 81 47 - 116 0.0850 Hexachlorobenzene 0.0800 mg/L 0.0800 0.0362 mg/L 45 10 - 110 Hexachtorobutadiene 47 10 - 110 0.0800 0.0378 mg/L Hexachloroethane 71 24 - 110 0.0570 0.0800 mg/L 2-Methylphenol 35 _ 117 62 0.0800 0.0497 mg/L Nitrobenzene 0.0884 108 12.110 0.0800 mg/L Pentachlorophenol 0,0800 0.0665 83 35 - 111 mg/L 2,4,5-Trichlorophenol 32 - 110 84 0.0800 0.0673 2,4,6-Trichlorophenol mg/L 77 27 - 110 0.160 0.122 mg/L 3 & 4 Methylphenol

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	56	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	22 - 110
2-Fluorophenol (Surr)	23		10.110
2,4,6-Tribromophenol (Surr)	97		17 - 117
Nitrobenzene-d5 (Surr)	60		29 - 111
Phenol-d5 (Surr)	62		10 - 110
Terphenyl-d14 (Surr)	95		40 - 119

TestAmerica Canton 7/16/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49770/15-A

Matrix: Solid

Analysis Batch: 50054

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49770

Analysis Batch: 50054	мв	МВ						Prep Batch	
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Acenaphthylene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Anthracene	6.7	U	6.7	3,3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[a]anthracene	6.7	Ü	6.7	3.3	ug/Kg		07/03/12 13:58	07/06/12 11:53	1
Benzoic acid	660	U	660	330	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
Benzo[b]fluoranthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[k]fluoranthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzyl alcohol	330	U	330	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Bis(2-chloroethoxy)methane	100	U	100	22	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Bis(2-chloroethyl)ether	100	Ü	100	2.0	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Bromophenyl phenyl ether	50	U	50	13	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Butyl benzyl phthelate	50	υ	50	10	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dimethylphenol	150	Ú	150	20	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
Dimethyl phthalate	50	υ	50	17	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4,6-Dinitro-2-methylphenol	150	U	150	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dinitrophenol	330	U	330	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dinitrotoluene	200	U	200	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,6-Dinitrotoluene	200	U	200	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Fluoranthene	6.7		6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Fluorene	6.7		6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Hexachlorobenzene	6.7		6.7	2.1	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
Hexachlorobutadiene	50		50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Hexachlorocyclopentadiene	330		330	27	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
Hexachloroethane	50		50	9.0	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
N-Nitrosodiphenylamine	50	ΰ	50	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
N-Nitrosodi-n-propylamine	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,4-Dichlorobenzene	50	Ü	50	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Chloronaphthalene	50		50	3.3	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
2-Chlorophenol		U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chlorophenyl phenyl ether	50	U	50	13	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Chrysene	6.7		6.7	1.1	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
•	6.7		6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Dibenz(a,h)anthracene Dibenzofuran	50	_	50	3.3	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
Benzolg,h,ilperylene	6.7		6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
		U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	
Benzo[a]pyrene	50	U	50	15	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Di-n-butyl phthalate	50	U	50	9.7			07/03/12 13:56	07/06/12 11:53	1
1,2-Dichlorobenzene	50		50 50	11			07/03/12 13:58	07/06/12 11:53	1
1,3-Dichlorobenzene	100		100	16	ug/Kg		07/03/12 13:56	07/08/12 11:53	
3,3'-Dichlorobenzidine	150		150		ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dichlorophenol			50		ug/Kg ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Diethyl phthalate	50							07/08/12 11:53	1
Indeno[1,2,3-cd]pyrene	6.7		6.7 50	3.3	ug/Kg		07/03/12 13:56 07/03/12 13:56	07/06/12 11:53	1
Isophorone	50		50 6.7	13	ug/Kg				1
2-Methylnaphthalene	6.7		6.7	3.3	ug/Kg		07/03/12 13:56	07/08/12 11:53	
2-Methylphenol	200		200	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Naphthalene	6.7		6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Nitroaniline	200		200	9.1	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
3-Nitroaniline	200		200		ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Nitroaniline	200	U	200	26	ug/Kg		07/03/12 13:56	07/06/12 11:53	1

2 4 54 54 5

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49770/15-A							Client Samp	le ID: Method	d Blank
Matrix: Solid							F	rep Type: T	otal/NA
Analysis Batch: 50054								Prep Batch	: 49770
-	MB	MB							
Analyte Re	sult	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

	(MID	mB							
Analyte	Result	Qualifier	RL	MDL	Unit	p	Prepared	Analyzed	Dil Fac
Nitrobenzene	100	U	100	2.2	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Nitrophenol	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Nitrophenol	330	Ú	330	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Pyrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Pentachlorophenol	150	U	150	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Phenanthrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,2,4-Trichlorobenzene	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4,5-Trichlorophenol	150	U	150	25	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4,6-Trichlorophenol	150	Ü	150	80	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
Phenol	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Carbazole	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chloroaniline	150	Ü	150	17	ug/Kg		07/03/12 13:56	07/08/12 11:53	1
3 & 4 Methylphenol	400	U	400	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Bis(2-ethylhexyl) phthalate	50,9		50	19	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Di-n-octyl phthalate	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chloro-3-methylphenol	150	U	150	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,2'-oxybis[1-chloropropane]	100	U	100	9.5	ug/Kg		07/03/12 13:56	07/08/12 11:53	1

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	MB MB				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	46	34 - 110	07/03/12 13:56	07/06/12 11:53	1
2-Fluorophenol (Sum)	60	26 - 110	07/03/12 13:56	07/06/12 11:53	1
2,4,6-Tribromophenol (Surr)	39	10-118	07/03/12 13:56	07/06/12 11:53	1
Nitrobenzene-d5 (Surr)	51	24 - 112	07/03/12 13:56	07/06/12 11:53	1
Phenol-d5 (Surr)	64	28 - 110	07/03/12 13:56	07/06/12 11:53	1
Terphenyl-d14 (Surr)	83	41 - 119	07/03/12 13:56	07/06/12 11:53	1

Lab Sample ID: LCS 240-49770/16-A

Matrix: Solid

Analysis Batch: 50054

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49770

Analysis Batch: 50054						Lichne	1611. 49110
	Spike	LCS	LCS			%Rec.	
Analyte	Added	Result	Qualifier	Unit	D %Rec	Limits	
Acenaphthene	867	429		ug/Kg	64	46 - 110	
Acenaphthylene	667	437		ug/Kg	66	47 - 110	
Anthracene	667	476		ug/Kg	71	56 - 111	
Benzo[a]anthracene	687	497		ug/Kg	74	58 - 111	
Benzoic acid	667	403	J	ug/Kg	60	10 - 124	
Benzo[b]fluoranthene	667	511		ug/Kg	77	43 - 124	
Benzo[k]fluoranthene	667	490		ug/Kg	73	36 - 122	
Benzyl alcohol	667	522		ug/Kg	78	10 - 130	
Bis(2-chloroethoxy)methane	667	399		ug/Kg	60	42 - 110	
Bis(2-chloroethyl)ether	667	403		ug/Kg	60	41 - 110	
4-Bromophenyl phenyl ether	667	425		ug/Kg	64	53 - 112	
Butyl benzyl phthalate	667	513		ug/Kg	77	57 - 121	
2,4-Dimethylphenol	667	412		ид/Кд	62	28.110	
Dimethyl phthalate	667	505		ug/Kg	76	54 - 112	
4,6-Dinitro-2-methylphenol	667	560		ug/Kg	84	21 - 110	
2,4-Dinitrophenol	667	821		ug/Kg	93	10 - 110	
2,4-Dinitrotoluene	667	485		ug/Kg	73	55 ₋ 116	
2,6-Dinitrotoluene	667	445		ug/Kg	67	54 - 115	
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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49770/16-A				Client	Sample	ID: Lab Control Sample
Matrix: Solid						Prep Type: Total/NA
Analysis Batch: 50054	0-11	1.00	100			Prep Batch: 49770
	Spike		LCS		0/ Das	%Rec.
Analyte	Added		Qualifier Unit	D	%Rec	Limits
Fluoranthene	667	489	ug/Kg		73	55 <u>- 118</u>
Fluorene	667	474	ug/Kg		71	51 - 110
Hexachlorobenzene	667	455	ug/Kg		66	51 - 110
Hexachlorobutadiene	667	390	ug/Kg		56	39 - 110
Hexachlorocyclopentadiene	667	403	ug/Kg		60	10.110
Hexachloroethane	667	409	ug/Kg		61 	38 - 110
N-Nitrosodiphenylamine	667	467	ug/Kg		70	54 - 112
N-Nitrosodi-n-propylamine	667	496	ug/Kg		74	40 - 114
1,4-Dichlorobenzene	667	446	ug/Kg		67	38 - 110
2-Chloronaphthalene	667	392	ug/Kg		59	46 - 110
2-Chlorophenol	667	487	ug/Kg		73	39 ـ 110
4-Chlorophenyl phenyl ether	667	419	ug/Kg		63	53 _ 110
Chrysene	867	522	ug/Kg		78	56 - 11 <b>1</b>
Dibenz(a,h)anthracene	667	495	ug/Kg		74	45 _ 122
Dibenzofuran	667	458	ug/Kg		69	50 - 110
Benzo[g,h,ijperylene	667	509	ug/Kg		76	44 - 120
Benzo[a]pyrene	667	452	ug/Kg		68	44 - 115
Di-n-butyl phthalate	667	532	ug/Kg		80	57 - 119
1,2-Dichlorobenzene	667	407	ug/Kg		61	42 - 110
1,3-Dichlorobenzene	867	383	ug/Kg		57	40 - 110
3,3'-Dichlorobenzidine	667	409	ug/Kg		61	31 - 110
2,4-Dichlorophenol	667	462	ug/Kg		72	40 - 110
Diethyl phthalate	667	529	ug/Kg		79	55 - 114
Indeno[1,2,3-cd]pyrene	667	507	ug/Kg		76	45 - 121
Isophorone	667	475	ug/Kg		71	46 - 117
2-Methylnaphthalene	867	430	ug/Kg		64	48 - 110
2-Methylphenol	667	479	ug/Kg		72	36 - 110
Naphthalene	867	453	ug/Kg		66	42 - 110
2-Nitroaniline	667	494	ug/Kg		74	47 - 124
	667	485	ug/Kg		73	44 - 110
3-Nitroaniline	667	493	ug/Kg		74	50 - 110
4-Nitroaniline						
Nitrobenzene	667	408	ug/Kg		61	40 - 110 35 - 110
2-Nitrophenol	667	465	ug/Kg		73	
4-Nitrophenol	667	525	ug/Kg		79	24 - 117
Ругеле	667	512	ug/Kg		77	58 - 113
Pentachlorophenol	667	547	ug/Kg		62	10 - 110
Phenanthrene	667	493	ug/Kg		74	54 - 110
1,2,4-Trichlorobenzene	667	383	ug/Kg		57	43 - 110
2,4,5-Trichlorophenol	667	394	ug/Kg		59	42 - 110
2,4,6-Trichlorophenol	667	316	ug/Kg		48	37 - 110
Phenol	667	510	ug/Kg		76	39 - 110
Carbazole	667	502	ug/Kg		75	56 - 115
4-Chloroaniline	667	396	ug/Kg		59	25.110
3 & 4 Methylphenol	1330	1020	ug/Kg		77	40 - 110
Bis(2-ethylhexyl) phthalate	667	531	ug/Kg		80	56 - 123
Di-n-octyl phthalate	667	514	ug/Kg		77	45 - 123
4-Chloro-3-methylphenol	667	523	ug/Kg		76	42 _ 110
2,2'-oxybis[1-chloropropane]	667	415	ug/Kg		62	36 - 116

# **QC Sample Results**

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49770/16-A

Matrix: Solid

Analysis Batch: 50054

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49770

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	55	*	34 - 110
2-Fluorophenol (Surr)	73		26 ₋ 110
2,4,6-Tribromophenol (Surr)	50		10-118
Nitrobenzene-d5 (Surr)	61		24 - 112
Phenol-d5 (Surr)	77		28 - 110
Terphenyl-d14 (Surr)	79		41 - 119

Lab Sample ID: MB 240-50344/13-A

Matrix: Water

Analysis Batch: 50708

Client Sample ID: Method Blank

Prep Type: Total/NA
Pren Batch: 50344

	MB	B MB							
Analyte	Result	Qualifler	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.20	Ū	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Acenaphthylene	0.20	U	0,20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Anthracene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[a]anthracene	0,20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzoic acid	25	U	25	10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[b]fluoranthene	0,20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-chloroethyi)ether	1.0	Ú	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bulyl benzyl phthalate	0.902	J	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dimethylphenol	2.0	Ú	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
2.4-Dinitrophenol	5.0	Ú	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachtorobutadiene	1.0	U	1.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
N-Nitrosodiphenylamine	1.0	Ü	1.0	0.31	ug/L		07/10/12 10:24	07/13/12 10:39	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		07/10/12 10:24	07/13/12 10:39	1
Chrysene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/l.		07/10/12 10:24	07/13/12 10:39	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[g,h,i]perylene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[a]pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Di-n-butyl phthalate	1.0	U	1.0	0.67	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,2-Dichlorobenzene	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1
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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-50344/13-A Matrix: Water						Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 50344			
Analysis Batch: 50708	MR	МВ						Prep Bater	1: 50344
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dii Fac
1,3-Dichlorobenzene	1.0	Ū	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dichlorophenol	2.0	Ü	2,0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		07/10/12 10:24	07/13/12 10:39	1
Indeno[1,2,3-cd]pyrene	0,20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Isophorone	1.0	U	1.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Methylnaphthalene	0,20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Naphthalene	0.20	Ü	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	í
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Nitrobenzene	1.0	U	1.0	0.040	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Nitrophenol	5,0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
Pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Pentachlorophenol	5.0	U	5,0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4,5-Trichlorophenol	5.0	υ	5.0	0.30	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4,6-Trichlorophenol	5.0	υ	5.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Phenol	1.0	υ	1.0	0,60	ug/L		07/10/12 10:24	07/13/12 10:39	1
Carbazole	1.0	υ	1.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chloroaniline	2.0	Ú	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-ethylhexyl) phthalate	1.97	J	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		07/10/12 10:24	07/13/12 10:39	1
	MB								50.5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	69		28 - 110				07/10/12 10:24	07/13/12 10:39	1
2-Fluorophenol (Surr)	79		10 - 110				07/10/12 10:24	07/13/12 10:39	1
2,4,6-Tribromophenol (Surr)	71		22 - 120				07/10/12 10:24	07/13/12 10:39	1
Nitrobenzene-d5 (Surr)	68		27 - 111				07/10/12 10:24	07/13/12 10:39	1
Phenol-d5 (Surr)	81		10.110				07/10/12 10:24	07/13/12 10:39	1
Terphenyl-d14 (Surr)	86		37 - 119				07/10/12 10:24	07/13/12 10:39	1

Lab Sample ID: LCS 240-50344/14-A

Matrix: Water

Analysis Batch: 50708

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50344

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifler	Unit	D	%Rec	Limits	
Acenaphthene	20.0	17.1		ug/L		86	40 - 110	
Acenaphthylene	20.0	17.2		ug/L		86	43 - 110	
Anthracene	20.0	17.2		ug/L		86	54 - 114	
Benzo[a]anthracene	20.0	16.5		ug/L		82	55 - 115	
Benzoic acid	20.0	17.2	J	ug/L		86	10 - 129	
Benzo[b]fluoranthene	20.0	16.1		ug/L		81	43 - 122	

