



**FINAL  
FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007**

**RAVENNA ARMY AMMUNITION PLANT,  
RAVENNA, OHIO**

**MARC Contract Number W912QR-04-D-0036  
Delivery Order No. 0006**

**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**

**March 24, 2008**

**FINAL  
FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007**

**RAVENNA ARMY AMMUNITION PLANT,  
RAVENNA, OHIO**

**MARC Contract Number W912QR-04-D-0036  
Delivery Order No. 0006**

**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**

**March 24, 2008**



**FWGWMP Annual Report (FINAL) 2007 Distribution List**

**RVAAP – 2 printed copies, 2 CDs**

**USACE - 2 printed copies, 3 CDs**

**USACE – 1 CD**

**Ohio EPA – 2 printed copies, 3 CDs**

**OHARNG – 1 printed copy, 1 CD**

**EQM – 1 printed copy, 1 CD**

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Table of Contents .....	i
List of Acronyms .....	iii
<b>SECTION 1 INTRODUCTION .....</b>	<b>1</b>
1.1 Facility Description.....	1
1.2 Project Description.....	1
1.3 Summary of the Scope of Work for 2007 .....	5
1.4 Annual Report Requirements and Report Presentation .....	6
1.5 Changes to the FWGWMP in 2007 .....	7
1.6 Changes to the FWGWMP in 2008 .....	7
<b>SECTION 2 SUMMARY OF WELLS INSTALLED OR ABANDONED IN 2007 .....</b>	<b>8</b>
<b>SECTION 3 SUMMARY OF 2007 FWGWMP EVENTS .....</b>	<b>9</b>
3.1 Groundwater Elevation Monitoring.....	9
3.2 Sedimentation/Turbidity of the Wells.....	25
3.3 Monitoring Well Inspection Results .....	26
3.4 Summary of Groundwater Sampling Results .....	27
3.5 Laboratory Audit.....	30
<b>SECTION 4 SUMMARY/ASSESSMENT OF ANNUAL FWGWMP ANALYTICAL RESULTS .....</b>	<b>32</b>
4.1 Introduction.....	32
4.2 Background .....	47
4.3 Load Line 1 .....	54
4.4 Load Line 2 .....	57
4.5 Load Line 3 .....	59
4.6 Load Line 4 .....	61
4.7 Load Line 11 .....	63
4.8 Load Line 12 .....	65
4.9 Central Burn Pits.....	68
4.10 Demolition Area #2.....	70
4.11 Ramsdell Quarry Landfill .....	71
4.12 Winklepeck Burning Grounds .....	73
4.13 Assessment of Groundwater Remedial Action Effectiveness .....	75
<b>SECTION 5 FWGWMP ANNUAL RECOMMENDATIONS/REVIEW .....</b>	<b>76</b>
5.1 Introduction.....	76
5.2 Background .....	77
<b>SECTION 6 REFERENCES.....</b>	<b>78</b>

## **List of Figures**

1-1	RVAAP General Location Map.....	2
1-2	RVAAP Facility Map .....	3

## **List of Tables**

3-1	Depth to Water and Potentiometric Elevation – October 2007 .....	10
3-2	Well Construction Details Including October 2007 Depth to Bottom.....	15
3-3	Historical Potentiometric Elevations in Selected Wells .....	24
3-4	Well Inspection Summary.....	28
4-1	Summary of Constituents Detected – October 2006 Through July 2007 .....	33
4-2	RVAAP Facility-wide Background Criteria.....	46
4-3	2007 FWGWMP Region 9 PRG or MCL Exceedances .....	48

## **Appendices**

Appendix A	Reporting Limits that Currently Do Not Meet the RVAAP QAPP PQLs and/or Region 9 PRGs
Appendix B	Water Level Measurement Field Sheets
Appendix C	Well Inspection Sheets
Appendix D	Laboratory Audit Report
Appendix E	Time-trend Graphs
Appendix F	Maps of FWGWMP Study Areas
Appendix G	Proposed Well Sampling Sequence

## **Plates**

Plate 1	Monitoring Wells at RVAAP
Plate 2	Potentiometric Map of Unconsolidated Aquifer (October 2007)
Plate 3	Potentiometric Surface of Bedrock – Homewood and Sharon (October 2007) Aquifer

## LIST OF ACRONYMS

amsl	Above Mean Sea Level
AOC	Area of Concern
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLP	Contract Laboratory Program
DA2	Demolition Area #2
DOD	Department of Defense
EQM	Environmental Quality Management, Inc.
FWGWMP	Facility-wide Groundwater Monitoring Program
FWSAP	Facility-wide Sampling and Analysis Plan
GOCO	Government Owned, Contractor Operated
IRP	Installation Restoration Program
LCS	Laboratory Control Sample
LCG	Louisville Chemistry Guidelines
IDW	Investigation Derived Waste
LTM	Long Term Monitoring
µg/L	microgram per Liter
MARC	Multiple Award Remediation Contract
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NELAC	National Environmental Laboratory Accreditation Conference
NGB	National Guard Bureau
NOAA	National Oceanographic and Atmospheric Administration
Ohio EPA	Ohio Environmental Protection Agency
OHARNG	Ohio Army National Guard
PCB	Polychlorinated biphenyl
PQLs	Practical Quantitation Limits
PRGs	Preliminary Remediation Goals
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigations
RLs	Reporting Limits
RQL	Ramsdell Quarry Landfill
RTLS	Ravenna Training and Logistics Site
RVAAP	Ravenna Army Ammunition Plant
SVOC	Semi-volatile organic compound
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USP&FO	United States Property and Fiscal Officer
VOC	Volatile organic compound

## SECTION 1

### INTRODUCTION

#### 1.1 Facility Description

Past Department of Defense (DOD) activities at the Ravenna Army Ammunition Plant (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 two year period from 2002 and 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 Ravenna Training and Logistics Site (RTLS). The RVAAP and the RTLS are collocated on contiguous parcels of property and the RTLS perimeter fence completely encloses the remaining parcels of the RVAAP. The RTLS is 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 RTLS (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 RTLS 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 the RTLS did not exist and the entire 21,683-acre parcel was a government-owned, contractor-operated (GOCO) industrial facility. The RVAAP Installation Restoration Program (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 RTLS and RVAAP, unless otherwise specifically stated.

#### 1.2 Project Description

In 2004 the U.S. Army and the Ohio EPA finalized the Facility-wide Groundwater Monitoring Program (FWGWMP) Plan which details the requirements of the program. The FWGWMP was initiated in 2005 with three consecutive quarters of FWGWMP well

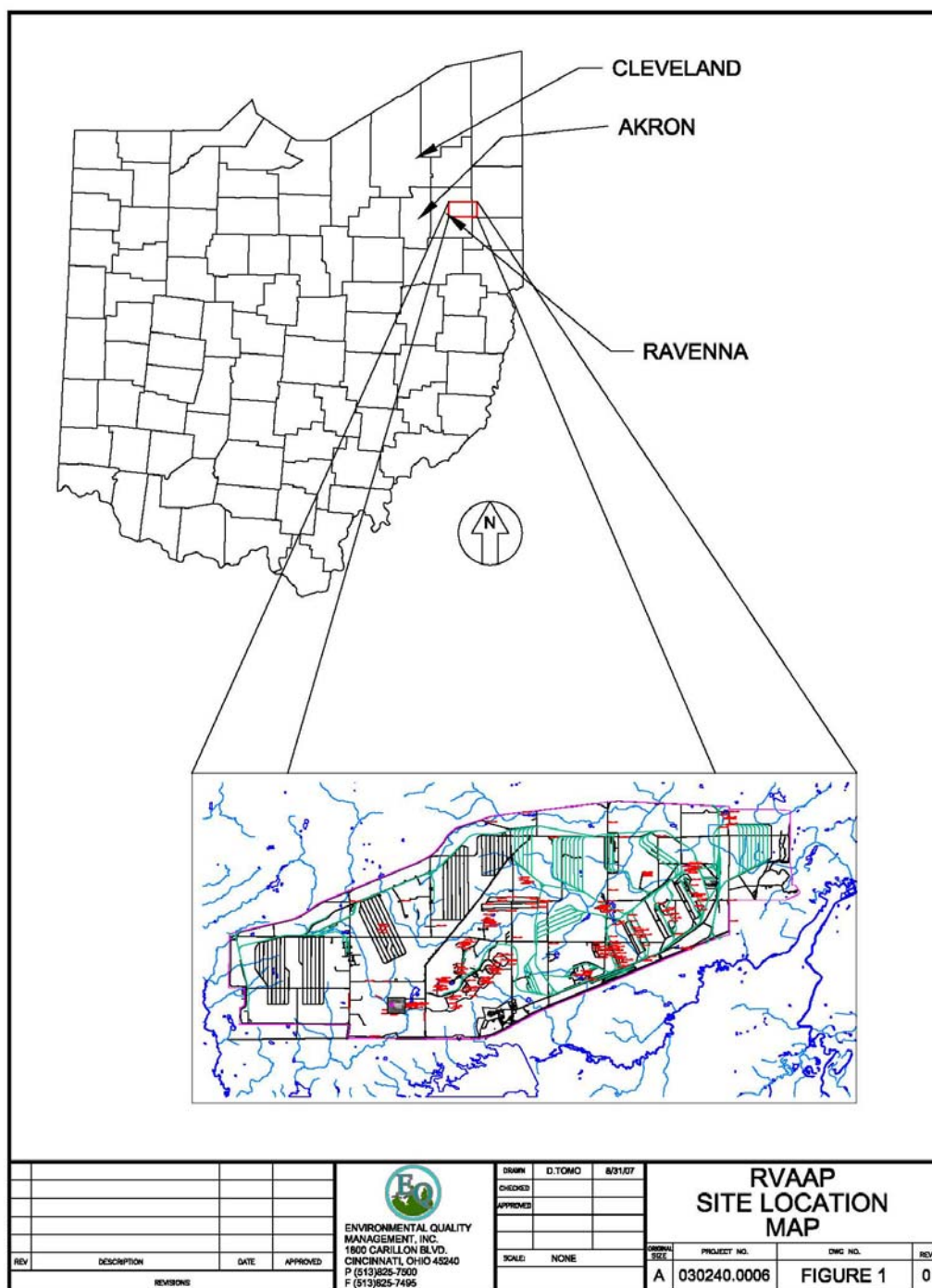


Figure 1-1 General Location Map





1  
2

Figure 1-2 RVAAP Facility Map

sampling. Quarterly sampling has continued in 2006 and 2007. All FWGWMP wells were sampled once every quarter, with the exception of the Ramsdell Quarry Landfill (RQL) wells RQLmw-007, -008, and -009, and two Demolition Area #2 (DA2) wells, DA2mw-DET3 and -DET4. The RQL and DA2 wells were sampled twice a year, during the second (April) and fourth (October) sampling events.

Details of the program design and requirements are contained in the *RVAAP Facility-Wide Groundwater Monitoring Program Plan*, (Portage Environmental, September 2004). This document contains the Facility-wide Sampling and Analysis Plan (FWSAP), Site Safety and Health Plan, and Quality Assurance Project Plan (QAPP) addenda that pertain to the proposed work. Additional details pertaining to performance of field and laboratory activities are contained in the *RVAAP Facility-Wide Sampling and Analysis Plan/Quality Assurance Project Plan (FWSAP)*, (SAIC, March 2001). As detailed in the FWGWMP Plan, the initial monitoring program consists of the sampling of 36 wells specified in Table 4-1 of the FWGWMP Plan. Fourteen of these wells are “Background Wells” and the remainder are wells situated at various Areas of Concern (AOCs) at RVAAP. The first sampling event for the FWGWMP was conducted in April 2005.

By agreement with the U.S. Army and the Ohio EPA and in accordance with Amendment No. 1 to the FWGWMP Plan, the Annual Report for 2007 summarizes the October 2006, January, April, and July, 2007 sampling events. Amendment No. 1 changed the annual reporting period from 1 January – 31 December to 1 October – 30 September. The change to the program was made so that the Annual Report for 2006 would include monitoring activities performed in the 4th quarter of 2005, and the 1st, 2nd, and 3rd quarters of 2006. Subsequent annual monitoring periods would also follow this pattern, such as the 2007 annual report, which covers the fourth quarter of 2006 and the first, second, and third quarters of 2007. This change was made because it was discovered that requiring the 4th quarter data to be included in the current years’ Annual Report did not allow sufficient time to collect samples, analyze samples, verify and validate data, assess results and still make the December deadline for including these results in the Annual Report.

The results of the sampling events covered under this annual report are presented in the following documents:

- *Facility-Wide Groundwater Monitoring Program, Report on the October 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*, dated March 2007 (SpecPro).
- *Facility-Wide Groundwater Monitoring Program, Report on the January 2007 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*, dated May 2007 (SpecPro).



- *Draft Facility-Wide Groundwater Monitoring Program, Report on the April 2007 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio, dated July 2007 (EQM).*
- *Draft Facility-Wide Groundwater Monitoring Program, Report on the July 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio, dated October 2007 (EQM).*

The results for the October 2007 sampling event will be submitted in a separate document and will be summarized in the Annual Report for 2008.

### **1.3 Summary of the Scope of Work for 2007**

Environmental Quality Management, Inc. (EQM) has been contracted (MARC Contract Number W912QR-04-D-0036) by the U.S. Army Corps of Engineers, Louisville District (USACE) to conduct the 2007 FWGWMP monitoring program beginning in April 2007. Prior to the April 2007 monitoring event, SpecPro conducted groundwater monitoring activities under the FWGWMP. The objective of this project is to continue quarterly monitoring under the RVAAP Facility-wide Groundwater Monitoring Program. The following tasks were performed in accordance with specifications contained in the FWGWMP Plan, the FWSAP, and the Scope of Work written by the USACE:

- Performed groundwater sampling of select wells (36) for four consecutive quarters including the requisite Investigation Derived Waste (IDW) characterization, reporting and disposal. The wells were sampled in October 2006 and January 2007 by SpecPro, and in April and July 2007 by EQM. The RQL (3 wells) and DA2 wells (DET-3 and DET-4) were only sampled in October 2006 and April 2007 as required.
- Water-level measurements from the 237 RVAAP monitoring wells were measured immediately prior to the October 2007 sampling event which were used to generate updated potentiometric maps. Note that water level measurements were scheduled to be completed prior to the July 2007 sampling event but access restrictions to DA2 and the Winklepeck Burning Grounds resulted in postponement until October.
- Performed laboratory analyses and data validation for the collected samples.
- Reduced quarterly data and preparation of individual sampling event reports.
- Prepared the 2007 annual report, including the overall program review requirement.
- Performed maintenance on selected groundwater monitoring wells.

## **1.4 Annual Report Requirements and Report Presentation**

This report presents the FWGWMP 2007 Annual Report. The report is structured in the following way:

- Section 1 – Introduction
- Section 2 – Summary of Monitoring Wells Installed or Abandoned in 2007
- Section 3 – Summary of Annual FWGWMP Events
- Section 4 – Summary and Assessment of Annual FWGWMP Analytical Results
- Section 5 – FWGWMP Annual Recommendations/Review
- Section 6 – References

The appendices contain the following items:

- Appendix A - Reporting Limits that Currently Do Not Meet the RVAAP QAPP PQLs and/or Region 9 PRGs
- Appendix B – Water Level Measurement Field Sheets
- Appendix C – Well Inspection Sheets
- Appendix D – Laboratory Audit Report
- Appendix E – Time-Trend Graphs
- Appendix F – Maps of FWGWMP Study Areas
- Appendix G – Proposed Well Sampling Sequence

The following lists the information required for the annual report as detailed in Section 5.2 of the FWGWMP Plan, as well as where this information is presented in this report:

- An evaluation of the current groundwater flow direction(s) based on water-level elevation data collected in October 2007 is discussed in Section 3.1.
- An evaluation of the trends of contamination detected in groundwater, as well as an assessment of the effectiveness of any groundwater remediation activities is presented in Section 4.0.
- The plots of concentration trends are presented in Appendix E, and are discussed in Section 4.0
- The facility map is presented in Section 1.0. The monitoring well network map and groundwater flow maps are presented in Plates 1, 2, and 3. Additional FWGWMP monitoring well locations are shown in Appendix F.
- The results of the monitoring well inspections are presented in Appendix C and summarized in Section 3.2.
- FWGWMP annual recommendations and review are presented in Section 5.0.

## **1.5 Changes to the FWGWMP in 2007**

During this reporting period, some metals analytical methods were changed from SW846 6010 to 6020 in order to achieve lower reporting limits. For the July 2006 event, only thallium was analyzed by method 6020; other metals were analyzed using 6010 (except mercury). Beginning in October 2006, antimony, iron, beryllium, zinc, cadmium, aluminum were added to the 6020, and deleted from the 6010 list.

No other changes to the FWGWMP were implemented during the 2007 reporting period.

## **1.6 Changes to the FWGWMP for 2008**

A perchlorate analysis addendum to the FWGWMP Plan was implemented for the October 2007 monitoring event that will be reported in the 2008 Annual Report.

Several analytical methods used for a number of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyl (PCBs) and explosives cannot meet the Region 9 preliminary remediation goals (PRGs) for some analytes. Additionally, three explosive analytes did not meet the Reporting Limits (RLs) of the project QAPP. Tables listing these compounds are presented in Appendix A.

Currently the laboratory has a standard reporting limit of 1,000 µg/L and a method detection limit (MDL) of 72 µg /L for potassium by SW846 6010B. The project required detection limit in the QAPP is 200 µg /L. The laboratory actually meets the QAPP specified limit with their MDL, but not with an RL. All results for this project are being reported down to the MDL, so concentrations are being evaluated at levels significantly below the QAPP required detection limit, although any concentration less than the RL of 1,000 µg /L is flagged as an estimated value. Discussions were held with the laboratory to investigate the feasibility of using SW846 6020 for potassium to achieve a more sensitive RL. The laboratory indicated, and EQM concurs, that SW846 6020 is not a well-suited method for the analysis of potassium. Typical naturally occurring concentrations of potassium in environmental samples are such that the laboratory would end up diluting samples to levels in order to bring potassium concentrations within the linear range of the instrument, resulting in MDL's/RL's the same as, or higher, than those that can be achieved by SW846 6010.

As potassium is naturally occurring in environmental samples, and has consistently been above the specified QAPP RL in historical RVAAP samples, the need to detect potassium concentrations down to the level specified in the QAPP may not be necessary. Given the background criteria for filtered samples (5,770 µg /L for bedrock wells, and 2,890 µg/l for unconsolidated wells ) as well as the reporting limit considerations described above, it is recommended that the reporting limit in the FWGWMP for potassium be raised to 1,000 µg /L.

## **SECTION 2**

### **SUMMARY OF WELLS INSTALLED OR ABANDONED IN 2007**

No FWGWMP wells were installed or abandoned during the 2007 reporting period.

## **SECTION 3**

### **SUMMARY OF 2007 FWGWMP EVENTS**

#### **3.1 Groundwater Elevation Monitoring**

Groundwater elevations were measured at 237 RVAAP monitoring wells between October 1 and 3, 2007. The locations of monitoring wells at RVAAP are shown on Plate 1.

Water-level measurements were made in accordance with procedures in Section 4.3.3.1 of the FWSAP. Appendix B presents the water-level measurement field sheets. Water-level measurements were made from the top of the inner casing to the top of the groundwater surface using an electronic measuring tape. The depth to the bottom of the well from the top of the inner casing also was measured with the electronic measuring tape. Depth-to-water and groundwater elevations for the RVAAP wells are presented in Table 3-1. Well construction details and depth to well bottom are presented in Table 3-2.

Each monitoring well was inspected at the time of water-level measurement and the results are discussed in Section 3.2. The monitoring well inspection sheets are presented in Appendix C.

Historically, water-level data have been interpreted to indicate that groundwater in both the unconsolidated deposits and bedrock flows across RVAAP in an easterly direction. These historical data also indicate that the unconsolidated aquifer shows local flow variations that reflect direct hydraulic communication between groundwater and surface water.

For this 2007 annual report, two Facility-wide potentiometric maps have been prepared. These maps represent the upper unconsolidated aquifer (Plate 2) and the deeper bedrock system (Plate 3). For this presentation, the bedrock system has been differentiated by geologic formation to represent the Homewood Member of the Pennsylvania-age Pottsville Formation in the western half of the facility and the Sharon Member of the Pottsville Formation in the eastern half of the facility, per methods suggested by the USACE (Hockett, 2007). Table 3-2 lists the monitored zones defined for this report.

Plate 2 represents Facility-wide groundwater flow in wells completed into the unconsolidated aquifer. The unconsolidated aquifer includes glacial till, glacial outwash, alluvium, and soil. Plate 2 illustrates that the potentiometric surface (i.e., water table) of the unconsolidated aquifer is a subdued expression of the surface topography of the RVAAP. Groundwater potentiometric elevation decreases approximately 207 ft from west to east across RVAAP; with a maximum measured elevation of about 1136.95 ft above mean sea level (amsl) at well BKGmw-005 in the northwest portion of the facility

*RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report*

**Table 3-1. Depth to Water and Potentiometric Elevation (October 2007)**

RVAAP Area	Well ID	Monitored Zone	TOC Elevation (ft amsl)	October 2007 Depth to Water (ft, BTOC)	Potentiometric Elevation October 2007 (ft amsl)
Background	BKGmw-004	Unconsolidated	967.66	14.79	952.87
	BKGmw-005	Unconsolidated	1,151.94	14.99	1,136.95
	BKGmw-006	Sharon	1,028.88	23.18	1,005.70
	BKGmw-008	Sharon	972.90	19.20	953.70
	BKGmw-010	Sharon	1,006.18	21.25	984.93
	BKGmw-012	Sharon	1,000.07	12.28	987.79
	BKGmw-013	Unconsolidated	989.09	13.12	975.97
	BKGmw-015	Sharon	1,040.40	51.53	988.87
	BKGmw-016	Unconsolidated	1,100.92	8.10	1,092.82
	BKGmw-017	Unconsolidated	1,135.30	21.33	1,113.97
	BKGmw-018	Sharon	1,045.56	16.40	1,029.16
	BKGmw-019	Unconsolidated	1,110.74	21.11	1,089.63
	BKGmw-020	Unconsolidated	1,067.50	12.86	1,054.64
	BKGmw-021	Unconsolidated	974.66	19.67	954.99
Load Line 1	LL1mw-063	Sharon	994.84	27.74	967.10
	LL1mw-064	Unconsolidated	935.10	3.86	931.24
	LL1mw-065	Unconsolidated	944.41	14.59	929.82
	LL1mw-067	Sharon	980.36	19.25	961.11
	LL1mw-078	Sharon	995.84	32.24	963.60
	LL1mw-079	Sharon	997.87	32.29	965.58
	LL1mw-080	Sharon	996.27	14.30	981.97
	LL1mw-081	Sharon	998.92	32.05	966.87
	LL1mw-082	Sharon	1,006.45	31.78	974.67
	LL1mw-083	Sharon	995.20	33.52	961.68
	LL1mw-084	Sharon	998.73	31.43	967.30
	LL1mw-085	Sharon	996.84	35.19	961.65
Load Line 2	LL2mw-059	Sharon	966.67	13.88	952.79
	LL2mw-060	Sharon	961.57	10.91	950.66
	LL2mw-261	Sharon	1,011.40	8.10	1,003.30
	LL2mw-262	Sharon	1,012.62	11.34	1,001.28
	LL2mw-263	Sharon	1,011.47	11.43	1,000.04
	LL2mw-264	Sharon	1,011.88	10.15	1,001.73
	LL2mw-265	Sharon	961.24	10.48	950.76
	LL2mw-266	Sharon	1,016.28	14.50	1,001.78
	LL2mw-267	Sharon	1,014.81	13.90	1,000.91
	LL2mw-268	Sharon	1,017.28	16.20	1,001.08
	LL2mw-269	Sharon	1,011.62	19.49	992.13
	LL2mw-270	Sharon	1,010.18	11.53	998.65
Load Line 3	LL3mw-232	Sharon	1,000.41	23.33	977.08
	LL3mw-233	Sharon	1,004.36	27.00	977.36
	LL3mw-234	Sharon	1,006.56	10.99	995.57
	LL3mw-235	Sharon	1,009.94	21.83	988.11
	LL3mw-236	Sharon	1,011.17	20.13	991.04
	LL3mw-237	Sharon	1,005.57	19.80	985.77
	LL3mw-238	Sharon	1,006.91	17.44	989.47
	LL3mw-239	Sharon	1,003.50	27.11	976.39
	LL3mw-240	Sharon	1,007.52	28.93	978.59
	LL3mw-241	Sharon	994.65	14.97	979.68
	LL3mw-242	Sharon	999.32	18.90	980.42
	LL3mw-243	Sharon	991.16	18.36	972.80

*RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report*

**Table 3-1. Depth to Water and Potentiometric Elevation (October 2007)**

RVAAP Area	Well ID	Monitored Zone	TOC Elevation (ft amsl)	October 2007 Depth to Water (ft, BTOC)	Potentiometric Elevation October 2007 (ft amsl)
Load Line 4	LL4mw-193	Unconsolidated	982.92	10.23	972.69
	LL4mw-194	Unconsolidated	983.76	10.69	973.07
	LL4mw-195	Unconsolidated	982.59	11.67	970.92
	LL4mw-196	Unconsolidated	984.55	14.12	970.43
	LL4mw-197	Unconsolidated	985.46	15.10	970.36
	LL4mw-198	Unconsolidated	983.42	10.74	972.68
	LL4mw-199	Unconsolidated	977.28	8.22	969.06
	LL4mw-200	Unconsolidated	987.93	18.39	969.54
Load Line 5	LL5mw-001	Homewood	1,127.92	21.74	1,106.18
	LL5mw-002	Homewood	1,128.68	22.48	1,106.20
	LL5mw-003	Unconsolidated	1,127.70	21.34	1,106.36
	LL5mw-004	Homewood	1,125.81	19.70	1,106.11
	LL5mw-005	Homewood	1,129.42	23.25	1,106.17
	LL5mw-006	Homewood	1,128.00	21.83	1,106.17
Load Line 6	LL6mw-001	Unconsolidated	1,124.16	16.37	1,107.79
	LL6mw-002	Unconsolidated	1,129.36	22.72	1,106.64
	LL6mw-003	Homewood	1,125.38	17.87	1,107.51
	LL6mw-004	Homewood	1,125.39	18.61	1,106.78
	LL6mw-005	Homewood	1,120.47	13.49	1,106.98
	LL6mw-006	Unconsolidated	1,124.37	16.19	1,108.18
	LL6mw-007	Homewood	1,115.62	9.21	1,106.41
Load Line 7	LL7mw-001	Homewood	1,129.64	22.20	1,107.44
	LL7mw-002	Homewood	1,129.55	18.71	1,110.84
	LL7mw-003	Homewood	1,120.84	13.14	1,107.70
	LL7mw-004	Homewood	1,126.32	16.61	1,109.71
	LL7mw-005	Homewood	1,135.87	23.79	1,112.08
	LL7mw-006	Homewood	1,123.56	13.24	1,110.32
Load Line 8	LL8mw-001	Unconsolidated	1,121.46	13.79	1,107.67
	LL8mw-002	Unconsolidated	1,124.51	21.35	1,103.16
	LL8mw-003	Unconsolidated	1,119.05	15.51	1,103.54
	LL8mw-004	Unconsolidated	1,115.75	13.94	1,101.81
	LL8mw-005	Homewood	1,115.73	15.79	1,099.94
	LL8mw-006	Homewood	1,117.17	21.24	1,095.93
Load Line 9	LL9mw-001	Homewood	1,134.62	17.41	1,117.21
	LL9mw-002	Homewood	1,127.30	16.94	1,110.36
	LL9mw-003	Homewood	1,135.76	14.63	1,121.13
	LL9mw-004	Homewood	1,131.83	22.57	1,109.26
	LL9mw-005	Homewood	1,130.93	18.51	1,112.42
	LL9mw-006	Homewood	1,129.88	21.20	1,108.68
	LL9mw-007	Homewood	1,119.99	11.43	1,108.56
Load Line 10	LL10mw-001	Homewood	1,132.77	26.21	1,106.56
	LL10mw-002	Homewood	1,127.13	19.42	1,107.71
	LL10mw-003	Homewood	1,130.28	21.73	1,108.55
	LL10mw-004	Homewood	1,122.39	15.29	1,107.10
	LL10mw-005	Homewood	1,125.67	17.55	1,108.12
	LL10mw-006	Unconsolidated	1,123.83	14.87	1,108.96

*RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report*

**Table 3-1. Depth to Water and Potentiometric Elevation (October 2007)**

RVAAP Area	Well ID	Monitored Zone	TOC Elevation (ft amsl)	October 2007 Depth to Water (ft, BTOC)	Potentiometric Elevation October 2007 (ft amsl)
Load Line 11	LL11mw-001	Unconsolidated	1,100.16	13.71	1,086.45
	LL11mw-002	Unconsolidated	1,080.00	6.05	1,073.95
	LL11mw-003	Unconsolidated	1,088.48	4.41	1,084.07
	LL11mw-004	Unconsolidated	1,084.72	4.29	1,080.43
	LL11mw-005	Unconsolidated	1,079.40	11.64	1,067.76
	LL11mw-006	Unconsolidated	1,086.50	9.25	1,077.25
	LL11mw-007	Unconsolidated	1,082.00	16.39	1,065.61
	LL11mw-008	Unconsolidated	1,087.74	5.70	1,082.04
	LL11mw-009	Unconsolidated	1,088.28	3.87	1,084.41
	LL11mw-010	Unconsolidated	1,082.68	7.82	1,074.86
Load Line 12	LL12mw-088	Unconsolidated	981.06	8.03	973.03
	LL12mw-107	Unconsolidated	980.15	11.13	969.02
	LL12mw-113	Sharon	980.18	8.12	972.06
	LL12mw-128	Unconsolidated	978.24	11.00	967.24
	LL12mw-153	Unconsolidated	977.85	7.55	970.30
	LL12mw-154	Unconsolidated	979.06	10.40	968.66
	LL12mw-182	Unconsolidated	984.42	13.12	971.30
	LL12mw-183	Sharon	982.98	14.56	968.42
	LL12mw-184	Unconsolidated	983.16	14.27	968.89
	LL12mw-185	Unconsolidated	981.31	10.63	970.68
	LL12mw-186	Sharon	978.31	7.29	971.02
	LL12mw-187	Unconsolidated	979.94	11.92	968.02
	LL12mw-188	Unconsolidated	980.63	7.65	972.98
	LL12mw-189	Sharon	978.04	7.68	970.36
	LL12mw-242	Unconsolidated	981.20	11.80	969.40
	LL12mw-243	Unconsolidated	980.79	9.93	970.86
	LL12mw-244	Unconsolidated	980.65	12.58	968.07
	LL12mw-245	Unconsolidated	980.04	9.12	970.92
	LL12mw-246	Unconsolidated	984.83	18.41	966.42
Atlas Scrap Yard	ASYmw-001	Sharon	981.13	13.62	967.51
	ASYmw-002	Sharon	985.24	16.02	969.22
	ASYmw-003	Sharon	982.21	14.51	967.70
	ASYmw-004	Sharon	979.66	11.55	968.11
	ASYmw-005	Sharon	979.80	10.77	969.03
	ASYmw-006	Sharon	983.01	15.12	967.89
	ASYmw-007	Unconsolidated	984.16	15.80	968.36
	ASYmw-008	Unconsolidated	978.85	6.09	972.76
	ASYmw-009	Sharon	982.70	14.35	968.35
	ASYmw-010	Unconsolidated	981.05	13.32	967.73
Building 1200	B12mw-010	Unconsolidated	1,005.92	20.63	985.29
	B12mw-011	Unconsolidated	1,006.70	23.02	983.68
	B12mw-012	Unconsolidated	1,006.32	22.45	983.87
C-Block Quarry	CBLmw-001	Homewood	1,181.08	44.53	1,136.55
	CBLmw-002	Homewood	1,175.24	39.03	1,136.21
	CBLmw-003	Homewood	1,175.06	37.70	1,137.36
	CBLmw-004	Homewood	1,174.84	37.40	1,137.44



*RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report*

**Table 3-1. Depth to Water and Potentiometric Elevation (October 2007)**

RVAAP Area	Well ID	Monitored Zone	TOC Elevation (ft amsl)	October 2007 Depth to Water (ft, BTOC)	Potentiometric Elevation October 2007 (ft amsl)
Central Burn Pits	CBPmw-001	Unconsolidated	975.84	14.67	961.17
	CBPmw-002	Unconsolidated	970.04	11.09	958.95
	CBPmw-003	Unconsolidated	974.67	14.78	959.89
	CBPmw-004	Unconsolidated	971.13	12.32	958.81
	CBPmw-005	Unconsolidated	971.59	13.48	958.11
	CBPmw-006	Unconsolidated	967.64	9.32	958.32
	CBPmw-007	Unconsolidated	976.37	18.15	958.22
	CBPmw-008	Unconsolidated	973.19	17.08	956.11
Cobbs Pond	CPmw-001	Unconsolidated	975.26	6.82	968.44
	CPmw-002	Unconsolidated	972.31	4.45	967.86
	CPmw-003	Unconsolidated	972.92	3.44	969.48
	CPmw-004	Unconsolidated	981.20	13.50	967.70
	CPmw-005	Unconsolidated	973.58	12.56	961.02
	CPmw-006	Unconsolidated	965.13	9.18	955.95
Demo. Area 2	DET-001B	Unconsolidated	1,065.85	24.75	1,041.10
	DET-002	Unconsolidated	1,061.24	33.08	1,028.16
	DET-003	Unconsolidated	1,036.81	9.84	1,026.97
	DET-004	Unconsolidated	1,038.68	11.11	1,027.57
	DA2mw-104	Unconsolidated	1,073.89	21.70	1,052.19
	DA2mw-105	Unconsolidated	1,045.34	3.70	1,041.64
	DA2mw-106	Unconsolidated	1,043.79	5.67	1,038.12
	DA2mw-107	Unconsolidated	1,041.63	8.41	1,033.22
	DA2mw-108	Unconsolidated	1,032.36	6.67	1,025.69
	DA2mw-109	Unconsolidated	1,071.29	17.37	1,053.92
	DA2mw-110	Unconsolidated	1,063.78	12.49	1,051.29
	DA2mw-111	Unconsolidated	1,042.12	4.67	1,037.45
	DA2mw-112	Unconsolidated	1,037.44	8.08	1,029.36
	DA2mw-113	Unconsolidated	1,037.11	8.79	1,028.32
Erie Burning Grounds	EBGmw-123	Unconsolidated	947.82	11.81	936.01
	EBGmw-124	Unconsolidated	941.39	5.53	935.86
	EBGmw-125	Unconsolidated	949.89	14.22	935.67
	EBGmw-126	Unconsolidated	940.61	4.29	936.32
	EBGmw-127	Unconsolidated	943.07	6.92	936.15
	EBGmw-128	Unconsolidated	945.13	9.22	935.91
	EBGmw-129	Unconsolidated	944.36	8.35	936.01
	EBGmw-130	Unconsolidated	944.00	8.57	935.43
Fuze and Booster Quarry	FBQmw-166	Unconsolidated	1,108.86	6.33	1,102.53
	FBQmw-167	Unconsolidated	1,115.90	6.21	1,109.69
	FBQmw-168	Homewood	1,133.91	13.28	1,120.63
	FBQmw-169	Homewood	1,120.58	8.36	1,112.22
	FBQmw-170	Homewood	1,142.26	19.81	1,122.45
	FBQmw-171	Homewood	1,143.55	20.74	1,122.81
	FBQmw-172	Homewood	1,150.09	28.14	1,121.95
	FBQmw-173	Homewood	1,165.94	43.30	1,122.64
	FBQmw-174	Homewood	1,139.97	18.14	1,121.83
	FBQmw-175	Homewood	1,140.73	18.85	1,121.88
	FBQmw-176	Unconsolidated	1,131.91	11.11	1,120.80
	FBQmw-177	Homewood	1,128.57	15.70	1,112.87

*RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report*

**Table 3-1. Depth to Water and Potentiometric Elevation (October 2007)**

RVAAP Area	Well ID	Monitored Zone	TOC Elevation (ft amsl)	October 2007 Depth to Water (ft, BTOC)	Potentiometric Elevation October 2007 (ft amsl)
Landfill North of Winklepeck	LNWmw-024	Unconsolidated	1,038.00	14.89	1,023.11
	LNWmw-025	Unconsolidated	1,029.13	5.76	1,023.37
	LNWmw-026	Unconsolidated	1,027.80	12.72	1,015.08
	LNWmw-027	Unconsolidated	1,027.13	10.14	1,016.99
NACA Test Area	NTAmw-107	Unconsolidated	1,080.30	13.30	1,067.00
	NTAmw-108	Unconsolidated	1,085.62	18.34	1,067.28
	NTAmw-109	Unconsolidated	1,079.84	12.73	1,067.11
	NTAmw-110	Unconsolidated	1,082.62	15.20	1,067.42
	NTAmw-111	Unconsolidated	1,080.94	6.55	1,074.39
	NTAmw-112	Unconsolidated	1,078.33	9.98	1,068.35
	NTAmw-113	Unconsolidated	1,075.68	8.11	1,067.57
	NTAmw-114	Unconsolidated	1,078.71	8.00	1,070.71
	NTAmw-115	Unconsolidated	1,089.65	16.45	1,073.20
	NTAmw-116	Unconsolidated	1,094.33	8.02	1,086.31
	NTAmw-117	Unconsolidated	1,094.54	16.56	1,077.98
	NTAmw-118	Unconsolidated	1,081.44	10.59	1,070.85
Ramsdell Quarry Landfill	RQLmw-006	Sharon	995.39	35.34	960.05
	RQLmw-007	Sharon	965.91	8.10	957.81
	RQLmw-008	Sharon	966.08	7.97	958.11
	RQLmw-009	Sharon	964.58	6.73	957.85
	RQLmw-010	Sharon	982.14	26.88	955.26
	RQLmw-011	Sharon	976.57	23.51	953.06
	RQLmw-012	Sharon	977.65	23.54	954.11
	RQLmw-013	Sharon	980.71	26.87	953.84
	RQLmw-014	Sharon	973.49	21.52	951.97
	RQLmw-015	Sharon	991.26	32.32	958.94
	RQLmw-016	Sharon	996.60	35.63	960.97
	RQLmw-017	Sharon	991.23	30.65	960.58
Winklepeck Burning Grounds	WBGmw-005	Unconsolidated	1,054.70	8.32	1,046.38
	WBGmw-006	Unconsolidated	1,014.66	10.25	1,004.41
	WBGmw-007	Unconsolidated	1,000.59	18.95	981.64
	WBGmw-008	Unconsolidated	1,008.21	16.38	991.83
	WBGmw-009	Unconsolidated	1,047.53	16.04	1,031.49
	WBGmw-010	Unconsolidated	1,069.85	9.78	1,060.07
	WBGmw-011	Unconsolidated	1,072.38	12.27	1,060.11
	WBGmw-012	Unconsolidated	1,079.11	24.21	1,054.90
	WBGmw-013	Unconsolidated	1,071.70	12.66	1,059.04
	WBGmw-014	Unconsolidated	996.78	17.90	978.88
	WBGmw-015	Unconsolidated	1,011.60	14.83	996.77
	WBGmw-016	Unconsolidated	997.03	18.73	978.30
	WBGmw-017	Unconsolidated	1,006.62	11.04	995.58
Suspected Mustard Agent Burial Site	MBS-001	Unconsolidated	1,082.20	18.09	1,064.11
	MBS-002	Unconsolidated	1,083.22	18.52	1,064.70
	MBS-003	Unconsolidated	1,084.45	19.23	1,065.22
	MBS-004	Unconsolidated	1,081.80	17.29	1,064.51
	MBS-005	Unconsolidated	1,082.42	18.35	1,064.07
	MBS-006	Unconsolidated	1,081.83	17.80	1,064.03

*TOC = top of casing*

*amsl = above mean sea level*

*BTOC = below top of casing*

**Table 3-2. Construction Details Including October 2007 Depth to Bottom Measurements**

RVAAP Area	Well ID	Ohio State Plane Easting	Ohio State Plane Northing	Ground Level Elevation <sup>a</sup>	Total Drilled Depth <sup>b</sup>	TOC Elevation <sup>a</sup>	Well Head Type <sup>c</sup>	Monitoring Zone		Top of Screen (ft, BGS)	Bottom of Screen (ft, BGS)	Bottom of Inner Casing Plug or End Cap (ft, BGS)	Stickup height (ft, AGS)	Reported Bottom of Inner Casing (ft, BTOC)	October 2007 Measured Bottom of Inner Casing (ft, BTOC)	Sediment Accumulation (ft)
								Old	New							
Background	BKGmw-004	2368852.97	569464.76	965.16	19.5	967.66	A	Unconsolidated	Unconsolidated	9.2	19.2	19.5	2.50	22.0	22.32	-0.32
	BKGmw-005	2340835.86	562288.45	1149.44	19.0	1151.94	A	Unconsolidated	Unconsolidated	8.2	18.2	18.5	2.50	21.0	21.03	-0.03
	BKGmw-006	2358643.96	571910.47	1026.38	35.1	1028.88	A	Bedrock	Sharon	24.7	34.7	35.1	2.50	37.6	37.64	-0.04
	BKGmw-008	2372741.08	569654.23	970.40	25.0	972.90	A	Bedrock	Sharon	14.7	24.7	25.0	2.50	27.5	27.48	0.02
	BKGmw-010	2371372.86	565540.54	1003.80	22.0	1006.18	A	Bedrock	Sharon	8.9	18.9	19.2	2.38	21.6	22.07	-0.47
	BKGmw-012	2367795.23	563918.86	997.57	59.8	1000.07	A	Bedrock	Sharon	38.6	59.6	59.8	2.50	62.3	62.27	0.03
	BKGmw-013	2361627.39	558269.16	986.59	25.5	989.09	A	Unconsolidated	Unconsolidated	15.2	25.2	25.5	2.50	28.0	28.07	-0.07
	BKGmw-015	2361482.22	569339.87	1037.90	51.0	1040.40	A	Bedrock	Sharon	30.1	50.1	50.4	2.50	52.9	53.12	-0.22
	BKGmw-016	2342407.08	553983.50	1098.42	19.0	1100.92	A	Unconsolidated	Unconsolidated	8.4	18.5	18.6	2.50	21.1	21.28	-0.18
	BKGmw-017	2346115.35	562452.04	1132.80	34.8	1135.30	A	Unconsolidated	Unconsolidated	23.2	33.3	33.6	2.50	36.1	36.11	-0.01
	BKGmw-018	2354993.91	570873.35	1043.06	24.7	1045.56	A	Bedrock	Sharon	14.5	24.5	24.7	2.50	27.2	27.68	-0.48
	BKGmw-019	2349882.14	559864.55	1108.24	34.0	1110.74	A	Unconsolidated	Unconsolidated	23.0	33.0	33.2	2.50	35.7	35.79	-0.09
	BKGmw-020	2357856.24	558756.24	1065.00	30.7	1067.50	A	Bedrock	Unconsolidated	20.5	30.5	30.7	2.50	33.2	33.30	-0.10
	BKGmw-021	2367622.95	571016.75	972.16	19.0	974.66	A	Unconsolidated	Unconsolidated	7.7	17.8	18.1	2.50	20.6	21.47	-0.87
Load Line 1	LL1mw-063	2376841.36	563650.53	992.20	27.4	994.84	A	Bedrock	Sharon	17.1	27.1	27.4	2.64	30.0	30.17	-0.17
	LL1mw-064	2380286.97	563118.74	932.32	18.4	935.10	A	Unconsolidated	Unconsolidated	8.0	18.0	18.4	2.78	21.1	21.17	-0.07
	LL1mw-065	2380452.00	560916.92	941.53	20.5	944.41	A	Unconsolidated	Unconsolidated	10.2	20.2	20.5	2.88	23.4	23.14	0.26
	LL1mw-067	2376545.30	565201.14	977.55	22.8	980.36	A	Bedrock	Sharon	12.8	22.5	22.8	2.81	25.6	25.82	-0.22
	LL1mw-078	2376275.85	564623.87	993.40	38.7	995.84	A	Bedrock	Sharon	28.7	38.2	38.7	2.44	41.1	41.22	-0.12
	LL1mw-079	2376228.31	563739.63	995.30	29.5	997.87	A	Bedrock	Sharon	29.5	38.9	39.5	2.57	42.0	41.98	0.02
	LL1mw-080	2376845.07	562479.73	993.70	19.5	996.27	A	Bedrock	Sharon	9.5	19.0	19.5	2.57	22.0	22.48	-0.48
	LL1mw-081	2376672.66	563462.73	996.40	39.4	998.92	A	Bedrock	Sharon	29.4	38.9	39.4	2.52	41.9	42.08	-0.18
	LL1mw-082	2376977.38	562956.86	1003.70	39.0	1006.45	A	Bedrock	Sharon	28.9	38.5	39.0	2.75	41.8	41.56	0.24
	LL1mw-083	2377074.80	563612.75	992.80	39.3	995.20	A	Bedrock	Sharon	29.1	38.6	39.3	2.40	41.7	41.56	0.14
	LL1mw-084	2377316.02	563160.44	996.40	37.0	998.73	A	Bedrock	Sharon	26.7	36.3	37.0	2.33	39.3	38.99	0.31
	LL1mw-085	2377246.94	562046.25	994.30	42.1	996.84	A	Bedrock	Sharon	32.2	41.6	42.1	2.54	44.7	44.86	-0.16

**Table 3-2. Construction Details Including October 2007 Depth to Bottom Measurements**

RVAAP Area	Well ID	Ohio State Plane Easting	Ohio State Plane Northing	Ground Level Elevation <sup>a</sup>	Total Drilled Depth <sup>b</sup>	TOC Elevation <sup>a</sup>	Well Head Type <sup>c</sup>	Monitoring Zone		Top of Screen (ft, BGS)	Bottom of Screen (ft, BGS)	Bottom of Inner Casing Plug or End Cap (ft, BGS)	Stickup height (ft, AGS)	Reported Bottom of Inner Casing (ft, BTOC)	October 2007 Measured Bottom of Inner Casing (ft, BTOC)	Sediment Accumulation (ft)
								Old	New							
Load Line 2	LL2mw-059	2375453.00	558020.00	964.33	19.5	966.67	A	Bedrock	Sharon	9.3	19.1	19.5	2.34	21.8	21.97	-0.17
	LL2mw-060	2375978.00	558022.00	958.93	18.3	961.57	A	Bedrock	Sharon	8.1	17.9	18.3	2.64	20.9	20.88	0.02
	LL2mw-261	2373317.81	561898.25	1009.55	22.5	1011.40	A	Bedrock	Sharon	9.8	19.8	20.0	1.85	21.9	22.56	-0.66
	LL2mw-262	2373970.79	562219.87	1011.12	21.2	1012.62	A	Bedrock	Sharon	10.6	20.6	20.8	1.50	22.3	22.76	-0.46
	LL2mw-263	2374289.51	561591.19	1009.42	22.2	1011.47	A	Bedrock	Sharon	10.8	20.8	21.0	2.05	23.0	22.66	0.34
	LL2mw-264	2374532.00	561173.60	1010.10	20.5	1011.88	A	Bedrock	Sharon	9.8	19.8	20.0	1.78	21.7	22.48	-0.78
	LL2mw-265	2375594.06	557972.91	959.47	22.5	961.24	A	Bedrock	Sharon	11.8	21.8	22.0	1.77	23.8	24.50	-0.70
	LL2mw-266	2373744.03	561981.86	1014.09	20.5	1016.28	A	Bedrock	Sharon	9.8	19.8	20.0	2.19	22.2	22.77	-0.57
	LL2mw-267	2373715.04	561393.22	1012.81	20.5	1014.81	A	Bedrock	Sharon	9.8	19.8	20.0	2.00	22.0	22.77	-0.77
	LL2mw-268	2374157.30	560831.04	1015.47	28.8	1017.28	A	Bedrock	Sharon	17.3	27.3	27.5	1.81	29.3	29.97	-0.67
	LL2mw-269	2374756.07	559484.12	1009.49	28.0	1011.62	A	Bedrock	Sharon	17.1	27.1	27.3	2.13	29.4	30.40	-1.00
Load Line 3	LL2mw-270	2372858.41	562655.93	1009.93	20.5	1010.18	A	Bedrock	Sharon	9.8	19.8	20.0	0.25	20.3	22.52	-2.22
	LL3mw-232	2369862.96	561365.91	998.59	37.8	1000.41	A	Bedrock	Sharon	26.8	36.8	37.0	1.82	38.8	39.94	-1.14
	LL3mw-233	2369934.52	560750.41	1002.47	31.1	1004.36	A	Bedrock	Sharon	20.1	30.1	30.3	1.89	32.2	32.89	-0.69
	LL3mw-234	2370297.47	560058.89	1004.47	20.5	1006.56	A	Bedrock	Sharon	9.8	19.8	20.0	2.09	22.1	22.75	-0.65
	LL3mw-235	2370642.47	559812.63	1008.05	21.2	1009.94	A	Bedrock	Sharon	10.1	20.1	20.3	1.89	22.2	23.09	-0.89
	LL3mw-236	2371178.58	559866.75	1008.94	25.5	1011.17	A	Bedrock	Sharon	13.8	23.8	24.0	2.23	26.2	26.68	-0.48
	LL3mw-237	2371475.00	559328.09	1003.57	23.9	1005.57	A	Bedrock	Sharon	12.7	22.7	22.9	2.00	24.9	25.62	-0.72
	LL3mw-238	2370625.34	559569.06	1004.75	20.7	1006.91	A	Bedrock	Sharon	10.5	20.5	20.7	2.16	22.9	23.46	-0.56
	LL3mw-239	2370895.01	559101.39	1001.70	35.7	1003.50	A	Bedrock	Sharon	24.9	34.9	35.0	1.80	36.8	37.23	-0.43
	LL3mw-240	2371309.57	558204.34	1005.60	35.5	1007.52	A	Bedrock	Sharon	24.4	34.4	34.6	1.92	36.5	36.81	-0.31
	LL3mw-241	2370332.80	559298.09	992.41	23.8	994.65	A	Bedrock	Sharon	12.7	22.7	22.9	2.24	25.1	21.60	3.50
	LL3mw-242	2371993.30	557034.21	997.39	20.5	999.32	A	Bedrock	Sharon	9.8	19.8	20.0	1.93	21.9	22.61	-0.71
	LL3mw-243	2371532.61	556688.92	989.36	24.5	991.16	A	Bedrock	Sharon	13.8	23.8	24.0	1.80	25.8	26.42	-0.62
Load Line 4	LL4mw-193	2364237.44	554959.74	980.88	21.9	982.92	A	Unconsolidated	Unconsolidated	11.3	21.3	21.5	2.04	23.5	24.45	-0.95
	LL4mw-194	2364584.76	555088.18	981.87	22.0	983.76	A	Unconsolidated	Unconsolidated	11.3	21.3	21.5	1.89	23.4	23.79	-0.39
	LL4mw-195	2365198.84	555045.69	980.83	21.0	982.59	A	Unconsolidated	Unconsolidated	10.3	20.3	20.5	1.76	22.3	23.00	-0.70
	LL4mw-196	2365297.28	555212.59	982.56	20.0	984.55	A	Unconsolidated	Unconsolidated	9.2	19.2	19.4	1.99	21.4	21.92	-0.52
	LL4mw-197	2365385.95	555396.55	983.79	21.7	985.46	A	Unconsolidated	Unconsolidated	10.8	20.8	21.0	1.67	22.7	23.72	-1.02
	LL4mw-198	2364991.12	555440.99	981.61	22.0	983.42	A	Unconsolidated	Unconsolidated	10.3	20.3	20.5	1.81	22.3	21.04	1.26
	LL4mw-199	2365421.66	554621.06	975.20	22.0	977.28	A	Unconsolidated	Unconsolidated	10.3	20.3	20.5	2.08	22.6	23.34	-0.74
	LL4mw-200	2365904.12	554579.72	985.97	23.5	987.93	A	Unconsolidated	Unconsolidated	12.6	22.6	23.0	1.96	25.0	25.38	-0.38

RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report

**Table 3-2. Construction Details Including October 2007 Depth to Bottom Measurements**

RVAAP Area	Well ID	Ohio State Plane Easting	Ohio State Plane Northing	Ground Level Elevation <sup>a</sup>	Total Drilled Depth <sup>b</sup>	TOC Elevation <sup>a</sup>	Well Head Type <sup>c</sup>	Monitoring Zone		Top of Screen (ft, BGS)	Bottom of Screen (ft, BGS)	Bottom of Inner Casing Plug or End Cap (ft, BGS)	Stickup height (ft, AGS)	Reported Bottom of Inner Casing (ft, BTOC)	October 2007 Measured Bottom of Inner Casing (ft, BTOC)	Sediment Accumulation (ft)
								Old	New							
Load Line 5	LL5mw-001	2354625.07	554319.25	1125.00	24.0	1127.92	A	Unconsolidated	Homewood	14.0	24.0	24.0	2.92	26.9	27.12	-0.22
	LL5mw-002	2354571.52	554604.01	1125.80	25.0	1128.68	A	Unconsolidated	Homewood	15.0	25.0	25.0	2.88	27.9	27.60	0.30
	LL5mw-003	2354964.47	554535.41	1124.70	21.0	1127.70	A	Unconsolidated	Unconsolidated	11.0	21.0	21.0	3.00	24.0	24.08	-0.08
	LL5mw-004	2355006.44	554073.73	1122.90	22.4	1125.81	A	Unconsolidated	Homewood	12.0	22.0	22.0	2.91	24.9	25.51	-0.61
	LL5mw-005	2354422.02	554152.73	1126.50	27.8	1129.42	A	Unconsolidated	Homewood	17.0	27.0	27.0	2.92	29.9	29.83	0.07
	LL5mw-006	2354730.78	553984.82	1125.10	24.5	1128.00	A	Unconsolidated	Homewood	14.0	24.0	24.0	2.90	26.9	29.83	-2.93
Load Line 6	LL6mw-001	2353153.23	554214.84	NA	18.0	1124.16	F	Unconsolidated	Unconsolidated	7.0	17.0	17.0	0.00	17.0	17.72	-0.72
	LL6mw-002	2353820.09	553589.88	NA	23.0	1129.36	F	Unconsolidated	Unconsolidated	12.5	22.5	22.5	0.00	22.5	24.59	-2.09
	LL6mw-003	2353048.68	553544.34	NA	23.4	1125.38	A	Unconsolidated	Homewood	12.5	22.5	22.5	3.35	25.9	25.82	0.08
	LL6mw-004	2353368.79	553431.82	NA	23.0	1125.39	A	Unconsolidated	Homewood	12.5	22.5	22.5	2.58	25.1	24.61	0.49
	LL6mw-005	2353194.52	553170.76	NA	19.9	1120.47	A	Unconsolidated	Homewood	9.5	19.5	19.5	2.96	22.5	22.38	0.12
	LL6mw-006	2352419.15	553165.28	NA	20.0	1124.37	A	Unconsolidated	Unconsolidated	7.0	17.0	17.0	0.00	17.0	17.88	-0.88
	LL6mw-007	2353354.89	552677.17	NA	20.0	1115.62	F	Unconsolidated	Homewood	9.5	19.5	19.5	0.00	19.5	19.44	0.06
Load Line 7	LL7mw-001	2352192.91	554925.77	1126.90	30.0	1129.64	A	Unconsolidated	Homewood	19.5	29.5	29.5	2.74	32.2	33.14	-0.94
	LL7mw-002	2351918.23	555126.55	1126.70	26.5	1129.55	A	Bedrock	Homewood	15.0	25.0	25.0	2.85	27.8	27.28	0.52
	LL7mw-003	2352351.04	555417.04	1118.23	31.5	1120.84	A	Bedrock	Homewood	21.0	31.0	31.0	2.61	33.6	33.64	-0.04
	LL7mw-004	2352035.20	555581.14	1123.30	29.5	1126.32	A	Bedrock	Homewood	19.5	29.5	29.5	3.02	32.5	32.34	0.16
	LL7mw-005	2351741.47	555581.80	1133.30	28.2	1135.87	A	Bedrock	Homewood	18.0	28.0	28.0	2.57	30.6	30.44	0.16
	LL7mw-006	2351879.92	555990.59	1120.70	28.0	1123.56	A	Bedrock	Homewood	17.5	27.5	27.5	2.86	30.4	30.43	-0.03
Load Line 8	LL8mw-001	2351666.10	552607.06	1118.69	24.0	1121.46	A	Unconsolidated	Unconsolidated	14.0	24.0	24.0	2.77	26.8	27.63	-0.83
	LL8mw-002	2351010.33	552408.18	1121.67	30.4	1124.51	A	Unconsolidated	Unconsolidated	20.0	30.0	30.0	2.84	32.8	32.66	0.14
	LL8mw-003	2351359.25	552231.14	1116.30	21.0	1119.05	A	Unconsolidated	Unconsolidated	10.5	20.5	20.5	2.75	23.3	23.13	0.17
	LL8mw-004	2351261.83	551807.58	1112.73	20.5	1115.75	A	Unconsolidated	Unconsolidated	10.0	20.0	20.0	3.02	23.0	22.74	0.26
	LL8mw-005	2351748.32	551522.48	1112.51	24.0	1115.73	A	Unconsolidated	Homewood	14.0	24.0	24.0	3.22	27.2	27.26	-0.06
	LL8mw-006	2351483.58	551296.77	1114.33	24.2	1117.17	A	Unconsolidated	Homewood	14.0	24.0	24.0	2.84	26.8	27.16	-0.36
Load Line 9	LL9mw-001	2355817.04	556125.81	NA	21.6	1134.62	A	Bedrock	Homewood	10.5	20.5	20.5	2.78	23.3	23.40	-0.10
	LL9mw-002	2355907.76	556755.11	NA	21.0	1127.30	A	Bedrock	Homewood	10.0	20.0	20.0	2.42	22.4	22.83	-0.43
	LL9mw-003	2356635.21	556445.31	NA	22.0	1135.76	A	Bedrock	Homewood	11.5	21.5	21.5	2.30	23.8	24.26	-0.46
	LL9mw-004	2357338.76	556002.00	NA	33.0	1131.83	A	Bedrock	Homewood	22.0	32.0	32.0	2.91	34.9	34.74	0.16
	LL9mw-005	2356505.95	557063.36	NA	20.6	1130.93	A	Bedrock	Homewood	10.0	20.0	20.0	3.30	23.3	23.58	-0.28
	LL9mw-006	2357446.67	556434.79	NA	26.8	1129.88	A	Bedrock	Homewood	16.0	26.0	26.0	2.90	28.9	28.88	0.02
	LL9mw-007	2357024.34	557000.56	NA	19.0	1119.99	F	Bedrock	Homewood	8.5	18.5	18.5	0.00	18.5	18.23	0.27

RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report

**Table 3-2. Construction Details Including October 2007 Depth to Bottom Measurements**

RVAAP Area	Well ID	Ohio State Plane Easting	Ohio State Plane Northing	Ground Level Elevation <sup>a</sup>	Total Drilled Depth <sup>b</sup>	TOC Elevation <sup>a</sup>	Well Head Type <sup>c</sup>	Monitoring Zone		Top of Screen (ft, BGS)	Bottom of Screen (ft, BGS)	Bottom of Inner Casing Plug or End Cap (ft, BGS)	Stickup height (ft, AGS)	Reported Bottom of Inner Casing (ft, BTOC)	October 2007 Measured Bottom of Inner Casing (ft, BTOC)	Sediment Accumulation (ft)
								Old	New							
Load Line 10	LL10mw-001	2355272.22	555816.25	1130.00	28.0	1132.77	A	Bedrock	Homewood	17.0	27.0	27.0	2.77	29.8	29.66	0.14
	LL10mw-002	2355710.51	555523.36	1124.40	28.0	1127.13	A	Bedrock	Homewood	17.0	27.0	27.0	2.73	29.7	29.87	-0.17
	LL10mw-003	2355389.92	555494.71	1127.40	26.4	1130.28	A	Bedrock	Homewood	16.0	26.0	26.0	2.88	28.9	28.62	0.28
	LL10mw-004	2355438.20	555236.59	1119.60	31.2	1122.39	A	Bedrock	Homewood	21.0	31.0	31.0	2.79	33.8	33.64	0.16
	LL10mw-005	2355943.55	555380.53	1122.90	27.0	1125.67	A	Bedrock	Homewood	16.5	26.5	26.5	2.77	29.3	29.31	-0.01
	LL10mw-006	2355654.80	554995.25	1121.20	24.0	1123.83	A	Unconsolidated	Unconsolidated	13.5	23.5	23.5	2.63	26.1	26.58	-0.48
Load Line 11	LL11mw-001	2352778.89	557505.03	1097.46	23.0	1100.16	A	Unconsolidated	Unconsolidated	11.4	21.4	21.4	2.70	24.1	21.61	2.49
	LL11mw-002	2353354.28	558310.52	1080.29	20.0	1080.00	F	Unconsolidated	Unconsolidated	6.3	16.3	16.3	-0.29	16.0	16.54	-0.54
	LL11mw-003	2352737.87	557999.62	1088.45	17.0	1088.48	F	Unconsolidated	Unconsolidated	5.9	15.9	15.9	0.03	15.9	16.15	-0.25
	LL11mw-004	2352737.24	558164.36	1084.60	17.0	1084.72	F	Unconsolidated	Unconsolidated	6.1	16.1	16.1	0.12	16.2	16.27	-0.07
	LL11mw-005	2352847.56	558501.02	1079.60	17.0	1079.40	F	Unconsolidated	Unconsolidated	6.2	16.2	16.2	-0.20	16.0	16.51	-0.51
	LL11mw-006	2352521.36	558263.28	1086.61	17.0	1086.50	F	Unconsolidated	Unconsolidated	5.6	15.6	15.6	-0.11	15.5	15.81	-0.31
	LL11mw-007	2352094.81	558189.71	1079.22	23.0	1082.00	A	Unconsolidated	Unconsolidated	12.4	22.4	22.4	2.78	25.2	25.42	-0.22
	LL11mw-008	2352388.60	557981.17	1087.90	17.0	1087.74	F	Unconsolidated	Unconsolidated	5.6	15.6	15.6	-0.16	15.4	15.82	-0.42
	LL11mw-009	2352577.18	557901.18	1088.38	17.0	1088.28	F	Unconsolidated	Unconsolidated	6.7	16.7	16.7	-0.10	16.6	16.88	-0.28
	LL11mw-010	2352039.00	557675.43	1080.22	22.0	1082.68	A	Unconsolidated	Unconsolidated	10.9	20.9	20.9	2.46	23.4	23.53	-0.13
Load Line 12	LL12mw-088	2368667.75	556393.79	978.94	29.0	981.06	A	Unconsolidated	Unconsolidated	14.8	24.8	25.0	2.12	27.1	27.62	-0.52
	LL12mw-107	2368595.67	556759.02	978.03	33.0	980.15	A	Unconsolidated	Unconsolidated	20.7	30.7	31.0	2.12	33.1	33.79	-0.69
	LL12mw-113	2368223.73	558345.37	977.67	23.0	980.18	A	Unconsolidated	Sharon	12.3	22.3	22.5	2.51	25.0	20.43	4.57
	LL12mw-128	2368293.20	557371.54	976.21	34.0	978.24	A	Unconsolidated	Unconsolidated	21.1	31.1	31.3	2.03	33.3	34.29	-0.99
	LL12mw-153	2368138.87	557823.23	975.34	26.0	977.85	A	Unconsolidated	Unconsolidated	12.3	22.3	22.5	2.51	25.0	24.91	0.09
	LL12mw-154	2368183.88	557754.56	977.00	29.0	979.06	A	Unconsolidated	Unconsolidated	16.4	26.4	26.6	2.06	28.7	28.47	0.23
	LL12mw-182	2368853.20	555890.35	982.20	36.1	984.42	A	Unconsolidated	Unconsolidated	25.2	35.2	35.5	2.22	37.7	38.24	-0.54
	LL12mw-183	2369224.36	556068.15	980.59	36.0	982.98	A	Unconsolidated	Sharon	23.3	33.3	33.6	2.39	36.0	36.40	-0.40
	LL12mw-184	2368997.48	556399.46	980.96	29.5	983.16	A	Unconsolidated	Unconsolidated	18.8	28.8	29.0	2.20	31.2	31.20	0.00
	LL12mw-185	2368829.86	556946.75	979.09	24.0	981.31	A	Unconsolidated	Unconsolidated	10.8	20.8	21.0	2.22	23.2	23.33	-0.13
	LL12mw-186	2367912.39	559065.95	976.34	23.0	978.31	A	Unconsolidated	Sharon	8.8	18.8	19.0	1.97	21.0	21.14	-0.14
	LL12mw-187	2368524.14	557633.10	977.90	29.0	979.94	A	Unconsolidated	Unconsolidated	17.2	27.2	27.4	2.04	29.4	29.71	-0.31
	LL12mw-188	2367908.82	558132.59	978.46	20.5	980.63	A	Unconsolidated	Unconsolidated	9.8	19.8	20.0	2.17	22.2	22.31	-0.11
	LL12mw-189	2367945.92	558569.27	976.17	18.5	978.04	A	Unconsolidated	Sharon	7.5	17.5	17.7	1.87	19.6	19.87	-0.27
	LL12mw-242	2368545.29	558020.51	978.40	26.3	981.20	A	Unconsolidated	Unconsolidated	15.5	25.5	25.5	2.80	28.3	29.41	-1.11
	LL12mw-243	2368190.04	557376.32	978.10	24.0	980.79	A	Unconsolidated	Unconsolidated	13.0	23.0	23.0	2.69	25.7	25.80	-0.10
	LL12mw-244	2368751.42	557377.17	978.10	30.0	980.65	A	Unconsolidated	Unconsolidated	19.5	29.5	29.5	2.55	32.1	31.67	0.43
	LL12mw-245	2368370.74	557044.55	977.50	29.0	980.04	A	Unconsolidated	Unconsolidated	18.0	28.0	28.0	2.54	30.5	30.45	0.05
	LL12mw-246	2369432.17	556658.89	982.00	32.0	984.83	A	Unconsolidated	Unconsolidated	21.5	31.5	31.5	2.83	34.3	35.12	-0.82

**Table 3-2. Construction Details Including October 2007 Depth to Bottom Measurements**

RVAAP Area	Well ID	Ohio State Plane Easting	Ohio State Plane Northing	Ground Level Elevation <sup>a</sup>	Total Drilled Depth <sup>b</sup>	TOC Elevation <sup>a</sup>	Well Head Type <sup>c</sup>	Monitoring Zone		Top of Screen (ft, BGS)	Bottom of Screen (ft, BGS)	Bottom of Inner Casing Plug or End Cap (ft, BGS)	Stickup height (ft, AGS)	Reported Bottom of Inner Casing (ft, BTOC)	October 2007 Measured Bottom of Inner Casing (ft, BTOC)	Sediment Accumulation (ft)
								Old	New							
Atlas Scrap Yard	ASYmw-001	2366260.85	558404.04	978.40	22.0	981.13	A	Unconsolidated/	Sharon	11.0	21.0	21.0	2.73	23.7	23.18	0.52
	ASYmw-002	2366170.86	557887.86	982.00	20.0	985.24	A	Unconsolidated	Sharon	10.0	19.5	19.5	3.24	22.7	23.02	-0.32
	ASYmw-003	2366651.49	558015.94	979.70	21.5	982.21	A	Unconsolidated	Sharon	11.0	21.0	21.0	2.51	23.5	23.52	-0.02
	ASYmw-004	2367166.04	557640.81	977.10	27.8	979.66	A	Unconsolidated	Sharon	17.0	27.0	27.0	2.56	29.6	29.86	-0.26
	ASYmw-005	2367448.16	557783.01	977.60	25.0	979.80	A	Unconsolidated	Sharon	14.0	24.0	24.0	2.20	26.2	27.25	-1.05
	ASYmw-006	2366746.73	557257.72	980.20	27.0	983.01	A	Unconsolidated	Sharon	16.0	26.0	26.0	2.81	28.8	28.97	-0.17
	ASYmw-007	2366834.49	556818.08	981.40	28.0	984.16	A	Unconsolidated	Unconsolidated	16.0	26.0	26.0	2.76	28.8	28.94	-0.14
	ASYmw-008	2367475.07	557087.66	976.20	26.0	978.85	A	Unconsolidated	Unconsolidated	15.0	25.0	25.0	2.65	27.7	27.73	-0.03
	ASYmw-009	2366631.94	557603.68	979.90	22.0	982.70	A	Unconsolidated	Sharon	11.5	21.5	21.5	2.80	24.3	24.63	-0.33
	ASYmw-010	2366985.37	557270.61	978.20	28.0	981.05	A	Unconsolidated	Unconsolidated	17.0	27.0	27.0	2.85	29.8	31.21	-1.41
Building 1200	B12mw-010	2371292.81	565827.43	1002.72	21.0	1005.92	A	Bedrock	Unconsolidated	10.0	20.0	20.0	3.20	23.2	22.92	0.28
	B12mw-011	2371416.15	565687.82	1003.76	24.7	1006.70	A	Bedrock	Unconsolidated	14.0	24.0	24.0	2.94	26.9	26.82	0.08
	B12mw-012	2371430.41	565828.01	1003.43	22.3	1006.32	A	Bedrock	Unconsolidated	12.0	22.0	22.0	2.89	24.9	24.91	-0.01
C-Block Quarry	CBLmw-001	2343657.08	559403.12	1178.50	50.0	1181.08	A	Bedrock	Homewood	39.0	49.0	49.0	2.58	51.6	49.79	1.81
	CBLmw-002	2343845.22	559044.48	1172.50	45.3	1175.24	A	Bedrock	Homewood	34.5	44.5	44.5	2.74	47.2	49.79	-2.59
	CBLmw-003	2343970.00	559695.52	1172.22	44.0	1175.06	A	Bedrock	Homewood	33.0	43.0	43.0	2.84	45.8	44.82	0.98
	CBLmw-004	2343688.76	559951.58	1172.08	45.0	1174.84	A	Bedrock	Homewood	34.0	44.0	44.0	2.76	46.8	47.12	-0.32
Central Burn Pits	CBPmw-001	2367095.37	561616.01	972.71	32.3	975.84	A	Unconsolidated	Unconsolidated	21.8	31.8	31.8	3.13	34.9	32.84	2.06
	CBPmw-002	2367295.66	561865.83	967.33	30.0	970.04	A	Unconsolidated	Unconsolidated	19.5	29.5	29.5	2.71	32.2	32.12	0.08
	CBPmw-003	2366768.68	561944.14	972.04	25.0	974.67	A	Unconsolidated	Unconsolidated	14.5	24.5	24.5	2.63	27.1	30.29	-3.19
	CBPmw-004	2366978.80	562123.80	968.58	27.5	971.13	A	Unconsolidated	Unconsolidated	17.0	27.0	27.0	2.55	29.5	29.80	-0.30
	CBPmw-005	2366919.66	562311.88	968.83	25.0	971.59	A	Unconsolidated	Unconsolidated	14.5	24.5	24.5	2.76	27.3	27.52	-0.22
	CBPmw-006	2367243.68	562311.87	965.01	23.0	967.64	A	Unconsolidated	Unconsolidated	12.5	22.5	22.5	2.63	25.1	25.43	-0.33
	CBPmw-007	2366512.62	562006.41	973.47	30.0	976.37	A	Unconsolidated	Unconsolidated	19.5	29.5	29.5	2.90	32.4	31.86	0.54
	CBPmw-008	2366757.21	562668.84	970.57	25.5	973.19	A	Unconsolidated	Unconsolidated	15.0	25.0	25.0	2.62	27.6	28.01	-0.41
Cobbs Pond	CPmw-001	2368948.81	560440.91	975.46	16.0	975.26	F	Unconsolidated	Unconsolidated	5.5	15.5	15.5	-0.20	15.3	14.80	0.50
	CPmw-002	2368239.23	560311.26	972.72	16.0	972.31	F	Unconsolidated	Unconsolidated	5.5	15.5	15.5	-0.41	15.1	15.08	0.02
	CPmw-003	2368796.49	560676.30	973.27	18.5	972.92	F	Unconsolidated	Unconsolidated	8.0	18.0	18.0	-0.35	17.6	17.80	-0.20
	CPmw-004	2368674.31	561843.46	978.51	20.0	981.20	A	Unconsolidated	Unconsolidated	9.5	19.5	19.5	2.69	22.2	22.60	-0.40
	CPmw-005	2367900.41	561846.78	970.71	40.0	973.58	A	Unconsolidated	Unconsolidated	29.5	39.5	39.5	2.87	42.4	43.27	-0.87
	CPmw-006	2367727.13	562830.13	962.97	18.5	965.13	A	Unconsolidated	Unconsolidated	8.0	18.0	18.0	2.16	20.2	20.74	-0.54

RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report

**Table 3-2. Construction Details Including October 2007 Depth to Bottom Measurements**

RVAAP Area	Well ID	Ohio State Plane Easting	Ohio State Plane Northing	Ground Level Elevation <sup>a</sup>	Total Drilled Depth <sup>b</sup>	TOC Elevation <sup>a</sup>	Well Head Type <sup>c</sup>	Monitoring Zone		Top of Screen (ft, BGS)	Bottom of Screen (ft, BGS)	Bottom of Inner Casing Plug or End Cap (ft, BGS)	Stickup height (ft, AGS)	Reported Bottom of Inner Casing (ft, BTOC)	October 2007 Measured Bottom of Inner Casing (ft, BTOC)	Sediment Accumulation (ft)
								Old	New							
Demo.Area 2	DET-001B	2354959.47	560820.03	1064.35	39.0	1065.85	A	Unconsolidated	Unconsolidated	34.0	39.0	39.0	1.50	40.5	38.61	1.89
	DET-002	2355360.33	560664.71	1060.24	39.0	1061.24	A	Unconsolidated	Unconsolidated	34.0	39.0	39.0	1.00	40.0	42.08	-2.08
	DET-003	2355204.94	560456.10	1035.81	15.0	1036.81	A	Unconsolidated	Unconsolidated	7.0	12.0	12.0	1.00	13.0	16.09	-3.09
	DET-004	2355072.36	560454.22	1037.68	11.0	1038.68	A	Unconsolidated	Unconsolidated	6.0	11.0	11.0	1.00	12.0	13.92	-1.92
	DA2mw-104	2354773.79	561129.59	1070.82	27.0	1073.89	A	Unconsolidated	Unconsolidated	16.3	26.3	26.5	3.07	29.6	29.35	0.25
	DA2mw-105	2354557.62	560572.58	1042.66	14.0	1045.34	A	Unconsolidated	Unconsolidated	8.3	13.3	13.5	2.68	16.2	16.32	-0.12
	DA2mw-106	2354848.85	560560.49	1041.19	16.0	1043.79	A	Unconsolidated	Unconsolidated	8.3	15.3	15.5	2.60	18.1	16.90	1.20
	DA2mw-107	2354924.29	560480.05	1039.18	15.0	1041.63	A	Unconsolidated	Unconsolidated	8.8	13.8	14.0	2.45	16.5	16.97	-0.47
	DA2mw-108	2355604.43	560181.78	1029.92	15.0	1032.36	A	Bedrock	Unconsolidated	9.3	14.3	14.5	2.44	16.9	17.29	-0.39
	DA2mw-109	2354793.14	559897.89	1068.66	24.0	1071.29	A	Unconsolidated	Unconsolidated	11.3	21.3	21.5	2.63	24.1	24.48	-0.38
	DA2mw-110	2355195.91	559927.02	1061.39	20.0	1063.78	A	Unconsolidated	Unconsolidated	9.3	19.3	19.5	2.39	21.9	22.45	-0.55
	DA2mw-111	2354728.33	560222.94	1039.63	12.6	1042.12	A	Bedrock	Unconsolidated	7.1	12.1	12.3	2.49	14.8	14.93	-0.13
	DA2mw-112	2355018.98	560378.36	1034.87	15.0	1037.44	A	Unconsolidated	Unconsolidated	8.8	13.8	14.0	2.57	16.6	17.18	-0.58
	DA2mw-113	2355153.13	560394.81	1034.51	14.0	1037.11	A	Unconsolidated	Unconsolidated	8.3	13.3	13.5	2.60	16.1	16.42	-0.32
Erie Burning Grounds	EBGmw-123	2380049.21	571747.04	945.59	32.0	947.82	A	Unconsolidated	Unconsolidated	21.0	31.0	31.5	2.23	33.7	34.90	-1.20
	EBGmw-124	2380030.24	571618.07	939.02	32.0	941.39	A	Unconsolidated	Unconsolidated	20.0	30.0	30.5	2.37	32.9	32.86	0.04
	EBGmw-125	2379679.20	571655.63	947.55	25.0	949.89	A	Unconsolidated	Unconsolidated	14.0	24.0	24.5	2.34	26.8	27.58	-0.78
	EBGmw-126	2380307.31	572348.81	938.20	28.0	940.61	A	Unconsolidated	Unconsolidated	15.2	25.2	25.5	2.41	27.9	28.00	-0.10
	EBGmw-127	2380172.16	571083.61	940.21	30.0	943.07	A	Unconsolidated	Unconsolidated	19.0	29.0	29.5	2.86	32.4	32.82	-0.42
	EBGmw-128	2379892.79	570970.32	942.47	28.0	945.13	A	Unconsolidated	Unconsolidated	15.0	25.0	25.3	2.66	28.0	28.31	-0.31
	EBGmw-129	2379240.52	572035.68	941.97	29.0	944.36	A	Unconsolidated	Unconsolidated	16.0	26.0	26.0	2.39	28.4	31.12	-2.72
	EBGmw-130	2379220.69	570695.61	941.18	26.0	944.00	A	Unconsolidated	Unconsolidated	15.2	25.2	25.5	2.82	28.3	28.49	-0.19
Fuze and Booster Quarry	FBQmw-166	2349584.33	553123.86	1104.87	16.0	1108.86	A	Unconsolidated	Unconsolidated	5.5	15.5	15.5	3.99	19.5	19.84	-0.34
	FBQmw-167	2349675.45	553556.12	1112.05	18.0	1115.90	A	Unconsolidated	Unconsolidated	5.0	15.0	15.0	3.85	18.9	19.09	-0.19
	FBQmw-168	2350066.87	553620.85	1131.27	19.5	1133.91	A	Unconsolidated	Homewood	9.0	19.0	19.0	2.64	21.6	21.36	0.24
	FBQmw-169	2349730.90	553681.21	1117.36	16.0	1120.58	A	Unconsolidated	Homewood	5.0	15.0	15.0	3.22	18.2	18.21	-0.01
	FBQmw-170	2350102.41	553975.40	1139.67	30.5	1142.26	A	Bedrock	Homewood	20.0	30.0	30.0	2.59	32.6	32.82	-0.22
	FBQmw-171	2350072.44	554230.93	1140.49	30.0	1143.55	A	Bedrock	Homewood	18.0	28.0	28.0	3.06	31.1	31.52	-0.42
	FBQmw-172	2349907.37	554322.17	1145.71	33.0	1150.09	A	Bedrock	Homewood	20.0	30.0	30.0	4.38	34.4	34.53	-0.13
	FBQmw-173	2350449.01	554491.35	1162.43	50.0	1165.94	A	Bedrock	Homewood	29.5	49.5	49.5	3.51	53.0	51.79	1.21
	FBQmw-174	2350289.81	554142.44	1135.78	22.5	1139.97	A	Bedrock	Homewood	12.0	22.0	22.0	4.19	26.2	22.95	3.25
	FBQmw-175	2350297.98	553989.24	1137.16	22.5	1140.73	A	Bedrock	Homewood	12.0	22.0	22.0	3.57	25.6	25.91	-0.31
	FBQmw-176	2350219.45	553273.33	1129.57	21.5	1131.91	A	Unconsolidated	Unconsolidated	11.0	21.0	21.0	2.34	23.3	24.12	-0.82
	FBQmw-177	2350112.18	553321.94	1125.73	22.5	1128.57	A	Unconsolidated	Homewood	12.0	22.0	22.0	2.84	24.8	24.99	-0.19



RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report

**Table 3-2. Construction Details Including October 2007 Depth to Bottom Measurements**

RVAAP Area	Well ID	Ohio State Plane Easting	Ohio State Plane Northing	Ground Level Elevation <sup>a</sup>	Total Drilled Depth <sup>b</sup>	TOC Elevation <sup>a</sup>	Well Head Type <sup>c</sup>	Monitoring Zone		Top of Screen (ft, BGS)	Bottom of Screen (ft, BGS)	Bottom of Inner Casing Plug or End Cap (ft, BGS)	Stickup height (ft, AGS)	Reported Bottom of Inner Casing (ft, BTOC)	October 2007 Measured Bottom of Inner Casing (ft, BTOC)	Sediment Accumulation (ft)
								Old	New							
Landfill North of Winklepeck	LNWmw-024	2358403.21	564825.89	1035.30	24.0	1038.00	A	Unconsolidated	Unconsolidated	10.0	20.0	20.0	2.70	22.7	22.65	0.05
	LNWmw-025	2358417.06	565071.92	1027.20	19.0	1029.13	A	Unconsolidated	Unconsolidated	8.0	18.0	18.0	1.93	19.9	20.45	-0.55
	LNWmw-026	2358952.24	564658.16	1025.00	24.0	1027.80	A	Unconsolidated	Unconsolidated	13.0	23.0	23.0	2.80	25.8	26.12	-0.32
	LNWmw-027	2358628.75	564517.41	1024.40	25.0	1027.13	A	Bedrock	Unconsolidated	14.0	24.0	24.0	2.73	26.7	26.96	-0.26
NACA Test Area	NTAmw-107	2345433.40	551697.29	1077.65	23.0	1080.30	A	Unconsolidated	Unconsolidated	12.0	22.0	22.0	2.65	24.6	24.44	0.16
	NTAmw-108	2345781.60	551916.22	1083.22	23.0	1085.62	A	Unconsolidated	Unconsolidated	12.0	22.0	22.0	2.40	24.4	24.61	-0.21
	NTAmw-109	2345997.72	551293.25	1076.89	19.0	1079.84	A	Unconsolidated	Unconsolidated	8.0	18.0	18.0	2.95	20.9	21.01	-0.11
	NTAmw-110	2346438.94	551351.46	1080.03	28.0	1082.62	A	Unconsolidated	Unconsolidated	17.0	27.0	27.0	2.59	29.6	29.82	-0.22
	NTAmw-111	2346638.01	551538.60	1078.07	20.0	1080.94	A	Unconsolidated	Unconsolidated	9.5	19.5	19.5	2.87	22.4	22.18	0.22
	NTAmw-112	2346889.48	551712.14	1075.36	23.9	1078.33	A	Unconsolidated	Unconsolidated	13.9	23.9	23.9	2.97	26.9	26.76	0.14
	NTAmw-113	2347082.83	551488.52	1072.61	27.5	1075.68	A	Unconsolidated	Unconsolidated	17.0	27.0	27.5	3.07	30.6	29.41	1.19
	NTAmw-114	2347301.57	551592.94	1075.61	20.0	1078.71	A	Unconsolidated	Unconsolidated	9.5	19.5	19.5	3.10	22.6	22.91	-0.31
	NTAmw-115	2347581.16	551791.78	1086.91	24.0	1089.65	A	Unconsolidated	Unconsolidated	12.5	22.5	22.5	2.74	25.2	25.41	-0.21
	NTAmw-116	2348196.39	551748.00	1091.68	22.0	1094.33	A	Unconsolidated	Unconsolidated	10.0	20.0	20.0	2.65	22.6	22.69	-0.09
	NTAmw-117	2347994.83	551584.57	1091.67	25.0	1094.54	A	Unconsolidated	Unconsolidated	14.5	24.5	24.5	2.87	27.4	27.61	-0.21
Ramsdell Quarry Landfill	NTAmw-118	2347609.41	551335.04	1078.86	22.5	1081.44	A	Unconsolidated	Unconsolidated	12.0	22.0	22.0	2.58	24.6	24.82	-0.22
	RQLmw-006	2375927.71	566091.26	993.52	42.1	995.39	A	Bedrock	Sharon	19.4	39.4	39.6	1.87	41.4	42.12	-0.72
	RQLmw-007	2375872.56	566544.36	963.86	18.7	965.91	A	Bedrock	Sharon	6.0	16.0	16.2	2.05	18.2	18.60	-0.40
	RQLmw-008	2376011.08	566327.94	963.82	18.7	966.08	A	Bedrock	Sharon	6.0	16.0	16.2	2.26	18.5	18.72	-0.22
	RQLmw-009	2376253.65	566351.20	962.60	18.8	964.58	A	Bedrock	Sharon	5.9	15.9	16.4	1.98	18.4	18.90	-0.50
	RQLmw-010	2376048.58	566857.39	980.04	35.4	982.14	A	Bedrock	Sharon	12.5	32.5	33.0	2.10	35.1	35.42	-0.32
	RQLmw-011	2376398.19	566819.66	974.60	35.4	976.57	A	Bedrock	Sharon	12.4	32.4	32.6	1.97	34.6	35.44	-0.84
	RQLmw-012	2376558.19	566551.95	975.12	30.5	977.65	A	Bedrock	Sharon	19.8	29.8	30.0	2.53	32.5	32.76	-0.26
	RQLmw-013	2376204.93	566928.09	978.04	34.4	980.71	A	Bedrock	Sharon	23.7	33.7	33.9	2.67	36.6	36.57	0.03
	RQLmw-014	2376519.38	566941.29	970.83	29.4	973.49	A	Bedrock	Sharon	18.6	28.6	28.9	2.66	31.6	31.44	0.16
	RQLmw-015	2375490.96	566560.90	989.19	40.1	991.26	A	Bedrock	Sharon	29.2	39.2	39.5	2.07	41.6	42.14	-0.54
	RQLmw-016	2375649.55	566177.68	994.02	39.5	996.60	A	Bedrock	Sharon	28.5	38.5	39.0	2.58	41.6	43.82	-2.22
	RQLmw-017	2376124.18	565931.38	988.69	30.5	991.23	A	Bedrock	Sharon	19.8	29.8	30.0	2.54	32.5	32.86	-0.36

RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report

**Table 3-2. Construction Details Including October 2007 Depth to Bottom Measurements**

RVAAP Area	Well ID	Ohio State Plane Easting	Ohio State Plane Northing	Ground Level Elevation <sup>a</sup>	Total Drilled Depth <sup>b</sup>	TOC Elevation <sup>a</sup>	Well Head Type <sup>c</sup>	Monitoring Zone		Top of Screen (ft, BGS)	Bottom of Screen (ft, BGS)	Bottom of Inner Casing Plug or End Cap (ft, BGS)	Stickup height (ft, AGS)	Reported Bottom of Inner Casing (ft, BTOC)	October 2007 Measured Bottom of Inner Casing (ft, BTOC)	Sediment Accumulation (ft)
								Old	New							
Winklepeck Burning Grounds	WBGmw-005	2357163.55	563037.18	1052.20	19.0	1054.70	A	Unconsolidated	Unconsolidated	8.3	18.3	18.6	2.50	21.1	21.22	-0.12
	WBGmw-006	2359087.79	563008.87	1012.16	19.0	1014.66	A	Unconsolidated	Unconsolidated	7.6	17.6	17.9	2.50	20.4	20.29	0.11
	WBGmw-007	2360420.44	562479.87	998.09	24.0	1000.59	A	Unconsolidated	Unconsolidated	13.5	23.5	23.8	2.50	26.3	26.50	-0.20
	WBGmw-008	2359700.57	562010.35	1005.71	18.5	1008.21	A	Unconsolidated	Unconsolidated	8.1	18.2	18.5	2.50	21.0	20.92	0.08
	WBGmw-009	2357159.20	561603.54	1045.03	24.0	1047.53	A	Unconsolidated	Unconsolidated	11.4	21.4	21.5	2.50	24.0	24.40	-0.40
	WBGmw-010	2356051.96	562893.20	1067.10	21.0	1069.85	A	Unconsolidated	Unconsolidated	10.5	20.5	20.8	2.75	23.6	23.50	0.10
	WBGmw-011	2356187.29	562609.18	1069.70	22.0	1072.38	A	Unconsolidated	Unconsolidated	11.0	21.0	21.3	2.68	24.0	23.96	0.04
	WBGmw-012	2354810.65	562240.90	1076.50	30.0	1079.11	A	Unconsolidated	Unconsolidated	19.0	29.0	29.4	2.61	32.0	31.73	0.27
	WBGmw-013	2355223.25	561518.27	1069.10	22.0	1071.70	A	Unconsolidated	Unconsolidated	11.0	21.0	21.3	2.60	23.9	24.22	-0.32
	WBGmw-014	2360439.22	562061.26	994.10	23.0	996.78	A	Unconsolidated	Unconsolidated	12.0	22.0	22.3	2.68	25.0	25.09	-0.09
	WBGmw-015	2359182.41	562340.12	1009.10	22.0	1011.60	A	Unconsolidated	Unconsolidated	11.0	21.0	21.3	2.50	23.8	23.62	0.18
	WBGmw-016	2360645.88	562709.13	994.90	24.0	997.03	A	Unconsolidated	Unconsolidated	13.0	23.0	23.3	2.13	25.4	25.30	0.10
	WBGmw-017	2359603.84	562913.24	1004.00	22.0	1006.62	A	Unconsolidated	Unconsolidated	11.0	21.0	21.3	2.62	23.9	23.82	0.08
Suspected Mustard Agent Burial Site	MBS-001	2345323.00	550759.50	1079.68	30.0	1082.20	A	Unconsolidated	Unconsolidated	19	28.7	29	2.52	31.5	31.03	0.47
	MBS-002	2345322.30	550886.20	1080.50	30.0	1083.22	A	Unconsolidated	Unconsolidated	18	27.3	28	2.72	30.7	30.44	0.26
	MBS-003	2345172.40	550922.80	1082.45	30.0	1084.45	A	Unconsolidated	Unconsolidated	18.5	28.2	28.5	2.00	30.5	30.81	-0.31
	MBS-004	2345134.20	550767.90	1079.55	26.0	1081.80	A	Unconsolidated	Unconsolidated	14.7	24.4	24.7	2.25	27.0	26.66	0.34
	MBS-005	2345354.10	550800.70	1080.50	30.0	1082.42	A	Unconsolidated	Unconsolidated	18	28	28.08	1.92	30.2	30.12	0.08
	MBS-006	2345282.3	550726.1	1080.29	28.0	1081.83	A	Unconsolidated	Unconsolidated	16.5	26.5	26.56	1.54	28.2	28.22	-0.02

a elevations are in feet above mean sea level (amsl)

b total drilled well borehole depth relative to ground surface.

c A = above grade completion; F = flush-mount completion

NA = Not available

AGS = above ground surface

BGS = below ground surface

BTOC = below top of casing

and minimum measured elevation of 929.82 ft amsl southeast of Load Line 1 (well LL1mw-065). At the watershed scale (e.g., Hinkley Creek, Sand Creek, and Eagle Creek), groundwater flow patterns are influenced by topography and the drainage patterns of the streams. The influence of surface topography on groundwater flow is especially observed within the Hinkley Creek watershed (e.g., NACA Test Area, Suspected Mustard Agent Burial Site, and Demolition Area 1 vicinity) where groundwater flow is toward the southwestern RVAAP boundary. In four areas of RVAAP, including the Atlas Scrap, C Block Quarry, Load Lines 1, 2, 3, 7, 9 and 12, Ramsdell Quarry, the unconsolidated aquifer is not present and is replaced by the Homewood Member or Sharon Member. Refer to Plate 2 for the location of these areas.