TestAmerica Canton 7/16/2012

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-50344/14-A				Client Sample	iD: Lab Control Sample
Matrix: Water					Prep Type: Total/NA
Analysis Batch: 50708					Prep Batch: 50344
	Spike		LCS	D 4/D	%Rec.
Analyte	Added		Qualifier Unit	D %Rec	Limits
Benzolkifluoranthene	20.0	17.0	ug/L	85	43 - 124
Benzyl alcohol	20.0	18.8	ug/L	94	10 - 130
Bis(2-chloroethoxy)methane	20.0	15.7	ug/L	79	39 - 110
Bis(2-chloroethyl)ether	20.0	15,2	ug/L	76	34 - 113
4-Bromophenyl phenyl ether	20.0	15.2	ug/L	76	51 - 114
Butyl benzyl phthalate	20.0	18.3	ug/L	91	53 - 126
2,4-Dimethylphenol	20.0	14.2	ug/L	71	12 - 110
Dimethyl phthalate	20.0	18.0	ug/L	90	15 - 143
4,6-Dinitro-2-methylphenol	20.0	18.2	ug/L	91	28 - 112
2,4-Dinitrophenol	20.0	16.4	ug/L	82	17 - 112
2,4-Dinitrotoluene	20.0	16.1	ug/L	80	52 - 123
2,6-Dinitrololuene	20.0	16.4	ug/L	82	52 - 119
Fluoranthene	20.0	17.5	ug/L	67	54 - 122
Fluorene	20,0	17.3	ug/L	67	47 - 112
Hexachlorobenzene	20.0	18.8	ug/L	84	51 - 112
Hexachlorobutadiene	20,0	15.1	ug/l.	75	13 - 110
Hexachlorocyclopentadiene	20.0	8.56	J ug/L	43	10 <b>- 1</b> 10
Hexachloroethane	20.0	16.4	ug/L	82	12 - 110
N-Nitrosodiphenylamine	20.0	16.1	ug/L	81	53 _ 113
N-Nitrosodi-n-propylamine	20.0	17.7	ug/L	88	37 - 121
1,4-Dichlorobenzene	20.0	16.9	ug/L	85	19 - 110
2-Chloronaphthalene	20.0	15.2	ug/L	76	39 _ 110
2-Chlorophenol	20.0	17.5	ug/L	88	27 - 110
4-Chlorophenyl phenyl ether	20.0	15.7	ug/L	78	50 - 115
Chrysene	20.0	17.6	ug/L	88	55 - 115
Dibenz(a,h)anthracene	20.0	16.2	ug/L	81	46 - 122
Dibenzofuran	20.0	17.4	ug/L	87	46 - 111
Benzo[g,h,i]perylene	20.0	16.9	ug/L	84	45 - 120
Benzo[a]pyrene	20,0	14.5	ug/L	72	43 - 116
Di-n-butyl phthalate	20.0	18.1	ug/L	91	55 - 122
1,2-Dichlorobenzene	20.0	15.8	ug/L	79	23 - 110
1,3-Dichlorobenzene	20.0	15.5	ug/L	78	19 - 110
3,3'-Dichlorobenzidine	20.0	10.3	ug/L	52	19 - 110
2,4-Dichlorophenol	20.0	17,6	ug/L	88	33 - 110
Diethyl phthalate	20.0	18.3	ug/L	92	33 - 134
Indeno[1,2,3-cd]pyrene	20.0	15.9	ug/L	80	46 - 121
Isophorone	20.0	17.9	ug/L	90	44 - 128
2-Methylnaphthalene	20.0	16.9	ug/L	85	35 - 110
2-Methylphenol	20.0	17.6	ug/L	88	30 - 110
Naphthalene	20.0	17.8	ug/L	89	31 - 110
2-Nitroaniline	20.0	17.4	ug/L	87	43 - 130
3-Nitroanitine	20.0	16.4	ug/L	62	45 - 116
4-Nitroaniline	20.0	17.7	ug/L	88	45 - 120
Nitrobenzene	20.0	16.0	ug/L	80	37 115
2-Nitrophenol	20.0	17.8	ug/L	89	29 - 110
4-Nitrophenol	20.0	17.6	ug/L	 88	12 - 130
Pyrene	20.0	16.7	ug/L	84	55 . 120
Pentachtorophenol	20.0	18.1	ug/L	90	26 - 110
Phenanthrene	20.0	17.2	ug/L	86	52 - 114
1,2,4-Trichlorobenzene	20.0	14.6	ug/L	73	25 - 110

TestAmerica Canton 7/16/2012

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-50344/	14-A						Client	t Sample	ID: Lab Contro	ol Sample
Matrix: Water									Prep Type:	Total/NA
Analysis Batch: 50708									Prep Bat	ch: 50344
-			Spike	LCS	LCS				%Rec.	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
2,4,5-Trichlorophenol			20.0	17.4		ug/L		87	39 - 110	
2.4,6-Trichlorophenol			20.0	17.4		ug/L		87	35 - 110	
Phenol			20.0	17.9		ug/L		89	14 - 112	
Carbazole			20.0	17.4		ug/L		87	53 - 120	
4-Chloroaniline			20.0	15.3		ug/L		76	10 - 110	
3 & 4 Methylphenol			40.0	34.8		ug/L		87	32 - 110	
Bis(2-ethylhexyl) phthalate			20.0	15.0		ug/L		75	36 - 163	
Di-n-octyl phthalate			20.0	13.3		ug/L		66	44 - 128	
4-Chloro-3-methylphenol			20.0	17.3		ug/L		87	39 _ 110	
2,2'-oxybis[1-chloropropane]			20.0	15.6		ug/L		78	25 _ 128	
	LCS	LCS								
Surrogate	%Rесочегу	Qualifier	Limits							
2-Fluorobiohenvl (Surr)	73		28 - 110							

 2-Fluorobiphenyl (Surr)
 73
 28 - 110

 2-Fluorophenol (Surr)
 88
 10 - 110

 2,4,6-Tribromophenol (Surr)
 83
 22 - 120

 Nitrobenzene-d5 (Surr)
 75
 27 - 111

 Phenol-d5 (Surr)
 91
 10 - 110

 Terphenyl-d14 (Surr)
 69
 37 - 119

### Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-49615/2-A Matrix: Water Analysis Batch: 49739							Client Sa	mple ID: Metho Prep Type: T Prep Batch	otal/NA
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dll Fac
4,4'-DDD	0.050	U	0.050	0.0096	ug/L		07/02/12 11:57	07/04/12 08:18	1
4,4'-DDE	0.050	U	0.050	0.0097	ug/L		07/02/12 11:57	07/04/12 08:18	1
4,4'-DDT	0,050	U	0.050	0.016	ug/L		07/02/12 11:57	07/04/12 08:18	1
Aldrin	0.050	U	0.050	0.0082	ug/L		07/02/12 11:57	07/04/12 08:18	1
alpha-BHC	0.050	U	0.050	0,0070	ug/L		07/02/12 11:57	07/04/12 08:18	1
alpha-Chlordane	0,050	U	0.050	0.014	ug/L		07/02/12 11:57	07/04/12 08:18	1
beta-BHC	0.050	Ü	0,050	0.0084	ug/L		07/02/12 11:57	07/04/12 08:18	1
delta-BHC	0,050	U	0.050	0.0087	ug/L		07/02/12 11:57	07/04/12 08:18	1
Dieldrin	0.050	U	0.050	0.0075	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan I	0.050	Ú	0.050	0.013	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan II	0,050	U	0.050	0.012	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan sulfate	0.050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin	0.050	Ú	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin aldehyde	0.050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin ketone	0.050	U	0,050	0.0078	ug/L		07/02/12 11:57	07/04/12 08:18	1
gamma-BHC (Lindane)	0.050	U	0.050	0.0064	ug/L		07/02/12 11:57	07/04/12 08:18	1
gamma-Chlordane	0.050	U	0.050	0.012	ug/L		07/02/12 11:57	07/04/12 08:18	1
Heptachlor	0.050	U	0,050	0.0080	ug/L		07/02/12 11:57	07/04/12 08:18	1
Heptachlor epoxide	0,050	U	0.050	0.0071	ug/L		07/02/12 11:57	07/04/12 08:18	1
Methoxychlor	0.10	U	0.10	0.032	ug/L		07/02/12 11:57	07/04/12 08:18	1
Toxaphene	2.0	U	2.0	0,32	ug/L		07/02/12 11:57	07/04/12 08:18	1

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### Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49615/2-A

Matrix: Water

Analysis Batch: 49739

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49615

	MB ME	3			
Surrogate	%Recovery Qu	ualifier Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	94	10 - 145	07/02/12 11:57	07/04/12 08:18	1
DCB Decachlorobiphenyl	86	10 - 145	07/02/12 11:57	07/04/12 08:18	1
Tetrachioro-m-xylene	83	30 - 141	07/02/12 11:57	07/04/12 08:18	1
Tetrachloro-m-xylene	76	30 - 141	07/02/12 11:57	07/04/12 08:18	1

Lab Sample ID: LCS 240-49615/3-A

Matrix: Water

Analysis Batch: 49739

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49615

(0)

•	Spike	LCS	LCS			%Rec.
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits
4,4'-DDD	0.500	0.649	ug/L		130	53 - 168
4,4'-DDE	0.500	0.574	ug/L		115	66 - 136
4,4'-DDT	0.500	0.576	ug/L		115	42 _ 140
Aldrin	0.500	0.544	ug/L		109	61 - 127
alpha-BHC	0.500	0.569	ug/L		114	65 - 132
aipha-Chlordane	0.500	0.559	ug/L		112	60 - 134
beta-BHC	0.500	0.579	ug/L		116	59 - 134
delta-BHC	0,500	0.603	ug/L		121	45 - 143
Dieldrin	0.500	0.598	ug/L		120	61 - 142
Endosuifan I	0.500	0.416	ug/L		83	35 - 110
Endosulfan (l	0.500	0.449	ug/L₋		90	39 _ 110
Endosulfan sulfate	0.500	0,610	ug/L		122	54 - 143
Endrin	0,500	0.586	ug/L		117	57 - 148
Endrin aldehyde	0.500	0.553	ug/L		111	44 - 116
Endrin ketone	0,500	0.604	ug/L		121	52 - 135
gamma-BHC (Lindane)	0.500	0.612	ւն/[-		122	58 - 140
gamma-Chlordane	0,500	0.588	ug/L		118	59 - 139
Heptachlor	0.500	0.530	ug/L		106	60 - 132
Heptachlor epoxide	0.500	0,593	ug/L		119	60 - 138
Methoxychlor	0.500	0.541	ug/L		108	45 _ 139

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	56		10 - 145
DCB Decachlorobiphenyl	48		10 - 145
Tetrachloro-m-xylana	96		30 - 141
Tetrachioro-m-xylene	90		30 - 141

Lab Sample ID: MB 240-49705/7-A

Matrix: Water

Analysis Batch: 49922

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49705

į		MB	MB							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		07/03/12 09:15	07/08/12 00:21	1
	Endrin	0.0012	U	0.0012	0.000026	mg/L		07/03/12 09:15	07/06/12 00:21	1
	gamma-BHC (Lindane)	0,0012	U	0.0012	0,000015	mg/L		07/03/12 09:15	07/06/12 00:21	1
	Heptachtor	0.0012	U	0.0012	0.000019	mg/L		07/03/12 09:15	07/08/12 00:21	1
	Heptachlor epoxide	0,0012	U	0.0012	0.000017	mg/L		07/03/12 09:15	07/06/12 00:21	1
	Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/06/12 00:21	1
	Toxaphene	0.048	U	0.048	0.00077	mg/L		07/03/12 09:15	07/06/12 00:21	1
	•									

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

#### Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49705/7-A

Matrix: Water

Analysis Batch: 49922

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49705

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	93		34 - 141	07/03/12 09:15	07/06/12 00:21	1
DCB Decachlorobiphenyl	92		34 - 141	07/03/12 09:15	07/06/12 00:21	1
Tetrachloro-m-xylene	65		46 - 122	07/03/12 09:15	07/06/12 00:21	1
Tetrachloro-m-xylene	61		46 - 122	07/03/12 09:15	07/06/12 00:21	1

Lab Sample ID: LCS 240-49705/8-A

Matrix: Water

Analysis Batch: 49922

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49705
LCS LCS %Rec.

- 1		Spike	LUO	FCO				781100.	
ļ	Analyte	Added	Resuit	Qualifier	Unit	D	%Rec	Limits	
-	Endńn	0,00200	0.00193		mg/L		96	59 - 136	
	gamma-BHC (Lindane)	0.00200	0.00204		mg/L		102	59 - 137	
	Heptachlor	0.00200	0.00139		mg/L		69	63 _ 123	
	Heptachlor epoxide	0.00200	0.00212		mg/L		108	59 - 141	
	Methoxychlor	0.00400	0,00366		mg/L		92	42 - 141	

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LCS LCS

Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	89		34 - 141
DCB Decachlorobiphenyl	93		34 - 141
Tetrachloro-m-xylene	70		46 - 122
Tetrachloro-m-xylene	65		46 - 122

Lab Sample ID: MB 240-49756/10-A

Matrix: Solid

Analysis Batch: 50336

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 49756

мв мв Prepared Anaiyzed Dil Fac Result Qualifier RL MDL Unit Analyte 07/03/12 12:02 07/09/12 11:12 17 0.62 ug/Kg 1.7 Ü 4,4'-DDD 07/03/12 12:02 07/09/12 11:12 4,4'-DDE 1.7 Ų 1.7 0.39 ug/Kg 07/09/12 11:12 1 U 1.7 0.63 ug/Kg 07/03/12 12:02 4.4'-DDT 1.7 07/03/12 12:02 07/09/12 11:12 1.7 U 1.7 1.2 ug/Kg Aldrin 07/03/12 12:02 07/09/12 11:12 1.7 U 0.73 ug/Kg alpha-BHC 1.7 07/09/12 11:12 07/03/12 12:02 1.7 U 1.7 0.94 ug/Kg alpha-Chlordane 07/09/12 11:12 07/03/12 12:02 1.7 U 1.7 1.1 ug/Kg beta-BHC 07/09/12 11:12 07/03/12 12:02 1.7 U 1.7 1.2 ug/Kg delta-BHC 07/09/12 11:12 07/03/12 12:02 Dieldrin 1.7 Ų 1.7 0.47 ug/Kg 07/09/12 11:12 1.7 0.52 ug/Kg 07/03/12 12:02 Endosulfan I 1.7 U 07/03/12 12:02 07/09/12 11:12 0.82 ug/Kg Endosulfan II 17 U 1.7 07/03/12 12:02 07/09/12 11:12 0.87 ug/Kg Endosulfan sulfate 1.7 U 1.7 07/09/12 11:12 Endrin 1.7 U 1.7 0.50 ug/Kg 07/03/12 12:02 1.7 U 1.7 1.0 ug/Kg 07/03/12 12:02 07/09/12 11:12 Endrin aldehyde 07/03/12 12:02 07/09/12 11:12 1.7 0.63 ug/Kg 1.7 U Endrin ketone 07/03/12 12:02 07/09/12 11:12 gamma-BHC (Lindane) 1.7 Ú 1.7 ug/Kg 07/03/12 12:02 07/09/12 11:12 gamma-Chlordane Ų 1.7 0.42 ug/Kg 1.7 07/03/12 12:02 07/09/12 11:12 1.7 U 1.7 ug/Kg 1.1 Heptachlor 07/09/12 11:12 07/03/12 12:02 1.7 0.60 ug/Kg 1.7 U Heptachtor epoxide 07/09/12 11:12 07/03/12 12:02 1 3,3 U 3.3 1.5 ug/Kg Methoxychlor 07/09/12 11:12 67 U 67 19 ug/Kg 07/03/12 12:02 Toxaphene

> TestAmerica Canton 7/16/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

## Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49756/10-A

Matrix: Solid

Analysis Batch: 50336

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 49756

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dii Fac
DCB Decachlorobiphenyl	93		32 - 175	07/03/12 12:02	07/09/12 11:12	1
Tetrachloro-m-xylene	104		24 - 150	07/03/12 12:02	07/09/12 11:12	1
Tetrachioro-m-xylene	180	X	24 - 150	07/03/12 12:02	07/09/12 11:12	1