Plate 3 represents Facility-wide groundwater flow in wells completed into bedrock. Pre-glacial erosion has resulted in bedrock highs (i.e., islands) surrounded and topped by glacial and recent deposits (i.e., unconsolidated aquifer). At least three such islands have been interpreted to exist at RVAAP. Two are topped by the Homewood Member and one by the Sharon Member. These islands may not be in hydraulic communication with each other, but there is hydraulic communication with the unconsolidated aquifer. Plate 3 illustrates that groundwater in bedrock of the Sharon Member flows radially outward from bedrock into the surrounding unconsolidated aquifer. The potentiometric high is located beneath Load Line 2. Plate 3 indicates that groundwater flow of the Homewood Member is to the southeast toward the Michael J. Kerwin Reservoir on the Mahoning River, which is a regional hydraulic sink.

Groundwater-elevation measurements are collected each time a groundwater sample is collected from one of 41 wells that are a part of the FWGWMP. These data can be used to evaluate the vertical fluctuate of groundwater in wells. Table 3-3 presents the water-level elevations of the 41 wells between September 2005 and October 2007. While the historical record under the FWGWMP is relatively short the following observations can be made:

- Year to year (i.e. September/October) comparisons indicate that between September 2005 and September 2006, average groundwater elevation increased more than one foot.
- Between September 2006 and October 2007, average groundwater elevation declined over 1.9 feet.
- Between April and October 2007, average groundwater levels in wells declined about 4.25 feet. The greatest decline was at well BKGmw-012 (8.38 ft) and the least decline was at well BKGmw-006 (0.79 ft).

During the July and October monitoring events EQM determined that groundwater levels in some wells had declined significantly from April levels. EQM initiated an evaluation of conditions, which may have caused this decline. Through reviewing data available from the U.S. Department of Agriculture (USDA) and the National Oceanographic and Atmospheric Administration (NOAA) it was determined that starting about June 1, the RVAAP area was experiencing abnormally dry weather conditions. This condition lasted until about August 10.

Table 3-3. Historical Potentiometric Elevations in Selected Wells

RVAAP Facility-Wide Groundwater Monitoring Program 2007 Annual Report

RVAAP Area	Well ID	Monitoring Zone	TOC Elevation (ft, amsl)	Potentiometric Elevation September 2005 (ft. amsl)	Potentiometric Elevation March 2006 (ft. amsl)	Potentiometric Elevation July 2006 (ft. amsl)	Potentiometric Elevation September 2006 (ft. amsl)	Potentiometric Elevation January 2007 (ft. amsl)	Potentiometric Elevation April 2007 (ft. amsl)	Potentiometric Elevation July 2007 (ft. amsl)	Potentiometric Elevation October 2007 (ft. amsl)	Elevation Change (Sept 05-Sept 06) (ft)	Elevation Change (Sept 06-Oct 07) (ft)	Elevation Change (April-October)
Background	BKGmw-004	Unconsolidated	967.66	953.24	953.93	954.08	953.74	953.74	955.45	954.08	952.87	0.50	-0.87	-2.58
	BKGmw-005	Unconsolidated	1,151.94	1,137.82	1,140.86	1,141.91	1,138.51	1,138.54	1,141.89	1,137.92	1,136.95	0.69	-1.56	-4.94
	BKGmw-006	Sharon	1,028.88	1,005.66	1,006.20	1,007.03	1,006.20	1,006.20	1,006.49	1,006.46	1,005.70	0.54	-0.50	-0.79
	BKGmw-008	Sharon	972.90	954.36	956.32	957.53	955.54	955.54	959.32	956.38	953.70	1.18	-1.84	-5.62
	BKGmw-010	Sharon	1,006.18	985.84	993.11	993.87	992.39	994.80	993.31	988.84	984.93	6.55	-7.46	-8.38
	BKGmw-012	Sharon	1,000.07	988.40	992.30	992.35	989.74	993.02	993.05	989.21	987.79	1.34	-1.95	-5.26
	BKGmw-013	Unconsolidated	989.09	976.26	977.03	977.50	976.68	978.00	978.07	976.65	975.97	0.42	-0.71	-2.10
	BKGmw-015	Sharon	1,040.40	989.43	991.66	991.99	991.11	992.42	992.73	990.66	988.87	1.68	-2.24	-3.86
	BKGmw-016	Unconsolidated	1,100.92	1,093.73	1,095.28	1,095.71	1,094.04	1,095.88	1,095.70	1,093.00	1,092.82	0.31	-1.22	-2.88
	BKGmw-017	Unconsolidated	1,135.30	1,115.02	1,118.77	1,118.72	1,116.16	1,119.32	1,119.41	1,115.32	1,113.97	1.14	-2.19	-5.44
	BKGmw-018	Sharon	1,045.56	1,029.33	1,029.69	1,030.16	1,029.62	1,030.39	1,030.63	1,029.96	1,029.16	0.29	-0.46	-1.47
	BKGmw-019	Unconsolidated	1,110.74	1,090.06	1,092.24	1,092.64	1,091.02	1,093.59	1,095.64	1,091.38	1,089.63	0.96	-1.39	-6.01
	BKGmw-020	Unconsolidated	1,067.50	1,055.92	1,059.47	1,059.85	1,057.25	1,060.51	1,060.41	1,055.69	1,054.64	1.33	-2.61	-5.77
	BKGmw-021	Unconsolidated	974.66	955.67	956.00	959.32	956.29	961.80	962.33	960.00	954.99	0.62	-1.30	-7.34
Load Line 1	LL1mw-078	Sharon	995.84	964.46	963.39	965.80	965.05	966.85	968.58	966.51	963.60	0.59	-1.45	-4.98
	LL1mw-080	Sharon	996.27	984.78	986.07	987.04	985.60	987.15	986.98	984.18	981.97	0.82	-3.63	-5.01
	LL1mw-083	Sharon	995.20	962.67	961.76	964.12	963.36	965.35	967.14	964.78	961.68	0.69	-1.68	-5.46
Load Line 2	LL2mw-059	Sharon	966.67	953.09	954.45	954.99	953.56	955.77	956.66	954.22	952.79	0.47	-0.77	-3.87
	LL2mw-262	Sharon	1,012.62	1,001.63	1,005.65	1,006.01	1,003.52	1,006.20	1,006.86	1,002.58	1,001.28	1.89	-2.24	-5.58
	LL2mw-263	Sharon	1,011.47	1,000.50	1,004.26	1,004.94	1,002.79	1,002.79	1,005.14	1,001.28	1,000.04	2.29	-2.75	-5.10
Load Line 3	LL3mw-238	Sharon	1,006.91	989.83	991.29	992.07	990.76	992.80	992.31	988.20	989.47	0.93	-1.29	-2.84
	LL3mw-242	Sharon	999.32	980.60	984.32	985.12	981.99	986.53	986.04	981.95	980.42	1.39	-1.57	-5.62
Load Line 4	LL4mw-198	Unconsolidated	983.42	973.60	976.61	977.54	973.99	978.02	978.07	974.09	972.68	0.39	-1.31	-5.39
	LL4mw-199	Unconsolidated	977.28	969.47	970.36	970.96	969.83	971.78	971.90	969.99	969.06	0.36	-0.77	-2.84
Load Line 11	L L11mw-2	Unconsolidated	1,080.00	1,076.99	1,078.30	1,079.10	1,077.86	1,079.08	1,079.10	1,074.88	1,073.95	0.87	-3.91	-5.15
	LL11mw-7	Unconsolidated	1,082.00	1,066.26	1,068.31	1,068.66	1,067.62	1,069.00	1,068.85	1,066.18	1,065.61	1.36	-2.01	-3.24
Load Line 12	LL12mw-153	Unconsolidated	977.85	970.28	972.21	972.73	971.60	972.70	973.55	971.63	970.30	1.32	-1.30	-3.25
	LL12mw-182	Unconsolidated	984.42	971.90	975.51	975.90	974.10	976.54	976.63	973.94	971.30	2.20	-2.80	-5.33
	LL12mw-183	Sharon	982.98	969.07	971.58	972.16	970.49	972.66	973.74	970.72	968.42	1.42	-2.07	-5.32
	LL12mw-186	Sharon	978.31	970.92	972.91	973.25	972.28	973.73	973.48	971.21	971.02	1.36	-1.26	-2.46
Central Burn Pits	CBPmw-5	Unconsolidated	971.59	958.58	960.20	960.84	959.46	961.50	NM	NM	NM	0.88	NM	NM
	CBPmw-6	Unconsolidated	967.64	NM	NM	NM	NM	NM	962.01	959.70	958.32	NM	NM	-3.69
	CBPmw-7	Unconsolidated	976.37	958.82	961.38	962.35	960.21	963.20	963.29	960.29	958.22	1.39	-1.99	-5.07
Demo. Area 2	DET-003	Unconsolidated	1,036.81	1,031.08	1,027.53	NM	1,026.86	1,027.98	1,027.85	NM	1,026.97	-4.22	0.11	-0.88
	DET-004	Unconsolidated	1,038.68	NM	NM	NM	NM	NM	1,028.48	NM	1,027.57	NA	NA	-0.91
	DA2mw-107	Unconsolidated	1,041.63	1,032.75	1,033.99	1,034.93	1,033.62	1,035.29	1,035.23	1,032.87	1,033.22	0.87	-0.40	-2.01
Ramsdell Quarry	RQLmw-007	Sharon	965.91	959.95	958.74	NM	961.63	961.63	962.31	NM	957.81	1.68	-3.82	-4.50
	RQLmw-008	Sharon	966.08	960.06	959.14	NM	961.49	961.49	962.38	NM	958.11	1.43	-3.38	-4.27
	RQLmw-009	Sharon	964.58	959.84	958.78	NM	961.27	961.27	962.08	NM	957.85	1.43	-3.42	-4.23
Winklepeck Burning Grounds	WBGmw-006	Unconsolidated	1,014.66	1,005.56	1,008.27	1,009.56	1,006.87	1,009.76	1,009.88	1,005.40	1,004.41	1.31	-2.46	-5.47
	WBGmw-007	Unconsolidated	1,000.59	981.96	983.54	984.06	982.53	984.47	984.39	982.47	981.64	0.57	-0.89	-2.75
	WBGmw-009	Unconsolidated	1,047.53	1,032.50	1,035.06	1,036.02	1,033.64	1,036.77	1,037.28	1,033.03	1,031.49	1.14	-2.15	-5.79
Average Change												1.06	-1.94	-4.23

amsl = above mean sea level

NM = not measured

Ohio EPA's Technical Guidance for Ground Water Investigations – Chapter 3 (Characterization of Site Hydrogeology) (October 2006) indicates that the fluctuation of groundwater levels are affected by groundwater recharge (i.e., infiltration to the water table) and evapotranspiration and phreatophytic consumption (i.e., utilization of groundwater by plants to sustain growth and health).

During an abnormal dry period it can be expected that the amount of recharge to groundwater will be less than “normal” and that the amount of plant use will be above “normal” resulting in abnormal (i.e., lower than “normal”) groundwater levels.

For the purpose of comparison, the changes in groundwater elevation in sampled wells were determined for the Spring to Summer sampling events for 2006 and 2007. In 2006, groundwater levels in wells increased by an average of 0.79 feet (actual range was up to 2.4 feet). USDA and NOAA records indicate that the RVAAP area was not experiencing abnormally dry conditions during that time.

In 2007, groundwater levels in wells declined an average of 2.94 feet (actual range was up to 8 feet). As previously indicated USDA and NOAA record indicate that the RVAAP area was experiencing abnormally dry conditions during this time. Thus, EQM concluded that the low water levels measured in wells in July and October 2007 were climatically controlled.

### **3.2 Sedimentation/Turbidity of the Wells**

As described in Section 3.1 groundwater elevations for the FWGWMP monitoring wells were obtained during the last four quarters. The groundwater elevations for the FWGWMP wells are presented in Table 3-2. EQM reviewed the sediment accumulation footages and the description of bottom for the wells. The majority of wells at RVAAP indicate a <0.20 ft accumulation of sediment with a hard bottom indicated over the last 2 sampling events. During the last two quarters, four wells indicated a 0.50 -1.0 ft accumulation if compared to the original reported construction depths and most were not highly turbid wells. Comparison of the last four quarters of measured depth to bottom indicates that there is little to no change in accumulation of sediment or measured depth to bottom. The correlation of wells with sediment accumulation versus high turbidity has not been established based on the past two quarters of data. Additionally, the sediment accumulation compared over the last four quarters to historical data has not established a correlation to a potential increase of sediment accumulation. Neither has the turbidity in these wells shown a trend of increases during the past two quarters. EQM will continue to monitor the sediment accumulation, descriptions of bottom, and the chance for turbidity increases at all of the well sampled at RVAAP.

To minimize turbid samples, low flow purging and sampling techniques are used. The pumps are suspended at least one foot above the bottom of the well to avoid agitation of the sediment potentially accumulating in the well sump. Additionally, in-line field filtering of metals samples is currently employed to mitigate high sample turbidity. EQM

will continue to monitor the high turbidity readings and make a determination for future redevelopment and other evaluation of any affected wells.

### **3.3 Monitoring Well Inspection Results**

All FWGWMP monitoring wells at RVAAP were inspected during the week of October 1, 2007. Inspection of the physical condition of all existing facility monitoring wells was conducted at the same time potentiometric surface measurements were collected. The well inspection survey consisted of the following elements:

- Following collection of water-level measurements at each well, the total depth of each monitoring well was sounded using the water level indicator. These data allow a determination of the degree of siltation and comparison of the constructed depths recorded in the well construction logs.
- Visual examination of the condition of the above-ground components of each well was performed. The examination included the condition of access roads to the well, well identification tags or markings, protective casing condition, traffic guard posts, protective covers and locks, protective pads, weep holes, and watertight inner casing caps.
- Recording of well inspection data and any maintenance needs were done using a well inspection/maintenance checklist.

The well inspections did not reveal irreparable damage to any specific monitoring wells. General well conditions include:

- Many of the outer well casings and guard posts are showing signs of rust and peeling paint, especially the smaller square outer casings that are painted yellow (e.g., BKGmw-010, BKGmw-12, BKGmw-19, LL10mw-002, as well as most of the wells at Load Line12 and the Atlas Scrap Yard). All of the FWGWMP wells should be considered for repainting within the next 2 years.
- The vegetation around the wells was cleared in June of 2007 (the Winklepeck Burning Ground wells were not cleared of vegetation at the request of the USACE). The vegetation around the majority of the wells was cleared, although starting to grow back. Access roads were passable.
- At many of the wells (e.g., BKG 20, Central Burn Pit wells, Building 1200 wells, and Winklepeck Burning Ground wells) the guard posts were missing the concrete plugs at the top of the post. This does not appear to affect the integrity or life of the posts
- Overall the locks associated with the wells were in good condition with the few exceptions noted on the attached table.

- Per the recommendation of the 2006 well inspection, monitoring well LL11mw-009 was converted from a flush-mounted well to a stickup casing (3-feet) in order to minimize the opportunity for artesian flow. In order to protect against rupture of the PVC due to potential freezing in the well casing a reinforced concrete collar was also installed.

Table 3-4 presents a list of specific wells that have conditions potentially requiring attention. Appendix C presents the well inspection sheets.

### **3.4 Summary of Groundwater Sampling Results**

#### **3.4.1 October 2006**

The October 2006 FWGWMP sampling event was performed between October 2 and 5, 2006. Forty-one wells were sampled for this event. The results of this sampling event are reported in the *Facility-Wide Groundwater Monitoring Program, Report on the October 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*, dated March 2007 (SpecPro). The results of this sampling event are also summarized in Section 4.0 of this report.

#### **3.4.2 January 2007**

The January 2007 FWGWMP sampling event was performed between January 18 and 25, 2007. Thirty-six wells were sampled for this event. The results of this sampling event are reported in the *Facility-Wide Groundwater Monitoring Program, Report on the January 2007 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*, dated May 2007 (SpecPro). The results of this sampling event are also summarized in Section 4.0 of this report.

#### **3.4.3 April 2007**

The April 2007 FWGWMP sampling event was performed between April 16 and 19, 2007. Forty-one wells were sampled for this event. The results of this sampling event are reported in the *Draft Facility-Wide Groundwater Monitoring Program, Report on the April 2007 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*, dated July 2007 (EQM). The results of this sampling event are also summarized in Section 4.0 of this report.

*RVAAP Facility-Wide Groundwater Monitoring Program 2007 Sampling Event Report*

**Table 3-4. Well Inspection Summary**

Area	Well Number	Well Condition/Issue	Recommendation
Background Wells	BKGmw-017	Concrete pad cracked, although still stable.	Repair cracks with silicone caulking to prevent infiltration.
	BKGmw-021	Square outer casing, hinge very rusted, will not close all the way.	Replace top of outer casing.
Load Line 5	LL5mw-001	Well cap was missing.	The cap was replaced by EQM during the inspection.
Load Line 6	LL6mw-001	Flush-mounted well had no gasket around well cover.	Replace gasket.
	LL6mw-006	1.Outer casing box was full of water. Flush-mounted well had no gasket around well cover. 2.Concrete pad is not secure (wobbles). Appears to be void underneath. 3.Lock is hard to open.	1.Replace gasket. 2.Fill in void or replace pad. 3.Take lock in to be repaired or replaced.
	LL6mw-007	1.Outer casing box was full of water. Flush-mounted well had no gasket around well cover. 2.Lock is hard to open.	1.Replace gasket. 2.Take lock in to be repaired or replaced.
Load Line 8	LL8mw-003	The steel outer casing is dented but does not appear to be damaged. One of the guard posts has damaged concrete. The concrete is cracked and wobbles but is still stable.	There does not appear to be any structural damage to the inner casing or well - no action at this time.
	LL8mw0006	Concrete pad cracked, although still stable.	No action at this time, monitor cracks during future inspections.
Load Line 10	LL10mw-004	Concrete pad cracked, although still stable.	No action at this time, monitor cracks during future inspections.
Load Line 11	LL11mw0002	Flush-mounted well had no gasket around well cover.	Replace gasket.
	LL11mw0003	Flush-mounted well had no gasket around well cover.	Replace gasket.
	LL11mw-004	1.Outer casing box was full of water. Flush-mounted well had no gasket around well cover. 2.Lock is hard to open.	1.Replace gasket. 2.Take lock in to be repaired or replaced.
	LL11mw-005	Flush-mounted well had no gasket around well cover.	Replace gasket.
	LL11mw-006	Flush-mounted well had no gasket around well cover.	Replace gasket.
	LL11mw-008	Flush-mounted well had no gasket around well cover.	Replace gasket.



*RVAAP Facility-Wide Groundwater Monitoring Program 2007 Sampling Event Report*

Table 3-4. (cont.)			
Area	Well Number	Well Condition/Issue	Recommendation
Load Line 11	LL11mw-009	1.Flush-mounted well had no gasket around well cover. 2.Concrete pad is not secure (wobbles). Appears to be void underneath. 3. Lock is hard to open and has no gasket.	1.Replace gasket. 2.Fill in void or replace pad. 3.Take lock in to be repaired or replaced.
Cobbs Pond	CPmw-001	Outer casing box was full of water. Flush-mounted well had no gasket around well cover	Replace gasket.
	CPmw-002	Outer casing box was full of water. Flush-mounted well had no gasket around well cover	Replace gasket.
Detonation Area 2	DA2mw-106	Soil is eroded away from the concrete pad. Pad is stable at this time.	Monitor the erosion during subsequent inspections.
	DA2mw-109	Well cap was missing.	The cap was replaced by EQM during the inspection.
NACA Test Area	NTAmw0109	Concrete pad is not secure (wobbles).	Stabilize pad with additional concrete or replace pad.
Winklepeck Burning Grounds	WBGmw-005	Square outer casing hinge rusted, hard to close.	Replace top of outer casing.
	WBGmw-012	One of the guard posts is leaning and appears to have been hit.	Post is secure. Monitor during future inspections.
Ramsdell Quarry	RQLmw-008	Hinge on the top of the outer casing is broken off.	Replace hinge/top of outer casing.
	RQLmw-009	Hinge on the top of the outer casing is broken off.	Replace hinge/top of outer casing.

### **3.4.4 July 2007**

The July 2007 FWGWMP sampling event was performed between July 9 and 12, 2007. Thirty-six wells were sampled for this event. The results of this sampling event are reported in the *Draft Facility-Wide Groundwater Monitoring Program, Report on the July 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*, dated October 2007 (EQM). The results of this sampling event are also summarized in Section 4.0 of this report. Note that the annual Facility-wide monitoring well inspections for all 237 wells were originally scheduled to be completed in conjunction with the July sampling event. The inspection was postponed until the October 2007 event due to safety concerns associated with the Open Detonation area 2 and Winklepeck Burning Grounds. The results of the well inspections and the associated potentiometric map are included in this report as discussed in Section 3.1.

As discussed in the April and July groundwater reports elevated sample receipt temperatures were an issue for two coolers received by the laboratory in 2007 (one from the April event and one from the July event). In order to ensure that this situation does not re-occur, EQM has instituted the policy that temperature blanks accompany the samples at all times prior to shipment. Additionally, a secondary check will be performed prior to cooler shipment to ensure that sufficient ice has been placed in each cooler. Further, the laboratory (TestAmerica) has been notified that any temperature exceedances must immediately be reported to EQM so that an evaluation can be made as to the need for re-sampling.

It should be noted that while every attempt is made to meet the temperature requirement, exceptions may have to be made for this requirement when samples are collected and then submitted to the laboratory within a relatively short time period of sample collection as detailed in Section 5.4.3 of the FWSAP. Should this situation occur in the future, the Ohio EPA will be notified immediately upon discovery of the situation.

### **3.5 Laboratory Audit**

EQM conducted an on-site Performance Audit at the TestAmerica North Canton on July 24, 2007. The audit was conducted during the processing and analysis of the RVAAP samples from the July sampling event. The purpose of this audit was to evaluate the laboratory for continued use by EQM in support of the USACE RVAAP contract. It was also used as a communication mechanism to address laboratory performance issues identified by EQM personnel relevant to TestAmerica North Canton's analytical documentation in support of EQM's USACE contract.

The audit was intended to focus on the data reporting process of TestAmerica North Canton, which actively plays a role in the handling of EQM samples. The Audit Report reflected issues observed during the on-site evaluation and any associated items.

discovered during the July 2007 data package review. Applicable processes covered during this audit were:

- Viewing of the Laboratory Facility (lay-out, cleanliness, equipment, and space).
- Review of Sample Receiving and custody procedures.
- Interviews with laboratory management, quality assurance personnel, and technical staff.
- Review of techniques employed to communicate client-specific analytical requirements to technical personnel within the laboratory and general project management within TA.
- Review of data reporting and records retention.

A copy of the Audit Report and a modified National Environmental Laboratory Accreditation Conference (NELAC) Audit checklist used to assist in ascertaining TestAmerica North Canton's ability to provide complete, correct, and compliant data packages is presented in Appendix D.

## SECTION 4

### SUMMARY/ASSESSMENT OF ANNUAL FWGWMP ANALYTICAL RESULTS

#### 4.1 Introduction

A summary of the constituents detected above background levels or above RLs at each of the FWGWMP wells during the 2007 study is discussed in the following subsections. Calcium, magnesium, iron, potassium, and sodium concentrations above background levels are not discussed in this section because they are considered as essential nutrients. A summary of all compounds detected in 2007 are presented in Table 4-1. The Maximum Contaminant Levels (MCLs) are provided where applicable in the following sections. MCLs and United States Environmental Protection Agency (USEPA) Region 9 Preliminary Remediation Goals (PRG) are provided where applicable in Table 4-1. RVAAP background levels are presented in Table 4-2.

Since potassium is a naturally occurring inorganic element in environmental samples, and has consistently been above the specified reporting limit (RL) of 200 µg/L in historical samples at RVAAP, it is apparent that the need for this degree of sensitivity for potassium is not necessary. It is suggested that the RL for potassium be raised to 1,000 µg/L. Pending approval of this change by the Ohio EPA, potassium has been added to the list of RLs that currently do not meet RVAAP QAAAP PQLs in Appendix A of the 2007 Annual Report.

Note that prior to the April 2007 monitoring event nitroglycerine and pentaerythritol tetranitrate (PETN) (USEPA SW-846 8330M) were not analyzed for any of the wells. The April and July 2007 groundwater reports present the results for nitroglycerine and PETN.

<b>The Primary Chemicals of Potential Concern at the RVAAP Facility</b>	
Dinitrotoluene-2,4	Dinitrotoluene-2,6
Trinitrotoluene-2,4,6	RDX (cyclotrimethylenetrinitramine)
Composition B [RDX + Trinitrotoluene (TNT)]	HMX [high melting point explosive (octogen)]
Nitrocellulose	Nitroglycerine
Nitroguanidine	Perchlorate
Aluminum	Arsenic
Barium	Cadmium
Chromium	Lead
Mercury	Selenium
Silver	Zinc
<b>Other Chemicals of Potential Concern at the Facility</b>	
1,3,5-trinitrobenzene	1,3-Dinitrobenzene
Nitrobenzene	o-Nitrotoluene
n-nitrotoluene	p-Nitrotoluene
Manganese	VOCs
SVOCs	PCBs

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Background Wells	BK Gmw-004	Unconsolidated	2-Nitrotoluene	0.5 U	0.5 U	0.1	0.55 U	NS	0.049	*
			Aluminum	50 U	2.8 J	50 U	6.2 J	200	36000	0
			Antimony	2 U	0.11 J	2 U	2 U	6	15	0
			Barium	20.1	20.4	20.2	17.1	2000	2600	82.1
			Benzoic acid	10 R	10 R	9.5 J	10 UJ	NS	150000	*
			bis(2-Ethylhexyl) phthalate	10 UJ	0.94 J	10 U	10 U	NS	4.8	*
			Calcium	18800	18000	17200	16200	NS	NS	115000
			Copper	5 U	5 U	2.7 B,J	5 U	1300	1500	0
			Cyanide	10 U	10 U	10 R	5.1 J	200	730	0
			Di-n-octyl phthalate	1 U	1 U	1.2 J	1 U	NS	1500	*
			Iron	89.5	68.2	53.8 J	110 B, J	300	11000	279
			Magnesium	6620	6430	6260	5430	NS	NS	43300
			Manganese	2.4 J	1.1 J	0.89 J	0.98 J	50	880	1020
			Methylene chloride	2 UJ	2 U	0.29 J	2 U	NS	4.3	*
			Nickel	1 J	10 U	2 J	10 U	NS	730	0
			Potassium	773	685 U	653 J	668 J	NS	NS	2890
			Sodium	12900	12700	12900	10700	NS	NS	45700
			Zinc	7.6 UJ	6.3 UJ	5 J	3 J	5000	11000	60.9
Background Wells	BK Gmw-005	Unconsolidated	2-Nitrotoluene	0.5 U	0.096 U	0.098 J	0.48 U	NS	0.049	*
			Aluminum	50 U	50 U	5 J	50 U	NS	36000	0
			Antimony	0.6 UJ	0.12 J	2 UJ	2 U	6	15	0
			Barium	14.3	14.0	14.8	13.6	2000	2600	82.1
			Benzene	1 U	1 U	0.81 J	0.54 J	5	0.35	*
			beta-BHC	0.03 J	0.03 U	0.03 UJ	0.017 J	NS	0.037	*
			bis(2-Ethylhexyl) phthalate	10 UJ	10 U	10 U	2.4 J	NS	4.8	*
			Calcium	88300	77800	86700	87600	NS	NS	115000
			Copper	5 U	5 U	3 J	5 U	1300	1500	0
			HMX	0.1 U	0.096 U	0.073 J	0.097 U	NS	1800	*
			Iron	493	312	347	339 BJ	300	11000	279
			Magnesium	19300	18700	21100	18700	NS	NS	43300
			Manganese	3 J	0.73 J	2.2 J	0.91 J	50	880	1020
			Nickel	10 U	10 U	1.5 J	10 U	NS	730	0
			Potassium	1280 J	391 U	399 J	864	NS	NS	2890
			Sodium	6870	3140	3240	7660	NS	NS	45700
			Toxaphene	0.36 J	2 U	2 UJ	2 U	3	0.061	*
			Zinc	6.1 UJ	5.5 UJ	12.7 B	10 U	5000	11000	60.9
Background Wells	BK Gmw-006	Bedrock	bis(2-Ethylhexyl) phthalate	10 U	10 UJ	10 UJ	1 J	NS	4.8	*
			Di-n-butyl phthalate	1 U	0.61 J	1 UJ	1 U	NS	NS	*
			Barium	9.6 J	11.8	11.7	0.03 UJ	2000	2600	256
			Calcium	72400	75800	76200	71700	NS	NS	53100
			Copper	5 U	5 U	2.1 J	0.025 UJ	1300	1500	83.4
			Cyanide	10 U	22	10 U	10 U	200	730	0
			Iron	929	587	1540	1100 BJ	300	11000	1430
			Magnesium	22600	23100	23100	21800	NS	NS	15000
			Manganese	268	384 J	209	182	50	880	1340
			Nickel	10 U	10 U	3.8 J	10 U	NS	730	0
			Nitrocellulose	0.5 U	0.13 J	0.5 UJ	0.5 U	NS	NS	*
			Potassium	1490	1300 J	1340	1360 J	NS	NS	5770
			Sodium	38800	42000	44200	41500	NS	NS	51400
			Zinc	3.8 UJ	3.1 J	6 B,J	10 U	5000	11000	52.3
Background Wells	BK Gmw-008	Bedrock	Antimony	2 U	0.093 J	2 U	0.066 J	6	15	0
			Barium	4 J	5 J	5 J	4.4 J	2000	2600	256
			bis(2-Ethylhexyl) phthalate	10 UJ	10 UJ	10 U	3.3 J	NS	4.8	*
			Calcium	27000	27100 J	30300	27900	NS	NS	53100
			Copper	5 U	1.8 J	2.3 B,J	5 U	1300	1500	0
			Di-n-octyl phthalate	1 U	0.95 J	1 U	1 U	NS	1500	*
			Iron	135	114	95.4	98.2 B, J	300	11000	1430
			Magnesium	10800	10700	12200	11100	NS	NS	15000
			Manganese	0.81 J	0.74 J	0.27 J	0.73 J	50	880	1340
			Methoxychlor	0.1 U	0.1 U	0.012 J	0.1 U	40	180	*
			Potassium	529 J	485 U	480 J	519 J	NS	NS	5770
			Sodium	9700	9940	10200	8800	NS	NS	51400
			Zinc	6.7 UJ	6.7 UJ	3.9 J	10 U	5000	11000	52.3

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Background Wells	BK Gmw-010	Bedrock	alpha-Chordane	0.03 U	0.03 U	0.03 U	0.009 J	NS	NS	*
			Aluminum	117	136 J	156	107 B, J	200	36000	0
			Barium	18.6	18.4	21.4	15	2000	2600	256
			Beryllium	0.13 J	1 U	1 U	1 U	4	NS	0
			bis(2-Ethylhexyl) phthalate	10 U	10 UJ	24	2.1 J	NS	4.8	*
			Cadmium	0.12 J	0.14 J	0.14 J	0.5 U	5	NS	0
			Calcium	11100	12100 J	11600	11800	NS	NS	53100
			Copper	5 U	5 U	3.6 B,J	5 U	1300	1500	0
			Cyanide	10 U	10 U	10 R	10 U	200	730	0
			delta-BHC	0.03 U	0.03 U	0.03 U	0.0066 J	NS	NS	*
			Iron	84.9	47.2	43.4	47.1 B, J	300	11000	1430
			Magnesium	14200	14900	15600	13800	NS	NS	15000
			Manganese	509	838	944	79.5	50	880	1340
			Methoxychlor	0.1 U	0.1 U	0.028 J	0.1 U	40	180	*
			Nickel	78.4	76.3	78.7	23.7	100	730	0
			Nitrocellulose	0.5 U	0.5 U	0.5 UJ	0.18 J	NS	NS	*
			Potassium	706	591 u	540 J	715 J	NS	NS	5770
			Sodium	3800	8000 U	3730	3860	NS	NS	51400
			Tetryl	0.71 J	0.099 U	0.096 U	0.1 U	NS	360	*
			Zinc	14.7 U	12.3 U	11.6	4.4 J	5000	11000	52.3
Background Wells	BK Gmw-012	Bedrock	2-Nitrotoluene	0.5 U	0.049 U	0.098 J	0.48 U	NS	0.049	*
			4,4'-DDT	0.012 J	0.03 U	0.03 UJ	0.03 U	NS	0.2	*
			Aluminum	50 U	50 U	8.1 J	103	200	36000	0
			Antimony	2 UJ	0.096 J	2 UJ	0.13 J	6	15	0
			Barium	331	343.0	283	227	2000	2600	256
			Benzene	1.1	0.46 J	0.81 J	0.54 J	5	0.35	*
			beta-BHC	0.0076 J	0.03 U	0.03 UJ	0.017 J	NS	0.037	*
			bis(2-Ethylhexyl) phthalate	10 UJ	10 UJ	10 U	2.4 J	NS	4.8	*
			Calcium	36200	35800 J	28600	26200	NS	NS	53100
			Copper	5 U	5 U	2.1 J	5 U	1300	1500	0
			HMX	0.1 U	0.098 U	0.073 J	0.097 U	NS	1800	*
			Iron	425	413	469	372	300	11000	1430
			Magnesium	12500	12000	9530	9040	NS	NS	15000
			Manganese	51.7	49.8 J	34.6	37.9	50	880	1340
			Methylene chloride	2 UJ	2 U	0.26 B,J	2 U	NS	4.3	*
			Nickel	10 U	10 U	10 U	2.2 J	NS	730	0
			Potassium	6020	4980 J	4640	4100	NS	NS	5770
			Sodium	33400	36700	42900	40500	NS	NS	51400
			Toluene	0.2 J	1 U	1 U	0.45 UJ	1000	720	*
			Zinc	12.2 U	9 UJ	11.7 B	8.2 J	5000	11000	52.3
Background Wells	BK Gmw-013	Unconsolidated	2-Nitrotoluene	0.5 U	0.49 U	0.098 J	0.55 U	NS	0.049	*
			Aluminum	3.6 J	50 U	50 U	6.2 J	200	36000	0
			Antimony	2 UJ	0.94 J	2 UJ	2 U	6	15	0
			Arsenic	11.4	13.4	10.3	5 U	10	0.007	11.7
			Barium	77.6	87.6	93.6	17.1	2000	2600	82.1
			bis(2-Ethylhexyl) phthalate	10 UJ	3 J	10 UJ	10 U	NS	4.8	*
			Calcium	70700	73500	76100	16200	NS	NS	115000
			Carbon disulfide	0.29 J	1 U	1 U	1 U	NS	1000	*
			Chloromethane	0.15 J	1 U	1 U	1 U	NS	160	*
			Copper	5 U	5 U	2.2 J	5 U	1300	1500	0
			Cyanide	10 U	9.5 J	10 UJ	5.1 J	200	730	0
			Iron	1480	1170	1150	110 B, J	300	11000	279
			Magnesium	23900	24600	25700	5430	NS	NS	43300
			Manganese	391	432	434	0.98 J	50	880	1020
			Methylene chloride	2 U	2 U	0.24 B,J	2 U	NS	1300	*
			Potassium	1950	1870 J	1750	668 J	NS	NS	2890
			Sodium	11100	12100	12800	10700	NS	NS	45700
			Zinc	13.9 UJ	5.6 UJ	7.5 B,J	2.7 J	5000	11000	60.9

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Background Wells	BKGmw-015	Bedrock	2-nitrotoluene	0.50 U	0.48 U	0.095 J	0.56 U	NS	0.049	*
			Acetone	10 U	10 U	10 R	1.3 J	NS	5500	*
			Barium	279	273	302	220	2000	2600	256
			bis(2-Ethylhexyl) phthalate	10 UJ	10.0 U	1.9 J	10 U	NS	4.8	*
			Calcium	29800	30500	31600	28500	NS	NS	53100
			Copper	5.0 U	5.0 U	3.2 B,J	5 U	1300	1500	0
			Cyanide	10.000 U	10.000 U	10 U	10 U	200	730	0
			Iron	153	213	128	145 B,J	300	10000	1430
			Magnesium	12800	12700	13200	11700	NS	NS	15000
			Manganese	2.4 J	25.6 J	11.3	61.4	50	880	1340
			Methoxychlor	0.10 U	0.10 U	0.061 J	0.10 U	40	180	*
			Nickel	10 U	10 U	3.5 J	2.9 J	100	730	83.4
			Potassium	5560	4360 J	4780	4150 J	NS	NS	5770
			Sodium	12300	13100	14200	11900	NS	NS	51400
Background Wells	BKGmw-016	Unconsolidated	Zinc	14.3 U	9.9 J	13.6	8.9 J	5000	11000	52.3
			2-Amino-4,6-dinitrotoluene	0.10 U	0.097 U	7	0.11 U	NS	NS	*
			Aluminum	24.4 J	26.7 J	25.5 J	14.8 B, J	200	36000	0
			Antimony	2 UJ	0.073 J	2 UJ	2 UJ	6	15	0
			Arsenic	5 U	5 U	15.4	5 U	10	0	11.7
			Barium	13.2	14.1	13.9	14.1	2000	2600	82.1
			Calcium	8950	9600	9950	9980	NS	NS	115000
			Copper	5.0 U	2.4 J	2.6 J	5.0 U	1300	1500	0
			Iron	74.6 J	80.5	111	85.2 B, J	300	10000	279
			Magnesium	4230	4090	4190	4090	NS	NS	43300
			Manganese	6.1 J	9.6 J	5 J	9.2 J	50	880	1020
			Mercury	0.2 U	0.091 J	0.2 U	0.2 U	2	11	0
			Nickel	2.3 J	10.0 U	2.6 J	3.5 J	100	730	0
			Potassium	576 J	506 U	509 J	603 J	NS	NS	2890
Background Wells	BKGmw-017	Unconsolidated	Sodium	3240	2350	2640	2680	NS	NS	45700
			Zinc	8.4 UJ	6.4 UJ	6.1 B,J	3.6 J	5000	11000	60.9
			Aluminum	50 U	50 U	419	50 U	200	3600	0
			Antimony	2.0 U	0.073 J	2 U	0.18 J	6	15	0
			Arsenic	19.8	20.4	15.4	17.1	10	0.007	11.7
			Barium	36.7	37	40.1	38.8	2000	2600	82.1
			Benzoic Acid	10 R	10 U	8.9 J	10 R	NS	150000	*
			bis(2-Ethylhexyl) phthalate	10 UJ	10 U	10 U	1.3 J	NS	4.8	*
			Calcium	107000	101000	88600	98300	NS	NS	115000
			Copper	5 U	5 U	4.5 B,J	5 U	1300	1500	0
			Iron	2000	1800	2050	1420 B, J	300	10000	279
			Magnesium	45400	43200	40000	41800	NS	NS	43300
			Manganese	210	211	190	190	50	880	1020
			Nickel	10 U	10 U	2.5 J	10 U	100	730	0
Background Wells	BKGmw-018	Bedrock	Nitrocellulose	0.5 U	0.5 U	0.5 UJ	0.18 J	NS	NS	*
			Potassium	2990	2340 J	4760	2560 J	NS	NS	2890
			Sodium	22500	22100	22200	20800	NS	NS	45700
			Thallium	1 U	1 U	0.031 J	1 U	2	2.4	0
			Zinc	6.1 UJ	5.1 UJ	12.4	10 U	5000	11000	60.9
			Acetone	10 U	10 U	10 U	1.1 J	NS	5500	*
			Aluminum	2.9 J	2.8 J	50 U	50 U	200	36000	0
			Barium	22.7	16.2	21.7	17.4	2000	2600	256
			2-butanone	10 U	10 U	0.51 B,J	10 U	NS	700	*
			Cadmium	0.09 J	0.5 U	0.5 U	0.5 U	5	18	0
			Calcium	63600	33300	47900	56100	NS	NS	53100
			Chloromethane	1 U	1 U	1 U	0.49 J	NS	160	*
			Copper	5.0 U	2.0 J	2.8 J	5 U	1300	1500	0
			Cyanide	10 U	41	10 UJ	10 U	200	730	0
Background Wells	BKGmw-018	Bedrock	Di-n-octyl phthalate	1.0 U	0.540 J	1 U	1 U	NS	1500	*
			Iron	490	273	275	248 B, J	300	10000	1430
			Magnesium	7230	4020	5290	6000	NS	NS	15000
			Manganese	30.1	45.6 J	28.4	0.75 J	50	880	1340
			Methoxychlor	0.10 U	0.10 U	0.016 J	0.10 U	40	180	*
			Potassium	1670	835 J	1090	1240 J	NS	NS	5770
			Sodium	1780	1960	1640	1120	NS	NS	51400
			Zinc	7.9 UJ	4.2 J	6.2 B,J	2.4 J	5000	11000	52.3

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Background Wells	BK Gmw-019	Unconsolidated	Aluminum	50.0 U	25.5 J	50 U	6.9 J	200	36000	0
			Antimony	2.0 U	0.074 J	2 UJ	2.0 U	6	15	0
			Barium	38.4	43.3	4.6	39.3	2000	2600	82.1
			Calcium	111000	114000	118000	112000	NS	NS	115000
			Copper	5 U	5 U	3.3 J	5 U	1300	1500	0
			Cyanide	10 U	10 U	10 UJ	0.0042 J	200	730	0
			Iron	659	520	540	480 J	300	10000	279
			Magnesium	31800	32600	33800	32000	NS	NS	43300
			Manganese	125	146	70.8	128	50	880	1020
			Nickel	10 U	10 U	4 J	10 U	NS	730	0
			Potassium	1370	1200 J	1320	1140 J	NS	NS	2890
			Sodium	8640	8120	8770	8760	NS	NS	45700
			Zinc	3.8 UJ	4.4 UJ	6.5 B,J	10 U	5000	11000	60.9
Background Wells	BK Gmw-020	Bedrock	2-Nitrotoluene	0.5 U	0.5 U	0.095 J	0.5 U	NS	0.049	*
			Aluminum	50.0 U	3.1 J	50 U	50 U	200	36000	0
			Antimony	0.22 UJ	0.92 J	2 U	2 U	6	15	0
			Barium	148	154	147	111	2000	2600	256
			beta-BHC	0.030 U	0.030 U	0.0081 J	0.030 U	NS	0	*
			Calcium	51400	49600	49200	46900	NS	NS	53100
			Copper	5.0 U	5.0 U	2.4 J	5 U	1300	1500	0
			Cyanide	10 U	9 J	10 UJ	10 U	200	730	0
			Iron	3550	1950	2040	2510 J	300	10000	1430
			Magnesium	16600	15900	15500	14600	NS	NS	15000
			Manganese	829	744 J	706	652	50	880	1340
			Nickel	10 U	10 U	2.3 J	10 U	NS	730	83.4
			Potassium	3610	2630	2540	2280 J	NS	NS	5770
			Selenium	5.0 U	3.0 J	5 U	5 U	50	180	0
			Sodium	8160	8000	8090	7070	NS	NS	51400
			Zinc	8.0 UJ	9.5 J	10.9 B	3.6 J	NS	1100	52.3
Background Wells	BK Gmw-021	Unconsolidated	Antimony	2.000 U	0.19 J	2 U	0.07 J	6	15	0
			Barium	37.2	31	30.4	35.7 J	2000	2600	82.1
			Benzoic acid	10 R	10 R	8.9 J	10 UJ	NS	150000	*
			bis(2-Ethylhexyl) phthalate	10 UJ	10 U	1.1 J	0.88 J	NS	4.8	*
			Calcium	81000	88200	82400	78800 J	NS	NS	115000
			Chloromethane	1.0 U	1.0 U	1 U	0.37 J	NS	160	*
			Copper	5.0 U	5.0 U	2.8 B,J	5 U	1300	1500	0
			Iron	392	296	293	285 J	300	10000	279
			Magnesium	45500	50800	15500	40800	NS	NS	43300
			Manganese	10 U	0.47 J	10 U	10 U	50	880	1020
			Nickel	10 U	10 U	2.3 J	10 U	NS	730	0
			Potassium	1100	695 U	2540	1030	NS	NS	2890
			Sodium	10200	15200	8090	10300	NS	NS	45700
			Zinc	4.7 UJ	3.9 UJ	10.9 B	10 U	5000	11000	60.9
Load Line 1	LL1mw-078	Bedrock	Aluminum	50.0 U	50.0 U	50 U	18.8 J	200	36000	0
			Antimony	0.10 J	0.067 J	2 UJ	2 U	6	15	0
			Barium	6.1 J	8.0 J	7 J	6.4 J	2000	2600	256
			bis(2-Ethylhexyl) phthalate	10 UJ	10 UJ	2.4 J	0.96 J	NS	4.8	*
			Calcium	48200	52200 J	53000	53100	NS	NS	53100
			Cobalt	5.0 U	3.9 J	1.7 J	5 U	NS	730	0
			Copper	5.0 U	1.9 J	5 U	5 U	1300	1500	0
			Diethyl phthalate	1 U	1 U	0.81 BJ	1 U	NS	29000	*
			Iron	255	200	212 J	192 J	300	10000	1430
			Magnesium	7310	7630	7410	7460	NS	NS	15000
			Manganese	15.9	82.0	24.2	18.4	50	880	1340
			Nickel	10.0 U	10.0 U	4.4 J	3.7 J	100	730	83.4
			Nitrobenzene	0.1 U	0.1 U	0.1	0.097 U	NS	3	*
			Nitrocellulose	0.50 U	0.13 J	0.5 UJ	0.5 R	NS	NS	*
			PETN	NO DATA	NO DATA	0.42 J	0.4 J	NS	NS	*
			Potassium	2230	1940 J	2080	2170 J	NS	NS	5770
			Sodium	5410	6170	6450	5650	NS	NS	51400
			Tetryl	0.1 U	0.1 U	0.1 U	0.06 J	NS	360	*
			Thallium	0.13 UJ	0.1 J	0.07 J	0.077 J	2	2.4	0
			Zinc	4.6 UJ	10.3 U	5.9 B,J	6.2 J	5000	11000	52.3



Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Load Line 1	LL1mw-080	Bedrock	1,3,5-Trinitrobenzene	0.80	0.22	0.17	0.92	NS	1100	*
			2,4,6-TNT	0.61	0.15	0.13	0.45 J	NS	2	*
			2,4-Dinitrotoluene	0.059 J	0.099 U	0.096 U	0.5 U	NS	73	*
			2,6-Dinitrotoluene	0.10 U	0.099 U	0.061 J	0.5 U	NS	36	*
			2-Amino-4,6-dinitrotoluene	3.5	1.4	1.4	4.1	NS	NS	*
			4-amino-2,6-dinitrotoluene	5.4	3.1	3.1	6.5	NS	NS	*
			4-Nitrotoluene	0.13 J	0.14 J	0.48 U	2.5 U	NS	1	*
			Aluminum	5.2 J	50 U	50 U	50 U	200	36000	0
			Antimony	0.38 J	0.21 J	2 UJ	0.18 J	6	15	0
			Barium	11.3	10 U	10 U	9.5 J	2000	2600	256
			beta-BHC	0.039	0.029 J	0.030 U	0.030 U	NS	0.037	*
			bis(2-Ethylhexyl) phthalate	10 UJ	10 U	5 J	3 J	NS	4.8	*
			Calcium	60000	45100	43300	88300	NS	NS	53100
			Carbon disulfide	0.33 J	1.0 U	1.0 U	1.0 U	NS	1000	*
			Diethyl phthalate	1.0 U	1.0 U	0.83 B,J	1.0 U	NS	NS	*
			Di-n-octyl phthalate	0.71 J	1.0 U	1.0 U	1.0 U	NS	29000	*
			HMX	2.7	0.55	0.59	7.3	NS	1800	*
			Iron	323	147	159 J	316 J	300	10000	1430
			Nitrocellulose	0.13 J	0.12 UJ	0.5 UJ	0.5 U	NS	NS	*
			Magnesium	4880	3180	3260	6490	NS	NS	15000
			Manganese	0.74 J	0.34 J	3.5 J	6.9 J	50	880	1340
			Nickel	10 U	10 U	2.8 J	4.7 J	100	730	83.4
			Potassium	2720	1500 J	1410	1950	NS	NS	5770
			RDX	15	2.4	2.3	52	NS	0.61	*
			Selenium	2.7 J	5.0 U	5.0 U	5 U	50	180	0
			Sodium	1440	722 J	1130	1830	NS	NS	51400
			Zinc	8 UJ	3.7 UJ	6.5 B,J	3.1 J	5000	11000	52.3
Load Line 1	LL1mw-083	Bedrock	1,3,5-Trinitrobenzene	7.1	7.2	6.5	7 J	NS	1100	*
			1,3-Dinitrobenzene	26 J	0.27 J	0.48 U	0.49 R	NS	3.6	*
			2,4,6-TNT	6.4	6.5	5.3	6 J	NS	2.20	*
			2,4-Dinitrotoluene	3.5	3.2	2.6	3.2 J	NS	73	*
			2,6-Dinitrotoluene	1.7	1.4	1	1.2 J	NS	36	*
			2-Amino-4,6-dinitrotoluene	19	18 J	16	17 J	NS	NS	*
			4-amino-2,6-dinitrotoluene	26	30 J	24	25 J	NS	NS	*
			4,4'-DDT	0.030 U	0.030 U	0.024 J	0.6 U	NS	0.20	*
			Alpha-BHC	0.030 U	0.030 U	0.011 J	0.6 U	NS	0.011	*
			Alpha-chlordane	0.0074 J	0.030 U	0.030 U	0.6 U	NS	0.19	*
			Aluminum	648	612	640	730 J	200	36000	0
			Antimony	2.0 UJ	0.95 J	2 U	2 U	6	15	0
			Barium	16.3	15.6	16.4	16.4	2000	2600	256
			Beryllium	0.25 J	0.27 J	0.19 B	0.26 J	4	NS	0
			beta-BHC	0.069	0.086 J	0.17 J	0.6 U	NS	0.037	*
			Cadmium	0.43 J	0.34 J	0.29 B	0.31 J	5	NS	0
			Calcium	16900	16100 J	17300	16400	NS	NS	53100
			Cobalt	7.2	6.4	6.8	7.5	NS	730	0
			Copper	2.4 J	3.2 J	2.9 B	5 U	1300	1500	0
			Cyanide	10.000 U	10	10 U	10 UJ	200	730	0
			Di-n-octyl phthalate	0.72 J	0.88 J	1 U	1 U	NS	1500	*
			Endosulfan I	0.17	0.25 UJ	0.025 U	0.5 UJ	NS	220	*
			Endrin aldehyde	0.18	0.3 U	0.03 U	0.6 U	NS	11	*
			Endrin Ketone	0.03 U	0.3 U	0.044 J	0.6 U	NS	11	*
			gamma-Chlordane	0.021 J	0.030 U	0.03 U	0.6 U	NS	NS	*
			HMX	0.50 U	0.27 J	0.18 J	0.2 J	NS	1800	*
			Iron	125	74	61.2	82.5 B,J	300	10000	1430
			Magnesium	4500	4120	4490	4560	NS	NS	15000
			Manganese	395	374	427 J	394	50	880	1340
			Methoxychlor	0.10 U	0.10 U	0.028 J	2 U	40	180	*
			Nickel	26.9	20.2	26.9	28.4	100	730	83.4
			Potassium	2770	2210 J	2280 J	2170 J	NS	NS	5770
			RDX	0.19 J	0.49 U	0.48 U	0.49 R	NS	0.61	*
			Sodium	14800	12000	11800	13500	NS	NS	51400
			Thallium	0.07 UJ	0.085 J	0.041 B	0.072 J	2	2.4	0
			Zinc	45.1 J	35.0 J	38.3 J	29.3 J	5000	11000	52.3

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Load Line 2	LL2mw-059	Bedrock	1,3,5-Trinitrobenzene	1.9	1.1	0.66	1.6	NS	1100	*
			1,3-Dinitrobenzene	0.083 J	0.099 U	0.098 U	0.07 J	NS	3.6	*
			2,4-Dinitrotoluene	0.44	0.2	0.12	0.41	NS	73	*
			2-Amino-4,6-dinitrotoluene	0.83	0.45	0.22	0.77	NS	NS	*
			4-amino-2,6-dinitrotoluene	0.81	0.49	0.21	0.78	NS	NS	*
			alpha-Chordane	0.030 U	0.030 U	0.027 J	0.03 U	NS	NS	*
			Aluminum	9.0 J	5 J	50 U	50 U	NS	36000	0
			Antimony	0.77 J	0.93 J	2 UJ	0.16 J	6	15	0
			Barium	17	23.1	17.6	13.4	2000	2600	256
			beta-BHC	0.011 J	0.030 U	0.0094 B,J	0.0084 J	NS	0	*
			bis(2-Ethylhexyl) phthalate	10 UJ	10 UJ	10 U	1.3 J	NS	48	*
			Calcium	21200	40800	45300	24700	NS	NS	53100
			Chloromethane	0.23 J	1.0 U	1 U	1 U	NS	160	*
			Cobalt	3.7 J	1.3 J	5 U	3.7 J	NS	730	0
			Copper	2.3 J	5.0 U	3.1 J	5 U	1300	1500	0
			HMX	0.085 J	0.061 J	0.038 J	0.13	NS	1800	*
			Iron	508	313	176	435 J	300	10000	1430
			Magnesium	7840	7850	7910	7970	NS	NS	15000
			Manganese	514	151 J	9.5 J	259	50	880	1340
			Methoxychlor	0.1 U	0.1 U	0.025 J	0.1 U	40	180	*
			Nickel	5.3 J	10.0 U	3.7 J	4.5 J	100	730	83.4
			Nitrocellulose	0.5 U	0.17 J	0.5 UJ	0.12 J	NS	NS	*
			Potassium	805	552 U	589 J	703 J	NS	NS	5770
			RDX	0.10 U	0.046 J	0.098 U	0.1 B	NS	0.61	*
			Selenium	3.4 J	5.0 U	5.0 U	5 U	50	180	0
			Sodium	4590	5980	8530	4670	NS	NS	51400
			Thallium	0.036 UJ	0.037 J	1.0 UJ	0.048 J	2	2.4	0
			Zinc	9.6 UJ	6.1 J	6.6 B,J	3.2 J	5000	11000	52.3
Load Line 2	LL2mw-262	Bedrock	Aluminum	50 U	50 U	3.4 B	50 U	200	36000	0
			Antimony	0.72 J	0.31 UJ	2 U	0.087 J	6	15	0
			Barium	22.5	15.3	15.2	13.1	2000	2600	256
			Calcium	74300	42900	42500	43100	NS	NS	53100
			Cobalt	14.9	5.0 U	1.3 B	1.6 J	NS	730	0
			Copper	5.0 U	5.0 U	1.8 B	5 U	1300	1500	0
			Iron	3490	188	200 J	142 J	300	10000	1430
			Magnesium	43000	30800	30300	33300	NS	NS	15000
			Manganese	2020	259 J	281 J	266	50	880	1340
			Nickel	17.6	10.9	14.3	14.1	100	730	83.4
			Nitrocellulose	500 U	0.16 J	0.5 U	0.5 R	NS	NS	*
			Potassium	2870	1670 J	1600 J	1810 J	NS	NS	5770
			RDX	0.10 U	0.056 J	0.1 U	0.099 U	NS	0.61	*
			Sodium	9380	8720	9180	9370	NS	NS	51400
			Thallium	0.049 UJ	1.0 U	1 U	0.026 J	2	2.4	0
			Zinc	15.7 UJ	5.2 J	6.6 B,J	3.1 J	5000	11000	52.3
Load Line 2	LL2mw-263	Bedrock	Antimony	0.27 J	0.17 UJ	2 U	0.066 J	6	15	0
			Arsenic	15.5	15.7	12.9	14.4	10	0.007	0
			Barium	18.1	18.1	19.2	16.4	2000	2600	256
			Calcium	28300	29500	29600	28100	NS	NS	53100
			Cobalt	2.1 J	3 J	2.4 B	2.3 J	NS	730	0
			Iron	4810	4800	4160	5460 J	300	10000	1430
			Magnesium	12400	12600	12900	11900	NS	NS	15000
			Manganese	1330	1540 J	1200 J	1370	50	880	1340
			Nickel	4.7 J	4.3 J	5.7 B	4.9 J	100	730	83.4
			Potassium	652	625 U	602 B,J	567 J	NS	NS	5770
			PETN	NO DATA	NO DATA	0.48 J	0.94 J	NS	NS	*
			Sodium	3550	4170	5240	3450	NS	NS	51400
			Zinc	7.5 UJ	4.3 J	6.6 B,J	10 U	5000	11000	52.3

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Load Line 3	LL3mw-238	Bedrock	1,3,5-Trinitrobenzene	37	30	26 J	41 J	NS	1100	*
			2,4,6-TNT	100	65	60 J	97 J	NS	2.2	*
			2,6-Dinitrotoluene	1.0 U	0.49	0.5 R	0.49 R	NS	36	*
			2-Amino-4,6-dinitrotoluene	17	13	11 J	9.9 J	NS	NS	*
			4,4'-DDE	0.025 J	0.030 U	1.5 R	1.5 UJ	NS	0	*
			4-amino-2,6-dinitrotoluene	35	27	25 J	26 J	NS	NS	*
			4-nitrotoluene	2.3 J	2.5 U	2.5 R	2.5 R	NS	0.66	*
			Aluminum	50.0 U	50 U	15.5 J	20.8 B, J	200	36000	0
			Antimony	0.075 UJ	0.13 J	2 UJ	2 U	6	15	0
			Barium	6.2 J	5.6 J	5.1 B	5.2 J	2000	2600	256
			beta-BHC	0.18 J	0.17 J	1.5 R	1.5 UJ	NS	0.032	*
			bis(2-Ethylhexyl) phthalate	10.0 UJ	10 U	4 J	1.4 J	NS	4.8	*
			Calcium	37600	36600	36700	34700	NS	NS	53100
			Copper	5.0 U	1.9 J	5 U	5 U	1300	1500	0
			Diethyl phthalate	1.0 U	1.0 U	0.8 B, J	1 U	NS	1500	*
			Endrin aldehyde	0.059 J	0.030 U	1.5 R	1.5 UJ	NS	11	*
			Gamma-BHC	0.014 J	0.030 U	1.5 R	1.5 UJ	NS	0.052	*
			HMX	12	1.5	1.2 J	1.7 J	NS	1800	*
			Iron	232	120	185 J	204 J	300	10000	1430
			Magnesium	3950	3990	3970	4460	NS	NS	15000
			Manganese	1.3 J	0.79 J	1.8 B, J	2.9 J	50	880	1340
			Methoxychlor	0.044 J	1 U	5 R	5 UJ	40	180	*
			Nickel	1.6 J	10.0 U	1.7 B	10 U	100	730	83.4
			Nitrobenzene	1.5	0.49 U	1 UJ	0.27 B, J	NS	3.4	*
			Nitrocellulose	0.5 U	0.5 U	0.5 UJ	0.13 J	NS	NS	*
			Potassium	2370	1620 J	1500 J	1600 J	NS	NS	5770
			RDX	5.1	4.6	4.8 J	6.6 J	NS	0.61	*
			Selenium	2.4 J	5.0 U	5 U	2.9 J	50	180	0
			Sodium	2120	1910	2120	1370	NS	NS	51400
			Zinc	6.1 UJ	6.2 UJ	5.5 B, J	10 U	5000	11000	52.3
Load Line 3	LL3mw-242	Bedrock	Aluminum	12.0 J	9.8 J	11.8 B	50 U	200	36000	0
			Barium	4.9 J	7.5 J	8.5 B	8.8 J	2000	2600	256
			bis(2-Ethylhexyl) phthalate	10 U	10 U	10 U	1.5 J	NS	4.8	*
			Calcium	14700	11000	11700	15900	NS	NS	53100
			Chloromethane	2.0 J	1.0 U	1.0 U	1.0 U	NS	160	*
			Copper	5.0 U	5.0 U	2.6 B	5 U	1300	1500	0
			HMX	0.10 U	0.10 U	0.099 U	0.06 J	NS	1800	*
			Iron	141	36.0	51.2	63.8 B, J	300	10000	1430
			Magnesium	6300	5640	5750	6730	NS	NS	15000
			Manganese	413	5.3 J	7.7 B, J	113	50	880	1340
			Methoxychlor	0.1 U	0.1 U	0.021 J	0.1 U	40	180	*
			Nickel	15.7	4.8 J	8.2 B	12.2	100	730	83.4
			Nitrocellulose	0.5 U	0.5 U	0.5	0.14 J	NS	NS	*
			Potassium	1130	768 J	721 B, J	929 J	NS	NS	5770
			Sodium	12800	9750	9480	12700	NS	NS	51400
			Zinc	9.4 UJ	6.7 UJ	8.2 B, J	7.8 J	5000	11000	52.3
Load Line 4	LL4mw-198	Unconsolidated	Aluminum	26.3 J	15.7 J	28.2 B	1540 J	200	36000	0
			Antimony	2.0 UJ	0.11 UJ	2 U	0.11 J	6	15	0
			Barium	13.1	13.7	12.8	20.1	2000	2600	82.1
			Cadmium	0.5 U	0.091 J	0.5 U	0.5 U	5	18	0
			Calcium	26700	31100 J	29200	28800	NS	NS	115000
			Cobalt	5.0 U	1.2 J	1.4 B	1.6 J	NS	730	0
			Copper	5.0 U	5.0 U	5.0 U	2.5 J	1300	1500	0
			Iron	5090	4690 J	5400	10400 J	300	10000	279
			Magnesium	12900	14700	14100	13700	NS	NS	43300
			Manganese	1240	1480 J	1330 J	1050	50	880	1020
			Methoxychlor	0.10 UJ	0.1 U	0.038 J	0.1 UJ	40	180	*
			Nickel	26.4	32.2	36.6	29.6	100	730	0
			Nitrocellulose	0.5 U	0.5 U	0.5 U	0.12 J	NS	NS	*
			PETN	NO DATA	NO DATA	0.57 J	0.32 J	NS	NS	*
			Potassium	1330	1140 J	1060 J	1550 J	NS	NS	2890
			Sodium	8900	10500	9650	8740	NS	NS	45700
			Thallium	1 U	1 U	1 U	0.11 J	2	2.4	0
			Vanadium	10 U	10 U	10 U	3.3 J	NS	36	0
			Zinc	81.0 J	91.3 J	94.6 J	66.1 J	5000	11000	60.9

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Load Line 4	LL4mw-199	Unconsolidated	Arsenic	11.6	4.8 J	8.9	12	10	0.007	11.7
			Barium	109	129	101	105	2000	2600	82.1
			Calcium	87400	104000 J	85500	90300	NS	NS	115000
			Carbon disulfide	0.31 J	1.0 U	1 U	1 U	NS	1000	*
			Chloromethane	1 U	1 U	1 U	0.38 J	NS	160	*
			Iron	3180	5280 J	2460 J	3770 J	300	10000	279
			Magnesium	21800	26200	21500	22400	NS	NS	43300
			Manganese	746	1160 J	425	410	50	880	1020
			Potassium	1860	1760 J	1240	1270 J	NS	NS	2890
			RDX	0.064 J	0.096 U	0.098 U	0.11 U	NS	0.61	*
			Sodium	9640	9380	9230	9140	NS	NS	45700
			Zinc	7.9 UJ	5.7 UJ	6.7 B,J	3.8 J	5000	11000	60.9
Load Line 11	LL11mw-002	Unconsolidated	1,3,5-Trinitrobenzene	0.041 J	0.098 U	0.099 U	0.12 U	NS	1100	*
			Aluminum	50 U	50 U	20.5 B	1430 J	200	36000	0
			Antimony	0.18 UJ	0.1 UJ	2 U	0.19 J	6	15	0
			Barium	32.7	30.1	26.1	38.5	2000	2600	82.1
			Beta-BHC	0.030 U	0.030 U	0.21 B	0.013 J	NS	0.037	*
			bis(2-Ethylhexyl) phthalate	10 U	10 U	10 U	1.7 J	NS	4.8	*
			Cadmium	3.0	1.4	1.2	0.87	5	NS	0
			Calcium	93800	96300 J	93400	94400	NS	NS	115000
			Chromium	5.0 U	5.0 U	5.0 U	2.4 J	100	120	7.3
			Cobalt	5.0 U	5.0 U	5.0 U	1.7 J	NS	730	0
			Copper	5 U	5 U	2 B	2.3 J	1300	1500	0
			Diethyl phthalate	1 U	1 U	1 U	1.3	NS	1500	*
			Iron	596	337 J	402	2830 J	300	10000	279
			Magnesium	25300	27100	23900	29500	NS	NS	43300
			Manganese	534	84.8 J	277 J	500	50	880	1020
			Methoxychlor	0.10 U	0.10 U	0.031 J	0.1 U	40	180	*
			Nickel	10.0 U	10.0 U	10 U	4.2 J	100	730	0
			Nitrobenzene	0.085 J	1.0 UJ	0.099 U	0.12 U	NS	3	*
			Nitrocellulose	0.50 U	0.30 J	0.5 U	0.5 UJ	NS	NS	*
			Potassium	1880	1410 J	1390 J	2060 J	NS	NS	2890
			Sodium	6600	9100	6240	9170	NS	NS	45700
			Thallium	1 U	1 U	1 U	0.03 J	2	2.4	0
			Vanadium	10.0 U	10.0 U	10 U	3.3 J	NS	36	0
			Zinc	223 J	92.9 J	19.5 J	23.5 J	5000	11000	60.9
Load Line 11	LL11mw-007	Unconsolidated	Arsenic	21.2	16.0	18.2	20	10	0.007	11.7
			Barium	84.4	88.5	88.1	84	2000	2600	82.1
			bis(2-Ethylhexyl) phthalate	10 U	10 UJ	0.9 J	10 U	NS	4.8	*
			Calcium	90200	94300 J	90500	90500	NS	NS	115000
			Iron	1570	523 J	1560	1460 J	300	10000	279
			Magnesium	32400	33600	32200	32200	NS	NS	43300
			Manganese	211	274 J	214 J	203	50	880	1020
			Methoxychlor	0.1 U	0.1 U	0.038 J	0.1 U	40	180	*
			Potassium	1700	1420 J	1310 J	1330 J	NS	NS	2890
			Sodium	13300	14400	13600	12900	NS	NS	45700
			Zinc	6.9 UJ	5.1 UJ	6.7 B,J	3.7 J	5000	11000	60.9
Load Line 12	LL12mw-153	Unconsolidated	2-Nitrotoluene	0.5 U	0.48 U	0.097 J	0.49 U	NS	0.049	*
			Aluminum	50.0 U	50.0 U	13.3 J	50 U	200	36000	0
			Antimony	2.0 UJ	2.0 UJ	2 U	0.096 J	6	15	0
			Arsenic	26.9	12.7	14.6	26.9	10	0.007	11.7
			Barium	80.8	73.2	74.9	74.4	2000	2600	82.1
			bis(2-Ethylhexyl) phthalate	10 UJ	10 U	3 J	10 U	NS	4.8	*
			Calcium	148000	133000	138000	145000	NS	NS	115000
			Copper	5.0 U	5.0 U	3 B,J	5 U	1300	1500	0
			Iron	5320	4020	4000	4810 J	300	10000	279
			Magnesium	80100	72600	75500	79700	NS	NS	43300
			Manganese	196	187	198	195	50	880	1020
			Nickel	10.0 U	10.0 U	1.7 J	10 U	100	730	0
			Potassium	2740	1960 J	1950	2120	NS	NS	2890
			Sodium	25800	24400	25400	25100	NS	NS	45700
			Zinc	9.9 UJ	6.9 UJ	7.9 J	4.6 J	5000	11000	60.9

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Load Line 12	LL12mw-182	Unconsolidated	2,6-Dinitrotoluene	0.10 U	0.059 J	0.098 U	0.098 U	NS	36	*
			2-Nitrotoluene	0.50 U	0.48 U	0.1 J	0.49 U	NS	0.049	*
			4-Nitrotoluene	0.12 J	0.31 J	0.098 U	0.49 U	NS	0.66	*
			Aluminum	50.0 U	5.4 J	14.7 J	20.1 J	200	36000	0
			Antimony	0.069 UJ	0.34 J	2 U	2 U	6	15	0
			Arsenic	31.9	26.6	35.3	51 J	10	0.007	11.7
			Barium	92.0	94.4	85.8	79	2000	2600	82.1
			bis(2-Ethylhexyl) phthalate	10 UJ	10 U	1.4 J	3.7 J	NS	4.8	*
			Calcium	70100	73200	83700	83200	NS	NS	115000
			Copper	5 U	2 J	2.4 B,J	5 U	1300	1500	0
			Cyanide	10 U	3.5 J	10 U	10 U	200	730	0
			Iron	819	292	1170	1680 J	300	10000	279
			Magnesium	50500	49700	61900	65100	NS	NS	43300
			Manganese	40.5	22.3	52.6	53.8	50	880	1020
			Nickel	10.0 U	1.6 J	10 U	10 U	100	730	0
			Nitrobenzene	0.1 U	0.097 U	0.097 U	0.064 J	NS	3	*
			Potassium	7030	6140 J	3950	4100	NS	NS	2890
			Sodium	26600	29200	27300	26300	NS	NS	45700
			Zinc	7.7 UJ	4.8 UJ	6.1 J	3.8 J	5000	11000	60.9
Load Line 12	LL12mw-183	Unconsolidated	Aluminum	50 U	50 U	5.3 J	50 U	200	36000	0
			Antimony	0.080 UJ	0.12 J	2 U	2 U	6	15	0
			Arsenic	41.3	34.5	20.2	33.3	10	0.007	11.7
			Barium	72.1	82.3	78.4	71.8	2000	2600	82.1
			bis(2-Ethylhexyl) phthalate	10 UJ	10 U	1.9 J	2.1 J	NS	4.8	*
			Calcium	109000	110000	116000	115000	NS	NS	115000
			Copper	5.0 U	5.0 U	2.8 B,J	5 U	1300	1500	0
			Iron	1850	1220	830	1670 J	300	10000	279
			Magnesium	43900	44700	46200	46100	NS	NS	43300
			Manganese	66.7	56.9	53.4	74.1	50	880	1020
			Methoxychlor	0.1 U	0.1 U	0.012 J	0.1 U	40	180	*
			Potassium	3660	4920 J	3880	3800	NS	NS	2890
			Sodium	15500	20600	18700	17600	NS	NS	45700
			Zinc	6.2 UJ	6.3 UJ	5 J	5.3 J	5000	11000	60.9
Load Line 12	LL12mw-186	Unconsolidated	1,3,5-Trinitrobenzene	0.1 U	0.095 U	0.031 J	0.12 U	NS	1100	*
			2-nitrotoluene	0.5 U	0.048 U	0.1 J	0.6 U	NS	0.049	*
			4-4'-DDT	0.19 J	0.030 U	0.030 U	0.03 UJ	NS	0.2	*
			alpha-BHC	0.065 J	0.030 U	0.030 U	0.03 UJ	NS	0.011	*
			Aluminum	3.6 J	50.0 U	11.6 J	6.4 J	200	36000	0
			Antimony	0.073 J	0.17 J	2 U	0.17 J	6	15	0
			Arsenic	5.7	5.0 U	5 U	5 U	10	0.007	11.7
			Barium	47.6	47.3	46.9	45	2000	2600	82.1
			beta-BHC	0.57 J	0.030 U	0.03 U	0.03 UJ	NS	0.037	*
			bis(2-Ethylhexyl) phthalate	10 UJ	10 U	2 J	0.97 J	NS	4.8	*
			Calcium	137000	141000	139000	135000	NS	NS	115000
			Chloromethane	1.0 J	1.0 U	1.0 U	1.0 U	NS	160	*
			Cobalt	2.0 J	1.4 J	1.3 J	1.9 J	NS	730	0
			Copper	5.0 U	5.0 U	3.4 B,J	5 U	1300	1500	0
			Cyanide	10 U	8.6 J	10 U	25	200	730	0
			delta-BHC	0.0073 J	0.030 U	0.03 U	0.03 UJ	NS	NS	*
			1,2-Dichloroethane	0.46 J	1.0 U	1.0 U	1.0 U	NS	0.12	*
			dieldrin	0.0093 J	0.030 U	0.03 U	0.03 UJ	NS	0.0042	*
			Gamma-BHC	0.1 J	0.030 U	0.03 U	0.03 UJ	NS	0.052	*
			gamma-Chlordane	0.028 J	0.030 U	0.03 U	0.03 UJ	NS	0.019	*
			Heptachlor	0.0072 J	0.030 U	0.030 U	0.03 UJ	0.40	0.02	*
			Heptachlor epoxide	0.11 J	0.030 U	0.030 U	0.03 UJ	0.20	0.01	*
			Iron	2290	699	820	941 J	300	10000	279
			Magnesium	61900	65000	64100	61300	NS	NS	43300
			Manganese	373	295	287	398	50	880	1020
			Methoxychlor	0.012 J	0.1 U	0.09 J	0.1 UJ	40	180	*
			Nickel	2.4 J	10.0 U	3.8 J	2.5 J	100	730	0
			Nitrate-Nitrite	0.07 UJ	0.1 U	0.1 U	0.02 J	10000	1000	*
			Potassium	2070	1520 J	1340	1560	NS	NS	2890
			RDX	0.10 U	0.053 J	0.098 U	0.093 UJ	NS	0.61	*
			Sodium	15700	16600	16200	15300	NS	NS	45700
			Thallium	0.026 UJ	1 U	1 U	0.031 J	2	2.4	0
			Zinc	9.6 UJ	5.2 UJ	5 J	4.3 J	5000	11000	60.9

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Central Burn Pits	CBPmw-005	Unconsolidated	Antimony	0.070 UJ	0.11 J	NT	NT	6	15	0
			Arsenic	21.6	24.6	NT	NT	10	0.007	11.7
			Barium	33.2	36.4	NT	NT	2000	2600	82.1
			Calcium	76500	75600	NT	NT	NS	NS	115000
			Iron	1200	1040	NT	NT	300	10000	279
			Magnesium	36500	37400	NT	NT	NS	NS	43300
			Manganese	51.9	51.7	NT	NT	50	880	1020
			Potassium	3360	4190 J	NT	NT	NS	NS	2890
Central Burn Pits	CBPmw-006	Unconsolidated	Sodium	25500	29400	NT	NT	NS	NS	45700
			2-Nitrotoluene	NT	NT	0.09 J	0.5 U	NS	0.049	*
			Aluminum	NT	NT	25.2 J	50 U	200	36000	0
			Antimony	NT	NT	2 UJ	0.13 J	6	15	0
			Arsenic	NT	NT	9.2	11.5	10	0.007	11.7
			Barium	NT	NT	150	134	2000	2600	82.1
			bis(2-Ethylhexyl) phthalate	NT	NT	10 UJ	2.5 J	NS	4.8	*
			Calcium	NT	NT	78800	72800	NS	NS	115000
			Copper	NT	NT	2.4 J	5 U	1300	1500	0
			Cyanide	NT	NT	11 J	10 U	200	730	0
			Iron	NT	NT	718	900 J	300	10000	279
			Magnesium	NT	NT	31500	29100	NS	NS	43300
			Manganese	NT	NT	71.7	56.9	50	880	1020
			Methoxychlor	NT	NT	0.028 J	0.1 UJ	40	180	*
			Nickel	NT	NT	3.2 J	1.7 J	100	730	0
			Potassium	NT	NT	1900	1740	NS	NS	2890
			Sodium	NT	NT	16400	14200	NS	NS	45700
			Zinc	NT	NT	10.7 B	5.2 J	5000	11000	60.9
Central Burn Pits	CBPmw-007	Unconsolidated	4,4'-DDT	0.013 J	0.030 U	0.03 U	0.03 U	NS	0.2	*
			Aluminum	50 U	50 U	50 U	40 J	200	36000	0
			Antimony	0.55 J	0.12 J	2 U	0.34 J	6	15	0
			Arsenic	22.3	18.8	44.9	46.8	10	0.007	11.7
			Barium	10.2	12.9	9.9 B	10	2000	2600	82.1
			bis(2-Ethylhexyl) phthalate	10 U	10 UJ	10 U	4.3 J	NS	4.8	*
			Calcium	218000	198000	265000	258000	NS	NS	115000
			Cobalt	5.0 U	5.0 U	2.2 B	2.1 J	NS	730	0
			Copper	5.0 U	2.3 J	5 U	5 U	1300	1500	0
			Iron	3520	2290	5610	5940 J	300	10000	279
			Magnesium	112000	104000	145000	141000	NS	NS	43300
			Manganese	72.0	73.6	117 J	119	50	880	1020
			Nickel	2.0 J	10 U	3.8 B	4.4 J	100	730	0
			Potassium	5680	5070 J	4960 J	4960	NS	NS	2890
			Sodium	111000	136000	88300	88000	NS	NS	45700
			Thallium	0.035 J	1 U	1 U	0.031 J	2	2.4	0
			Zinc	5.6 UJ	10 U	7.2 B,J	3.2 J	5000	11000	60.9
Demolition Area 2	DA2mw-107	Unconsolidated	Antimony	0.35 UJ	2.0 UJ	2 U	0.34 J	6	15	0
			Arsenic	6.9	5.0 U	5 U	6.8	10	0.007	11.7
			Barium	32.4	32	28.8	31.9	2000	2600	82.1
			bis(2-Ethylhexyl) phthalate	10 UJ	10 UJ	10 U	5.3 J	NS	4.8	*
			Calcium	81200	80000 J	81000	84600	NS	NS	115000
			Iron	1920	876	952	1970 J	300	10000	279
			Magnesium	26900	29300	27300	27900	NS	NS	43300
			Manganese	170	345	347 J	198	50	880	1020
			Nickel	2.0 J	10 U	1.7 B	10 U	100	730	0
			Potassium	2020	1440 J	1320 J	1560 J	NS	NS	2890
			Sodium	9300	9810	9250	9300	NS	NS	45700
			Thallium	1.0 U	1.0 U	1 U	0.026 J	2	2.4	0
			Zinc	4.2 UJ	4.7 UJ	10.4 J	10 U	5000	11000	60.9
Demolition Area 2	DA2mw-Det3	Unconsolidated	2,6-Dinitrotoluene	5 U	NT	4.6 J	NT	NS	36	*
			Arsenic	9.9	NT	8.6	NT	10	0.007	11.7
			Barium	45.6	NT	52.3	NT	2000	2600	82.1
			Calcium	80300	NT	91000	NT	NS	NS	115000
			Copper	5 U	NT	2.4 B	NT	1300	1500	0
			Cyanide	10 U	NT	9 B,J	NT	200	730	0
			Di-n-octyl phthalate	1 U	NT	1.1	NT	NS	NS	*
			Iron	1920	NT	1990	NT	300	10000	279
			Magnesium	29300	NT	33300	NT	NS	NS	43300
			Manganese	239	NT	291 J	NT	50	880	1020
			Nickel	10.0 U	NT	1.6 B	NT	100	730	0
			Potassium	2030	NT	1600 J	NT	NS	NS	2890
			Sodium	11200	NT	13200	NT	NS	NS	45700
			Zinc	4.7 UJ	NT	7.8 B,J	NT	5000	11000	60.9

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Demolition Area 2	DA2mw-Det4	Unconsolidated	1,1-Dichloroethene (total)	1.0 U	NT	0.3 J	NT	NS	340	*
			2-Nitrotoluene	0.1 U	NT	0.11 J	NT	NS	0.049	*
			Antimony	1.2 J	NT	5 U	NT	6	15	0
			Barium	65.2	NT	43.7	NT	2000	2600	82.1
			Calcium	156000	NT	140000	NT	NS	NS	115000
			Copper	5 U	NT	2.5 B	NT	1300	1500	0
			HMX	2	NT	1	NT	NS	1800	*
			Iron	894	NT	528	NT	300	10000	279
			Magnesium	31000	NT	28700	NT	NS	NS	43300
			Manganese	1.8 J	NT	1.6 B,J	NT	50	880	1020
			Potassium	4590	NT	1470 J	NT	NS	NS	2890
			RDX	0.21	NT	0.5	NT	NS	0.61	*
			Sodium	17600	NT	3750	NT	NS	NS	45700
			Thallium	0.026 J	NT	1 U	NT	2	2	0
			Zinc	20.9 U	NT	12.1 J	NT	5000	11000	60.9
Ramsdell Quarry Landfill	RQLmw-007	Bedrock	Antimony	0.73 J	NT	2 UJ	NT	6	15	0
			Arsenic	53.3	NT	53.6	NT	10	0.007	0
			Barium	41.6 J	NT	58.8	NT	2000	2600	256
			bis(2-Ethylhexyl) phthalate	10 U	NT	2.3 J	NT	NS	4.8	*
			Calcium	102000	NT	161000	NT	NS	NS	53100
			Cobalt	6.7	NT	8.7	NT	NS	730	0
			Diethyl phthalate	1.0 U	NT	0.86 B,J	NT	NS	29000	*
			Iron	15000	NT	21700 J	NT	300	10000	1430
			Magnesium	115000	NT	133000	NT	NS	NS	15000
			Manganese	1700 J	NT	2590	NT	50	880	1340
			Nickel	11.9	NT	12.5	NT	100	730	83.4
			Potassium	8310	NT	9050	NT	NS	NS	5770
			Sodium	6320	NT	9960	NT	NS	NS	51400
			Thallium	0.023 J	NT	0.029 J	NT	2	2	0
			Zinc	9.7 UJ	NT	32.4 B,J	NT	5000	11000	52.3
Ramsdell Quarry Landfill	RQLmw-008	Bedrock	1,3,5-Trinitrobenzene	0.19	NT	0.099 U	NT	NS	1100	*
			1,3-Dinitrobenzene	0.085 J	NT	0.099 U	NT	NS	3.6	*
			2,6-Dinitrotoluene	0.1 U	NT	0.27	NT	NS	36	*
			4,4'-DDE	0.0095 J	NT	0.15 UJ	NT	NS	0	*
			Aluminum	50 U	NT	29.4 J	NT	200	36000	0
			Arsenic	18.4	NT	53.3	NT	10	0.007	0
			Barium	146	NT	152	NT	2000	2600	256
			Beta-BHC	0.012 J	NT	0.15 UJ	NT	NS	0.037	*
			bis(2-Ethylhexyl) phthalate	10 UJ	NT	1.9 J	NT	NS	4.8	*
			Calcium	64400	NT	86200	NT	NS	NS	53100
			Cobalt	2.2 J	NT	2.8	NT	NS	730	0
			Copper	5 U	NT	1.9 J	NT	1300	1500	0
			Diethyl phthalate	1 U	NT	0.83 B,J	NT	NS	29000	*
			HMX	0.88	NT	0.099 U	NT	NS	1800	*
			Iron	89600	NT	134000 J	NT	300	10000	1430
			Magnesium	62900	NT	41600	NT	NS	NS	15000
			Manganese	835	NT	930	NT	50	880	1340
			Nickel	5.7 J	NT	9.00 J	NT	100	730	83.4
			Nitrocellulose	0.5 U	NT	0.13 J	NT	NS	NS	*
			Potassium	6590	NT	5940	NT	NS	NS	5770
			Sodium	10200	NT	10900	NT	NS	NS	51400
			Tetryl	0.16	NT	0.099 U	NT	NS	360	*
			Zinc	10.8 U	NT	9.3 B,J	NT	5000	11000	52.3
Ramsdell Quarry Landfill	RQLmw-009	Bedrock	2-Nitrotoluene	0.10 U	NT	0.11 J	NT	NS	0.049	*
			Arsenic	39.8	NT	40.6	NT	10	0.007	0
			Barium	52.9	NT	56.3	NT	2000	2600	256
			bis(2-Ethylhexyl) phthalate	10 U	NT	1.6 J	NT	NS	4.8	*
			Calcium	31600	NT	33900	NT	NS	NS	53100
			Cobalt	4.9 J	NT	7	NT	NS	730	0
			Diethyl phthalate	1 U	NT	0.81 B,J	NT	NS	29000	*
			Iron	15000	NT	21700 J	NT	300	10000	1430
			Magnesium	25200	NT	36900	NT	NS	NS	15000
			Manganese	1640	NT	2050	NT	50	880	1340
			Nickel	5.5 J	NT	5.5 J	NT	100	730	83.4
			PETN	No data	NT	0.88	NT	NS	NS	*
			Potassium	5750	NT	4430	NT	NS	NS	5770
			Sodium	3380	NT	4360	NT	NS	NS	51400
			Thallium	0.20 J	NT	0.079 J	NT	2	2	0
			Zinc	11.3 U	NT	7.7 B,J	NT	5000	11000	52.3

Table 4-1. Summary of Constituents Detected - October 2006 through July 2007

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)	Facilitywide Background (ug/L)
Winklepeck Burning Ground	WBGmw-006	Unconsolidated	1,3,5-Trinitrobenzene	0.44 J	0.50 U	0.5 U	0.49 U	NS	1100	*
			Aluminum	2 U	4 J	50 U	50 U	200	36000	0
			Antimony	5 U	1 J	2 UJ	2 U	6	15	0
			Barium	23.5	26.5	26.5	25	2000	2600	82.1
			bis(2-Ethylhexyl) phthalate	10 U	10 UJ	10 U	1.1 J	NS	4.8	*
			Calcium	64800	66000 J	68200	68100	NS	NS	115000
			Cobalt	5.0 U	5.0 U	5.0 U	1.4 J	NS	730	0
			Copper	5.0 U	5.0 U	2.2 J	5 U	1300	1500	0
			Cyanide	10 U	10 U	9 J	10 U	200	730	0
			Gamma-BHC	0.057	0.30 U	0.30 U	0.03 U	0.2	0.052	*
			HMX	13	13	12	12	NS	1800	*
			Iron	376	263	278	254 J	300	10000	279
			Magnesium	21400	21800	22600	22400	NS	NS	43300
			Manganese	51.7	59.2	54.6	55.3	50	880	1020
			Nickel	10 U	10 U	10 U	2.2 J	100	730	83.4
			Nitrocellulose	0.12 J	0.13 J	0.5 UJ	0.12 J	NS	NS	*
			Potassium	940 J	812 J	784 J	837 J	NS	NS	2890
			RDX	50	53	51	48	NS	0.61	*
			Sodium	5820	6200	6350	6500	NS	NS	45700
			Thallium	1.0 U	0.03 J	1 UJ	0.025 J	2	2	0
			Zinc	4.4 UJ	3.4 UJ	5.1 B,J	3.6 J	5000	11000	60.9
Winklepeck Burning Ground	WBGmw-007	Unconsolidated	1,1,-Dichloroethene (total)	1.0 U	1.0 U	1.0 U	0.32 J	5	2	*
			2,6-Dinitrotoluene	0.010 U	0.66 J	0.1 U	0.11 U	NS	36	*
			2-Nitrotoluene	0.5 U	0.54 U	0.091 J	0.54 U	NS	0.049	*
			Antimony	0.69 UJ	0.37 J	2 UJ	2 U	6	15	0
			Arsenic	5.0 U	5.0 U	5.0 U	4.8 J	10	0.007	11.7
			Barium	34	19.1	22.3	36.6	2000	2600	82.1
			bis(2-Ethylhexyl) phthalate	10 UJ	10 UJ	10 UJ	2.5 J	NS	5	*
			Calcium	59900	61900 J	63700	64800	NS	NS	115000
			Copper	5.0 U	5.0 U	2 J	5 U	1300	1500	0
			Iron	573	288	350	604 J	300	10000	279
			Magnesium	14700	14200	14900	17300	NS	NS	43300
			Manganese	74.3	41.5	46.8	118	50	880	1020
			Methylene chloride	2.0 UJ	2.0 U	0.26 B,J	2 R	NS	4.3	*
			Nitrobenzene	0.1 U	0.1 U	0.1 U	0.064 B,J	NS	3.4	*
			Nitrocellulose	0.5 U	0.5 U	0.5 U	0.14 J	NS	NS	*
			Potassium	1180	938 J	1030	1120 J	NS	NS	2890
			Sodium	3670	3400	3620	4990	NS	NS	45700
			Zinc	5.4 UJ	4.1 UJ	6 B,J	10 U	5000	11000	60.9
Winklepeck Burning Ground	WBGmw-009	Unconsolidated	1,3,5-Trinitrobenzene	0.32 J	0.10 U	0.1 UJ	0.099 U	NS	1100	*
			Aluminum	50 U	5.8 J	2.9 J	50 U	200	36000	0
			Antimony	2.0 U	0.13 J	2 UJ	0.16 J	6	15	0
			Barium	8.4 J	9.0 J	9.7 J	13	2000	2600	82.1
			Beta-BHC	0.030 U	0.030 U	0.0087 J	0.03 U	NS	0.037	*
			Calcium	31800	39000 J	46200	83300	NS	NS	115000
			Copper	5.0 U	5.0 U	2.1 J	5 U	1300	1500	0
			HMX	1.9	1.3	1.1	2	NS	1800	*
			Iron	167	165	196	362 J	300	10000	279
			Magnesium	9920	11900	14300	25500	NS	NS	43300
			Manganese	33.7	40.1	52.6	106	50	880	1020
			Potassium	536 J	453 U	475 J	850 J	NS	NS	2890
			RDX	7.8	3.8	3.4	9 J	NS	0.61	*
			Sodium	4050	3760	4060	4330	NS	NS	45700
			Tetryl	0.061 J	0.10 U	0.10 U	0.099 U	NS	360	*
			Zinc	11.3 U	5.7 UJ	5.4 B,J	10 U	5000	11000	60.9

Notes:

NS = no standard NT = not tested

Bold = inorganic constituent detected above facility wide background levels

Shaded boxes indicate organic constituent detected above the reporting limit

\* There are no background levels for organic constituents



Table 4-1 Summary of Constituents Detected in 2007

**Data Qualifiers**

Data qualifier flags are used in an effort to describe the quality of each piece of data for each constituent. These flags are letter codes appended to the numerical data. The following data qualifiers are specified in the USACE Louisville Chemistry Guidelines (LCG). For a complete explanation of qualifiers used for each constituent please refer to the Data Verification Summaries in Appendix B.