Lab Sample ID; LCS 240-49756/11-A

Matrix: Solid

Tetrachloro-m-xylene

Analysis Batch: 50336

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 49756

Analysis Batch: 50336									-	saten: 49750
			Spike		LCS		_		%Rec.	
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	
4,4'-DDD			33.3	35.1		ug/Kg		105	38 - 160	
4,4'-DDE			33,3	27.2		ug/Kg		82	41 - 137	
4,4'-DDT			33.3	33,3		ug/Kg		100	34 - 139	
Aldrin			33.3	25.2		ug/Kg		76	52 - 119	
alpha-BHC			33,3	26.0		ug/Kg		78	50 - 129	
alpha-Chlordane			33.3	26,0		ug/Kg		78	43 - 130	
beta-BHC			33,3	26.0		ug/Kg		78	51 - 127	
delta-BHC			33.3	29.1		ug/Kg		87	54 _ 134	
Dieldrin			33.3	29.0		ug/Kg		87	45 - 140	
Endosulfan I			33.3	16.9		ug/Kg		57	13.110	
Endosulfan II			33.3	20.6		ug/Kg		62	22 - 115	
Endosulfan sulfate			33.3	32.0		ug/Kg		96	44 - 143	
Endrin			33.3	30.5		ug/Kg		92	48 - 143	
Endrin aldehyde			33.3	32.7		ug/Kg		98	31 - 126	
Endrin ketone			33.3	29.5		ug/Kg		89	39 _ 137	
gamma-BHC (Lindane)			33.3	27.2		ug/Kg		82	41 - 137	
gamma-Chlordane			33,3	25.4		ug/Kg		76	53 - 129	
Heptachlor			33.3	29,9		ug/Kg		90	37 - 127	
Heptachlor epoxide			33.3	26.0		ug/Kg		78	53 - 132	
Methoxychlor			33.3	34.8		ug/Kg		104	33 - 151	
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
DCB Decachlorobiphenyl	98		32 _ 175							
DCB Decachlorobiphenyl	82		32 - 175							
Tetrachloro-m-xylene	110		24 - 150							
· · · · · · · · · · · · · · · · · · ·										

#### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

113

Client Sample ID: Method Blank Lab Sample ID: MB 240-49612/11-A Prep Type: Total/NA Matrix: Water

24 - 150

Prep Batch: 49612 Analysis Batch: 49764

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Aroclor-1016	0.50	Ü	0.50	0.17	ug/L		07/02/12 11:53	07/03/12 17:39	1
Arodor-1221	0.50	U	0.50	0.13	ug/L		07/02/12 11:53	07/03/12 17:39	1
Arodor-1232	0.50	U	0.50	0.16	ug/L		07/02/12 11:53	07/03/12 17:39	1
Arodor-1242	0.50	Ú	0.50	0.22	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1248	0.50	U	0.50	0.10	ug/L		07/02/12 11:53	07/03/12 17:39	1
Arodor-1254	0.50	U	0.50	0,16	ug/L		07/02/12 11:53	07/03/12 17:39	1

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Aroclor-1260

# Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-49612/1 Matrix: Water	1-A						Client Sa	mple ID: Metho Prep Type: T	
Analysis Batch: 49764								Prep Batch	ı: 49612
	MB	MB						·	
Analyte	Result	Qualifier	RL	MDL	Unit	Д	Prepared	Analyzed	Dil Fac
Aroclor-1260	0,50	U	0.50	0.17	ug/L		07/02/12 11:53	07/03/12 17:39	1
	мв	мв							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72	E	23 - 136				07/02/12 11:53	07/03/12 17:39	1
DCB Decachlorobiphenyl	81		10 - 130				07/02/12 11:53	07/03/12 17:39	1

Lab Sample ID: LCS 240-49 Matrix: Water Analysis Batch: 49852	612/12-A						Client	Sample		itrol Sample be: Total/NA latch: 49612
			Spike	LCS	LCS				%Rec.	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aroclor-1016			5,00	5.95		ug/L		119	66 - 120	
Aroclor-1260			5.00	4.18		ug/L		84	55 - 120	
	LCS LC	cs								
Surrogate	%Recovery Q	ualifier L	Imits							
Tetrachloro-m-xylene	70		13 - 136							
DCB Decachlorobiphenyl	71	1	0 - 130							

Lab Sample ID: MB 240-49755/19-A Matrix: Solid Analysis Batch: 49992							Client Sa	mple ID: Metho Prep Type: T Prep Batch	otal/NA
	MB	мв							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	33	U	33	21	ug/Kg		07/03/12 11:53	07/06/12 12:12	1
Aroclor-1221	33	U	33	16	ug/Kg		07/03/12 11:53	07/06/12 12:12	1
Aroclor-1232	33	U	33	14	ug/Kg		07/03/12 11:53	07/06/12 12:12	1
Aroclor-1242	33	Ü	33	13	ug/Kg		07/03/12 11:53	07/08/12 12:12	1
Aroclor-1248	33	U	33	17	ug/Kg		07/03/12 11:53	07/06/12 12:12	1
Arodor-1254	33	U	33	17	ug/Kg		07/03/12 11:53	07/06/12 12:12	1

	MB MB				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69	29 - 151	07/03/12 11:53	07/06/12 12:12	1
DCB Decachlorobinhenyl	66	14 - 163	07/03/12 11:53	07/06/12 12:12	1

33

17 ug/Kg

07/03/12 11:53

07/06/12 12:12

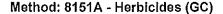
33 U

Lab Sample ID: LCS 240-49 Matrix: Solid Analysis Batch: 49992	755/20-A						Client	Sample	ID: Lab Control Samp Prep Type: Total/N Prep Batch: 497
Think your Editor Touris			Spike	LCS	LCS				%Rec.
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits
Aroclor-1016			333	225		ug/Kg		68	62 - 120
Aroclor-1260			333	228		ug/Kg		68	56 _ 122
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
Tetrachloro-m-xylene	62		29 - 151						
DCB Decachlorobiphenyl	67		14 - 163						

### QC Sample Results

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1



2,4-Dichlorophenylacetic acid

Matrix: Solid

Client Sample ID: Method Blank Lab Sample ID: MB 240-49707/7-A Prep Type: Total/NA Matrix: Water Analysis Batch: 50094 Prep Batch: 49707 MB MB

MDL Unit Prepared Analyzed Dli Fac Analyte Result Qualifler RL 2,4-D 0.0020 Ū 0.0020 0.00021 mg/L 07/03/12 09:18 07/07/12 21:18 07/03/12 09:18 07/07/12 21:18 0.00050 U 0.00050 0,00010 mg/L Silvex (2,4,5-TP)

ΜB Dil Fac Prepared Analyzed Surrogate %Recovery Qualifier Limits 07/07/12 21:18 37 _ 116 07/03/12 09:18 2,4-Dichlorophenylacetic acid 51 37 - 116 07/03/12 09:18 07/07/12 21:18 2,4-Dichlorophenylacetic acid 57

Lab Sample ID: LCS 240-49707/8-A Client Sample ID: Lab Control Sample Prep Type: Total/NA Matrix: Water Prep Batch: 49707 Analysis Batch: 50094

Spike LCS LCS %Rec. %Rec Added Result Qualifier Unit D Limits Analyte 2,4-D 0.0200 0.0135 mg/L 67 35 - 136

0.00500 0.00325 65 46 - 112 Silvex (2,4,5-TP) mg/L LCS LCS %Recovery Qualifier Limits Surrogate 37 - 116 2,4-Dichlorophenylacetic acid 55

37 - 116

#### Method: 8330 (Modified) - Organic Compounds by UV/HPLC

66

Client Sample ID: Method Blank Lab Sample ID: G2G060000020B Prep Type: Total Matrix: Solid Prep Batch: 2188020_P Analysis Batch: 2188020 MB MB

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Nitroguanidine 0.25 U 0,25 0.020 mg/kg 07/06/12 08:00 07/10/12 11:54

Lab Sample ID: G2G060000020C Client Sample ID: Lab Control Sample Prep Type: Total

Prep Batch: 2188020_P Analysis Batch: 2188020 ICS ICS %Rec. Spike

Added Result Qualifler Unit D %Rec Limits Nitroguanidine 1.00 0.973 97 72 - 121 mg/kg

Lab Sample ID: G2F280490026D Client Sample ID: Matrix Spike Duplicate Matrix: Solid Prep Type: Total Prep Batch: 2188020_ P Analysis Batch: 2188020 Spike RPD SD1 SD1 %Rec. Sample Sample Limit Analyte Result Qualifler Added Result Qualifier Unit D %Rec Limits RPD

1.4 Nitroguanidine 0.25 U 1.00 0.822 mg/kg 82 72 - 121 Lab Sample ID: G2F280490026S Client Sample ID: Matrix Spike Matrix: Solid Prep Type: Total Prep Batch: 2188020_ P Analysis Batch: 2188020

Splke MS1 MS1 %Rec. Sample Sample %Rec Limits Analyte Result Qualifier Added Result Qualifier Unit D 72 - 121 Nitroguanidine 0,25 Ü 1.00 0.833 mg/kg 83

Nitroguanidine

### Method: 8330 (Modified) - Organic Compounds by UV/HPLC (Continued)

Lab Sample ID: G2G090000129B Client Sample ID: Method Blank Matrix: Water Prep Type: Dissolved Analysis Batch: 2191129 Prep Batch: 2191129_P

Result Qualifier RL MOL Unit D Prepared Analyzed Dil Faç 20 Nitroguanidine 20 U 2.4 ug/L 07/09/12 14:50 07/10/12 10:28

Client Sample ID: Lab Control Sample Lab Sample ID: G2G090000129C Matrix: Water Prep Type: Dissolved Prep Batch: 2191129_P Analysis Batch: 2191129 Spike LCS LCS %Rec. Added Unit %Rec Limits Analyte Resuit Qualifier D Nitroguanidine 250 73 - 117

240

244

ug/L

ug/L

98

73 - 117

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MS Matrix: Water Prep Type: Dissolved Analysis Batch: 2191129 Prep Batch: 2191129_P Sample Sample Spike MS MS Anaivte Result Qualifler Added Result Qualifier Unit %Rec Limits

250

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MSD Matrix: Water Prep Type: Dissolved Analysis Batch: 2191129 Prep Batch: 2191129 P Sample Sample Spike MSD MSD RPD %Rec. Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits **RPD** Limit Nitroguanidine Ũ 250 20 244 ug/L 98 73 - 117 0.16 15

#### Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

20 U

Lab Sample ID: G2G030000016B Client Sample ID: Method Blank Matrix: Water Prep Type: Total Analysis Batch: 2185016 Prep Batch: 2185016_P MB MB Analyte Qualifier RL MDL Unit Prepared Analyzed Dil Fac Result Ũ 07/06/12 17:23 Nitroglycerin 0.65 0,65 0.33 ug/L 07/03/12 06:00 1 07/06/12 17:23 PETN 0.65 U 0.65 07/03/12 06:00 ug/L 1 0.30 0.20 U 07/06/12 17:23 2-Amino-4,6-dinitrotoluene 0.20 0.017 ug/L 07/03/12 06:00 4-Amino-2,6-dinitrotoluene 0.10 U 07/03/12 06:00 07/06/12 17:23 0.10 0,050 ug/L 0.10 U 07/03/12 06:00 07/06/12 17:23 1.3-Dinitropenzene 0.10 0.050 ug/L 0.10 U 07/06/12 17:23 2.4-Dinitrotoluene 0.050 ug/L 07/03/12 06:00 0.10 2,6-Dinitrotoluene 0.10 U 0.10 0,050 ug/L 07/03/12 06:00 07/06/12 17:23 07/06/12 17:23 **HMX** 0.10 0.10 0.036 ug/L 07/03/12 06:00 07/06/12 17:23 Nitrobenzene 0.10 u 0.10 0.050 ug/L 07/03/12 06:00 07/06/12 17:23 2-Nitrotoluene 0.50 П 0.50 0.088 ug/L 07/03/12 08:00 3-Nitrotoluene 07/03/12 06:00 07/06/12 17:23 0.50 0.50 0.057 ug/L 4-Nitrotoluene u 0.65 0.088 07/03/12 06:00 07/06/12 17:23 0.65 ua/L RDX 07/06/12 17:23 П 0.10 0.036 ug/L 07/03/12 06:00 0.10 Tetryl 0.10 U 0.10 0.050 ug/L 07/03/12 06:00 07/06/12 17:23 07/03/12 06:00 07/06/12 17:23 1,3,5-Trinitrobenzene 0.10 U 0.10 0.030 ug/L 2,4,6-Trinitrotoluene 0.050 ug/L 07/03/12 06:00 07/06/12 17:23 0.10 U 0.10 1 MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 3,4-Dinitrotoluene 79 - 111 07/03/12 06:00 07/06/12 17:23 101

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A) (Continued)

Client Sample ID: Lab Control Sample Lab Sample ID: G2G030000016C Prep Type: Total Matrix: Water Prep Batch: 2185016_P Analysis Batch: 2185016

7 maryolo Datom Liver in			Spike	LCS	LCS				%Rec.
Analyte			Added	Resuit	Qualifier	Unit	D	%Rec	Limits
Nitroglycerin			5.00	5.69		ug/l.		114	85 - 115
PETN			5.00	4.97		ug/L		99	84 - 117
2-Amino-4,6-dinitrotoluene			1.00	1.11		ug/L		111	50 - 155
4-Amino-2,6-dinitrotoluene			1.00	1.10		ug/L		110	55 - 155
1,3-Dinitrobenzene			1.00	1.17		ug/L		117	45 - 160
2,4-Dinitrotoluene			1.00	1.09		ug/L		109	60 - 135
2,6-Dinitrotoluene			1.00	1.09		ug/L		109	60 - 135
HMX			1.00	1.11		ug/L		111	80 - 115
Nitrobenzene			1.00	1.17		ug/L		117	50 - 140
2-Nitrotoluene			1.00	1.08		ug/L		108	45 - 135
3-Nitrotoluene			1,00	1.06		ug/L		106	50 _ 130
4-Nitrotoluene			1.00	1.07		ug/l.		107	50 ₋ 130
RDX			1.00	1.16		ug/L		116	50 - 160
Tetryl			1.00	0.974		ug/L		97	20 - 175
1,3,5-Trinitrobenzene			1.00	1.13		ug/L		113	65 - 140
2,4,6-Trinitrotoluene			1.00	0.988		ug/L		99	50 ₋ 145
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						

79 - 111 3,4-Dinitrotoluene

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)

Client Sample ID: Method Blank Lab Sample ID: G2G090000108B Prep Type: Total Matrix: Solid

Matrix: Solid								1 10b 13b	0 0
Analysis Batch: 2191108								Prep Batch: 219	)1108P
•	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.25	υ	0.25	0.010	mg/kg		07/09/12 12:45	07/10/12 18:06	1
1,3-Dinitrobenzene	0.25	U	0,25	0,0042	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2,4,6-Trinitrotoluene	0,25	U	0,25	0.019	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2,4-Dinitrotoluene	0.25	υ	0,25	0,0053	mg/kg		07/09/12 12:45	07/10/12 16:08	1
2,6-Dinitrotoluene	0.25	U	0.25	0.0073	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2-Amino-4,6-dinitrotoluene	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2-Nitrotoluene	0.25	Ú	0.25	0.013	mg/kg		07/09/12 12:45	07/10/12 16:06	1
3-Nitrotoluene	0.25	U	0.25	0.016	mg/kg		07/09/12 12:45	07/10/12 16:06	1
4-Amino-2,6-dinitrotoluene	0.25	υ	0.25	0.010	mg/kg		07/09/12 12:45	07/10/12 18:06	1
4-Nitrotoluene	0.25	ΰ	0.25	0.025	mg/kg		07/09/12 12:45	07/10/12 16:08	1
нмх	0.25	U	0,25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:06	1
Nitrobenzene	0.25	U	0.25	0.018	mg/kg		07/09/12 12:45	07/10/12 16:06	1
Nitroglycerin	0.50	U	0.50	0.015	mg/kg		07/09/12 12:45	07/10/12 16:06	1
PETN	0.50	U	0.50	0.025	mg/kg		07/09/12 12:45	07/10/12 16:06	1
RDX	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:06	1
Tetryl	0.25	Ú	0.25	0.010	mg/kg		07/09/12 12:45	07/10/12 16:06	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DII Fac
3,4-Dinitrotoluene	102		75 - 115				07/09/12 12:45	07/10/12 16:06	1

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

#### Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

Lab Sample ID: G2G090000 Matrix: Solid	108C						Client	t Sampl		ntrol Sample p Type: Total
Analysis Batch: 2191108									•	h: <b>21</b> 91108_P
			Spike	LCS	LCS				%Rec.	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,3,5-Trinitrobenzene			0.500	0.507		mg/kg		101	81 - 121	
1,3-Dinitrobenzene			0,500	0.517		mg/kg		103	81 - 121	
2,4,6-Trinitrotoluene			0.500	0.445		mg/kg		89	85 - 105	
2,4-Dinitrotoluene	•		0.500	0.499		mg/kg		100	79 - 119	
2,6-Dinitrotoluene			0.500	0,496		mg/kg		99	79 <b>- 1</b> 19	
2-Amino-4,6-dinitrotoluene			0.500	0.502		mg/kg		100	79 - 119	
2-Nitrotoluene			0.500	0.495		mg/kg		99	78 - 118	
3-Nitrotoluene			0.500	0,500		mg/kg		100	77 - 117	
4-Amino-2,8-dinitrotoluene			0.500	0.510		mg/kg		102	81 - 121	
4-Nitrotoluene			0,500	0.497		mg/kg		99	78 - 118	
НМХ			0.500	0.513		mg/kg		103	80 - 120	
Nitrobenzene			0.500	0.520		mg/kg		104	80 - 120	
Nitroglycerin			1.00	1.06		mg/kg		108	76 - 116	
PETN			1.00	1.02		mg/kg		102	76 _ 118	
RDX			0.500	0.500		mg/kg		100	82 - 122	
Tetryl			0.500	0.437		mg/kg		87	83 - 120	
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
3,4-Dinitrotoluene	100		75 - 115							