- U- The analyte was analyzed for but not detected. The numerical value preceding the U is the associated RL.
- J- The identification of the analyte is acceptable, but the quality assurance criteria indicate that the quantitative values may be outside the normal expected range of precision (i.e., the quantitative value is estimated). Examples include:
  - Results detected above the laboratory MDL but less than the laboratory RL.
  - MS/MSD percent recoveries outside the acceptance criteria.
  - Laboratory control sample (LCS) percent recoveries outside acceptance criteria.
- R- Data are considered to be rejected and shall not be used. This flag denotes the failure of quality control criteria such that it cannot be determined if the analyte is present or absent from the sample [e.g., the method reporting limit (MRL) verification standard was below quality control guidelines; associated sample results that were non-detect are unusable].
- UJ- This flag is a combination of the U and J qualifiers which indicate that the analyte is not present. The reported value is considered to be an estimated RL.
- B- The B flag is used for both organic and inorganic analyses when the analyte is found in the method blank or any of the field blanks. This designation overrides the Contract Laboratory Program (CLP) "B" designation when used by the laboratory as an estimated value for inorganics.

Table 4-2 RVAAP Facility-wide Background Criteria, (SAIC, 2001b)

Media Units	Surface Soil mg/kg	Subsurface Soil mg/kg	Sediment mg/kg	Surface Water µg/L	Groundwater Bedrock Zone Filtered µg/L	Groundwater Bedrock Zone Unfiltered µg/L	Groundwater Unconsolidated Zone Filtered µg/L	Groundwater Unconsolidated Unfiltered µg/L
<b>Analyte</b>								
Cyanide	0	0	0	0	0	0	0	0
Aluminum	17700	19500	13900	3370	0	9410	0	0
Antimony	0.96	0.96	0	0	0	0	0	0
Arsenic	15.4	19.8	19.5	3.2	0	19.1	11.7	11.7
Barium	88.4	124	123	47.5	256	241	82.1	82.1
Beryllium	0.88	0.88	0.38	0	0	0	0	0
Cadmium	0	0	0	0	0	0	0	0
Calcium	15800	35500	5510	41400	53100	48200	115000	115000
Chromium	17.4	27.2	18.1	0	0	19.5	7.3	7.3
Cobalt	10.4	23.2	9.1	0	0	0	0	0
Copper	17.7	32.3	27.6	7.9	0	17	0	0
Iron	23100	35200	28200	2560	1430	21500	279	279
Lead	26.1	19.1	27.4	0	0	23	0	0
Magnesium	3030	8790	2760	10800	15000	13700	43300	43300
Manganese	1450	3030	1950	391	1340	1260	1020	1020
Mercury	0.036	0.044	0.059	0	0	0	0	0
Nickel	21.1	60.7	17.7	0	83.4	85.3	0	0
Potassium	927	3350	1950	3170	5770	6060	2890	2890
Selenium	104	105	107	0	0	0	0	0
Silver	0	0	0	0	0	0	0	0
Sodium	123	145	112	21300	51400	49700	45700	45700
Thallium	0	0.91	0.89	0	0	0	0	0
Vanadium	31.1	37.6	26.1	0	0	15.5	0	0
Zinc	61.8	93.3	532	42	52.3	193	60.9	60.9

Table 4-3 presents those compounds and elements detected in any of the October 2006, March 2007, May 2007, or July 2007 sampling events that exceeded Region 9 PRGs, primary MCLs, or secondary MCLs.

Sections 4.2 through 4.12 present a summary of the trends of concentrations of Chemicals of Potential Concern identified in groundwater samples collected under the FWGWMP over the last eight quarters. A Chemical of Potential Concern is defined, for this report, to be any analyte determined by the analytical laboratory to be present at a concentration greater than the respective analyte RL in at least three of the eight FWGWMP sampling events. Each of Sections 4.2 through 4.12 contains several subsections presented by group of Chemicals of Potential Concern (e.g., inorganics, semi-volatile organic compounds, explosives, etc.).

Time-trend graphs for the Chemicals of Potential Concern are presented in Appendix E. The graphs are organized by AOC. The background wells are grouped before the AOCs.

The time-trend plots include the comparative criteria of: 1) MCL, 2) PRG for tap water, and 3) background concentration (either unconsolidated or bedrock) for inorganics. It is noted that background concentrations for several inorganics are identified as “0” (i.e., not expected to be naturally present at any measurable concentration) (Table 4-3). These inorganics include cyanide, aluminum, antimony, arsenic (bedrock only), beryllium, cadmium, chromium (bedrock only), cobalt copper, lead, selenium, silver, thallium and vanadium. These criteria were calculated from data collected prior to implementation of the FWGWMP. With implementation of the FWGWMP, many of the inorganics with a “0” background criterion are found to be present at concentrations greater than the respective FWGWMP RLs. Consideration should be made for a re-evaluation of background criteria for inorganics with thought given to inclusion of the FWGWMP data.

## **4.2 Background Wells**

Aluminum, antimony, arsenic, barium, cadmium, calcium, copper, cyanide, iron, magnesium, manganese, nickel, potassium, carbon disulfide, and bis(2-ethylhexyl)-phthalate are reported to be present at concentrations exceeding their respective RL in three or more samples from background wells. No explosive, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from background wells.

### **4.2.1 Inorganics**

#### **4.2.1.1 Aluminum**

Aluminum is present above the RL in background wells BKGmw-004 (unconsolidated well), BKGmw-010 (bedrock well), and BKGmw-016 (unconsolidated well). The reported concentrations in all three wells show fluctuation over time without identifiable

**Table 4-3 2007 FWGWMP Region 9 PRG or MCL Exceedences**

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)
Background Wells	BKGmw-004	Unconsolidated	2-Nitrotoluene	0.5 U	0.5 U	0.1	0.55 U	NS	0.049
	BKGmw-005	Unconsolidated	2-Nitrotoluene	0.5 U	0.096 U	0.098 J	0.48 U	NS	0.049
			Toxaphene	0.36 J	2 U	2 UJ	2 U	3	0.061
			Iron	493	312	347	339 BJ	300	11000
	BKGmw-006	Bedrock	Iron	929	587	1540	1100 BJ	300	11000
			Manganese	268	384 J	209	182	50	880
	BKGmw-010	Bedrock	bis(2-Ethylhexyl) phthalate	10 U	10 UJ	24	2.1 J	NS	4.8
			Iron	84.9	47.2	43.4	47.1 B, J	300	11000
			Manganese	509	838 J	944	79.5	50	880
	BKGmw-012	Bedrock	2-Nitrotoluene	0.5 U	0.049 U	0.098 J	0.48 U	NS	0.049
			Benzene	1.1	0.46 J	0.81 J	0.54 J	5	0.35
			Iron	425	413	469	372	300	11000
			Manganese	51.7	49.8 J	34.6	37.9	50	880
	BKGmw-013	Unconsolidated	2-Nitrotoluene	0.5 U	0.49 U	0.098 J	0.55 U	NS	0.049
			Arsenic	11.4	13.4	10.3	5 U	10	0.007
			Iron	1480	1170	1150	110 B, J	300	11000
			Manganese	391	432	434	0.98 J	50	880
	BKGmw-015	Bedrock	2-nitrotoluene	0.50 U	0.48 U	0.095 J	0.56 U	NS	0.049
			Manganese	2.4 J	25.6 J	11.3	61.4	50	880
	BKGmw-017	Unconsolidated	Arsenic	19.8	20.4	15.4	17.1	10	0.007
			Iron	2000	1800	2050	1420 B, J	300	10000
			Manganese	210	211	190	190	50	880
	BKGmw-018	Bedrock	Iron	490	273	275	248 B, J	300	10000
	BKGmw-019	Unconsolidated	Iron	659	520	540	480 J	300	10000
			Manganese	125	146	70.8	128	50	880
	BKGmw-020	Bedrock	Iron	3550	1950	2040	2510 J	300	880
			Manganese	829	744 J	706	652	50	880
	BKGmw-021	Unconsolidated	Iron	392	296	293	285 J	300	10000
Load Line 1	LL1mw-078	Bedrock	Manganese	15.9	82.0	24.2	18.4	50	880
	LL1mw-080	Bedrock	beta-BHC	0.039	0.029 J	0.030 U	0.030 U	NS	0.037
			bis(2-Ethylhexyl) phthalate	10 UJ	10 U	5 J	3 J	NS	4.8
			Iron	323	147	159 J	316 J	300	10000
			RDX	15	2.4	2.3	52	NS	0.61
	LL1mw-083	Bedrock	2,4,6-TNT	6.4	6.5	5.3	6 J	NS	2.20
			Alpha-BHC	0.030 U	0.030 U	0.011 J	0.6 U	NS	0.011
			beta-BHC	0.069	0.086 J	0.17 J	0.6 U	NS	0.037
			Manganese	395	374	427 J	394	50	880
Load Line 2	LL2mw-059	Bedrock	Iron	508	313	176	435 J	300	10000
			Manganese	514	151 J	9.5 J	259	50	880
	LL2mw-262	Bedrock	Iron	3490	188	200 J	142 J	300	10000
			Manganese	2020	259 J	281 J	266	50	880
	LL2mw-263	Bedrock	Iron	4810	4800	4160	5460 J	300	10000
			Manganese	1330	1540 J	1200 J	1370	50	880
Load Line 3	LL3mw-238	Bedrock	2,4,6-TNT	100	65	60 J	97 J	NS	2.2
			4-nitrotoluene	2.3 J	2.5 U	2.5 R	2.5 R	NS	0.66
			beta-BHC	0.18 J	0.17 J	1.5 R	1.5 UJ	NS	0.032
			RDX	5.1	4.6	4.8 J	6.6 J	NS	0.61
	LL3mw-242	Bedrock	Manganese	413	5.3 J	7.7 B, J	113	50	880
Load Line 4	LL4mw-198	Unconsolidated	Iron	5090	4690 J	5400	10400 J	300	10000
			Manganese	1240	1480 J	1330 J	1050	50	880
	LL4mw-199	Unconsolidated	Arsenic	11.6	4.8 J	8.9	12	10	0.007
			Iron	3180	5280 J	2460 J	3770 J	300	10000
			Manganese	746	1160 J	425	410	50	880

**Table 4-3 2007 FWGWMP Region 9 PRG or MCL Exceedences**

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)
Load Line 11	LL11mw-002	Unconsolidated	Beta-BHC	0.030 U	0.030 U	0.21 B	0.013 J	NS	0.037
			Iron	596	337 J	402	2830 J	300	10000
			Manganese	534	84.8 J	277 J	500	50	880
	LL11mw-007	Unconsolidated	Arsenic	21.2	16.0	18.2	20	10	0.007
			Iron	1570	523 J	1560	1460 J	300	10000
			Manganese	211	274 J	214 J	203	50	880
Load Line 12	LL12mw-153	Unconsolidated	Arsenic	26.9	12.7	14.6	26.9	10	0.007
			Iron	5320	4020	4000	4810 J	300	10000
			Manganese	196	187	198	195	50	880
	LL12mw-182	Unconsolidated	2-Nitrotoluene	0.50 U	0.48 U	0.1 J	0.49 U	NS	0.049
			Arsenic	31.9	26.6	35.3	51 J	10	0.007
			Iron	819	292	1170	1680 J	300	10000
			Manganese	40.5	22.3	52.6	53.8	50	880
	LL12mw-183	Unconsolidated	Arsenic	41.3	34.5	20.2	33.3	10	0.007
			Iron	1850	1220	830	1670 J	300	10000
			Manganese	66.7	56.9	53.4	74.1	50	880
	LL12mw-186	Unconsolidated	2-nitrotoluene	0.5 U	0.048 U	0.1 J	0.6 U	NS	0.049
			alpha-BHC	0.065 J	0.030 U	0.030 U	0.03 UJ	NS	0.011
			beta-BHC	0.57 J	0.030 U	0.03 U	0.03 UJ	NS	0.037
			Heptachlor epoxide	0.11 J	0.030 U	0.030 U	0.03 UJ	0.20	0.01
			Iron	2290	699	820	941 J	300	10000
			Manganese	373	295	287	398	50	880
Central Burn Pits	CBPmw-005	Unconsolidated	Arsenic	21.6	24.6	NT	NT	10	0.007
			Manganese	51.9	51.7	NT	NT	50	880
	CBPmw-006	Unconsolidated	2-Nitrotoluene	NT	NT	0.09 J	0.5 U	NS	0.049
			Iron	NT	NT	718	900 J	300	10000
			Manganese	NT	NT	71.7	56.9	50	880
	CBPmw-007	Unconsolidated	Arsenic	22.3	18.8	44.9	46.8	10	0.007
Iron			3520	2290	5610	5940 J	300	10000	
Manganese			72.0	73.6	117 J	119	50	880	
Demolition Area 2	DA2mw-107	Unconsolidated	Arsenic	6.9	5.0 U	5 U	6.8	10	0.007
			bis(2-Ethylhexyl) phthalate	10 UJ	10 UJ	10 U	5.3 J	NS	4.8
			Iron	1920	876	952	1970 J	300	10000
			Manganese	170	345	347 J	198	50	880
	DA2mw-Det3	Unconsolidated	Arsenic	9.9	NT	8.6	NT	10	0.007
			Iron	1920	NT	1990	NT	300	10000
			Manganese	239	NT	291 J	NT	50	880
	DA2mw-Det4	Unconsolidated	2-Nitrotoluene	0.1 U	NT	0.11 J	NT	NS	0.049
Iron			894	NT	528	NT	300	10000	
Ramsdell Quarry Landfill	RQLmw-007	Bedrock	Arsenic	53.3	NT	53.6	NT	10	0.007
			Iron	15000	NT	21700 J	NT	300	10000
			Manganese	1700 J	NT	2590	NT	50	880
	RQLmw-008	Bedrock	Arsenic	18.4	NT	53.3	NT	10	0.007
			Iron	89600	NT	134000 J	NT	300	10000
			Manganese	835	NT	930	NT	50	880
	RQLmw-009	Bedrock	2-Nitrotoluene	0.10 U	NT	0.11 J	NT	NS	0.049
			Arsenic	39.8	NT	40.6	NT	10	0.007
			Iron	15000	NT	21700 J	NT	300	10000
			Manganese	1640	NT	2050	NT	50	880

**Table 4-3 2007 FWGWMP Region 9 PRG or MCL Exceedences**

Area	Well Number	Monitoring Zone	Compound or Element Detected	Oct 2006 Level (ug/L)	Jan 2007 Level (ug/L)	Apr 2007 Level (ug/L)	July 2007 Level (ug/L)	MCL (ug/L)	Region 9 PRG (ug/L)
Winklepeck Burning Ground	WBGmw-006	Unconsolidated	Gamma-BHC	<b>0.057</b>	0.30 U	0.30 U	0.03 U	0.2	0.052
			Iron	<b>376</b>	263	278	254 J	300	10000
			Manganese	<b>51.7</b>	<b>59.2</b>	<b>54.6</b>	<b>55.3</b>	50	880
			RDX	<b>50</b>	<b>53</b>	<b>51</b>	<b>48</b>	NS	0.61
	WBGmw-007	Unconsolidated	2-Nitrotoluene	0.5 U	0.54 U	<b>0.091</b> J	0.54 U	NS	0.049
			Arsenic	5.0 U	5.0 U	5.0 U	<b>4.8</b> J	10	0.007
			Iron	<b>573</b>	288	<b>350</b>	<b>604</b> J	300	10000
			Manganese	<b>74.3</b>	41.5	46.8	<b>118</b>	50	880
	WBGmw-009	Unconsolidated	Iron	167	165	196	<b>362</b> J	300	10000
			Manganese	33.7	40.1	<b>52.6</b>	<b>106</b>	50	880
			RDX	<b>7.8</b>	<b>3.8</b>	<b>3.4</b>	<b>9</b> J	NS	0.61

## Notes:

PRG = Preliminary Remediation Goal

MCL = Maximum Contaminant Level

NS = no standard NT = not tested

Bold = result greater than Region 9 PRG or MCL

## Data Qualifiers

U - The analyte was analyzed for but not detected. The numerical value preceding the U is the associated reporting limit.

J - The identification of the analyte is acceptable, but the quality assurance criteria indicate that the quantitative values may be outside the normal expected range of precision (i.e., the quantitative value is estimated). Examples include:

- Results detected above the laboratory MDL but less than the laboratory reporting limit.
- MS/MSD percent recoveries outside the acceptance criteria.
- Laboratory control sample (LCS) percent recoveries outside acceptance criteria.

R - Data are considered to be rejected and shall not be used. This flag denotes the failure of quality control criteria such that it cannot be determined if the analyte is present or absent from the sample [e.g., the method reporting limit (MRL) verification standard was below quality control guidelines; associated sample results that were non-detect are unusable].

UJ - This flag is a combination of the U and J qualifiers which indicate that the analyte is not present. The reported value is considered to be an estimated reporting limit (RL).

B - The B flag is used for both organic and inorganic analyses when the analyte is found in the method blank or any of the field blanks. This designation overrides the Contract Laboratory Program (CLP) "B" designation when used by the laboratory as an estimated value for inorganics.

trend. All reported concentrations in all three background wells are below the MCL (200 µg/L) and the PRG (36,000 µg/L). All reported concentrations are above the background criterion of “0.”

#### **4.2.1.2 Antimony**

Antimony is present above the RL in bedrock background well BKGmw-008. The reported concentrations have declined during the FWGWMP to a concentration below the PRG (15 µg/L) and the MCL (6 µg/L). The decline may be related to changes in laboratory reporting limits. All reported concentrations are above the background criterion of “0.”

#### **4.2.1.3 Arsenic**

Arsenic is present above the RL in unconsolidated background wells BKGmw-013 and BKGmw-017. The reported concentrations in both wells show fluctuation over time without identifiable trend. The reported concentrations in well BKGmw-013 are fluctuating around the MCL (10 µg/L) and the unconsolidated background (11.7 µg/L). The reported concentrations in well BKGmw-013 are above the PRG (0.007 µg/L). The reported concentrations in well BKGmw-017 are above the MCL, the PRG, and the unconsolidated background.

#### **4.2.1.4 Barium**

Barium is present above the RL in unconsolidated background well BKGmw-013. The reported concentrations show fluctuation over time without identifiable trend. The reported concentrations in well BKGmw-013 are fluctuating around the unconsolidated background (82.1 µg/L). The reported concentrations are below the MCL (2,000 µg/L) and the PRG (2,600 µg/L).

Barium is present above the RL in bedrock background wells BKGmw-012, BKGmw-015 and BKGmw-020. The concentrations in all three wells show fluctuation over time without identifiable trend. The reported concentrations are fluctuating around the bedrock background (256 µg/L). The reported concentrations are below the MCL and the PRG.

#### **4.2.1.5 Cadmium**

Cadmium is present above the RL in bedrock background well BKGmw-010. The reported concentrations show a significant decline between July and September 2006. This may be related to changes in analytical method or reporting limit. All reported concentrations are below the PRG (18 µg/L). Through July 2006 the reported concentrations were at the MCL (5 µg/L), but starting in September 2006 the concentrations are below the MCL. All reported concentrations are above the bedrock background criterion of “0.”

#### **4.2.1.6 Calcium**

Calcium is present above the RL in unconsolidated background wells BKGmw-005, BKGmw-013, BKGmw-017, and BKGmw-019. The reported concentrations in all four wells show fluctuation over time. Declining trends are observed for wells BKGmw-005, BKGmw-013, and BKGmw-017. An increasing trend is observed for well BKGmw-019. All reported concentrations are below the unconsolidated background (115,000 µg/L) for wells BKGmw-005, BKGmw-013, and BKGmw-017. The reported concentration exceeded the unconsolidated background in well MCKmw-019 during the April 2007 sampling event. There are no MCL or PRG criteria for calcium.

Calcium is present above the RL in bedrock background wells BKGmw-006, BKGmw-018 and BKGmw-020. The reported concentrations in all three wells show fluctuation over time without identifiable trend. The reported concentrations are at or above the bedrock background criterion.

#### **4.2.1.7 Copper**

Copper is present above the RL in background wells BKGmw-004 (unconsolidated well), BKGmw-008 (bedrock well), and BKGmw-016 (unconsolidated well). The reported concentrations in all three wells show little fluctuation. All reported concentrations are below the MCL (1,300 µg/L) and the PRG (15,000 µg/L). All reported concentrations are above the background criterion of “0.”

#### **4.2.1.8 Cyanide**

Cyanide is present above the RL in background wells BKGmw-006 (bedrock well), BKGmw-016 (unconsolidated well), and BKGmw-020 (bedrock well). The reported concentrations in all three wells show little fluctuation. All reported concentrations are below the MCL (200 µg/L) and the PRG (730 µg/L). All reported concentrations are above the background criterion of “0”.

#### **4.2.1.9 Iron**

Iron is present above the RL in unconsolidated background wells BKGmw-005, BKGmw-013, BKGmw-017, BKGmw-019, and BKGmw-021. The reported concentrations in all five wells show fluctuation over time without identifiable trend. The reported concentrations fluctuate around the MCL (300 µg/L) and unconsolidated background (279 µg/L). The reported concentrations are below the PRG (11,000 µg/L).

Iron is present above the RL in bedrock background wells BKGmw-006, BKGmw-012, BKGmw-018, and BKGmw-020. The reported concentrations in all four wells show fluctuation over time without identifiable trend. Some reported concentrations in BKGmw-006 and BKGmw-020 are above the MCL. All concentrations in all wells are below the PRG and bedrock background (1,430 µg/L).



#### **4.2.1.10 Magnesium**

Magnesium is present above the RL in unconsolidated background wells BKGmw-005, BKGmw-013, BKGmw-013, BKGmw-017, BKGmw-019 and BKGmw-021. The reported concentrations in all wells, except BKGmw-021, show fluctuation over time without identifiable trend. The reported concentrations in BKGmw-020 show a declining trend. All concentrations are below the unconsolidated background (43,300 µg/L), except BKGmw-017 and BKGmw-021 which are fluctuating around the unconsolidated background. There is no MCL or PRG for magnesium.

Magnesium is present above the RL in bedrock background wells BKGmw-006, BKGmw-010, and BKGmw-020. The reported concentrations in all wells show fluctuation over time without identifiable trend. All reported concentrations in all wells are above the bedrock background (15,000 µg/L).

#### **4.2.1.11 Manganese**

Manganese is present above the RL in bedrock background well BKGmw-006. The reported concentrations show a declining trend. All reported concentrations are below the bedrock background (1,020 µg/L) and all but one result (March 2006) is below the PRG (880 µg/L). All concentrations are above the MCL (50 µg/L).

#### **4.2.1.12 Potassium**

Potassium is present above the RL in unconsolidated background well BKGmw-017. The reported concentrations show fluctuation over time without identifiable trend. Reported concentrations are fluctuating around the unconsolidated background (2,890 µg/L). There is no MCL or PRG for potassium.

Potassium is present above the RL in bedrock background wells BKGmw-012, BKGmw-015 and BKGmw-020. The reported concentrations in all three wells show a declining trend. All reported concentrations are below the bedrock background (5,770 µg/L), except for the October 2006 sample from well BKGmw-012.

### **4.2.2 Volatile and Semi-Volatile Organic Compounds**

#### **4.2.2.1 Carbon Disulfide**

Carbon disulfide is reported above the RL in bedrock wells BKGmw-012 and BKGmw-020. The reported concentrations in both wells show no fluctuation over time. All reported concentrations are below the PRG (1,000 µg/L). All reported concentrations are above the bedrock background criterion of "0." There is no MCL for carbon disulfide.

#### **4.2.2.2 Bis(2-ethylhexyl)phthalate**

Bis(2-ethylhexyl)phthalate is reported above the RL in unconsolidated background wells BKGmw-004, BKGmw-005, BKGmw-013, BKGmw-016, BKGmw-0174, BKGmw-019, and BKGmw-021. The reported concentrations show a wide range of fluctuation without identifiable trend. The reported concentrations fluctuate above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

There has been no bis(2-ethylhexyl)phthalate found in the laboratory blanks and/or field blanks/rinse samples associated with the detected concentrations of bis(2-ethylhexyl)phthalate in the unconsolidated background wells

### **4.3 Load Line 1**

Aluminum, antimony, beryllium, cadmium, calcium, cobalt, copper, nickel, thallium, bis(2-ethylhexyl)phthalate, di-n-octyl phthalate, HMX, 1,3-dinitrobenzene, RDX, 1,3,5-trinitrobenzene, and 2,4,6-trinitrotoluene are reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 1 wells. No VOC, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 1 wells.

#### **4.3.1 Inorganics**

##### **4.3.1.1 Aluminum**

Aluminum is present above the RL in Load Line 1 wells LL1mw-078 and LL1mw-083. The reported concentrations in both wells show small fluctuation over time without identifiable trend. All reported concentrations are below the MCL (200 µg/L) and the PRG (36,000 µg/L). All reported concentrations are above the background criterion of “0.”

##### **4.3.1.2 Antimony**

Antimony is present above the RL in Load Line 1 well LL1mw-080. The reported concentrations have declined during the FWGWMP to below the PRG (15 µg/L) and the MCL (6 µg/L). The decline may be related to changes in laboratory reporting limits. All reported concentrations are above the background criterion of “0.”

##### **4.3.1.3 Beryllium**

Beryllium is present above the RL in Load Line 1 well LL1mw-083. The reported concentrations have declined to below the MCL (4 µg/L). All concentrations are below the PRG (73 µg/L). All concentrations are above the background criterion of “0.”

#### **4.3.1.4 Cadmium**

Cadmium is present above the RL in Load Line 1 well LL1mw-083. The reported concentrations show fluctuation over time with no identifiable trend. The reported concentrations are at or below the MCL (5 µg/L) and below PRG (18 µg/L). All concentrations are above the background criterion of “0.”

#### **4.3.1.5 Calcium**

Calcium is present above the RL in Load Line 1 well LL1mw-080. The reported concentrations show fluctuation over time with no identifiable trend. Three reported concentrations are above the background (53,100 µg/L) and five are at or below the background criterion. There are no MCL or PRG criteria for calcium.

#### **4.3.1.6 Cobalt**

Cobalt is present above the RL in Load Line 1 wells LL1mw-078 and LL1mw-083. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the PRG (730 µg/L), but above the background criterion of “0.” There is no MCL for cobalt.

#### **4.3.1.7 Copper**

Copper is present above the RL in Load Line 1 wells LL1mw-078 and LL1mw-083. The reported concentrations show minimal fluctuation over time in both wells. All reported concentrations are below the MCL (1,300 µg/L) and the PRG (1,500 µg/L). All reported concentrations are above the background criterion of “0.”

#### **4.3.1.8 Nickel**

Nickel is present above the RL in Load Line 1 wells LL1mw-078, LL1mw-080 and LL1mw-083. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (100 µg/L), the PRG (730 µg/L) and background concentration (83.4 µg/L).

#### **4.3.1.9 Thallium**

Thallium is present above the RL in Load Line 1 wells LL1mw-078, LL1mw-080 and LL1mw-083. The reported concentrations fluctuate over time without identifiable trend. All reported concentrations are below the MCL (2 µg/L) and the PRG (2.4 µg/L). All reported concentrations are above the background criterion of “0.”

### **4.3.2 Semi-Volatile Organic Compounds**

#### **4.3.2.1 Bis(2-ethylhexyl)phthalate**

Bis(2-ethylhexyl)phthalate is present above the RL in Load Line 1 wells LL1mw-078, LL1mw-080 and LL1mw-083. The reported concentrations fluctuate widely over time without identifiable trend. In all wells the reported concentrations are above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

#### **4.3.2.2 Di-n-octyl phthalate**

Di-n-octyl phthalate is present above the RL in Load Line 1 well LL1mw-083. The reported concentrations show small fluctuation over time without identifiable trend. All reported concentrations are below the PRG (1,500 µg/L). There is no MCL for di-n-octyl phthalate.

### **4.3.3 Explosives**

#### **4.3.3.1 HMX**

HMX is present above the RL in Load Line 1 wells LL1mw-080 and LL1mw-083. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the PRG (1,800 µg/L). There is no MCL for HMX.

#### **4.3.3.2 1,3-Dinitrobenzene**

1,3-Dinitrobenzene (m-dinitrobenzene) is above the RL in Load Line 1 well LL1mw-083. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the PRG (3.6 µg/L). There is no MCL for 1,3-dinitrobenzene.

#### **4.3.3.3 RDX**

RDX is present above the RL in Load Line 1 wells LL1mw-080 and LL1mw-083. The reported concentrations show minimal fluctuation over time. All concentrations are below the PRG (0.61 µg/L). There is no MCL for RDX.

#### **4.3.3.4 1,3,5-Trinitrobenzene**

1,3,5-Trinitrobenzene is present above the RL in Load Line 1 wells LL1mw-080 and LL1mw-083. The reported concentrations in both wells show minimal fluctuation over time. All concentrations are below the PRG (1,100 µg/L). There is no MCL for 1,3,5-trinitrobenzene.

#### **4.3.3.5 2,4,6-Trinitrotoluene**

2,4,6-Trinitrotoluene is present above the RL in Load Line 1 wells LL1mw-080 and LL1mw-083. The reported concentrations in both wells show fluctuation over time without identifiable trend. All reported concentrations are at or below the PRG (2 µg/L) in well LL1mw-080. All reported concentrations are above the PRG in well LL1mw-083. There is no MCL for 2,4,6-trinitrotoluene.

### **4.4 Load Line 2**

Antimony, arsenic, calcium, cobalt, iron, magnesium, manganese, nickel, thallium, bis(2-ethylhexyl)phthalate, HMX, 1,3-dinitrobenzene, RDX, and 1,3,5-trinitrobenzene are reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 2 wells. No VOC, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 2 wells.

#### **4.4.1 Inorganics**

##### **4.4.1.1 Antimony**

Antimony is present above the RL in Load Line 2 wells LL2-mw059, LL2mw-062, and LL2mw-063. The reported concentrations have declined during the FWGWMP to a concentration below the PRG (15 µg/L) and the MCL (6 µg/L). The decline may be related to changes in laboratory reporting limits. All reported concentrations are above the background criterion of “0.”

##### **4.4.1.2 Arsenic**

Arsenic is present above the RL in Load Line 2 well LL2mw-263. The reported concentrations show fluctuation over time with a slight declining trend. All reported concentrations are above the MCL (10 µg/L), the PRG (0.007 µg/L) and the background criterion of “0.”

##### **4.4.1.3 Calcium**

Calcium is present above the RL in Load Line 2 well LL2mw-262. The reported concentrations show fluctuation over time with a declining trend. Three reported concentrations are above the background concentration (53,100 µg/L) and five are below the background concentration. There are no MCL or PRG criteria for calcium.

##### **4.4.1.4 Cobalt**

Cobalt is present above the RL in Load Line 2 wells LL2mw-259 and LL2mw-262, and LL2mw-263. The reported concentrations show minimal fluctuation over time. All

reported concentrations are below the PRG (730 µg/L) but above the background criterion of “0.” There is no MCL for cobalt.

#### **4.4.1.5 Iron**

Iron is present above the RL in Load Line 2 wells LL2mw-259 and LL2mw-263. The reported concentrations in both wells show fluctuation over time without identifiable trend. All reported concentrations in LL2mw-263 are above the MCL (300 µg/L) and background concentration (1,430 µg/L) but all reported concentrations are below the PRG (11,000 µg/L). Reported concentrations in LL2mw-259 fluctuate around the MCL and all concentrations are below the PRG and background concentration.

#### **4.4.1.6 Magnesium**

Magnesium is present above the RL in Load Line 2 wells LL2mw-262 and LL2mw-263. The reported concentrations in all wells show fluctuation over time with a slight declining trend. All reported concentrations in well LL2mw-262 are above the bedrock background concentration (15,000 µg/L). All reported concentrations in well LL2mw-263 are at or below the background concentration. There are no MCL or PRG criteria for magnesium.

#### **4.4.1.7 Manganese**

Manganese is present above the RL in Load Line 2 well LL2mw-263. The reported concentrations show fluctuation over time without identifiable trend. All concentrations are above the MCL (50 µg/L) and PRG (880 µg/L). Reported concentrations fluctuate around the background concentration (1,020 µg/L).

#### **4.4.1.8 Nickel**

Nickel is present above the RL in Load Line 2 wells LL2mw-259, LL2mw-262 and LL2mw-263. The reported concentrations show minimal fluctuation over time without identifiable trend. All reported concentrations are below the MCL (100 µg/L), the PRG (730 µg/L) and background concentration (83.4 µg/L).

#### **4.4.1.9 Thallium**

Thallium is present above the RL in Load Line 2 well LL2mw-259. The reported concentrations show fluctuation over time without identifiable trend. All reported concentrations are below the MCL (2 µg/L) and the PRG (2.4 µg/L). All reported concentrations are above the background criterion of “0.”

#### **4.4.2 Semi-volatile Organics**

Bis(2-ethylhexyl)phthalate is the only SVOC present above the RL in Load Line 2 wells LL2mw-059, LL2mw-062 and LL2mw-063. The reported concentrations fluctuate

widely over time without identifiable trend. In all wells the reported concentrations are above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

#### **4.4.3 Explosives**

##### **4.4.3.1 HMX**

HMX is present above the RL in Load Line 2 well LL2mw-059. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the PRG (1,800 µg/L). There is no MCL for HMX.

##### **4.4.3.2 1,3-Dinitrobenzene**

1,3-Dinitrobenzene is present above the RL in Load Line 2 well LL2mw-059. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the PRG (3.6 µg/L). There is no MCL for 1,3-dinitrobenzene.

##### **4.4.3.3 RDX**

RDX is present above the RL in Load Line 2 well LL2mw-059. The reported concentrations show minimal fluctuation over time. All concentrations are below the PRG (0.61 µg/L). There is no MCL for RDX.

##### **4.4.3.4 1,3,5-Trinitrobenzene**

1,3,5-Trinitrobenzene is present above the RL in Load Line 2 well LL2mw-059. The reported concentrations show minimal fluctuation over time. All concentrations are below the PRG (1,100 µg/L). There is no MCL for 1,3,5-trinitrobenzene.

#### **4.5 Load Line 3**

Aluminum, nickel, selenium, bis(2-ethylhexyl)phthalate, HMX, RDX, 1,3,5-trinitrobenzene and 2,4,6-trinitrotoluene are reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 3 wells. No VOC, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 3 wells.

##### **4.5.1 Inorganics**

###### **4.5.1.1 Aluminum**

Aluminum is present above the RL in Load Line 3 wells LL3mw-238 and LL3mw-242. The reported concentrations in both wells show minimal fluctuation over time. All reported concentrations are below the MCL (200 µg/L) and the PRG (36,000 µg/L). All reported concentrations are above the background criterion of “0.”

#### **4.5.1.5 Nickel**

Nickel is present above the RL in Load Line 3 wells LL2mw-238 and LL3mw-242. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (100 µg/L), the PRG (730 µg/L) and background concentration (83.4 µg/L).

#### **4.5.1.2 Selenium**

Selenium is present above the RL in Load Line 3 well LL3mw-238. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (50 µg/L) and the PRG (180 µg/L). All reported concentrations are above the bedrock criterion of “0.”

### **4.5.2 Semi-Volatile Organic Compounds**

Bis(2-ethylhexyl)phthalate is the only SVOC present above the RL in Load Line 3 wells LL3mw-238 and LL3mw-242. The reported concentrations fluctuate widely over time without identifiable trend. In all wells the reported concentrations are above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

#### **4.5.3 Explosives**

##### **4.5.3.1 HMX**

HMX is present above the RL in Load Line 3 well LL3mw-238. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the PRG (1,800 µg/L). There is no MCL for HMX.

##### **4.5.3.2 RDX**

RDX is present above the RL in Load Line 3 well LL3mw-238. The reported concentrations show fluctuation over time without identifiable trend. All concentrations are above the PRG (0.61 µg/L). There is no MCL for RDX.

##### **4.5.3.3 1,3,5-Trinitrobenzene**

1,3,5-Trinitrobenzene is present above the RL in Load Line 3 well LL3mw-258. The reported concentrations show minimal fluctuation over time. All concentrations are below the PRG (1,100 µg/L). There is no MCL for 1,3,5-trinitrobenzene.

##### **4.5.3.4 2,4,6-Trinitrotoluene**

2,4,6-Trinitrotoluene is present above the RL in Load Line 3 well LL3mw-238. The reported concentrations show fluctuation over time without identifiable trend. All



reported concentrations are above the PRG (2 µg/L). There is no MCL for 2,4,6-trinitrotoluene.

## **4.6 Load Line 4**

Aluminum, antimony, arsenic, barium, calcium, cobalt, iron, magnesium, manganese, nickel, zinc and bis(2-ethylhexyl)phthalate are reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 4 wells. No VOC, explosive, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 4 wells.

### **4.6.1 Inorganics**

#### **4.6.1.1 Aluminum**

Aluminum is present above the RL in Load Line 4 well LL4mw-198. The reported concentrations show little fluctuation over time. All reported concentrations are below the MCL (200 µg/L) and the PRG (36,000 µg/L). All reported concentrations are above the background criterion of “0.”

#### **4.6.1.2 Antimony**

Antimony is present above the RL in Load Line 4 well LL4-mw198. The reported concentrations have declined during the FWGWMP to a concentration below the PRG (15 µg/L) and the MCL (6 µg/L). The decline may be related to changes in laboratory reporting limits. All reported concentrations are above the background criterion of “0.”

#### **4.6.1.3 Arsenic**

Arsenic is present above the RL in Load Line 4 well LL4mw-199. The reported concentrations show significant fluctuation over time without identifiable trend. Reported concentrations are above the MCL (10 µg/L) in five samples and below the MCL in three samples. All reported concentrations are above the PRG (0.007 µg/L) and the bedrock criterion of “0.”

#### **4.6.1.4 Barium**

Barium is present above the RL in Load Line 4 well LL4mw-199. The concentrations show small fluctuation over time without identifiable trend. The reported concentrations are fluctuating at the background concentration (256 µg/L). The reported concentrations are below the MCL (2,000 µg/L) and the PRG (2,600 µg/L).

#### **4.6.1.5 Calcium**

Calcium is present above the RL in Load Line 4 well LL4mw-199. The reported concentrations show fluctuation over time with an increasing trend. Three reported concentrations are below the bedrock background (53,100 µg/L). There are no MCL or PRG criteria for calcium.

#### **4.6.1.6 Cobalt**

Cobalt is present above the RL in Load Line 4 well LL4mw-198. The reported concentrations show small fluctuation over time without identifiable trend. All reported concentrations are below the PRG (730 µg/L) but above the background criterion of “0.” There is no MCL for cobalt.

#### **4.6.1.7 Iron**

Iron is present above the RL in Load Line 4 wells LL4mw-198 and LL4mw-199. The reported concentrations in both wells show large fluctuation over time with an increasing trend. Reported concentrations in both wells are above the MCL (300 µg/L) and bedrock background (1,430 µg/L) but below the PRG (11,000 µg/L).

#### **4.6.1.8 Magnesium**

Magnesium is present above the RL in Load Line 4 well LL4mw-199. The reported concentrations show fluctuation over time without identifiable trend. All reported concentrations are above the background concentration (15,000 µg/L). There are no MCL or PRG criteria for magnesium.

#### **4.6.1.9 Manganese**

Manganese is present above the RL in Load Line 4 wells LL4mw-198 and LL4mw-199. The reported concentrations show fluctuation over time without trend. All reported concentrations are above the MCL (50 µg/L). Reported concentrations for LL4mw-199 are below the PRG (880 µg/L) and the background concentration (1,020 µg/L). The reported concentrations for LL4mw-198 are above the PRG and background concentration.

#### **4.6.1.10 Nickel**

Nickel is present above the RL in Load Line 4 well LL4mw-199. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (100 µg/L), the PRG (730 µg/L) and above the background criterion of “0.”

#### **4.6.1.11 Zinc**

Zinc is present above the RL in Load Line 4 well LL4mw-198. The reported concentrations show minimal fluctuation over time without trend. All reported concentrations are below the MCL (5,000 µg/L), PRG (11,000 µg/L) and background concentration (60.9 µg/L).

#### **4.6.2 Semi-Volatile Organic Compounds**

Bis(2-ethylhexyl)phthalate is the only SVOC present above the RL in Load Line 4 wells LL4mw-198 and LL4mw-199. The reported concentrations fluctuate widely over time without identifiable trend. In both wells the reported concentrations are above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

#### **4.7 Load Line 11**

Aluminum, antimony, arsenic, barium, cadmium, calcium, iron, magnesium, nickel, zinc, bis(2-ethylhexyl)phthalate and 1,3,5-trinitrobenzene are reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 11 wells. No VOC, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 11 wells.

##### **4.7.1 Inorganics**

###### **4.7.1.1 Aluminum**

Aluminum is present above the RL in Load Line 11 well LL11mw-002. The reported concentrations show little fluctuation over time. All reported concentrations are below the MCL (200 µg/L) and the PRG (36,000 µg/L). All reported concentrations are above the background criterion of “0.”

###### **4.7.1.2 Antimony**

Antimony is present above the RL in Load Line 11 well LL11-mw-002. The reported concentrations have declined during the FWGWMP to below the PRG (15 µg/L) and the MCL (6 µg/L). The decline may be related to changes in laboratory reporting limits. All reported concentrations are above the background criterion of “0.”

###### **4.7.1.3 Arsenic**

Arsenic is present above the RL in Load Line 11 well LL11mw-007. The reported concentrations show fluctuation over time with an increasing trend. Reported concentrations are above the MCL (10 µg/L), the PRG (0.007 µg/L) and the unconsolidated background concentration (11.7 µg/L).

#### **4.7.1.4 Barium**

Barium is present above the RL in Load Line 11 well LL11mw-007. The reported concentrations show little fluctuation over time. The reported concentrations are fluctuating at the background concentration (256 µg/L). The reported concentrations are below the MCL (2,000 µg/L) and the PRG (2,600 µg/L).

#### **4.7.1.5 Cadmium**

Cadmium is present above the RL in Load Line 11 well LL11mw-002. The reported concentrations show fluctuation over time without identifiable trend. The reported concentrations fluctuate around the MCL (5 µg/L) and are below PRG (18 µg/L). All concentrations are above the background criterion of “0.”

#### **4.7.1.6 Calcium**

Calcium is present above the RL in Load Line 11 wells LL11mw-002 and LL11mw-007. The reported concentrations show fluctuation over time without identifiable trend. All reported concentrations are below the background concentration (115,000 µg/L). There are no MCL or PRG criteria for calcium.

#### **4.7.1.7 Copper**

Copper is present above the RL in Load Line 11 well LL11mw-002. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (1,300 µg/L) and the PRG (1,500 µg/L). All reported concentrations are above the background criterion of “0.”

#### **4.7.1.8 Iron**

Iron is present above the RL in Load Line 11 wells LL11mw-002 and LL11mw-012. The reported concentrations in both wells show fluctuation over time without identifiable trend. Reported concentrations in both wells are above the MCL (300 µg/L) and background concentration (279 µg/L). All reported concentrations are below the PRG (11,000 µg/L).

#### **4.7.1.9 Magnesium**

Magnesium is present above the RL in Load Line 11 wells LL11mw-002 and LL11mw-007. The reported concentrations in both wells show fluctuation over time without identifiable trend. All reported concentrations below the background concentration (43,300 µg/L). There are no MCL or PRG criteria for magnesium.

#### **4.7.1.10 Nickel**

Nickel is present above the RL in Load Line 11 well LL11mw-002. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (100 µg/L), the PRG (730 µg/L) and above the unconsolidated background criterion of “0.”

#### **4.7.1.11 Zinc**

Zinc is present above the RL in Load Line 11 well LL11mw-002. The reported concentrations show fluctuation over time without identifiable trend. All reported concentrations are below the MCL (5,000 µg/L) and PRG (11,000 µg/L). The reported concentrations fluctuate above and below the background concentration (60.9 µg/L).

### **4.7.2 Semi-Volatile Organic Compounds**

Only bis(2-ethylhexyl)phthalate is present above the RL in Load Line 11 wells LL11mw-002 and LL11mw-007. The reported concentrations fluctuate widely over time without identifiable trend. In both wells the reported concentrations are above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

### **4.7.3 Explosives**

Only 1,3,5-trinitrobenzene is present above the RL in Load Line 11 well LL11mw-002. The reported concentrations show minimal fluctuation. All concentrations are below the PRG (1,100 ug/L). There is no MCL for 1,3,5-trinitrobenzene.

## **4.8 Load Line 12**

Aluminum, antimony, arsenic, barium, calcium, cobalt, copper, cyanide, iron, magnesium, nickel, potassium, selenium, and bis(2-ethylhexyl)phthalate are reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 12 wells. No VOC, explosive, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from Load Line 12 wells.

### **4.8.1 Inorganics**

#### **4.8.1.1 Aluminum**

Aluminum is present above the RL in Load Line 12 wells LL12-mw-182 and LL12mw-186. The reported concentrations show little fluctuation over time. All reported concentrations are below the MCL (200 µg/L) and the PRG (36,000 µg/L). All reported concentrations are above the background criterion of “0.”

#### **4.8.1.2 Antimony**

Antimony is present above the RL in Load Line 12 wells LL12-mw-182 and LL12mw-186. The reported concentrations have declined during the FWGWMP to below the PRG (15 µg/L) and the MCL (6 µg/L). The decline may be related to changes in laboratory reporting limits. All reported concentrations are above the background criterion of “0.”

#### **4.8.1.3 Arsenic**

Arsenic is present above the RL in Load Line 12 well LL12mw-153, LL12-mw-182 and LL12mw-186. The reported concentrations show wide fluctuation over time without identifiable trend. Reported concentrations are above the MCL (10 µg/L), the PRG (0.007 µg/L) and the background concentration (11.7 µg/L).

#### **4.8.1.4 Barium**

Barium is present above the RL in Load Line 12 well LL12mw-182. The reported concentrations show little fluctuation over time. The reported concentrations are fluctuating at the unconsolidated background (82.1 µg/L). The reported concentrations are below the MCL (2,000 µg/L) and the PRG (2,600 µg/L).

#### **4.8.1.5 Calcium**

Calcium is present above the RL in Load Line 12 wells LL12mw-153, LL12-mw-182, LL12mw-183 and LL12mw-186. All reported concentrations show fluctuation over time without identifiable trend. Reported concentrations in LL12mw-182 are below the background concentration (115,000 µg/L). Reported concentrations in LL2mw-153, LL12mw-183 and LL12mw-186 are above background concentration. There are no MCL or PRG criteria for calcium.

#### **4.8.1.6 Cobalt**

Cobalt is present above the RL in Load Line 12 well LL12mw-186. The reported concentrations show little fluctuation over time. All reported concentrations are below the PRG (730 µg/L) but above the background criterion of “0.” There is no MCL for cobalt.

#### **4.8.1.7 Copper**

Copper is present above the RL in Load Line 12 well LL12mw-182. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (1,300 µg/L) and the PRG (1,500 µg/L). All reported concentrations are above the background criterion of “0.”

#### **4.8.1.8 Cyanide**

Cyanide is present above the RL in Load Line 12 well LL12mw-186. The reported concentrations show little fluctuation over time. All reported concentrations are below the MCL (200 µg/L) and the PRG (730 µg/L). All reported concentrations are above the background criterion of “0.”

#### **4.8.1.9 Iron**

Iron is present above the RL in Load Line 12 wells LL12mw-153, LL12-mw-182, LL12mw-183 and LL12mw-186. The reported concentrations show fluctuation over time without identifiable trend. Reported concentrations are above the MCL (300 µg/L) and background concentration (279 µg/L). All reported concentrations are below the PRG (11,000 µg/L).

#### **4.8.1.10 Magnesium**

Magnesium is present above the RL in Load Line 12 wells LL12mw-153, LL12-mw-182, LL12mw-183 and LL12mw-186. The reported concentrations in all wells show fluctuation over time without identifiable trend. All reported concentrations at or above the background concentration (43,300 µg/L). There are no MCL or PRG criteria for magnesium.

#### **4.8.1.11 Nickel**

Nickel is present above the RL in Load Line 12 wells LL12mw-153, LL12-mw-182, and LL12mw-186. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (100 µg/L), the PRG (730 µg/L) and above the background criterion of “0.”

#### **4.8.1.12 Potassium**

Potassium is present above the RL in Load Line 12 wells LL12mw-182 and LL12mw-183. The reported concentrations show wide fluctuation over time without identifiable trend. All reported concentrations are above the background concentration (2,890 µg/L). There is no MCL or PRG for potassium.

#### **4.8.1.13 Selenium**

Selenium is present above the RL in Load Line 12 well LL12mw-182. The reported concentrations show small fluctuation over time without identifiable trend. All reported concentrations are below the MCL (50 µg/L) and the PRG (180 ug/L). All reported concentrations are above the background criterion of “0.”

## **4.8.2 Semi-Volatile Organic Compounds**

Bis(2-ethylhexyl)phthalate is the only SVOC present above the RL in Load Line 12 wells LL12mw-153, LL12mw-182, LL12mw-183 and LL12mw-186. The reported concentrations fluctuate widely over time without identifiable trend. In all wells the reported concentrations are above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

## **4.9 Central Burn Pits Area**

Antimony, arsenic, barium, calcium, cobalt, iron, magnesium, nickel, potassium, sodium, thallium, and bis(2-ethylhexyl)phthalate are reported to be present at concentrations exceeding the respective RL in three or more samples from the Central Burn Pits Area. No VOC, explosive, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from the Central Burn Pits Area wells.

### **4.9.1 Inorganics**

#### **4.9.1.1 Antimony**

Antimony is present above the RL in Central Burn Pits Area well CBPmw-007. The reported concentrations have declined during the FWGWMP to below the PRG (15 µg/L) and the MCL (6 µg/L). The decline may be related to changes in laboratory reporting limits. All reported concentrations are above the background criterion of “0”.

#### **4.9.1.2 Arsenic**

Arsenic is present above the RL in Central Burn Pits Area well CBPmw-007. The reported concentrations show wide fluctuation over time with an increasing trend. Reported concentrations are above the MCL (10 µg/L), the PRG (0.007 µg/L) and the background concentration (11.7 µg/L).

#### **4.9.1.3 Calcium**

Calcium is present above the RL in Central Burn Pits Area well CBPmw-007. The reported concentrations show wide fluctuation over time with an increasing trend. Reported concentrations are above the background concentration (115,000 µg/L). There are no MCL or PRG criteria for calcium.

#### **4.9.1.4 Cobalt**

Cobalt is present above the RL in Central Burn Pits Area well CBPmw-007. The reported concentrations show little fluctuation over time. All reported concentrations are below the PRG (730 µg/L) but above the background criterion of “0.” There is no MCL for cobalt.



#### **4.9.1.5 Iron**

Iron is present above the RL in Central Burn Pits Area well CBPmw-007. The reported concentrations show significant fluctuation over time with an increasing trend. Reported concentrations are above the MCL (300 µg/L) and unconsolidated background (279 µg/L). All reported concentrations are below the PRG (11,000 µg/L).

#### **4.9.1.6 Nickel**

Nickel is present above the RL in Central Burn Pits Area well CBPmw-007. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (100 µg/L), the PRG (730 µg/L) and above the background criterion of “0.”

#### **4.9.1.7 Potassium**

Potassium is present above the RL in Central Burn Pits Area well CBPmw-007. The reported concentrations show fluctuation over time with a declining trend. All reported concentrations are above the background concentration (2,890 µg/L). There is no MCL or PRG for potassium.

#### **4.9.1.8 Sodium**

Sodium is present above the RL in Central Burn Pits Area well CBPmw-007. The reported concentrations show fluctuation over time with a declining trend. All concentrations are above the background concentration (45,700 µg/L). There are no MCL or PRG criteria for sodium.

#### **4.9.1.9 Thallium**

Thallium is present above the RL in Central Burn Pits Area well CBPmw-007. The reported concentrations show fluctuation over time without identifiable trend. All reported concentrations are below the MCL (2 ug/L) and the PRG (2.4 µg/L) but above the background criterion of “0.”

### **4.9.2 Semi-Volatile Organic Compounds**

Bis(2-ethylhexyl)phthalate is the only SVOC present above the RL in Central Burn Pits Area well CBPmw-007. The reported concentrations fluctuate widely over time without identifiable trend. In all wells the reported concentrations are above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

## **4.10 Open Demolition Area #2**

Arsenic, calcium, iron, magnesium, bis(2-ethylhexyl)phthalate HMX and RDX are reported to be present at concentrations exceeding the respective RL in three or more samples from the Open Demolition Area #2 wells. No VOC, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from Open Demolition Area #2 wells.

### **4.10.1 Inorganics**

#### **4.10.1.1 Arsenic**

Arsenic is present above the RL in Open Demolition Area #2 wells DA2mw-107 and DA2mw-DET3. The reported concentrations show fluctuation over time without identifiable trend. Reported concentrations are generally below the MCL (10 µg/L) and the unconsolidated background (11.7 µg/L). All reported concentrations are above the PRG (0.007 µg/L).

#### **4.10.1.2 Calcium**

Calcium is present above the RL in Open Demolition Area #2 wells DA2mw-107, DA2mw-DET3 and DA2mw-DET4. The reported concentrations show fluctuation over time without identifiable trend. Reported concentrations in well DA2mw-DET4 are above the background concentration (115,000 µg/L). Reported concentrations in wells DA2mw-107 and DA2mw-DET3 are below the background concentration. There are no MCL or PRG criteria for calcium.

#### **4.10.1.3 Iron**

Iron is present above the RL in Open Demolition Area #2 wells DA2mw-107 and DA2mw-DET3. The reported concentrations show fluctuation over time without identifiable trend. Reported concentrations are above the MCL (300 µg/L) and unconsolidated background (279 µg/L). All reported concentrations are below the PRG (11,000 µg/L).

#### **4.10.1.4 Magnesium**

Magnesium is present above the RL in Open Demolition Area #2 wells DA2mw-107, DA2mw-DET3 and DA2mw-DET4. The reported concentrations in all wells show fluctuation over time without identifiable trend. All reported concentrations at or below the background concentration (43,300 µg/L). There are no MCL or PRG criteria for magnesium.

#### **4.10.2 Semi-Volatile Organic Compounds**

Bis(2-ethylhexyl)phthalate is the only SVOC present above the RL in Demolition Area #2 wells DA2mw-107, DA2mw-DET3 and DA2mw-DET4. The reported concentrations fluctuate widely in all three wells over time without identifiable trend. In all wells the reported concentrations are above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

#### **4.10.3 Explosives**

##### **4.10.3.1 HMX**

HMX is present above the RL in Open Demolition Area #2 well DA2mw-DET4. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the PRG (1,800 µg/L). There is no MCL for HMX.

##### **4.10.3.2 RDX**

RDX is present above the RL in Open Demolition Area #2 well DA2mw-DET4. The reported concentrations show fluctuation over time without identifiable trend. All concentrations are below the PRG (0.61 µg/L). There is no MCL for RDX.

#### **4.11 Ramsdell Quarry Landfill**

Arsenic, barium, cadmium, calcium, cobalt, iron, magnesium, manganese, nickel, potassium, thallium, bis(2-ethylhexyl)phthalate, and 1,3,5-trinitrobenzene are reported to be present at concentrations exceeding the respective RL in three or more samples from Ramsdell Quarry Landfill wells. No VOC, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from Ramsdell Quarry Landfill wells.

##### **4.11.1 Inorganics**

###### **4.11.1.1 Arsenic**

Arsenic is present above the RL in Ramsdell Quarry Landfill wells RQLmw-007, RQLmw-008 and RQLmw-009. The reported concentrations show fluctuation over time without identifiable trend. Reported concentrations are above the MCL (10 µg/L), the PRG (0.007 µg/L) and the background criterion of “0.”

###### **4.11.1.2 Barium**

Barium is present above the RL in Ramsdell Quarry Landfill well RQLmw-008. The reported concentrations show little fluctuation over time. The reported concentrations are below the MCL (2,000 µg/L), the PRG (2,600 µg/L) and the background concentration (256 µg/L).

#### **4.11.1.3 Cadmium**

Cadmium is present above the RL in Ramsdell Quarry Landfill well RQLmw-008. The reported concentrations show fluctuation over time without identifiable trend. The reported concentrations are below the MCL (5 µg/L) and the PRG (18 µg/L) but above the background criterion of “0.”

#### **4.11.1.4 Calcium**

Calcium is present above the RL in Ramsdell Quarry Landfill wells RQLmw-007 and RQLmw-008. The reported concentrations show fluctuation over time without identifiable trend. All reported concentrations are above the background concentration (53,100 µg/L). There are no MCL or PRG criteria for calcium.

#### **4.11.1.5 Cobalt**

Cobalt is present above the RL in Ramsdell Quarry Landfill wells RQLmw-007, RQLmw-008 and RQLmw-009. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the PRG (730 µg/L) but above the background criterion of “0.” There is no MCL for cobalt.

#### **4.11.1.6 Iron**

Iron is present above the RL in Ramsdell Quarry Landfill wells RQLmw-007, RQLmw-008 and RQLmw-009. The reported concentrations show fluctuation over time without identifiable trend. Reported concentrations are above the MCL (300 µg/L), the PRG (11,000 µg/L) and bedrock concentration (1,430 µg/L).

#### **4.11.1.7 Magnesium**

Magnesium is present above the RL in Ramsdell Quarry Landfill wells RQLmw-007, RQLmw-008 and RQLmw-009. The reported concentrations in all wells show wide fluctuation over time without identifiable trend. All reported concentrations are above the background concentration (15,000 µg/L). There are no MCL or PRG criteria for magnesium.

#### **4.11.1.8 Manganese**

Manganese is present above the RL in Ramsdell Quarry Landfill wells RQLmw-007, RQLmw-008 and RQLmw-009. The reported concentrations fluctuate widely over time without identifiable trend. Reported concentrations are above the MCL (50 µg/L), the PRG (880 µg/L) and the background concentration (1,020 µg/L).

#### **4.11.1.9 Nickel**

Nickel is present above the RL in Ramsdell Quarry Landfill wells RQLmw-007, RQLmw-008 and RQLmw-009. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (100 µg/L), the PRG (730 µg/L) and background concentration (83.4 µg/L).

#### **4.11.1.10 Potassium**

Potassium is present above the RL in Ramsdell Quarry Landfill wells RQLmw-007, RQLmw-008 and RQLmw-009. The reported concentrations show fluctuation over time with a declining trend. Reported concentrations are at or above the bedrock background (5,770 µg/L). There is no MCL or PRG for potassium.

#### **4.11.1.11 Thallium**

Thallium is present above the RL in Ramsdell Quarry Landfill wells RQLmw-007 and RQLmw-009. The reported concentrations fluctuate over time without identifiable trend. All reported concentrations are below the MCL (2 µg/L) and the PRG (2.4 µg/L) but above the bedrock criterion of "0."

### **4.11.2 Semi-Volatile Organic Compounds**

Bis(2-ethylhexyl)phthalate is the only SVOC present above the RL in Ramsdell Quarry Landfill wells RQLmw-007, RQLmw-008 and RQLmw-009. The reported concentrations fluctuate widely in all three wells over time without identifiable trend. In all wells the reported concentrations are above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

### **4.11.3 Explosives**

1,3,5-Trinitrobenzene is the only explosive present above the RL in Ramsdell Quarry Landfill well RQLmw-008. The reported concentrations show minimal fluctuation. All concentrations are below the PRG (1,100 µg/L). There is no MCL for 1,3,5-trinitrobenzene.

## **4.12 Winklepeck Burning Grounds**

Aluminum, calcium, copper, iron, magnesium, thallium, bis(2-ethylhexyl)phthalate, HMX and RDX are reported to be present at concentrations exceeding the respective RL in three or more samples from the Winklepeck Burning Grounds wells. No VOC, PCB Arochlor, pesticide or herbicide is reported to be present at concentrations exceeding the respective RL in three or more samples from Winklepeck Burning Grounds wells.

## **4.12.1 Inorganics**

### **4.12.1.1 Aluminum**

Aluminum is present above the RL in Winklepeck Burning Grounds well WBGmw-009. The reported concentrations show little fluctuation over time. All reported concentrations are below the MCL (200 µg/L) and the PRG (36,000 µg/L). All reported concentrations are above the background criterion of “0.”

### **4.12.1.2 Calcium**

Calcium is present above the RL in Winklepeck Burning Grounds wells WBGmw-006 and WBGmw-007. The reported concentrations show fluctuation over time without identifiable trend. All reported concentrations are below the background concentration (115,000 µg/L). There are no MCL or PRG criteria for calcium.

### **4.12.1.3 Copper**

Copper is present above the RL in Winklepeck Burning Grounds well WBGmw-009. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the MCL (1,300 µg/L) and the PRG (1,500 µg/L). All reported concentrations are above the background criterion of “0.”

### **4.12.1.4 Iron**

Iron is present above the RL in Winklepeck Burning Grounds wells WBGmw-007 and WBGmw-009. The reported concentrations show little fluctuation over time. Reported concentrations fluctuate around the MCL (300 µg/L) and the background concentration (274 µg/L). All reported concentrations are below the PRG (11,000 µg/L).

### **4.12.1.5 Magnesium**

Magnesium is present above the RL in Winklepeck Burning Grounds wells WBGmw-006 and WBGmw-007. The reported concentrations fluctuate over time without identifiable trend. All reported concentrations are below the background concentration (43,300 µg/L). There are no MCL or PRG criteria for magnesium.

### **4.12.1.6 Thallium**

Thallium is present above the RL in Winklepeck Burning Grounds well WBGmw-006. The reported concentrations fluctuate over time without identifiable trend. All reported concentrations are below the MCL (2 µg/L) and the PRG (2.4 µg/L) but above the bedrock background criterion of “0.”

#### **4.12.2 Semi-Volatile Organic Compounds**

Bis(2-ethylhexyl)phthalate is the only SVOC present above the RL in Winklepeck Burning Grounds wells WBGmw-006, WBGmw-007 and WBGmw-009. The reported concentrations fluctuate widely over time without identifiable trend. In all wells the reported concentrations are above and below the PRG (4.8 µg/L). There is no MCL for bis(2-ethylhexyl)phthalate.

#### **4.12.3 Explosives**

##### **4.12.3.1 HMX**

HMX is present above the RL in Winklepeck Burning Grounds wells WBGmw-006 and WBGmw-009. The reported concentrations show minimal fluctuation over time. All reported concentrations are below the PRG (1,800 µg/L). There is no MCL for HMX.

##### **4.12.3.2 RDX**

RDX is present above the RL in Winklepeck Burning Grounds wells WBGmw-006 and WBGmw-009. The reported concentrations show fluctuation over time without identifiable trend in WBGmw-009. A declining trend is evident over time in WBGmw-006. All concentrations are above the PRG (0.61 µg/L). There is no MCL for RDX.

#### **4.13 Assessment of Groundwater Remedial Action Effectiveness**

Groundwater remedial actions have not been performed to date at RVAAP and therefore are not discussed in this report.

## SECTION 5

### FWGWMP ANNUAL RECOMMENDATIONS/REVIEW

#### 5.1 FWGWMP Annual Recommendations

On October 22, 2007 the USACE submitted to the Ohio EPA the *Draft Proposal to Update the Facility-Wide Ground Water Monitoring Program* (USACE October 2007) at the Ravenna Army Ammunition Plant. This proposal presented recommendations for modifications to the FWGWMP, the Director's Final Findings and Orders, and the Conceptual Plan in Appendix F of the Findings and Orders as presented below.

Section 3.1.2.2 of the FWGWMP Plan establishes a protocol for adding and removing wells from the FWGWMP: "Future wells installed as part of individual AOC investigations conducted under the ongoing Comprehensive Environmental Response Compensation and Liability Act (CERCLA) process at RVAAP will be evaluated for incorporation into the FWGWMP upon completion of at least four quarterly groundwater sampling events to be conducted as part of the Remedial Investigation (RI) phase at each AOC. The frequency of the initial sampling events may be other than quarterly if agreed upon by the Army and Ohio EPA."

Due to budget constraints, several Remedial Investigations (RIs) have been completed at RVAAP which included less than four groundwater sampling events; indeed as noted above, 157 wells have only been sampled once. In order to move the FWGWMP forward in an efficient and timely fashion, the Army is seeking Ohio EPA concurrence for the FWGWMP Plan to be modified to remove the requirement that each well have "at least four quarterly groundwater sampling events" before it can be included in the FWGWMP. The Army is proposing to delete all current wells sampled, except the five Resource Conservation and Recovery Act (RCRA) wells (DA2mw-DET3, DA2mw-DET4, RQLmw-007, RQLmw-008, and RQLmw-009) from the FWGWMP. The 196 remaining wells would then be subjected to four quarterly sampling events each, as quickly as Army budget allows, as part of the FWGWMP. In 2008, the Army anticipates including about 75 wells in this effort. Following that, it is anticipated to be able to sample a minimum of 50 wells per quarter, so at this rate it would take approximately three to four years to cycle all of the 196 wells through the four quarters of sampling, while maintaining the semi-annual RCRA sampling activities. It is possible that additional budget may become available from money ear-marked for Long Term Monitoring (LTM); if so, the three-to-four year monitoring period could be significantly shortened, perhaps to as little as one or two years. Once all of the wells have been sampled at least four times, the Army proposes to review the data generated by that effort and propose a subset of wells that will be representative of Facility-wide conditions. That subset of wells will then be monitored as a part of a Facility-wide LTM program, in lieu of the currently planned AOC-by-AOC LTM. At AOCs (if any) where ground water remediation is required, the LTM wells would be supplemented by additional wells as required to support the remedial activities. And, of course, the five wells associated with the RCRA program will continue to be included in the monitoring program. Because of uncertainty regarding the level of FWGWMP funding that will be available over the next few years, the Army proposes to perform the additional four



quarters of monitoring on the 196 wells in the order shown in Appendix G.

## **5.2 Background Well Issues**

The specific issues related to the background wells at RVAAP include the presence of explosives and the exceedance of health/aesthetic criteria (MCLs). An additional question is related to the presence of naturally occurring elements (e.g., aluminum, copper, nickel, etc) previously establish to have a “0” background concentration in background wells. Prior to addressing the concern that background needs to be re-evaluated, it is necessary to point out that the background data are not conclusive that explosives are present. While a few explosive compounds have been reported in samples at estimated (“J”) concentrations, these reports are isolated and not recurrent.

Background wells can be used to address one or both of the following: 1) define regional water-quality conditions without the effects of human activities and 2) define the quality of groundwater flowing into an area of interest (e.g., AOC) from a neighboring site that may show effects of outside actions (i.e., groundwater contaminated from other sources). The Army recognizes that there are issues associated with background water-quality data and suggests that background data require re-evaluation. This re-evaluation should include the actual quality of water in the wells and the location of the wells with respect to objective.

The Army considers the FWGWMP to be a fluid program allowing for re-evaluation and re-definition. The Army has initiated this re-evaluation with the presentation in October 2007 of the Draft Proposal to Update the Facility-Wide Ground Water Monitoring Program. The major premise of this document is that previous interpretations of the groundwater regime at RVAAP are not completely accurate. If the Ohio EPA agrees with this conclusion and the subsequent reinterpretation of groundwater flow systems, the locations and objectives of background wells can be re-considered.

Inspection of the locations of background wells in relationship to the newly interpreted groundwater flow regime (as described in the Annual Report) suggests that only wells BKGmw 005, BKGmw-006, and BKGmw-018 may be located to establish unaffected regional water-quality conditions. All other background wells may be located hydraulically down gradient from activities and practices at RVAAP that may result in measurable affects.

## SECTION 6

### REFERENCES

Portage Environmental, 2004. *RVAAP Facility-Wide Groundwater Monitoring Program Plan*.

SAIC, 2001. *RVAAP Facility-Wide Sampling and Analysis Plan/Quality Assurance Project Plan*.

SAIC, 2001b. *Phase II Remedial Investigation report for the Winklepeck Burning Grounds at Ravenna Army Ammunition Plant, Ravenna, Ohio*.

SAIC/REIMS, 2005. *Table of Reported Construction Depths from REIMS Information*.

SpecPro, Inc., 2005a. *Facility-Wide Groundwater Monitoring Program Report on the April 2005 Sampling Event, Ravenna Training and Logistics Site / Ravenna Army Ammunition Plant, Ravenna, Ohio*.

SpecPro, Inc., 2005b. *Facility-Wide Groundwater Monitoring Program, Report on the July 2005 Sampling Event, Ravenna Training and Logistics Site/Ravenna Army Ammunition Plant, Ravenna, Ohio*

SpecPro, Inc. 2006a. *Facility-Wide Groundwater Monitoring Program, Annual Report for 2005, Ravenna Training and Logistics Site/Ravenna Army Ammunition Plant, Ravenna, Ohio*

SpecPro, Inc. 2006b. *Facility-Wide Groundwater Monitoring Program, Report on the March 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*

SpecPro, Inc. 2006c, *Facility-Wide Groundwater Monitoring Program, Report on the May 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*

SpecPro, Inc. 2006d. (Draft) *Facility-Wide Groundwater Monitoring Program, Annual Report for 2006, Ravenna Army Ammunition Plant, Ravenna, Ohio*

SpecPro, Inc. 2007a. *Facility-Wide Groundwater Monitoring Program, Report on the July 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*

SpecPro, Inc. 2007b. *Facility-Wide Groundwater Monitoring Program, Report on the October 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*

SpecPro, Inc. 2007c. *Facility- Wide Groundwater Monitoring Program, Report on the January 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio*.

Environmental Quality Management, Inc. 2007d. *Facility- Wide Groundwater Monitoring Program, Report on the April 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio.*

Environmental Quality Management, Inc. 2007e. *Facility- Wide Groundwater Monitoring Program, Report on the July 2006 Sampling Event, Ravenna Army Ammunition Plant, Ravenna, Ohio.*

U.S. Army Corps of Engineers. October 2007. *Draft Proposal to Update the Facility-Wide Ground Water Monitoring Program.*

**APPENDIX A**  
**REPORTING LIMITS THAT CURRENTLY DO NOT MEET THE RVAAP**  
**QAAP PQLS AND/OR REGION 9 PRGS**

### VOCs

CAS No	Analyte Name	MDL	Lab RL	RVAAP QAPP PQL	Region 9 PRG
107-06-2	1,2-Dichloroethane	0.16	1.0	1.0	0.12
71-43-2	Benzene	0.22	1.0	1.0	0.35
67-66-3	Chloroform	0.16	1.0	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	0.12	1.0	1.0	0.4
75-01-4	Vinyl chloride	0.21	1.0	1.0	0.02
79-34-5	1,1,2,2-Tetrachloroethane	0.22	1.0	1.0	0.055
106-93-4	1,2-Dibromoethane	0.24	1.0	1.0	0.0056
79-01-6	Trichloroethene	0.28	1.0	1.0	0.028
127-18-4	Tetrachloroethene	0.19	1.0	1.0	0.1
75-27-4	Bromodichloromethane	0.14	1.0	1.0	0.18
79-00-5	1,1,2-Trichloroethane	0.22	1.0	1.0	0.2
124-48-1	Dibromochloromethane	0.19	1.0	1.0	0.13
10061-02-6	trans-1,3-Dichloropropene	0.17	1.0	1.0	0.4
56-23-5	Carbon tetrachloride	0.19	1.0	1.0	0.17

Note: All units are ug/L

### SVOCs

CAS No	Analyte Name	MDL	Lab RL	RVAAP QAPP PQL	Region 9 PRG
111-44-4	Bis(2-Chloroethyl) ether	0.088	1.0	10	0.01
50-32-8	Benzo(a)pyrene	0.048	0.20	10	0.0092
53-70-3	Dibenz(a,h)anthracene	0.039	0.20	10	0.0093
118-74-1	Hexachlorobenzene	0.065	0.20	10	0.042
205-99-2	Benzo(b)fluoranthene	0.049	0.20	10	0.092
193-39-5	Indeno(1,2,3-cd)pyrene	0.065	0.20	10	0.092
56-55-3	Benzo(a)anthracene	0.052	0.20	10	0.092
91-94-1	3,3'-Dichlorobenzidine	0.48	5.0	10	0.15
106-46-7	1,4-Dichlorobenzene	0.52	1.0	10	0.5
87-86-5	Pentachlorophenol	0.48	5.0	25	0.56
87-68-3	Hexachlorobutadiene	0.51	1.0	10	0.86
88-06-2	2,4,6-Trichlorophenol	1.4	5.0	10	3.6

Note: All units are ug/L

### Pesticides

CAS No	Analyte Name	MDL	Lab RL	RVAAP QAPP PQL	Region 9 PRG
60-57-1	Dieldrin	0.0067	0.030	0.05	0.0042
309-00-2	Aldrin	0.0061	0.030	0.05	0.004
1024-57-3	Heptachlor epoxide	0.0065	0.030	0.05	0.0074
319-84-6	alpha-BHC	0.0062	0.030	0.05	0.011
76-44-8	Heptachlor	0.0062	0.030	0.05	0.015

Note: All units are ug/L

### Explosives

CAS No	Analyte Name	MDL	Lab RL	RVAAP QAPP PQL	Region 9 PRG
88-72-2	2-Nitrotoluene	0.1	0.48	0.2	120
99-08-1	3-Nitrotoluene	0.1	0.48	0.2	0.049
99-99-0	4-Nitrotoluene	0.1	0.48	0.2	0.66

Note: All units are ug/L

### PCBs

CAS No	Analyte Name	MDL	Lab RL	RVAAP QAPP PQL	Region 9 PRG
11104-28-2	PCB-1221	0.49	0.50	0.50	0.034
11141-16-5	PCB-1232	0.41	0.50	0.50	0.034
53469-21-9	PCB-1242	0.11	0.50	0.50	0.034
12672-29-6	PCB-1248	0.049	0.50	0.50	0.034
11097-69-1	PCB-1254	0.087	0.50	0.50	0.034
11096-82-5	PCB-1260	0.071	0.50	0.50	0.034

Note: All units are ug/L

### Inorganics

CAS No	Analyte Name	MDL	Lab RL	RVAAP QAPP PQL	Region 9 PRG
7440-70-2	Calcium	80	1000	100	NS
7440-23-5	Sodium	410	1000	200	NS

#### Notes:

NS = Not Specified

These compounds will not meet the reporting limits specified in the QAPP. However, both of these chemicals have been consistently been found naturally occurring on the site at values that exceed the QAPP RLs.

**APPENDIX B**

**WATER LEVEL MEASUREMENT FIELD SHEETS**



# **COMPREHENSIVE WATER LEVEL MEASUREMENTS**

RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
EBG-MW126	Erie Burning Grounds	10/1/2007	1205	4.29	28.00	Hard	Heron OHO2911
EBG-MW129	Erie Burning Grounds	10/1/2007	1214	8.39	31.10	Soft	Heron OHO2911
EBG-MW125	Erie Burning Grounds	10/1/2007	1219	14.22	27.58	Hard	Heron OHO2911
EBG-MW123	Erie Burning Grounds	10/1/2007	1224	11.81	34.90	Hard	Heron OHO2911
EBG-MW124	Erie Burning Grounds	10/1/2007	1227	5.53	32.86	Soft	Heron OHO2911
RQL-MW015	Ramsdell Quarry	10/1/2007	1238	32.32	42.14	Hard	Heron OHO2911
RQL-MW016	Ramsdell Quarry	10/1/2007	1242	35.63	43.82	Hard	Heron OHO2911
RQL-MW006	Ramsdell Quarry	10/1/2007	1248	35.34	42.12	Hard	Heron OHO2911
RQL-MW017	Ramsdell Quarry	10/1/2007	1253	30.65	32.86	Hard	Heron OHO2911
RQL-MW012	Ramsdell Quarry	10/1/2007	1259	23.54	32.76	Hard	Heron OHO2911
RQL-MW011	Ramsdell Quarry	10/1/2007	1305	23.51	35.44	Hard	Heron OHO2911
RQL-MW014	Ramsdell Quarry	10/1/2007	1313	21.52	31.44	Hard	Heron OHO2911
RQL-MW013	Ramsdell Quarry	10/1/2007	1318	26.87	36.57	Hard	Heron OHO2911
RQL-MW010	Ramsdell Quarry	10/1/2007	1321	26.88	35.42	Hard	Heron OHO2911
LL1-MW080	Loadline 1	10/1/2007	1341	14.30	22.48	Hard	Heron OHO2911
LL1-MW085	Loadline 1	10/1/2007	1347	35.19	44.86	Soft	Heron OHO2911
LL1-MW082	Loadline 1	10/1/2007	1353	31.78	41.56	Very Soft	Heron OHO2911
LL1-MW084	Loadline 1	10/1/2007	1401	31.43	38.99	Hard	Heron OHO2911

\*All measurements from top of casing

Recorded By:

*Conner* 10/1/07 1800  
(Signature and time)

OA Check By:

*J. M. Mcell* 10/30/07  
(Signature and time)

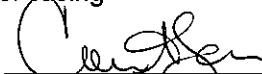
# COMPREHENSIVE WATER LEVEL MEASUREMENTS

## RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
LL3-MW235	Loadline 3	10/1/2007	1558	21.82	23.09	Hard	Heron OHO2911
LL3-MW241	Loadline 3	10/1/2007	1609	14.97	21.60	Hard	Heron OHO2911
LL12-MW186	Loadline 12	10/1/2007	1620	7.29	21.14	Hard	Heron OHO2911
LL12-MW189	Loadline 12	10/1/2007	1623	7.68	19.87	Hard	Heron OHO2911
LL12-MW107	Loadline 12	10/1/2007	1630	11.13	33.79	Hard	Heron OHO2911
LL12-MW245	Loadline 12	10/1/2007	1635	9.12	30.45	Hard	Heron OHO2911
LL12-MW243	Loadline 12	10/1/2007	1640	9.93	25.80	Hard	Heron OHO2911
LL12-MW128	Loadline 12	10/1/2007	1642	11.00	34.29	Hard	Heron OHO2911
LL12-MW154	Loadline 12	10/1/2007	1649	10.40	28.74	Hard	Heron OHO2911
LL12-MW153	Loadline 12	10/1/2007	1650	7.55	24.91	Hard	Heron OHO2911
LL12-MW188	Loadline 12	10/1/2007	1657	7.65	22.31	Hard	Heron OHO2911
LL12-MW113	Loadline 12	10/1/2007	1700	8.12	20.43	Slightly Soft	Heron OHO2911
LL12-MW187	Loadline 12	10/1/2007	1707	11.92	29.71	Hard	Heron OHO2911
LL12-MW184	Loadline 12	10/1/2007	1715	14.27	31.20	Hard	Heron OHO2911

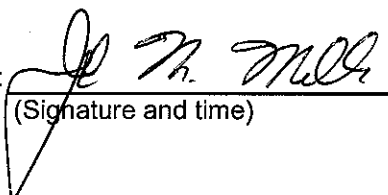
\*All measurements from top of casing

Recorded By:

  
(Signature and time)

10/01/07 1800

OA Check By:

 10/30/07  
(Signature and time)

# **COMPREHENSIVE WATER LEVEL MEASUREMENTS**

## **RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007**

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
EBG-MW127	Erie Burning Grounds	10/1/2007	1220	6.92	32.82	Hard	Heron 05769
EBG-MW130	Erie Burning Grounds	10/1/2007	1320	8.57	28.49	Hard	Heron 05769
RQL-MW007	Ramsdell Quarry	10/1/2007	1300	8.10	18.60	Hard	Heron 05769
LL1-MW078	Loadline 1	10/1/2007	1409	32.24	41.22	Hard	Heron OHO2911
LL1-MW067	Loadline 1	10/1/2007	1419	19.25	25.82	Hard	Heron OHO2911
LL2-MW262	Loadline 2	10/1/2007	1428	11.34	22.76	Hard	Heron OHO2911
LL2-MW263	Loadline 2	10/1/2007	1434	11.43	22.66	Hard	Heron OHO2911
LL2-MW264	Loadline 2	10/1/2007	1442	10.15	22.48	Hard	Heron OHO2911
LL2-MW269	Loadline 2	10/1/2007	1454	19.49	30.40	Hard	Heron OHO2911
LL2-MW270	Loadline 2	10/1/2007	1508	11.53	22.52	Hard	Heron OHO2911
LL2-MW261	Loadline 2	10/1/2007	1514	8.10	22.56	Hard	Heron OHO2911
LL3-MW240	Loadline 3	10/1/2007	1528	28.93	36.81	Hard	Heron OHO2911
LL3-MW239	Loadline 3	10/1/2007	1533	27.11	37.23	Soft	Heron OHO2911
LL3-MW238	Loadline 3	10/1/2007	1537	17.44	23.46	Hard	Heron OHO2911
LL3-MW234	Loadline 3	10/1/2007	1541	10.99	22.75	Hard	Heron OHO2911
LL3-MW233	Loadline 3	10/1/2007	1545	27.00	32.89	Soft <1"	Heron OHO2911
LL3-MW232	Loadline 3	10/1/2007	1550	23.33	39.94	Hard	Heron OHO2911

\*All measurements from top of casing

Recorded By:

*J. M. Miller* 10/6/07  
(Signature and time)

OA Check By:

*C. Reen* 10/25/07  
(Signature and time)

# **COMPREHENSIVE WATER LEVEL MEASUREMENTS**

## RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
EBG-MW128	Erie Burning Grounds	10/1/2007	1210	9.92	28.31	Hard	Heron 05769
RQL-MW008	Ramsdell Quarry	10/1/2007	1250	7.97	18.72	Hard	Heron 05769
RQL-MW009	Ramsdell Quarry	10/1/2007	1305	6.73	18.90	Hard	Heron 05769
LL1-MW079	Loadline 1	10/1/2007	1340	32.29	41.98	Medium	Heron 05769
LL1-MW081	Loadline 1	10/1/2007	1347	32.05	42.08	Soft	Heron 05769
LL1-MW063	Loadline 1	10/1/2007	1353	27.74	30.17	Hard	Heron 05769
LL1-MW083	Loadline 1	10/1/2007	1356	33.52	41.56	Soft	Heron 05769
LL1-MW065	Loadline 1	10/1/2007	1420	14.59	23.14	Hard	Heron 05769
LL1-MW064	Loadline 1	10/1/2007	1425	3.86	21.17	Hard	Heron 05769
LL2-MW060	Loadline 2	10/1/2007	1436	10.91	20.88	Hard	Heron 05769
LL2-MW265	Loadline 2	10/1/2007	1440	10.48	24.50	Hard	Heron 05769
LL2-MW059	Loadline 2	10/1/2007	1448	13.88	21.97	Soft	Heron 05769
LL2-MW268	Loadline 2	10/1/2007	1500	16.20	29.97	Hard	Heron 05769
LL2-MW267	Loadline 2	10/1/2007	1506	13.90	22.77	Hard	Heron 05769
LL2-MW266	Loadline 2	10/1/2007	1515	14.50	22.77	Hard	Heron 05769
LL3-MW242	Loadline 3	10/1/2007	1530	18.90	22.61	Hard	Heron 05769
LL3-MW243	Loadline 3	10/1/2007	1535	18.36	26.42	Hard	Heron 05769
LL3-MW237	Loadline 3	10/1/2007	1550	19.80	25.62	Hard	Heron 05769

\*All measurements from top of casing

Recorded By:

*[Signature]* 10/6/07  
(Signature and time)

OA Check By:

*[Signature]* 10/25/07  
(Signature and time)

## COMPREHENSIVE WATER LEVEL MEASUREMENTS

RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

[illegible]

\*All measurements from top of casing

Recorded By:

(Signature and time)

OA Check By:

(Signature and time)

# **COMPREHENSIVE WATER LEVEL MEASUREMENTS**

## **RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007**

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
LL9-MW003	Loadline 9	10/2/2007	811	14.63	24.26	Hard	Heron OHO2911
LL9-MW002	Loadline 9	10/2/2007	816	16.94	22.83	Hard	Heron OHO2911
LL9-MW005	Loadline 9	10/2/2007	821	18.51	23.58	Hard	Heron OHO2911
LL9-MW007	Loadline 9	10/2/2007	826	11.43	18.23	Hard	Heron OHO2911
LL9-MW006	Loadline 9	10/2/2007	831	21.20	28.88	Hard	Heron OHO2911
LL9-MW004	Loadline 9	10/2/2007	836	22.57	34.74	Hard	Heron OHO2911
LL9-MW001	Loadline 9	10/2/2007	843	17.41	23.40	Hard	Heron OHO2911
LL10-MW003	Loadline 10	10/2/2007	849	21.73	28.62	Hard	Heron OHO2911
LL10-MW001	Loadline 10	10/2/2007	852	26.21	29.66	Hard	Heron OHO2911
LL10-MW002	Loadline 10	10/2/2007	857	19.42	29.87	Hard	Heron OHO2911
LL10-MW005	Loadline 10	10/2/2007	901	17.55	29.31	Hard	Heron OHO2911
LL10-MW006	Loadline 10	10/2/2007	905	14.87	26.58	Hard	Heron OHO2911
LL10-MW004	Loadline 10	10/2/2007	909	15.22	33.64	Hard	Heron OHO2911
LL5-MW002	Loadline 5	10/2/2007	919	22.48	27.60	Soft <1"	Heron OHO2911
LL5-MW003	Loadline 5	10/2/2007	926	21.34	24.08	Hard	Heron OHO2911
LL5-MW004	Loadline 5	10/2/2007	931	19.70	25.51	Soft <1"	Heron OHO2911
LL5-MW006	Loadline 5	10/2/2007	940	21.83	27.19	Hard	Heron OHO2911
LL5-MW005	Loadline 5	10/2/2007	945	23.25	29.83	Hard	Heron OHO2911

\*All measurements from top of casing

Recorded By:

*[Signature]*  
(Signature and time)

10/2/07 1700

OA Check By:

*[Signature]*  
(Signature and time)

10/30/07

# **COMPREHENSIVE WATER LEVEL MEASUREMENTS**

RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
LL5-MW001	Loadline 5	10/2/2007	950	21.74	27.12	Hard	Heron OHO2911
LL6-MW001	Loadline 6	10/2/2007	1002	16.37	17.72	Hard	Heron OHO2911
LL6-MW003	Loadline 6	10/2/2007	1014	17.87	25.82	Slightly Soft<1"	Heron OHO2911
LL6-MW004	Loadline 6	10/2/2007	1018	18.61	24.61	Hard	Heron OHO2911
LL6-MW002	Loadline 6	10/2/2007	1022	22.72	24.59	Soft <1"	Heron OHO2911
LL6-MW005	Loadline 6	10/2/2007	1027	13.49	22.38	Soft <1"	Heron OHO2911
LL6-MW006	Loadline 6	10/2/2007	1045	16.19	17.88	Hard	Heron OHO2911
LL6-MW007	Loadline 6	10/2/2007	1100	9.21	19.44	Hard	Heron OHO2911
LL8-MW001	Loadline 8	10/2/2007	1114	13.79	27.63	Soft <1"	Heron OHO2911
LL8-MW003	Loadline 8	10/2/2007	1118	15.51	23.13	Hard	Heron OHO2911
LL8-MW002	Loadline 8	10/2/2007	1124	21.35	32.66	Hard	Heron OHO2911
LL8-MW004	Loadline 8	10/2/2007	1129	13.94	22.74	Soft <1"	Heron OHO2911
LL8-MW006	Loadline 8	10/2/2007	1134	21.24	27.16	Hard	Heron OHO2911
LL8-MW005	Loadline 8	10/2/2007	1138	15.79	27.26	Soft <1"	Heron OHO2911
LL11-MW001	Loadline 11	10/2/2007	1201	13.71	21.61	Soft <1"	Heron OHO2911
LL11-MW009	Loadline 11	10/2/2007	1206	3.87	16.88	Hard	Heron OHO2911
LL11-MW008	Loadline 11	10/2/2007	1212	5.70	15.82	Hard	Heron OHO2911
LL11-MW007	Loadline 11	10/2/2007	1217	16.39	25.42	Soft 1"	Heron OHO2911

\*All measurements from top of casing

Recorded By: \_\_\_\_\_

(Signature and time)

OA Check By: \_\_\_\_\_

(Signature and time)

# **COMPREHENSIVE WATER LEVEL MEASUREMENTS**

## **RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007**

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
LL11-MW010	Loadline 11	10/2/2007	1222	7.82	23.53	Hard	Heron OHO2911
LL11-MW003	Loadline 11	10/2/2007	1227	4.41	16.15	Hard	Heron OHO2911
LL11-MW004	Loadline 11	10/2/2007	1231	4.29	16.27	Hard	Heron OHO2911
LL11-MW006	Loadline 11	10/2/2007	1236	9.25	15.81	Hard	Heron OHO2911
LL11-MW005	Loadline 11	10/2/2007	1243	11.64	16.51	Hard	Heron OHO2911
LL11-MW002	Loadline 11	10/2/2007	1258	6.05	16.54	Hard	Heron OHO2911
LL7-MW001	Loadline 7	10/2/2007	1325	22.20	33.14	Hard	Heron OHO2911
LL7-MW002	Loadline 7	10/2/2007	1330	18.71	27.28	Hard	Heron OHO2911
LL7-MW005	Loadline 7	10/2/2007	1336	23.79	30.44	Hard	Heron OHO2911
LL7-MW006	Loadline 7	10/2/2007	1341	13.24	30.43	Hard	Heron OHO2911
LL7-MW004	Loadline 7	10/2/2007	1346	16.61	32.34	Hard	Heron OHO2911
LL7-MW003	Loadline 7	10/2/2007	1351	13.14	33.64	Hard	Heron OHO2911
LL4-MW200	Loadline 4	10/2/2007	1425	18.39	25.38	Soft 1"	Heron OHO2911
LL4-MW196	Loadline 4	10/2/2007	1430	14.12	21.92	Hard	Heron OHO2911
LL4-MW197	Loadline 4	10/2/2007	1434	15.10	23.72	Soft <1"	Heron OHO2911
LL4-MW195	Loadline 4	10/2/2007	1437	11.67	23.00	Hard	Heron OHO2911
LL4-MW194	Loadline 4	10/2/2007	1440	10.69	23.79	Soft	Heron OHO2911
LL4-MW198	Loadline 4	10/2/2007	1450	10.74	21.04	Soft 1"	Heron OHO2911

\*All measurements from top of casing

Recorded By:

*C. Deane* 10/2/07 1700  
(Signature and time)

OA Check By:

*J. N. Miller* 10/30/07  
(Signature and time)



## COMPREHENSIVE WATER LEVEL MEASUREMENTS

RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

[illegible]

\*All measurements from top of casing

Recorded By:

6/2/07 1700  
(Signature and time)

OA Check By:

(Signature and time) *10/30/07*

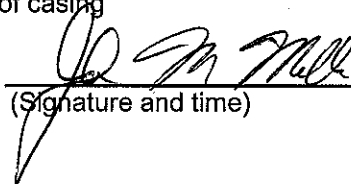
# **COMPREHENSIVE WATER LEVEL MEASUREMENTS**

## RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007


Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
CBP-MW004	Central Burn Pits	10/2/2007	820	12.32	29.80	Soft	Heron 05769
CBP-MW005	Central Burn Pits	10/2/2007	825	13.48	27.52	Soft	Heron 05769
CBP-MW007	Central Burn Pits	10/2/2007	830	18.15	31.86	Soft	Heron 05769
CBP-MW003	Central Burn Pits	10/2/2007	835	14.78	30.29	Medium	Heron 05769
CBP-MW006	Central Burn Pits	10/2/2007	845	9.32	25.43	Medium	Heron 05769
CBP-MW008	Central Burn Pits	10/2/2007	855	17.68	28.01	Hard	Heron 05769
CBP-MW001	Central Burn Pits	10/2/2007	900	14.67	32.84	Soft	Heron 05769
CBP-MW002	Central Burn Pits	10/2/2007	908	11.09	32.12	Medium	Heron 05769
WBG-MW008	Winklepeck Burning	10/2/2007	930	16.38	20.92	Hard	Heron 05769
WBG-MW014	Winklepeck Burning	10/2/2007	940	17.90	25.09	Hard	Heron 05769
WBG-MW007	Winklepeck Burning	10/2/2007	944	18.95	26.50	Hard	Heron 05769
WBG-MW016	Winklepeck Burning	10/2/2007	947	18.73	25.30	Soft	Heron 05769
WBG-MW017	Winklepeck Burning	10/2/2007	955	11.04	23.82	Hard	Heron 05769
WBG-MW006	Winklepeck Burning	10/2/2007	1000	10.25	20.29	Hard	Heron 05769
LNW-MW024	LF North Winklepeck	10/2/2007	1010	14.89	22.65	Hard	Heron 05769
LNW-MW027	LF North Winklepeck	10/2/2007	1015	10.14	26.96	Hard	Heron 05769
LNW-MW025	LF North Winklepeck	10/2/2007	1020	5.76	20.45	Hard	Heron 05769
LNW-MW026	LF North Winklepeck	10/2/2007	1030	12.72	26.12	Hard	Heron 05769

\*All measurements from top of casing

Recorded By:

 10/02/07  
(Signature and time)

OA Check By:

 10/25/07  
(Signature and time)

# COMPREHENSIVE WATER LEVEL MEASUREMENTS

## RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
WBG-MW005	Winklepeck Burning	10/2/2007	1040	8.32	21.22	Hard	Heron 05769
WBG-MW010	Winklepeck Burning	10/2/2007	1045	9.78	23.50	Soft	Heron 05769
WBG-MW011	Winklepeck Burning	10/2/2007	1100	12.27	23.96	Hard	Heron 05769
WBG-MW012	Winklepeck Burning	10/2/2007	1105	24.21	31.73	Hard	Heron 05769
WBG-MW013	Winklepeck Burning	10/2/2007	1115	12.66	24.22	Hard	Heron 05769
WBG-MW015	Winklepeck Burning	10/2/2007	1130	14.83	23.62	Hard	Heron 05769
WBG-MW009	Winklepeck Burning	10/2/2007	1140	16.04	24.40	Hard	Heron 05769
BKG-MW020	Background	10/2/2007	1150	12.86	33.30	Soft	Heron 05769
BKG-MW013	Background	10/2/2007	1205	13.12	28.07	Hard	Heron 05769
CP-MW005	Cobbs Pond	10/2/2007	1210	12.56	43.27	Hard	Heron 05769
CP-MW004	Cobbs Pond	10/2/2007	1220	13.50	22.60	Hard	Heron 05769
CP-MW003	Cobbs Pond	10/2/2007	1230	3.44	17.80	Hard	Heron 05769
CP-MW001	Cobbs Pond	10/2/2007	1250	6.82	14.80	Hard	Heron 05769
CP-MW002	Cobbs Pond	10/2/2007	1330	4.45	15.08	Hard	Heron 05769
CP-MW006	Cobbs Pond	10/2/2007	1340	9.18	20.74	Hard	Heron 05769
B12-MW011	Building 1200	10/2/2007	1350	23.02	26.82	Hard	Heron 05769
B12-MW012	Building 1200	10/2/2007	1354	22.45	24.91	Hard	Heron 05769
B12-MW010	Building 1200	10/2/2007	1400	20.63	22.92	Hard	Heron 05769

\*All measurements from top of casing

Recorded By:

(Signature and time)

OA Check By:

(Signature and time)

# **COMPREHENSIVE WATER LEVEL MEASUREMENTS**

RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
BKG-MW010	Background	10/2/2007	1407	21.25	22.07	Hard	Heron 05769
BKG-MW008	Background	10/2/2007	1420	19.20	27.48	Hard	Heron 05769
BKG-MW004	Background	10/2/2007	1425	14.79	22.32	Hard	Heron 05769
BKG-MW021	Background	10/2/2007	1432	19.67	21.47	Hard	Heron 05769
BKG-MW015	Background	10/2/2007	1445	51.53	53.12	Soft	Heron 05769
BKG-MW012	Background	10/2/2007	1455	12.28	62.27	Soft	Heron 05769
ASY-MW001	Atlas Scrap Yard	10/2/2007	1505	13.62	23.18	Hard	Heron 05769
ASY-MW001	Atlas Scrap Yard	10/2/2007	1510	16.02	23.02	Hard	Heron 05769
ASY-MW002	Atlas Scrap Yard	10/2/2007	1515	15.80	28.94	Hard	Heron 05769
ASY-MW007	Atlas Scrap Yard	10/2/2007	1520	6.09	27.73	Soft	Heron 05769
ASY-MW008	Atlas Scrap Yard	10/2/2007	1525	13.32	31.21	Hard	Heron 05769
ASY-MW010	Atlas Scrap Yard	10/2/2007	1530	15.12	28.97	Hard	Heron 05769
ASY-MW006	Atlas Scrap Yard	10/2/2007	1535	14.35	24.63	Hard	Heron 05769
ASY-MW009	Atlas Scrap Yard	10/2/2007	1540	11.55	29.86	Hard	Heron 05769
ASY-MW004	Atlas Scrap Yard	10/2/2007	1543	10.77	27.25	Hard	Heron 05769
ASY-MW005	Atlas Scrap Yard	10/2/2007	1546	14.51	23.52	Hard	Heron 05769
CBL-MW003	C Block	10/2/2007	1610	37.70	44.82	Hard	Heron 05769
CBL-MW004	C Block	10/2/2007	1620	37.40	47.12	Hard	Heron 05769

\*All measurements from top of casing

Recorded By: \_\_\_\_\_

(Signature and time)

OA Check By: \_\_\_\_\_

(Signature and time)

## COMPREHENSIVE WATER LEVEL MEASUREMENTS

## RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

[illegible]

\*All measurements from top of casing

Recorded By:

(Signature and time)

10/02/07

OA Check By:

(Signature and time)

10/25/07

# **COMPREHENSIVE WATER LEVEL MEASUREMENTS**

## **RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007**

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
DA2-MW104	Demo Area 2	10/3/2007	825	21.70	29.35	Hard	Heron 05769
DET-1B	Demo Area 2	10/3/2007	830	24.75	38.61	Hard	Heron 05769
DA2-MW106	Demo Area 2	10/3/2007	840	5.67	16.90	Hard	Heron 05769
DA2-MW105	Demo Area 2	10/3/2007	845	3.70	16.32	Hard	Heron 05769
DA2-MW110	Demo Area 2	10/3/2007	900	12.49	22.45	Hard	Heron 05769
MBS-MW003	Mustard Agent Burial	10/3/2007	1005	19.23	30.81	Hard	Heron 05769
MBS-MW004	Mustard Agent Burial	10/3/2007	1010	17.29	26.66	Soft	Heron 05769
MBS-MW006	Mustard Agent Burial	10/3/2007	1015	17.80	28.22	Hard	Heron 05769
MBS-MW001	Mustard Agent Burial	10/3/2007	1020	18.09	31.03	Soft	Heron 05769
MBS-MW005	Mustard Agent Burial	10/3/2007	1023	18.35	30.12	Soft	Heron 05769
MBS-MW002	Mustard Agent Burial	10/3/2007	1027	18.52	30.44	Hard	Heron 05769
NTA-MW107	NACA Test Area	10/3/2007	1038	13.30	24.44	Hard	Heron 05769
NTA-MW108	NACA Test Area	10/3/2007	1045	18.34	24.61	Soft	Heron 05769
NTA-MW109	NACA Test Area	10/3/2007	1050	12.73	21.01	Hard	Heron 05769
NTA-MW110	NACA Test Area	10/3/2007	1105	15.20	29.82	Hard	Heron 05769

\*All measurements from top of casing

Recorded By:

(Signature and time)

OA Check By:

(Signature and time)

# **COMPREHENSIVE WATER LEVEL MEASUREMENTS**

## RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
DET-2	Demo Area 2	10/3/2007	818	33.08	42.08	Soft 2"	Heron OHO2911
DET-4	Demo Area 2	10/3/2007	826	11.11	13.92	Hard	Heron OHO2911
DET-3	Demo Area 2	10/3/2007	829	9.84	16.09	Soft <1"	Heron OHO2911
DA2-MW113	Demo Area 2	10/3/2007	834	8.79	16.42	Hard	Heron OHO2911
DA2-MW112	Demo Area 2	10/3/2007	838	8.08	17.18	Hard	Heron OHO2911
DA2-MW107	Demo Area 2	10/3/2007	842	8.41	16.97	Hard	Heron OHO2911
DA2-MW111	Demo Area 2	10/3/2007	850	4.67	14.93	Soft	Heron OHO2911
DA2-MW109	Demo Area 2	10/3/2007	858	17.37	24.48	Soft 1"	Heron OHO2911
DA2-MW108	Demo Area 2	10/3/2007	918	6.67	17.29	Hard	Heron OHO2911
FBQ-MW177	Fuze & Booster Q	10/3/2007	936	15.70	24.99	Soft >1"	Heron OHO2911
FBQ-MW176	Fuze & Booster Q	10/3/2007	940	11.11	24.12	Soft >1"	Heron OHO2911
FBQ-MW168	Fuze & Booster Q	10/3/2007	946	13.28	21.36	Soft <1'	Heron OHO2911
FBQ-MW175	Fuze & Booster Q	10/3/2007	951	18.85	25.91	Soft <1'	Heron OHO2911
FBQ-MW174	Fuze & Booster Q	10/3/2007	954	1.14	22.95	Soft 1/2"	Heron OHO2911
FBQ-MW173	Fuze & Booster Q	10/3/2007	958	43.30	51.79	Soft 1"	Heron OHO2911
FBQ-MW172	Fuze & Booster Q	10/3/2007	1007	28.14	34.53	Soft <1"	Heron OHO2911
FBQ-MW171	Fuze & Booster Q	10/3/2007	1010	20.74	31.52	Hard	Heron OHO2911
FBQ-MW170	Fuze & Booster Q	10/3/2007	1013	19.81	32.82	Hard	Heron OHO2911

\*All measurements from top of casing

Recorded By:

Constance 10/3 1200  
(Signature and time)

OA Check By:

[Signature] 10/30/07  
(Signature and time)

# COMPREHENSIVE WATER LEVEL MEASUREMENTS

## RVAAP FACILITY-WIDE GROUNDWATER MONITORING PROGRAM - OCTOBER 2007

Well Number	Location	Date	Time	Depth To Water*	Depth to Bottom	Description of bottom	Instrument/Serial Number
FBQ-MW167	Fuze & Booster Q	10/3/2007	1019	6.21	19.09	Hard	Heron OHO2911
FBQ-MW169	Fuze & Booster Q	10/3/2007	1022	8.36	18.21	Hard	Heron OHO2911
FBQ-MW166	Fuze & Booster Q	10/3/2007	1032	6.33	19.84	Hard	Heron OHO2911
NTA-MW111	NACA Test Area	10/3/2007	1042	6.55	22.18	Hard	Heron OHO2911
NTA-MW112	NACA Test Area	10/3/2007	1045	9.98	26.76	Soft <1"	Heron OHO2911
NTA-MW113	NACA Test Area	10/3/2007	1049	8.11	29.41	Soft 2"	Heron OHO2911
NTA-MW114	NACA Test Area	10/3/2007	1052	8.00	22.91	Hard	Heron OHO2911
NTA-MW115	NACA Test Area	10/3/2007	1056	16.45	25.41	Hard	Heron OHO2911
NTA-MW116	NACA Test Area	10/3/2007	1059	8.02	22.69	Hard	Heron OHO2911
NTA-MW117	NACA Test Area	10/3/2007	1104	16.56	27.61	Hard	Heron OHO2911
NTA-MW118	NACA Test Area	10/3/2007	1107	10.59	24.82	Hard	Heron OHO2911

\*All measurements from top of casing

Recorded By: Curtis 10/3 1200  
(Signature and time)

OA Check By: A. M. M. 10/30/07  
(Signature and time)



**APPENDIX C**  
**WELL INSPECTION SHEETS**

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BKG-MW-004 Location/Functional Area: Background

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate in cement, markings on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 22.32

Thickness of sediment accumulation (reported depth-present measurement): ee - 1.32

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-67

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BKG MW005 Location/Functional Area: background

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 21 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint / plate-tag

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 21.03

Thickness of sediment accumulation (reported depth-present measurement): - 1.03

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft/ hard, etc.): 21"

Inspection Date: 10-2-07

Inspected by: [Signature]

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BKG mw006 Location/Functional Area: background

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 37.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cracked <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint tag/plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-------------------------------------	--------------------------	--------------------------	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 37.64

Thickness of sediment accumulation (reported depth-present measurement): al 1.04

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 1" to 2"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BKG-MW-008 Location/Functional Area: Background

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: CE Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.5 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate in cement marking on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 27.48

Thickness of sediment accumulation (reported depth-present measurement): 1.02

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-02

Inspected by: John Miller

21.25  
22.07

Ravenna Army Ammunition Plant  
**WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BKG-mw-010 Location/Functional Area: background  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 21.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:** YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3  
 Are the posts positioned to prevent collision damage to the well? ☒ ☐ ☐  
 Are any of the posts damaged or degraded? ☐ ☒ ☐  
 Is a concrete pad installed? ☒ ☐ ☐  
 Is the pad cracked or deteriorated? Frost Heaving? ☐ ☒ ☐  
 Is steel protective casing installed? ☒ ☐ ☐  
 Does the protective casing have a weep hole? ☐ ☒ ☐  
 Does vegetation around the well need clearing? ☐ ☒ ☐  
Square casing that is rusting at the top

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box? ☐ ☐ ☒  
 Does the well have a flush-mount box? ☐ ☐ ☒  
 Is the traffic cover cracked or broken? ☐ ☐ ☒  
 Is the concrete apron cracked or deteriorated? Frost Heaving? ☐ ☐ ☒

**Identification:**

Is the well labeled with the correct number? ☒ ☐ ☐  
 Describe labeling: Brass plate in cement, marking in casing

**Security:**

Does the well have a cap or lid? ☒ ☐ ☐  
 Does the well have a weatherproof lock? ☒ ☐ ☐  
 Does the lock secure well? ☒ ☐ ☐  
 Does the inner casing have a water-tight cap? ☒ ☐ ☐

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?) ☐ ☒ ☐  
 Is the well casing loose, (at the surface?) ☐ ☒ ☐  
 Is a measurement point marked a the top of well casing? ☒ ☐ ☐  
 Measured depth of the well from measurement point: ~~21.6~~ 22.07  
 Thickness of sediment accumulation (reported depth-present measurement): -.47  
 Are there an obstructions in the well? ☐ ☒ ☐  
 Description of well bottom conditions (soft hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BK6-mw-012 Location/Functional Area: background

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: ce Monitor Interval Length: 21 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 62.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Square casing w/ rusted hinges

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: marking on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 62.27

Thickness of sediment accumulation (reported depth-present measurement): +1.03

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-67

Inspected by: John Miller

Ravenna Army Ammunition Plant  
**WELL INSPECTION CHECKLIST**

**WELL INFORMATION**

Well Number: BRX MW-013 Location/Functional Area: background  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: cal Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 28 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Square casing  
rusting, no  
caps on poles

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate in cement, spray paint on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 28.07

Thickness of sediment accumulation (reported depth-present measurement): -.07

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): 6

Inspection Date: 10-2-07

Inspected by: John Miller



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BKG-MW-015 Location/Functional Area: background

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 20 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 52.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: markings on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 53.12

Thickness of sediment accumulation (reported depth-present measurement): - 0.22

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BKGMW016 Location/Functional Area: Background

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10.1 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 21.1 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint - plates/tags

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 21.28

Thickness of sediment accumulation (reported depth-present measurement): -0.18

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): < 1"

	X	
	X	
X		
	X	

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: B16mw017 Location/Functional Area: Background

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10.1 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 36.10 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

*Some concrete at bases Cracked still stable*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 36.11

Thickness of sediment accumulation (reported depth-present measurement): - .01

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): 1"

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BKGmw018 Location/Functional Area: Background

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 27.68

Thickness of sediment accumulation (reported depth-present measurement): -0.28

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): 4"

Inspection Date: 10-2

Inspected by: CEL

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BKG-MW-019 Location/Functional Area: Background

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: See Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 35.7 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Square casing with rusty hinge

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: markings on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 35.79

Thickness of sediment accumulation (reported depth-present measurement): -1.09

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BGS-MW-020 Location/Functional Area: Background

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 33.20 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*outer casing may  
need cleanup  
on posts*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate in cement

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 33.30

Thickness of sediment accumulation (reported depth-present measurement): 2.0 1.0 -1.0

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: BKG-MW-0121 Location/Functional Area: Background

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10.1 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 20.6 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*Square casing with much rust top of casing will not close all the way*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 21.47

Thickness of sediment accumulation (reported depth-present measurement): -0.87

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 441 MW-063 Location/Functional Area: loadline

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 30.0 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Paint's peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Spray paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 30.17

Thickness of sediment accumulation (reported depth-present measurement): - .17

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: Oct. 1, 2007 Inspected by: John Miller



3.86

Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST

WELL INFORMATION:

Well Number: 44-MW-064 Location/Functional Area: load line 1  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 21.1 ft ☐ BGS or ☒ BTOC (chose one only)

INSPECTION ITEMS

Well-Head Completion:

YES NO N/A COMMENTS

Above-ground completion:

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

paint peeling

Flush-mount completion:

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Identification:

Is the well labeled with the correct number?

Describe labeling:

spray paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Security:

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Down-hole Condition:

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 21.17

Thickness of sediment accumulation (reported depth-present measurement): -.07

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.):

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Inspection Date: Oct 1, 2007 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL-MW-065 Location/Functional Area: Loadline 1

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 0 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.4 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>paint peeling</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: SPRAY PAINT

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 23.14

Thickness of sediment accumulation (reported depth-present measurement): +0.26

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: Oct 1, 2007 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 441-MW 067 Location/Functional Area: Leadline 1

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.7 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Replaced

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 25.82

Thickness of sediment accumulation (reported depth-present measurement): -0.22

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL1-mw078 Location/Functional Area: Lead Line 1  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.5 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 41.1 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

X		
---	--	--

Are any of the posts damaged or degraded?

	X	
--	---	--

Is a concrete pad installed?

X		
---	--	--

Is the pad cracked or deteriorated? Frost Heaving?

	X	
--	---	--

Is steel protective casing installed?

X		
---	--	--

Does the protective casing have a weep hole?

X		
---	--	--

Does vegetation around the well need clearing?

	X	
--	---	--

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

		X
--	--	---

Does the well have a flush-mount box?

		X
--	--	---

Is the traffic cover cracked or broken?

		X
--	--	---

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
--	--	---

**Identification:**

Is the well labeled with the correct number?

X		
---	--	--

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

X		
---	--	--

Does the well have a weatherproof lock?

X		
---	--	--

Does the lock secure well?

X		
---	--	--

Does the inner casing have a water-tight cap?

X		
---	--	--

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

	X	
--	---	--

Is the well casing loose, (at the surface?)

	X	
--	---	--

Is a measurement point marked at the top of well casing?

X		
---	--	--

Measured depth of the well from measurement point: 41.22

Thickness of sediment accumulation (reported depth-present measurement): -0.12

Are there any obstructions in the well?

	X	
--	---	--

Description of well bottom conditions (soft, hard, etc.): hard

Inspection Date: 10-1-07

Inspected by: Col

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 111 MW-079 Location/Functional Area: Loadline 1  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.4 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 42.0 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
	X	
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: metal plate on casing

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 41.98

Thickness of sediment accumulation (reported depth-present measurement): +1.02

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.):

	X	
	X	
X		
	X	

Inspection Date: Oct 1<sup>st</sup> 2009 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U1-mw80 Location/Functional Area: loadline 1  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.5 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 22 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
X		
X		
	X	
	X	

Sealed

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface)?

Is the well casing loose, (at the surface)?

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 22.48

Thickness of sediment accumulation (reported depth-present measurement): - .48

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

	X	
	X	
X		
	X	

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL1 MW-081 Location/Functional Area: Load Line 1

Casing Type: ☒ Steel ☐ Stainless Steel ☐ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.5 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 41.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Spry paint on casing

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 4208

Thickness of sediment accumulation (reported depth-present measurement): - .18

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): soft

	X	
	X	
X		
	X	

Inspection Date: Oct 1, 2017

Inspected by: John Miller

Ravenna Army Ammunition Plant  
**WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: W1-mw082 <sup>82 cal</sup> Location/Functional Area: Lead Line 1

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.5 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 41.8 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: painted

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 41.56

Thickness of sediment accumulation (reported depth-present measurement): +0.24

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 1.50ft > 1"

	X	
	X	
X		
	X	

Inspection Date: 10-1-07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL1 MW-083 Location/Functional Area: LoadLine 1

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.5 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 41.7 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Metal plate on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 41.56

Thickness of sediment accumulation (reported depth-present measurement): +1.14

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): (soft)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: Oct 1, 2007

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U1 mw084 Location/Functional Area: LoadLine1

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.6 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 39.3 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 38.99

Thickness of sediment accumulation (reported depth-present measurement): + .31

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): HARD

Inspection Date: 10-1-07

Inspected by: Colleen

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 41-mw088 Location/Functional Area: Load Line 1

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.4 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 44.7 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

Construction area

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Painted

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 44.86

Thickness of sediment accumulation (reported depth-present measurement): 3.84 - .16

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): Soft

	X	
	X	
X		
	X	

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL2-MW-059 Location/Functional Area: Loadline 2

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.8 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 21.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: spray paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 21.92

Thickness of sediment accumulation (reported depth-present measurement): -1.12

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): (soft)

Inspection Date: Oct 1, 2007 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL2-MW-060 Location/Functional Area: load line 2

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.8 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 20.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 20.8

Thickness of sediment accumulation (reported depth-present measurement): +1.02

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: Oct 1, 2007 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U2-MW261 Location/Functional Area: loadline 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 21.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 22.56

Thickness of sediment accumulation (reported depth-present measurement): - .66

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: Carl

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL2-MW 262 Location/Functional Area: Load line 2  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 22.3 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: SWW

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 22.76

Thickness of sediment accumulation (reported depth-present measurement): 0.46

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.):

	X	
	X	
X		
	X	

Inspection Date: 10-1-01

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 42-mw263 Location/Functional Area: Load Line 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 22.64

Thickness of sediment accumulation (reported depth-present measurement): + .34

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-1-07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U2-MW 264 Location/Functional Area: Load Line 2  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 21.7 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4  
 Are the posts positioned to prevent collision damage to the well?  
 Are any of the posts damaged or degraded?  
 Is a concrete pad installed?  
 Is the pad cracked or deteriorated? Frost Heaving?  
 Is steel protective casing installed?  
 Does the protective casing have a weep hole?  
 Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?  
 Does the well have a flush-mount box?  
 Is the traffic cover cracked or broken?  
 Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?  
 Describe labeling: Paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?  
 Does the well have a weatherproof lock?  
 Does the lock secure well?  
 Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface)?  
 Is the well casing loose, (at the surface)?  
 Is a measurement point marked at the top of well casing?  
 Measured depth of the well from measurement point: 22.48  
 Thickness of sediment accumulation (reported depth-present measurement): - .78  
 Are there any obstructions in the well?  
 Description of well bottom conditions (soft, hard, etc.): 0

	X	
	X	
X		
	X	

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL2-MW-265 Location/Functional Area: loadline

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 2 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 217623.8 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 24.50

Thickness of sediment accumulation (reported depth-present measurement): -1.7

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard etc.): (G)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: John Muller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL2 MW-266 Location/Functional Area: Loadline 2

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

~~Screened~~/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/~~Above-ground~~ Completion: \_\_\_\_\_

Reported Construction Depth: 22.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Medellion, paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 22.77

Thickness of sediment accumulation (reported depth-present measurement): - .57

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: Oct 1, 2007 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL2-MW-267 Location/Functional Area: Loadline 2

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: Perforated Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: Perforated

Reported Construction Depth: 22 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Medallion, paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 22.77

Thickness of sediment accumulation (reported depth-present measurement): - .77

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 6

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: Oct 1, 2007 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL5-MW-268 Location/Functional Area: Loadline 2

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 29.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: painted on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 29.97

Thickness of sediment accumulation (reported depth-present measurement): -1.67

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: Oct. 1, 2007

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U2-mw269 Location/Functional Area: Load Line 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 29.40 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		Y
		Y
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
Y		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 30.40

Thickness of sediment accumulation (reported depth-present measurement): -1.0

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-1-09

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL2- mw270 Location/Functional Area: lead line 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 20.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 22.52

Thickness of sediment accumulation (reported depth-present measurement): -2.22

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
--	---	--

_____
-------

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U3 mw 232 Location/Functional Area: loadline 3

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 38.8 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 39.94

Thickness of sediment accumulation (reported depth-present measurement): - 1.94

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-1-01

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LC3-MW233 Location/Functional Area: load line 3

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 32.89

Thickness of sediment accumulation (reported depth-present measurement): - .69

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): < 1"

Inspection Date: 10/10

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U3-mw234 Location/Functional Area: Lead Line 3

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.10 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	


**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X


**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint/plate

X		
---	--	--

--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		


**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 22.75

Thickness of sediment accumulation (reported depth-present measurement): - .65

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	


Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U3-mw235 Location/Functional Area: load line 3

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well? ☒ ☐ ☐ \_\_\_\_\_

Are any of the posts damaged or degraded? ☐ ☒ ☐ \_\_\_\_\_

Is a concrete pad installed? ☒ ☐ ☐ \_\_\_\_\_

Is the pad cracked or deteriorated? Frost Heaving? ☐ ☒ ☐ \_\_\_\_\_

Is steel protective casing installed? ☒ ☐ ☐ \_\_\_\_\_

Does the protective casing have a weep hole? ☒ ☐ ☐ \_\_\_\_\_

Does vegetation around the well need clearing? ☐ ☒ ☐ construction area

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box? ☐ ☐ ☒ \_\_\_\_\_

Does the well have a flush-mount box? ☐ ☐ ☒ \_\_\_\_\_

Is the traffic cover cracked or broken? ☐ ☐ ☒ \_\_\_\_\_

Is the concrete apron cracked or deteriorated? Frost Heaving? ☐ ☐ ☒ \_\_\_\_\_

**Identification:**

Is the well labeled with the correct number? ☒ ☐ ☐ \_\_\_\_\_

Describe labeling: paint / plate

**Security:**

Does the well have a cap or lid? ☒ ☐ ☐ \_\_\_\_\_

Does the well have a weatherproof lock? ☒ ☐ ☐ \_\_\_\_\_

Does the lock secure well? ☒ ☐ ☐ \_\_\_\_\_

Does the inner casing have a water-tight cap? ☒ ☐ ☐ \_\_\_\_\_

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?) ☐ ☒ ☐ \_\_\_\_\_

Is the well casing loose, (at the surface?) ☐ ☒ ☐ \_\_\_\_\_

Is a measurement point marked a the top of well casing? ☒ ☐ ☐ \_\_\_\_\_

Measured depth of the well from measurement point: 23.09

Thickness of sediment accumulation (reported depth-present measurement): -1.89

Are there an obstructions in the well? ☐ ☒ ☐ \_\_\_\_\_

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-1-07 Inspected by: ad

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: IL3 MW-236 Location/Functional Area: Load Line 3

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 26.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate, spray paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 26.68

Thickness of sediment accumulation (reported depth-present measurement): -.48

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____

Inspection Date: Oct 1, 2007 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL3-mw-237 Location/Functional Area: Leadline 3

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Spray paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 17.80 25.62 7.82

Thickness of sediment accumulation (reported depth-present measurement): 7.82 - 1.72

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Inspection Date: Oct 1, 2007 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL3-mw238 Location/Functional Area: leadline 3

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 23.46

Thickness of sediment accumulation (reported depth-present measurement): -1.56

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: W3-mw239 Location/Functional Area: load line 3

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 36.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-------------------------------------	--------------------------	--------------------------	-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 37.23

Thickness of sediment accumulation (reported depth-present measurement): - .43

Are there an obstructions in the well?

Description of well bottom conditions (soft) hard, etc.): 1"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Inspection Date: 10-1-07

Inspected by: CeO

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL3-MW 240 Location/Functional Area: loadline 3

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 36.50 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 28.93 36.81

Thickness of sediment accumulation (reported depth-present measurement): 1.57 - 1.31

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: Q2



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL3-MW 241 Location/Functional Area: Leadline 3

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.1 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 21.60

Thickness of sediment accumulation (reported depth-present measurement): 3.5

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 443-mw-242 Location/Functional Area: load line 3  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 21.90 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4  
 Are the posts positioned to prevent collision damage to the well?  
 Are any of the posts damaged or degraded?  
 Is a concrete pad installed?  
 Is the pad cracked or deteriorated? Frost Heaving?  
 Is steel protective casing installed?  
 Does the protective casing have a weep hole?  
 Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?  
 Does the well have a flush-mount box?  
 Is the traffic cover cracked or broken?  
 Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?  
 Describe labeling: medallion, paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?  
 Does the well have a weatherproof lock?  
 Does the lock secure well?  
 Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface)?  
 Is the well casing loose, (at the surface)?  
 Is a measurement point marked at the top of well casing?  
 Measured depth of the well from measurement point: 22.61  
 Thickness of sediment accumulation (reported depth-present measurement): -1.71  
 Are there any obstructions in the well?  
 Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: Oct 1, 2007 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 43-MW 243 Location/Functional Area: Loadline 3

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.8 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: medallion, spray paint on casing

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 26.42

Thickness of sediment accumulation (reported depth-present measurement): -62

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: Oct. 1, 2002 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U4mw193 Location/Functional Area: Line 4

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.5 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint/plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 24.45

Thickness of sediment accumulation (reported depth-present measurement): 2' - .95

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 1" demolition area nearby

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL4mw194 Location/Functional Area: Leadline 4  
 Casing Type: ☐ Steel ☐ Stainless Steel ☐ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 23.4 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 23.79

Thickness of sediment accumulation (reported depth-present measurement): - .39

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 1"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-01

Inspected by: Col

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL4 mw 195 Location/Functional Area: load line 4

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.3 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 23.00

Thickness of sediment accumulation (reported depth-present measurement): -.70

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

_____
-------

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U4 MW 196 Location/Functional Area: load well 4

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 21.4 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well? ☒ ☐ ☐ \_\_\_\_\_

Are any of the posts damaged or degraded? ☐ ☒ ☐ \_\_\_\_\_

Is a concrete pad installed? ☒ ☐ ☐ \_\_\_\_\_

Is the pad cracked or deteriorated? Frost Heaving? ☐ ☒ ☐ Construction Area

Is steel protective casing installed? ☒ ☐ ☐ \_\_\_\_\_

Does the protective casing have a weep hole? ☒ ☐ ☐ \_\_\_\_\_

Does vegetation around the well need clearing? ☐ ☒ ☐ \_\_\_\_\_

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box? ☐ ☐ ☒ \_\_\_\_\_

Does the well have a flush-mount box? ☐ ☐ ☒ \_\_\_\_\_

Is the traffic cover cracked or broken? ☐ ☐ ☒ \_\_\_\_\_

Is the concrete apron cracked or deteriorated? Frost Heaving? ☐ ☐ ☒ \_\_\_\_\_

**Identification:**

Is the well labeled with the correct number? ☒ ☐ ☐ \_\_\_\_\_

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid? ☒ ☐ ☐ \_\_\_\_\_

Does the well have a weatherproof lock? ☒ ☐ ☐ \_\_\_\_\_

Does the lock secure well? ☒ ☐ ☐ \_\_\_\_\_

Does the inner casing have a water-tight cap? ☒ ☐ ☐ \_\_\_\_\_

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?) ☐ ☒ ☐ \_\_\_\_\_

Is the well casing loose, (at the surface?) ☐ ☒ ☐ \_\_\_\_\_

Is a measurement point marked a the top of well casing? ☒ ☐ ☐ \_\_\_\_\_

Measured depth of the well from measurement point: 21.92

Thickness of sediment accumulation (reported depth-present measurement): -1.52

Are there an obstructions in the well? ☐ ☒ ☐ \_\_\_\_\_

Description of well bottom conditions (soft, hard, etc.): 9 \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 44mw197 Location/Functional Area: load line 4

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.7 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well? 

X		
---	--	--

 \_\_\_\_\_

Are any of the posts damaged or degraded? 

	X	
--	---	--

 \_\_\_\_\_

Is a concrete pad installed? 

X		
---	--	--

 \_\_\_\_\_

Is the pad cracked or deteriorated? Frost Heaving? 

	X	
--	---	--

 \_\_\_\_\_

Is steel protective casing installed? 

X		
---	--	--

 \_\_\_\_\_

Does the protective casing have a weep hole? 

X		
---	--	--

 \_\_\_\_\_

Does vegetation around the well need clearing? 

	X	
--	---	--

 \_\_\_\_\_

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box? 

		X
--	--	---

 \_\_\_\_\_

Does the well have a flush-mount box? 

		X
--	--	---

 \_\_\_\_\_

Is the traffic cover cracked or broken? 

		X
--	--	---

 \_\_\_\_\_

Is the concrete apron cracked or deteriorated? Frost Heaving? 

		X
--	--	---

 \_\_\_\_\_

**Identification:**

Is the well labeled with the correct number? 

X		
---	--	--

 \_\_\_\_\_

Describe labeling: Paint / plate

**Security:**

Does the well have a cap or lid? 

X		
---	--	--

 \_\_\_\_\_

Does the well have a weatherproof lock? 

X		
---	--	--

 \_\_\_\_\_

Does the lock secure well? 

X		
---	--	--

 \_\_\_\_\_

Does the inner casing have a water-tight cap? 

X		
---	--	--

 \_\_\_\_\_

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?) 

	X	
--	---	--

 \_\_\_\_\_

Is the well casing loose, (at the surface?) 

	X	
--	---	--

 \_\_\_\_\_

Is a measurement point marked at the top of well casing? 

X		
---	--	--

 \_\_\_\_\_

Measured depth of the well from measurement point: 23.72

Thickness of sediment accumulation (reported depth-present measurement): -1.02

Are there any obstructions in the well? 

	X	
--	---	--

 \_\_\_\_\_

Description of well bottom conditions (soft, hard, etc.): <1"

Inspection Date: 10/20/07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: W4 MW 198 Location/Functional Area: Load Line 4

Casing Type: ☐ Steel ☐ Stainless Steel ☐ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 21.04

Thickness of sediment accumulation (reported depth-present measurement): 1.26

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 1"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U4mw199 Location/Functional Area: Load Line 4

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 2334

Thickness of sediment accumulation (reported depth-present measurement): -1.74

Are there any obstructions in the well?

Description of well bottom conditions (soft/hard, etc.): 1"

	X	
	X	
X		
	X	

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U4mw200 Location/Functional Area: Load Line 4  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 25.0 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-------------------------------------	--------------------------	--------------------------	-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 25.38

Thickness of sediment accumulation (reported depth-present measurement): 1.38

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 1"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL5 MW001 Location/Functional Area: Lead Line 5

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 26.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	-------------------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Replaced

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 27.12

Thickness of sediment accumulation (reported depth-present measurement): -.22

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): ○

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL5 MW002 Location/Functional Area: Load Line 5

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.9 ft ☐ BGS or ☐ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-------------------------------------	--------------------------	--------------------------	-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 27.60

Thickness of sediment accumulation (reported depth-present measurement): + .30

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): < 1"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U5 mw003 Location/Functional Area: Load Line 5

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.0 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 24.08

Thickness of sediment accumulation (reported depth-present measurement): -1.08

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____

Inspection Date: 10-2-07

Inspected by: cel

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LLS MW004 Location/Functional Area: Lead Line 5

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Paint / plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 25.5

Thickness of sediment accumulation (reported depth-present measurement): 2.7 ft - .61

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft) hard, etc.): < 1"

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: US MW005 Location/Functional Area: Load Line 5

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 29.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 29.83

Thickness of sediment accumulation (reported depth-present measurement): 7.07

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-2-07

Inspected by: Carl



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL5 MW006 Location/Functional Area: Lead Line 5

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.0 ft ☐ BGS or ☒ BTOC (chose one only)

26.9

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 27.19

Thickness of sediment accumulation (reported depth-present measurement): -1.29

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): (C)

	X	
	X	
X		

	X	
--	---	--

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL6 MW001 Location/Functional Area: Leadline 6

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 17 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a flush-mount box?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	-------------------------------------	--------------------------

Measured depth of the well from measurement point: 17.72

Thickness of sediment accumulation (reported depth-present measurement): -1.72

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): 0

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LV6M1002 Location/Functional Area: Lead Line 6  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 22.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 2459

Thickness of sediment accumulation (reported depth-present measurement): -2.09

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): <1"

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL6 M0003 Location/Functional Area: Leadline 6

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 25.82

Thickness of sediment accumulation (reported depth-present measurement): +1.08

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): slightly soft <1"

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL6mw004 Location/Functional Area: Lead Line 6

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.1 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 24.01

Thickness of sediment accumulation (reported depth-present measurement): +0.49

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL6MN005 Location/Functional Area: Load Line 6

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are any of the posts damaged or degraded?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Is a concrete pad installed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is the pad cracked or deteriorated? Frost Heaving?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Is steel protective casing installed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does the protective casing have a weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does vegetation around the well need clearing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Does the well have a flush-mount box?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Is the traffic cover cracked or broken?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Is the concrete apron cracked or deteriorated? Frost Heaving?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

**Identification:**

Is the well labeled with the correct number? ☒ ☐ ☐ \_\_\_\_\_  
Describe labeling: paint

**Security:**

Does the well have a cap or lid?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does the well have a weatherproof lock?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does the lock secure well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does the inner casing have a water-tight cap?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Is the well casing loose, (at the surface?)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Is a measurement point marked a the top of well casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Measured depth of the well from measurement point:	<u>22.38</u>			_____
Thickness of sediment accumulation (reported depth-present measurement):	<u>+1.12</u>			_____
Are there an obstructions in the well?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Description of well bottom conditions (soft, hard, etc.):	<u>41"</u>			_____

Inspection Date: 10-2-07 Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 66mw006 Location/Functional Area: Load Line 6

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 17.0 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
		X
		X
		X

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

X		
X		
	X	
	X	

needs gasket  
filled w/ water

pad wobbles

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

could use new lock

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 17.88

Thickness of sediment accumulation (reported depth-present measurement): -0.88

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

	X	
--	---	--

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL6 MW007 Location/Functional Area: Lead Line 6

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 19.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>no path cut to well</u>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>needs gasket</u>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>filled w/ water</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-------------------------------------	--------------------------	--------------------------	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>could use new lock</u>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 19.44

Thickness of sediment accumulation (reported depth-present measurement): +0.06

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 0

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Inspection Date: 10-2-07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL7mw001 Location/Functional Area: load line 7

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.2 ft ☐ BGS or ☐ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 33.14

Thickness of sediment accumulation (reported depth-present measurement): - .94

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 0

	X	
	X	
X		
	X	

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LT1/mw002 Location/Functional Area: Loadline 7

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint/plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 22.09 27.28

Thickness of sediment accumulation (reported depth-present measurement): + .52

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 447 MW003 Location/Functional Area: Load Line 7

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 33.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 33.64

Thickness of sediment accumulation (reported depth-present measurement): - .04

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 447MW004 Location/Functional Area: Lead Line 7

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 32.34

Thickness of sediment accumulation (reported depth-present measurement): 1.18

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL7 MW005 Location/Functional Area: Loadline 7

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 30.6 ft ☐ BGS or ☐ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X	X	
	X	
X		
X		
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 30.44

Thickness of sediment accumulation (reported depth-present measurement): +1.16

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 0

	X	
	X	
X		

_____
_____
_____

	X	
--	---	--

_____
-------

Inspection Date: 16-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL7 MW006 Location/Functional Area: Loadline 7

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 30.4 ft ☐ BGS or ☐ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
	X	
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 30.43

Thickness of sediment accumulation (reported depth-present measurement): -.03

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X	X	
	X	

_____
_____
_____
_____

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL8mw001 Location/Functional Area: Lead Line 8

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 26.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 27.63

Thickness of sediment accumulation (reported depth-present measurement): -1.83

Are there an obstructions in the well?

Description of well bottom conditions (soft/hard, etc.): 1"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 48mw002 Location/Functional Area: loadline 8

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/~~Above-ground~~ Completion: \_\_\_\_\_

Reported Construction Depth: 32.8 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-------------------------------------	--------------------------	--------------------------	-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 32.66

Thickness of sediment accumulation (reported depth-present measurement): + .14

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): (C)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Inspection Date: 10-2-07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL8M1003 Location/Functional Area: Leadline 8

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

damage concrete 1 post

dented 2 spots

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 23.13

Thickness of sediment accumulation (reported depth-present measurement): + .17

Are there an obstructions in the well?

Description of well bottom conditions (soft hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL8mwo04 Location/Functional Area: load line 8

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 22.74

Thickness of sediment accumulation (reported depth-present measurement): 1.26

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): <1"

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL2mW005 Location/Functional Area: leadline 8

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>sealed crack</u>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-------------------------------------	--------------------------	--------------------------	-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 27.26

Thickness of sediment accumulation (reported depth-present measurement): -.06

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): <1"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 148 MW006 Location/Functional Area: Leadline 8

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 26.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
X		
X		
X		
	X	

Cracked ☒

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		Y
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 27.16

Thickness of sediment accumulation (reported depth-present measurement): .36

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.):                     

	X	
--	---	--

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: W9 mw001 Location/Functional Area: load line 9

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 23.40

Thickness of sediment accumulation (reported depth-present measurement): 1.10

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL9 MW002 Location/Functional Area: load line 9

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.4 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 22.83

Thickness of sediment accumulation (reported depth-present measurement): -1.33

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL9 mw003 Location/Functional Area: load line 9

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.8 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 24.26

Thickness of sediment accumulation (reported depth-present measurement): -1.46

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-01

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 119 MW004 Location/Functional Area: Lead Line 9

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 34.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 34.74

Thickness of sediment accumulation (reported depth-present measurement): +1.16

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U9 mw 005 Location/Functional Area: Lead Line 9

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
	X	
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 23.58

Thickness of sediment accumulation (reported depth-present measurement): -1.28

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: 10-2

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U9 mwoob Location/Functional Area: Lead Line 9

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 28.9 ft ☐ BGS or ☐ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 28.86

Thickness of sediment accumulation (reported depth-present measurement): +1.02

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard etc.): ○

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL9 MW00970 Location/Functional Area: loadline 9

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 185 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		X
		X
		✓

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

X		
X		
	X	
	X	

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: print

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
	X	
	X	
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 1823

Thickness of sediment accumulation (reported depth-present measurement): 7.27

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
	X	
	✓	

_____
_____
_____
_____

Inspection Date: 10-2-07

Inspected by: Carl

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U10 MW001 Location/Functional Area: Leadline 10

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 29.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint / plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 29.66

Thickness of sediment accumulation (reported depth-present measurement): + .14

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL10 MW002 Location/Functional Area: Leadline 10

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 29.7 ft ☐ BGS or ☐ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

post paint badly degraded

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 29.87

Thickness of sediment accumulation (reported depth-present measurement): -1.17

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U10 mw003 Location/Functional Area: Loadline 10

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 28.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 28.62

Thickness of sediment accumulation (reported depth-present measurement): + .28

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-2-07

Inspected by: Carl

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: L410MW004 Location/Functional Area: Loadline 10

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 33.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: <u>3</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are the posts positioned to prevent collision damage to the well?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Are any of the posts damaged or degraded?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is a concrete pad installed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>cracked</u> <input checked="" type="checkbox"/>
Is the pad <u>cracked</u> or deteriorated? Frost Heaving?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is steel protective casing installed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does the protective casing have a weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does vegetation around the well need clearing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Does the well have a flush-mount box?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Is the traffic cover cracked or broken?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Is the concrete apron cracked or deteriorated? Frost Heaving?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

**Identification:**

Is the well labeled with the correct number? ☒ ☐ ☐ \_\_\_\_\_

Describe labeling: Paint/plate

**Security:**

Does the well have a cap or lid?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does the well have a weatherproof lock?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does the lock secure well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does the inner casing have a water-tight cap?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Is the well casing loose, (at the surface?)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Is a measurement point marked at the top of well casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Measured depth of the well from measurement point: <u>33.64</u>				_____
Thickness of sediment accumulation (reported depth-present measurement): <u>+ .16</u>				_____
Are there any obstructions in the well?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Description of well bottom conditions (soft, <u>hard</u> , etc.): _____				_____

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL10 M 4005 Location/Functional Area: Load Line 10

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 29.3 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
X	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint / plate

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 29.31

Thickness of sediment accumulation (reported depth-present measurement): -1.01

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: 10-2-01 Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U10 -mw006 Location/Functional Area: Lead line 10

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 26.1 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 26.58

Thickness of sediment accumulation (reported depth-present measurement): -1.48

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: W11mw001 Location/Functional Area: Load line 11

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 60 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.1 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 21.61

Thickness of sediment accumulation (reported depth-present measurement): +2.5

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): <1"

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL11 MW002 Location/Functional Area: load line 11

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 16.0 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is steel protective casing installed?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a flush-mount box?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 16.54

Thickness of sediment accumulation (reported depth-present measurement): -1.54

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U11mw003 Location/Functional Area: Leadline 11

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

8 Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 15.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

X		
---	--	--

Are any of the posts damaged or degraded?

	X	
--	---	--

Is a concrete pad installed?

X		
---	--	--

Is the pad cracked or deteriorated? Frost Heaving?

	X	
--	---	--

Is steel protective casing installed?

		X
--	--	---

Does the protective casing have a weep hole?

		X
--	--	---

Does vegetation around the well need clearing?

		X
--	--	---

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

X		
---	--	--

Does the well have a flush-mount box?

X		
---	--	--

Is the traffic cover cracked or broken?

	X	
--	---	--

Is the concrete apron cracked or deteriorated? Frost Heaving?

	X	
--	---	--

**Identification:**

Is the well labeled with the correct number?

X		
---	--	--

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

X		
---	--	--

Does the well have a weatherproof lock?

X		
---	--	--

Does the lock secure well?

X		
---	--	--

Does the inner casing have a water-tight cap?

X		
---	--	--

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

	X	
--	---	--

Is the well casing loose, (at the surface?)

	X	
--	---	--

Is a measurement point marked at the top of well casing?

X		
---	--	--

Measured depth of the well from measurement point: 16.15

Thickness of sediment accumulation (reported depth-present measurement): -1.25

Are there any obstructions in the well?

	X	
--	---	--

Description of well bottom conditions (soft, hard, etc.): hard

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL11MW004 Location/Functional Area: Load Line 11

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 16.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a flush-mount box?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 16.27

Thickness of sediment accumulation (reported depth-present measurement): -1.07

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard etc.): Cal

Inspection Date: 16-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL11 MW005 Location/Functional Area: Loadline 11

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 16.0 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>no gasket</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-------------------------------------	--------------------------	--------------------------	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 16.51

Thickness of sediment accumulation (reported depth-present measurement): -1.51

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: W11 MW 006 Location/Functional Area: Lead Line 11

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 15.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

*no no gasket*

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-------------------------------------	--------------------------	--------------------------	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 15.81

Thickness of sediment accumulation (reported depth-present measurement): -.31

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 0

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U11 MW007 Location/Functional Area: Loadline 11

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 25.42

Thickness of sediment accumulation (reported depth-present measurement): 1.22

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 1"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LLN MW008 Location/Functional Area: Load Well

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 15.4 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

needs gasket

**Identification:**

Is the well labeled with the correct number?

Describe labeling: mint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 15.82

Thickness of sediment accumulation (reported depth-present measurement): -.42

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL11 MW009 Location/Functional Area: Lead Line 11  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 16.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
X		
X		X
	X	X
		X

wobbly pad

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

X		
X		
	X	
	X	

needs gasket

wobbly pad

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X	X	

needs gasket

needs new lock

not on well / replaced

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 16.88

Thickness of sediment accumulation (reported depth-present measurement): -.28

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

	X	
	X	
	X	
	X	

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LU11mw010 Location/Functional Area: Loadline 11

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.4 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 23.53

Thickness of sediment accumulation (reported depth-present measurement): -1.13

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-2-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 1412 mm-088 Location/Functional Area: Loadline 12

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.1 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Identification:**

Is the well labeled with the correct number?

Describe labeling: BRASS plate, gray paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-------------------------------------	--------------------------	--------------------------	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 27.62

Thickness of sediment accumulation (reported depth-present measurement): - .52

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Inspection Date: 10-1-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U12 mw 107 Location/Functional Area: load line 12

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 33.1 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: plumb/plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 33.79

Thickness of sediment accumulation (reported depth-present measurement): -1.69

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U12-MW113 Location/Functional Area: Lead Line 12

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.0 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint / plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 20.43

Thickness of sediment accumulation (reported depth-present measurement): +4.57

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): slightly

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: W12-mw128 Location/Functional Area: Leadline 12

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 33.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Print

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 34.29

Thickness of sediment accumulation (reported depth-present measurement): -1.99

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U12 MW153 Location/Functional Area: Load Line 12  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 25 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

Starting to grow up

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint/plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 24.91

Thickness of sediment accumulation (reported depth-present measurement): -1.09

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.):

	X	
--	---	--

Inspection Date: 10-1-07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 412 MW154 Location/Functional Area: Lead line 12

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 28.7 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
X		

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 28.74

Thickness of sediment accumulation (reported depth-present measurement): -1.04

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): ⊙

	X	
	X	
X		
	X	

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 412 MW 182 Location/Functional Area: Load Line 12

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 37.7 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>


**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>


**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate, spray painted on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>


**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 38.24

Thickness of sediment accumulation (reported depth-present measurement): -1.54

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.):  

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>


<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

--

Inspection Date: 10-1-07 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL12-MW-183 Location/Functional Area: Load Line 12

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: or Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 36.0 ft ☐ BGS or ☐ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 36.40

Thickness of sediment accumulation (reported depth-present measurement): .40

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 412 MW184 Location/Functional Area: Load Line 12  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 31.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
X		

*middle of cane/bamboo field*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

✓		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 31.20

Thickness of sediment accumulation (reported depth-present measurement): 0

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

	X	
--	---	--

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL 12 mmw-185 Location/Functional Area: Leadline 12  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 23.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
	X	
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate, spray paint on casing

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 23.35

Thickness of sediment accumulation (reported depth-present measurement): -13

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard etc.): (hard)

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: 10-1-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: L412-mw186 Location/Functional Area: load line 12

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 21.0 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint + plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 21.14

Thickness of sediment accumulation (reported depth-present measurement): -1.14

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 0

	X	
	X	
X		
	X	

Inspection Date: 16-1-07

Inspected by: CEL

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL12-MN187 Location/Functional Area: Loadline 12  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 29.4 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:** YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
	X	
X		

growing up

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: label / plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 29.71

Thickness of sediment accumulation (reported depth-present measurement): -.31

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-1

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: U12 MW188 Location/Functional Area: Loadline 12

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-------------------------------------	--------------------------	--------------------------	-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 22.31

Thickness of sediment accumulation (reported depth-present measurement): -11

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Inspection Date: 10-1-07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 112-MW/89 Location/Functional Area: Leadline 12

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 19.6 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
	X	
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 19.87

Thickness of sediment accumulation (reported depth-present measurement): 1.27

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL 12 mur 242 Location/Functional Area: Load Line 12

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open Hole Well Type: 20 Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: 20

Reported Construction Depth: 28.3 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate on top plate, gray paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 29.41

Thickness of sediment accumulation (reported depth-present measurement): -1.11

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): (soft)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL12-mw243 Location/Functional Area: Load Line 12

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole-Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.7 ft ☐ BGS or ☐ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: cel 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

growing up

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 25.80

Thickness of sediment accumulation (reported depth-present measurement): -1.10

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): cel

Inspection Date: 10-1-07

Inspected by: cel

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 412mw-244 Location/Functional Area: Load Line 12

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: Screened Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: Screened

Reported Construction Depth: 32.1 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: medallion on casing top plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 31.67

Thickness of sediment accumulation (reported depth-present measurement): +1.43

Are there any obstructions in the well?

Description of well bottom conditions (soft hard, etc.):

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: John M. Her

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LL12-MW245 Location/Functional Area: Load Line 12

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 30.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

growing up

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint/plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 30.45

Thickness of sediment accumulation (reported depth-present measurement): +1.05

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): hard

Inspection Date: 10-1-01

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 4412 MW-246 Location/Functional Area: Load Line 12

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: Cell Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 34.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>paints peeling</u>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Identification:**

Is the well labeled with the correct number?

Describe labeling: medallion on plate, spray paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-------------------------------------	--------------------------	--------------------------	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 35.12

Thickness of sediment accumulation (reported depth-present measurement): 1.82

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Inspection Date: 10-1-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: ASK-mw-001 Location/Functional Area: Atlas Scrap Yard

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: CE Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.7 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate on cap, marking on case

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 23.18

Thickness of sediment accumulation (reported depth-present measurement): 1.52

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: ASY-mw-002 Location/Functional Area: Atlas Scrap Yard

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 9.5 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.7 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: marking on casing, brass plate on cap

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 23.02

Thickness of sediment accumulation (reported depth-present measurement): 7.32

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: ASY-MW-003 Location/Functional Area: Atlas Scrap Yard  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 23.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

*paint peeling, rust*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate on cap, markings on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 23.52

Thickness of sediment accumulation (reported depth-present measurement): -1.02

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): ⊙

Inspection Date: 10-2-07

Inspected by: Bhm M. I. Fer

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: AS4-mw-004 Location/Functional Area: Atlas Scrap Yard

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: 0

Reported Construction Depth: 29.6 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling, rust

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 29.86

Thickness of sediment accumulation (reported depth-present measurement): -1.26

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: ASY-mw-005 Location/Functional Area: Atlas Scrap Yard  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 26.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate on cap, markings on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 27.25

Thickness of sediment accumulation (reported depth-present measurement): -1.05

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.):

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: ASY-mw-006 Location/Functional Area: Atlas Scrap Yard  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 28.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling, rust

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate on cap, markings on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 28.97

Thickness of sediment accumulation (reported depth-present measurement): -1.7

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: ASY-MW-007 Location/Functional Area: Atlas Scrap Yard

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: 0

Reported Construction Depth: 28.8 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate on cap, markings on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 28.94

Thickness of sediment accumulation (reported depth-present measurement): -.14

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: ASY-mw-008 Location/Functional Area: Atlas Scrap Yard

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.7 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 27.73

Thickness of sediment accumulation (reported depth-present measurement): -.03

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: ASP-mm-009 Location/Functional Area: Atlas Scrap Yard

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*paint peeling, rust*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 24.63

Thickness of sediment accumulation (reported depth-present measurement): 7.33

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: AS1-mw-010 Location/Functional Area: Atlas Scrap Yard

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 29.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 31.21

Thickness of sediment accumulation (reported depth-present measurement): -1.41

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: B12-MW-010 Location/Functional Area: Building 1200

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 2000 ft ☐ BGS or ☒ BTOC (chosed one only)  
23.2

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*One post has  
shattered cement,  
paint peeling on posts*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling:

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 22.92

Thickness of sediment accumulation (reported depth-present measurement): + .28

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.):

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: B12-mw-011 Location/Functional Area: Building 1200  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 26.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: brass plate on well cap

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 26.82

Thickness of sediment accumulation (reported depth-present measurement): 1.08

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: B12-MW-012 Location/Functional Area: Building 1200

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: marking on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 24.91

Thickness of sediment accumulation (reported depth-present measurement): -.01

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Mule

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBL-MW-001 Location/Functional Area: C-Block Quarry  
 Casing Type: ☒ Steel ☐ Stainless Steel ☐ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 51.6 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling, rust

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate on cap, markings a casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 49.79

Thickness of sediment accumulation (reported depth-present measurement): +1.81

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBL-mm 002 Location/Functional Area: C Block Quarry  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 47.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling, rust

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate on cap, markings on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 47.39

Thickness of sediment accumulation (reported depth-present measurement): -1.39

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBL-MW-003 Location/Functional Area: C Block Quarry  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 45.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling, rust

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: BRASS plate on cap, markings on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 44.82

Thickness of sediment accumulation (reported depth-present measurement): 1.98

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBL-mw-004 Location/Functional Area: C Block Quarry

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 46.8 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling, rust

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate on cap, markings on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 47.12

Thickness of sediment accumulation (reported depth-present measurement): -1.32

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBP-mw-001 Location/Functional Area: Central Burn Pit

Casing Type: ☒ Steel ☐ Stainless Steel ☐ PVC

Screened/Open-Hole Well Type: Screened Monitor Interval Length: 60 ft

Flush-mount/Above-ground Completion: Screened

Reported Construction Depth: 34.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Spray paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-------------------------------------	--------------------------	--------------------------	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 32.84

Thickness of sediment accumulation (reported depth-present measurement): +2.06

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): (soft)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Inspection Date: 10-02-07 Inspected by: John Miller



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBP-MW-002 Location/Functional Area: Central Burn Pits

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Spray paint on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 32.12

Thickness of sediment accumulation (reported depth-present measurement): + .08

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): medium

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBP-MW-003 Location/Functional Area: Central Basin Pits

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: ⓐ

Reported Construction Depth: 27.1 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: spray paint on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 30.29

Thickness of sediment accumulation (reported depth-present measurement): -3.19

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): medium

Inspection Date: 10-2-07 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBP MW-004 Location/Functional Area: Central Burn Pits

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 29.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Spray paint on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 29.80

Thickness of sediment accumulation (reported depth-present measurement): -1.30

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBP-MW-005 Location/Functional Area: Central Burn Pits

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion:   

Reported Construction Depth: 27.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Spray paint on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 27.52

Thickness of sediment accumulation (reported depth-present measurement): -.22

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft hard, etc.):   

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBP MW-006 Location/Functional Area: Central Burn Pits

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.1 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 25.43

Thickness of sediment accumulation (reported depth-present measurement): -1.33

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): Medium

Inspection Date: 10-02-07 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CSP-MW-007 Location/Functional Area: Central burn pits

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.4 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: spray paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 31.86

Thickness of sediment accumulation (reported depth-present measurement): + .54

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CBP-MW-008 Location/Functional Area: Central Burn pits

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Can't caps off

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Spray paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 28.01

Thickness of sediment accumulation (reported depth-present measurement): 1.41

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CP mb- 001 Location/Functional Area: Cobb's Pond

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 15.3 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

well full of water

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

needs new gasket

**Identification:**

Is the well labeled with the correct number?

Describe labeling: marking on post

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 14.80

Thickness of sediment accumulation (reported depth-present measurement): +1.50

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): (circled)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CP-MW-002 Location/Functional Area: Cobbs Pond

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: al Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 15.1 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

well full of water

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

needs more gaskets

**Identification:**

Is the well labeled with the correct number?

Describe labeling: marking on post

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 15.08

Thickness of sediment accumulation (reported depth-present measurement): 1.02

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CP-MW-003 Location/Functional Area: Cobb's Pond

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 17.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Arrows in one post

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Spray paint marking

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 17.80

Thickness of sediment accumulation (reported depth-present measurement): -1.20

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CL-MW-004 Location/Functional Area: Cobbs Pond

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling:  Spray paint markings

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 23.6 ft

Thickness of sediment accumulation (reported depth-present measurement): -1.4

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CP-MW-005 Location/Functional Area: Cobb's Pond  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 42.4 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Spray paint on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 43.27

Thickness of sediment accumulation (reported depth-present measurement): -1.87

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-02

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: CP-MW-006 Location/Functional Area: Cobbs Pond  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 20.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3  
 Are the posts positioned to prevent collision damage to the well? 

X		
	X	
X		
	X	
X		
X		
	X	

  
 Are any of the posts damaged or degraded? 


  
 Is a concrete pad installed? 


  
 Is the pad cracked or deteriorated? Frost Heaving? 


  
 Is steel protective casing installed? 

X		
X		

  
 Does the protective casing have a weep hole? 

X		

  
 Does vegetation around the well need clearing? 

	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box? 

		X
		X
		X
		X

  
 Does the well have a flush-mount box? 


  
 Is the traffic cover cracked or broken? 


  
 Is the concrete apron cracked or deteriorated? Frost Heaving? 

		X

**Identification:**

Is the well labeled with the correct number? 

X		

  
 Describe labeling: marking on casing

**Security:**

Does the well have a cap or lid? 

X		
X		
X		
X		

  
 Does the well have a weatherproof lock? 


  
 Does the lock secure well? 


  
 Does the inner casing have a water-tight cap? 

X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?) 

	X	
	X	

  
 Is the well casing loose, (at the surface?) 

	X	

  
 Is a measurement point marked at the top of well casing? 

X		

  
 Measured depth of the well from measurement point: 20.74  
 Thickness of sediment accumulation (reported depth-present measurement): -1.54  
 Are there any obstructions in the well? 


  
 Description of well bottom conditions (soft, hard, etc.):

Inspection Date: 10-2-07 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DET-1B Location/Functional Area: DemoArea2  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 5 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 40.5 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:** YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Needs Well ID Paint

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 38.61

Thickness of sediment accumulation (reported depth-present measurement): +1.89

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): Hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DET 2 Location/Functional Area: Demo Area 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 5 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 40.00 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 42.08

Thickness of sediment accumulation (reported depth-present measurement): -2.08

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): 2"

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DET3 Location/Functional Area: Demo Area 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 5 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 13.0 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: \_\_\_\_\_

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 16.09

Thickness of sediment accumulation (reported depth-present measurement): - 3.09

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): <1"

	X	
	X	
X		

_____
_____
_____

	X	
--	---	--

_____
-------

Inspection Date: 10-3-07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DET 4 Location/Functional Area: Demo Area 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screwed/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 5 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 12.0 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 13.92

Thickness of sediment accumulation (reported depth-present measurement): - 1.92

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): Q

Inspection Date: 10-3-07

Inspected by: CEL

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DA2 MW 104 Location/Functional Area: Demo Area 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 29.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass Plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 29.35

Thickness of sediment accumulation (reported depth-present measurement): +1.25

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): Hard

Inspection Date: 6-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DA2NW105 Location/Functional Area: Demo Area 2  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 5 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 16.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass Plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 16.32

Thickness of sediment accumulation (reported depth-present measurement): -.12

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): Hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DA2 MW-106 Location/Functional Area: Demo Area 2  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 7 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 18.1 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Erosion underneath pad

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brown Plat

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 16.90

Thickness of sediment accumulation (reported depth-present measurement): 1.2

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): Hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DA2 mw107 Location/Functional Area: Demo Area 2  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 5 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 16.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: tag - Marker

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 16.97

Thickness of sediment accumulation (reported depth-present measurement): -.47

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DA2 MW108 Location/Functional Area: Demo Area 2  
 Casing Type: ☐ Steel ☐ Stainless Steel ☐ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 5 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 16.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

Deep woods

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 17.29

Thickness of sediment accumulation (reported depth-present measurement): 7.39

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DA2 mw109 Location/Functional Area: Demo Area 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.1 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: tag marker

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

added new one

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 24.48

Thickness of sediment accumulation (reported depth-present measurement): -.38

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 1"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DA2-nw116 Location/Functional Area: Demo Area 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 21.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass Plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 22.45

Thickness of sediment accumulation (reported depth-present measurement): 1.55

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): Hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: John Miller



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DA2 MW111 Location/Functional Area: Demo Area 2  
 Casing Type: ☐ Steel ☐ Stainless Steel ☐ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 5 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 14.8 ft ☐ BGS or ☐ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: marker + tag

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 14.93

Thickness of sediment accumulation (reported depth-present measurement): -.13

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DA2 MW112 Location/Functional Area: Dem Area 2  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 5 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 16.6 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
X		

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 17.18

Thickness of sediment accumulation (reported depth-present measurement): -1.58

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): g

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: DA2 MW113 Location/Functional Area: Demo Area 2

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 5 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 16.1 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: tag plate marker

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 16.42

Thickness of sediment accumulation (reported depth-present measurement): 1.32

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.):                     

Inspection Date: 103

Inspected by:

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: EBG mw123 Location/Functional Area: Erie Burning Grounds  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 33.7 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 34.90

Thickness of sediment accumulation (reported depth-present measurement): -1.20

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): Cal

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: EBG MW 124 Location/Functional Area: Erie Burning Grounds

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

growing up

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 3286

Thickness of sediment accumulation (reported depth-present measurement): +1.04

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): 1"

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: EBG MW125 Location/Functional Area: Fire Burning Grounds

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 26.8 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

growing back in

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 27.58

Thickness of sediment accumulation (reported depth-present measurement): -1.78

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): hard

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: EBG MW126 Location/Functional Area: Erie Burning Grounds

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: painted + plate.

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 28.00

Thickness of sediment accumulation (reported depth-present measurement): -1.10

Are there any obstructions in the well?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

Inspection Date: 10-1-07

Inspected by: Cal

7' 1/2 33.33

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: EBW-MW-127 Location/Functional Area: Erie Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.40 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<u>na</u>
<input type="checkbox"/>	<input type="checkbox"/>	<u>na</u>
<input type="checkbox"/>	<input type="checkbox"/>	<u>na</u>
<input type="checkbox"/>	<input type="checkbox"/>	<u>na</u>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Spring paint on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 32.82

Thickness of sediment accumulation (reported depth-present measurement): -1.42

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: Oct. 1, 2007 Inspected by: Stephen Sturgeon



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: EB6710128 Location/Functional Area: Erie Burhing Grounds

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 28 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

✓		
	✓	
	✓	
	✓	
✓	<del>✓</del>	
✓	<del>✓</del>	
	✓	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

✓		✓
		✓
		✓
		✓

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate + Casing Id

✓		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

✓		
✓		
✓		
✓		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 28.31

Thickness of sediment accumulation (reported depth-present measurement): -31

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): (hard)

	✓	
	✓	
	✓	

	✓	
--	---	--

Inspection Date: 10/1/07

Inspected by: J Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: EBG-MW129 Location/Functional Area: Erie Burning Grounds

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 28.4 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 31.1

Thickness of sediment accumulation (reported depth-present measurement): -2.70

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 1"

	X	
X		

_____
_____
_____
_____

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

8.57  
28.49

**WELL INFORMATION:**

Well Number: EB-130 Location/Functional Area: Erie Burning Grounds

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 283 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: \_\_\_\_\_

Are the posts positioned to prevent collision damage to the well?

X		
---	--	--

Are any of the posts damaged or degraded?

	X	
--	---	--

Is a concrete pad installed?

X		
---	--	--

Is the pad cracked or deteriorated? Frost Heaving?

	X	
--	---	--

Is steel protective casing installed?

X		
---	--	--

Does the protective casing have a weep hole?

	X	
--	---	--

Does vegetation around the well need clearing?

X		
---	--	--

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

		X
--	--	---

Does the well have a flush-mount box?

		X
--	--	---

Is the traffic cover cracked or broken?

		X
--	--	---

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
--	--	---

**Identification:**

Is the well labeled with the correct number?

X		
---	--	--

Describe labeling: Spvg paint on casing

**Security:**

Does the well have a cap or lid?

X		
---	--	--

Does the well have a weatherproof lock?

X		
---	--	--

Does the lock secure well?

X		
---	--	--

Does the inner casing have a water-tight cap?

X		
---	--	--

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

	X	
--	---	--

Is the well casing loose, (at the surface?)

	X	
--	---	--

Is a measurement point marked a the top of well casing?

X		
---	--	--

Measured depth of the well from measurement point: 28.49

Thickness of sediment accumulation (reported depth-present measurement): -.19

Are there an obstructions in the well?

	X	
--	---	--

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

Inspection Date: 10-1-07

Inspected by: John Miche

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FBQmw1166 Location/Functional Area: Fuze + Booster Quarry  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 60 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 19.5 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint + plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 19.84

Thickness of sediment accumulation (reported depth-present measurement): -.34

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

_____
_____
_____
_____

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: PBQ mw 167 Location/Functional Area: Fuze + Booster Quarry

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 60 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 18.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint + plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 19.09

Thickness of sediment accumulation (reported depth-present measurement): -.19

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FBQmw 168 Location/Functional Area: Fuze + Booster Quarry

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 21.6 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint + plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 21.36

Thickness of sediment accumulation (reported depth-present measurement): +1.24

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): < 1"

	X	
	X	
X		

	X	
--	---	--

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FED mw149 Location/Functional Area: \_\_\_\_\_

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 18.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint + plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 18.21

Thickness of sediment accumulation (reported depth-present measurement): - .01

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FBQ mw 170 Location/Functional Area: Fuze + Booster Quarry

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint + plate

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 32.82

Thickness of sediment accumulation (reported depth-present measurement): -1.22

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: 10-3-07

Inspected by: CO



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FBQ MW 171 Location/Functional Area: Fuze + Booster Quarry  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 31.1 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: print - plate

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X	X	
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 31.52

Thickness of sediment accumulation (reported depth-present measurement): - .42

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): (hard)

	X	
	X	
X		

_____
_____
_____
_____

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FBQ mw 172 Location/Functional Area: Fuze + Booster Quarry

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 34.4 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

Y		
	X	
Y		
	X	
Y		
Y		
	Y	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		Y
		X
		Y

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

Y		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 34.53

Thickness of sediment accumulation (reported depth-present measurement): -1.13

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): <1"

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FBO mw 173 Location/Functional Area: Fuze + Booster Quarry  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 20 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 53 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4  
 Are the posts positioned to prevent collision damage to the well? 

X		
	X	
X		
	X	
X		
X		
	X	

  
 Are any of the posts damaged or degraded?  
 Is a concrete pad installed?  
 Is the pad cracked or deteriorated? Frost Heaving?  
 Is steel protective casing installed?  
 Does the protective casing have a weep hole?  
 Does vegetation around the well need clearing?

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box? 

		X
		X
		X
		X

  
 Does the well have a flush-mount box?  
 Is the traffic cover cracked or broken?  
 Is the concrete apron cracked or deteriorated? Frost Heaving?

**Identification:**

Is the well labeled with the correct number? 

X		
---	--	--

  
 Describe labeling: Paint + plate

**Security:**

Does the well have a cap or lid? 

X		
X		
X		
X		

  
 Does the well have a weatherproof lock?  
 Does the lock secure well?  
 Does the inner casing have a water-tight cap?