Lab Sample ID: 240-12752-3 MS

Matrix: Solid

Analysis Batch: 2191108

Client Sample ID: FWG-IDW-SBCOMP3-SO

Prep Type: Total Prep Batch: 2191108_P

MS MS %Rec. Sample Sample Spike Limits Result Qualifier Result Qualifier Unit %Rec Analyte Added 81 - 121 1,3,5-Trinitrobenzene 0.25 U 0,498 0.503 mg/kg 101 0.25 U 0.498 0.523 105 81 - 121 1,3-Dinitrobenzene mg/kg 0.498 0.450 90 65 _ 105 0.25 U mg/kg 2,4,6-Trinitrotoluene 79 - 119 101 2,4-Dinitrotoluene 0.25 U 0.498 0.501 mg/kg 2,6-Dinitrotoluene 0.25 U 0.498 0,506 mg/kg 102 79 - 119 102 79 - 119 2-Amino-4,8-dinitrotoluene 0.25 U 0.498 0.506 mg/kg 101 78 - 118 0.25 U 0.498 0.502 mg/kg 2-Nitrotoluene 3-Nitrotoluene 0,25 U 0.498 0.504 mg/kg 101 77 - 117 0.25 U 103 81 - 121 4-Amino-2.6-dinitrotoluene 0.498 0.514 mg/kg 0.25 Ü 4-Nitrotoluene 0.498 0.497 100 78 - 118 mg/kg 80 - 120 HMX 105 0,25 U 0.498 0.522 mg/kg Nitrobenzene 0.25 U 0.498 0.520 mg/kg 104 80 - 120 107 76 - 116 0.50 U 0.996 1.07 mg/kg Nitroglycenn 101 76 - 116 PETN 0.50 U 0.998 1.00 mg/kg RDX 0.25 U 0.498 0.488 mg/kg 98 82 - 122 Tetryl 0.25 U 0.498 0.418 mg/kg 63 - 120

MS MS

 Surrogate
 %Recovery
 Qualifier
 Limits

 3,4-Dinitrotoluene
 101
 75-115

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Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

#### Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

Lab Sample ID: 240-12752-3 MSD Client Sample ID: FWG-IDW-SBCOMP3-SO Prep Type: Total Matrix: Solid Analysis Batch: 2191108 Prep Batch: 2191108_P RPD %Rec. Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Analyte 1,3,5-Trinitrobenzene 0.25 U 0,500 0.498 mg/kg 100 81 - 121 1.0 20 mg/kg 0.25 U 0.500 0.522 104 81 - 121 0.24 20 1,3-Dinitrobenzene 65 _ 105 0.80 20 89 2,4,6-Trinitrotoluene 0.25 U 0.500 0.446 mg/kg Ú 0,500 0.500 mg/kg 100 79 - 119 0.22 20 0.25 79 - 119 0.71 20 0.500 0.502 mg/kg 100 0.25 IJ

2,4-Dinitrotoluene 2.6-Dinitrotoluene 101 79 - 119 0.53 20 2-Amino-4,6-dinitrotoluene 0,25 Ų 0.500 0.503 mg/kg 78 _ 118 20 2-Nitrotoluene 0.25 Ų 0.500 0.493 mg/kg 99 1.7 0.500 100 77 - 117 0.63 20 3-Nitrotoluene 0.25 U 0.501 mg/kg 103 81 - 121 0.090 20 4-Amino-2,6-dinitrotoluene 0.25 U 0.500 0.513 mg/kg 20 78 - 118 0.76 4-Nitrotoluene 0.25 U 0.500 0.493 mg/kg 99 HMX 0.25 U 0.500 0.516 mg/kg 103 80 - 120 1.1 20 105 80 - 120 0.63 20 Nitrobenzene 0.25 U 0.500 0.524 mg/kg 108 76 - 116 1.2 20 Nitroglycerin 0.50 U 1.00 1.08 mg/kg 76 _ 116 0.10 20 PETN 0.50 U 1.00 1.00 mg/kg 100

0.500

0.500

 MSD
 MSD

 Surrogate
 %Recovery
 Qualifier
 Limits

 3,4-Dinitrotoluene
 101
 75-115

0.25 U

0.25 U

Method: 6010B - Metals (ICP)

RDX

Tetryl

Lab Sample ID: MB 240-49412/1-A Client Sample ID: Method Blank
Matrix: Solid Prep Type: Total/NA

Analysis Batch: 49675 Prep Batch: 49412

0.484

0.411

mg/kg

mg/kg

97

82 - 122

63 - 120

0.47

1.7

20

, = = = = = = = = = = = = = = =									
	МВ	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.0	U	1.0	0.30	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Cobalt	5.0	U	5.0	0.16	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Chromium	0.50	U	0.50	0.20	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Lead	0.30	U	0.30	0.19	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Selenium	0.50	U	0.50	0.45	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Silver	0.50	U	0.50	0.10	mg/Kg		08/29/12 11:17	07/02/12 17:37	1
Vanadium	0.212	J	5.0	0.12	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Barium	0.242	J	20	0.071	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Calcium	34.0	J	500	16	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Сорраг	2.5	U	2.5	0.74	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Magnesium	500	U	500	5.1	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Manganese	1.5	U	1.5	0.074	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Nicke!	0,429	J	4.0	0.27	mg/Kg		06/29/12 11:17	07/02/12 17:37	1
Potassium	20,7	J	500	6.2	mg/Kg		06/29/12 11:17	07/02/12 17:37	1

Lab Sample ID: LCS 240-49412/2-A Client Sample ID: Lab Control Sample

Matrix: Solid Prep Type: Total/NA
Analysis Batch: 49675 Prep Batch: 49412

Spike LCS LCS Result Qualifier D %Rec Limits Added Unit Analyte 94 80 - 120 200 mg/Kg Arsenic 188 80 - 120 Cobalt 50.0 45.1 mg/Kg 90

TestAmerica Canton 7/16/2012

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

### Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-49412/2-A Matrix: Solid Analysis Batch: 49675					Client	Sample	D: Lab Control Sa Prep Type: Tota Prep Batch: 4	al/NA
, <b>,</b>	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chromium	20,0	18.9		mg/Kg		95	80 - 120	
Lead	60.0	46.2		mg/Kg		92	80 - 120	
Selenium	200	187		mg/Kg		94	80 - 120	
Silver	5.00	5.06		mg/Kg		101	80 - 120	
Vanadium	50.0	49.8		mg/Kg		100	80 - 120	
Barium	200	211		mg/Kg		105	80 - 120	
Calcium	5000	5110		mg/Kg		102	80 _ 120	
Copper	25.0	23.4		mg/Kg		93	80 - 120	
Magnesium	5000	4880		mg/Kg		98	80 . 120	
Manganese	50.0	46,5		mg/Kg		93	80 _ 120	
Nickel	50,0	46.0		mg/Kg		92	80 - 120	
Potassium	5000	4990		mg/Kg		100	60 - 120	

Lab Sample ID: 240-12752-3 MS

Matrix: Solid

Analysis Batch: 50003

Client Sample ID: FWG-IDW-SBCOMP3-SO Prep Type: Total/NA

Prep Batch: 49412

Alialysis balcii, buvus									1 TOP DUTCH TOT I
-	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Arsenic	11		245	229		mg/Kg	₿	89	75 - 125
Cobalt	10		61.4	72.0		mg/Kg	ø	101	75 ₋ 125
Chromium	15		24.5	40.0		mg/Kg	Ÿ	103	75 ₋ 125
Lead	11		61.4	62.6		mg/Kg	ø	84	75 - 125
Setenium	0.61	U	245	212		mg/Kg	ø	86	75 ₋ 125
Silver	0.61	U	6.14	5.61		mg/Kg	₽	91	75 - 125
Vanadium	17	В	61.4	78,0		mg/Kg	¢	99	75 - 125
Barium	120	В	245	367		mg/Kg	₽	102	75 ₋ 125
Calcium	16000	В	6140	25800	F	mg/Kg	Ü	162	75 _ 125
Copper	21		30.7	50.3		mg/Kg	₽	95	75 _ 125
Magnesium	4500		6140	11000		mg/Kg	ø	106	75 ₋ 125
Manganese	430		61.4	472	4	mg/Kg	ť	63	75 - 125
Nickel	24	В	81.4	87.9		mg/Kg	₿	103	75 - 125
Potassium	1500	В	6140	7510		mg/Kg	ø	98	75 - 125

Lab Sample ID: 240-12752-3 MSD

Matrix: Solid

Analysis Batch: 50003

Client Sample ID: FWG-IDW-SBCOMP3-SO

Prep Type: Total/NA

Prep Batch: 49412

Alialysis Datell, byous										- Dutoiii	
,	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	11		245	225		mg/Kg	<u> </u>	87	75 ₋ 125	2	20
Cobalt	10		61.4	70.2		mg/Kg	Ü	98	75 - 125	3	20
Chromium	15		24.5	39.5		mg/Kg	ø	101	75 - 125	1	20
Lead	11		61.4	61,3		mg/Kg	₿	81	75 ₋ 125	2	20
Selenium	0.61	U	245	207		mg/Kg	₽	84	75 - 125	2	20
Silver	0.61	U	6.14	5.48		mg/Kg	ø	89	75 - 125	2	20
Vanadium	17	B	61.4	78,4		mg/Kg	₿	100	75 - 125	Ó	20
Barium	120	В	245	360		mg/Kg	₿	99	75 - 125	2	20
Calcium	16000	В	6140	29200	F	mg/Kg	₿	217	75 ₋ 125	12	20
Copper	21		30.7	48.3		mg/Kg	贷	88	75 - 125	4	20
Magnesium	4500		6140	10700		mg/Kg	₿	101	75 - 125	2	20
Manganese	430		61.4	672	4 F	mg/Kg	₿	389	75 _ 125	35	20

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### Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-12752-3 MSD						Clie	nt Sam	iple ID: I	FWG-IDW-	SBCOM	P3-SO
Matrix: Solid									Prep T	ype: To	tal/NA
Analysis Batch: 50003									Prep	Batch:	49412
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifler	Unit	D	%Rec	Limits	RPD	Limit
Nickel	24	В	61.4	84.7		mg/Kg	ø	98	75 - 125	4	20
Potassium	1500	В	6140	7440		mg/Kg	₽	97	75 - 125	1	20

Lab Sample ID: MB 240-49727/2-A

Matrix: Water

Analysis Batch: 50003

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 49727

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dif Fac
Arsenic	0,50	U	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:20	1
Cadmium	0.10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 17:20	1
Chromium	0.50	U	0.50	0,0022	mg/L		07/03/12 10:01	07/05/12 17:20	1
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:20	1
Selenium	0.25	U	0.25	0,0041	mg/L		07/03/12 10:01	07/05/12 17:20	1
Silver	0.50	U	0.50	0,0022	mg/L		07/03/12 10:01	07/05/12 17:20	1
Barlum	10	Ú	10	0.00067	mg/L	•	07/03/12 10:01	07/05/12 17:20	1
Chromium Lead Selenium Silver	0.50 0.50 0.25 0.50	U U U	0.50 0.50 0.25 0.50	0.0022 0.0019 0.0041 0.0022	mg/L mg/L mg/L mg/L		07/03/12 10:01 07/03/12 10:01 07/03/12 10:01 07/03/12 10:01	07/05/12 17:20 07/05/12 17:20 07/05/12 17:20 07/05/12 17:20	1 1 1 1 1

Lab Sample ID: LCS 240-49727/3-A

Matrix: Water

Analysis Batch: 50003

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 49727

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	2.00	2.16		mg/L		108	50 - 150	
Cadmium	0,0500	0.0524	J	mg/L		105	50 - 150	
Chromium	0.200	0.206	J	mg/L		103	50 - 150	
Lead	0,500	0.485	J	mg/L		97	50 - 150	
Selenium	2.00	2.16		mg/L		108	50 - 150	
Silver	0.0500	0.0551	J	mg/L		110	50 - 150	
Barium	2.00	2.22	J	mg/L		1 <b>1</b> 1	50 - 150	

Lab Sample ID: MB 240-50314/1-A

Matrix: Water

Client Sample ID: Method Blank Prep Type: Total Recoverable

Pren Batch: 50314

Analysis Batch: 50581								Prep Batcr	1: 50314
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10	3.2	ug/L	6.77	07/10/12 08:18	07/11/12 13:20	1
Cobalt	7.0	U	7.0	1.7	ug/L		07/10/12 08:18	07/11/12 13:20	1
Chromium	5.0	U	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:20	1
Lead	3.0	U	3.0	1.9	ug/L		07/10/12 08:18	07/11/12 13:20	1
Sefenium	5.0	U	5,0	4.1	ug/L		07/10/12 08:18	07/11/12 13:20	1
Silver	5.0	U	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:20	1
Vanadium	7.0	Ü	7.0	0.64	ug/L		07/10/12 08:18	07/11/12 13:20	1
Barium	0.891	J	200	0.67	ug/L		07/10/12 08:18	07/11/12 13:20	1
Calcium	235	J	5000	130	ug/L		07/10/12 08:18	07/11/12 13:20	1
Copper	25	Ū	25	4.5	ug/L		07/10/12 08:18	07/11/12 13:20	1
Magnesium	47.4	J	5000	34	ug/L		07/10/12 08:18	07/11/12 13:20	1
Manganese	1.09	t	15	0.41	ug/L		07/10/12 08:18	07/11/12 13:20	1
Nickel	40	U	40	3.2	ug/L		07/10/12 08:18	07/11/12 13:20	1
Potassium	191	J	5000	72	ug/L		07/10/12 08:18	07/11/12 13:20	1

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

### Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-50314/2-A Matrix: Water Analysis Batch: 50581					Client	ID: Lab Control Sampl Type: Total Recoverabl Prep Batch: 5031	
	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Arsenic	2000	2040		ug/L		102	80 _ 120
Cobalt	500	506		ug/L		101	80 - 120
Chromium	200	205		ug/L		103	80 - 120
Lead	500	509		ug/l.		102	80 _ 120
Selenium	2000	2070		ug/l.		103	80 - 120
Silver	50.0	52.4		ug/L		105	80 - 120
Vanadium	500	505		ug/L		101	80 _ 120
Barium	2000	2170		ug/l.		108	80 - 120
Calcium	50000	52400		ug/L		105	80 - 120
Copper	250	254		ug/L		102	80 - 120
Magnesium	50000	51800		ug/L		104	80 - 120
Manganese	500	522		ug/L		104	80 _ 120
Nickel	500	476		ug/L		95	80 - 120
Potassium	50000	52100		ug/L		104	80 ₋ 120

Lab Sample ID: 240-12752-4 MS

Matrix: Water

Analysis Batch: 50581

Client Sample ID: FWG-IDW-TANK3-GW

Prep Type: Total Recoverable Prep Batch: 50314

Allalysis Datch, 50501									t top baton.	00011
•	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualiffer	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	8.3	J	2000	2060		ug/l.		103	75 - 125	
Cobalt	7.0	U	500	506		ug/L		101	75 - 125	
Chromium	3.7	J	200	208		ug/L		102	75 ₋ 125	
Lead	3,0	U	500	507		ug/L		101	75 - 125	
Selenium	5.0	U	2000	2070		ug/L		103	75 ₋ 125	
Silver	5.0	U	50.0	52.1		ug/L		104	75 ₋ 125	
Vanadium	1.9	J	500	506		ug/L		101	75 _ 125	
Barium	56	JВ	2000	2230		ug/L		109	75 ₋ 125	
Calcium	43000	В	50000	94600		ug/L		104	75 - 125	
Copper	25	U	250	256		ug/L		103	75 ₋ 125	
Magnesium	10000	В	50000	62200		ug/L		104	75 - 125	
Manganese	110	В	500	628		ug/L		104	75 - 125	
Nickel	3.2	J	500	478		ug/L		96	75 ₋ 125	
Potassium	19000	В	50000	70900		ug/L		105	75 - 125	

Lab Sample ID: 240-12752-4 MSD

Matrix: Water

Analysis Batch: 50581

Client Sample ID: FWG-IDW-TANK3-GW

Prep Type: Total Recoverable

Prep Batch: 50314

Milatysis Datelli, 30301									יויי	-410	
•	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	8,3	J	2000	1990		ug/L		99	75 - 125	3	20
Cobalt	7.0	U	500	487		ug/l.		97	75 _ 125	4	20
Chromium	3.7	J	200	200		ug/L		98	75 - 125	4	20
Lead	3,0	U	500	486		ug/L		97	75 _ 125	4	20
Selenium	5.0	U	2000	1990		ug/L		100	75 - 125	4	20
Silver	5.0	U	50.0	50.4		ug/L		101	75 - 125	3	20
Vanadium	1.9	J	500	488		ug/L		97	75 - 125	4	20
Barium	56	JB	2000	2170		ug/L		106	75 - 125	3	20
Calcium	43000	В	50000	91300		ug/L		98	75 - 125	4	20
Copper	25	U	250	250		ug/L		100	75 - 125	3	20

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Z (e

Client Sample ID: Method Blank

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Lab Sample ID: LB 240-49653/1-D LB

Lab Sample ID: 240-12752-4 M Matrix: Water Analysis Batch: 50581	SD						Client S	•	D: FWG-ID! Type: Tota		erable
r many one Battern coocer	Sample	Sample	Spike	MSD	MSD				%Rec.	Daton.	RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Magnesium	10000	В	50000	60000	·	ug/L		100	75 - 125	4	20
Manganese	110	В	500	608		ug/L		100	75 - 125	3	20
Nicket	3.2	j	500	458		ug/L		92	75 - 125	4	20
Potassium	19000	В	50000	69400		ug/L		102	75 - 125	2	20

Matrix: Water Prep Type: TCLP Analysis Batch: 50003 Prep Batch: 49727 LB LB Analyte Result Qualifler MDL Unit Analyzed Prepared Dil Fac Arsenic 0.50 U 0.50 0.0032 mg/L 07/03/12 10:01 07/05/12 17:16 Cadmium 0.10 U 0.10 0.00066 mg/L 07/03/12 10:01 07/05/12 17:16 Chromium 0.50 U 0.50 0.0022 mg/L 07/03/12 10:01 07/05/12 17:16 Lead 0.50 U 0.50 0.0019 mg/L 07/03/12 10:01 07/05/12 17:16 Selenium 0.25 U 0.25 0.0041 mg/L 07/03/12 10:01 07/05/12 17:16 Silver 0.50 U 0.50 0.0022 mg/L 07/03/12 10:01 07/05/12 17:16 Barium 0.00405 J 0.00067 mg/L 07/03/12 10:01 07/05/12 17:16

### Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-49412/1-A							Client Sa	mple ID: Metho	d Blank
Matrix: Solid								Prep Type: 1	otal/NA
Analysis Batch: 50210								Prep Batch	1: 49412
	MB	мв						·	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Faç
Beryllium	0.10	U	0.10	0.047	mg/Kg		06/29/12 11:17	07/09/12 09:37	1

Lab Sample ID: LCS 240-49412/3-A Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Total/NA Analysis Batch: 49993 Prep Batch: 49412 Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit Limits D %Rec Aluminum 1000 968 mg/Kg 97 80 - 120 Antimony 10.0 9.29 mg/Kg 93 68.113 Cadmlum 100 mg/Kg 88.4 88 74 - 110 Iron 1010 1000 mg/Kg 80 - 120 101 Sodium 1000 933 mg/Kg 93 80 - 120 Thallium 25,0 26.9 mg/Kg 108 71 - 110 Zinc 100 88.4 mg/Kg 88 72 - 113

	Lab Sample ID: LCS 240-49412/3-A					Client	Sample	ID: Lab C	ontrol Sample
İ	Matrix: Solid							Prep 7	ype: Total/NA
	Analysis Batch: 50210							Prep	Batch: 49412
		Spike	LCS	LCS				%Rec.	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Beryllium	100	100		mg/Kg		100	79 - 110	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 6020 - Metals (ICP/MS) (Continued)

	Client Sample ID: FWG-IDW-SBCOMP3-SO
Lab Sample ID: 240-12752-3 MS	Client Sample ID: FWG-IDW-SBCOMF3-30
Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 49993	Prep Batch: 49412

Thialysis Batom todas	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Aluminum	11000	В	1180	14900	4	mg/Kg	₽	365	70 - 130
Antimony	0.13	JB	11.8	3.40	F	mg/Kg	₩	28	75 - 125
Cadmium	0.14		118	96.7		mg/Kg	₽	82	58 ₋ 110
Iron	25000	B	1180	28500	4	mg/Kg	ø	335	70 - 130
Sodium	90	JB	1180	1100		mg/Kg	≎	86	70 - 130
Thallium	0.17	J	29.5	28.6		mg/Kg	₽	96	62 _ 110
Zinc	63	В	118	154		mg/Kg	❖	77	10 - 199

Client Sample ID: FWG-IDW-SBCOMP3-SO Lab Sample ID: 240-12752-3 MS Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 50210 %Rec. Spike MS MS Sample Sample

Limits Result Qualifier Added Result Qualifier D %Rec Anaiyte ₽ 58 - 112 0.57 118 100 mg/Kg 84 Beryllium

Client Sample ID: FWG-IDW-SBCOMP3-SO Lab Sample ID: 240-12752-3 MSD Prep Type: Total/NA

Matrix: Solid

Prep Batch: 49412 Analysis Batch: 49993

Aliaiyala Datoli, 70000											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RÞD	Limit
Aluminum	11000	В	1180	13700	4	mg/Kg	<u> </u>	262	70 - 130	9	20
Antimony	0.13	JB	11.8	3.37	F	mg/Kg	₿	27	75 - 125	1	20
Cadmium	0.14		118	94.6		mg/Kg	±	80	58 - 110	2	20
Iron	25000	В	1180	27100	4	mg/Kg	ψ	220	70 - 130	5	20
Sodium	90	JB	1180	1100		mg/Kg	Φ	86	70 - 130	0	20
Thallium	0.17	J	29.5	28.1		mg/Kg	₩	95	62 - 110	2	20
Zinc	63	В	118	152		mg/Kg	₽	75	10 - 199	1	20

Client Sample ID: FWG-IDW-SBCOMP3-SO Lab Sample ID: 240-12752-3 MSD Prep Type: Total/NA Matrix: Solid Prep Batch: 49412 Analysis Batch: 50210 MSD MSD RPD Spike Sample Sample Limits RPD Limit Result Qualifier D %Rec Result Qualifler Added Unit Analyte

58 - 112 20 118 Beryllium 0.57 99.4 mg/Kg

Lab Sample ID: MB 240-50314/1-A

Matrix: Water

Analysis Batch: 50556

	Client Sample ID: Method Blank
	Prep Type: Total Recoverable
	Prep Batch: 50314
MB MB	

Anaiyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Aluminum	50	U	50	19	ug/L		07/10/12 08:18	07/11/12 13:13	1
Antimony	2,0	U	2.0	0,13	ug/L		07/10/12 08:18	07/11/12 13:13	1
Beryllium	1.0	U	1.0	0.20	ug/L		07/10/12 08:18	07/11/12 13:13	1
Cadmium	1.0	U	1,0	0.13	ug/L		07/10/12 08:18	07/11/12 13:13	1
tron	100	U ^	100	26	ug/L		07/10/12 08:18	07/11/12 13:13	1
Sodium	55.2	J	1000	6.9	ug/L		07/10/12 08:18	07/11/12 13:13	1
Thallium	0.293	J	2,0	0.14	ug/L		07/10/12 08:18	07/11/12 13:13	1
Zinc	9.16	J	20	2.3	ug/L		07/10/12 08:18	07/11/12 13:13	1

Prep Batch: 49412

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Method: 6020 - Metals (ICP/MS) (Continued)

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 240-50314/3-A Prep Type: Total Recoverable Matrix: Water

Prep Batch: 50314 Analysis Batch: 50556

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aluminum	10000	9340	**	ug/L		93	80 - 120	
Antimony	100	93,3		ug/L		93	80 - 120	
Beryllium	1000	938		ug/L		94	80 _ 120	
Cadmium	1000	927		ug/L		93	80 - 120	
Iron	10000	9670	٨	ug/L		97	80 ₋ 120	
Sodium	10000	10100		ug/L		101	80 - 120	
Thallium	250	253		ug/L		101	80 - 120	
Zinc	1000	990		ug/L		99	80 - 120	

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MS Prep Type: Total Recoverable

Matrix: Water

Prep Batch: 50314

Analysis Batch: 50556

	Sample S	Sample	Spike	MS	MS				%Rec.	
Analyte	Result (	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aluminum	580		10000	9240		ug/L		87	63 - 128	
Antimony	2.3		100	89.9		ug/L		88	44 - 153	
Beryllium	1.0 l	J	1000	894		ug/L		89	77 - 124	
Cadmium	1.0 l	J	1000	866		ug/L		87	78 - 117	
Iron	1300 4	١.	10000	10300	٨	ug/L		90	22 - 169	
Sodium	28000 E	3	10000	35200	F	ug/L		74	80 - 120	
Thallium	0.58 J	JВ	250	238		ug/L		95	69 - 117	
Zinc	11 J	JB	1000	901		ug/L		89	49 - 156	

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MSD Prep Type: Total Recoverable

Matrix: Water

Prep Batch: 50314 Analysis Batch: 50556 RPD Sample Sample Spike MSD MSD %Rec. Limit **RPD** Result Qualifler Added Result Qualifier Unit %Rec Limits Analyte 92 63 - 128 5 20 580 10000 9750 ug/L Aluminum ug/L 5 20 92 44.153 Antimony 100 94.2 2.3 20 77 - 1245 Beryllium 1.0 U 1000 939 ug/L 94 20 1.0 U 1000 898 ug/L 90 78 - 117 Cadmium 22.169 20 1300 ^ 10000 10900 ^ ug/L iron 20 80 - 120 Sodium 28000 B 10000 37600 ug/L 98 69 - 117 20 Thallium 0.58 JB 250 250 ug/L 100 11 JB 1000 965 ug/L 49 - 156 20 Zinc

Method: 7470A - Mercury (CVAA)

Client Sample ID: Method Blank Lab Sample ID: MB 240-49356/1-A Prep Type: Total/NA Matrix: Water

Prep Batch: 49356 Analysis Batch: 49867

MB MB Analyzed Dll Fac MDL Unit Prepared Result Qualifier RL Analyte 08/29/12 15:10 07/03/12 12:55 0.20 U 0.20 0.12 ug/L Mercury

TestAmerica Canton 7/16/2012

Project/Site: RVAAP (OH) - IDW

Lab Sample ID: LCS 240-49356/2-A							Clie	nt Sample	ID: Lab Control	
Matrix: Water									Prep Type:	
Analysis Batch: 49867									Prep Batcl	h: 49356
			Spike	LCS LCS		11-44		N 6/ Dec	%Rec. Limits	
Analyte			Added 5.00	Result Qual	inter	Unit ug/L		9 %Rec 89	81 - 123	
Mercury			5,00	4.47		ug/L		08	012 120	
Lab Sample ID: MB 240-49732/2-A								Client Sa	ample ID: Metho	d Blank
Matrix: Water									Prep Type:	
Analysis Batch: 49962									Prep Batc	h: 49732
<b>,</b>	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit		D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07	7/03/12 14:30	07/05/12 13:46	1
Lab Sample ID: LCS 240-49732/3-A							Clie	nt Sample	ID: Lab Control	
Matrix: Water									Prep Type:	
Analysis Batch: 49962									Prep Batcl	h: 49732
			Spike	LCS LCS			_		%Rec.	
Analyte			Added	Result Qual	lifier	Unit			Limits	
Mercury			0.00500	0.00452		mg/l.		90	50 - 150	
Lab Sample ID: LB 240-49653/1-E LB								Client Sa	ample ID: Metho	d Blank
Matrix: Water									Prep Typ	
Analysis Batch: 49962									Prep Batc	
maryolo Batom Novel	LB	L8							•	
Analyte	Result	Qualifier	RL	MDL	Unit		D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07	7/03/12 14:30	07/05/12 13:45	1
lethod: 7471A - Mercury (CVAA	)									
Lab Sample ID: MB 240-49425/1-A								Client Sa	ample ID; Metho	od Blank
Matrix: Solid									Prep Type:	Total/NA
Analysis Batch: 50031									Prep Batc	h: 49425
•	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit		D	Prepared	Analyzed	Dil Fac
Mercury	0.10	U	0.10	0.015	mg/Kg		06	5/29/12 14:00	07/05/12 16:24	1
Lab Sample ID: LCS 240-49425/2-A							Clie	nt Sample	ID: Lab Control	Sample
Matrix: Solid								•	Prep Type:	
Analysis Batch: 50031									Prep Batc	
manyona patom occor			Spike	LCS LCS					%Rec.	
Analyte			Added	Result Qual	lifier	Unit	1	O %Rec	Limits	
Mercury			0.833	0.736	274 10.14	mg/Kg		88	73 - 121	
Lab Sample ID: 240-12752-3 MS						CI	ient Sa	ample ID: F	WG-IDW-SBCO	MP3-SO
Matrix: Solid						٥.,			Prep Type:	
Analysis Batch: 50031									Prep Batc	
Analysis Butviir 99991									•	
	ample Sam	pie	Spike	MS MS					%Rec.	

Added

0.198

Result Qualifier

0.187

Unit

mg/Kg

D

 $\overline{\phi}$ 

%Rec

82

Limits

11 - 192

Result Qualifier

0.027 J

Analyte

Mercury

Client Sample ID: Lab Control Sample

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Lab Sample ID: LCS 240-49569/1

Matrix: Solid

TestAmerica Job ID: 240-12752-1

Method: 7471A - Mercury (CVA	AA) (Continued)
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Lab Sample ID: 240-12752-3 MSD Matrix: Solid						Clier	nt Sam	ple ID: I	FWG-IDW- Prep 1	SBCOMF	
Analysis Batch: 50031									Prep	Batch:	49425
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.027	J	0.196	0.189		mg/Kg	₽	83	11 - 192	1	20

## Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 240-49377/1 Matrix: Solid					Client	t Sample	ID: Lab Control Sample Prep Type: Total/NA
Analysis Batch: 49377	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Flashpoint	81.0	82.00		Degrees F		101	97 - 103

Matrix: Water							Prep 1	Гуре: Total/NA
Analysis Batch: 49569								
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Flashpoint	81.0	82.00	A south full	Degrees F		101	97 _ 103	•

## Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-49572/1-A Matrix: Water											Client Sa	mple ID: Metho ۱ : Prep Type	
Analysis Batch: 49633												Prep Batcl	ո։ 49572
Analysis Baton. 40000	MB	MB											
Analyte	Result	Qualifier		RL		MDL	Unit		D	P	repared	Anaiyzed	Dil Fac
Cyanide, Total	0,010	Ū		0.010	0.0	0050	mg/L			07/0	2/12 09:10	07/02/12 13:00	1
Lab Sample ID: LCS 240-49572/2-A									С	lient	Sample I	D: Lab Control	Sample
Matrix: Water												Prep Type: 1	Γotal/NA
Analysis Batch: 49633												Prep Batcl	h: 49572
•			Spike		LCS	LCS						%Rec.	
Analyte			Added		Result	Quai	lifler	Unit		D	%Rec	Limits	
Cyanide, Total	4 400 00000		0.0449		0,0465			mg/L		_	103	69 - 118	
Lab Sample ID: MRL 240-49633/12 MRL									С	lient	Sample i	D: Lab Control	Sample
Matrix: Water												Prep Type: 1	Γotal/NA
Analysis Batch: 49633													
•			Spike		MRL	MRL						%Rec.	