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?) 

	X	
	X	
X		

  
 Is the well casing loose, (at the surface?)  
 Is a measurement point marked a the top of well casing?  
 Measured depth of the well from measurement point: 51.79  
 Thickness of sediment accumulation (reported depth-present measurement): 1.21  
 Are there an obstructions in the well? 

	X	
--	---	--

  
 Description of well bottom conditions (soft, hard, etc.): 1" orange accumulation

Inspection Date: 10-3-07 Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FBQ MW 174 Location/Functional Area: Fuze + Booster Quarry  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 26.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint + plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 22.95

Thickness of sediment accumulation (reported depth-present measurement): 3.25

Are there any obstructions in the well?

Description of well bottom conditions (soft/hard, etc.): 1/2"

	X	
	X	
X		
	X	

Inspection Date: 10-3-01

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FBO mw 175 Location/Functional Area: Fuze + Booster Quarry  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 25.16 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
	X	
	X	

_____
_____
_____
_____
_____
_____
_____

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

_____
_____
_____
_____

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint + tag

X		
---	--	--

_____
-------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		X
X		
X		
X		

_____
_____
_____
_____

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 25.91

Thickness of sediment accumulation (reported depth-present measurement): -31

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): <1"

	X	
	X	
X		
	X	

_____
_____
_____
_____

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FR39m176 Location/Functional Area: Fuze + Booster Quarry  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/~~Above-ground~~ Completion: \_\_\_\_\_  
 Reported Construction Depth: 23.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint / plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 24.12

Thickness of sediment accumulation (reported depth-present measurement): 7.82

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): >1"

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: FBQ MW177 Location/Functional Area: Fuze + Booster Quarry

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: mint & plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 24.99

Thickness of sediment accumulation (reported depth-present measurement): -.19

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): >1"

Inspection Date: 10-3-07

Inspected by: Gal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 4NW-024 Location/Functional Area: Landfill North of Winklepeck

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.7 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 22.65

Thickness of sediment accumulation (reported depth-present measurement): +0.05

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: John Miller



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 2NW-MW-025 Location/Functional Area: Landfill North of Winklepeck

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 20.4 ft ☐ BGS or ☐ BTOC (chose one only)

19.9

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 20.45

Thickness of sediment accumulation (reported depth-present measurement): -55

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: 11W-MW-026 Location/Functional Area: Landfill North of Winklepeck

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.8 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate on casing cap

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 26.12

Thickness of sediment accumulation (reported depth-present measurement): - .32

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-02

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: LVW-027 Location/Functional Area: Landfill North of Winklepeck

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 26.7 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate on top cover

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 29.96

Thickness of sediment accumulation (reported depth-present measurement): -1.26

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): (hard)

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: NTA-mw-107 Location/Functional Area: NACA Test Area

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

*paint peeling, rust*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate on cap, markings on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 24.44

Thickness of sediment accumulation (reported depth-present measurement): + .16

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: MTA-mw-108 Location/Functional Area: NACA Test Area

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.4 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

*paint peeling, rust*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate on cap, markings on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 24.61

Thickness of sediment accumulation (reported depth-present measurement): - .21

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: MTA-MW-109 Location/Functional Area: NACA Test Area

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 20.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling, rust  
pad is loose

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plates, markings on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 12.73 21.01

Thickness of sediment accumulation (reported depth-present measurement): -.11

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: NTA-MW-110 Location/Functional Area: NACA Test Area

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 29.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
X		
X		
	X	
X		
X		
	X	

*paint peeling, rust*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Markings on casing

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 29.82

Thickness of sediment accumulation (reported depth-present measurement): -1.22

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

	X	
--	---	--

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: NTA mw111 Location/Functional Area: NACA Test Area

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.4 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

growing up.

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Paint + Plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 22.18

Thickness of sediment accumulation (reported depth-present measurement): 7.22

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-3-01

Inspected by: CD



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: NJA mw 112 Location/Functional Area: NACA Test Area  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 26.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: paint plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 26.76

Thickness of sediment accumulation (reported depth-present measurement): +1.14

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): <1"

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: NTA m2113 Location/Functional Area: NACA Test Area

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 30.6 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 29.41

Thickness of sediment accumulation (reported depth-present measurement): + 1.19

Are there an obstructions in the well?

Description of well bottom conditions (soft/hard, etc.): 2"

	X	
	X	
X		
	X	

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: NTA mw 114 Location/Functional Area: NACA Test Area

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 22.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint + plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 22.91

Thickness of sediment accumulation (reported depth-present measurement): -1.31

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard etc.): hard

	X	
	X	
X		
	X	

Inspection Date: 10-3-07

Inspected by: CEL

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: NT4 mw 115 Location/Functional Area: NACA Test Area  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 25.2 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint + plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 25.41

Thickness of sediment accumulation (reported depth-present measurement): - .21

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: NT4mw116 Location/Functional Area: NACA Test Area  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 22.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint + plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 22.69

Thickness of sediment accumulation (reported depth-present measurement): -.09

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): Q

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: N74-mw-117 Location/Functional Area: NACA Test Area  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 27.4 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint + plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 27.61

Thickness of sediment accumulation (reported depth-present measurement): - .21

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): 0

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: NTA mW 118 Location/Functional Area: NACA Test Area

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint + plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 24.82

Thickness of sediment accumulation (reported depth-present measurement): -1.22

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): ⓪

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: RQL MW006 Location/Functional Area: Ramsdell Quarry Landfill

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 20 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 41.4 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

peeling paint

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 42.12

Thickness of sediment accumulation (reported depth-present measurement): -1.72

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-1-07

Inspected by: Cal



8.1  
8.6

Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST

WELL INFORMATION:

Well Number: RALMW-007 Location/Functional Area: Ramsdell Quarry Landfill  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 18.2 ft ☐ BGS or ☒ BTOC (chosed one only)

INSPECTION ITEMS

Well-Head Completion:

YES NO N/A COMMENTS

Above-ground completion:

Number of Guard posts at well: 0

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

	X	
		NA
X		
	X	
X		
	X	
	X	


Flush-mount completion:

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X


Identification:

Is the well labeled with the correct number?

Describe labeling: Spray paint on casing

X		
---	--	--

--

Security:

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		


Down-hole Condition:

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 18.6

Thickness of sediment accumulation (reported depth-present measurement): -.40

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): Hard

	X	
	X	
X		


	X	
--	---	--

--

Inspection Date: Oct 1, 2007 Inspected by: Stephen Sturgeon

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: RGLMw008 Location/Functional Area: Ramsdell Quarry Landfill

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 18.5 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 0

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Hinge Broken on outer cap

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass Plate + Well Number

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 18.72

Thickness of sediment accumulation (reported depth-present measurement): -.22

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.):

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: J. Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: RGL MW609 Location/Functional Area: Ramsdell Quarry Landfill

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 18.4 ft ☐ BGS or ☒ BTOC (chase one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 0

Are the posts positioned to prevent collision damage to the well?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

*Hinge Broken on outer casing*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass Plate & Well ID Mark

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Measured depth of the well from measurement point: 18.9

Thickness of sediment accumulation (reported depth-present measurement): -1.5

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): 0

Inspection Date: 10-1-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: RQL MW010 Location/Functional Area: Ramsdell Quarry Landfill  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 20 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 35.1 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 2

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

peeling paint

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 35.42

Thickness of sediment accumulation (reported depth-present measurement): -1.32

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): Q

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: RQL MW011 Location/Functional Area: Ramsdell Quarry Landfill

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 20 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 34.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

peeling paint

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 35.44

Thickness of sediment accumulation (reported depth-present measurement): 7.84

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): hard

Inspection Date: 10-1-07

Inspected by: Carl

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: ROL MW012 Location/Functional Area: Ramsden Quarry Landfill

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

peeling paint

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 32.76

Thickness of sediment accumulation (reported depth-present measurement): -1.26

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: RQL MW013 Location/Functional Area: Ramsdell Quarry Landfill  
 Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 36.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

peeling paint

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 36.57

Thickness of sediment accumulation (reported depth-present measurement): 7.03

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: Col

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: RQL MW014 Location/Functional Area: Ramsdell Quarry Landfill

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 31.6 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

peeling paint

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 31.44

Thickness of sediment accumulation (reported depth-present measurement): + .16

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-1-07

Inspected by: Cal



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: ROL mw015 Location/Functional Area: Ramsden Quarry Landfill

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 41.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

peeling paint

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 42.14

Thickness of sediment accumulation (reported depth-present measurement): -1.54

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: RDL MW016 Location/Functional Area: Ramsdell Quarry Landfill

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 41.4 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Peeling paint</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Identification:**

Is the well labeled with the correct number?

Describe labeling: mint

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-------------------------------------	--------------------------	--------------------------	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 43.82

Thickness of sediment accumulation (reported depth-present measurement): -2.22

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: RQL MW017 Location/Functional Area: Pompsell Quarry Landfill

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
X		
	X	

peeling paint

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: paint

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 32.86

Thickness of sediment accumulation (reported depth-present measurement): -1.36

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

	X	
	X	
X		
	X	

Inspection Date: 10-1-07

Inspected by: Cal

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBG-MNW-005 Location/Functional Area: Winklepeck Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.4 ft ☐ BGS or ☒ BTOC (chosed one only)

21.1

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
	X	
X		
	X	
X		
	X	
X		

Square casing  
Wings are rusting

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		X
		X
		X
		X

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate

X		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

X		
X		
X		
X		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 21.22

Thickness of sediment accumulation (reported depth-present measurement): -.12

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): Hard

	X	
	X	
X		
	X	

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBF-MW-006 Location/Functional Area: Winklepeck Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 20.4 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

X		
✓	W	
✓		
	✓	
✓		
X		
	✓	

Concrete tops not on posts

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

		✓
		✓
		✓
		✓

**Identification:**

Is the well labeled with the correct number?

Describe labeling: BRASS plate in cement

✓		
---	--	--

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

✓		
✓		
✓		
✓		

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 20.29

Thickness of sediment accumulation (reported depth-present measurement): 1.11

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

	✓	
	✓	
✓		
	✓	

Inspection Date: 10-2-02

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: W15G-MW-007 Location/Functional Area: Winklepeck Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 26.3 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

tops off

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate in concrete

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 26.50

Thickness of sediment accumulation (reported depth-present measurement): - .20

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-02-07 Inspected by: John Munn

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: EWBG MW-008 Location/Functional Area: Winklepeck Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 21.0 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	-------------------------------------	--------------------------

Concrete tops off top

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 20.92

Thickness of sediment accumulation (reported depth-present measurement): 1.08

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-1-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBG-MW-009 Location/Functional Area: Winklepeck Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 3

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: brass plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 24.40

Thickness of sediment accumulation (reported depth-present measurement): -.40

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: John Miller



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBG-MW-010 Location/Functional Area: Winklepeck Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.6 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Hornets

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 23.50

Thickness of sediment accumulation (reported depth-present measurement): + .1

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBG-MW-011 Location/Functional Area: W mld peck burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

~~Screened~~/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 60 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 24.0 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 23.96

Thickness of sediment accumulation (reported depth-present measurement): +1.04

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-02 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBG-MW-012 Location/Functional Area: Wmkle peck Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 32.0 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*one pole is leaning over,  
poles need painting*

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 31.73

Thickness of sediment accumulation (reported depth-present measurement): +1.27

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): hard

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBG-MW-013 Location/Functional Area: Winklespeck Burning Grounds  
 Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC  
 Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft  
 Flush-mount/Above-ground Completion: \_\_\_\_\_  
 Reported Construction Depth: 23.9 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 24.22

Thickness of sediment accumulation (reported depth-present measurement): -1.32

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): (hard)

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBC-MW-0147<sup>gr</sup> Location/Functional Area: Winklepeck Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25 ft ☐ BGS or ☐ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Describe labeling: Not marked

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 25.09

Thickness of sediment accumulation (reported depth-present measurement): -.09

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft hard, etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBG-MW-015 Location/Functional Area: Winklepede Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.8 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 23.62

Thickness of sediment accumulation (reported depth-present measurement): +1.18

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBG-MW-016 Location/Functional Area: Winklepeck Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 25.4 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

paint peeling

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate in concrete

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 25.30

Thickness of sediment accumulation (reported depth-present measurement): +1.10

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-2-01

Inspected by: John M. Her

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: WBG-MW-017 Location/Functional Area: Winklepeck Burning Grounds

Casing Type: ☒ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 23.9 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 23.82

Thickness of sediment accumulation (reported depth-present measurement): +0.08

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard etc.): \_\_\_\_\_

Inspection Date: 10-2-07

Inspected by: John Miller



**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: MBS-MW-001 Location/Functional Area: Mustard Agent Serial Site

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 31.5 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: Brass plate, markings on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 31.03

Thickness of sediment accumulation (reported depth-present measurement): + .47

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.):

Part is under water

Inspection Date: 10-3-07 Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: MBS-MW-002 Location/Functional Area: Mustard Agent Burial Site

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 6 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 30.7 ft ☐ BGS or ☒ BTOC (chosed one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: BRASS plate, markings on casing

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked at the top of well casing?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Measured depth of the well from measurement point: 30.44

Thickness of sediment accumulation (reported depth-present measurement): +126

Are there any obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft, hard, etc.): ⊙

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: MBS-mw-003 Location/Functional Area: Mustard Agent Burial Site

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 30.5 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate, markings on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked at the top of well casing?

Measured depth of the well from measurement point: 30.81

Thickness of sediment accumulation (reported depth-present measurement): - .31

Are there any obstructions in the well?

Description of well bottom conditions (soft, hard, etc.): \_\_\_\_\_

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: MRS-MW-004 Location/Functional Area: Mustard Agent Burial Site

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 27.0 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

☒ ☐ ☐

Are any of the posts damaged or degraded?

☐ ☒ ☐

Is a concrete pad installed?

☒ ☐ ☐

Is the pad cracked or deteriorated? Frost Heaving?

☐ ☒ ☐

Is steel protective casing installed?

☒ ☐ ☐

Does the protective casing have a weep hole?

☒ ☐ ☐

Does vegetation around the well need clearing?

☐ ☒ ☐

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

☐ ☐ ☒

Does the well have a flush-mount box?

☐ ☐ ☒

Is the traffic cover cracked or broken?

☐ ☐ ☒

Is the concrete apron cracked or deteriorated? Frost Heaving?

☐ ☐ ☒

**Identification:**

Is the well labeled with the correct number?

☒ ☐ ☐

Describe labeling: BRASS plate, markings on casing

**Security:**

Does the well have a cap or lid?

☒ ☐ ☐

Does the well have a weatherproof lock?

☒ ☐ ☐

Does the lock secure well?

☒ ☐ ☐

Does the inner casing have a water-tight cap?

☒ ☐ ☐

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

☐ ☒ ☐

Is the well casing loose, (at the surface?)

☐ ☒ ☐

Is a measurement point marked at the top of well casing?

☒ ☐ ☐

Measured depth of the well from measurement point: 26.66

Thickness of sediment accumulation (reported depth-present measurement): + .34

Are there any obstructions in the well?

☐ ☒ ☐

Description of well bottom conditions (soft, hard, etc.): soft

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: MBS-mw-005 Location/Functional Area: Mustard Agent Burial Site

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 30.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Are any of the posts damaged or degraded?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a concrete pad installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Is the pad cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is steel protective casing installed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the protective casing have a weep hole?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does vegetation around the well need clearing?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Does the well have a flush-mount box?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the traffic cover cracked or broken?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

**Identification:**

Is the well labeled with the correct number?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Describe labeling: \_\_\_\_\_

**Security:**

Does the well have a cap or lid?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the well have a weatherproof lock?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the lock secure well?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is the well casing loose, (at the surface?)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Is a measurement point marked a the top of well casing?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	-------------------------------------	--------------------------

Measured depth of the well from measurement point: 30.12

Thickness of sediment accumulation (reported depth-present measurement): +.08

Are there an obstructions in the well?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Description of well bottom conditions (soft hard, etc.): \_\_\_\_\_

Inspection Date: 10-3-07

Inspected by: John Miller

**Ravenna Army Ammunition Plant  
WELL INSPECTION CHECKLIST**

**WELL INFORMATION:**

Well Number: MBS MW-006 Location/Functional Area: Mustard Agent Burial Site

Casing Type: ☐ Steel ☐ Stainless Steel ☒ PVC

Screened/Open-Hole Well Type: \_\_\_\_\_ Monitor Interval Length: 10 ft

Flush-mount/Above-ground Completion: \_\_\_\_\_

Reported Construction Depth: 28.2 ft ☐ BGS or ☒ BTOC (chose one only)

**INSPECTION ITEMS**

**Well-Head Completion:**

YES NO N/A COMMENTS

**Above-ground completion:**

Number of Guard posts at well: 4

Are the posts positioned to prevent collision damage to the well?

Are any of the posts damaged or degraded?

Is a concrete pad installed?

Is the pad cracked or deteriorated? Frost Heaving?

Is steel protective casing installed?

Does the protective casing have a weep hole?

Does vegetation around the well need clearing?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Flush-mount completion:**

Is the traffic cover securely bolted to the flush-mount box?

Does the well have a flush-mount box?

Is the traffic cover cracked or broken?

Is the concrete apron cracked or deteriorated? Frost Heaving?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Identification:**

Is the well labeled with the correct number?

Describe labeling: Brass plate, markings on casing

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

**Security:**

Does the well have a cap or lid?

Does the well have a weatherproof lock?

Does the lock secure well?

Does the inner casing have a water-tight cap?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Down-hole Condition:**

Is the well casing bent, corroded, or broken (at the surface?)

Is the well casing loose, (at the surface?)

Is a measurement point marked a the top of well casing?

Measured depth of the well from measurement point: 28.22

Thickness of sediment accumulation (reported depth-present measurement): 1.02

Are there an obstructions in the well?

Description of well bottom conditions (soft, hard, etc.):

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Inspection Date: 10-3-07

Inspected by: John Miller

**APPENDIX D**

**LABORATORY AUDIT REPORT**



**Environmental Quality Management, Inc.**

**Draft Audit Report  
TestAmerica Laboratories, Inc.  
North Canton, Ohio**

Ms. Dorothy Leeson  
Quality Assurance Manager  
TestAmerica Laboratories, Inc.  
TA North Canton  
4101 Shuffel Drive NW  
North Canton, Ohio 44720

October 16, 2007

Dear Ms Lesson,

On behalf of Environmental Quality Management, Inc. (EQ), I would like to thank you and the staff at TestAmerica (TA) North Canton for your cooperation and assistance during the on-site audit of your facility on July 24, 2007.

The audit was intended to focus on the data reporting process of TA North Canton, which actively plays a role in the handling of EQ samples. This Audit Report reflects issues observed during the on-site evaluation and any associated items discovered during the July 2007 data package review. Applicable processes covered during this audit were:

- Viewing of the Laboratory Facility (lay-out, cleanliness, equipment, and space)
- Review of Sample Receiving and custody procedures
- Interviews with laboratory management, quality assurance personnel, and technical staff
- Review of techniques employed to communicate client-specific analytical requirements to technical personnel within the laboratory and general project management within TA.
- Review of data reporting and records retention.

The purpose of this audit was to evaluate your facility for continued use by EQ in support of the U.S Army Corps of Engineers (USACE) Former Ravenna Army Ammunition Plant contract currently in place. It was also used as a communication mechanism to address recent laboratory performance issues identified by EQ personnel relevant to TA North Canton's analytical documentation in support of EQ's USACE contract (see General Comments section of this report for further discussion).

Reviewed documents include the July 2007 data packages and the Laboratory Quality Manual. A modified NELAC Audit checklist, attached to this Audit Report, was used to assist in ascertaining TA North Canton's ability to provide complete, correct, and compliant data packages.



The audit was conducted by Heather Medley of EQ, and included participation from several key TA North Canton personnel. TA North Canton personnel interviewed for this audit include:

Dorothy Leeson, Quality Assurance Manager  
Mark Loeb, Project Manager  
Tom Stiller, Group Leader GC/MS Volatiles  
Mark Ulman, Analyst GC/MS Semi-Volatiles  
Angela Serra, Group Leader GC Semi-Volatiles  
Olguita Colon, Group Leader Wet Chem  
Heather Bosworth, Reporting

TA North Canton is a mature laboratory, which is staffed with an extremely qualified and competent team of managers, chemists, and technicians. Facilities and instrumentation are adequately suited to meet the current workload of the laboratory. During the course of this audit, EQ identified five proficiencies, seven findings, and three observations. These are detailed in the following pages.

The result of this audit demonstrates that TA North Canton is capable of meeting the Quality Systems and Contractual Requirements necessary to analyze EQ samples in support of LCG work. Basic systems are in place to ensure data provided is legally defensible. The laboratory maintains the necessary personnel, equipment, licenses, certifications, and administrative controls necessary to meet contractual criteria. It will be my recommendation to EQ management, assuming issues identified during the course of this audit are satisfactorily resolved, that TA North Canton continues to provide analytical support to EQ on USACE/RVAAP currently under contract.

As a response to this audit, TA North Canton is requested to submit a Corrective Action Plan (CAP) to Heather Medley within 30 calendar days of receipt of this audit report, addressing each finding noted. Observations do not require a formal CAP, but must be addressed with a brief response. Responses to findings should contain the following critical items: a formal response; an itemized list of corrective actions performed to address a finding; an estimated scheduled date for completion (including applicable implementation dates); appropriate supporting documentation (i.e. procedure/policy revisions, additional staff training, Quality Assurance Plan revisions, and QA officer verifications of CAP implementation).

If for any reason TA North Canton requires additional clarification or feels that any of these findings have been improperly evaluated, please feel free to contact me. Again, thank you for your assistance and cooperation.

Sincerely,

Heather Medley  
Project Chemist  
Environmental Quality Management, Inc.

Enclosure

cc: with enclosure:  
Jackie Doan, EQ  
Erik Corbin, EQ  
John Miller, EQ

## **Audit Proficiencies**

- 1.) TA North Canton utilizes an electronic Internal Chain of Custody via scanning bar-code labels affixed to sample containers. This documents possession of samples from time of receipt until disposal and allows the lab to electronically generate ICOC forms.
- 2.) It was noted by the EQ auditor that most employees have been with the North Canton facility for extended periods of time; it would appear that employee turnover is not a significant problem faced by this particular laboratory.
- 3.) The General Chemistry lab implemented reporting of the standard IDs and true values. The report format allows recoveries to be calculated with ease.
- 4.) Sample log-in personnel efficiently and effectively document sample receipts.
- 5.) The electronic compilation of data packages is unique.

## **Audit Findings**

**Finding #1:** Standard and reagent origin, receipt, and preparation information for organic analyses is not routinely included in data packages.

**Standard(s):** NELAC Chapter 5, Section 5.4.12.2.5.3

**Status:** Open

**Discussion:** The data package reviews for April and July 2007 identified that the standard reagent and prep documentation was not included. A validator would not be able to recalculate QC recoveries from the standards used due to the lack of the documentation.

**Finding #2:** The July 2007 data packages did not include the PCB and Pesticide QC/MRL summary forms

**Standard(s):** NELAC Chapter 5, Section 5.4.12.2.5.3 and Section 5.5.10.1

**Status:** Open

**Discussion:** MRL summary forms were requested for both April and July 2007 data packages. The LCG requires QC/MRL checks to be analyzed and reported.

**Finding #3:** CCV %Ds and MRL %Ds were not included in the QA/QC section. This information was included in the raw data at the end of the ICAL information for organic analyses.

**Standard(s):** LCG Section 2 "Data Reporting", Item Number 5, page 76

**Status:** Open

**Discussion:** In recent data packages the ICAL raw data had to be reviewed to find the CCV %D and MRL %Ds.

**Finding #4:** The case narratives are very generic and do not describe all non-conformances.

**Standard(s):** LCG Section 3.5.3 and Section 2 "Data Reporting", Item Number 3, page 75

**Status:** Open

**Discussion:** The case narratives describe basic QC item non-conformances, i.e. MS/MSD failures, blank contamination, and results between the MDL and RL. The

case narratives do not document ICV, CCV, and/or MRL compliance/non-compliance to the LCG criteria.

**Finding #5:** The analytical result forms report the date sampled, extracted, and analyzed on page 1 only.

**Standard(s):** LCG, Table 2-1 and Section 2 "Data Reporting", Item Number 4 pages 75 and 76

**Status:** Open

**Discussion:** When analytical result forms were multiple pages in length, the date sampled, extraction date, and analysis date were not carried over to the subsequent pages.

**Finding #6:** All results for samples with multiple dilutions were not reported.

**Standard(s):** LCG Table 2-1

**Status:** Open

**Discussion:** Pesticides samples were diluted for both the April and July sample events. All analyses were not reported in the data packages.

**Finding #7:** Pesticide results have been reported with elevated reporting limits with non-detect results above the PQLs listed in the QAPP. The extracts were not cleaned prior to analysis.

**Standard(s):** LCG Table 2-2

**Status:** Open

**Discussion:** Samples for pesticide analyses had to be diluted due to matrix interference. The dilution raised the reporting limits. All analytes in FWGLL1mw-083c-0486-GW and FWGLL1mw-DUP3-0499-GW were reported as non-detects with RL above the QAPP PQLs.

## **Audit Observations**

- 1.) The data packages are not complete when reported. This results in follow-up questions and actions during the data review process due to information not being provided or it is unclear what the lab did and why.
- 2.) The data reporting system appears to allow for additional comments to be added to the case narratives. However, it doesn't appear to be consistently happening.
- 3.) For the July event, 3 of 4 SDGs had the VOAs analyzed on an instrument that had Bromomethane recover low in the ICV. There was no comment made in the case narrative of the ICV failure.

## **General Comments**

The data packages need to explain all the issues, situations, LCG QC failures encountered from the time of sample receipt to data reporting. The objective would be for a person not involved with the project to review the data package and be able to find all the necessary information and understand what happened and why.

It appears the data packages are not being reviewed to ensure all the required summary forms and raw data are included.

**TestAmerica – North Canton Data Reporting Audit Checklist**

<b>Item No.</b>	<b>Area Examined</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Comments:</b>
<b>1.</b>	<b>Organization and Management:</b>				
1.1	a) Has the lab specified and documented the responsibility, authority, and interrelationship of all personnel who manage, perform, or verify work affecting the quality of tests?	X			
	b) Has the lab provided supervision by persons familiar with the test methods and procedures, the objective of the test, and the assessment of the results?	X			
	c) Does the lab have a technical manager who has overall responsibility for the technical operations?	X			The Technical Director is Mark Bruce.
	d) Does the lab have a quality manager who has responsibility for the quality system and its implementation? Does the quality manager have direct access to the highest level of management at which decisions are taken on lab policy or resources, and to the technical manager (in some labs the quality manager may also be the technical manager)?	X			The Quality Manager is Dorothy Lesson.
<b>2.</b>	<b>Quality System, Audit and Review:</b>				
2.1	Does quality manual and related quality documentation contain:				
	a) Procedures for control and maintenance of documentation?	X			
	b) Identification of the lab's approved signatories for reports?	X			The Project Manager has final signature on reports.
2.2	QA/QC policies, procedures, and practices:				
	a) Is a documented corrective action plan implemented when analytical results fail to meet QC criteria?		X		A NCM is not always initiated when LCG QC criteria is not met.
	b) Do records indicate what corrective action has been taken when results fail to meet QC criteria?		X		If a NCM was initiated, a corrective action would be noted. However, a NCM or corrective action is not implemented.
	c) Do supervisory personnel review the data calculations and QC results?	X			Supervisory or second analyst

### TestAmerica – North Canton Data Reporting Audit Checklist

Item No.	Area Examined	Yes	No	N/A	Comments:
	d) Are deviations or deficiencies in QC reported to management, and are such reports recorded?	X			Deviations and/or deficiencies are documented through the NCM process to management.
3.	<b>Test Methods:</b>				
3.1	Does the lab have documented procedures for data handling, reporting, and record keeping? Are calculation and data transfers subject to appropriate checks?	X			The LQM states the process for data reporting. There are other SOPs, but are in revision.
4	<b>Records:</b>				
4.1	Is the history of the sample readily understood through the documentation? (NELAC 5.4.12.1.5)	X			Review of the entire data package (summary forms and raw data) is required to understand the history of sample. However, review of the raw data is outside the scope of LCG data review criteria.
4.2	Are records maintained of sample preservation including appropriateness of sample container and compliance with holding time requirement (5.4.12.2.5.1.a)	X			
4.3	Do the sample handling records include sample identification, receipt, acceptance or rejection and log-in? (5.4.12.2.5.1.b)	X			
4.4	Does the laboratory retain all original raw data, whether hard copy or electronic, for calibrations, samples, and quality control measures, including analysts' work sheets and data output records? (NELAC 5.4.12.2.5.2.a)	X			The lab keeps a combination of hard copy and electronic.
4.5	Does the laboratory retain copies of final reports? (NELAC 5.4.12.2.5.2.c)	X			Yes, since the hard copy is compiled electronically.
4.6	Do analytical records include the following essential information associated with an analysis, such as strip charts, tabular printouts, computer data files, analytical notebooks, and run logs: (NELAC 5.4.12.2.5.3)				
	a) Laboratory sample ID code	X			
	b) Date of analysis and time of analysis is required or when time critical steps are included in the analysis, e.g., extractions and incubations.	X			
	c) Instrumentation identification and instrument operating conditions/parameters	X			



### TestAmerica – North Canton Data Reporting Audit Checklist

Item No.	Area Examined	Yes	No	N/A	Comments:
	d) Analysis type	X			
	e) All manual calculations, e.g., manual integrations	X			
	f) Analyst's or operator's initials/signature	X			
	g) Sample preparation including cleanup, separation protocols, ID codes, volumes, weights, instrument printouts, meter readings, calculations, reagents	X			
	h) Sample analysis	X			
	i) Standard and reagent origin, receipt, preparation, and use		X		Standard prep information for organics had not been included in data packages.
	j) Calibration criteria, frequency and acceptance criteria	X			However acceptance criteria may not follow LCG criteria.
	k) Data and statistical calculations, review, confirmation, interpretation, assessment, and reporting conventions	X			
	l) Quality control protocols and assessment		X		MRL check summaries were not included in the July 2007 data packages for PCB and Pesticide analyses. Documentation of MRL checks meeting LCG criteria was not in the data packages.
	n) Method performance criteria including expected quality control requirements		X		The MS/MSD limits follow in-house limits instead of LCG criteria. The SOW requires the lab will follow the LCG version 5.
4.7	Does the laboratory ensure that the essential standards outlined in Appendix D or mandates methods or regulations are incorporated into their method manuals?		X		No specific SOP was provided regarding reviewing data in accordance with LCG criteria or how to document the review.
5.	<b>Certificates and Reports:</b>				
5.1	Are the lab's results of each test or series of tests carried out, reported accurately, clearly, unambiguously, and objectively in accordance with any instructions in the test methods? (NELAC 5.5.10.1)	X			
5.2	Are the results normally reported in a test report or test certificate, including all the information requested by the client and necessary for the interpretation of the test results and all information required by the method used? (NELAC 5.5.10.1)		X		July 2007 data packages were missing MRL summary reports for PCBs and Pesticides.

### TestAmerica – North Canton Data Reporting Audit Checklist

Item No.	Area Examined	<u>Yes</u>	<u>No</u>	<u>N/A</u>	Comments:
5.3	Does the facility management ensure that the appropriate report items are in the report to the regulatory authority if such information is required? (NELAC 5.5.10.1)				
5.4	Does each certificate or report include at least the following information: (NELAC 5.5.10.2a-I)				
	a) A title, e.g. "Calibration Certificate", "Test Report", or "Test Certificate"?	X			
	b) Name and address of lab, and location where the test was carried out, if different from the address of the lab and phone number with name of contact person for questions?	X			
	c) Unique identification of the certificate or report (such as serial number), and on each page an identification in order to ensure that the page is recognized as a part of the test report, and a clear identification of the end of the test report?	X			
	d) Name and address of client, where appropriate?	X			
	e) Identification of the method used?	X			
	f) A description of, the condition of, and unambiguous identification of the samples, including the client identification code?	X			
	g) Date of receipt of test item and date(s) of performance of test, where appropriate?	X			
	h) Reference to the sampling plan and procedures used by the laboratory or other bodies where plan and procedures are relevant to the validity or application of the results?	X			The report references the analytical methods and the data package was in compliance with NELAC, but no indication the LCG was also followed.
	i) Identification of the instrument used for analysis?	X			
	j) The name, function, and signature or equivalent electronic identification of person authorizing the test report, and date of issue?	X			

### TestAmerica – North Canton Data Reporting Audit Checklist

Item No.	Area Examined	<u>Yes</u>	<u>No</u>	<u>N/A</u>	Comments:
	k) Where relevant, a statement to the effect that the results relate only to the samples?	X			
	l) A statement that the certificate or report shall not be reproduced, except in full, without the written approval of the lab?	X			
5.5	Does the laboratory certify that the test results meet all requirements of NELAC or provide reasons and/or justification if they do not? (NELAC 5.5.10.2.m)	X			
5.6	Is particular care and attention paid to the arrangement of the certificate or report, especially with regard to presentation of the test data and ease of assimilation by the reader?	X			
5.7	Is a table or QC/MRL (%D) and CCV (%D) provided in the QC/QA section (LCG Section 2 "Data Reporting", Number 5, page 76)?		X		The CCVs %D and MRL %Ds are in the raw data at the end of the ICAL information.
5.8	Does the case narrative describe any non-conformances with SW846 methodology and /or the Table of Method Quality Objectives (LCG Tables) (LCG, Section 3.5.3 and Section 2 "Data Reporting", number 3, page 75)		X		The case narratives are very generic. They have covered items similar to MS/MSD failures, Method Blank contamination, and results between the MDL and RL. From the case narratives it is not apparent if the lab's reviewed the ICV, CCV, and MRL checks for compliance to the LCG criteria.
5.9	Does the report contain the date sampled, extracted, and analyzed on each analytical sheet? (LCG Table 2-1)	X			Yes, but only on the first page of a sample result. If the result is multiple pages, e.g., 3 pages only page one contains the pertinent information. The other pages contain the lab sample ID.
5.10	If dilutions are performed, are all the dilutions reported in the data package? (LCG Table 2-1)		X		There have been pesticides analyses that need to be diluted due to matrix interference. However, the lesser-diluted runs were not included in the data package for informational purposes.
5.11	Is analytical data reported with elevated reporting limits due to dilutions and are non-detect results? (LCG, Table 2-2)	X			Pesticides have been reported with elevated reporting limits and non-detect.

### TestAmerica – North Canton Data Reporting Audit Checklist

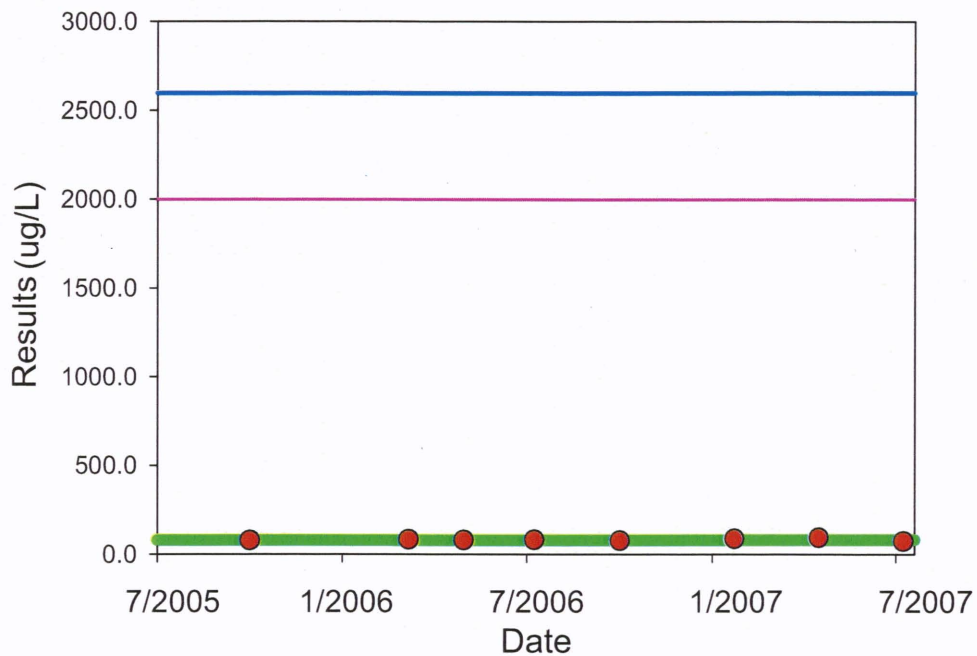
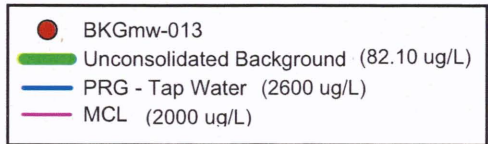
Item No.	Area Examined	<u>Yes</u>	<u>No</u>	<u>N/A</u>	Comments:
5.12	Were attempts made for cleaning the sample matrix? (LCG, Table 2-2)		X		Pesticide extracts are not cleaned.
5.13	Are results for Inorganic and Organic analyses reported per MRL? (LCG Table 2-1)	X			
5.14	Are the MDLs reported on the result forms? (LCG Table 2-1)	X			

References:

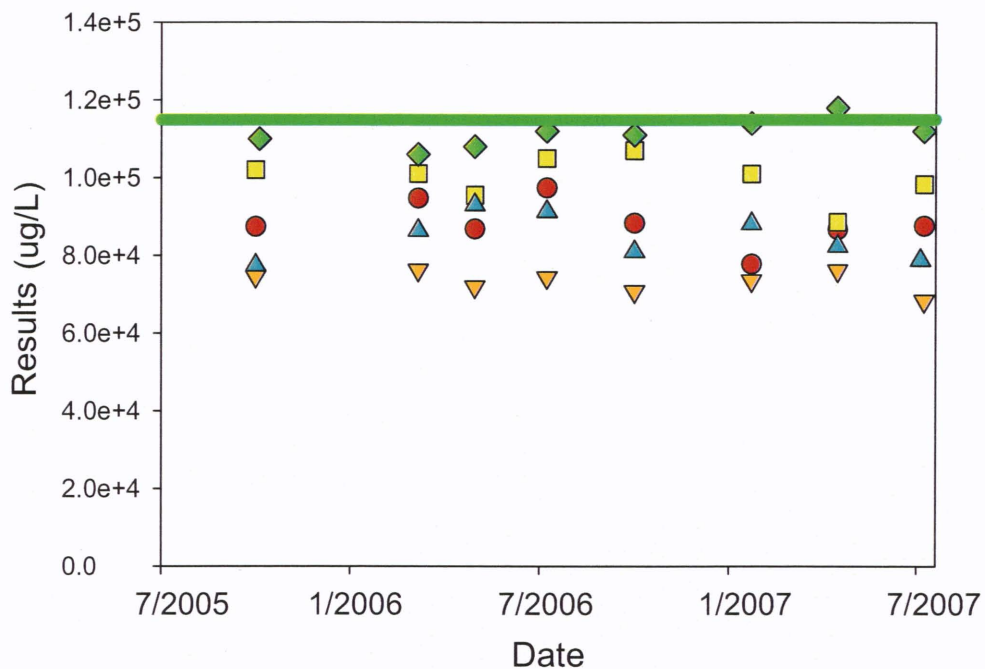
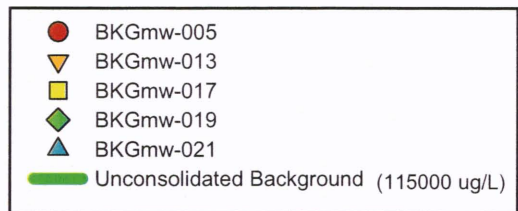
1. "Chapter 5 Checklist, Revision Ch5Rev7b based on 2002 NELAC Standards"
2. "Louisville Chemistry Guidelines (LCG)", Version 5, June 2002

**APPENDIX E**  
**TIME-TREND GRAPHS**

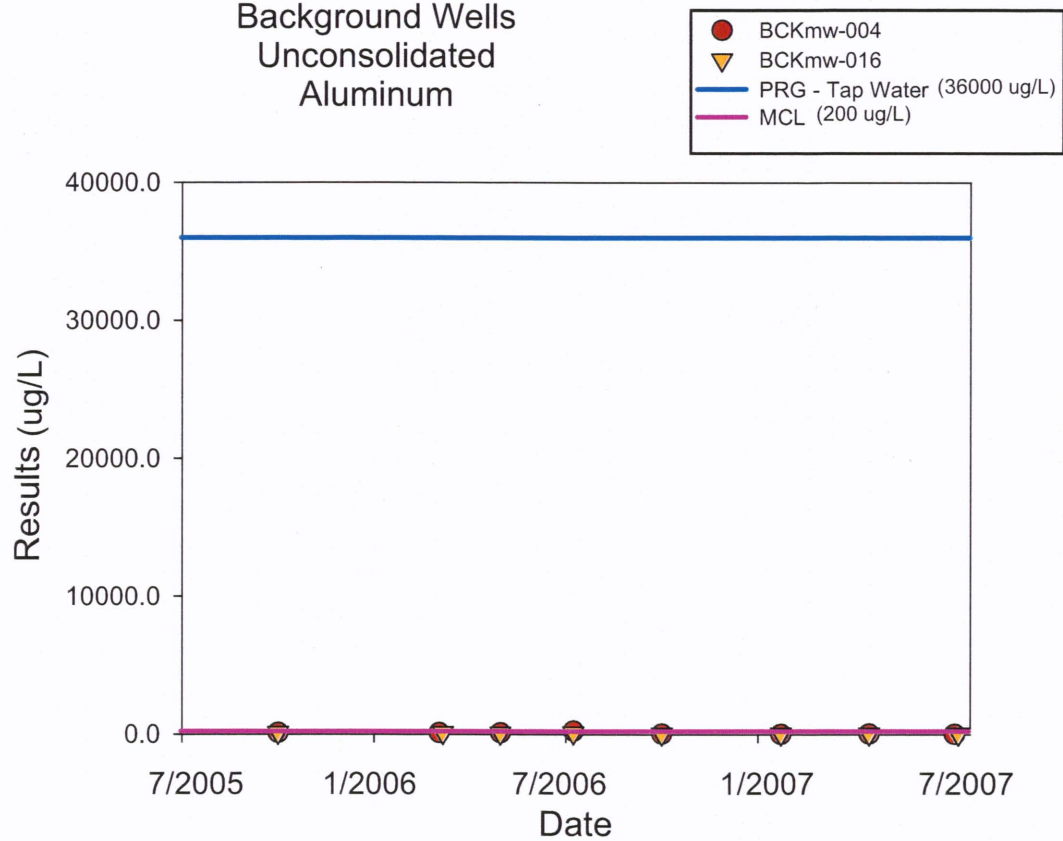
# Background Wells Unconsolidated Barium



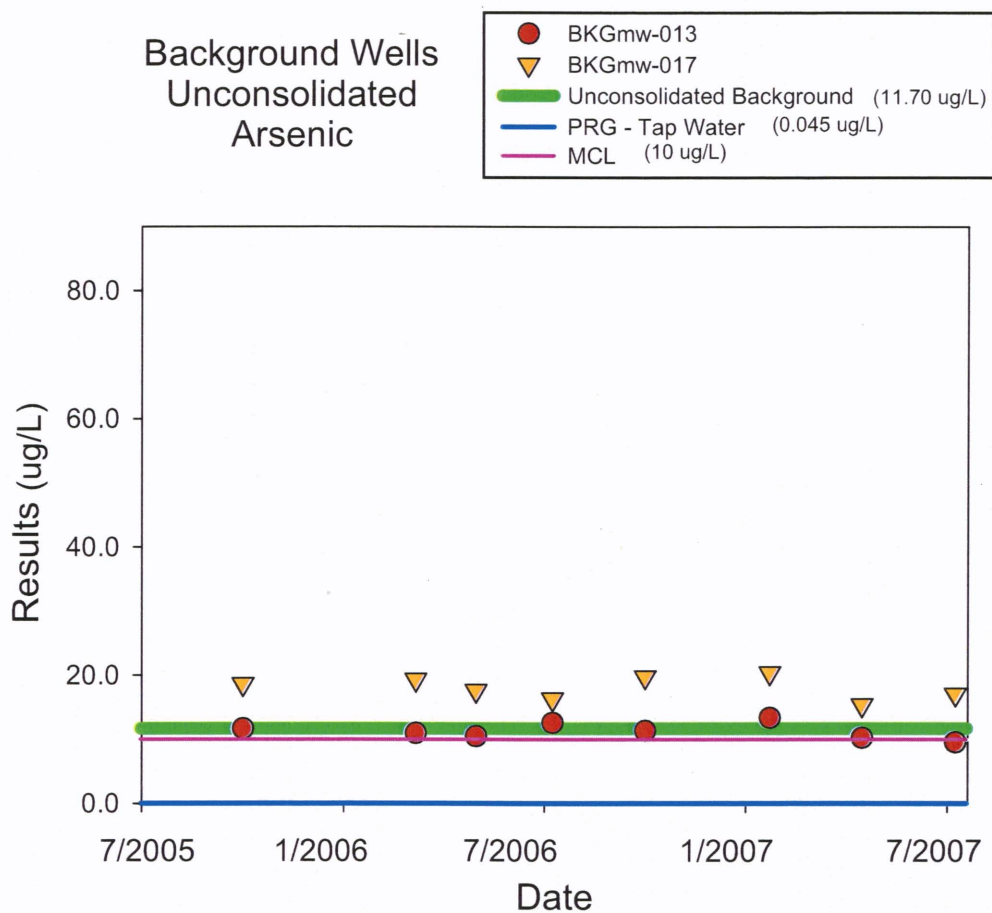
# Background Wells Unconsolidated Calcium



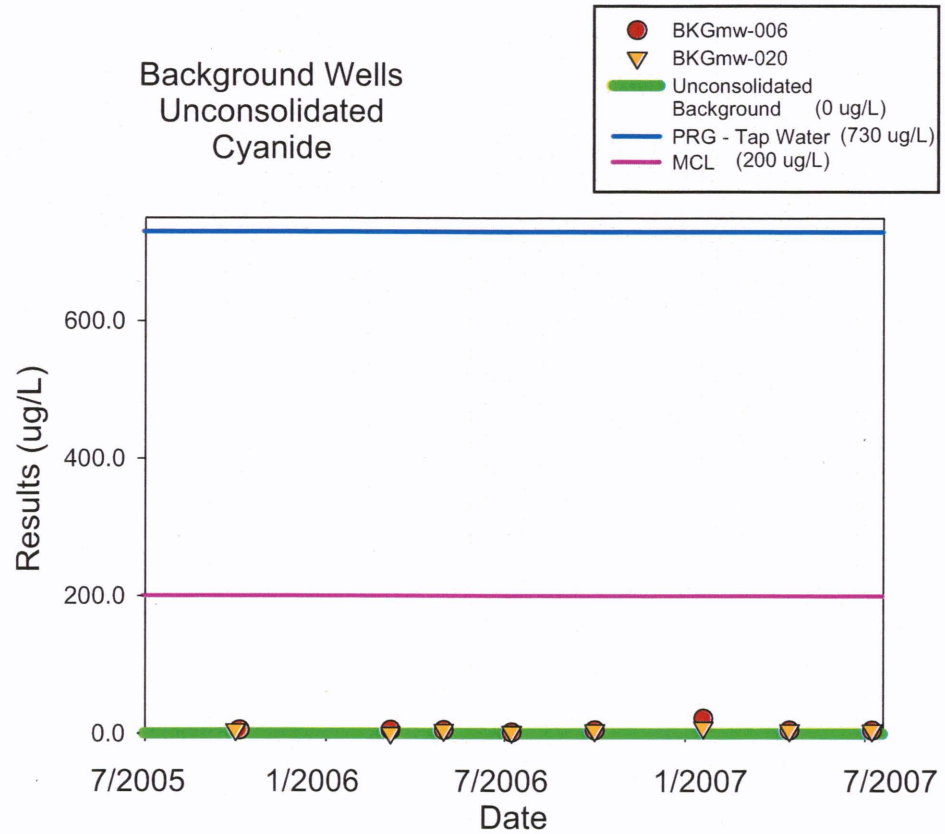
### Background Wells Unconsolidated Aluminum



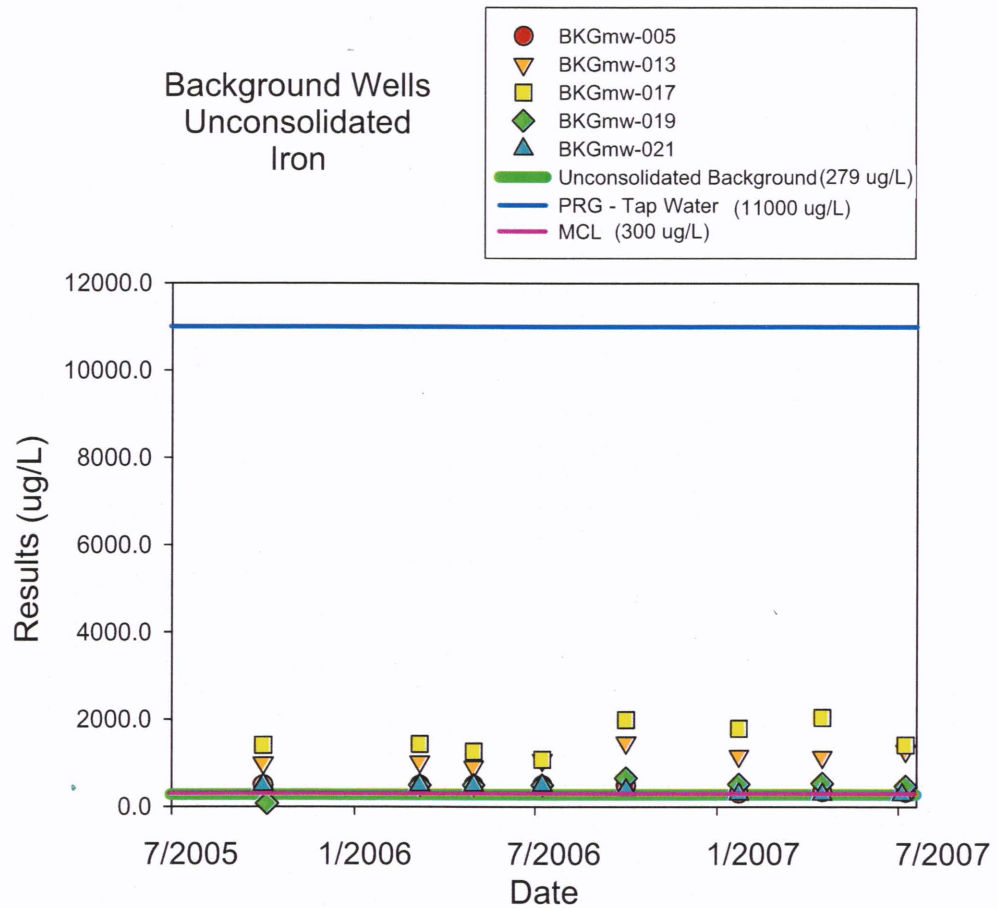
### Background Wells Unconsolidated Arsenic



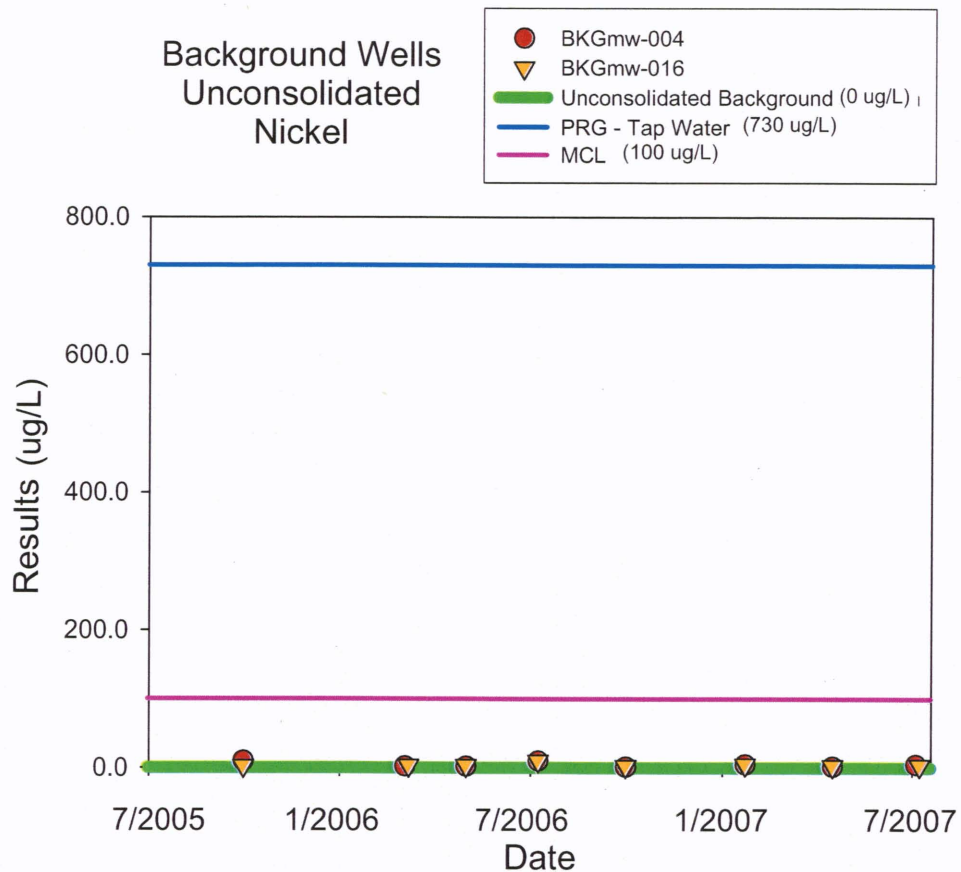
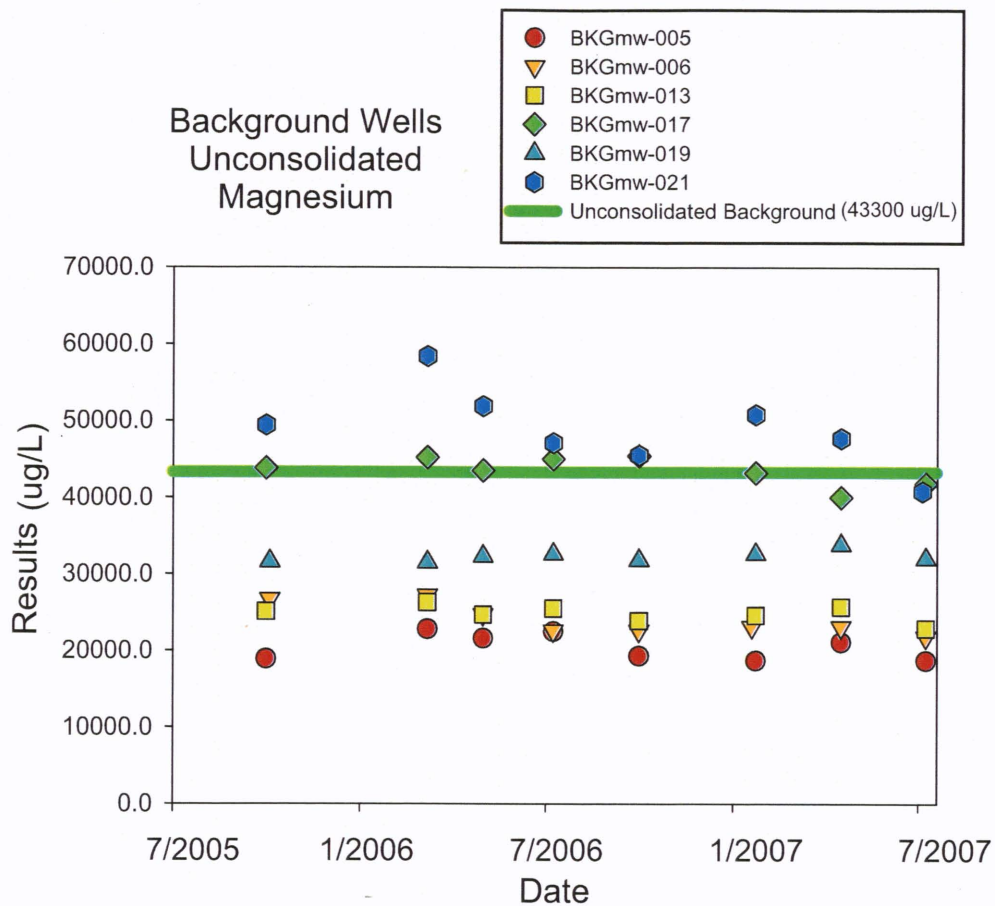
# Background Wells Unconsolidated Cyanide



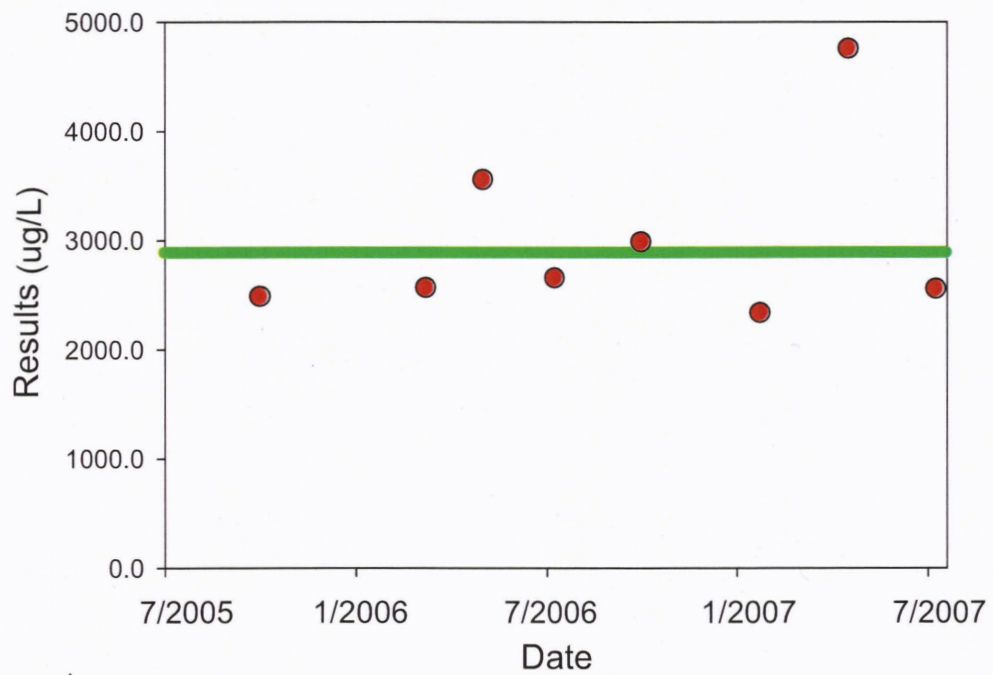
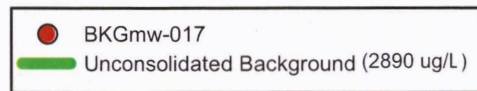
# Background Wells Unconsolidated Iron



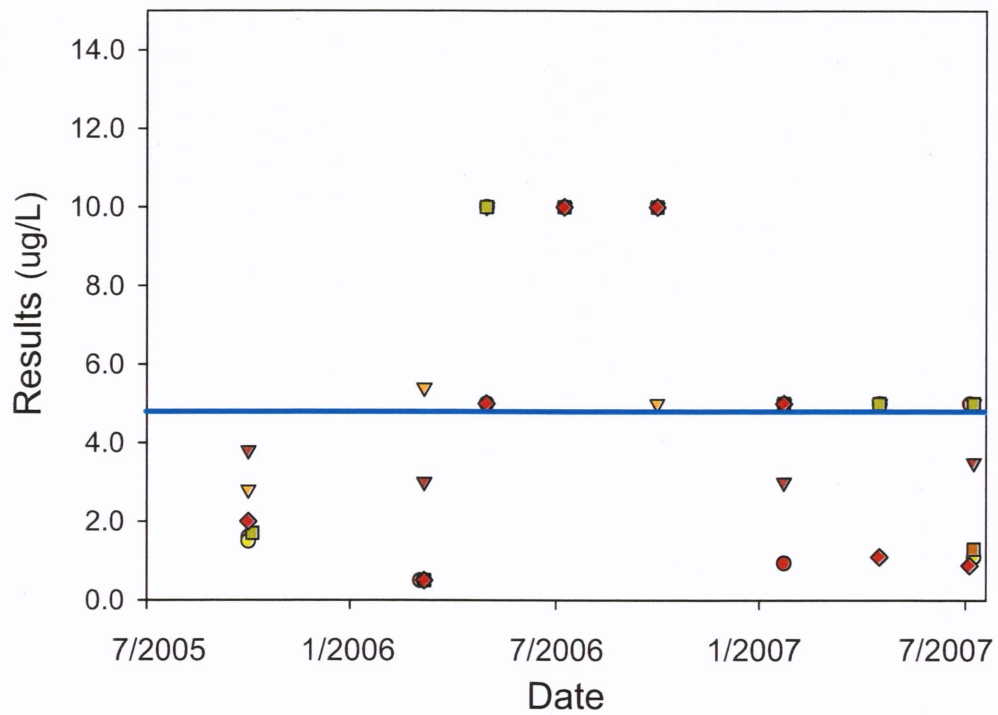
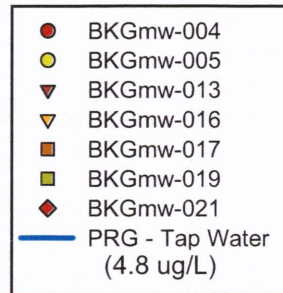




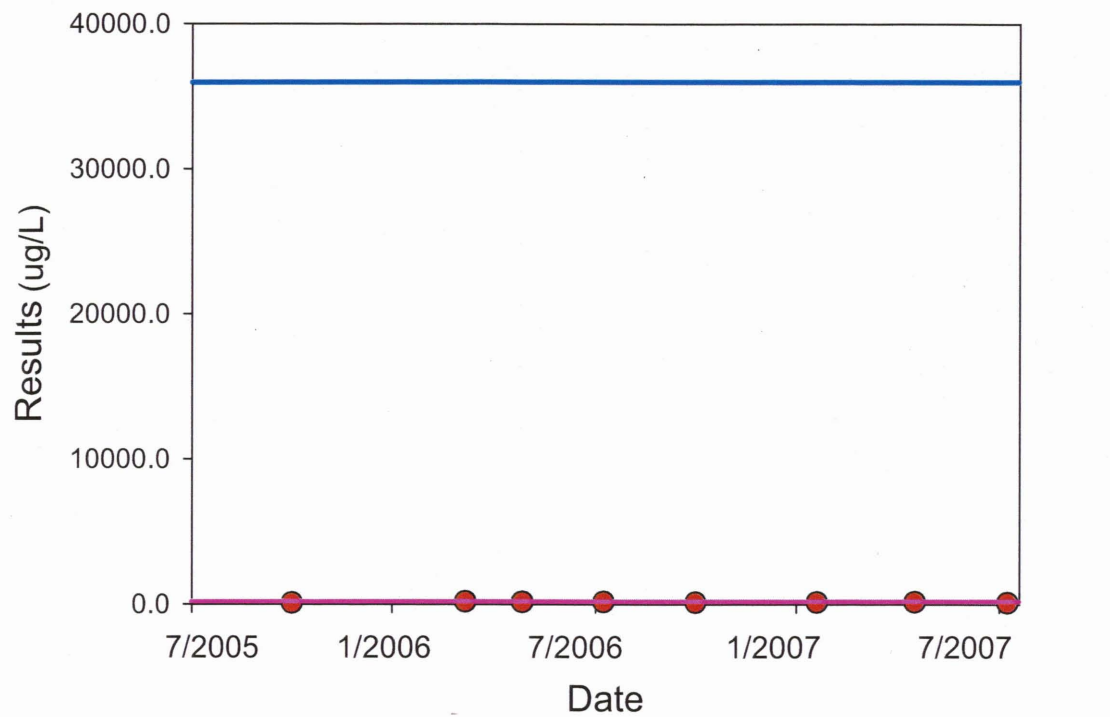
Background Wells  
Unconsolidated  
Potassium



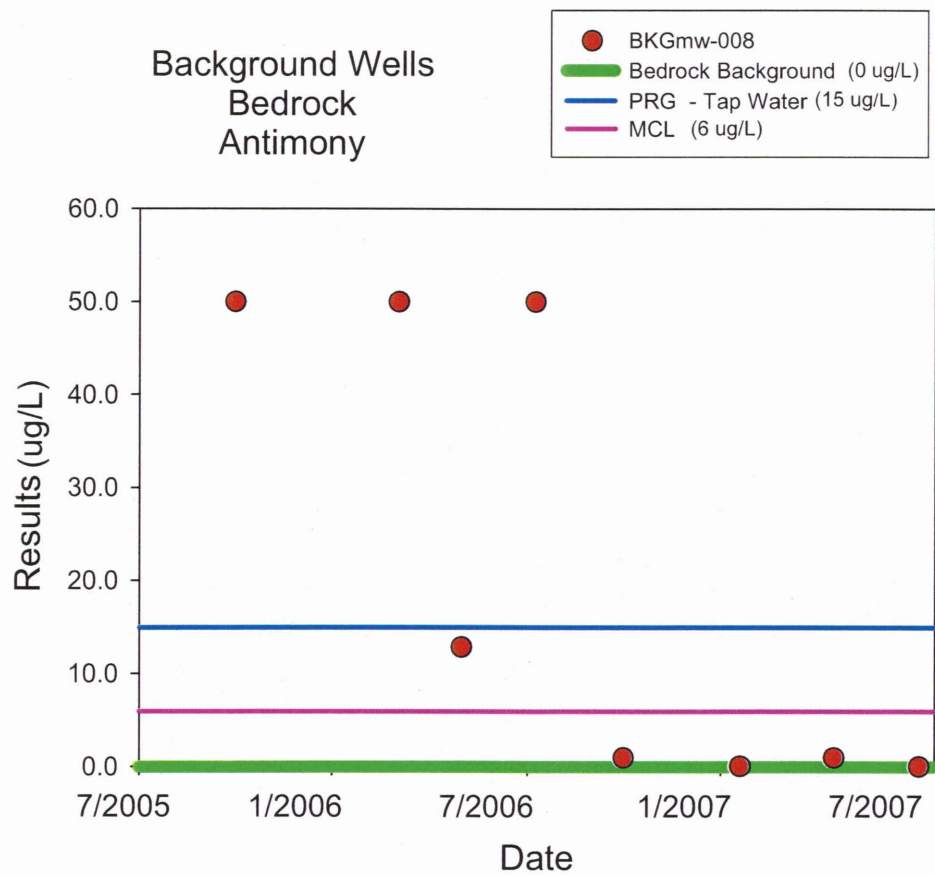
Background Wells  
Unconsolidated wells  
Bis(2-ethylhexyl)phthalate



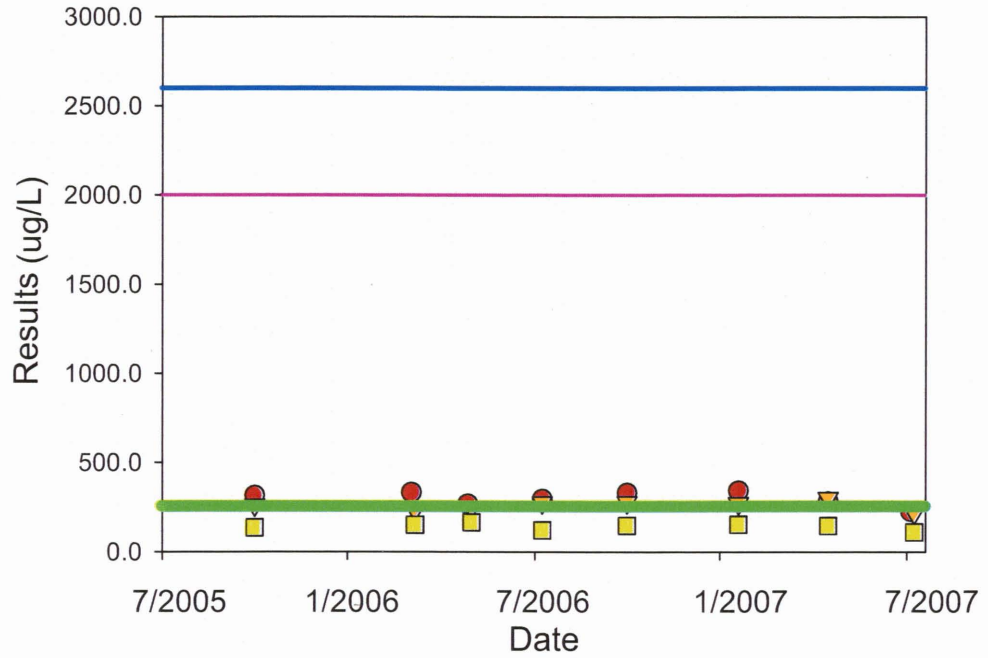
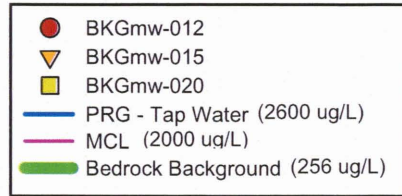
Background Wells  
Bedrock  
Aluminum



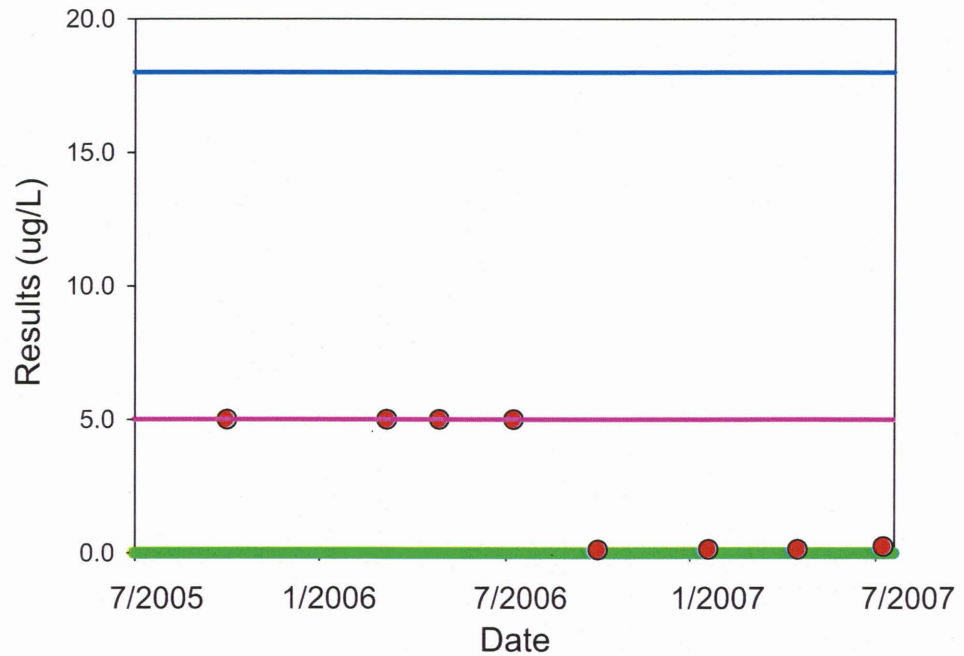
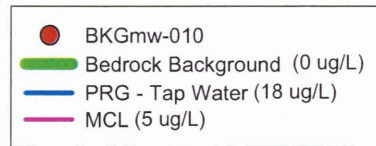
Background Wells  
Bedrock  
Antimony



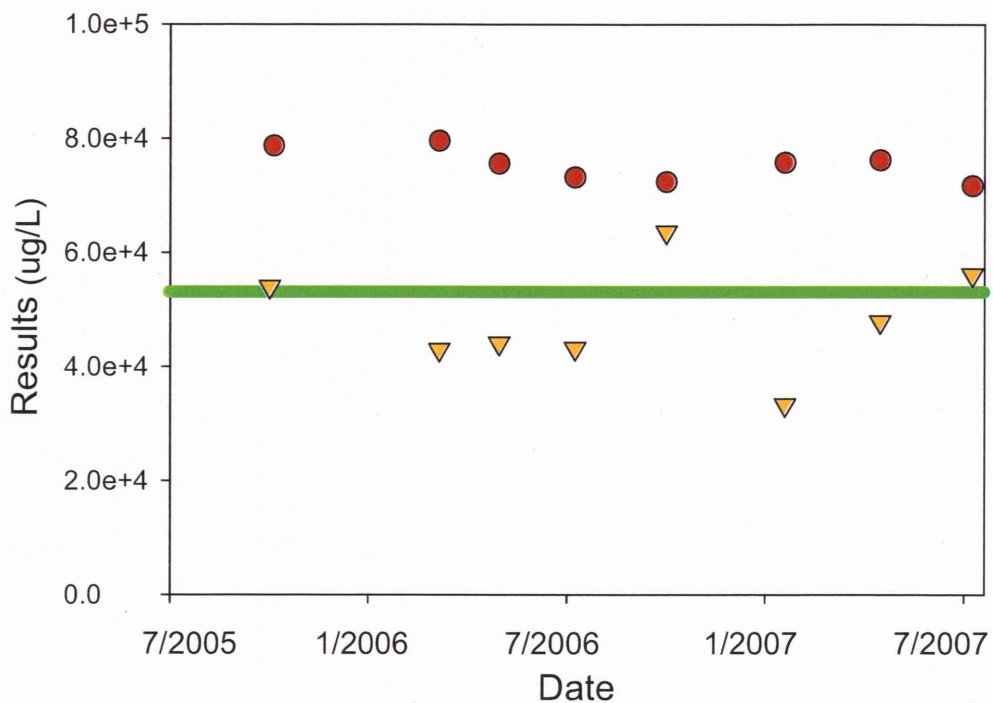
Background Wells  
Bedrock  
Barium



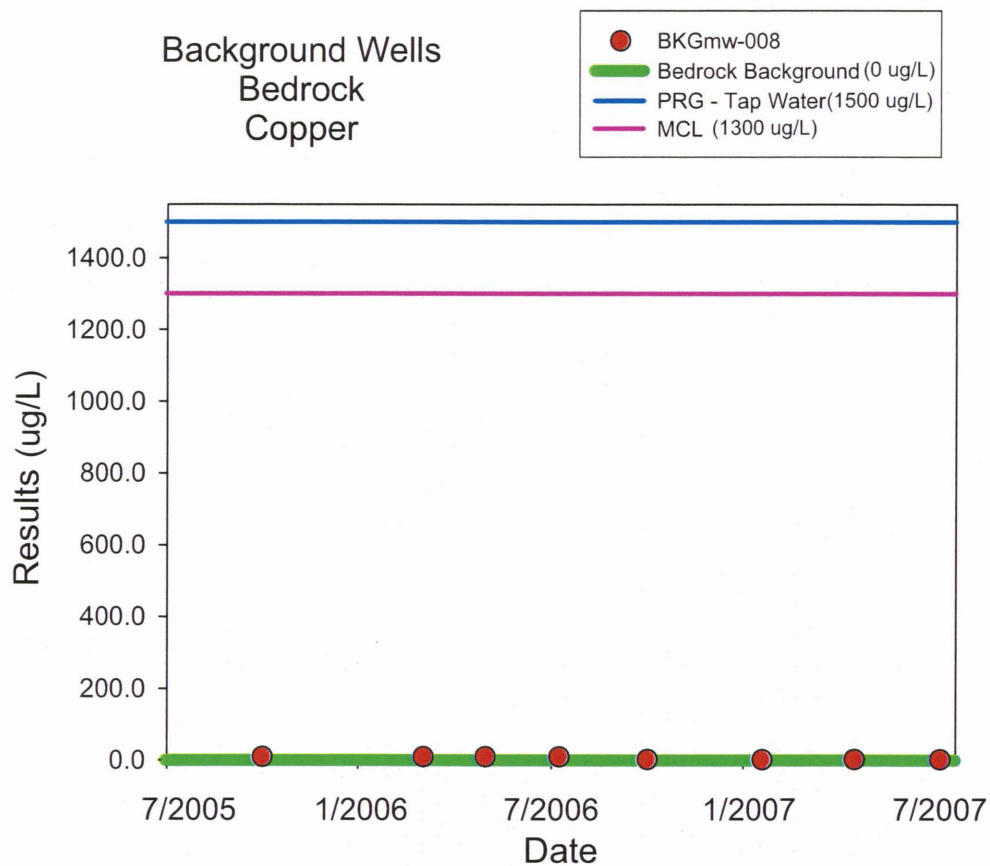
Background Well  
Bedrock  
Cadmium

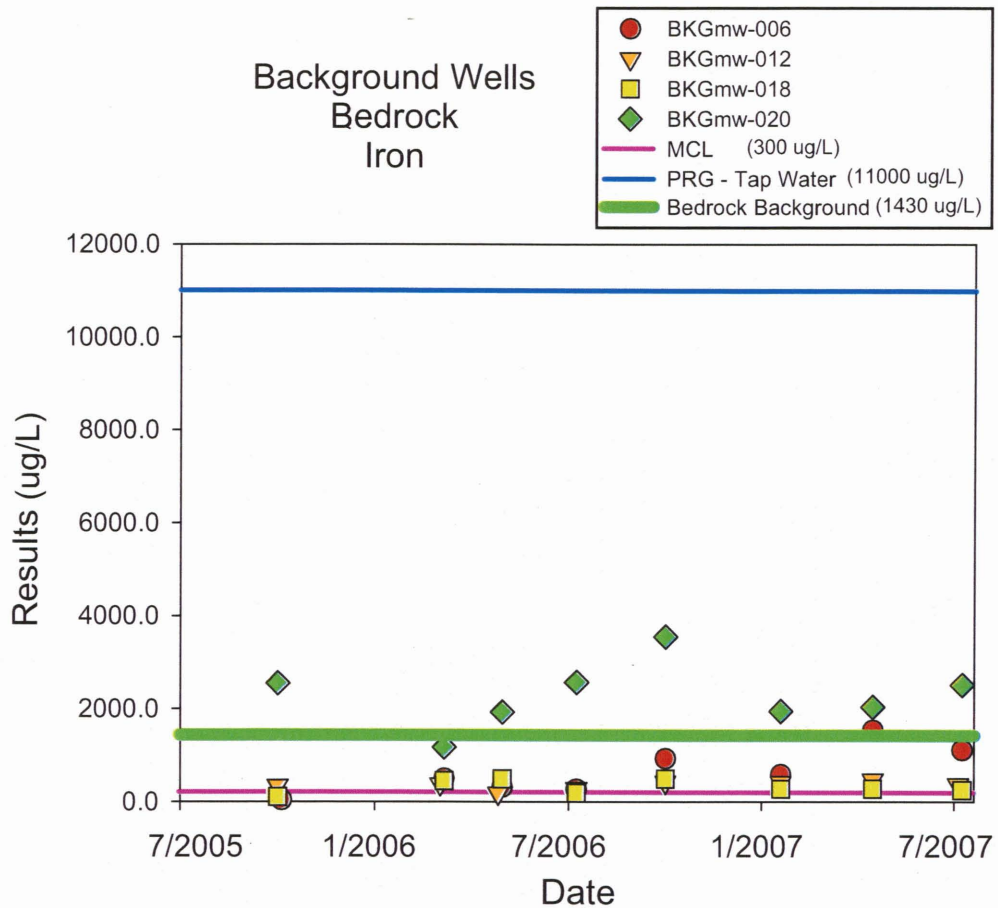
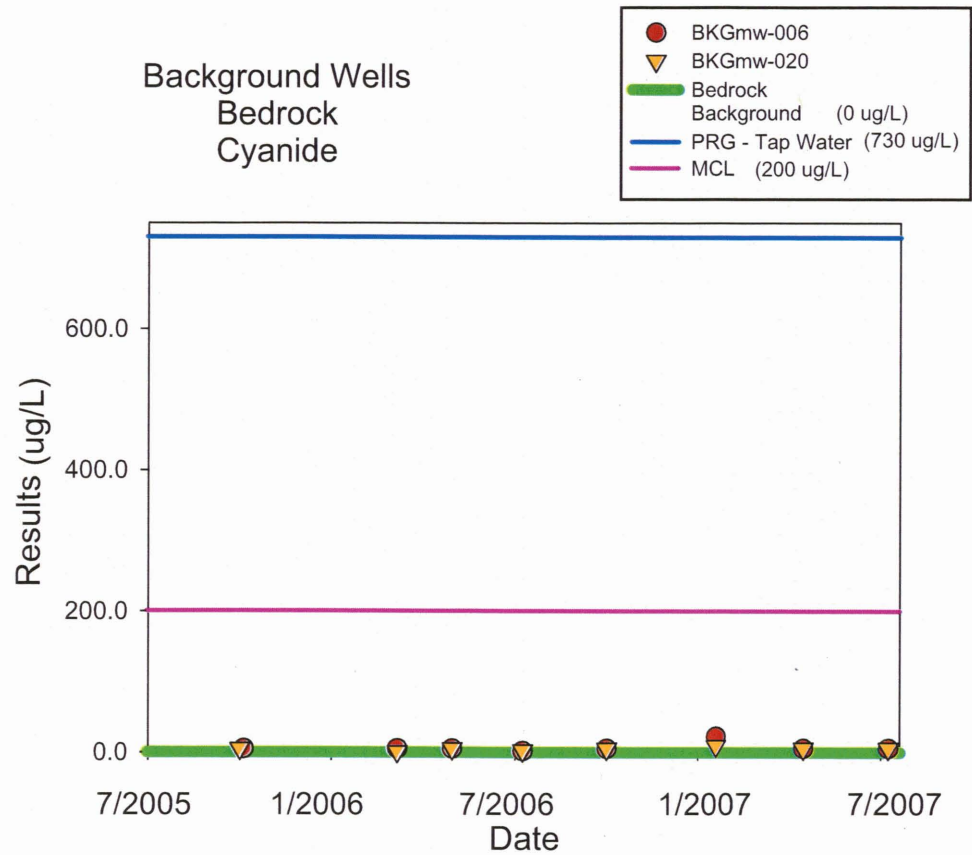


# Background Wells Bedrock Calcium

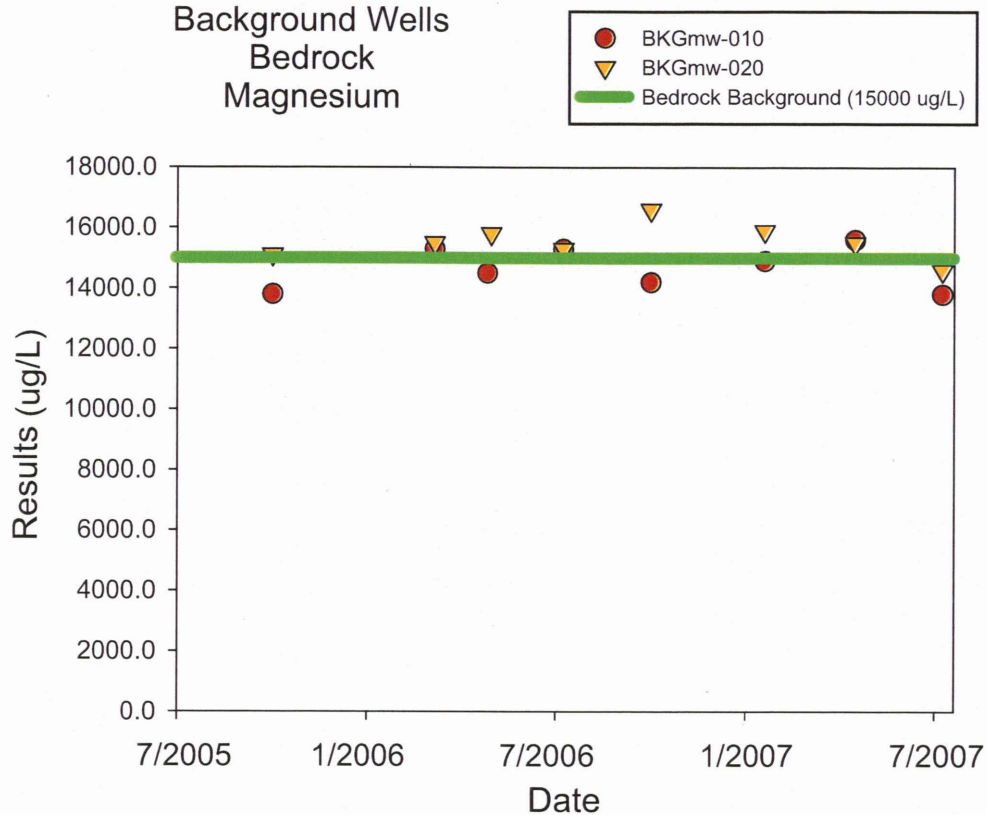


# Background Wells Bedrock Copper

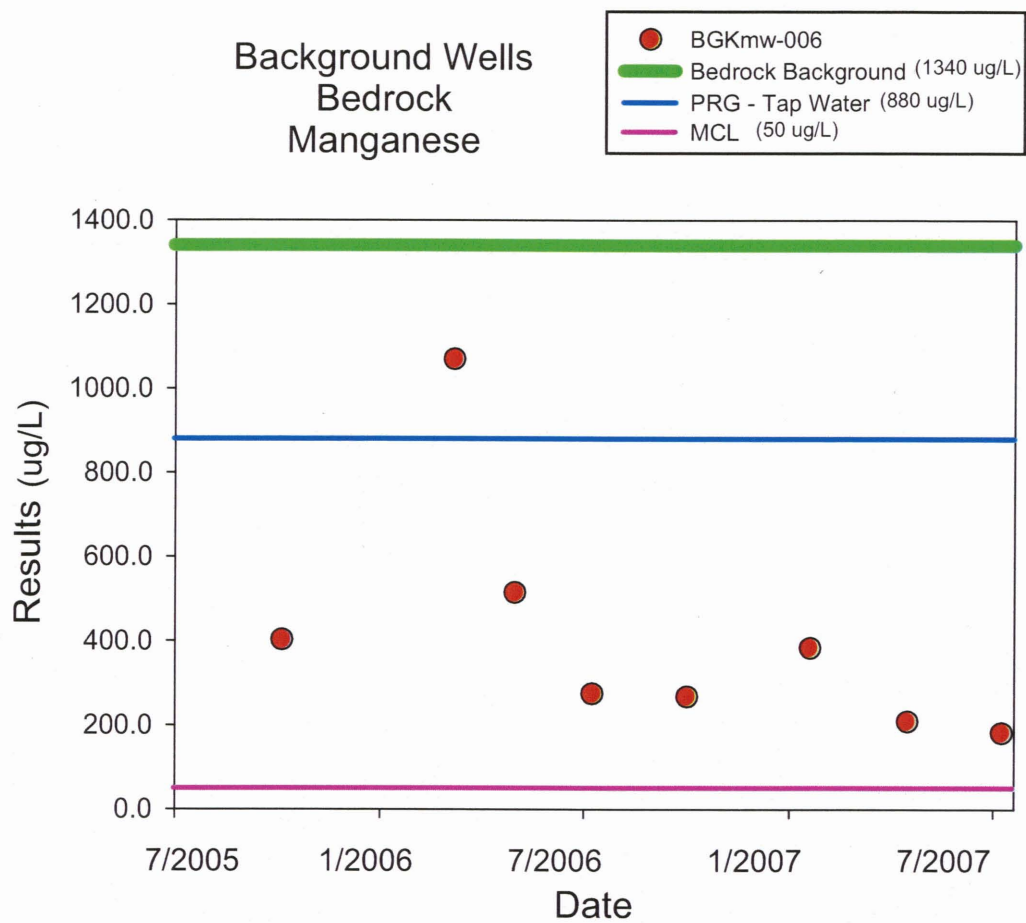




# Background Wells Bedrock Magnesium

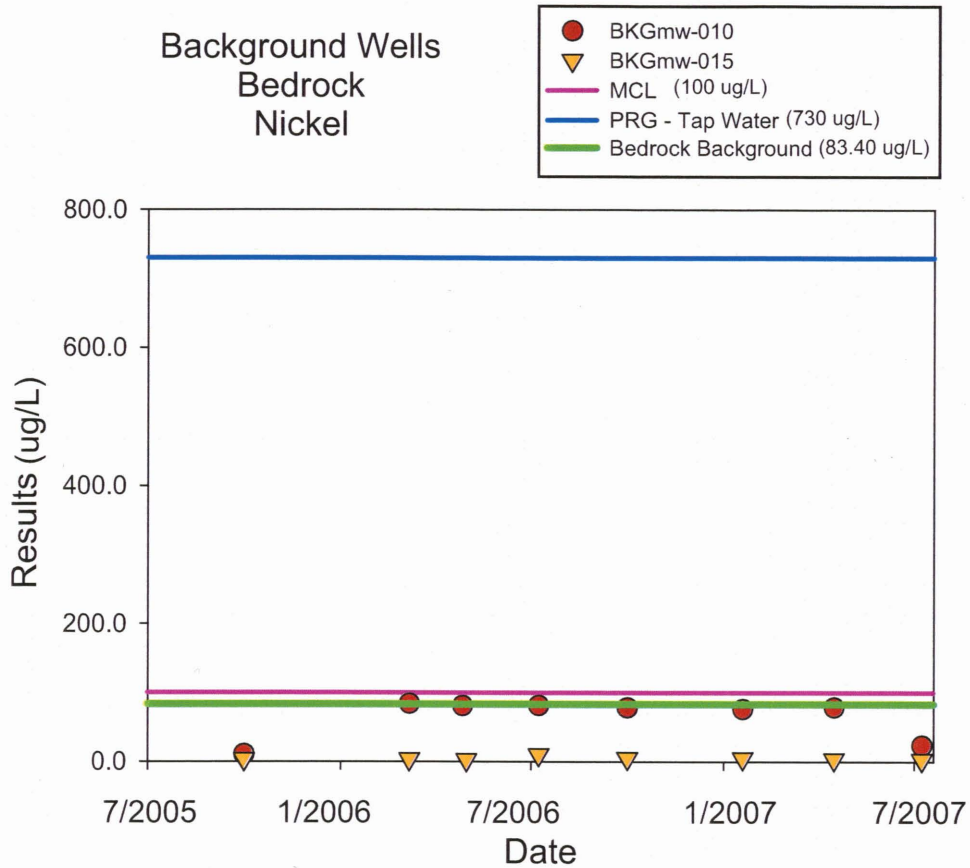


# Background Wells Bedrock Manganese

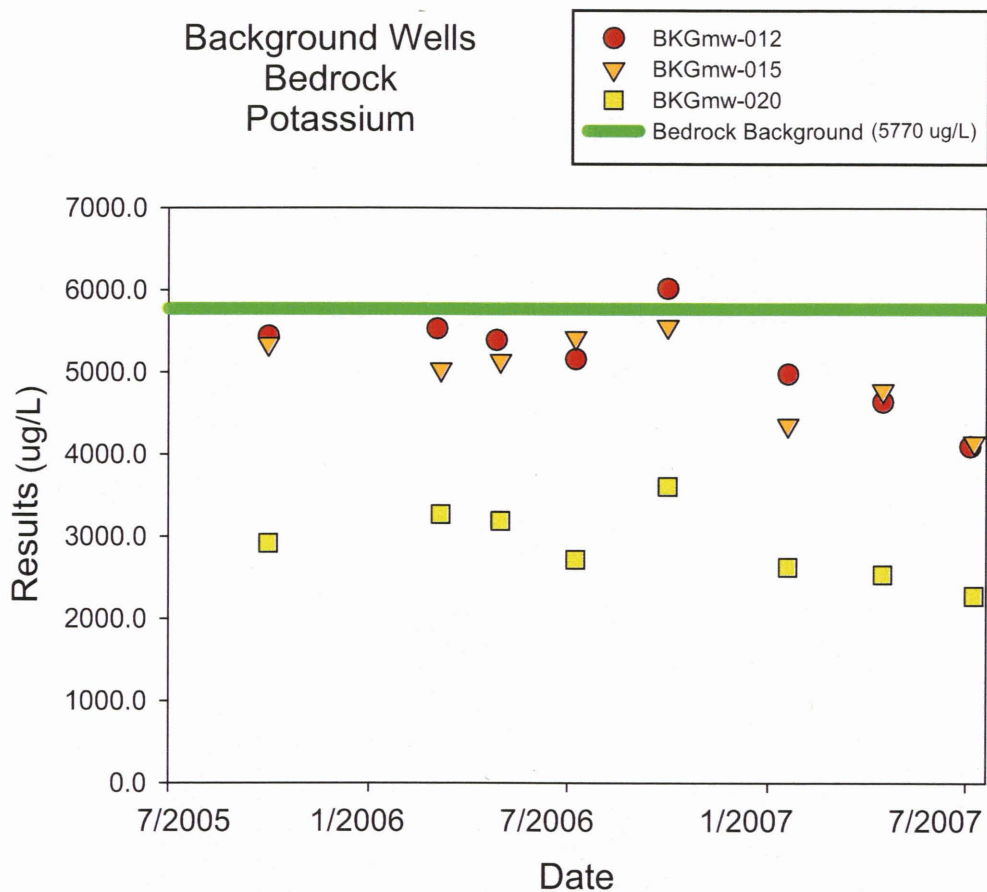




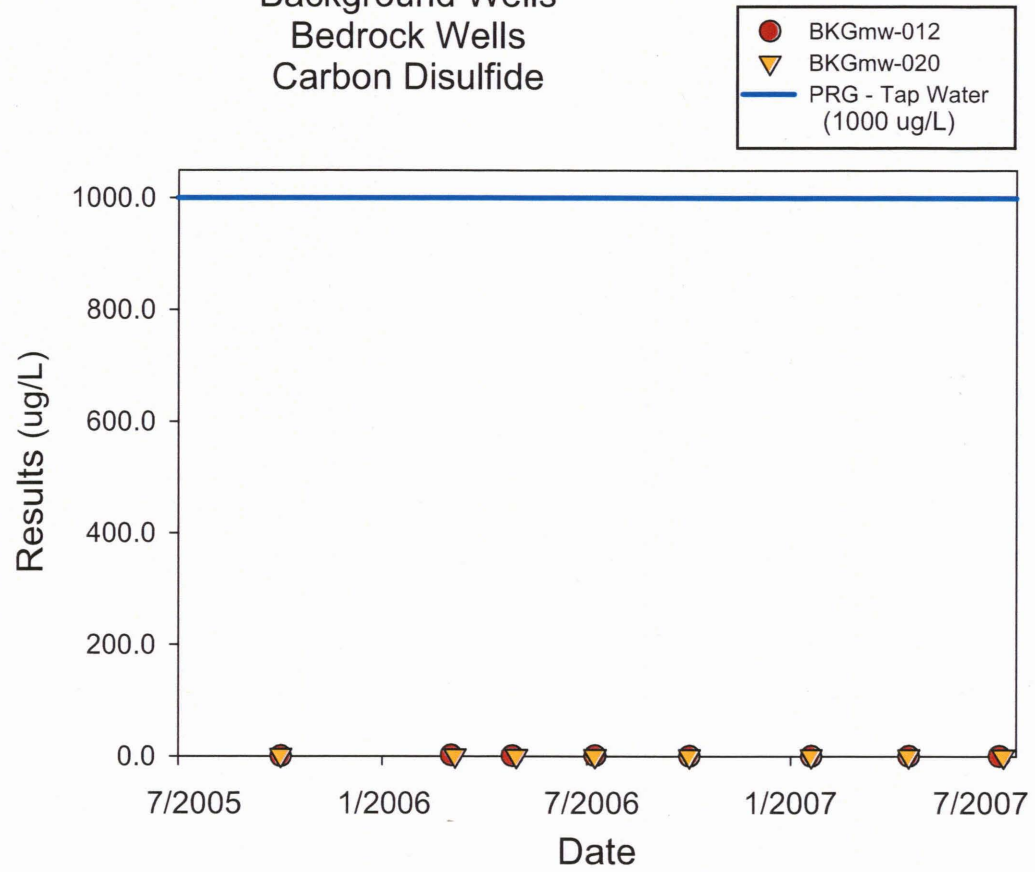
# Background Wells Bedrock Nickel



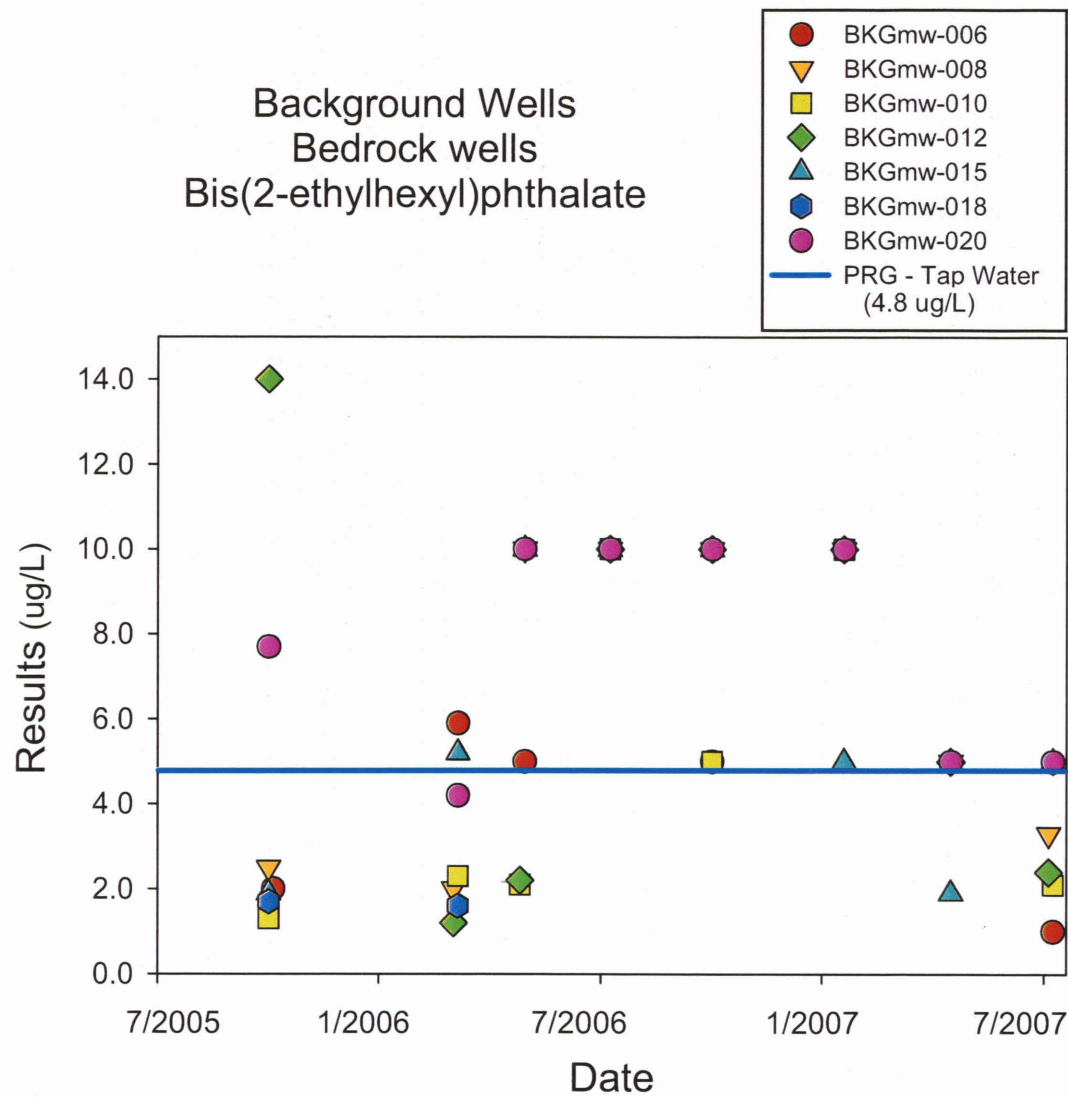
# Background Wells Bedrock Potassium



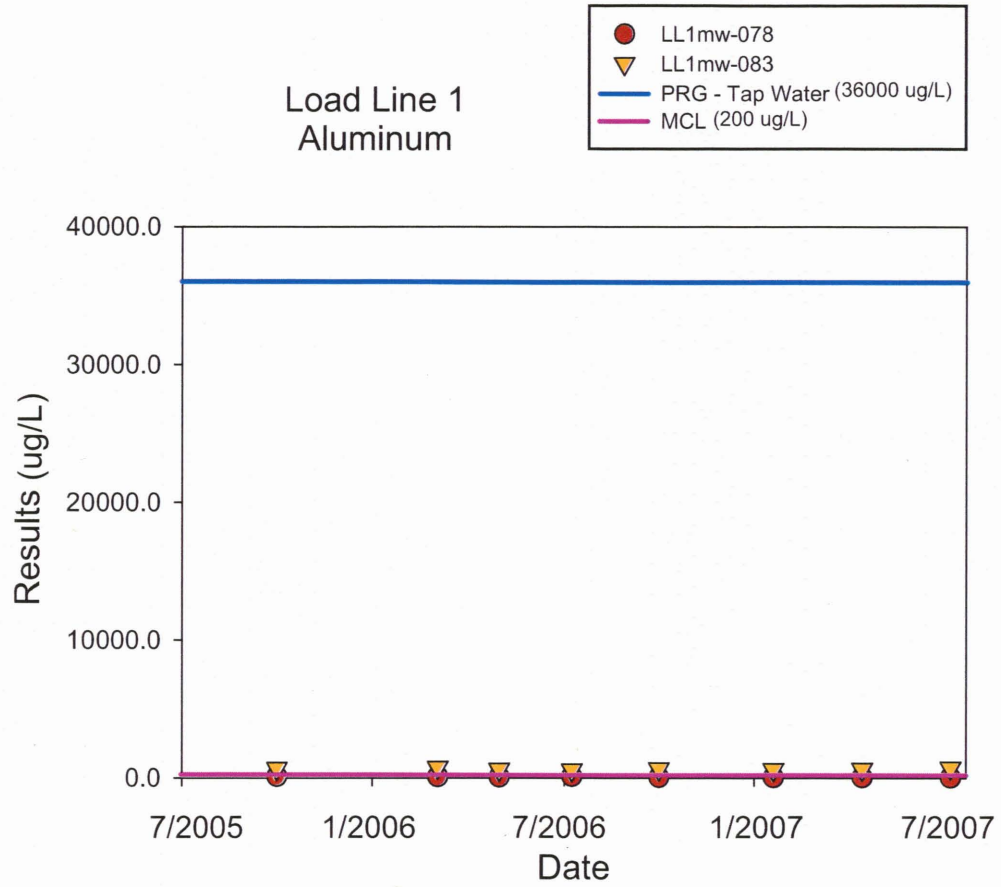
Background Wells  
Bedrock Wells  
Carbon Disulfide



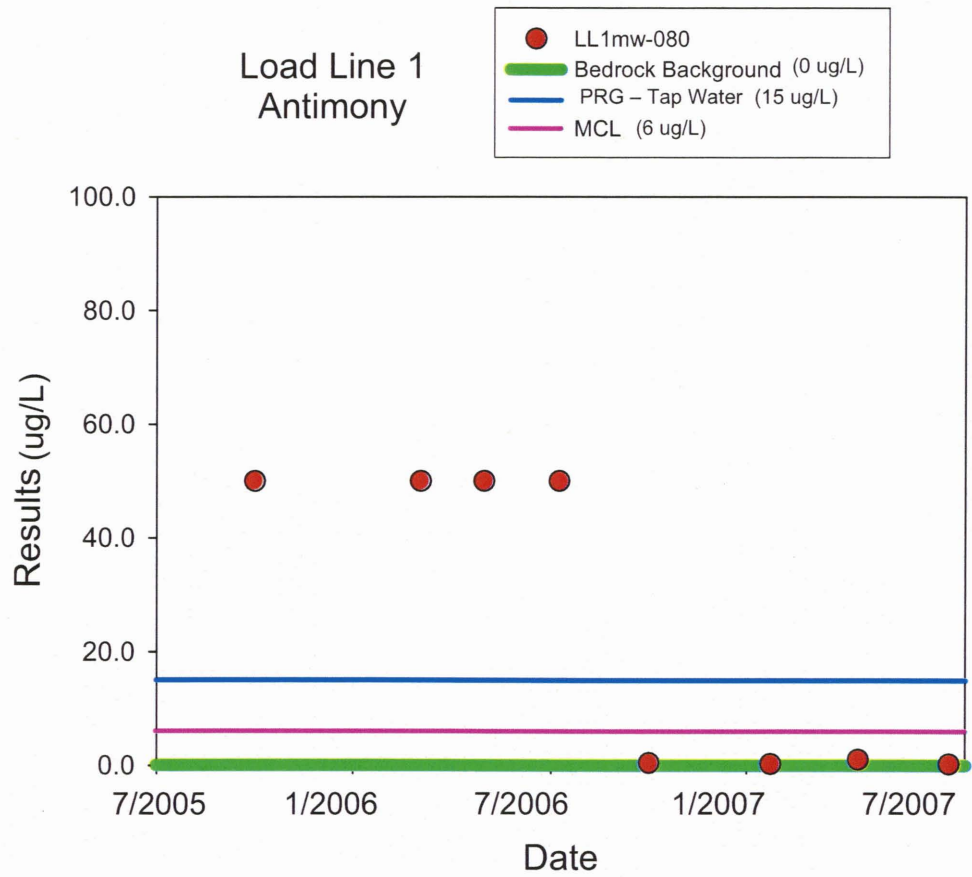
Background Wells  
Bedrock wells  
Bis(2-ethylhexyl)phthalate



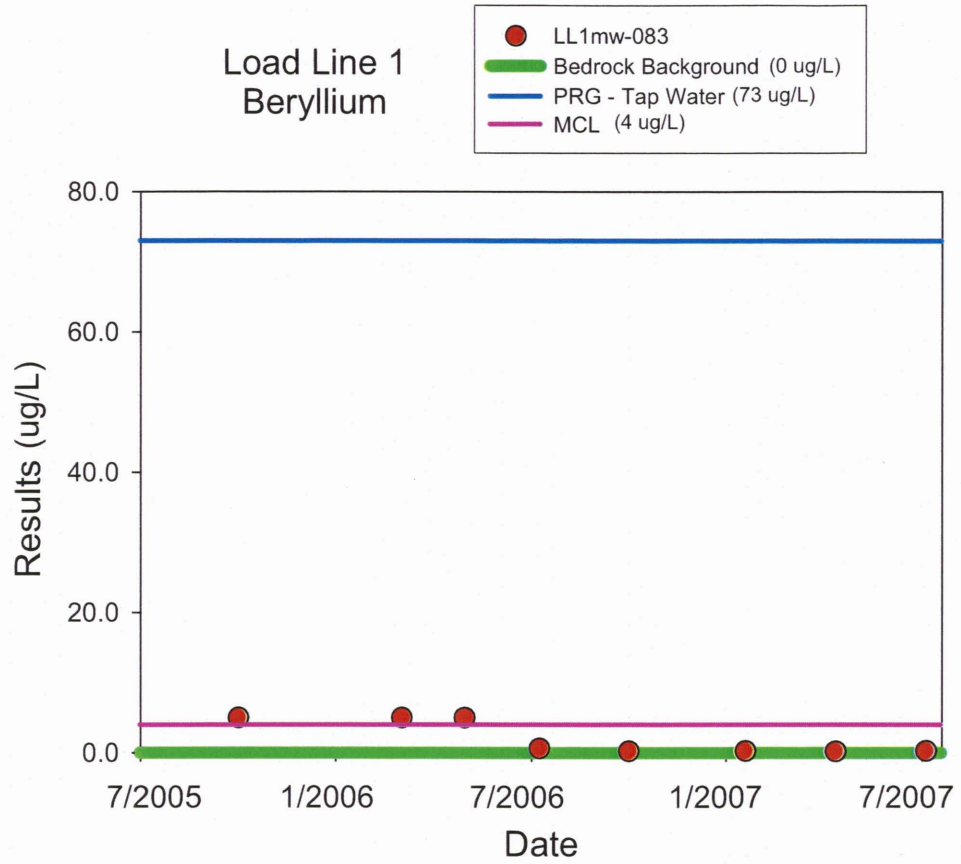
### Load Line 1 Aluminum



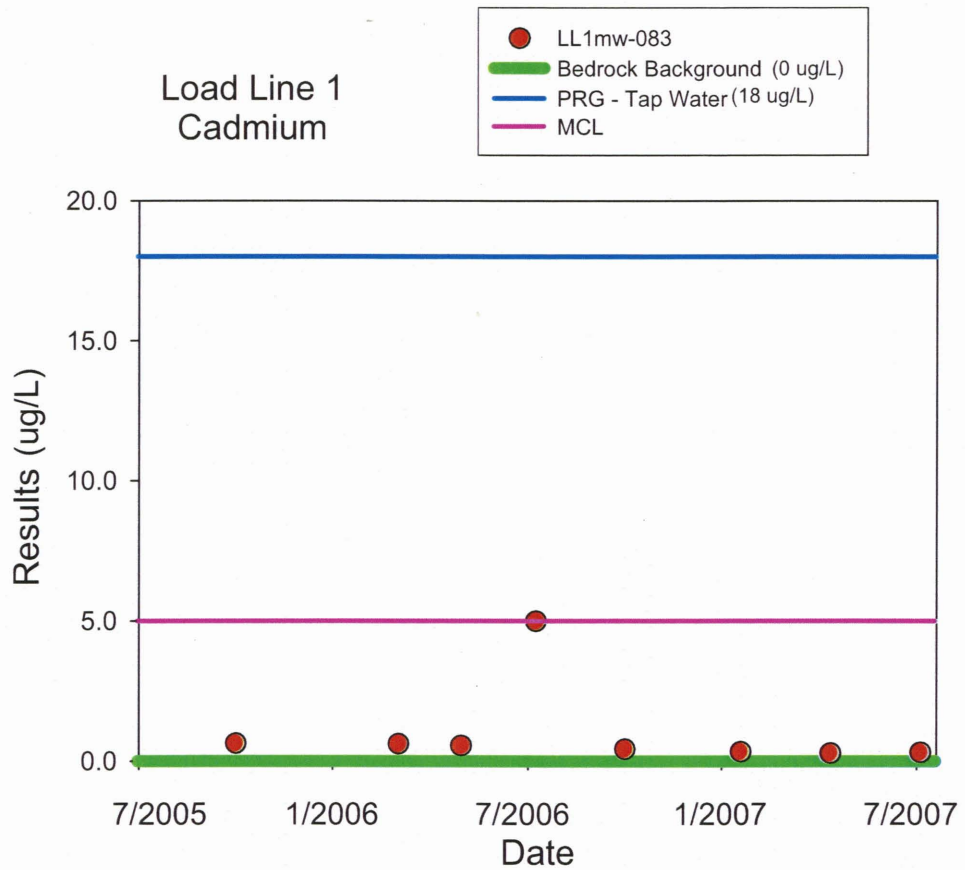
### Load Line 1 Antimony

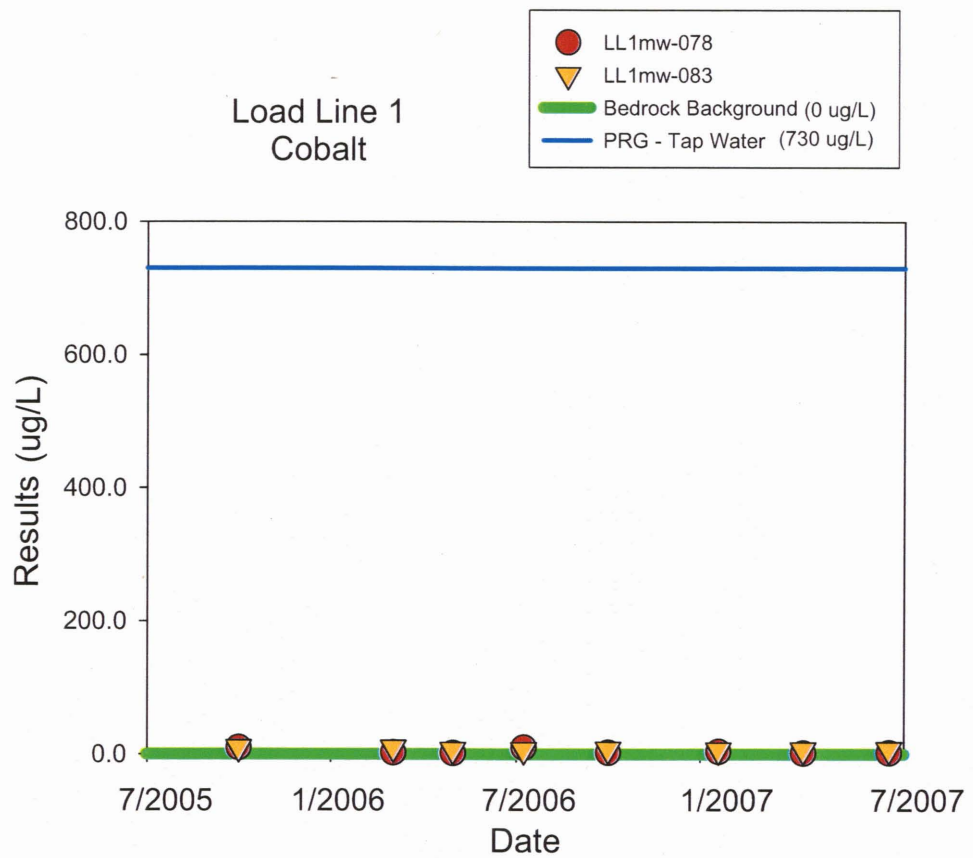
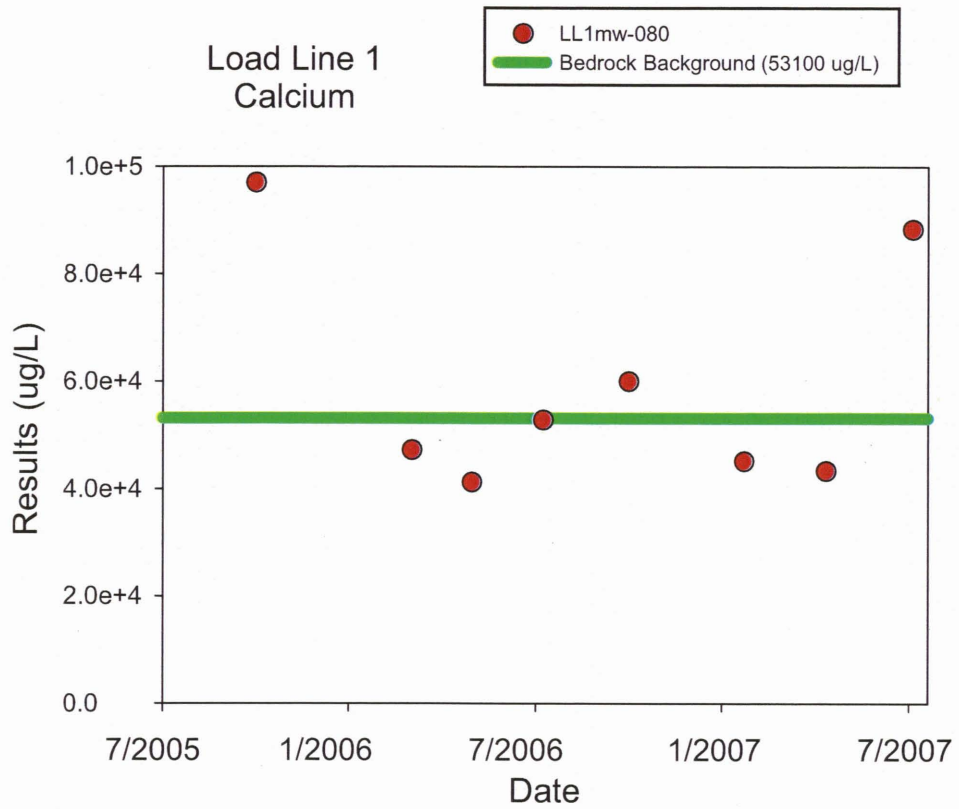


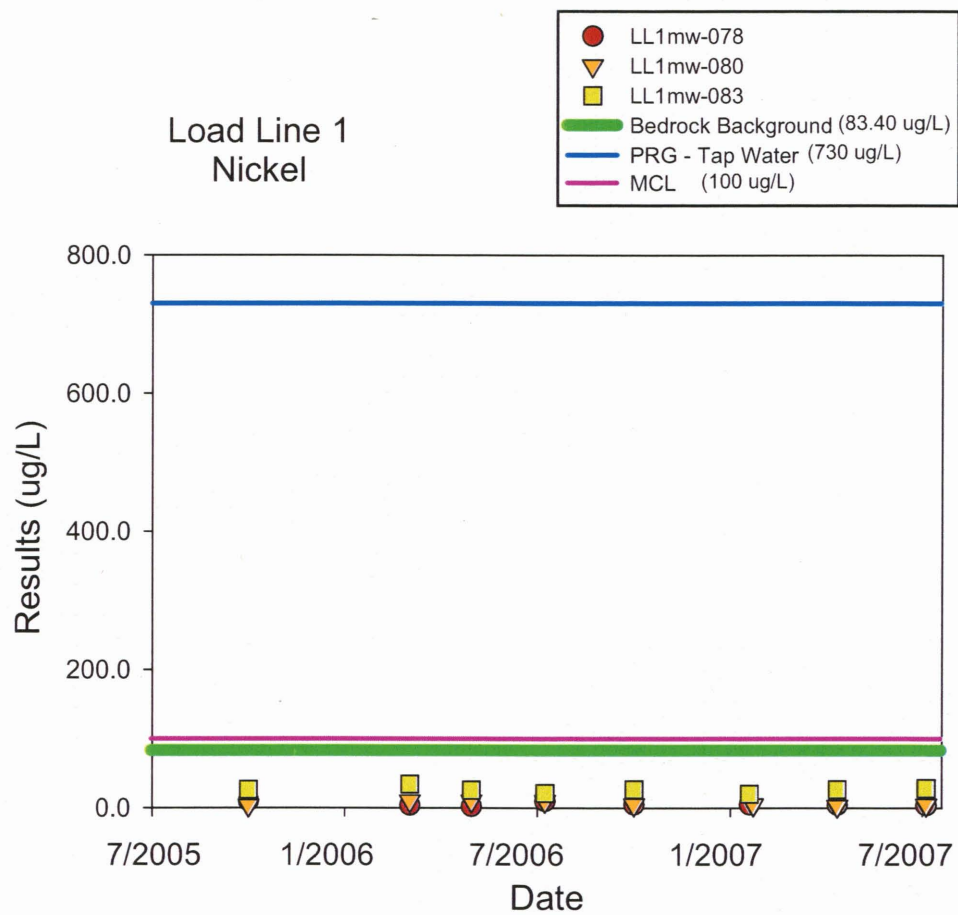
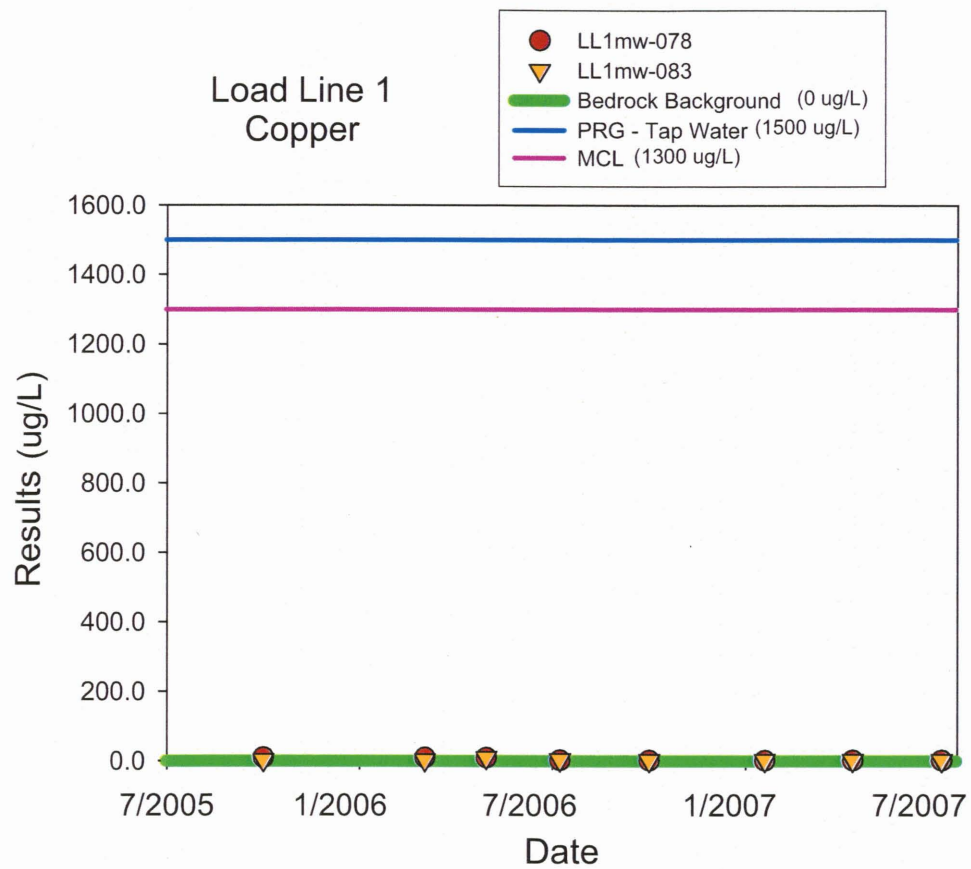
### Load Line 1 Beryllium



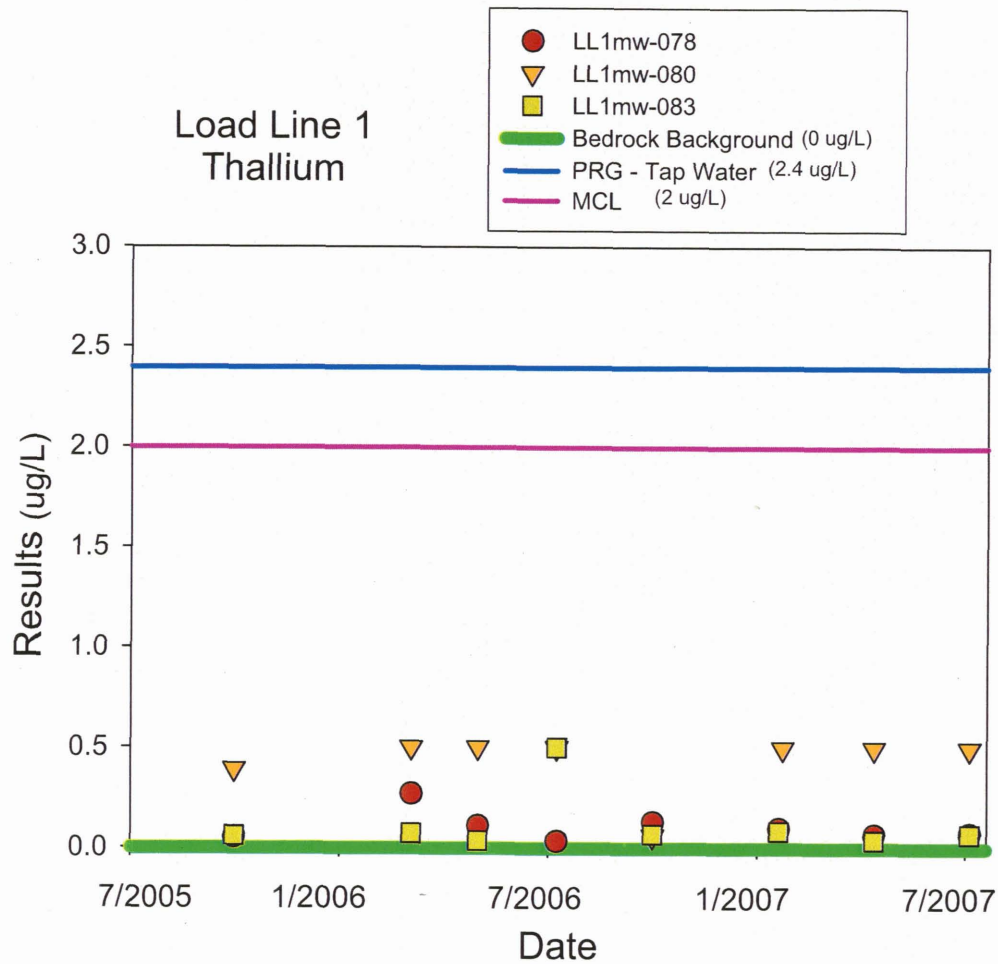
### Load Line 1 Cadmium





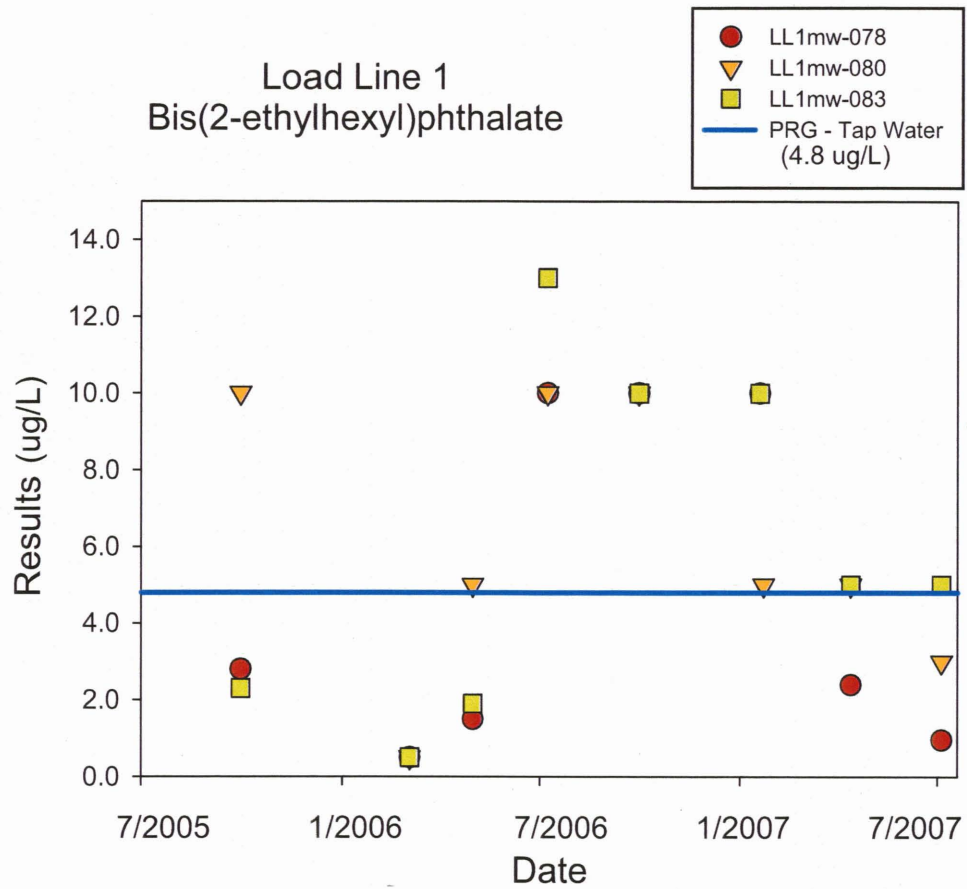


# Load Line 1 Thallium

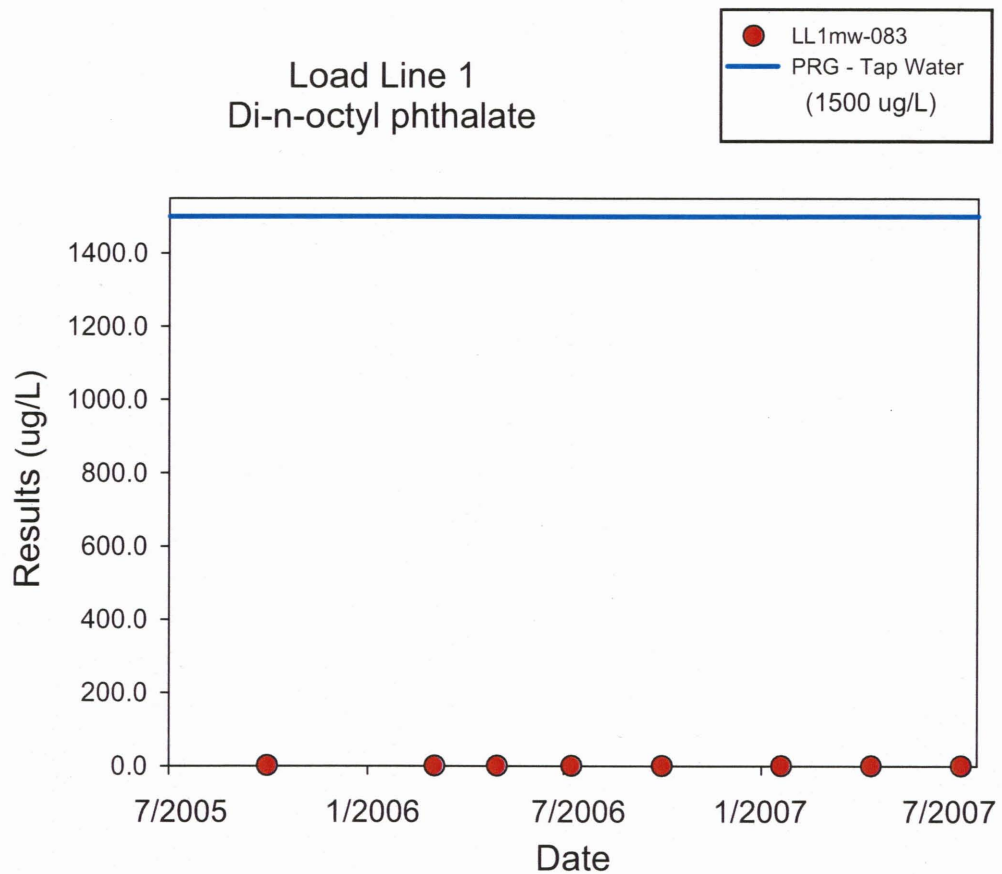


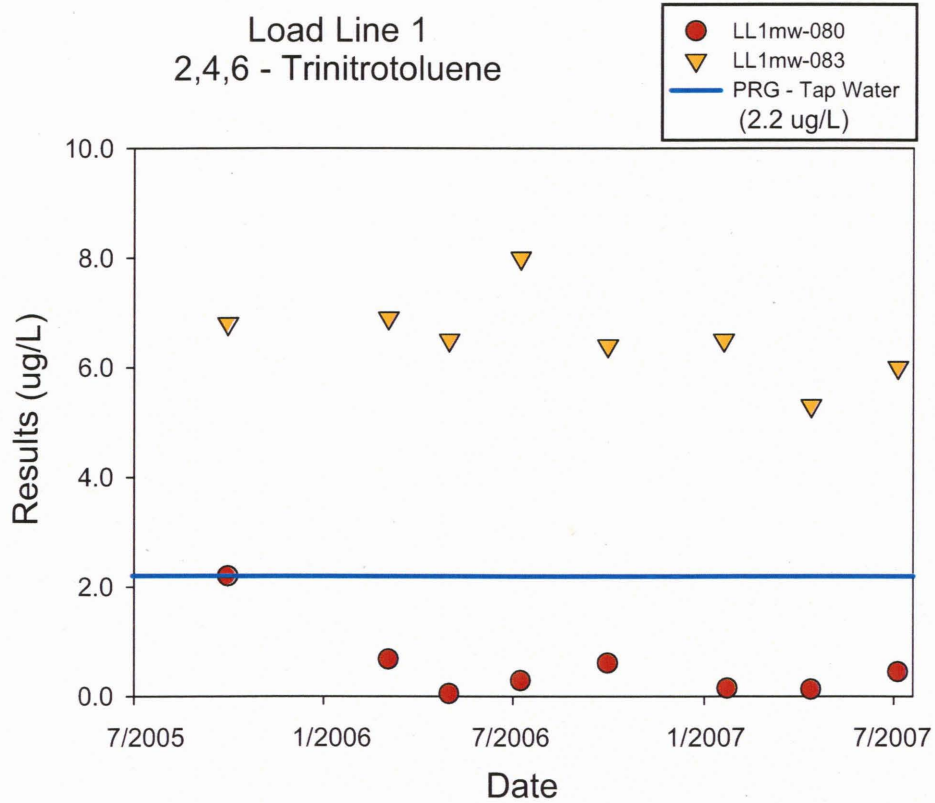
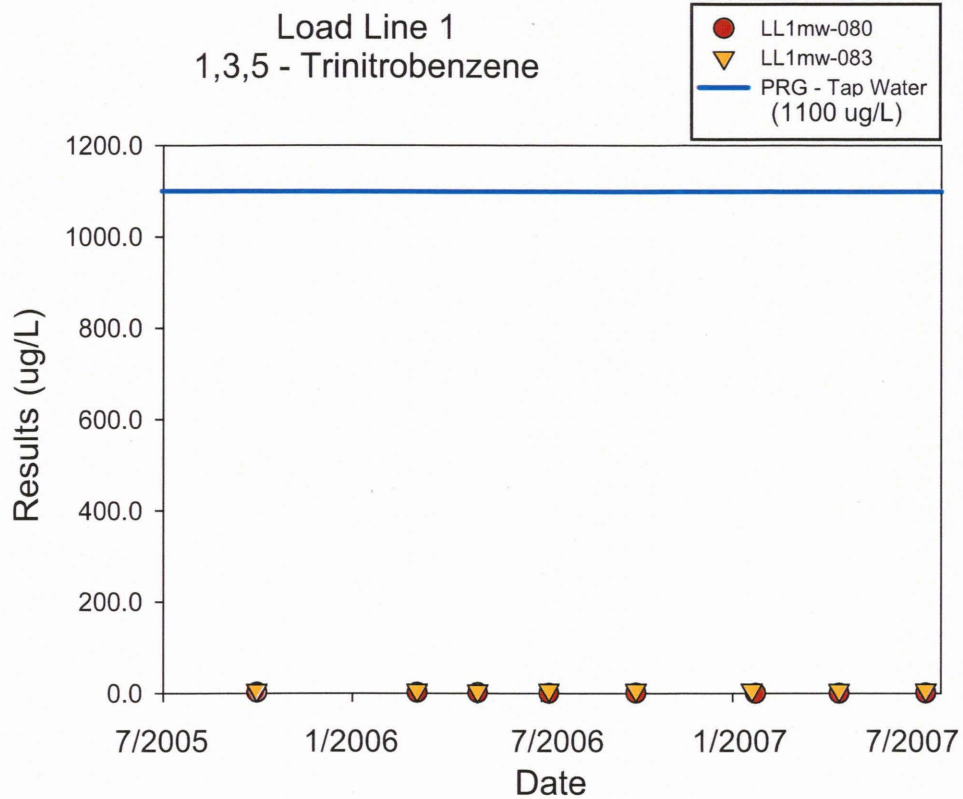


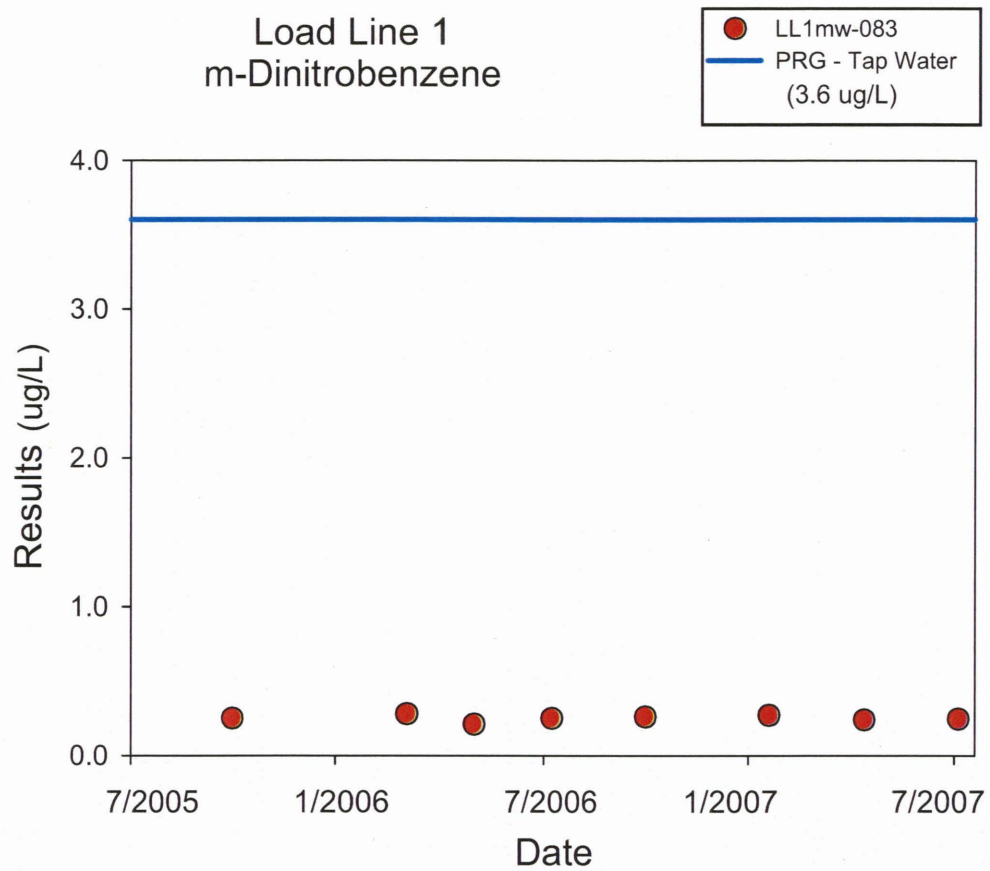
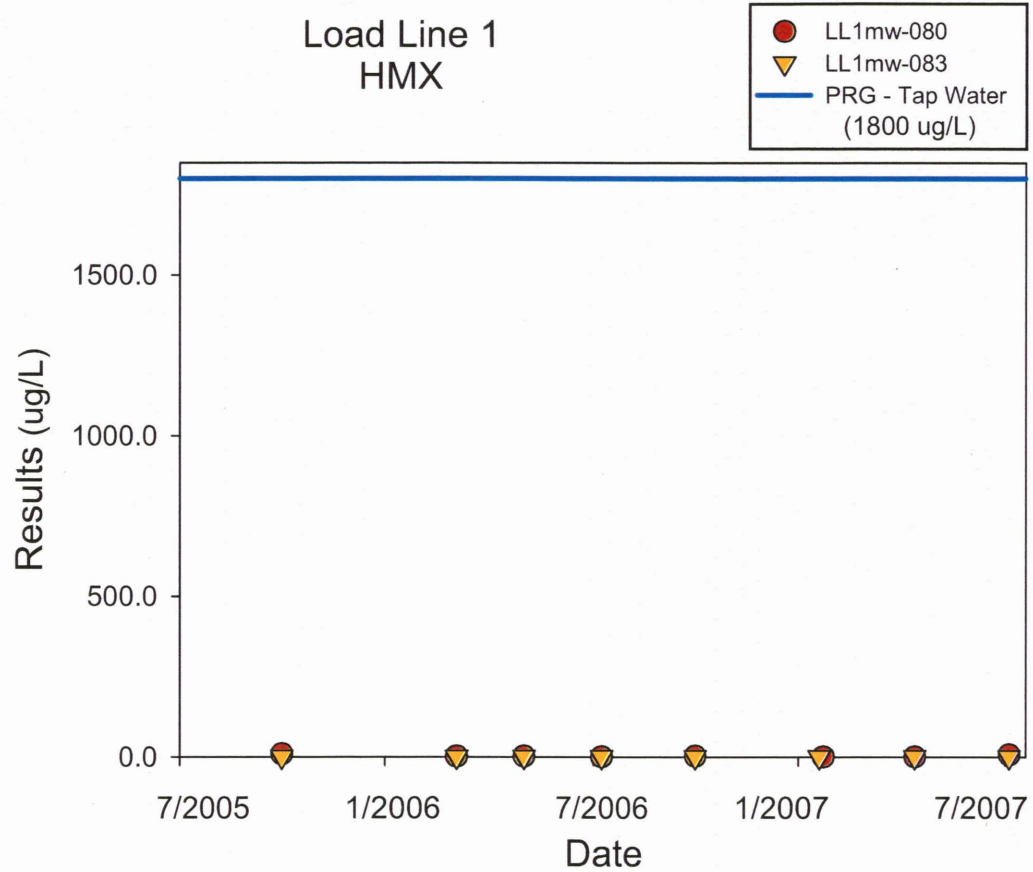
Load Line 1  
Bis(2-ethylhexyl)phthalate



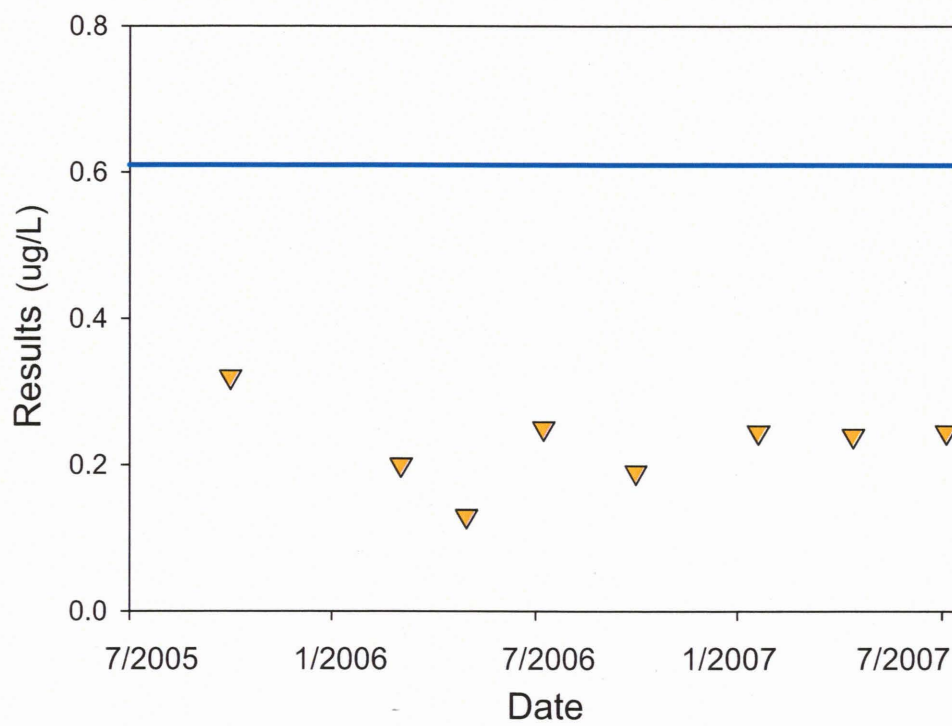
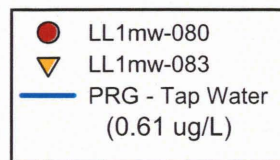
Load Line 1  
Di-n-octyl phthalate



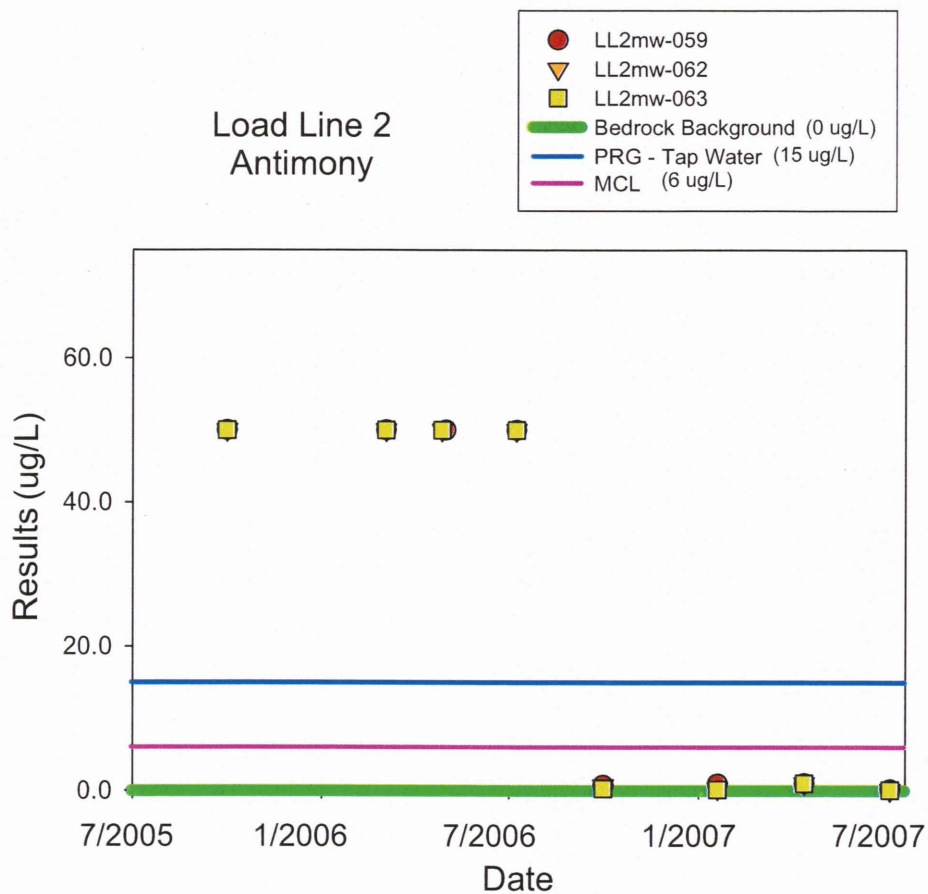




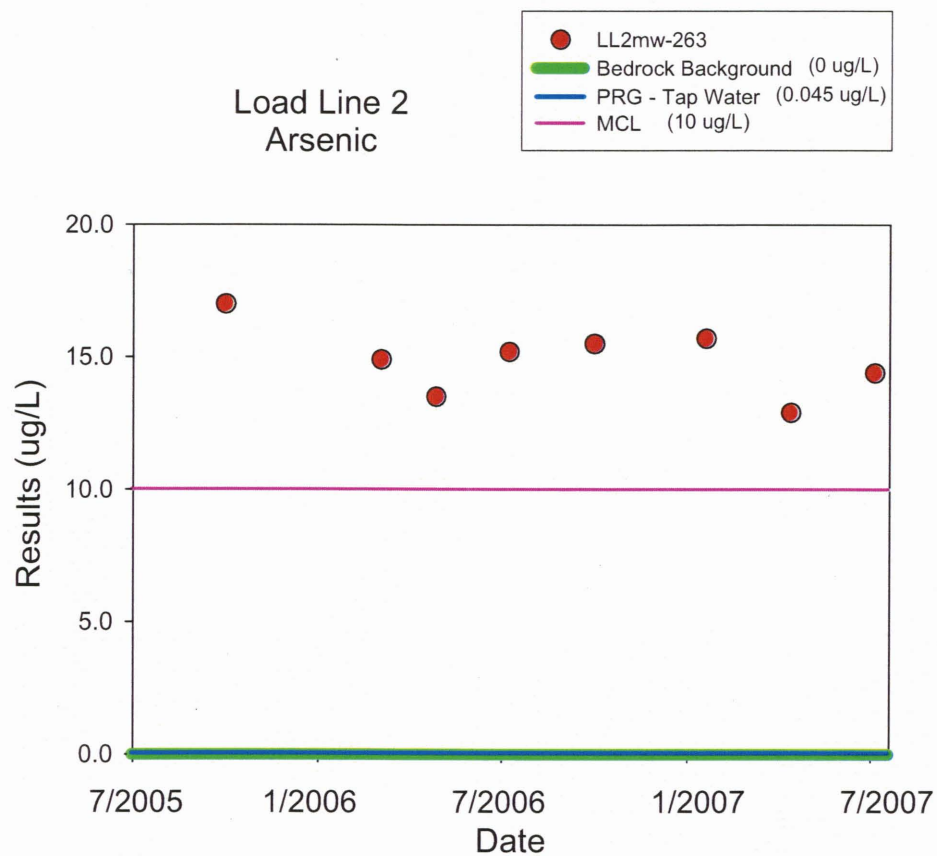
# Load Line 1 RDX

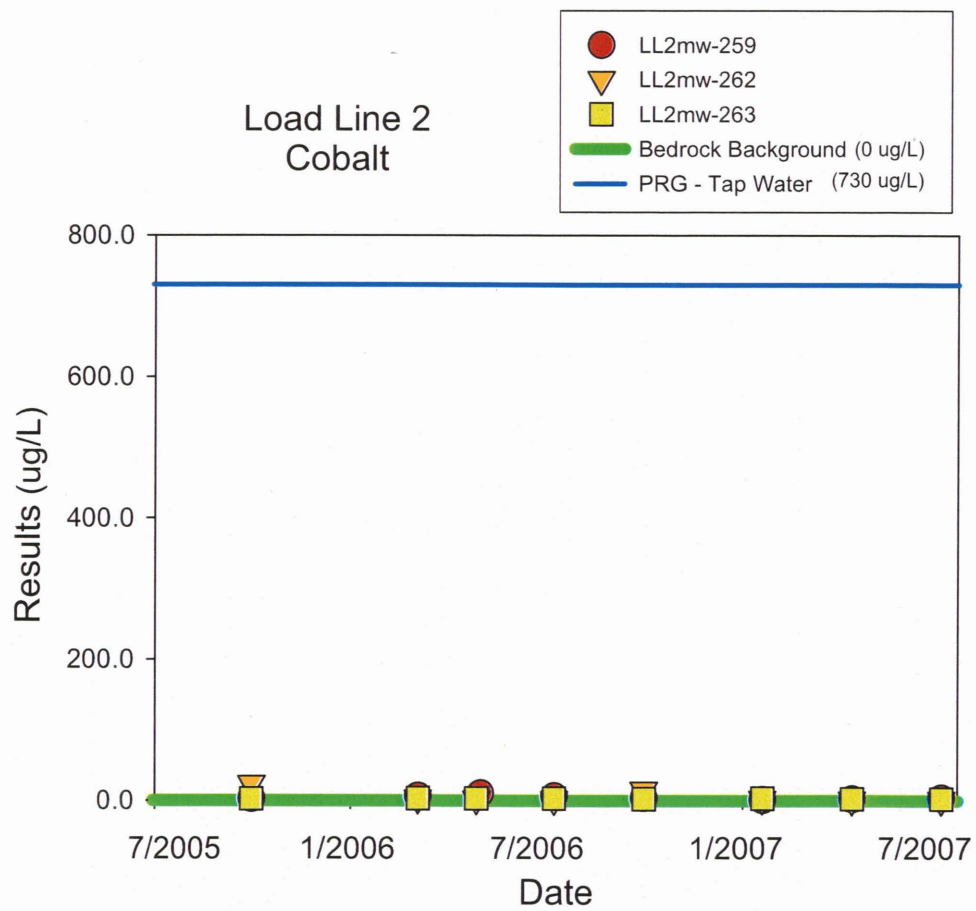
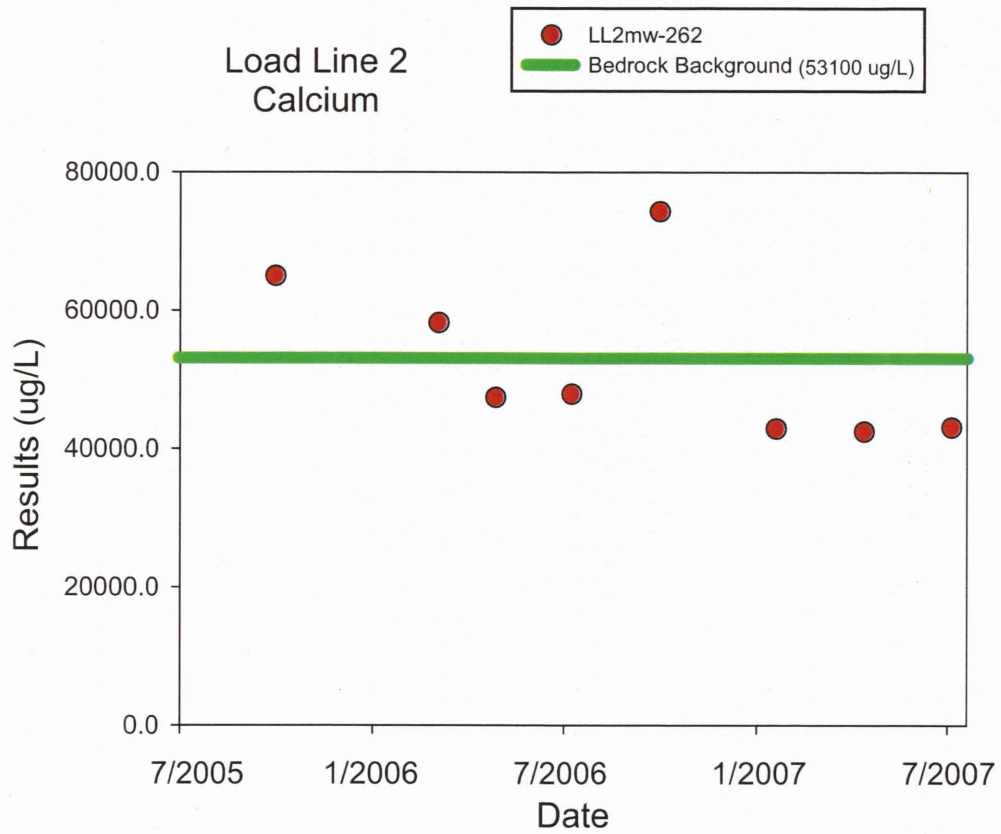


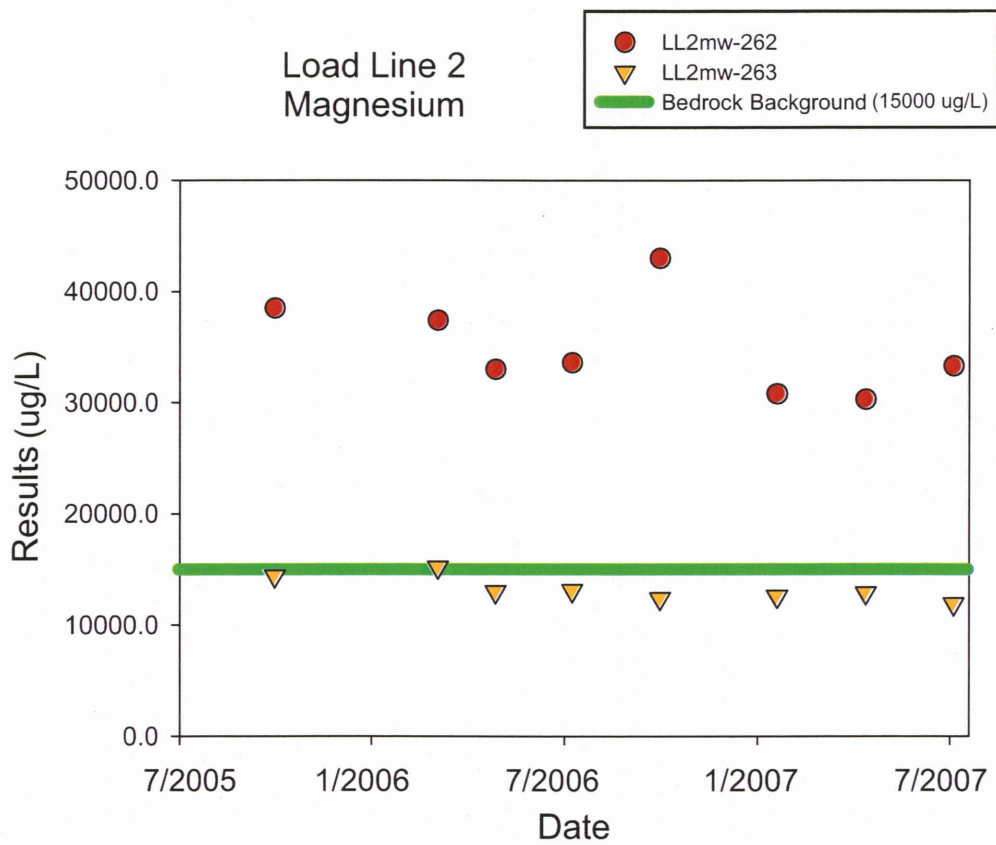
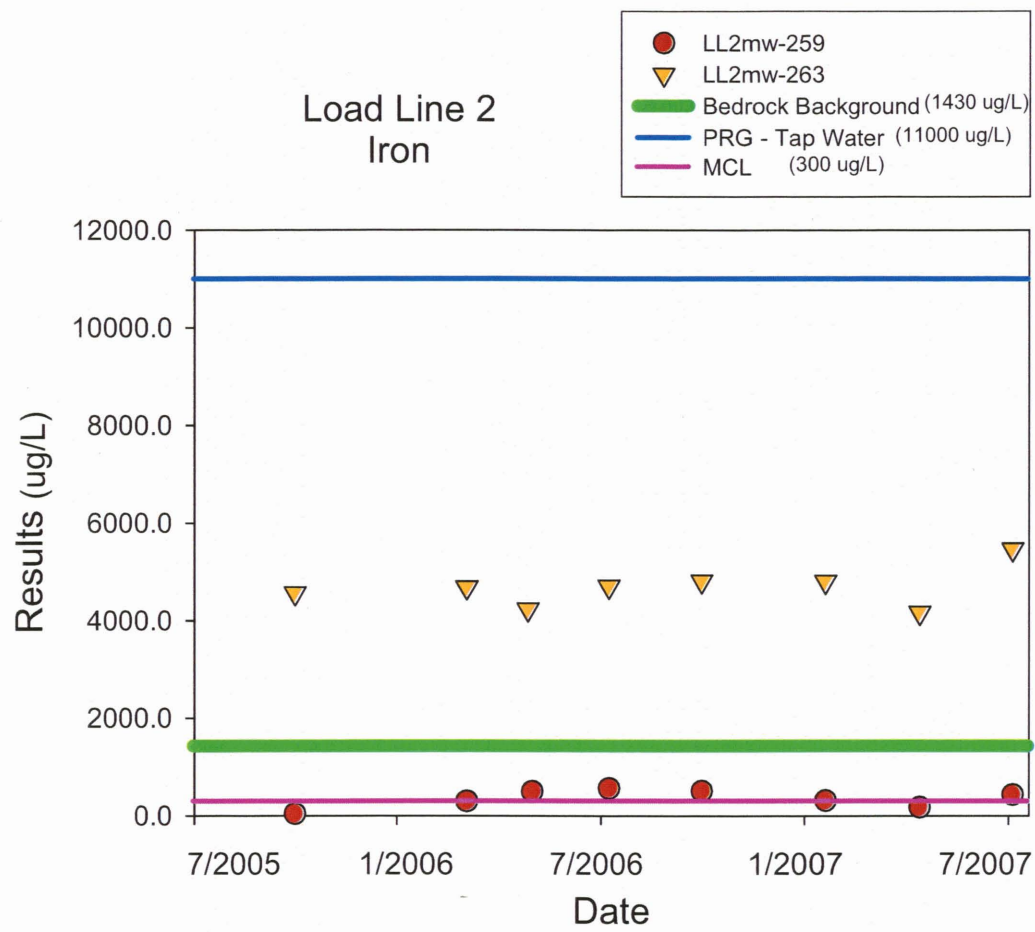
# Load Line 2 Antimony



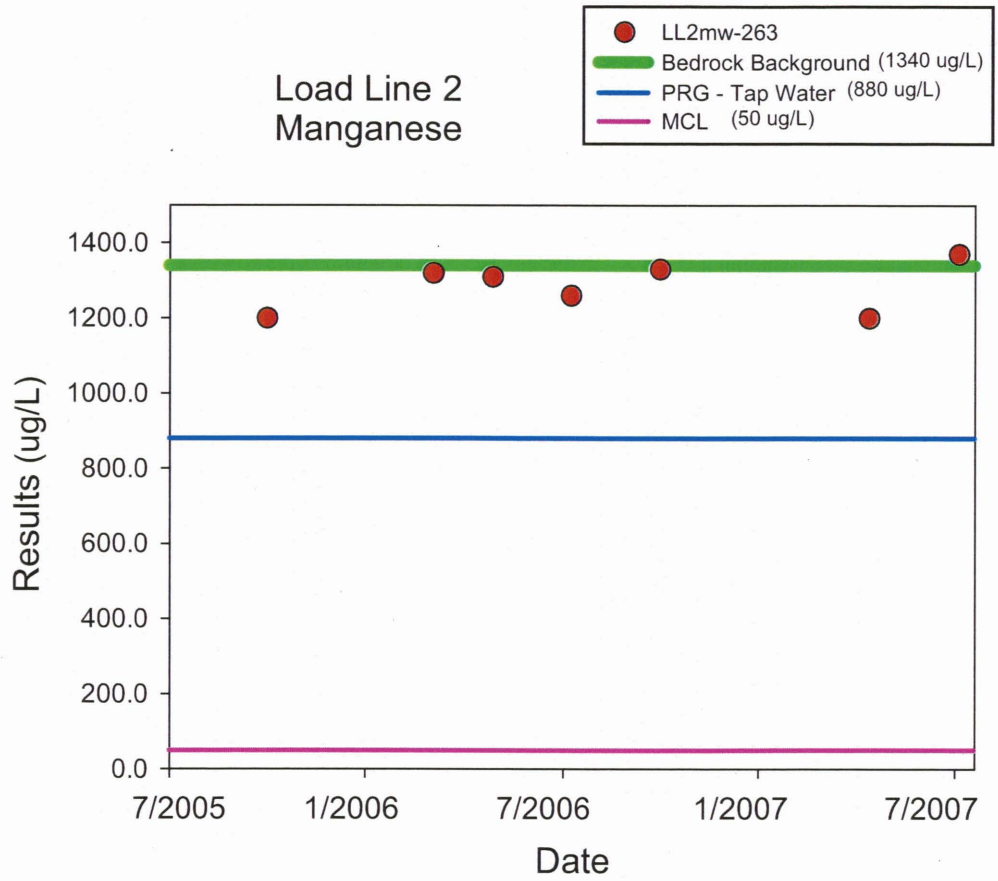
# Load Line 2 Arsenic



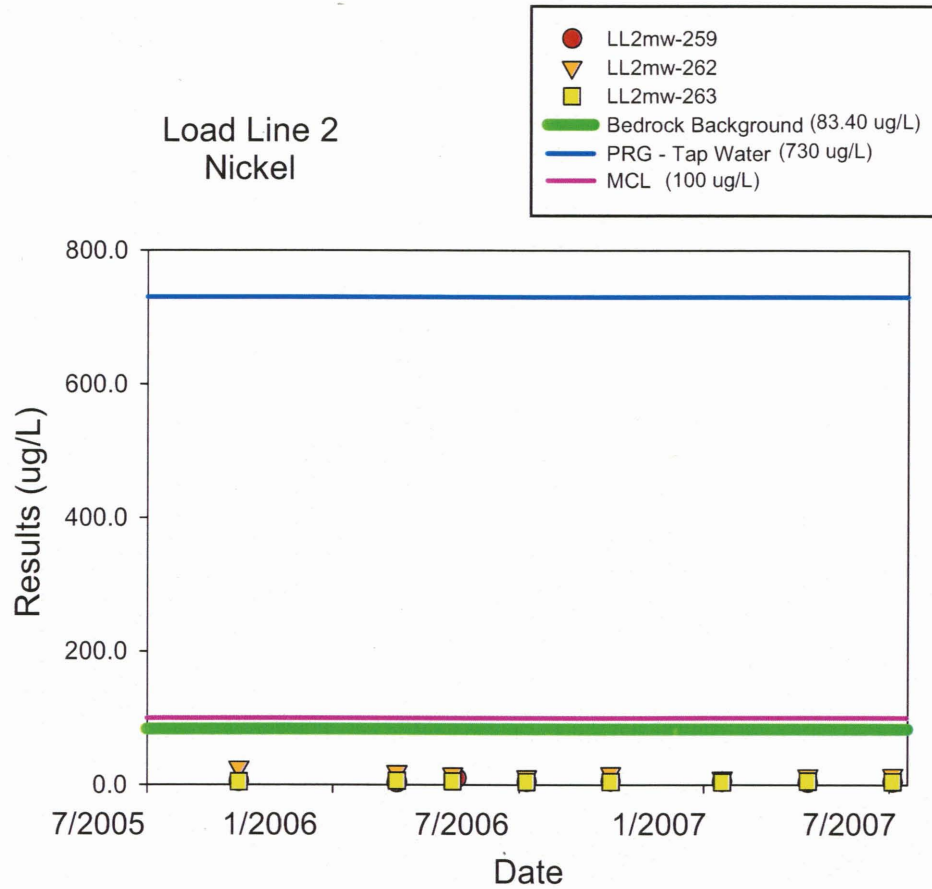




# Load Line 2 Manganese

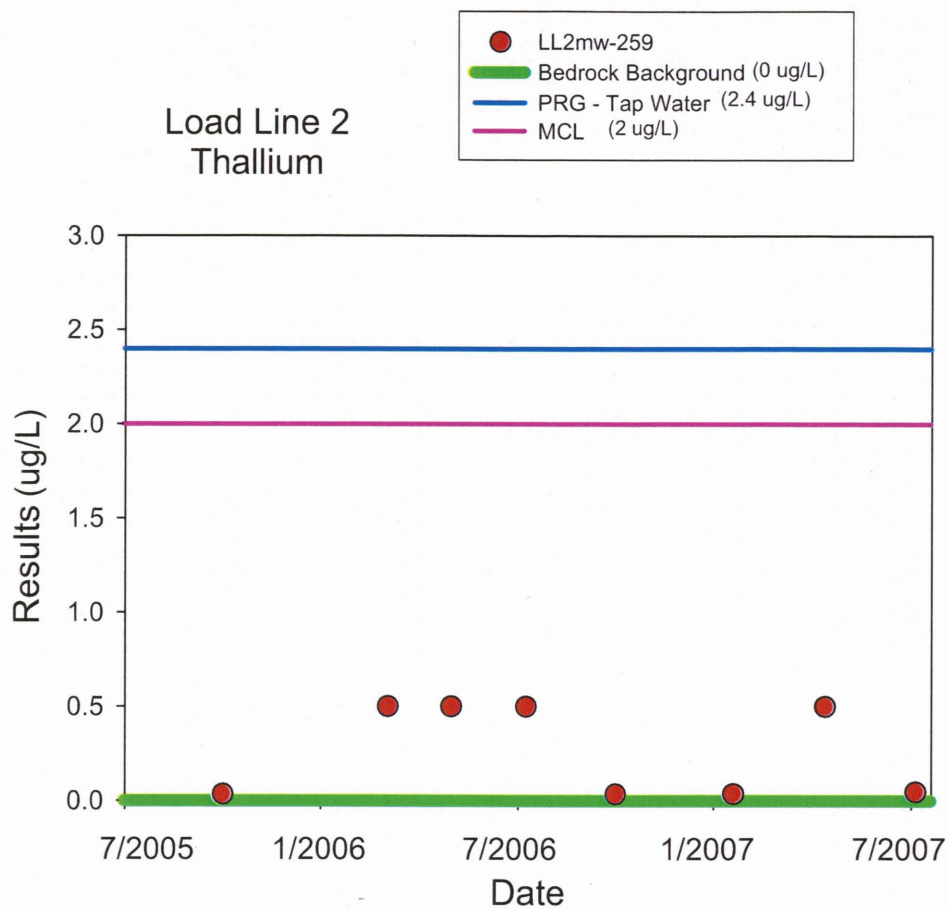


# Load Line 2 Nickel

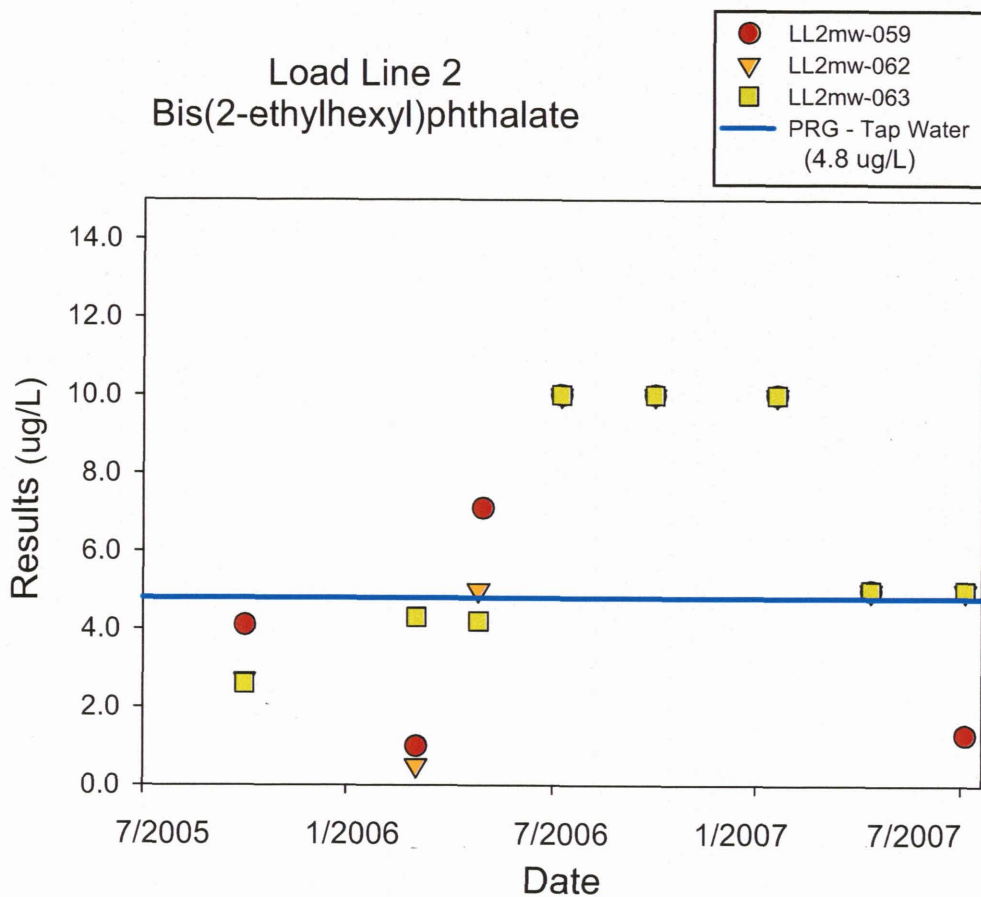




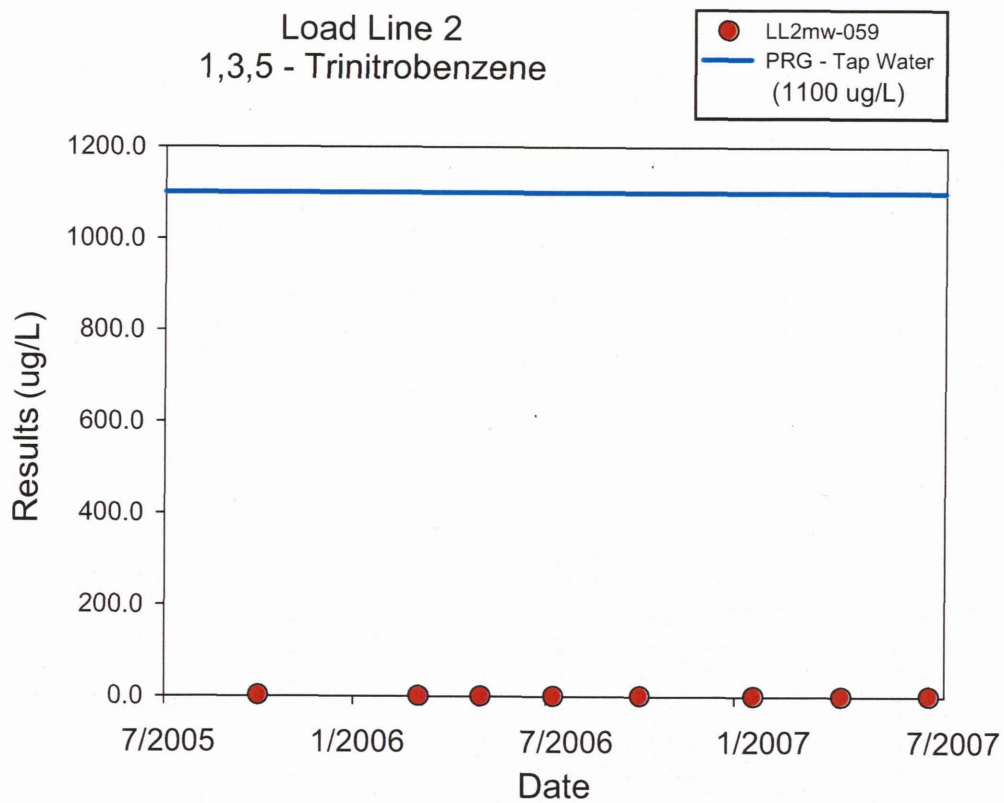
# Load Line 2 Thallium



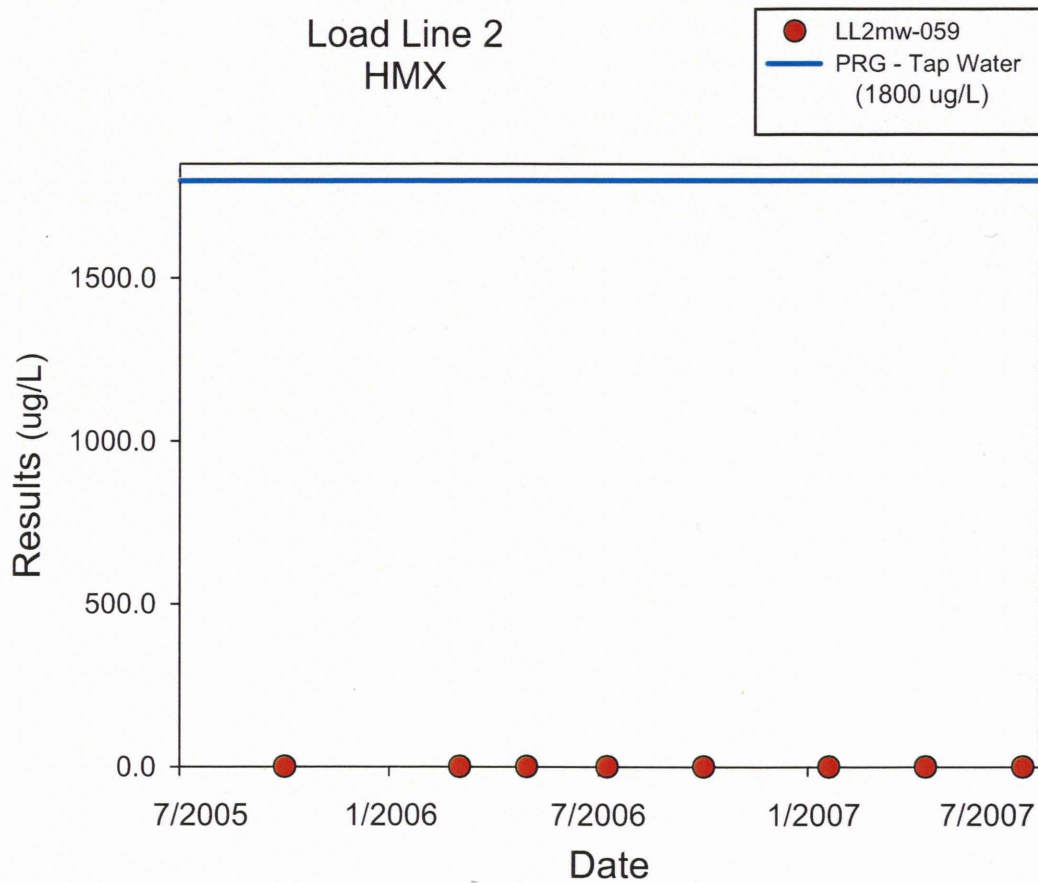
Load Line 2  
Bis(2-ethylhexyl)phthalate