Analysis Batch: 49633	Spike	MRL	MRL				%Rec.	
Analyte Cyanide, Total	Added 0.0100	Result 0.0102	Qualifier	Unit mg/L	D	%Rec 102	Limits 70 - 130	
Lab Sample ID: MB 240-50183/1-A						Client S	ample ID:	Method Blank

Analysis Batch: 50243								Prep Batch	า: 50183
•	MB	MB							
Analyte	Result	Qualifler	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.49	U	0.49	0.098	mg/Kg		07/09/12 08:07	07/09/12 10:23	1

Prep Type: Total/NA

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Lab Sample ID: LCS 240-49677/2-A

Method: 9012A - Cyanide, Total a	nd/or A	menabl	e (Contin	nued)								
Lab Sample ID: LCS 240-50183/2-A								CI	ient	Sample	ID: Lab Control	Sample
Matrix: Solid											Prep Type:	「otal/NA
Analysis Batch: 50243											Prep Batc	h: 50183
•			Spike	LCS	LCS						%Rec.	
Analyte			Added	Result	Qua	tifier	Unit		D	%Rec	Limits	
Cyanide, Total			2.22	2.20			mg/Kg			99	68 - 123	
- Lab Sample ID: MRL 240-50243/6 MRL								ÇI	ient	Sample	ID: Lab Control	Sample
Matrix: Solid											Prep Type: ⁻	Γotal/NA
Analysis Batch: 50243												
· · · · · · · · · · · · · · · · · · ·			Spike	MRL	MRL						%Rec.	
Analyte			Added	Result	Qua	lifier	Unit		D	%Rec	Limits	
Cyanide, Total			0,0100	0.00849	J	***************************************	mg/L			85	70 - 130	
Method: 9034 - Sulfide, Acid solu	ble and	Insolui	ole (Titrin	netric)								
Lab Sample ID; MB 240-49677/14-A										Client Sa	ample ID: Metho	d Blank
Matrix: Water											Prep Type:	otal/NA
Analysis Batch: 49769											Prep Batc	
	MB	MB									•	
Analyte	Result	Qualifier		RL	MDL	Unit		D	Pi	repared	Analyzed	Dii Fac
Sulfide	3.0	U		3.0	0.94	mg/L			07/0:	3/12 07:56	07/03/12 13:48	1

Client Sample ID: Method Blank Lab Sample ID: MB 240-49677/1-A Prep Type: Total/NA Matrix: Solid Prep Batch: 49677 Analysis Batch: 49769 MB MB RL MDL Unit Prepared Analyzed Dif Fac Analyte Result Qualifier 07/03/12 07:56 07/03/12 13:48 30 22 mg/Kg Sulfide 30 U Client Sample ID: Lab Control Sample Lab Sample ID: LCS 240-49677/15-A Prep Type: Total/NA Matrix: Water

Prep Batch: 49677 Analysis Batch: 49769 Spike LCS LCS Added Result Qualifier Unit %Rec Limits Analyte 105 70 - 130 8,27 8.67 mg/L Sulfide

Prep Type: Total/NA Matrix: Solid Prep Batch: 49677 Analysis Batch: 49769 LCS LCS Spike Result Qualifier %Rec Limits Added Unit Analyte 95 70 - 130 83.2 79.1 mg/Kg Sulfide

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MS Matrix: Water Prep Type: Total/NA Prep Batch: 49677 Analysis Batch: 49769 Sample Sample Spike MS MS %Rec. Limits Result Qualifler Added Result Qualifier Unit %Rec Analyte 3.0 U 8.27 7.87 95 27 - 124 Sulfide mg/L

TestAmerica Canton 7/16/2012

Client Sample ID: Lab Control Sample

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Lab Sample ID; 240-127524 MSD   Matrix: Water Analysis Batch: 49799   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sample   Sam	Method: 9034 - Sulfide, Acid:	soluble	and Insolu	ıble (Titri	metric) ((	Continue	ed)		11112 Au			
Analysis Batch: 49769   Result Gualifier   Added   Result Gualifier   Unit   D Wate   Limits   RPD   Limits   Lab Sample   D; LCS 240-49216/2   Lab Cantrol Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-49216/2   Lab Sample   D; LCS 240-12752-4 DU   Matrix: Water   Analysis Batch: 49216   Result   Gualifier   Unit   D Water   Lab Sample   D; LCS 240-12752-4 DU   Matrix: Water   Analysis Batch: 49218   Result   Gualifier   Unit   D Water   Lab Sample   D; LCS 240-49470/2   Lab Sample   D; LCS 240-49470/2   Lab Sample   D; LCS 240-49470/2   Matrix: Solid   Analysis Batch: 49470   Result   Gualifier   Unit   D Water   D; Lab Control Sample   D; LCS 240-49470/2   Matrix: Solid   Analysis Batch: 2191104   Result   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   D Water   Cusilier   Value   Cusilier   Value   Cusilier   Value   Cusilier   Value   Cusilier   Value   Cusilier   Value   Cusilier   Value   Cusilier   Value   Cusilier   Value   Cusilier   Value   Cusilier	Lab Sample ID: 240-12752-4 MSD			(·	<u>, , , , , , , , , , , , , , , , , , , </u>		·,	Client	Sample			
Mothod: 9040B - pH	Analysis Batch: 49769											
Method: 9040B - pH		Sample	Sample	Spike	MSD	MSD				-		RPD
Lab Sample   D; LCS 240-49216/2		Resul	t Qualifier	Added	Resul	t Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lab Sample ID: LCS 240-49216/2   Matrix: Water   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analyte   Analy	Sulfide	3.0	U	8.27	7.87	7	mg/L		95	27 - 124	0	20
Matrix: Water	Method: 9040B - pH											
Spike   LCS   LCS   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature   Mature	Matrix: Water							Clie	nt Sampl			-
Analysis   Added   Result   Qualifier   Unit   D   %Rec   Limits   Frep Type: Total/N	Analysis Batch: 49216			0	1.00							
DH	Analyte			-			Hatt	n	0/ Da-			
Matrix: Water			/				_					
Matrix: Water	Lab Sample ID: 240-12752-4 DU							Client	Sample i	ID: FWG-IDV	V-TANI	K3-GW
Analysis Batch: 49216	<u> </u>							-110111	ouitipio i			
Analyte	Analysis Batch: 49216											
Method: 9045C - pH		Sample	Sample		DU	UDU						RPD
Lab Sample ID: LCS 240-49470/2					Result	Qualifier		۵			RPD	Limit
Lab Sample ID: LCS 240-49470/2   Spike   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS   LCS	рН	8.39			8.390		SU				ō	20
Matrix: Solid   Analysis Batch: 49470	Method: 9045C - pH											
Added   Result   Qualifier   Unit   D   %Rec   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits   Limits	Matrix: Solid							Clien	t Sample			
Corrostvity   7.49   7.470   SU   100   97 - 103				Spike	LCS	LCS				%Rec.		
Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050								D	%Rec	Limits		
Lab Sample ID: G2G090000104B Matrix: Solid Analysis Batch: 2191104    MB   MB   MB   MB   MB   MB   MB   M	Corrosivity			7.49	7.470		SU		100	97 _ 103		
Matrix: Solid   Analysis Batch: 2191104   MB   MB   MB   Analyte   Result   Qualifier   RL   MDL   Unit   D   Prepared   Analyzed   Dil Fa   Fa   Fa   Fa   Fa   Fa   Fa   Fa	Method: WS-WC-0050 - Nitroc	ellulos	e as N by V	VS-WC-00	)50							
Analysis Batch: 2191104    MB   MB   MB   MB   MB   MB   MB   M	-								Client S	Sample ID: N	Method	Blank
Analyte   Result   Qualifier   RL   MDL   Unit   D   Prepared   Analyzed   Dil Fa												
Analyte	Analysis Batch: 2191104									Prep Batcl	n: 2191	104_P
Nitrocellulose	Analida	В			D.I	NIDI 11-14						B.: F
Matrix: Solid         Prep Type: Total Analysis Batch: 2191104           Analyte         Added Nesult Nitrocellulose         LCS LCS         LCS LCS         KRec.         Amelyte         Added Nesult Qualifier         Unit         D %Rec         Limits           Nitrocellulose         50.7         42.2         mg/kg         83         34 - 115           Lab Sample ID: 240-12752-3 MS         Client Sample ID: FWG-IDW-SBCOMP3-SC Matrix: Solid           Analysis Batch: 2191104         Prep Type: Total Analysis Batch: 2191104           Sample Sample Sample Spike MS MS         MS MS           Analyte         Result Qualifier Added Result Qualifier Unit D %Rec Limits							)					DII Fac
Analysis Batch: 2191104    Spike   LCS   LCS								Clien	t Sample			•
Spike   LCS   LCS												
Analyte Added Result Qualifier Unit D %Rec Limits  Nitrocellulose 50.7 42.2 mg/kg 83 34 - 115  Lab Sample ID: 240-12752-3 MS  Matrix: Solid Prep Type: Tota  Analysis Batch: 2191104  Sample Sample Sample Spike MS MS Result Qualifier Unit D %Rec Limits  Viliant Sample ID: FWG-IDW-SBCOMP3-SC Prep Type: Tota  Prep Batch: 2191104_I  Result Qualifier Added Result Qualifier Unit D %Rec Limits	Allaiysis Datcii. 2191104			Snika	1.08	108				-	1: 2191	104_P
Nitrocellulose 50.7 42.2 mg/kg 83 34 - 115  Lab Sample ID: 240-12752-3 MS  Matrix: Solid Prep Type: Tota Analysis Batch: 2191104  Sample Sample Spike MS MS  Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits	Analyte			-			Unit	n	%Rec			
Matrix: Solid Analysis Batch: 2191104  Sample Sample Spike MS MS  Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits								<del>-</del>				
Analysis Batch: 2191104  Sample Sample Spike MS MS %Rec.  Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits							Ci	ient Sar	nple ID:			
Sample Sample Spike MS MS %Rec.  Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits												
	•	Sample	Sample	Spike	MS	MS				-		
Nitrocellulose 17 JB 843 232 mono 8 24 34 445	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
	Nitrocellulose	1.7	JB	64.3	23.2		mg/kg	ψ	34	34 - 115		

Client Sample ID: FWG-IDW-SBCOMP3-SO

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Lab Sample ID: 240-12752-3 MSD

Matrix: Solid									Pr	ер Туре:	Total	
Analysis Batch: 2191104									Prep Bate	:h: 2191	104_P	
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Quailfier	Unit	D	%Rec	Limits	RPD	Limit	
Nitrocellulose	17	JB	64.6	16.5	N	ma/ka	<del>\$</del>	23	34 - 115	34	71	

Client Sample ID: Method Blank Lab Sample ID: G2G110000012B Prep Type: Total Matrix: Water Prep Batch: 2193012_P Analysis Batch: 2193012 мв мв DII Fac Analyzed MDL Unit Prepared

RLAnalyte Result Qualifier 07/11/12 06:00 07/11/12 13:01 Nitrocellulose 2.0 Ü 2.0 0.48 mg/L

Client Sample ID: Lab Control Sample Lab Sample ID: G2G110000012C Prep Type: Total Matrix: Water Prep Batch: 2193012_P Analysis Batch: 2193012 Spike LCS LCS %Rec. Result Qualifier %Rec Limits Analyte Added Unit 26 - 144 Nitrocellulose 5.07 5.41 mg/L 107

Client Sample ID: FWG-IDW-TANK3-GW Lab Sample ID: 240-12752-4 MS Prep Type: Total Matrix: Water Prep Batch: 2193012_P Analysis Batch: 2193012

Spike MS MS %Rec. Sample Sample Limits Result Qualifier %Rec Result Qualifier Added Unit 100 26 - 144 Nitrocellulose 2.0 U 5.07 5,26 mg/L

Lab Sample ID: 240-12752-4 MSD Client Sample ID: FWG-IDW-TANK3-GW Prep Type: Total Matrix: Water Prep Batch: 2193012_P Analysis Batch: 2193012 RPD Sample Sample Spike MSD MSD %Rec. Limits RPD Limit Analyte Result Qualifier Added Result Qualifier Unit %Rec 26 - 144 45 Nitrocellulose 2.0 U 5.07 5.36 102 1.9

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

GC/MS VOA	11.40				
Analysis Batch: 49421					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8260B	
LC\$ 240-49421/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-49421/6	Method Blank	Total/NA	Solid	8260B	
– Leach Batch: 49660					
Lab Sample ID	Cilent Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	
240-12752-4 MS	FWG-IDW-TANK3-GW	TCLP	Water	1311	
240-12752-4 MSD	FWG-IDW-TANK3-GW	TCLP	Water	1311	
LB 240-49660/1-A MB	Method Blank	TCLP	Water	1311	
- Analysis Batch: 49814					
– Lab Sample ID	Cilent Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
240-12752-4 MS	FWG-JDW-TANK3-GW	TCLP	Water	8260B	
240-12752-4 MSD	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
LB 240-49660/1-A MB	Method Blank	TCLP	Water	8260B	
LCS 240-49814/10	Lab Control Sample	Total/NA	Water	8260B	
- ∟each Batch: 49973					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
LB 240-49973/1-A MB	Method Blank	TCLP	Solid	1311	
⊸ Analysis Batch: 50127					
 Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8260B	
LB 240-49973/1-A MB	Method Blank	TCLP	Solid	8260B	
LCS 240-50127/12	Lab Control Sample	Total/NA	Solid	8260B	
 Analysis Batch: 50324					
Lah Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-1	TRIP BLANK	Total/NA	Water	8260B	
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8260B	
LCS 240-50324/4	Lab Control Sample	Total/NA	Water	8280B	
MB 240-50324/5	Method Blank	Total/NA	Water	8260B	
GC/MS Semi VOA					
Prep Batch: 49608	. 111 111 1111 1111 1111 1111 1111 1111 1111				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49608/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49808/13-A	Method Blank	Total/NA	Water	3520C	
∟each Batch: 49653					
Lab Sample ID	Cilent Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	<u>.</u>

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Prep Batch: 49701					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Solid	3520C	
MB 240-49701/4-A	Method Blank	Total/NA	Solid	3520C	
Prep Batch: 49703					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3520C	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3520C	4985
LCS 240-49703/16-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49703/15-A	Method Blank	Total/NA	Water	3520C	
rep Batch: 49770					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batci
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49770/16-A	Lab Contro! Sample	Total/NA	Sofid	3540C	
MB 240-49770/15-A	Method Blank	Total/NA	Solid	3540C	
Analysis Batch: 49827					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Solid	8270C	4970
MB 240-49701/4-A	Method Blank	Total/NA	Solid	8270C	4970
malysis Batch: 50054					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8270C	4970
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8270C	4977
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8270C	4970
LCS 240-49703/16-A	Lab Control Sample	Total/NA	Water	8270C	4970
LCS 240-49770/16-A	Lab Control Sample	Total/NA	Solid	8270C	4977
MB 240-49703/15-A	Method Blank	Total/NA	Water	8270C	4970
MB 240-49770/15-A	Method Blank	Total/NA	Solid	8270C	4977
nalysis Batch: 50188					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8270C	4960
LCS 240-49608/14-A	Lab Control Sample	Total/NA	Water	8270C	4960
MB 240-49608/13-A	Method Blank	Total/NA	Water	8270C	4960
rep Batch: 50344					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-12752-4 - RE	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-50344/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-50344/13-A	Method Blank	Total/NA	Water	3520C	
nalysis Batch: 50708					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-12752-4 - RE	FWG-IDW-TANK3-GW	Total/NA	Water	8270C	5034
LCS 240-50344/14-A	Lab Control Sample	Total/NA	Water	8270C	5034
MB 240-50344/13-A	Method Blank	Total/NA	Water	8270C	5034

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Prep Batch: 49612 –					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-12752-4	FWG-IDW-TANK3-GW	Tota!/NA	Water	3520C	
LCS 240-49612/12-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49612/11-A	Method Blank	Total/NA	Water	3520C	
Prep Batch: 49615					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49615/3-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49615/2-A	Method Blank	Total/NA	Water	3520C	
_each Batch: 49653					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	
Prep Batch: 49705					
Lab Sample ID	Cilent Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3520C	4985
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3520C	4965
LC\$ 240-49705/8-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49705/7-A	Method Blank	Total/NA	Water	3520C	
- Prep Batch: 49707					
– Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batci
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8151A	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8151A	4965
LCS 240-49707/8-A	Lab Control Sample	Total/NA	Water	8151A	
MB 240-49707/7-A	Method Blank	Total/NA	Water	8151A	
Analysis Batch: 49739					
Lab Sample ID	Cilent Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8081A	49618
LCS 240-49615/3-A	Lab Control Sample	Total/NA	Water	8081A	4961
MB 240-49615/2-A	Method Blank	Total/NA	Water	8081A	4961
Prep Batch: 49755			•		
Lab Sample ID	Cilent Sample ID	Ргер Туре	Matrix	Method	Prep Batcl
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
LCS 240-49755/20-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-49755/19-A	Method Blank	Total/NA	Solid	3540C	
Prep Batch: 49756					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49756/11-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-49756/10-A	Method Blank	Total/NA	Solid	3540C	
Analysis Batch: 49764					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8082	49612
		Total/NA	Water	8082	4961