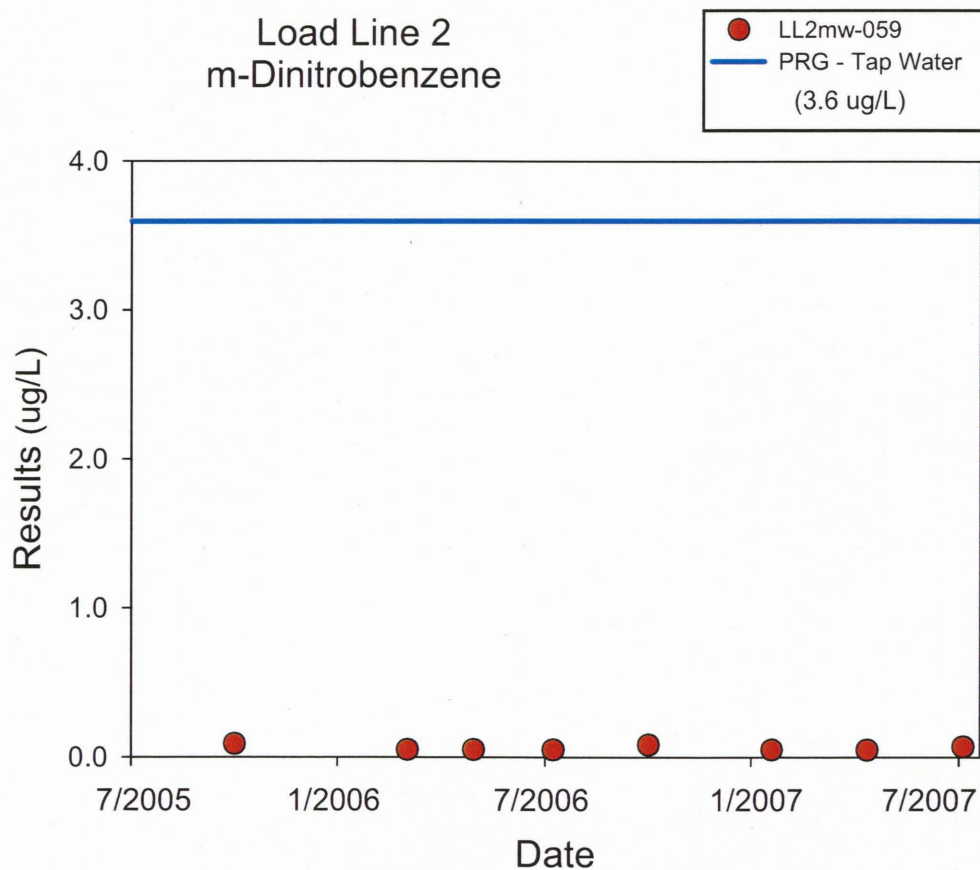
Load Line 2  
1,3,5 - Trinitrobenzene



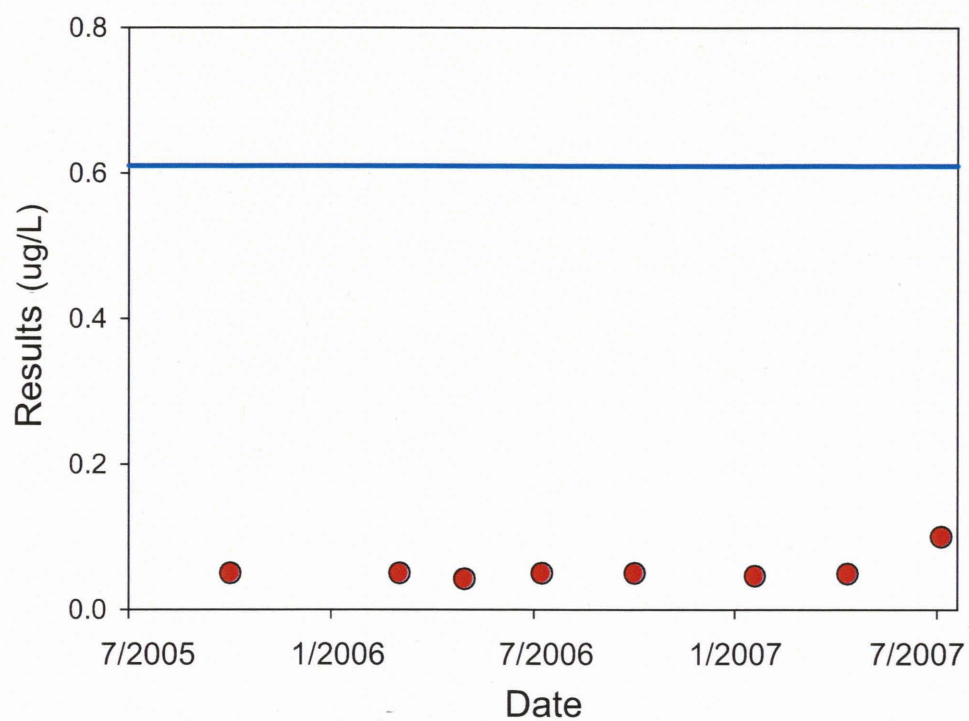
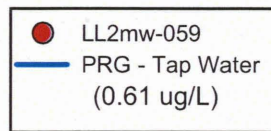
### Load Line 2 HMX



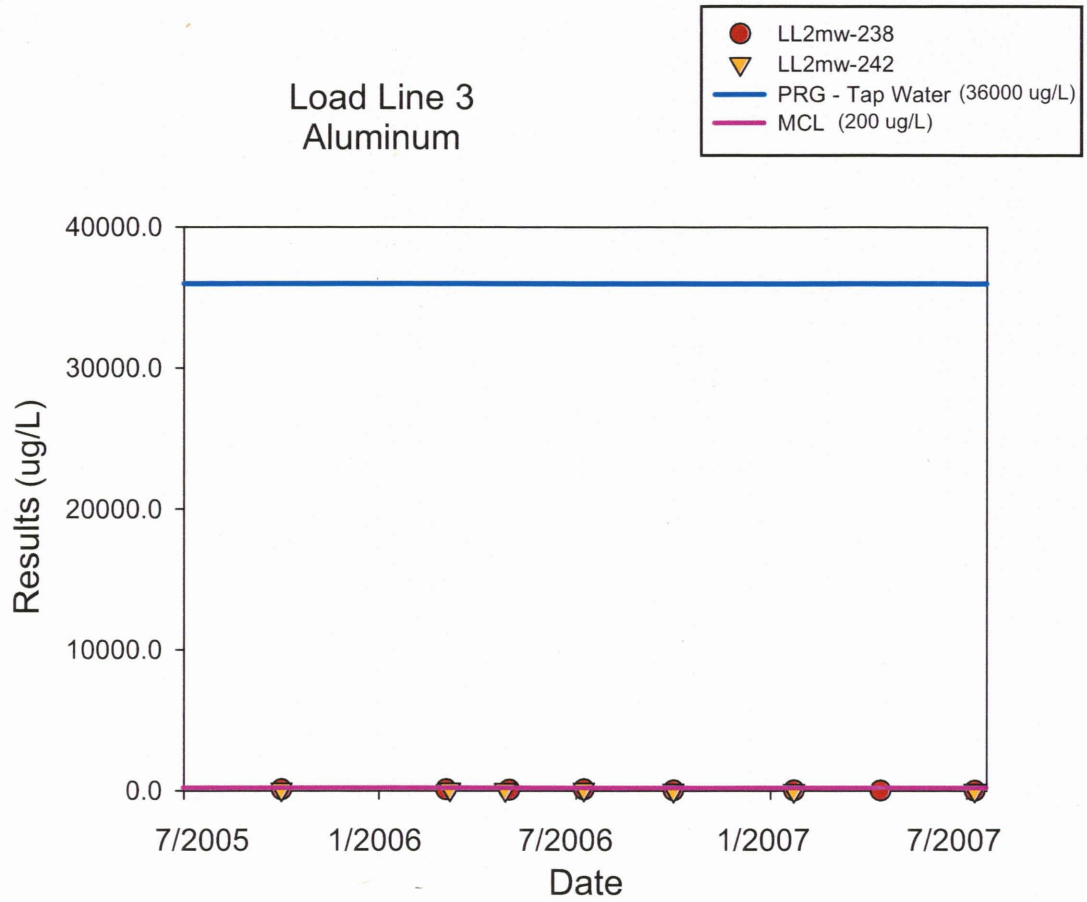
### Load Line 2 m-Dinitrobenzene



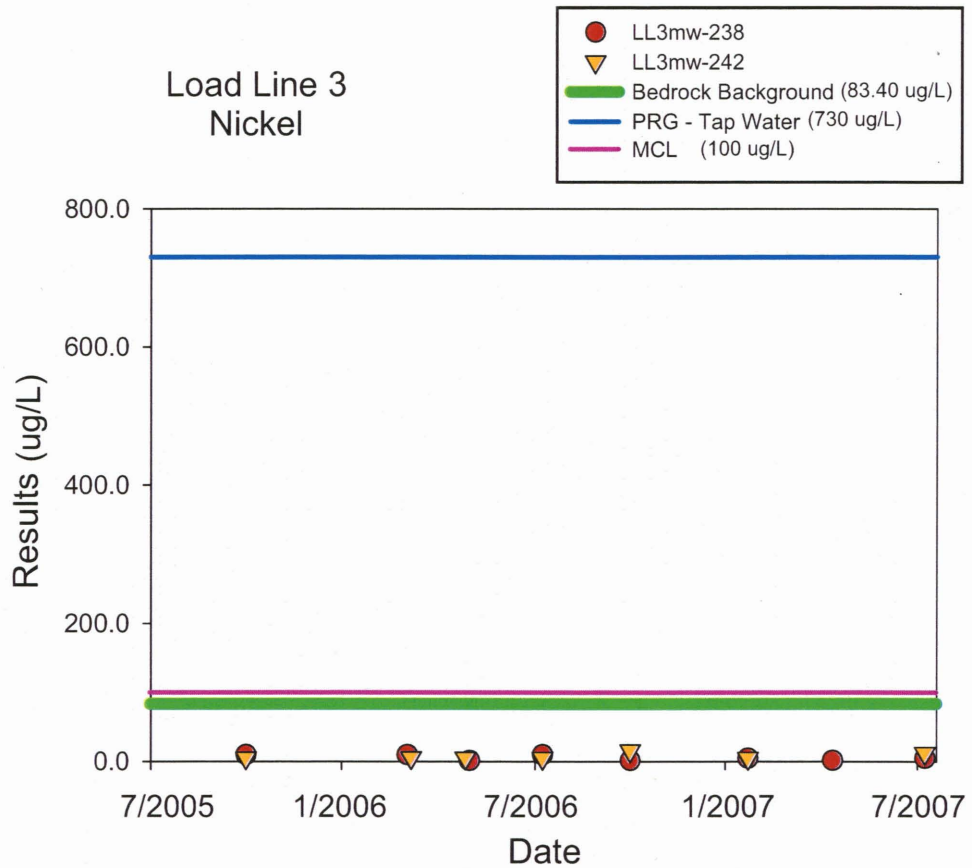
# Load Line 2 RDX



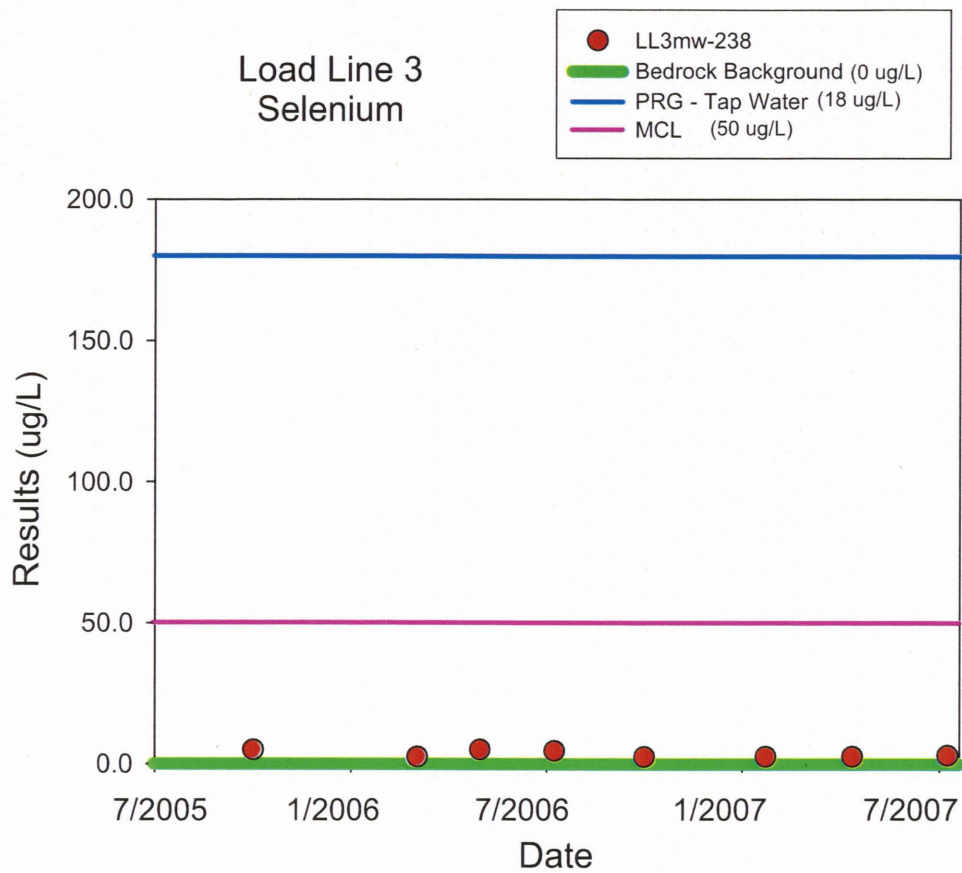
### Load Line 3 Aluminum



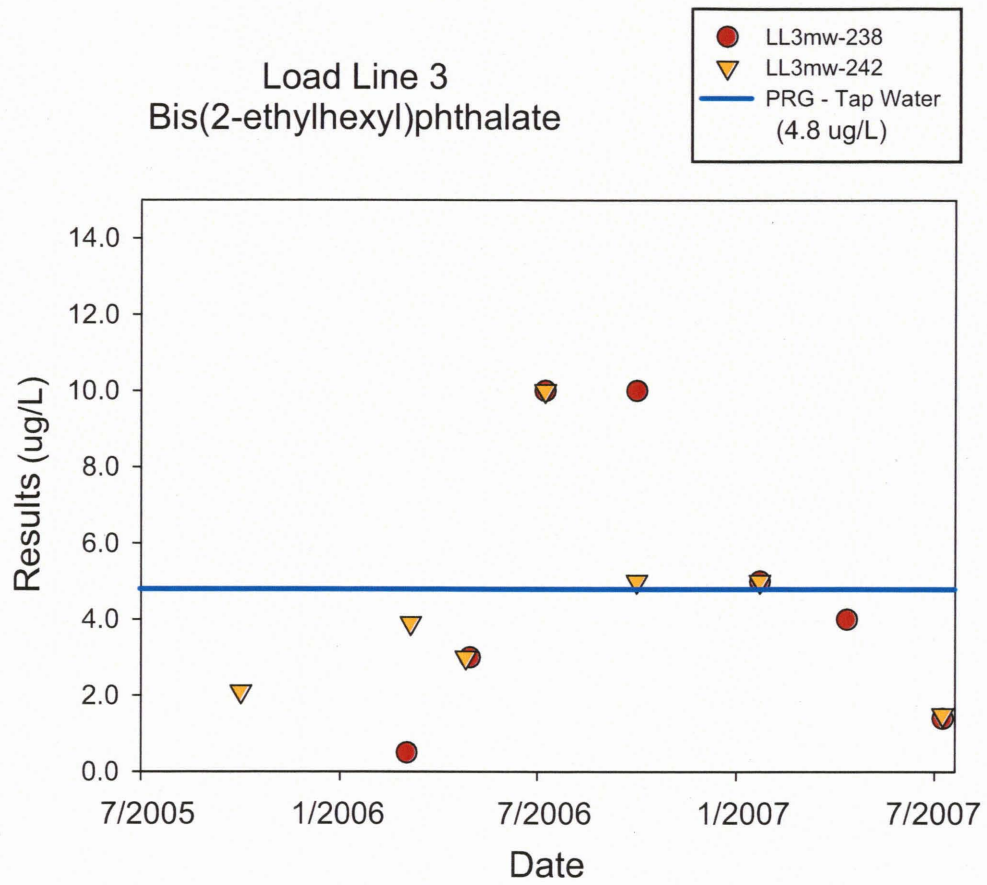
### Load Line 3 Nickel



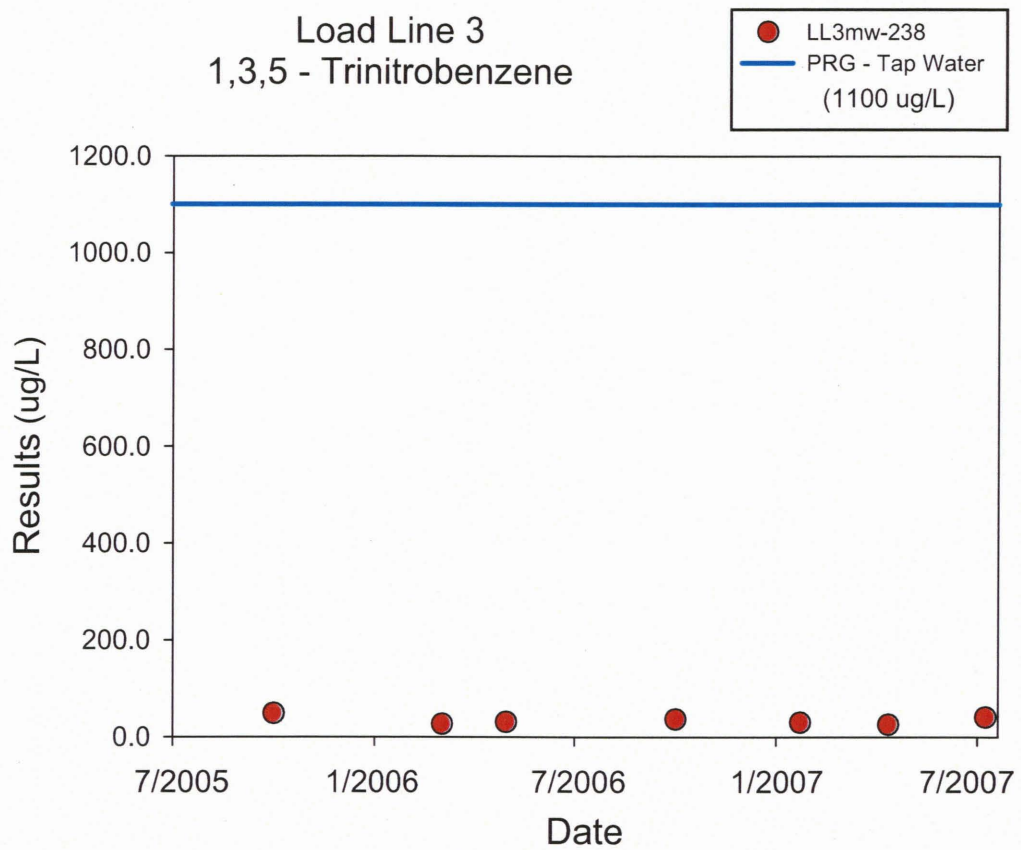
# Load Line 3 Selenium



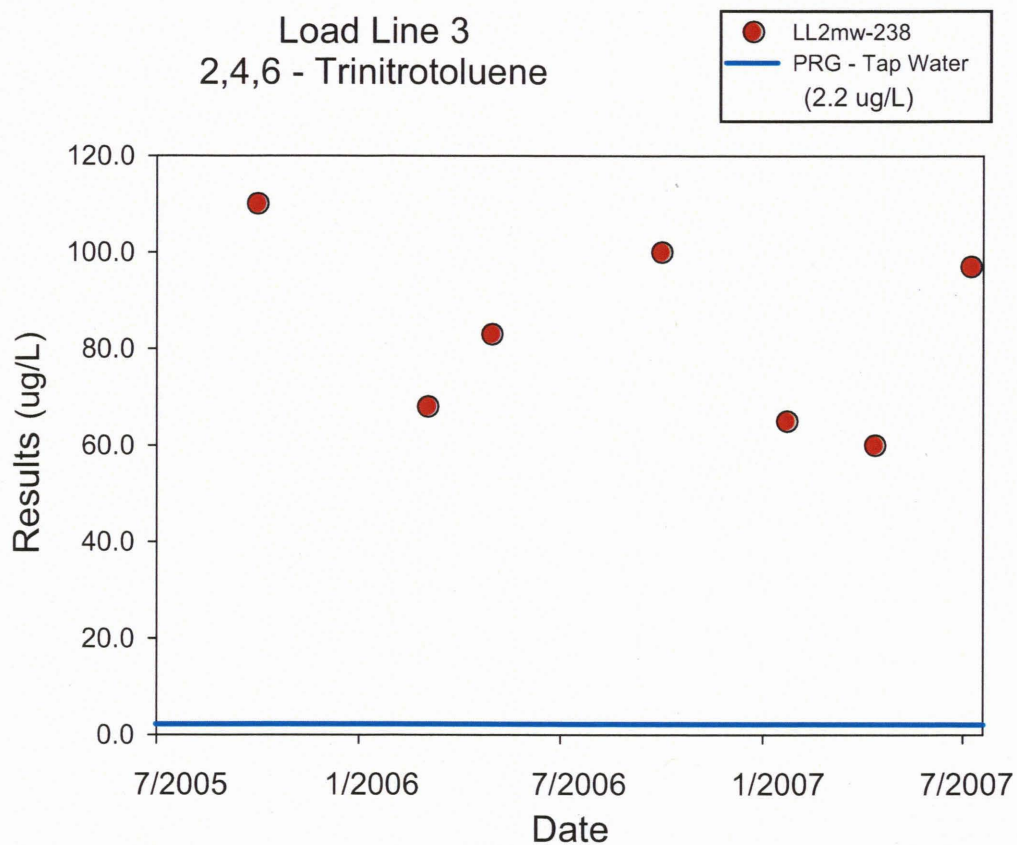
Load Line 3  
Bis(2-ethylhexyl)phthalate



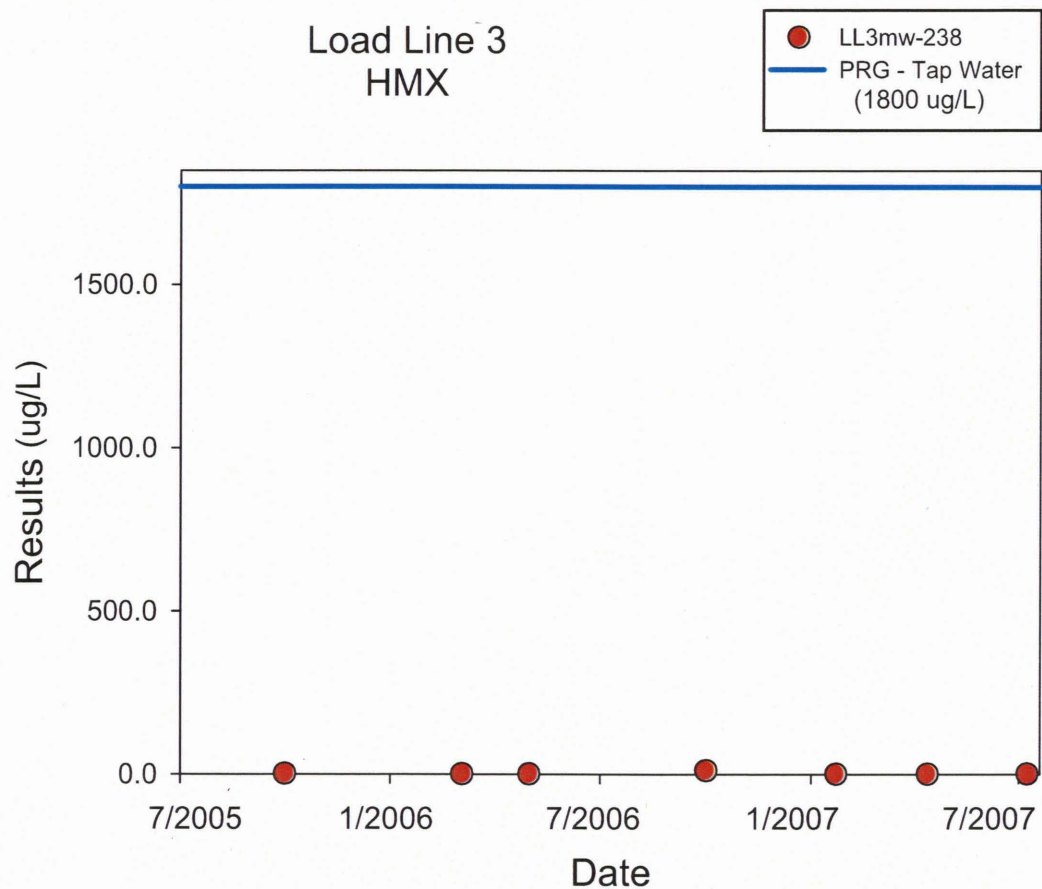
Load Line 3  
1,3,5 - Trinitrobenzene



Load Line 3  
2,4,6 - Trinitrotoluene

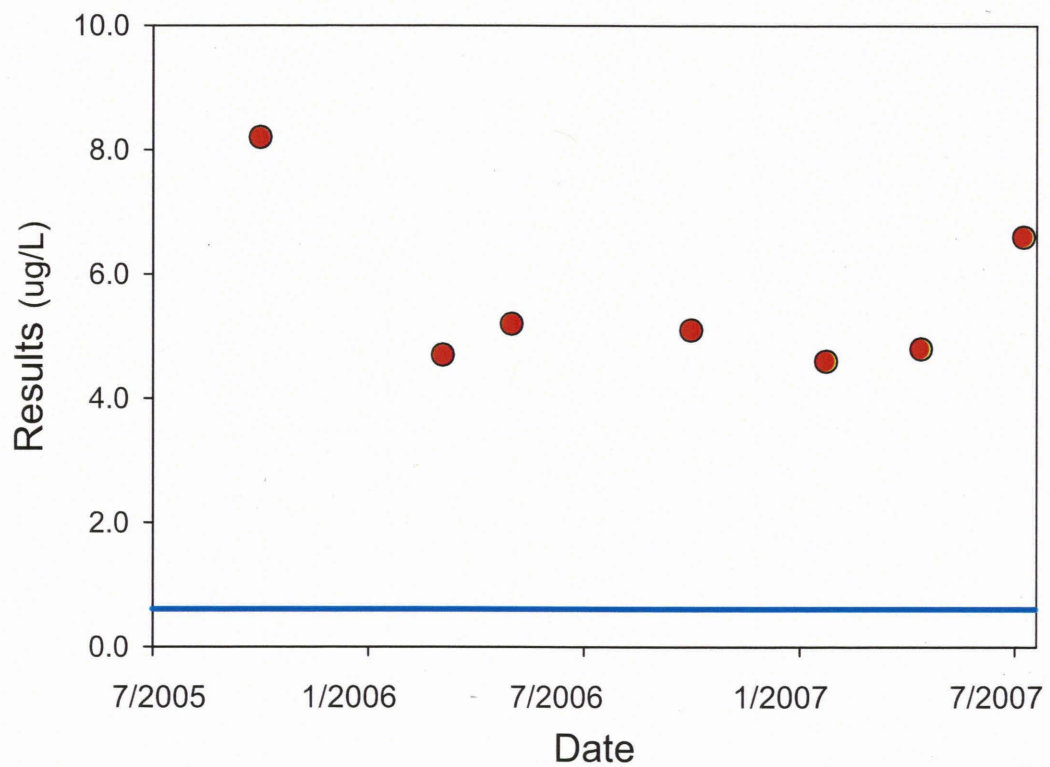
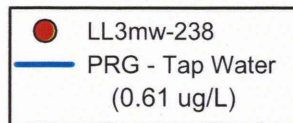


Load Line 3  
HMX

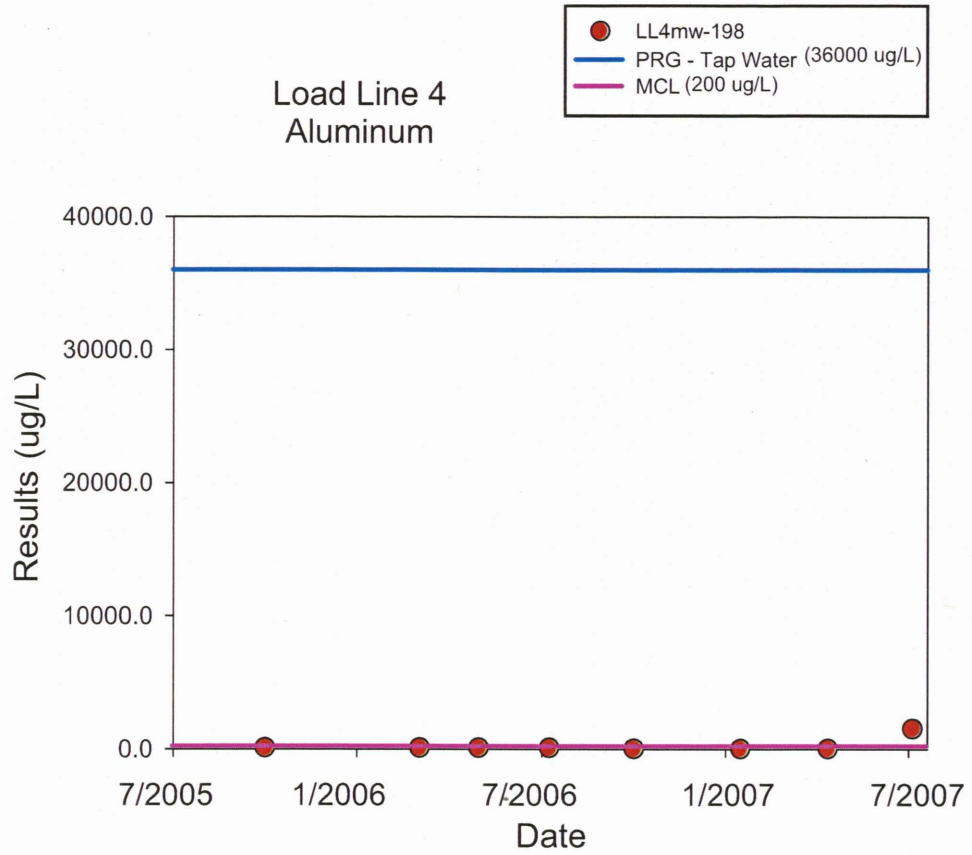




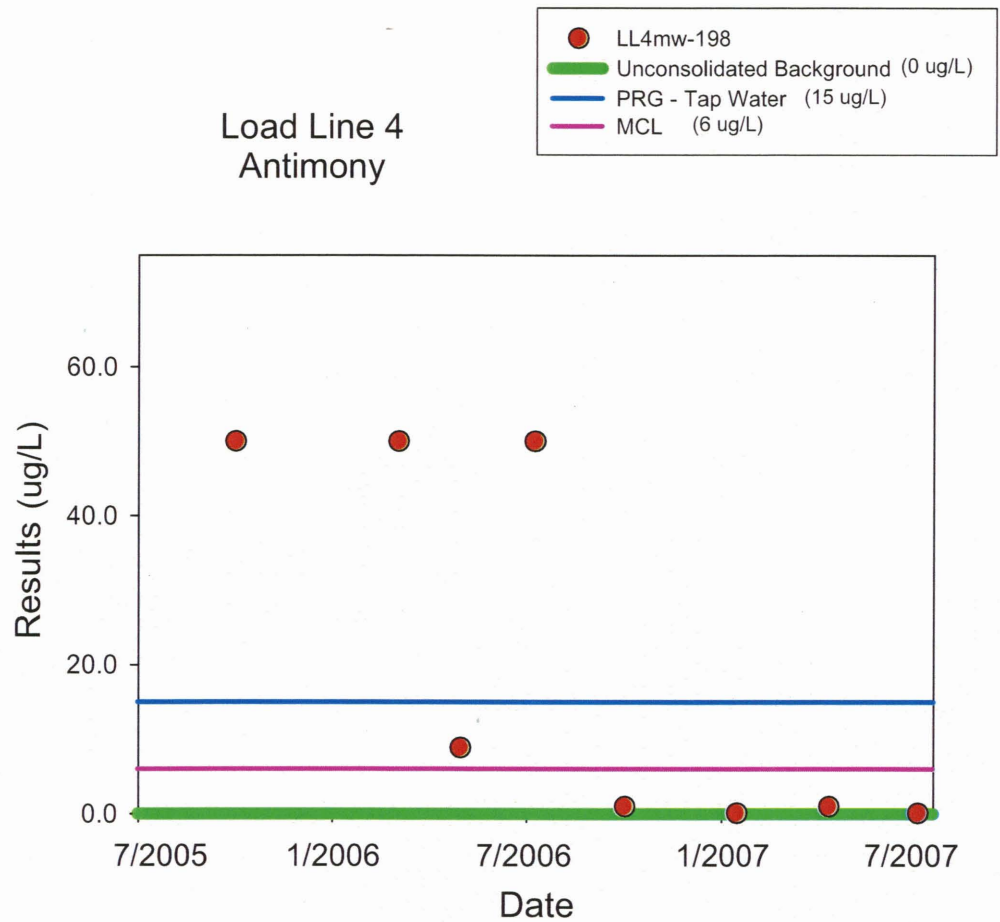
# Load Line 3 RDX



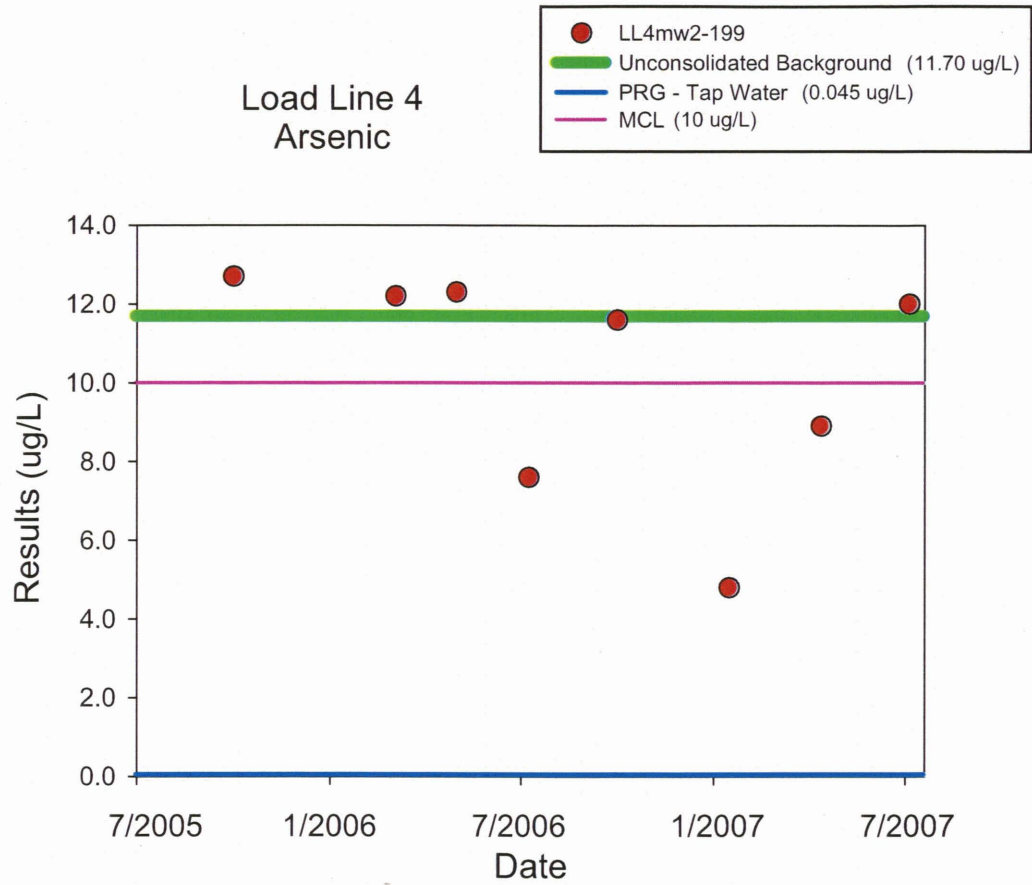
### Load Line 4 Aluminum



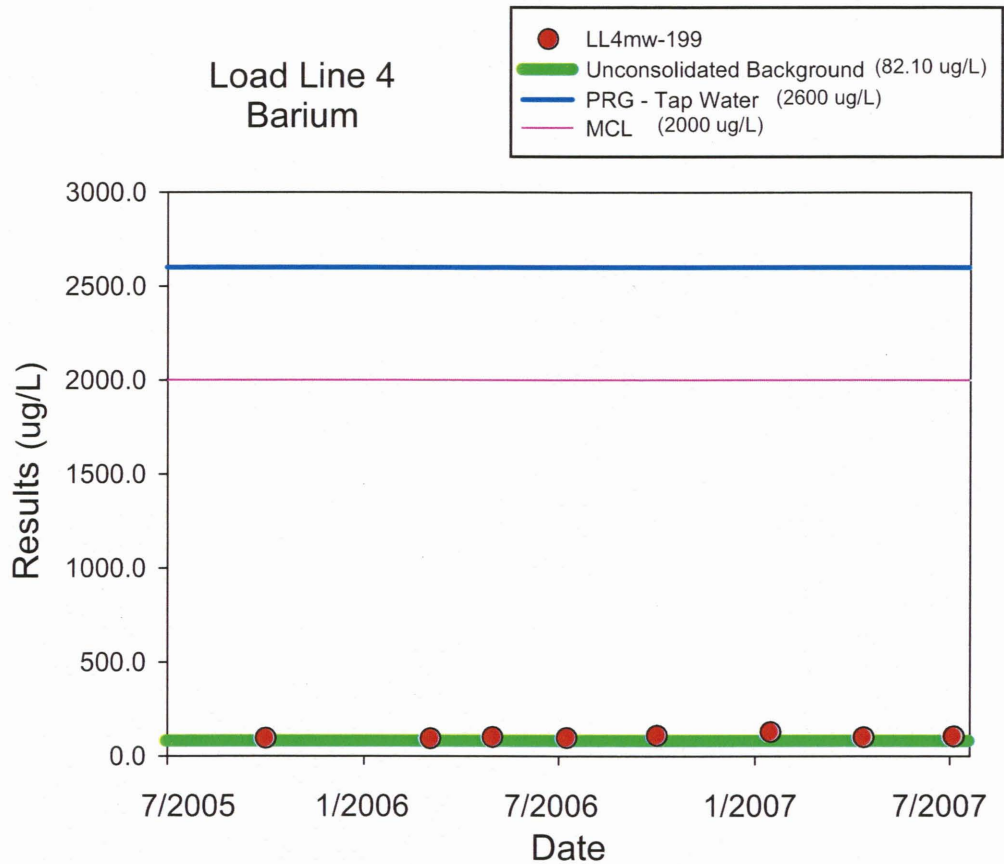
### Load Line 4 Antimony



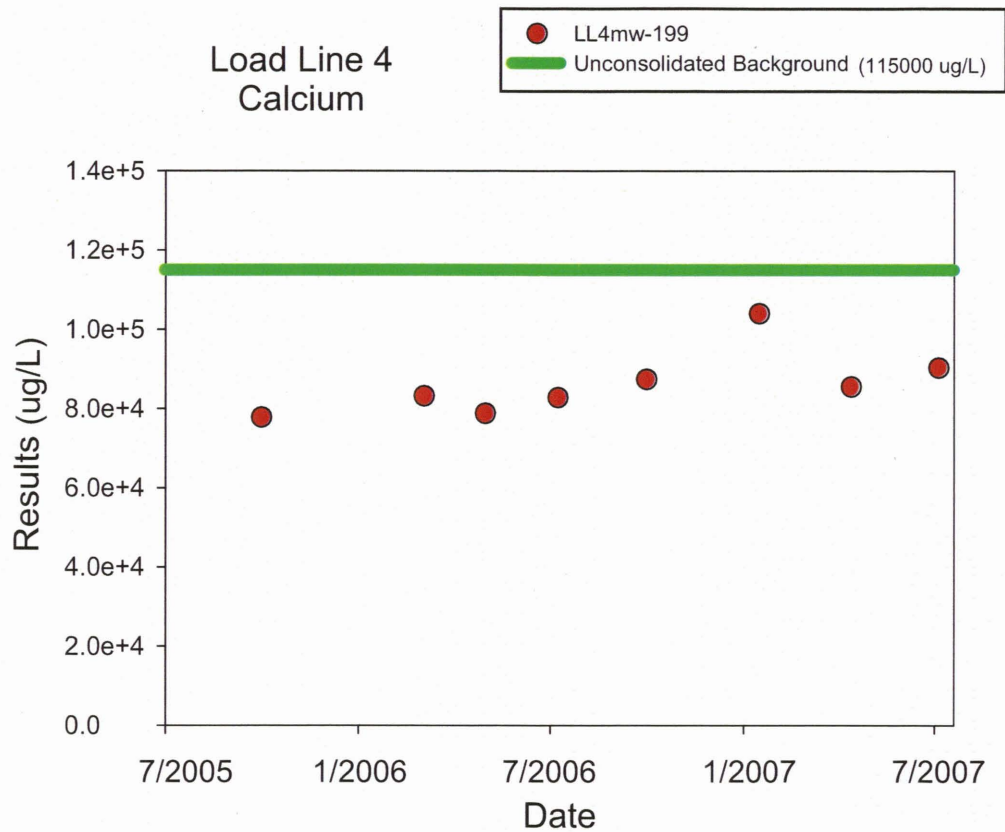
### Load Line 4 Arsenic



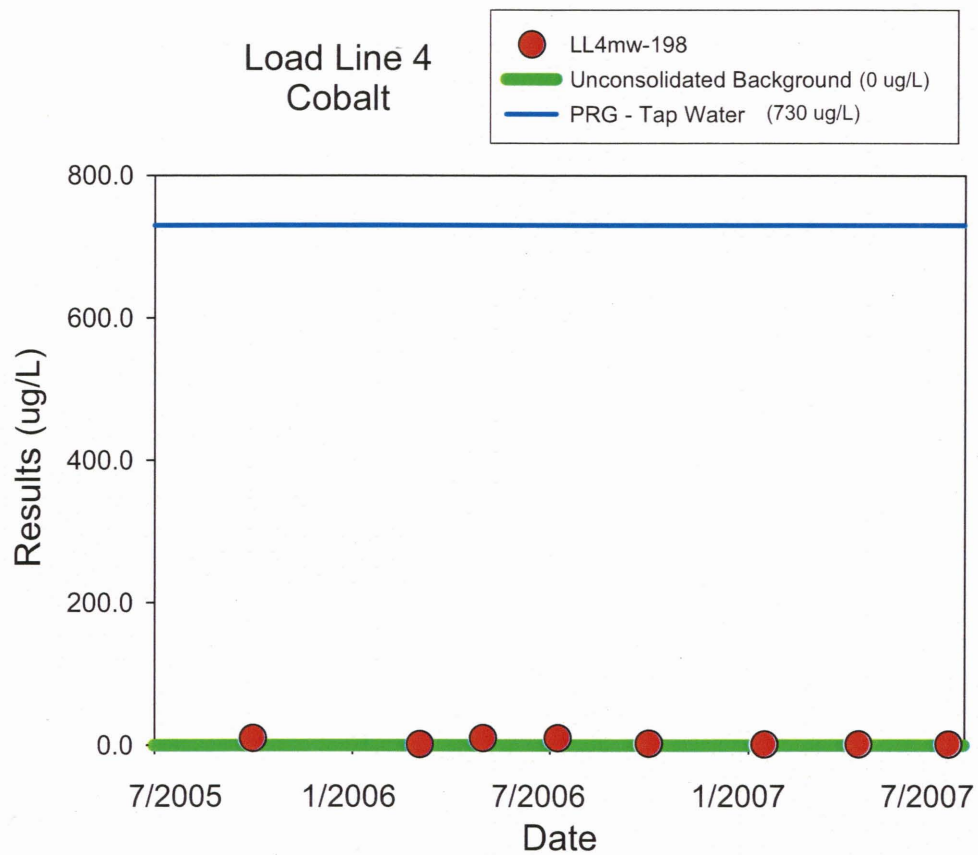
### Load Line 4 Barium



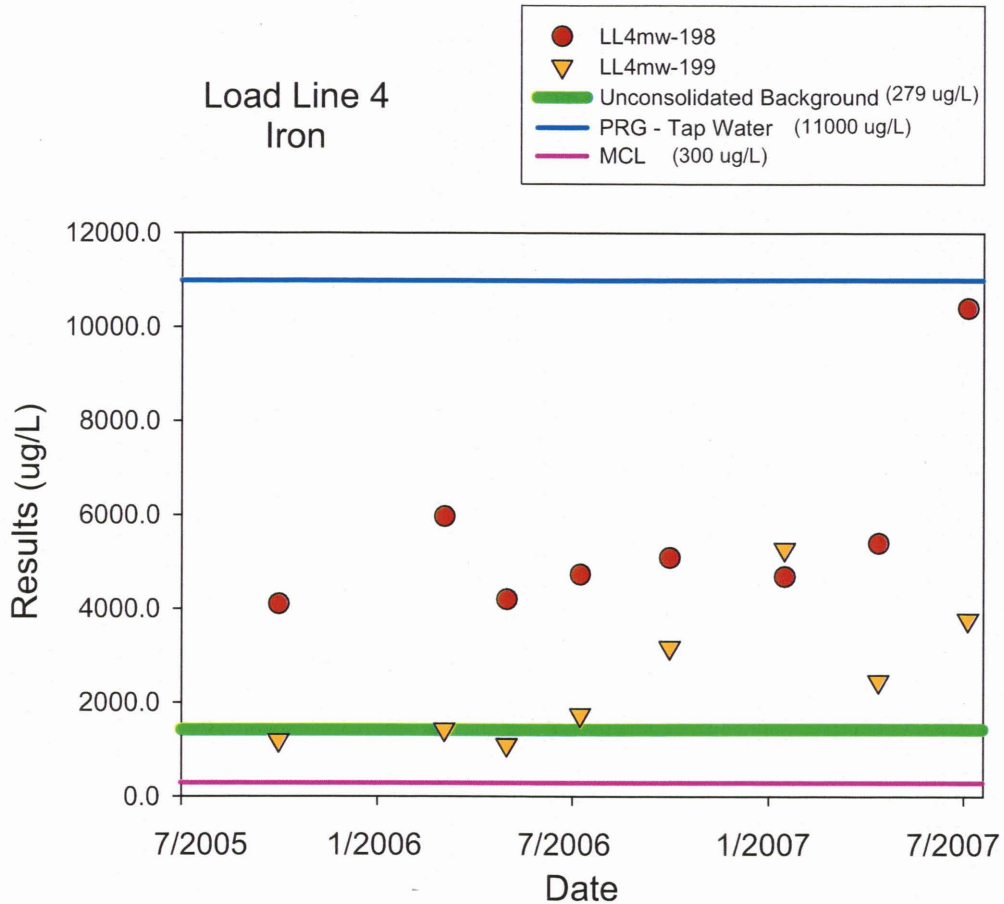
### Load Line 4 Calcium



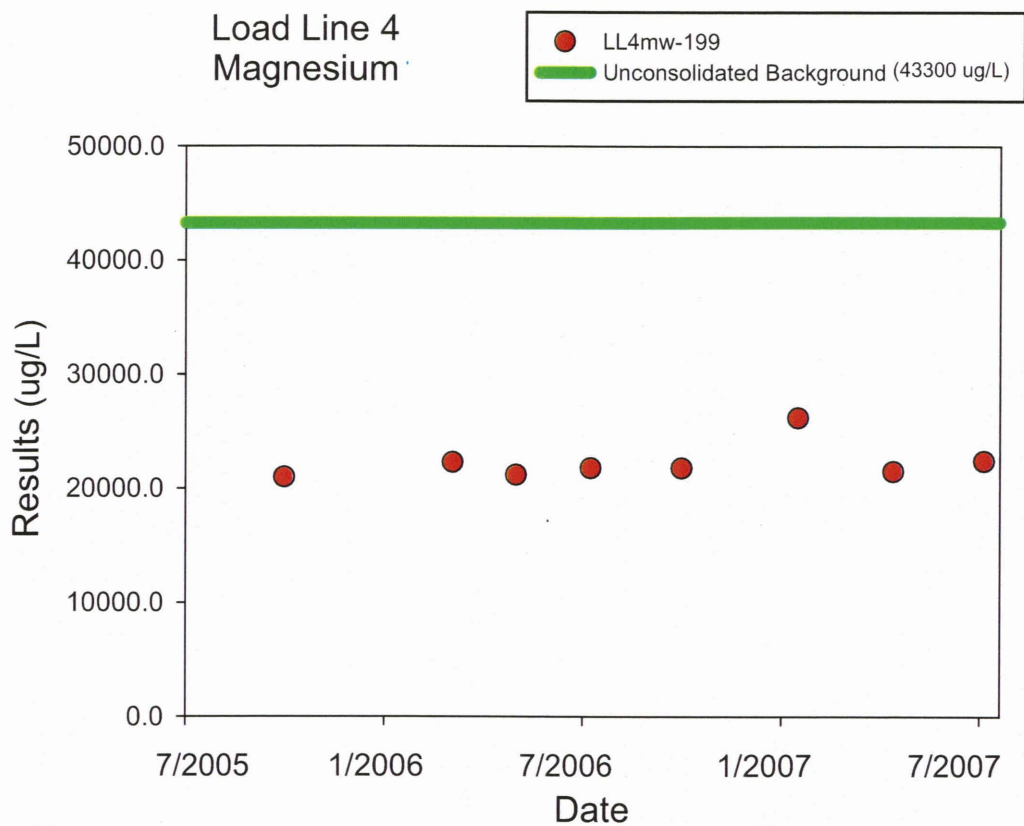
### Load Line 4 Cobalt



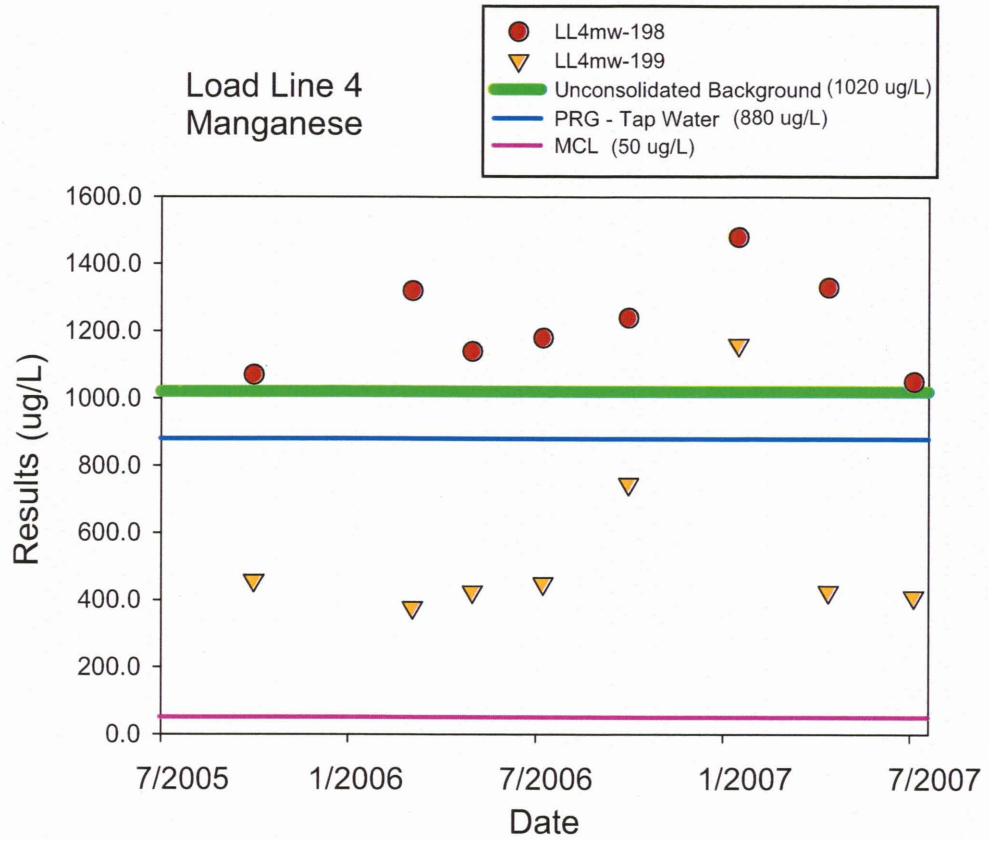
# Load Line 4 Iron



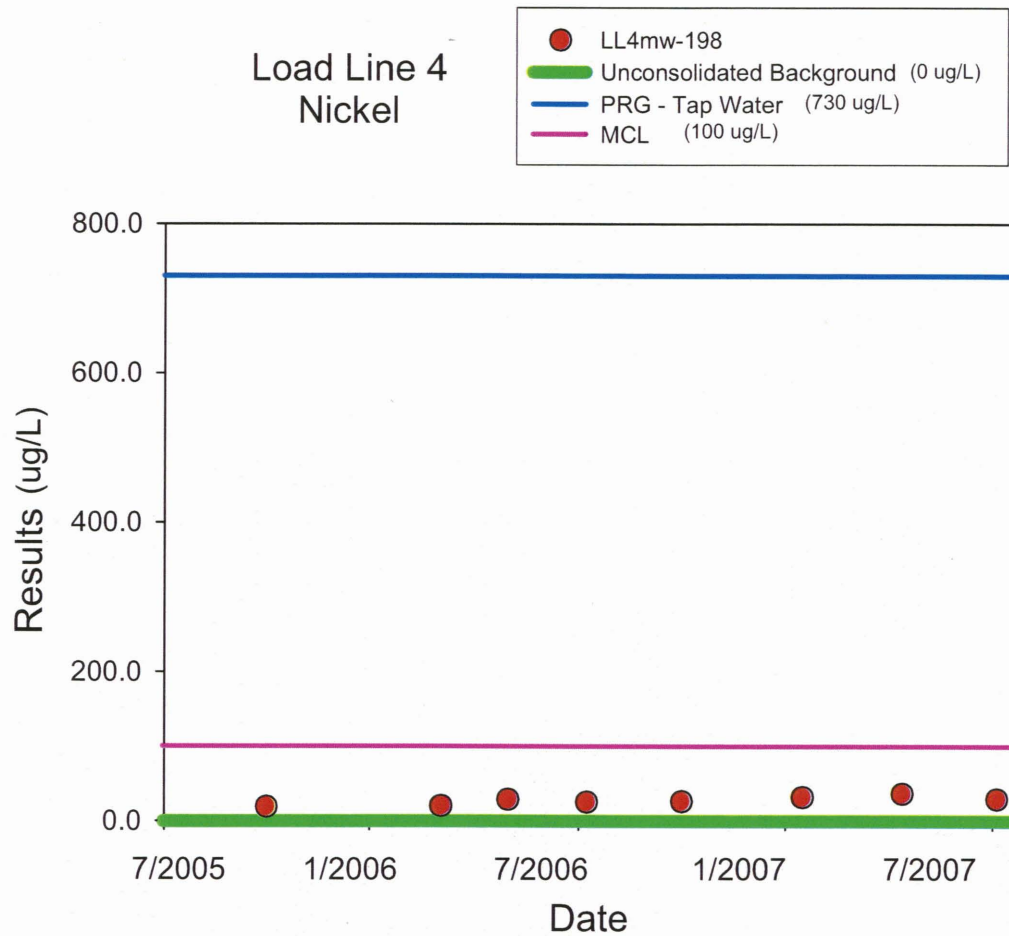
# Load Line 4 Magnesium



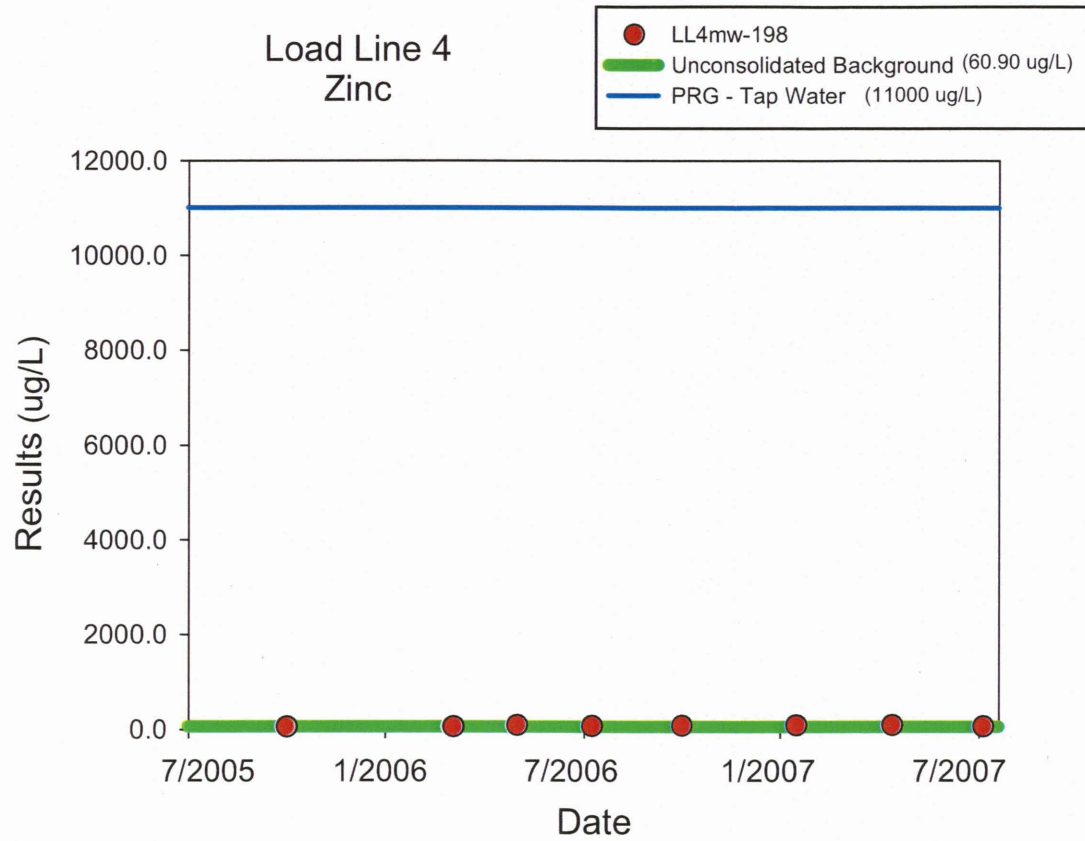
### Load Line 4 Manganese



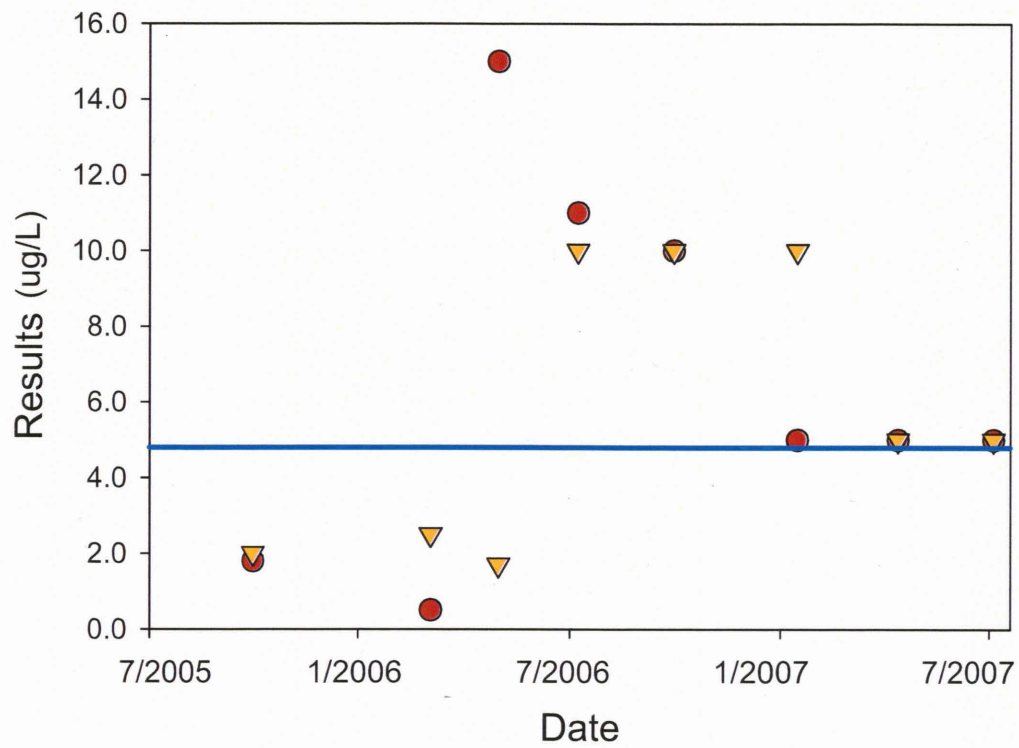
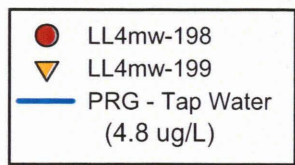
### Load Line 4 Nickel