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

GC Semi VOA (Coi	ntinuea)				
Analysis Batch: 49852					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49612/12-A	Lab Control Sample	Total/NA	Water	8082	49612
⊂ Analysis Batch: 49922					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8081A	49705
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	8081A	49705
MB 240-49705/7-A	Method Blank	Total/NA	Water	8081A	49705
— Analysis Batch: 49992					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8082	49755
LCS 240-49755/20-A	Lab Control Sample	Total/NA	Solid	8082	49755
MB 240-49755/19-A	Method Blank	Total/NA	Solid	8082	49755
⊆ Analysis Batch: 50084					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8081A	49705
Analysis Batch: 50094 ⊏					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8151A	49707
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8151A	49707
LCS 240-49707/8-A	Lab Control Sample	Total/NA	Water	8151A	49707
M8 240-49707/7-A	Method Blank	Total/NA	Water	8151A	49707
Analysis Batch: 50336					
Analysis Batch: 50336 Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
		Prep Type Total/NA	Matrix Solid	Method 8081A	Prep Batch 49756
Lab Sample ID	Client Sample ID				
Lab Sample ID 240-12752-3	Cilent Sample ID FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8081A	49756
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample	Total/NA Total/NA	Solid Solid	8081A 8081A	49756 49756
Lab Sample ID 240-12752-3 LCS 240-49756/11-A	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample	Total/NA Total/NA	Solid Solid	8081A 8081A	49756 49756
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A	Cilent Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank	Total/NA Total/NA	Solid Solid	8081A 8081A	49756 49756
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A	Cilent Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank	Total/NA Total/NA	Solid Solid	8081A 8081A	49756 49756
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank	Total/NA Total/NA Total/NA	Solid Solid Solid	8081A 8081A 8081A	49756 49756 49758
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850 Lab Sample ID	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank	Total/NA Total/NA Total/NA Prep Type	Solid Solid Solid Matrix	8081A 8081A 8081A Method	49756 49756 49758
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850  Lab Sample ID 240-12752-4	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank  16 Client Sample ID FWG-IDW-TANK3-GW	Total/NA Total/NA Total/NA Prep Type Total	Solid Solid Solid Matrix	8081A 8081A 8081A Wethod 8330/8330A	49756 49756 49758
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850  Lab Sample ID 240-12752-4 G2G0300000168	Client Sample ID  FWG-IDW-SBCOMP3-SO  Lab Control Sample  Method Blank  16  Client Sample ID  FWG-IDW-TANK3-GW  Method Blank  Lab Control Sample	Total/NA Total/NA Total/NA  Prep Type Total Total	Solid Solid Solid Matrix Water	8081A 8081A 8081A Method 8330/8330A 8330/8330A	49756 49756 49758
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850 Lab Sample ID 240-12752-4 G2G030000016B G2G030000016C	Client Sample ID  FWG-IDW-SBCOMP3-SO  Lab Control Sample  Method Blank  16  Client Sample ID  FWG-IDW-TANK3-GW  Method Blank  Lab Control Sample	Total/NA Total/NA Total/NA  Prep Type Total Total	Solid Solid Solid Matrix Water	8081A 8081A 8081A Method 8330/8330A 8330/8330A	49756 49756 49758
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850 Lab Sample ID 240-12752-4 G2G030000016B G2G030000016C  Analysis Batch: 21880	Cilent Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank  Cilent Sample ID FWG-IDW-TANK3-GW Method Blank Lab Control Sample	Total/NA Total/NA Total/NA  Prep Type Total Total Total	Solid Solid Solid Matrix Water Water Water	8081A 8081A 8081A Method 8330/8330A 8330/8330A 8330/8330A	49756 49756 49756 Prep Batch
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850  Lab Sample ID 240-12752-4 G2G030000016B G2G030000016C  Analysis Batch: 21880 Lab Sample ID	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank  16 Client Sample ID FWG-IDW-TANK3-GW Method Blank Lab Control Sample  20 Client Sample ID	Total/NA Total/NA Total/NA  Prep Type Total Total Total	Solid Solid Solid Solid Matrix Water Water Water Water	8081A 8081A 8081A Method 8330/8330A 8330/8330A 8330/8330A	49756 49756 49756 Prep Batch
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850 Lab Sample ID 240-12752-4 G2G030000016C  Analysis Batch: 21880 Lab Sample ID 240-12752-3	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank  Client Sample ID FWG-IDW-TANK3-GW Method Blank Lab Control Sample  Client Sample ID FWG-IDW-SBCOMP3-SO	Total/NA Total/NA Total/NA  Prep Type Total Total Total  Prep Type Total	Solid Solid Solid Solid  Matrix Water Water Water Water  Matrix Solid	8081A 8081A 8081A Method 8330/8330A 8330/8330A 8330/8330A Method 8330 (Modified)	49756 49756 49756 Prep Batch
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850 Lab Sample ID 240-12752-4 G2G030000016C  Analysis Batch: 21880 Lab Sample ID 240-12752-3 G2F280490026D G2F280490026S	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank  Client Sample ID FWG-IDW-TANK3-GW Method Blank Lab Control Sample  Client Sample ID FWG-IDW-SBCOMP3-SO Matrix Spike Duplicate Matrix Spike	Total/NA Total/NA Total/NA  Prep Type Total Total  Total  Prep Type  Total  Total  Total  Total  Total	Solid Solid Solid Solid  Matrix Water Water Water Water Solid Solid	8081A 8081A 8081A Method 8330/8330A 8330/8330A 8330/8330A Method 8330 (Modified) 8330 (Modified)	49756 49756 49756 Prep Batch
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850 Lab Sample ID 240-12752-4 G2G030000016C  Analysis Batch: 21880 Lab Sample ID 240-12752-3 G2F280490026D	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank  Client Sample ID FWG-IDW-TANK3-GW Method Blank Lab Control Sample  Client Sample ID FWG-IDW-SBCOMP3-SO Matrix Spike Duplicate	Total/NA Total/NA Total/NA  Prep Type Total Total Total  Prep Type Total Total Total Total Total Total	Solid Solid Solid Solid  Matrix Water Water Water Water Solid Solid Solid	8081A 8081A 8081A Method 8330/8330A 8330/8330A 8330/8330A Method 8330 (Modified) 8330 (Modified) 8330 (Modified)	49756 49756 49756 Prep Batch
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850  Lab Sample ID 240-12752-4 G2G030000016B G2G030000016C  Analysis Batch: 21880  Lab Sample ID 240-12752-3 G2F280490026D G2F280490026S G2G06000000000B	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank  Client Sample ID FWG-IDW-TANK3-GW Method Blank Lab Control Sample  Client Sample ID FWG-IDW-SBCOMP3-SO Matrix Spike Duplicate Matrix Spike Method Blank Lab Control Sample	Total/NA Total/NA Total/NA Total/NA  Prep Type Total Total  Prep Type Total Total Total Total Total Total Total	Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid	Method 8330/8330A 8330/8330A 8330/8330A 8330/8330A  Method 8330 (Modified) 8330 (Modified) 8330 (Modified) 8330 (Modified)	49756 49756 49756 Prep Batch
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850 Lab Sample ID 240-12752-4 G2G030000016C  Analysis Batch: 21880 Lab Sample ID 240-12752-3 G2F280490026D G2F280490026S G2G060000020C	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank  Client Sample ID FWG-IDW-TANK3-GW Method Blank Lab Control Sample  Client Sample ID FWG-IDW-SBCOMP3-SO Matrix Spike Duplicate Matrix Spike Method Blank Lab Control Sample	Total/NA Total/NA Total/NA Total/NA  Prep Type Total Total  Prep Type Total Total Total Total Total Total Total	Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid	Method 8330/8330A 8330/8330A 8330/8330A 8330/8330A  Method 8330 (Modified) 8330 (Modified) 8330 (Modified) 8330 (Modified)	49756 49756 49756 Prep Batch
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850  Lab Sample ID 240-12752-4 G2G030000016C  Analysis Batch: 21880  Lab Sample ID 240-12752-3 G2F280490026D G2F280490026B G2G060000020B G2G060000020C  Analysis Batch: 219116	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank  Client Sample ID FWG-IDW-TANK3-GW Method Blank Lab Control Sample  Client Sample ID FWG-IDW-SBCOMP3-SO Matrix Spike Duplicate Matrix Spike Method Blank Lab Control Sample	Total/NA Total/NA Total/NA  Prep Type Total Total  Total  Prep Type  Total  Total  Total  Total  Total  Total  Total  Total	Solid Solid Solid Solid  Matrix Water Water Water  Matrix Solid Solid Solid Solid Solid Solid	Method 8330/8330A 8330/8330A 8330/8330A 8330/8330A  Method 8330 (Modified) 8330 (Modified) 8330 (Modified) 8330 (Modified) 8330 (Modified) 8330 (Modified)	49756 49756 49756 Prep Batch
Lab Sample ID 240-12752-3 LCS 240-49756/11-A MB 240-49756/10-A  HPLC  Analysis Batch: 21850  Lab Sample ID 240-12752-4 G2G030000016C  Analysis Batch: 21880  Lab Sample ID 240-12752-3 G2F280490026D G2F280490026D G2F280490020B G2G060000020C  Analysis Batch: 219116	Client Sample ID FWG-IDW-SBCOMP3-SO Lab Control Sample Method Blank  Client Sample ID FWG-IDW-TANK3-GW Method Blank Lab Control Sample  Client Sample ID FWG-IDW-SBCOMP3-SO Matrix Spike Duplicate Matrix Spike Method Blank Lab Control Sample  Client Sample ID SWG-IDW-SBCOMP3-SO Matrix Spike Duplicate Matrix Spike Method Blank Lab Control Sample  Client Sample ID	Total/NA Total/NA Total/NA  Prep Type Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total	Solid Solid Solid Solid Matrix Water Water Water Matrix Solid Solid Solid Solid Solid Solid Solid Matrix	### Method  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/8330A  ### B330/830A  ### B330/830A  ### B330/830A  ### B330/830A  ### B330/830A  ### B330/830A  ### B330/830A  ### B330/830A  ### B330/830A  ### B330/8A  ### B330/8A  ### B330/8A  ### B330/8A  ### B330/8A  ### B330/8A  ### B330/8A  ### B330/8A  ### B330/8A  ### B330/8A  ### B330/	49756 49756 49756 Prep Batch

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Analysis Batch: 2191	108 (Continued)				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
G2G090000108B	Method Blank	Total	Solid	8330B	
G2G090000108C	Lab Control Sample	Total	Solid	8330B	
Analysis Batch: 2191	129				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
240-12752-4	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
240-12752-4 MS	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
G2G090000129B	Method Blank	Dissolved	Water	8330 (Modified)	
G2G090000129C	Lab Control Sample	Dissolved	Water	8330 (Modified)	
rep Batch: 2185016	_P				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bato
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	3535	
G2G030000016B	Method Blank	Total	Water	3535	
G2G030000016C	Lab Control Sample	Tota!	Water	3535	
rep Batch: 2188020_	_P				
Lab Sample ID	Client Sample iD	Prep Type	Matrix	Method	Prep Bate
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	3550A	
G2F280490026D	Matrix Spike Duplicate	Total	Solid	3550A	
G2F280490026S	Matrix Spike	Total	Solid	3550A	
G2G080000020B	Method Blank	Total	Solid	3550A	
G2G060000020C	Lab Control Sample	Total	Solid	3550A	
Prep Batch: 2191108_	_P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
G2G090000108B	Method Blank	Total	Solid	8330B	
G2G090000108C	Lab Control Sample	Total	Solid	8330B	
rep Batch: 2191129	_P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bate
240-12752-4	FWG-IDW-TANK3-GW	Dissolved	Water	FILTRATION	
240-12752-4 MS	FWG-IDW-TANK3-GW	Dissolved	Water	(DISS) FILTRATION	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Dissolved	Water	(DISS) FILTRATION	
		Dispelyed	Matas	(DISS)	
G2G090000129B	Method Blank	Dissolved	Water	FILTRATION (DISS)	
G2G090000129C	Lab Control Sample	Dissolved	Water	FILTRATION (DISS)	
				(5100)	
letals					
rep Batch: 49356		_			n = :
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bat
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	7470A	
LCS 240-49356/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-49356/1-A	Method Blank	Total/NA	Water	7470A	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Prep Batch
Prep Batch
Prep Batch
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Prep Batch
49412
49412
Prep Batch
49653
49653
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Prep Batch
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49653
Prep Batch
49356

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Metals (Continued)					
Analysis Batch: 49962					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	7470A	49732
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	7470A	49732
LB 240-49653/1-E LB	Method Blank	TCLP	Water	7470A	49732
LCS 240-49732/3-A	Lab Control Sample	Total/NA	Water	7470A	49732
MB 240-49732/2-A	Method Blank	Tota!/NA	Water	7470A	49732
Analysis Batch: 49993					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
LCS 240-49412/3-A	Lab Control Sample	Total/NA	Solid	6020	49412
Analysis Batch: 50003					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	6010B	49727
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	6010B	49727
LB 240-49653/1-D LB	Method Blank	TCLP	Water	6010B	49727
LCS 240-49727/3-A	Lab Control Sample	Total/NA	Water	6010B	49727
MB 240-49727/2-A	Method Blank	Total/NA	Water	6010B	49727
Analysis Batch: 50031					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
LCS 240-49425/2-A	Lab Control Sample	Total/NA	Solid	7471A	49425
MB 240-49425/1-A	Method Blank	Total/NA	Solid	7471A	49425
Analysis Batch: 50210					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
LCS 240-49412/3-A	Lab Control Sample	Tota!/NA	Solid	6020	49412
MB 240-49412/1-A	Method Blank	Total/NA	Solid	6020	49412
Prep Batch: 50314					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
LCS 240-50314/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-50314/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	3005A	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Metals (Continued)				,	· · · · · · · · · · · · · · · · · · ·
Analysis Batch: 50556					
Lab Sample ID	Cilent Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
LCS 240-50314/3-A	Lab Control Sample	Total Recoverable	Water	6020	50314
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	6020	50314
Analysis Batch: 50581					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
LCS 240-50314/2-A	Lab Control Sample	Total Recoverable	Water	6010B	50314
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	6010B	50314
General Chemistry					
Analysis Batch: 49216					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TolaVNA	Water	9040B	
240-12752-4 DU	FWG-IDW-TANK3-GW	Total/NA	Water	9040B	
LCS 240-49216/2	Leb Control Sample	Total/NA	Water	9040B	
Analysis Batch: 49377					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	1010	
LCS 240-49377/1	Lab Control Sample	Total/NA	Solid	1010	
Analysis Batch: 49467					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	Moisture	
Analysis Batch: 49470					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9045C	
LCS 240-49470/2	Lab Control Sample	Tota!/NA	Solid	9045C	•
Analysis Batch: 49569					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	1010	
LCS 240-49569/1	Lab Control Sample	Total/NA	Water	1010	
Prep Batch: 49572					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Tota!/NA	Water	9012A	
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-49572/1-A	Method Blank	Tota!/NA	Water	9012A	
Analysis Batch: 49633					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9012A	49572
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	49572
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	49572

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

<b>General Chemistry</b>	(Continued)				
Analysis Batch: 49633	(Continued)				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
MRL 240-49633/12 MRL	Lab Control Sample	Total/NA	Water	9012A	
Prep Batch: 49677					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9030B	
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9030B	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total/NA	Water	9030B	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total/NA	Water	9030B	
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9030B	
LCS 240-49677/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 240-49677/14-A	Method Blank	Total/NA	Water	9030B	
MB 240-49877/1-A	Mathod Blank	Total/NA	Solid	9030B	
Analysis Batch: 49769					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9034	49677
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
240-12752-4 MS	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9034	49677
LCS 240-49677/2-A	Lab Control Sample	Total/NA	Solid	9034	49677
MB 240-49677/14-A	Method Blank	Total/NA	Water	9034	49677
MB 240-49677/1-A	Method Blank	Total/NA	Solid	9034	49677
Prep Batch: 50183					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9012A	
LCS 240-50183/2-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 240-50183/1-A	Method Blank	Total/NA	Solid	9012A	
Analysis Batch: 50243					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9012A	50163
LCS 240-50183/2-A	Lab Control Sample	Total/NA	Solid	9012A	50183
MB 240-50183/1-A	Method Blank	Total/NA	Solid	9012A	50183
MRL 240-50243/6 MRL	Lab Control Sample	Total/NA	Solid	9012A	
Analysis Batch: 219110	04				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
G2G090000104B	Method Blank	Total	Solid	WS-WC-0050	
G2G090000104C	Lab Control Sample	Total	Solid	WS-WC-0050	
Analysis Batch: 21930	12				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total	Water	W\$-WC-0050	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
G2G110000012B	Method Blank	Total	Water	WS-WC-0050	
G2G110000012C	Lab Control Sample	Total	Water	WS-WC-0050	

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

General	Chem	istrv	(Continu	(bar
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Analy	/sis	Batch	219	95066

	Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
- 1	240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	160,3 MOD	

### Prep Batch: 2191104_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
G2G090000104B	Method Blank	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	
G2G090000104C	Lab Control Sample	Total	Solid	EXTRACTION,	
				SOLID/SOLVEN	
				T (Manual)	

#### Prep Batch: 2193012_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION,	
				SOLID PHASE	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION,	
				SOLID PHASE	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION,	
				SOLID PHASE	
G2G110000012B	Method Blank	Total	Water	EXTRACTION,	
				SOLID PHASE	
G2G110000012C	Lab Control Sample	Total	Water	EXTRACTION,	
				SOLID PHASE	

### Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Lab Sample ID: 240-12752-1

Matrix: Water

Client Sample ID: TRIP BLANK

Date Collected: 06/28/12 08:00 Date Received: 06/28/12 12:45

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50324	07/10/12 12:54	RQ	TAL NC

Client Sample ID: FWG-IDW-SBCOMP3-SO

Date Gollected: 06/28/12 10:15 Date Received: 06/28/12 12:45 Lab Sample ID: 240-12752-3 Matrix: Solid Percent Solids: 78.3

-	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	49421	06/29/12 19:38	SM	TAL NC
TCLP	Leach	1311			49973	07/05/12 16:15	BF	TAL NC
TCLP	Analysis	8260B		1	50127	07/06/12 21:42	TL	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49703	07/03/12 09:12	ВМ	TAL NC
TCLP	Analysis	8270C		1	50054	07/06/12 18:11	JG	TAL NC
Total/NA	Prep	3540C			49770	07/03/12 13:56	вм	TAL NC
Total/NA	Analysis	8270C		1	50054	07/06/12 19:27	JG	TAL NC
Total/NA	Prep	3540C			49755	07/03/12 11:53	SE	TAL NC
Total/NA	Analysis	8082		1	49992	07/06/12 09:43	RK	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCl.P	Prep	3520C			49705	07/03/12 09:15	ВМ	TAL NC
TCLP	Analysis	8081A		5	50084	07/06/12 14:52	AR	TAL NC
TCLP	Prep	8151A			49707	07/03/12 09:18	SE	TAL NC
TCLP	Analysis	8151A		1	50094	07/07/12 19:42	AR	TAL NC
Total/NA	Prep	3540C			49756	07/03/12 12:02	SE	TAL NC
Total/NA	Analysis	8081A		10	50336	07/09/12 08:27	AR	TAL NC
Total	Prep	3550A			2188020_P	07/06/12 06:00	TQP	TAL WSC
Total	Analysis	8330 (Modified)		0.99	2188020	07/10/12 12:23	RN	TAL WSC
Total	Prep	8330B			2191108_P	07/09/12 12:45	HJA	TAL WSC
Total	Analysis	8330B		0.99	2191108	07/10/12 14:08	RN	TAL WSC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	7470A			49732	07/03/12 14:30	AS	TAL NC
TCLP	Analysis	7470A		1	49962	07/05/12 13:58	SG	TAL NC
Total/NA	Prep	3050B			49412	06/29/12 11:17	DE	TAL NC
Total/NA	Analysis	6020		1	49993	07/05/12 21:15	BD	TAL NC
Total/NA	Analysis	6010B		1	50003	07/05/12 20:27	NJM	TAL NC
TCLP	Prep	3010A			49727	07/03/12 10:01	AS	TAL NC
TCLP	Analysis	6010B		1	50003	07/05/12 20:59	NJM	TAL NC
Total/NA	Prep	7471A			49425	06/29/12 14:00	DE	TAL NC
Total/NA	Analysis	7471A		1	50031	07/05/12 16:29	BD	TAL NC
Total/NA	Analysis	6020		1	50210	07/09/12 09:43	BD	TAL NC
	•	1010		1	49377	06/29/12 14:17	TH	TAL NC
Total/NA	Analysis							
Total/NA	Analysis	Moisture		1	49467	06/29/12 14:27	JB	TAL NC
Total/NA	Analysis	9045C		1	49470	06/29/12 16:15	LG	TAL NC
Total/NA	Prep	9030B			49677	07/03/12 07:56	BW	TAL NC
Total/NA	Analysis	9034		1	49769	07/03/12 13:48	BW	TAL NC



### Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

Date Collected: 06/28/12 10:15

Date Received: 06/28/12 12:45

Client Sample ID: FWG-IDW-SBCOMP3-SO

TestAmerica Job ID: 240-12752-1

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Lab Sample ID: 240-12752-3

Matrix: Solid

Percent Solids: 78.3

		Batch	atch Batch Dilution Batch Prepared	Batch Dilution Batch Prepared	Prepared			
Ргер Туре	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	9012A			50183	07/09/12 08:07	MJC	TAL NC
Total/NA	Analysis	9012A		1	50243	07/09/12 10:24	вw	TAL NO
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			2191104 <u>.</u> P	07/09/12 12:15	HJA	TAL WSC
Total	Analysis	WS-WC-0050		1	2191104	07/11/12 11:11	LW	TAL WSC
Total	Δπαίνεις	160.3 MOD		1	2195066	07/02/12 00:00	JS	TAL NO

Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00

Date Received: 06/28/12 12:45

Lab	Sample	ID:	240-12752-4

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
TCLP	Leach	1311			49660	07/03/12 10:53	DJ	TAL NC
TCLP	Analysis	8260B		1	49814	07/04/12 03:00	TL	TAL NC
Total/NA	Analysis	8260B		1	50324	07/10/12 13:16	RQ	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49703	07/03/12 09:12	BM	TAL NC
TCLP	Aπalysis	8270C		1	50054	07/06/12 18:30	JG	TAL NC
Total/NA	Prep	3520C			49608	07/02/12 11:43	CC	TAL NC
Total/NA	Analysis	8270C		1	50188	07/09/12 11:21	JG	TAL NC
Total/NA	Prep	3520C	RE		50344	07/10/12 10:24	SE	TAL NC
Total/NA	Analysis	8270C	RE	1	50708	07/13/12 12:33	JG	TAL NC
Total/NA	Prep	3520C			49615	07/02/12 11:57	CC	TAL NC
Total/NA	Analysis	80B1A		1	49739	07/04/12 07:55	AR	TAL NC
Total/NA	Prep	3520C			49612	07/02/12 11:53	CC	TAL NC
Total/NA	Analysis	8082		1	49764	07/03/12 17:25	CR	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49705	07/03/12 09:15	BM	TAL NC
TCLP	Analysis	8081A		1	49922	07/05/12 23:21	AR	TAL NC
TCLP	Prep	8151A			49707	07/03/12 09:18	SE	TAL NC
TCLP	Analysis	8151A		1	50094	07/07/12 20:08	AR	TAL NC
Total	Prep	3535			2185016_P	07/03/12 06:00	TQP	TAL WSC
Total	Analysis	8330/8330A		1.03	2185016	07/06/12 19:24	RN	TAL WSC
Dissolved	Prep	FILTRATION (DISS)			2191129_P	07/09/12 14:50	HJA	TAL WSC
Dissolved	Analysis	8330 (Modified)		1	2191129	07/10/12 10:57	RN	TAL WSC
Total/NA	Prep	7470A			49356	06/29/12 15:10	LM	TAL NC
Total/NA	Analysis	7470A		1	49867	07/03/12 13:40	RT	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Ргер	7470A			49732	07/03/12 14:30	AS	TAL NC
TCLP	Analysis	7470A		1	49962	07/05/12 14:02	SG	TAL NC
TCLP	Prep	3010A			49727	07/03/12 10:01	AS	TAL NC
TCLP	Analysis	6010B		1	50003	07/05/12 21:03	NJM	TAL NC
Total Recoverable	Prep	3005A			50314	07/10/12 08:18	LM	TAL NC
Total Recoverable	Analysis	6020		1	50556	07/11/12 13:26	BD	TAL NC



#### Lab Chronicle

Client: Environmental Quality Mgt., Inc. Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Lab Sample ID: 240-12752-4

Matrix: Water

### Client Sample ID: FWG-IDW-TANK3-GW

Date Collected: 06/28/12 11:00 Date Received: 06/28/12 12:45

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6010B		1	50581	07/11/12 13:31	NJM	TAL NC
Total/NA	Analysis	9040B		1	49216	06/28/12 16:18	LG	TAL NC
Total/NA	Analysis	1010		1	49569	07/02/12 11:30	TH	TAL NC
Total/NA	Prep	9012A			49572	07/02/12 09:10	MJC	TAL NC
Total/NA	Analysis	9012A		1	49633	07/02/12 11:06	CN	TAL NC
Total/NA	Prep	9030B			49877	07/03/12 07:56	BW	TAL NC
Total/NA	Analysis	9034		1	49769	07/03/12 13:48	BW	TAL NC
Total	Prep	EXTRACTION, SOLID			2193012_P	07/11/12 06:00	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	2193012	07/11/12 13:05	LW	TAL WSC

#### Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396
TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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aboratory	Authority	Program	EPA Region	Certification ID
estAmerica Canton	California	NELAC	9	01144CA
estAmerica Canton	Connecticut	State Program	1	PH-0590
estAmerica Canton	Florida	NELAC	4	E87225
estAmerica Canton	Georgia	State Program	4	N/A
estAmerica Centon	Illinois	NELAC	5	200004
estAmerica Canton	Kansas	NELAC	7	E-10336
estAmerica Canton	Kentucky	State Program	4	58
estAmerica Canton	L-A-B	DoD ELAP		L2315
estAmerica Canton	Minnesota	NELAC	5	039-999-348
estAmerica Canton	Nevada	State Program	9	OH-000482008A
estAmerica Canton	New Jersey	NELAC	2	OH001
estAmerica Canton	New York	NELAC	2	10975
estAmerica Canton	Óhío VÁP	State Program	5	CL0024
estAmerica Centon	Pennsylvania	NELAC	3	68-00340
estAmerica Canton	USDA	Federal		P330-11-00328
estAmerica Canton	Virginia	NELAC	3	460175
estAmerica Canton	Washington	State Program	10	C971
estAmerica Canton	West Virginia DEP	State Program	3	210
estAmerica Canton	Wisconsin	State Program	5	999518190
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estAmerica West Sacramento	A2LA	DoD ELAP		2928-01
estAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
estAmerica West Sacramento	Arizona	State Program	9	AZ0708
estAmerica West Sacramento	California	NELAC	9	1119CA
estAmerica West Sacramento	Colorado	State Program	8	N/A
stAmerica West Sacramento	Connecticut	State Program	1	PH-0691
stAmerica West Sacramento	Florida	NELAC	4	E87570
estAmerica West Sacramento	Georgia	State Program	4	960
stAmerica West Sacramento	Guam	State Program	9	N/A
stAmerica West Sacramento	Hawaii	State Program	9	N/A
stAmerica West Sacramento	Illinois	NELAC	5	200060
stAmerica West Sacramento	Kansas	NELAC	7	E-10375
stAmerica West Sacramento	Louisiana	NELAC	6	30612
stAmerica West Sacramento	Michigan	State Program	5	9947
estAmerica West Sacramento	Nevada	State Program	9	CA44
stAmerica West Sacramento	New Jersey	NELAC	2	CA005
estAmerica West Sacramento	New Mexico	State Program	6	N/A
estAmerica West Sacramento	New York	NELAC	2	11666
estAmerica West Sacramento	Northern Mariana Islands	State Program	9	MP0007
estAmerica West Sacramento	Oregon	NELAC	10	CA200005
estAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
estAmerica West Sacramento	South Carolina	State Program	4	87014
stAmerica West Sacramento	Texas	NELAC	6	T104704399-08-T
stAmerica West Sacramento	US Fish & Wildlife	Federal	-	LE146388-0
stAmerica West Sacramento	USDA	Federal		P330-11-00436
stAmerica West Sacramento	Utah	NELAC	8	QUAN1
stAmerica West Sacramento	Washington	State Program	10	C581
estAmerica West Sacramento	West Virginia	State Program	3	9930C
	•	State Program	3	334
stAmerica West Sacramento	West Virginia DEP	-	5	998204680
stAmerica West Sacramento	Wisconsin	State Program	<del>U</del>	490V04000

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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TestAmerica North Canton Sample Rece	ipt Form/Narrative	Login # :	2752
Client EQM	Site Name RUAAP	By: Den	of Burns
FedEx: 1st Grd Exp UPS FAS Stets TestAmerica Cooler # Foam Packing material used: Rubble Wrap COOLANT: Wet Ice Blue Ice  1. Cooler temperature upon receipt IR GUN# 1 (CF 0°C) Observed S IR GUN# 5G (CF -1°C) Observed S IR GUN# 8 (CF 0°C) Observed S IR GUN# 8 (CF 0°C) Observed S IR GUN# 8 (CF 0°C) Observed S 3. Shippers' packing slip attached to the cool 4. Did custody papers accompany the sample 5. Were the custody papers relinquished & s 6. Did all bottle arrive in good condition (C7. Could all bottle labels be reconciled with 8. Were correct bottle(s) used for the test(s) 9. Sufficient quantity received to perform in 10. Were sample(s) at the correct pH upon r 11. Were VOAs on the COC? 12. Were air bubbles > 6 mm in any VOA vi	Opened on 6 2 12  on Client Drop Off TestAmerical Box Client Cooler Box Foam Plastic Bag None  ce Dry Ice Water None  ample Temp. °C Correct Correct Comple Temp. °C Correct Correct Cooler(s)? If Yes Quantity Cooler(s) signed & dated?  ler(s)?  ler(s)?  ler(s)?  igned in the appropriate place?  Inbroken)?  the COC?  indicated?  dicated analyses?  eccipt?	Other  ed Sample Temp.  ed Sample Temp.  cd Sample Temp.  cd Sample Temp.  cd Sample Temp.  cd Sample Temp.  cd Sample Temp.  cd Sample Temp.  cd Sample Temp.  cd Sample Temp.  cd Sample Temp.  cd Sample Temp.	nature)  □ Multiple on Back
13. Was a trip blank present in the cooler(s)	?		
Contacted PM Date	b <b>y</b>	70.501	
14. CHAIN OF CUSTODY & SAMPLE	DISCREPANCIES		
15. SAMPLE CONDITION		J. d baldles time had av	nired
Sample(s)		ommended holding time had ex were received in a broken co	ntainer.
Sample(s)	were received with	bubble >6 ınm in diameter. (No	otify PM)

	16. SAMPLE P	RESERVATION		
Sample(s)	· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·	C. diamagnizadi	n Sample Receiving	g to meet
recommended pH level(s). I NaOH; Hydrochloric Acid I	Nitric Acid Lot# 110410-HNO3; Sulft Lot# 041911-HCl; Sodium Hydroxide	ric Acid Lot# 041911-FI2SU4; 5 and Zinc Acetate Lot# 100108-(	CH3COO)2ZN/NaC	OH. What
time was preservative added	i to sample(s):		Date	<u>Initials</u>
Client ID	Hq		6/28/12	TB
Trankla	17-7	12-	1000	A
Tank3	227	7, 113-		4.
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1			IR#	Coolant
Cooler#	Observed Sample Temp. °C	Corrected Sample Temp. C	110 110 110 110 110 110 110 110 110 110	Lee
L127	5,6	5,6		1
L436	5.9	5,9		1
1436 5099	6.0	6,01	-	- months
C429	6,0	6,0	-	

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## Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-12752-1

List Source: TestAmerica Canton

Login Number: 12752

List Number: 1

Creator: Livengood, Chris

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