# Load Line 4 Zinc

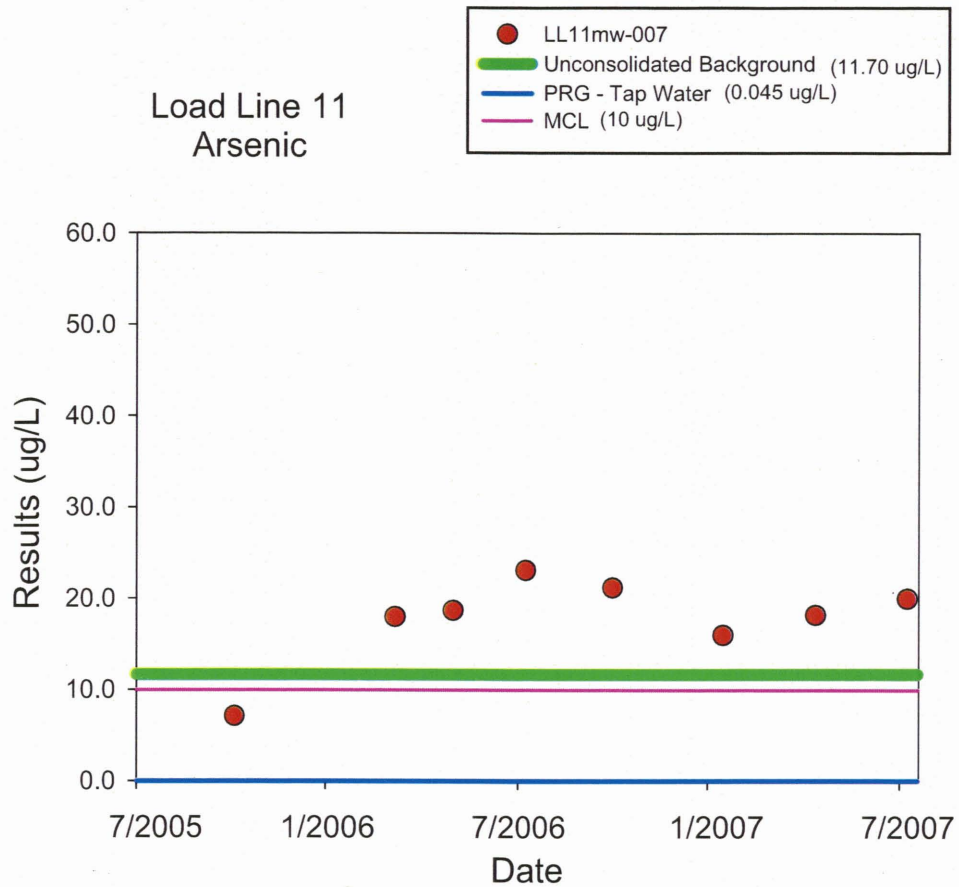


Load Line 4  
Bis(2-ethylhexyl)phthalate

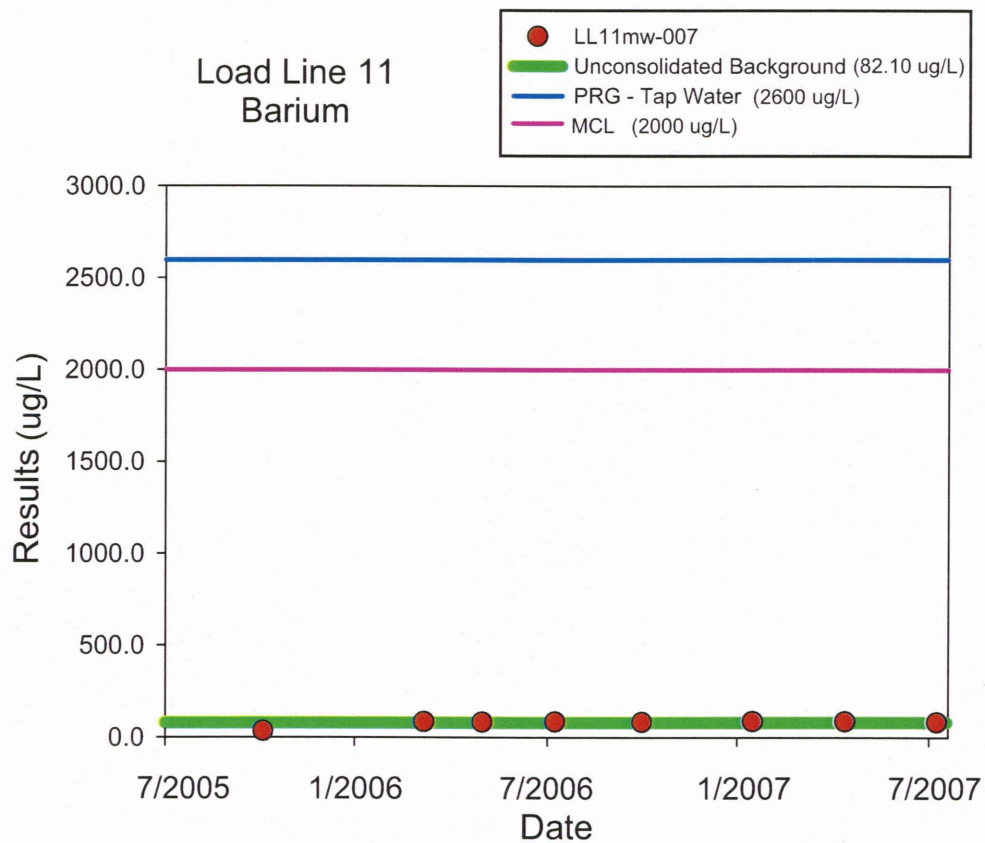




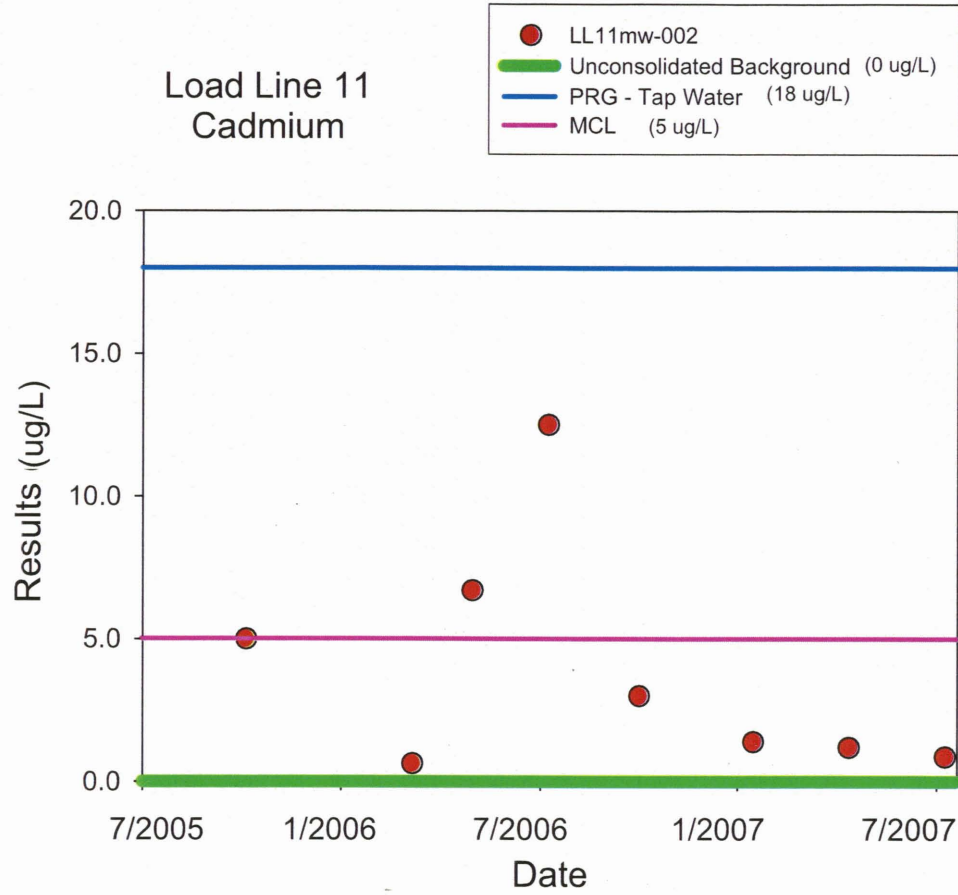
### Load Line 11 Arsenic



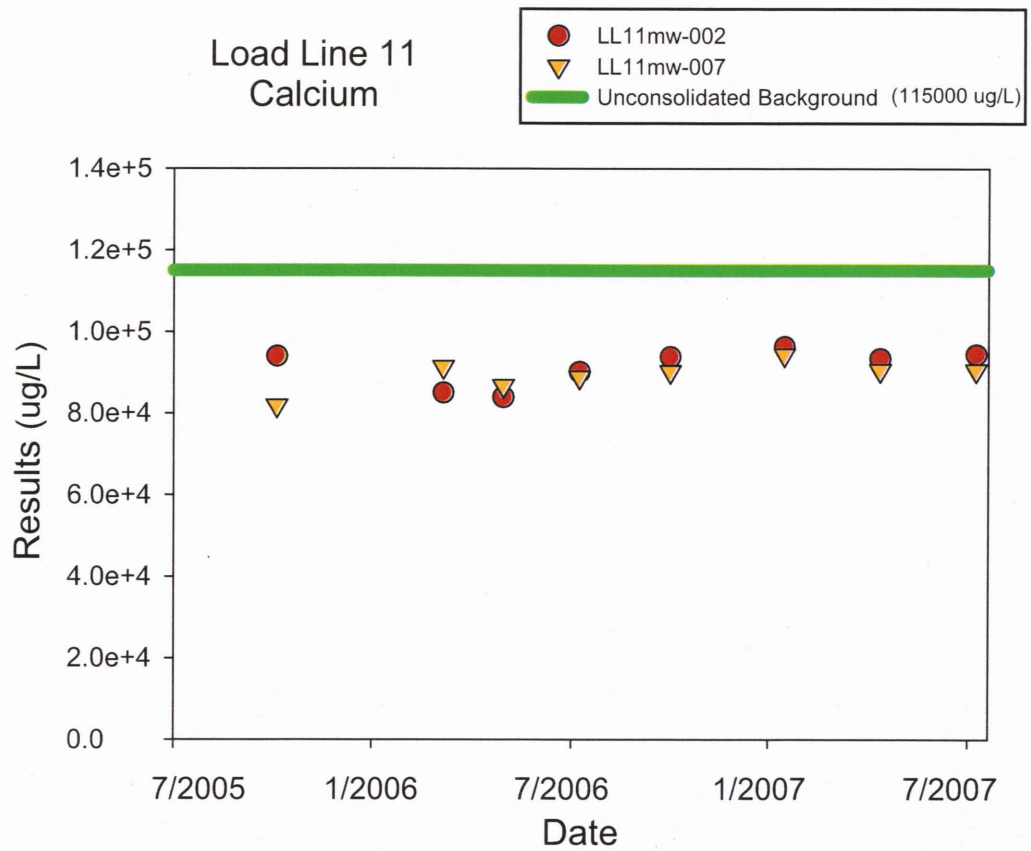
### Load Line 11 Barium



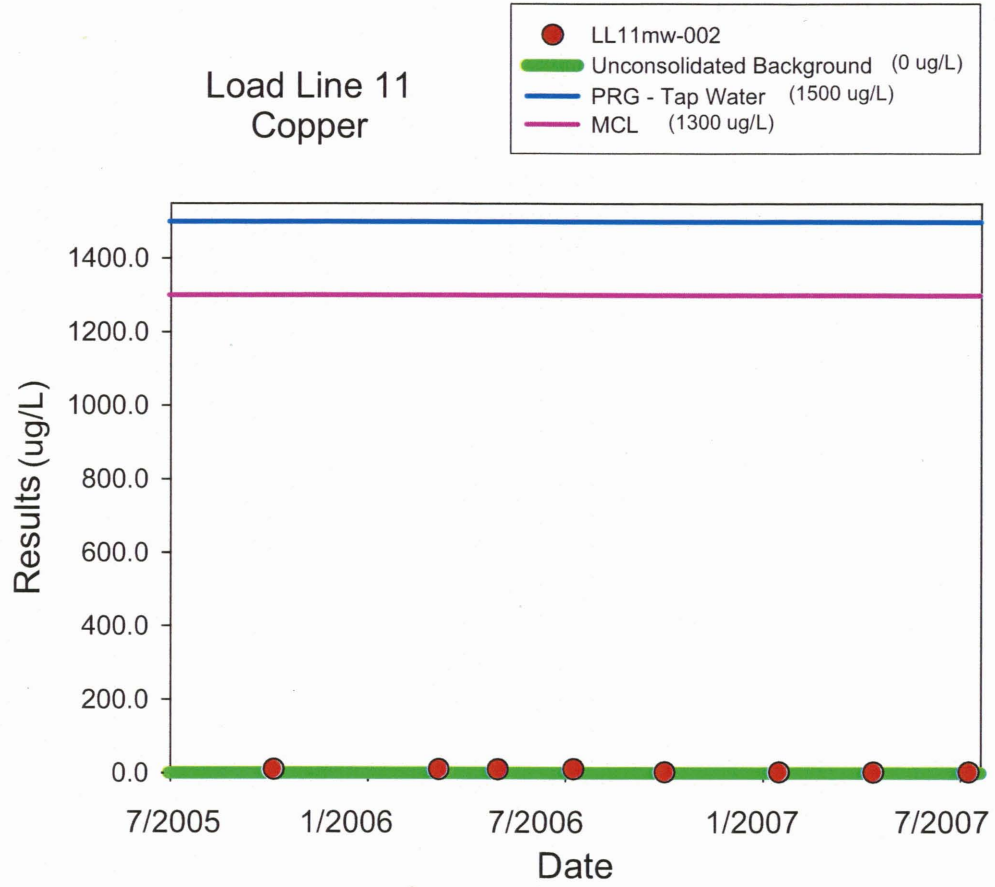
### Load Line 11 Cadmium



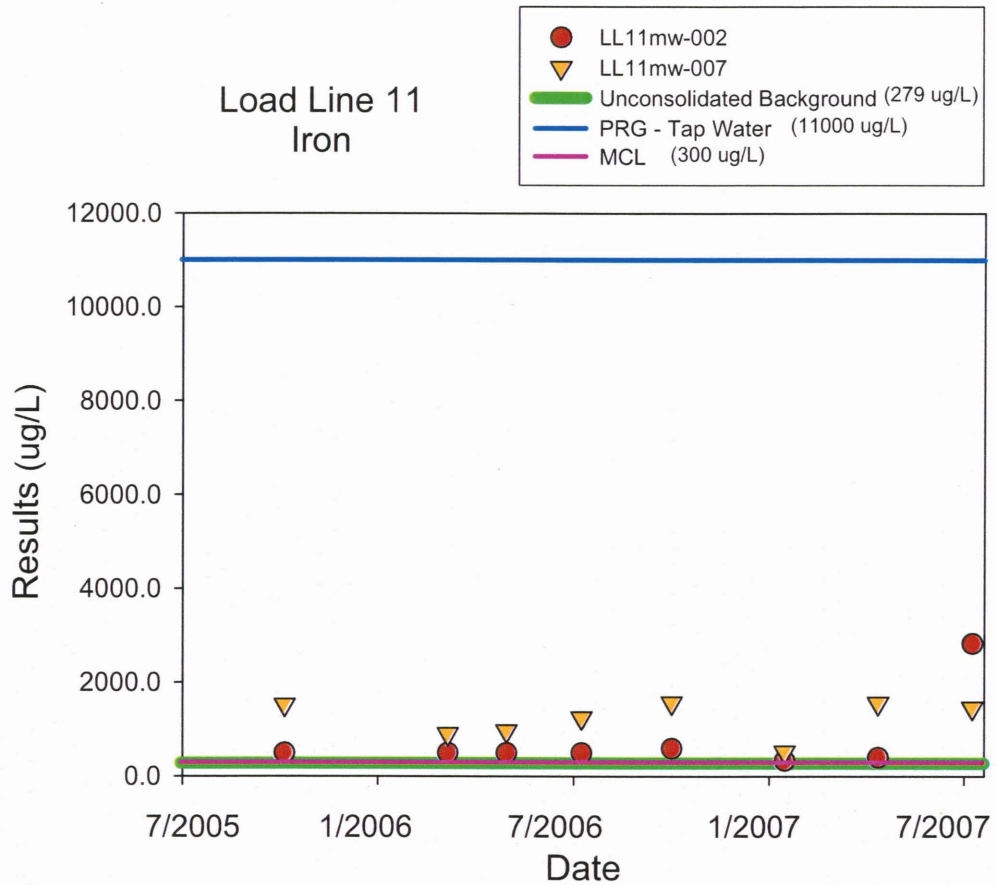
### Load Line 11 Calcium



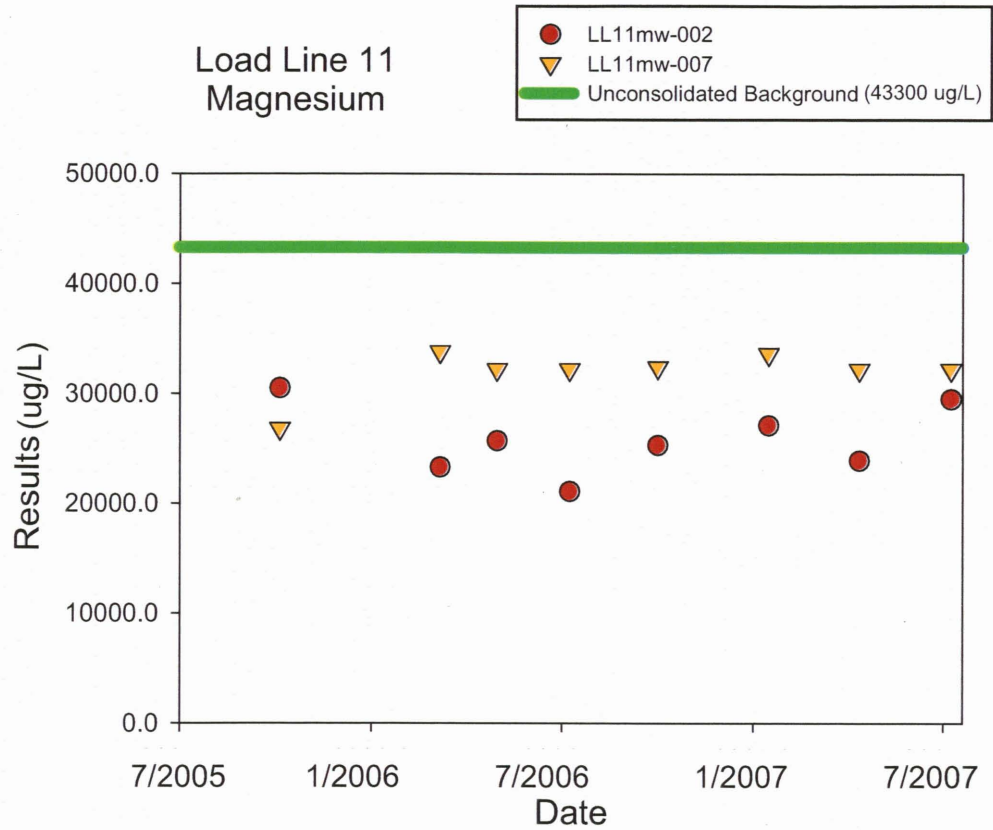
### Load Line 11 Copper



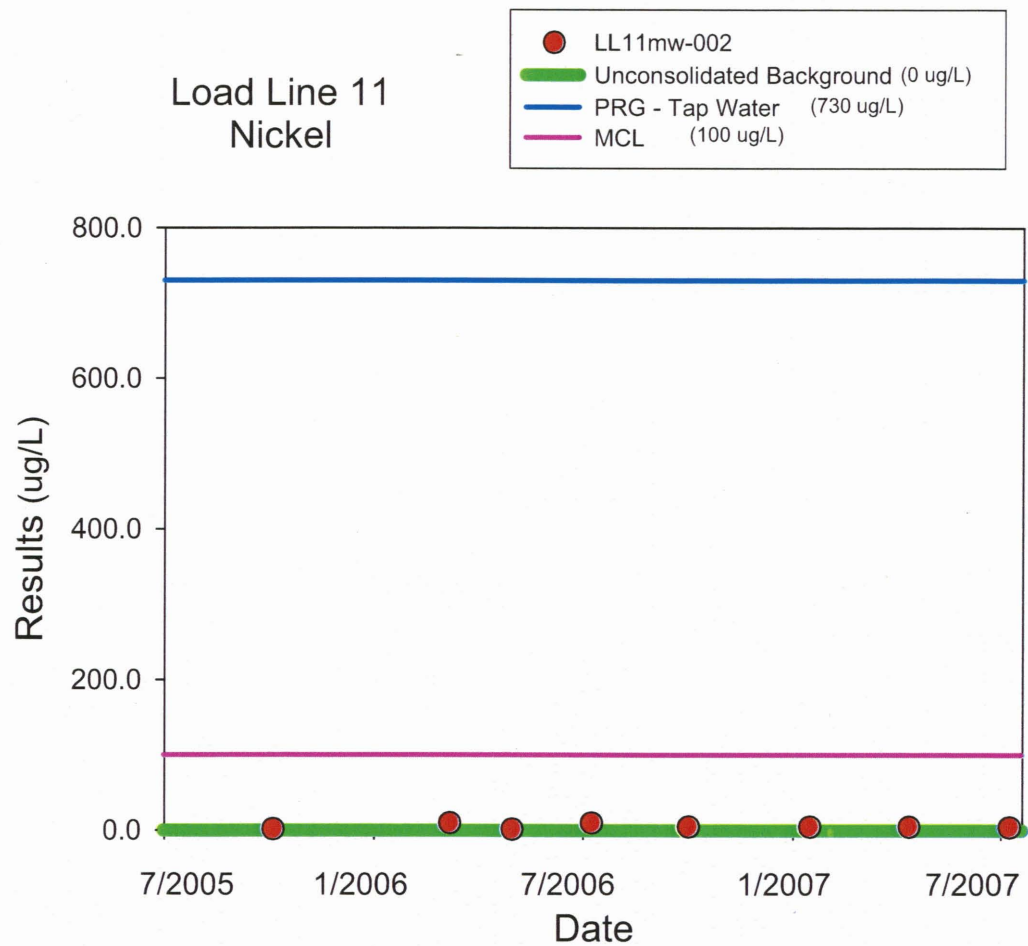
### Load Line 11 Iron



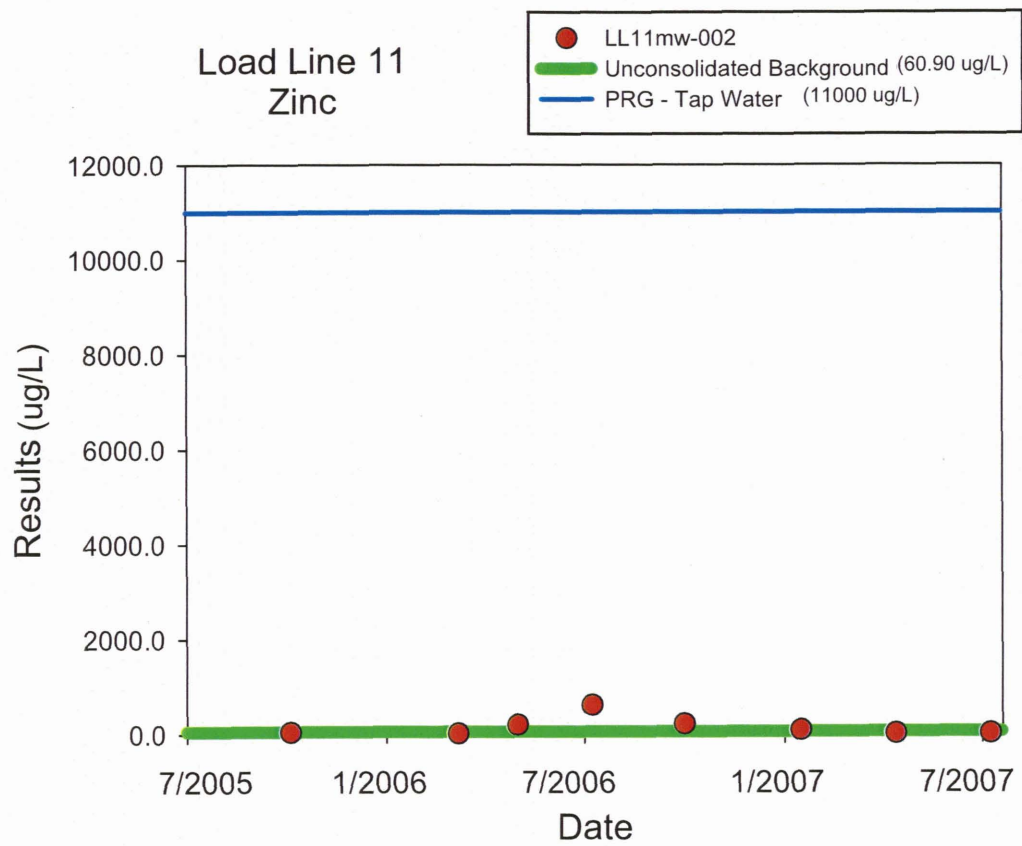
# Load Line 11 Magnesium



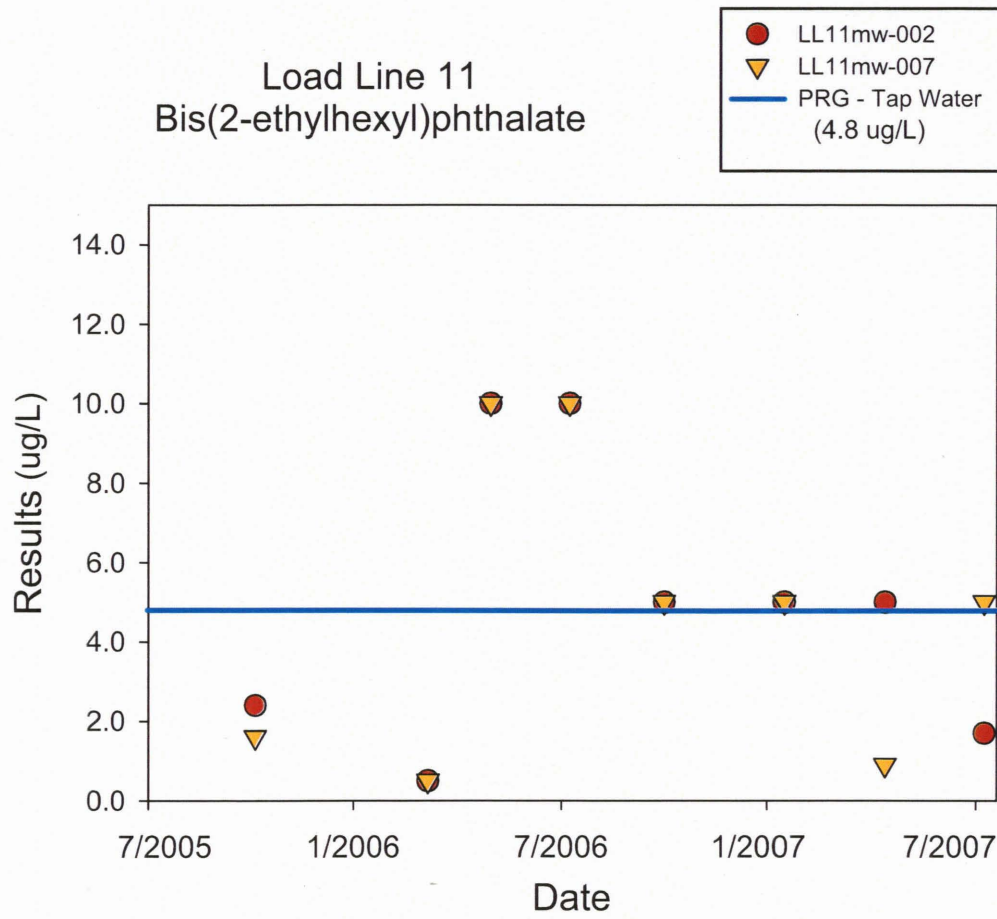
# Load Line 11 Nickel



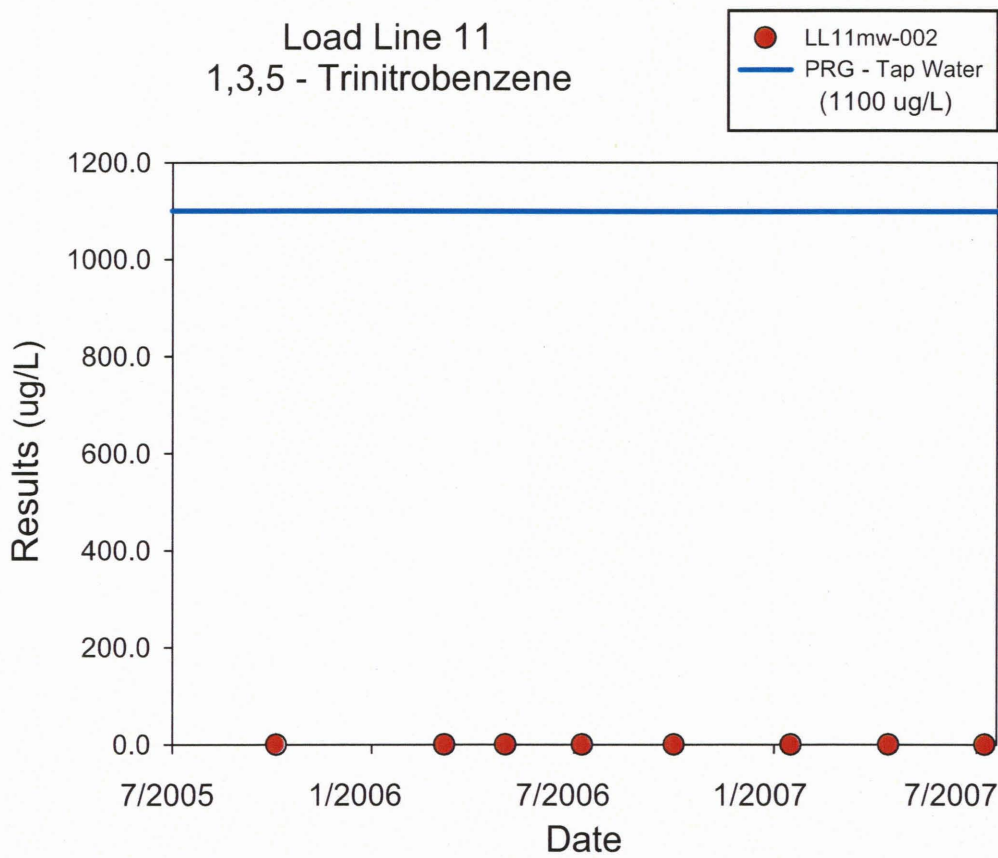
# Load Line 11 Zinc



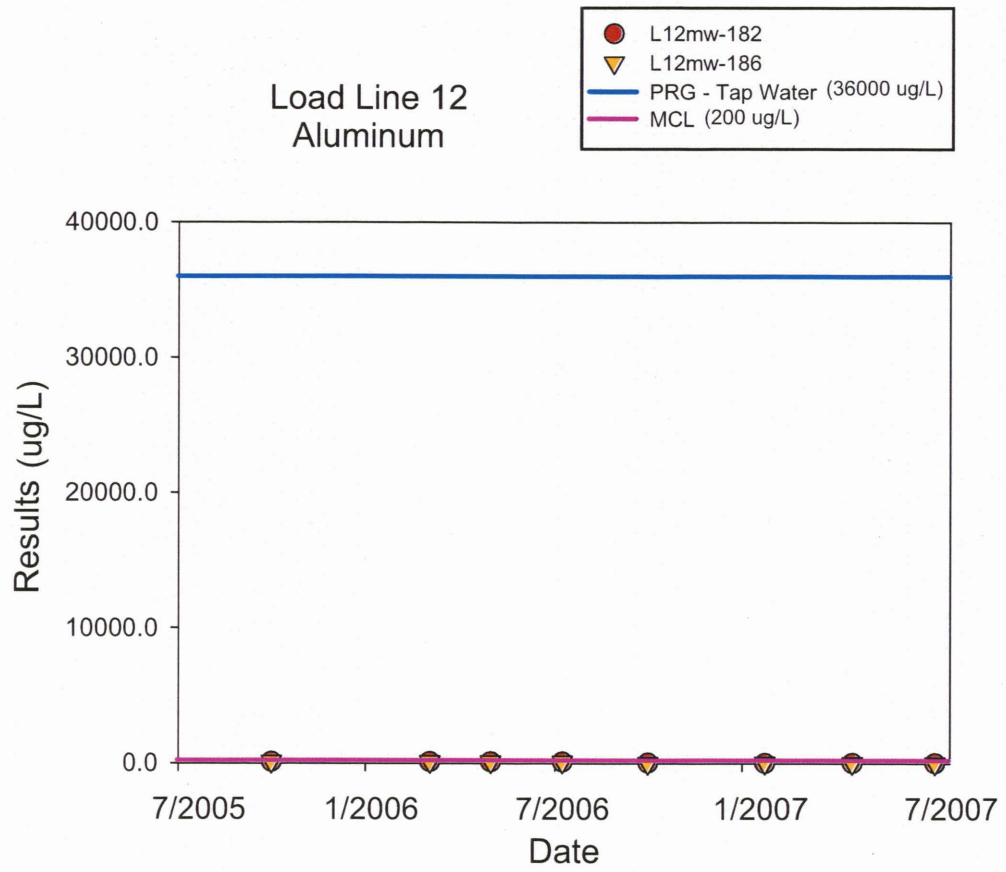
Load Line 11  
Bis(2-ethylhexyl)phthalate



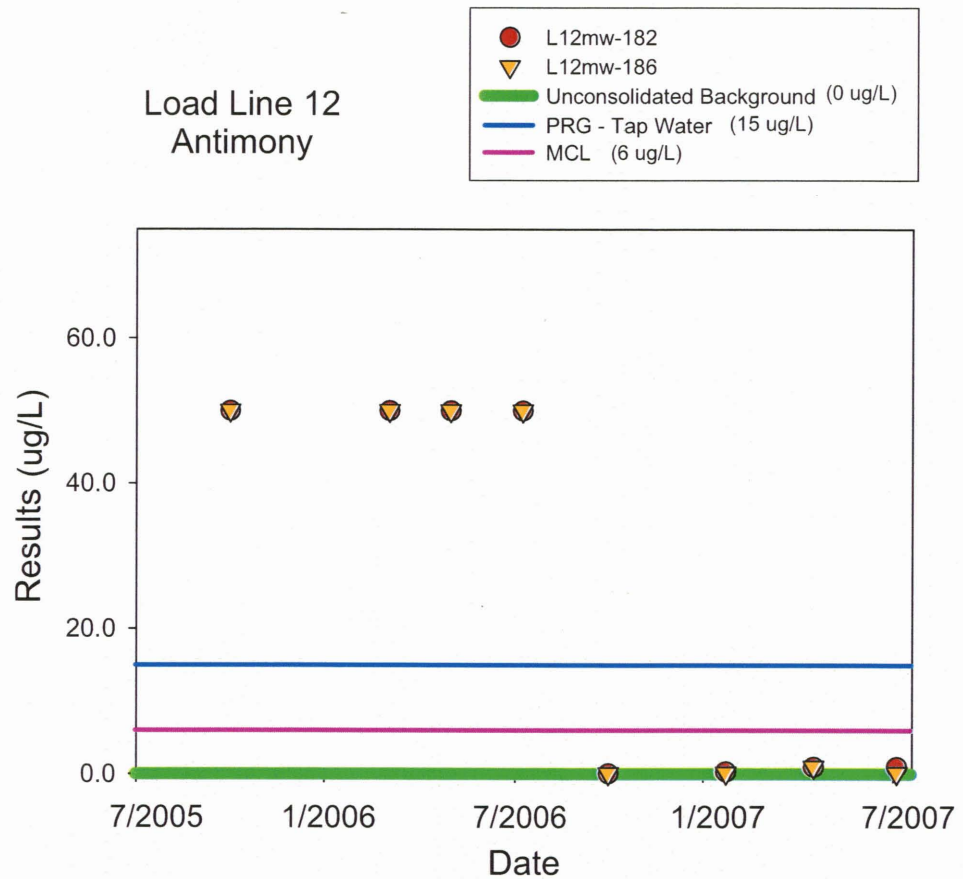
Load Line 11  
1,3,5 - Trinitrobenzene



### Load Line 12 Aluminum

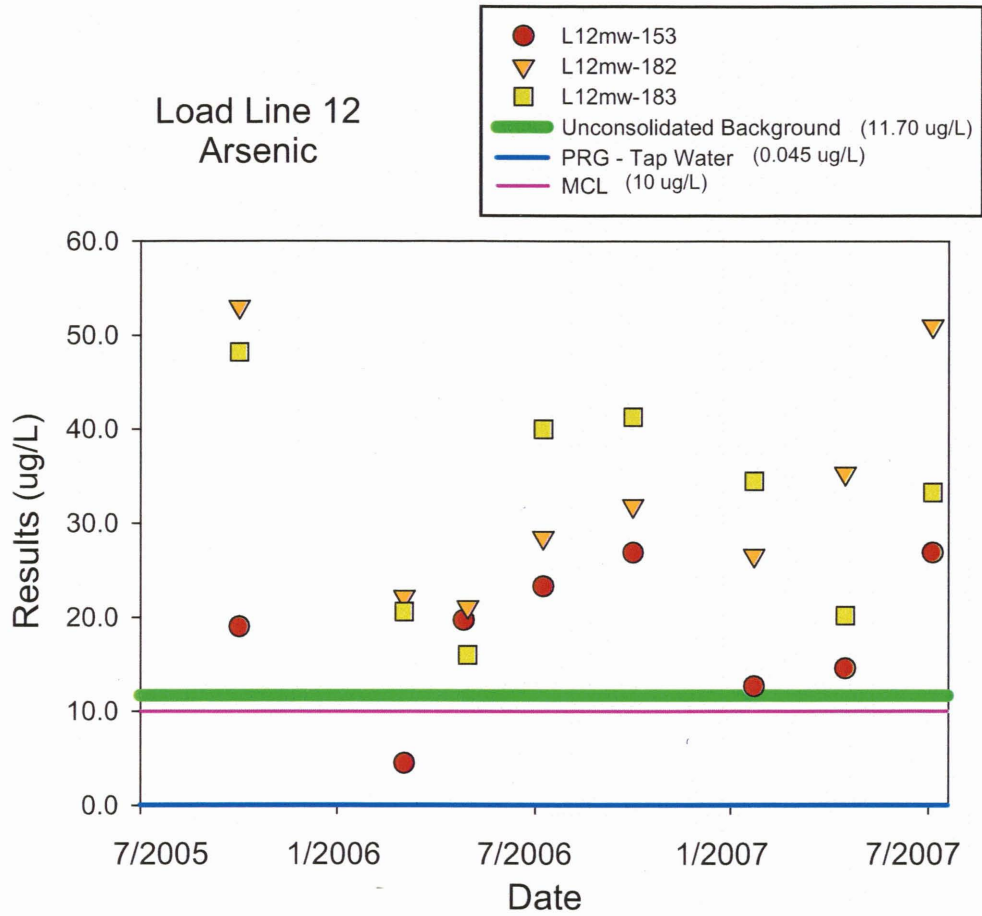


### Load Line 12 Antimony

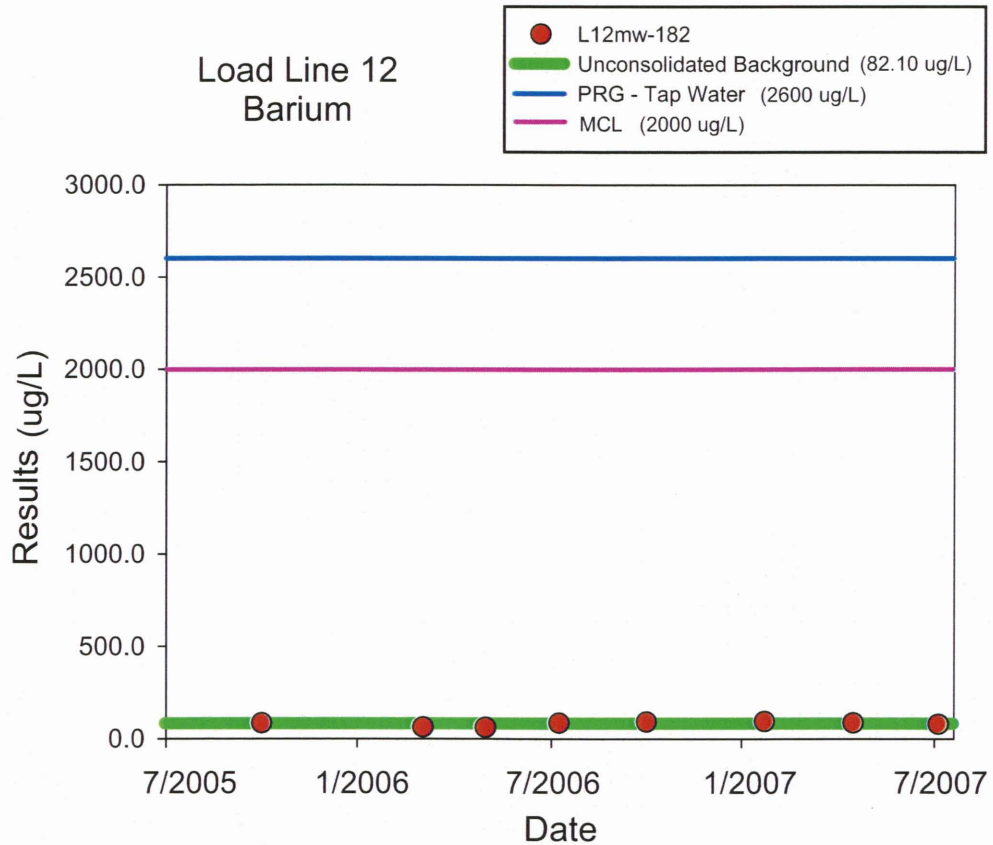




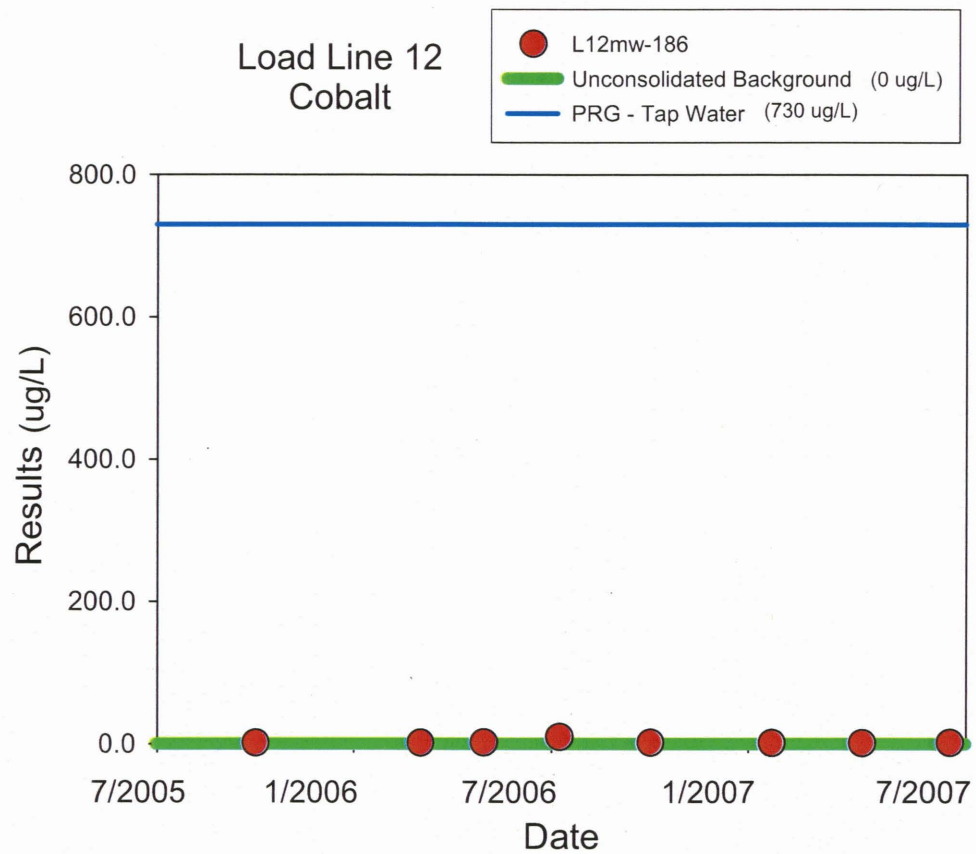
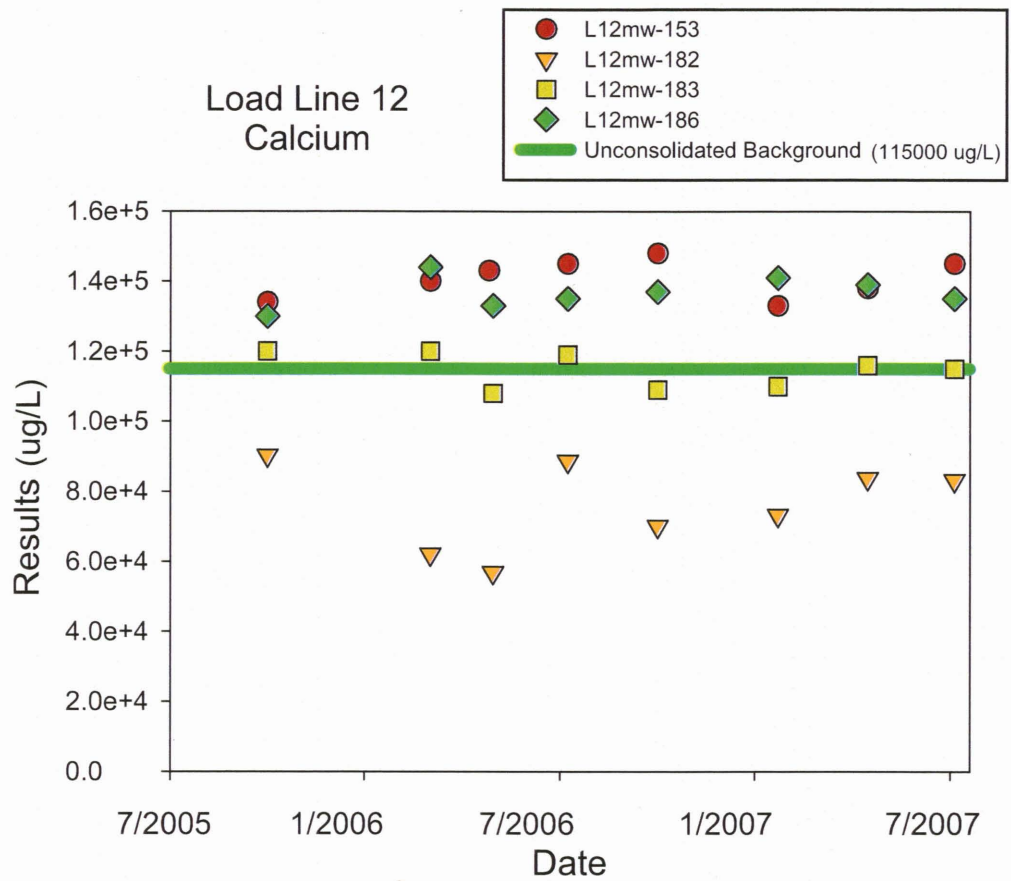
### Load Line 12 Arsenic



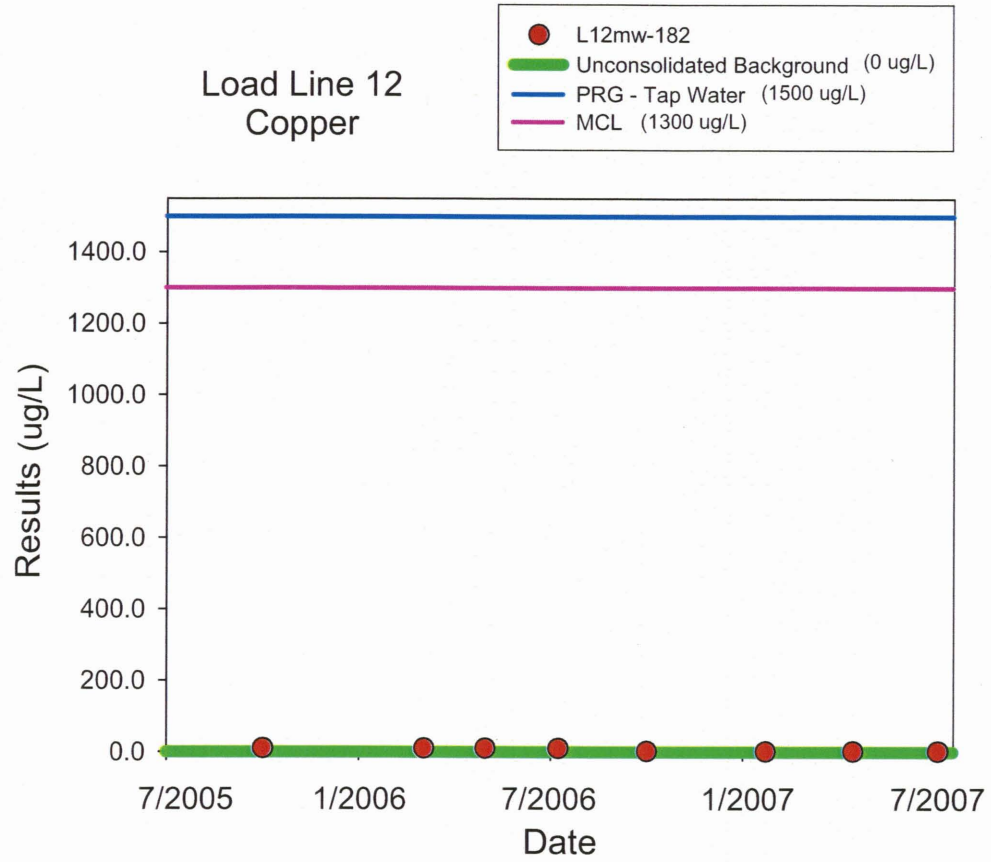
### Load Line 12 Barium



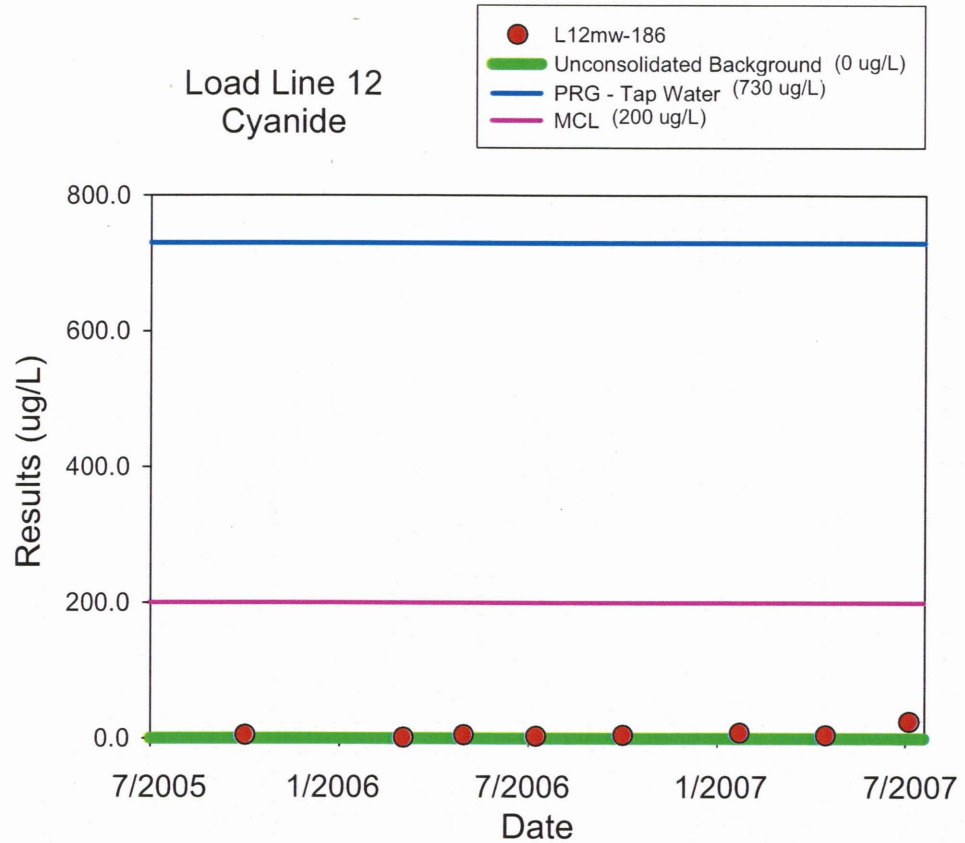




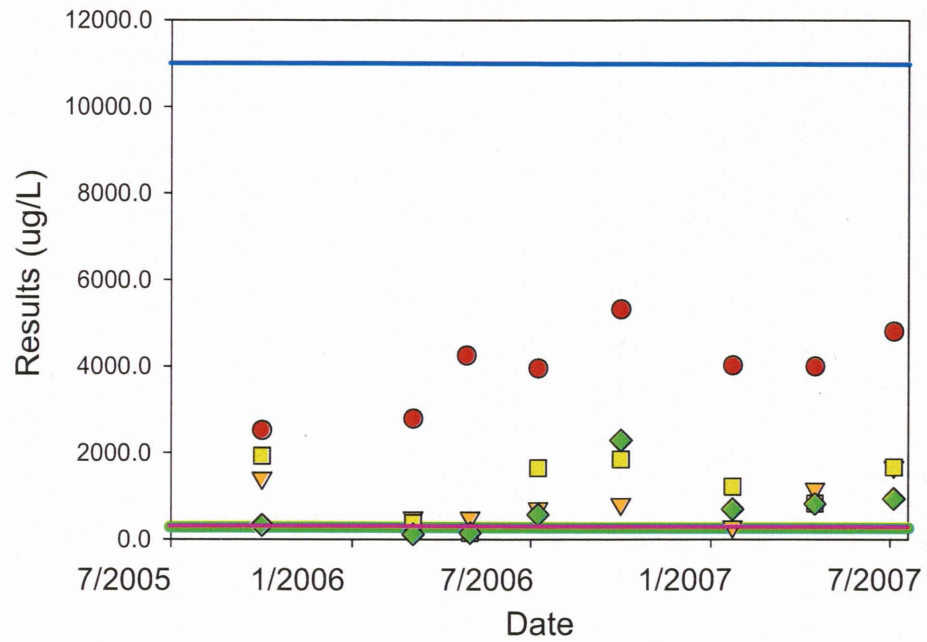
### Load Line 12 Copper



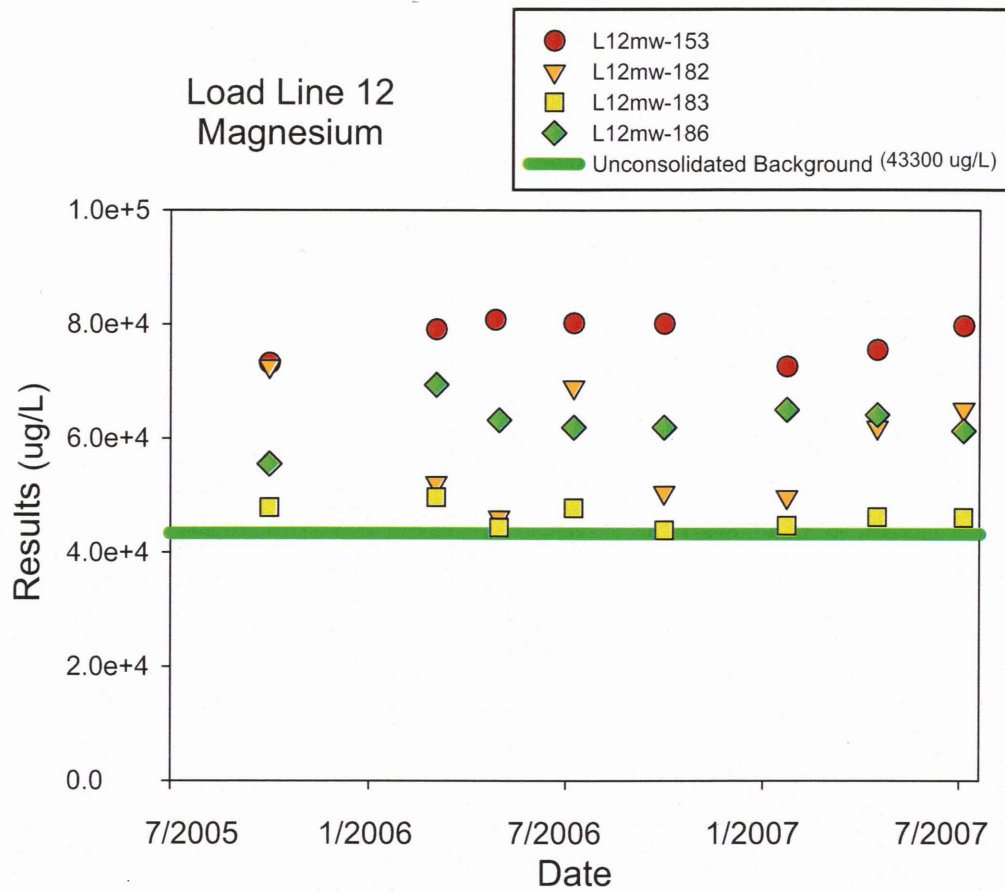
### Load Line 12 Cyanide

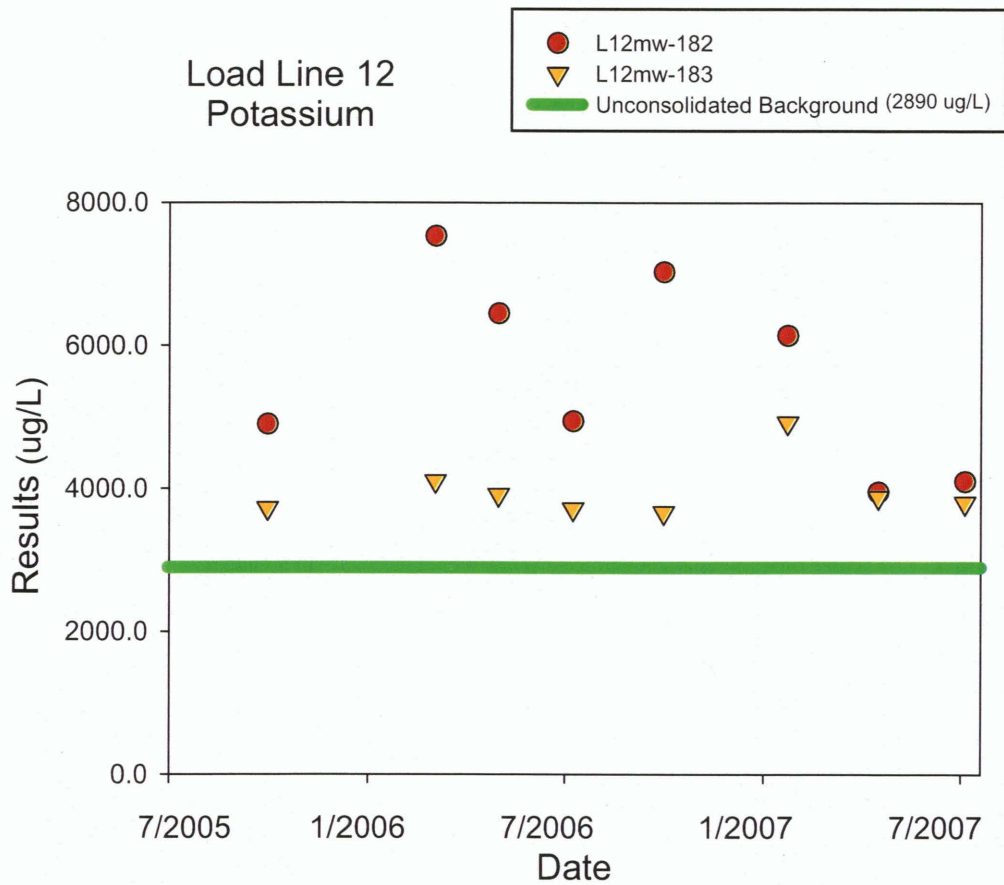
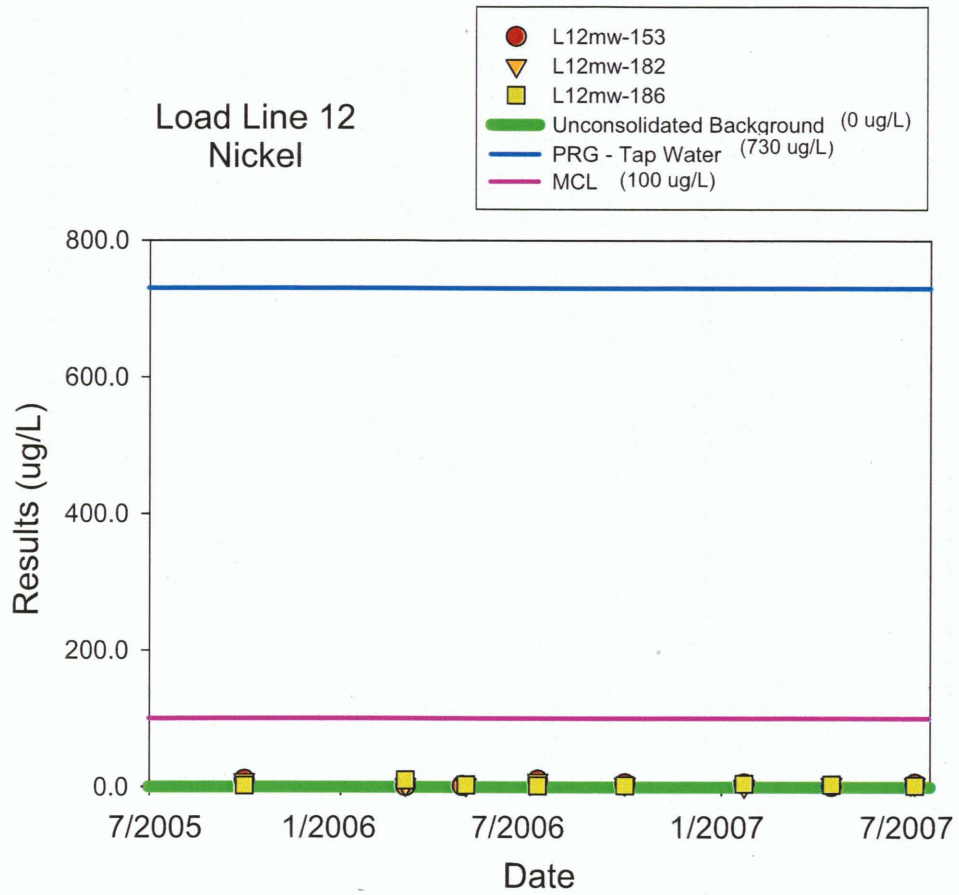


### Load Line 12 Iron

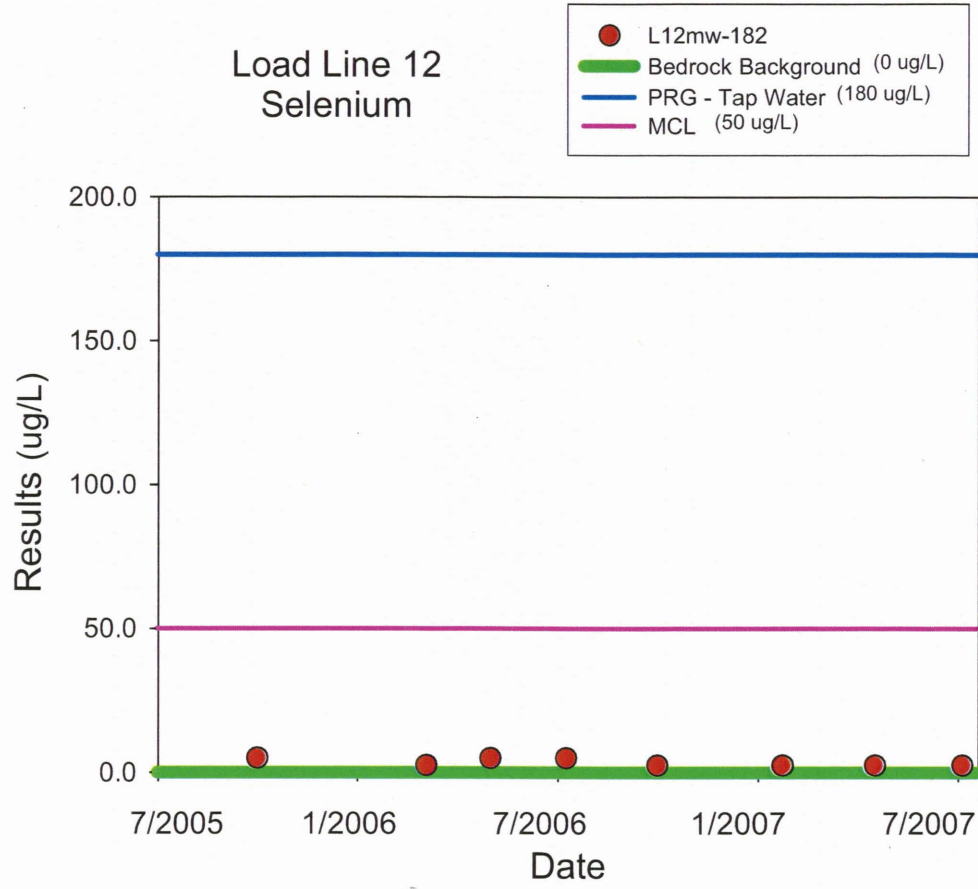


### Load Line 12 Magnesium

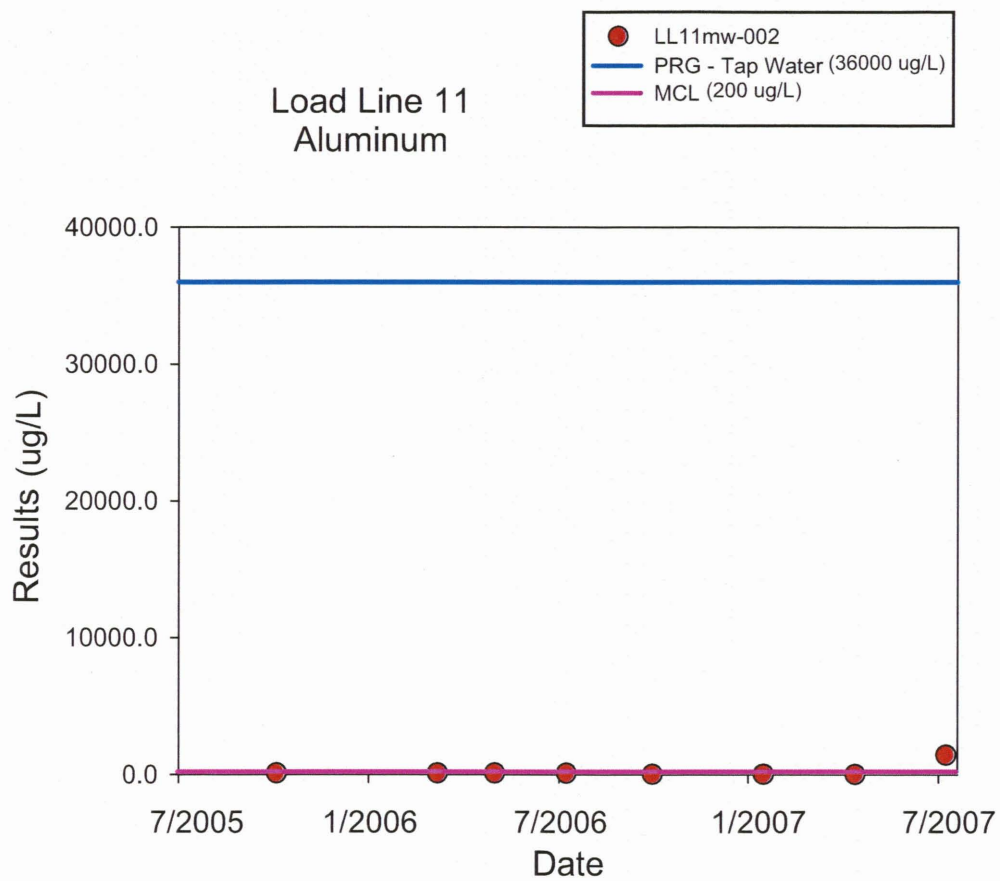




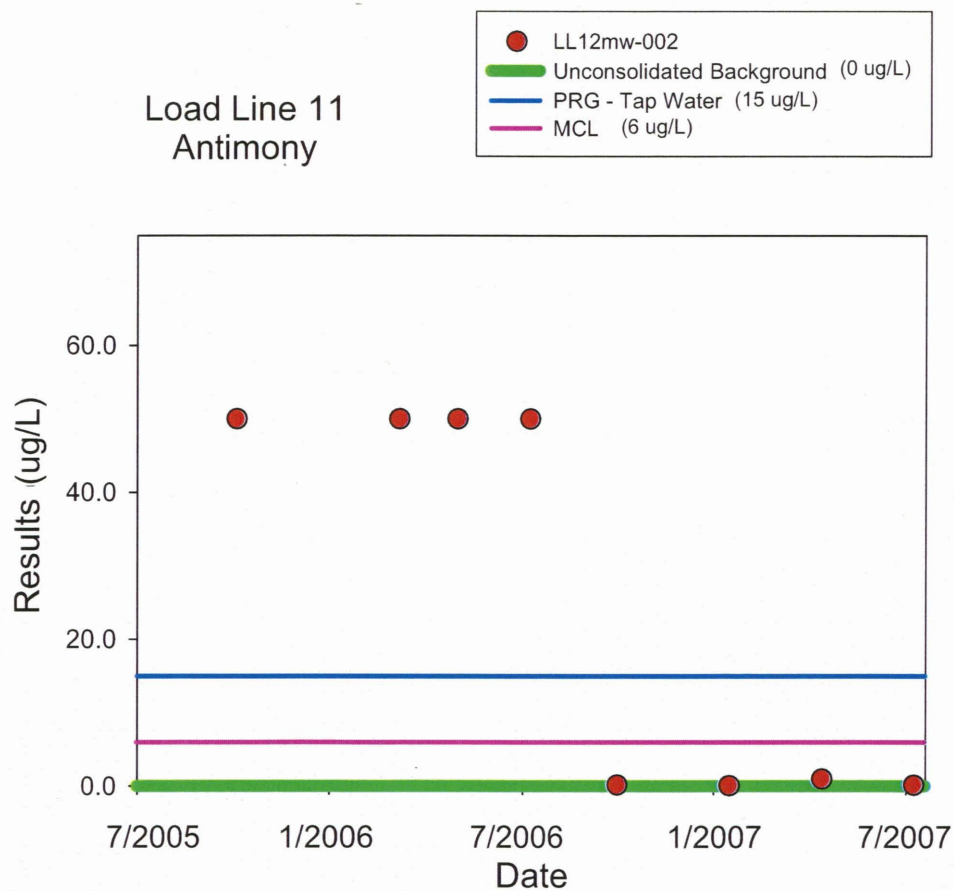
# Load Line 12 Selenium



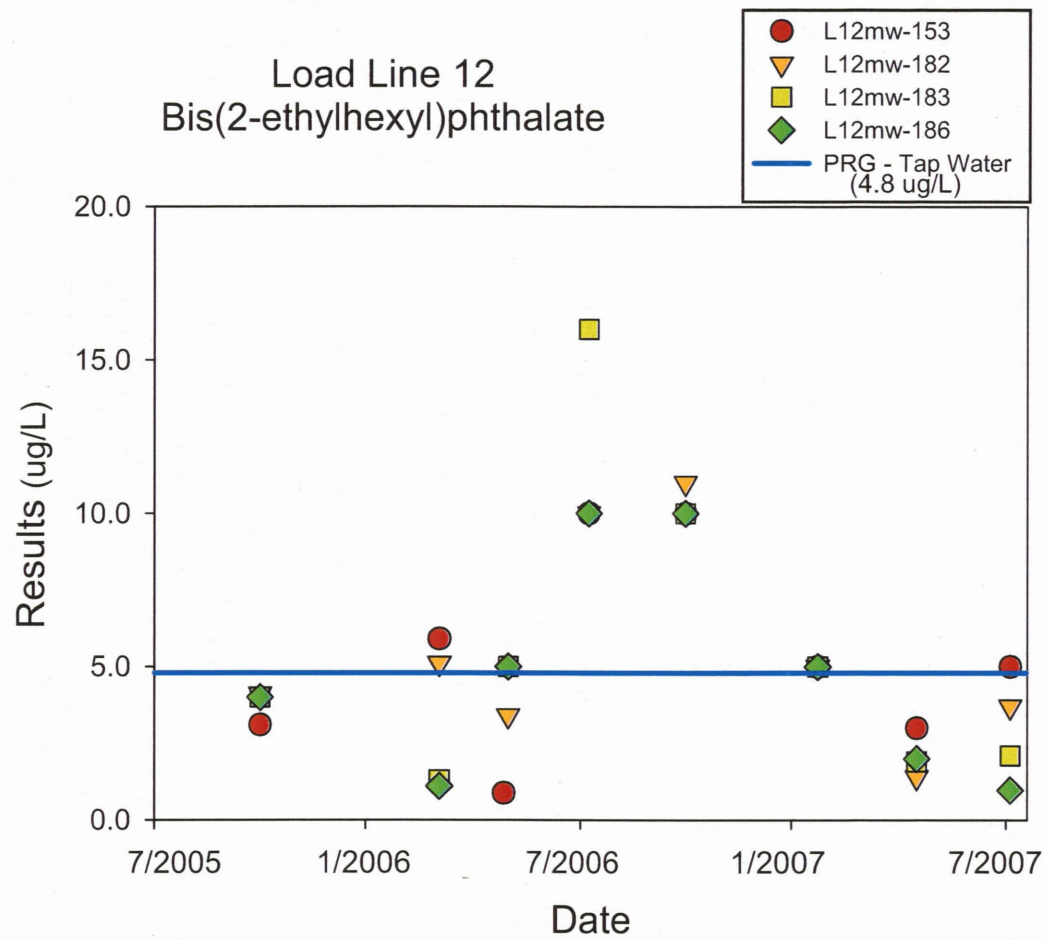
### Load Line 11 Aluminum



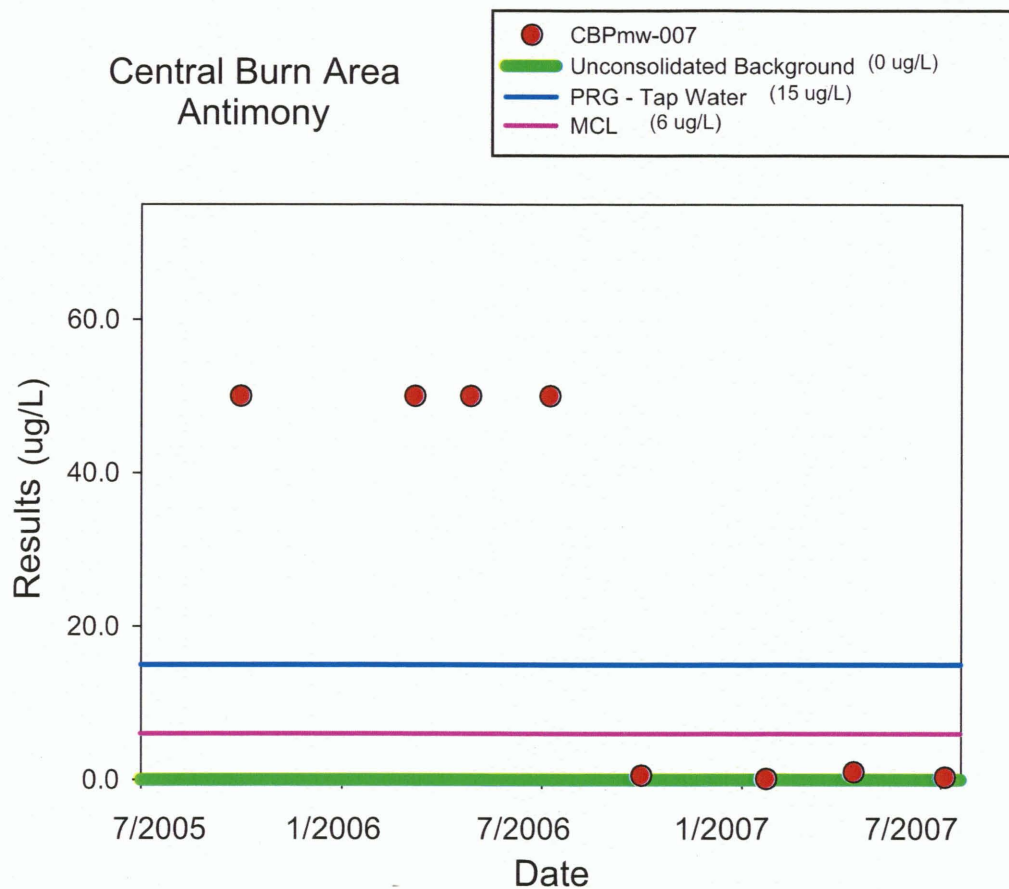
### Load Line 11 Antimony



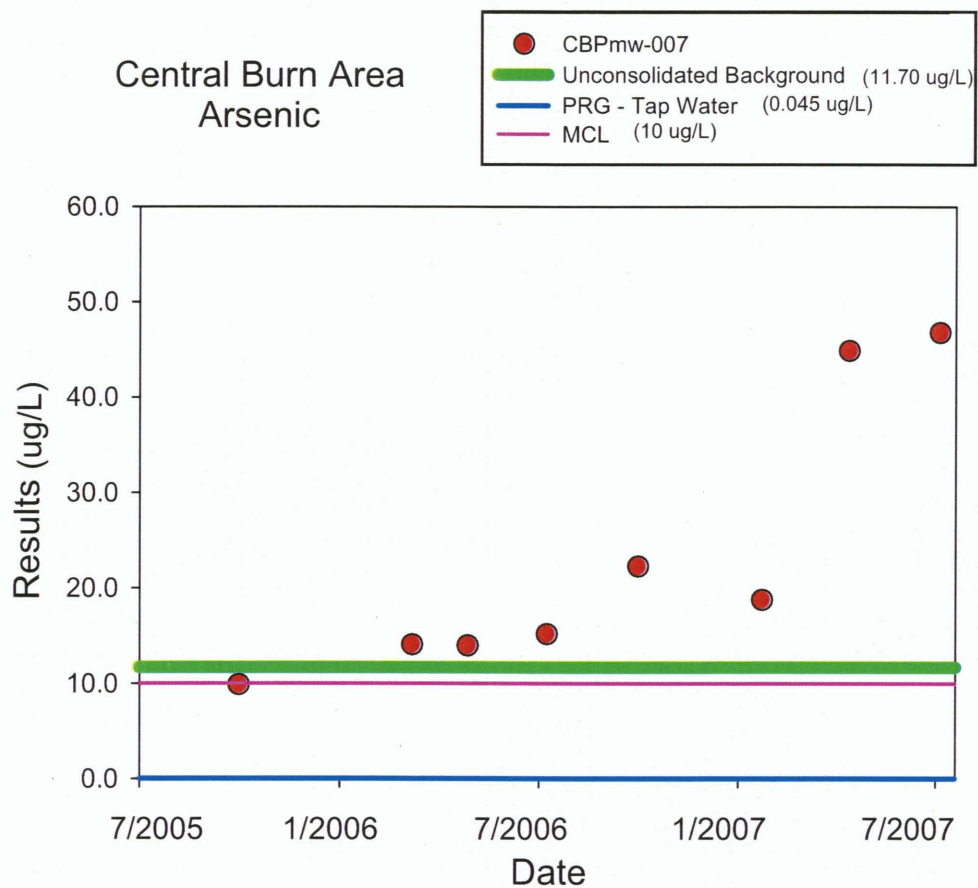
Load Line 12  
Bis(2-ethylhexyl)phthalate



# Central Burn Area Antimony

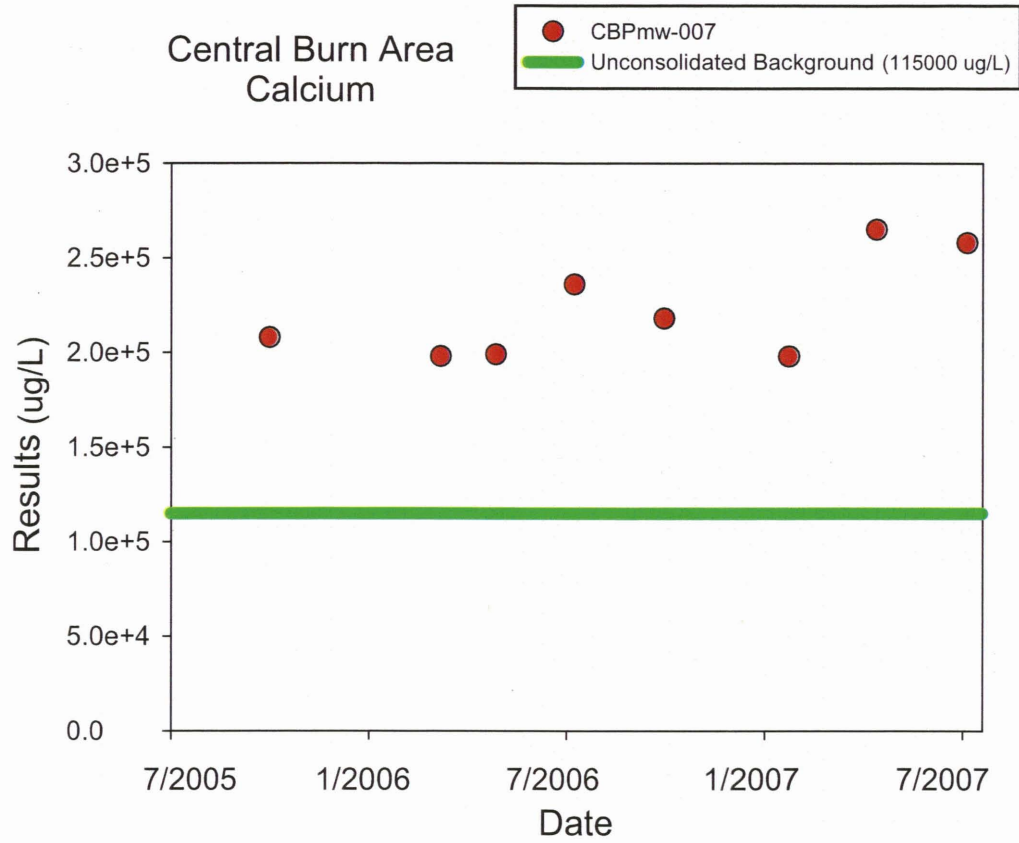


# Central Burn Area Arsenic

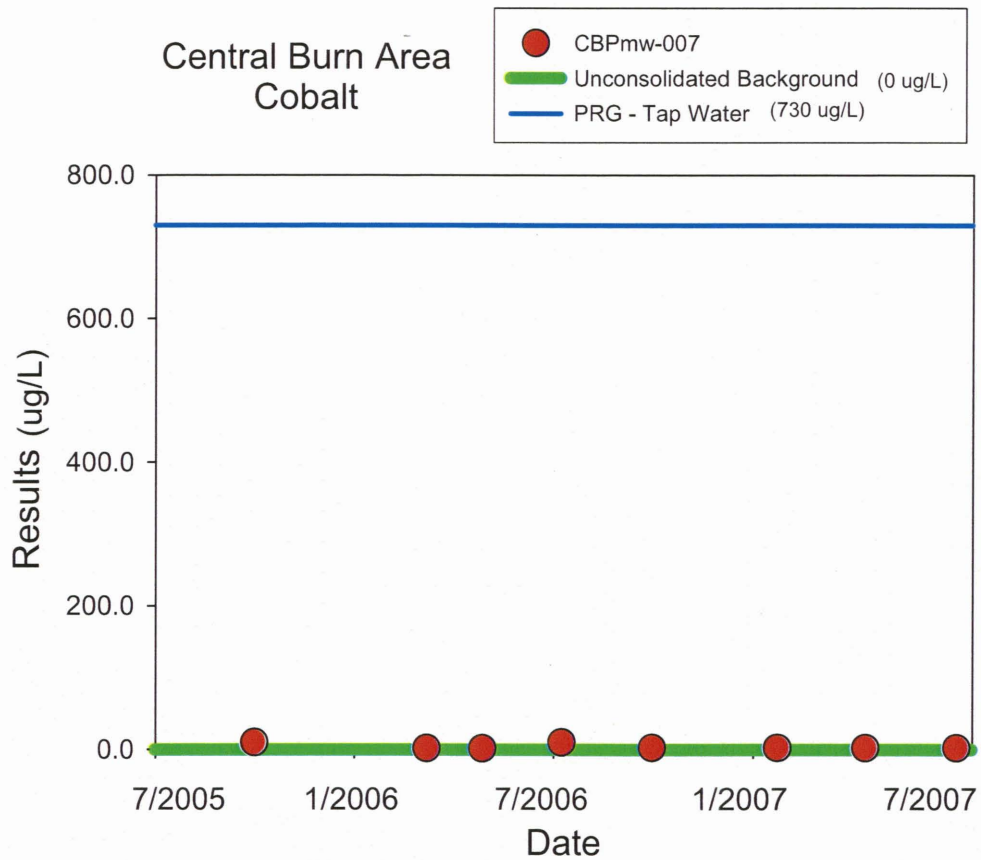




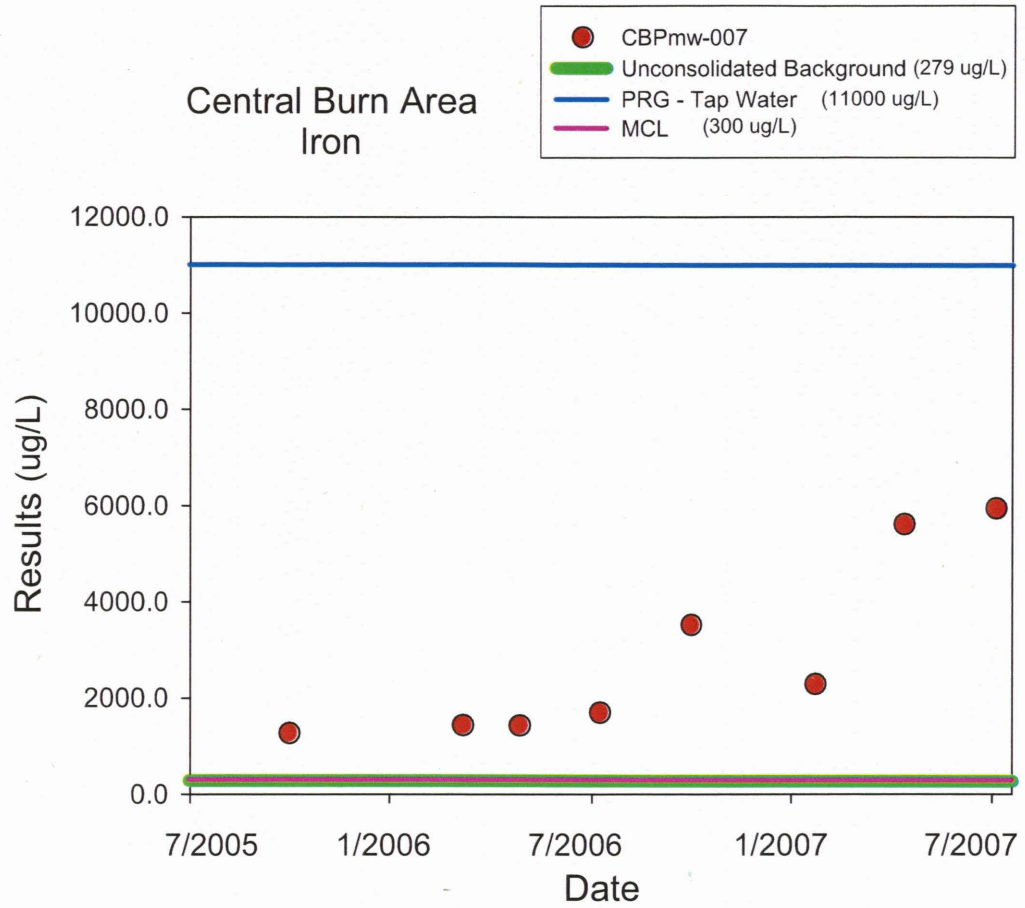
### Central Burn Area Calcium



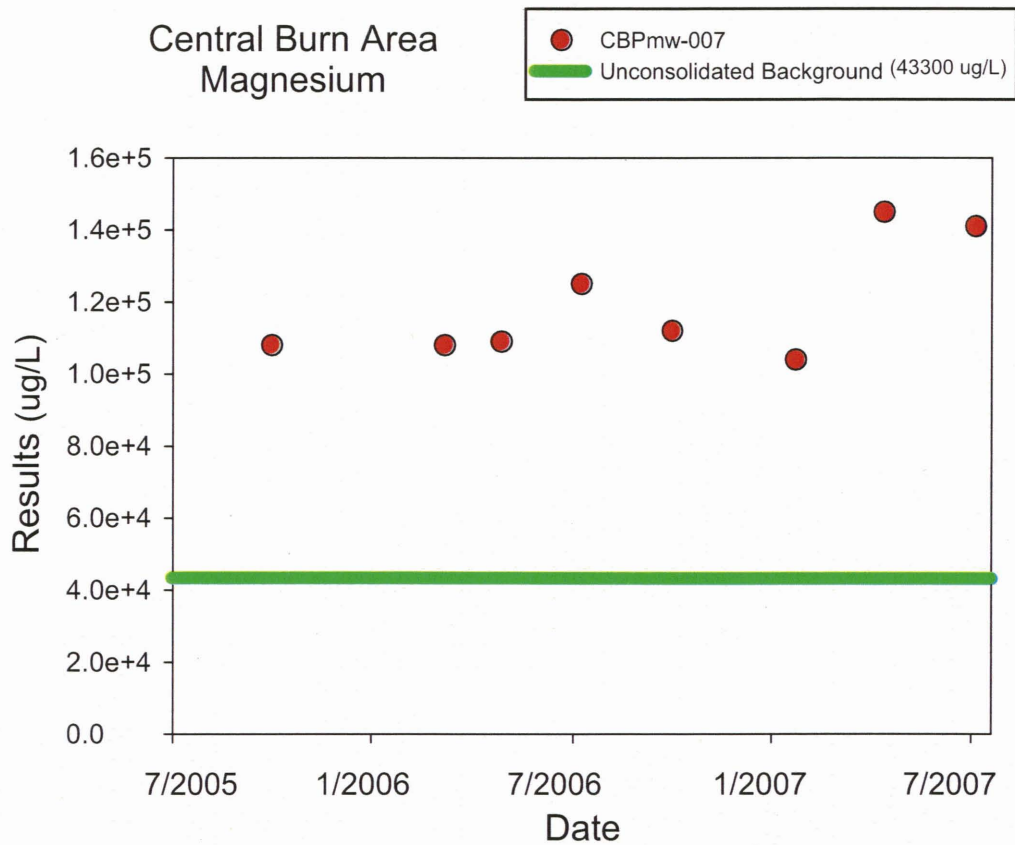
### Central Burn Area Cobalt



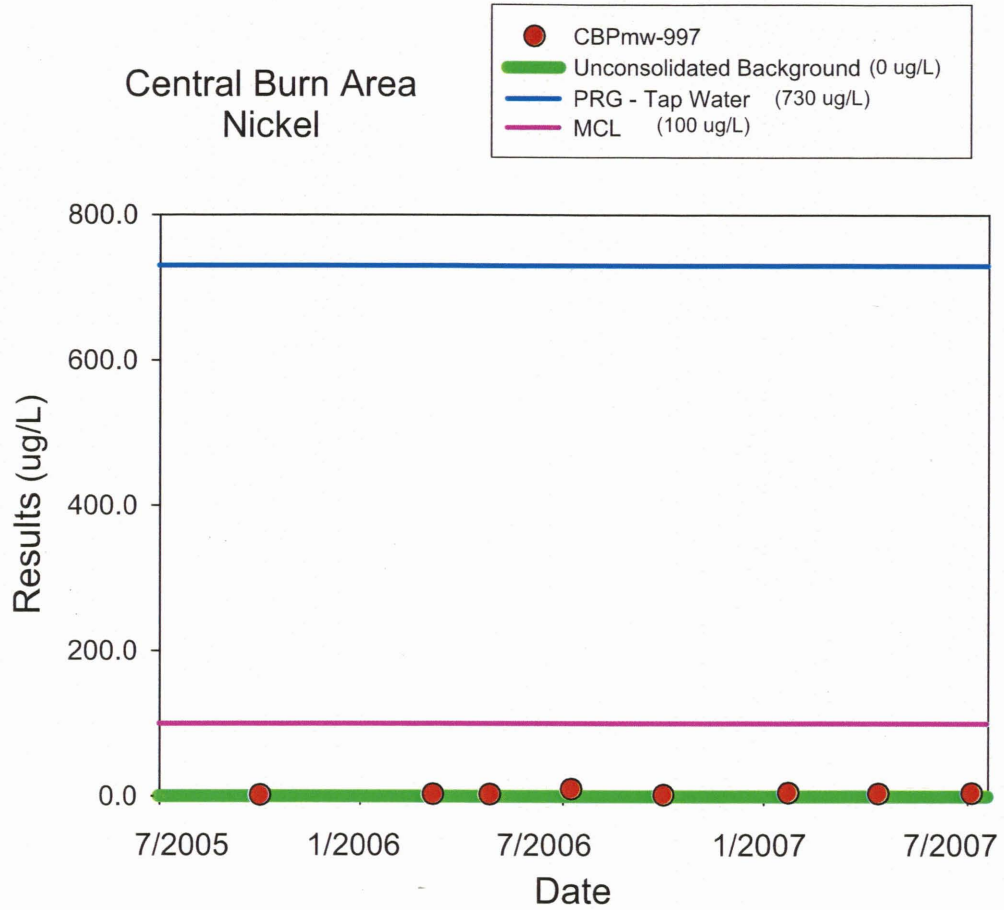
### Central Burn Area Iron



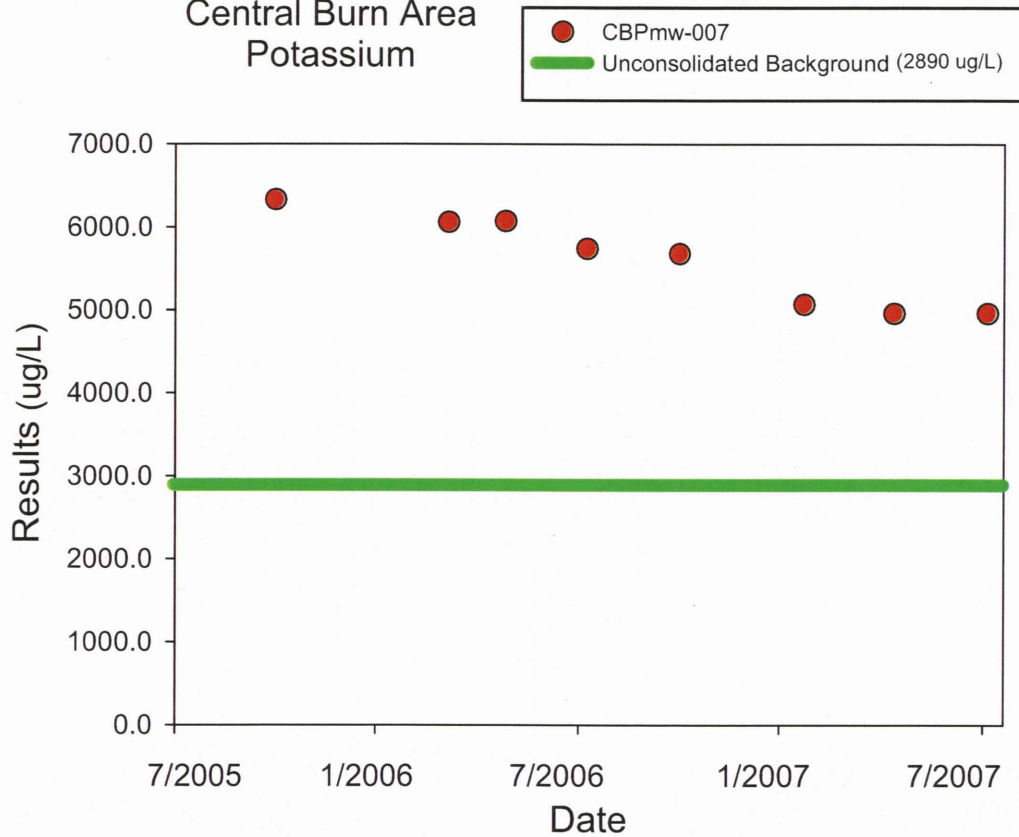
### Central Burn Area Magnesium



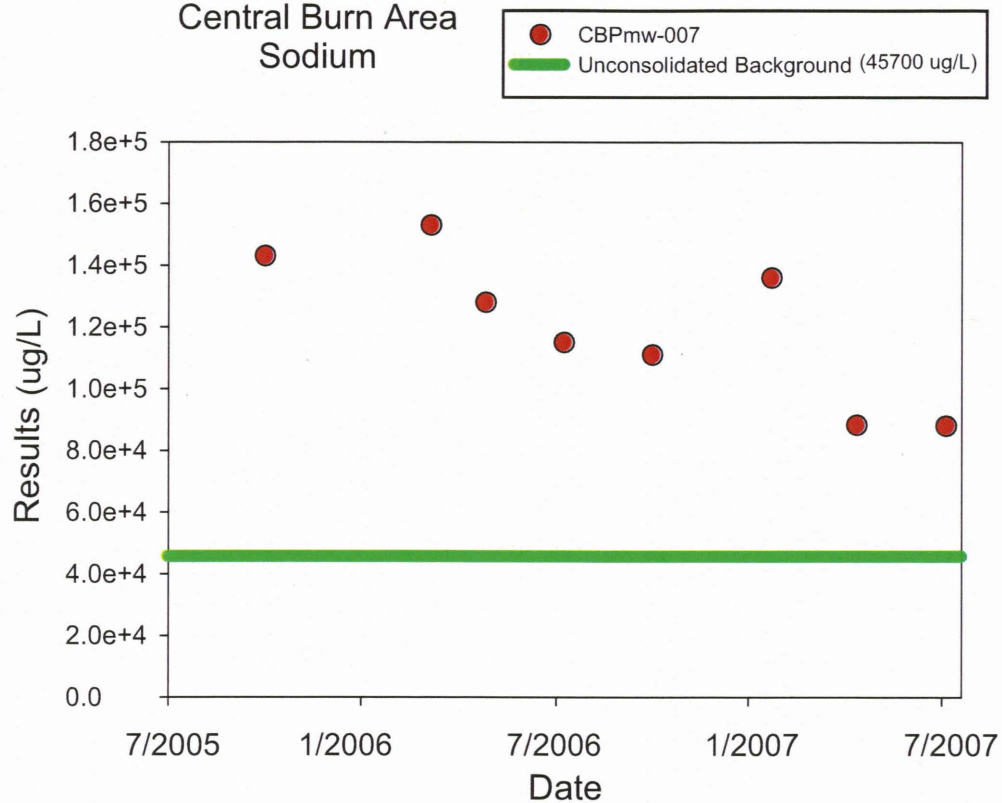
### Central Burn Area Nickel



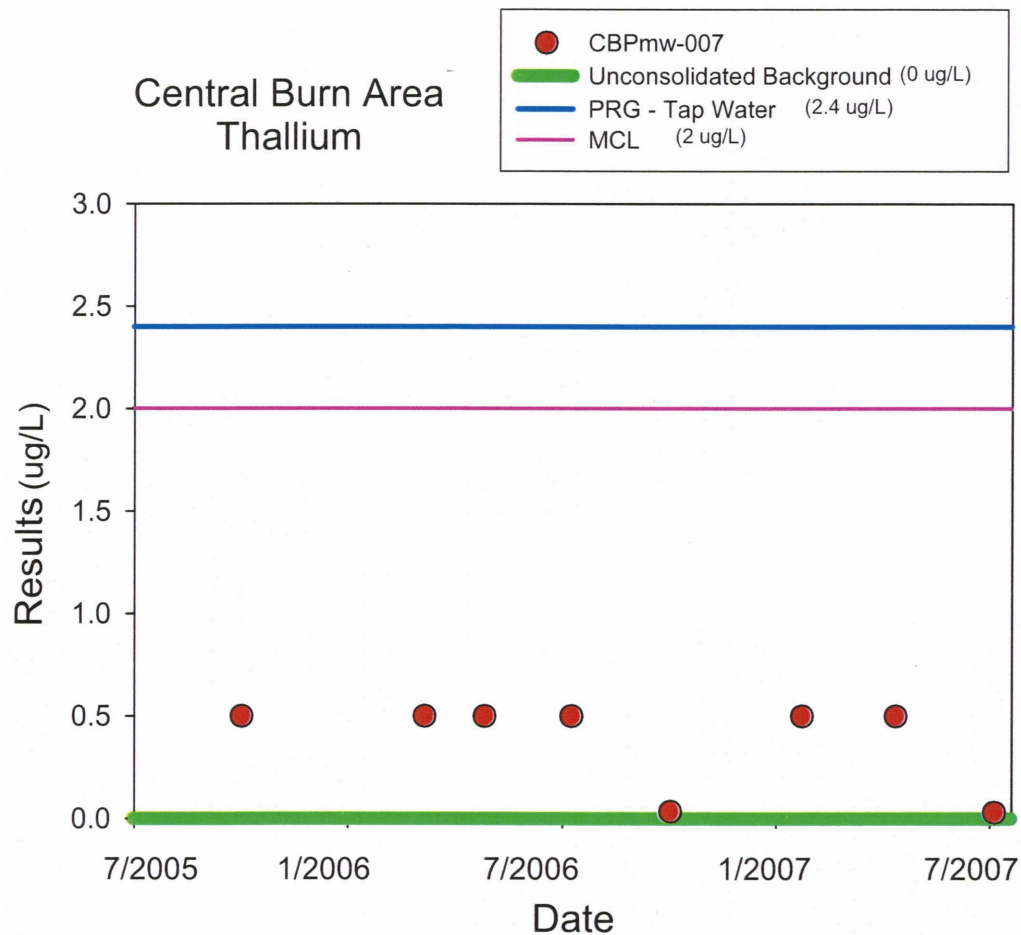
### Central Burn Area Potassium



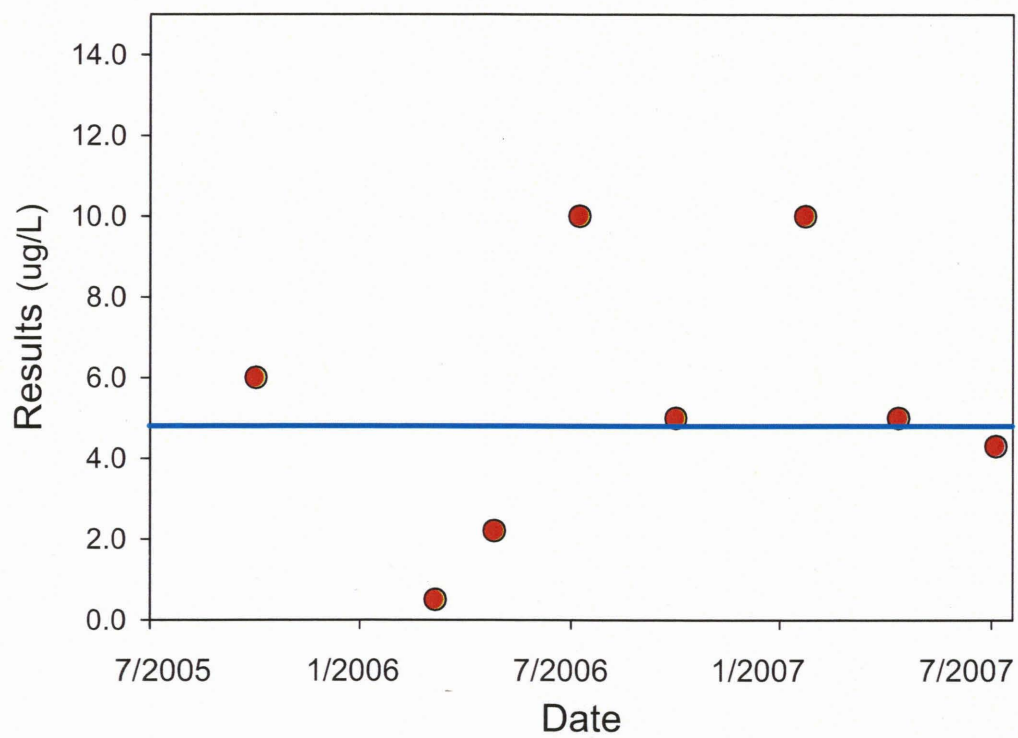
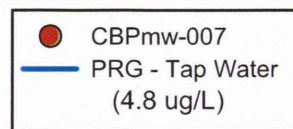
### Central Burn Area Sodium

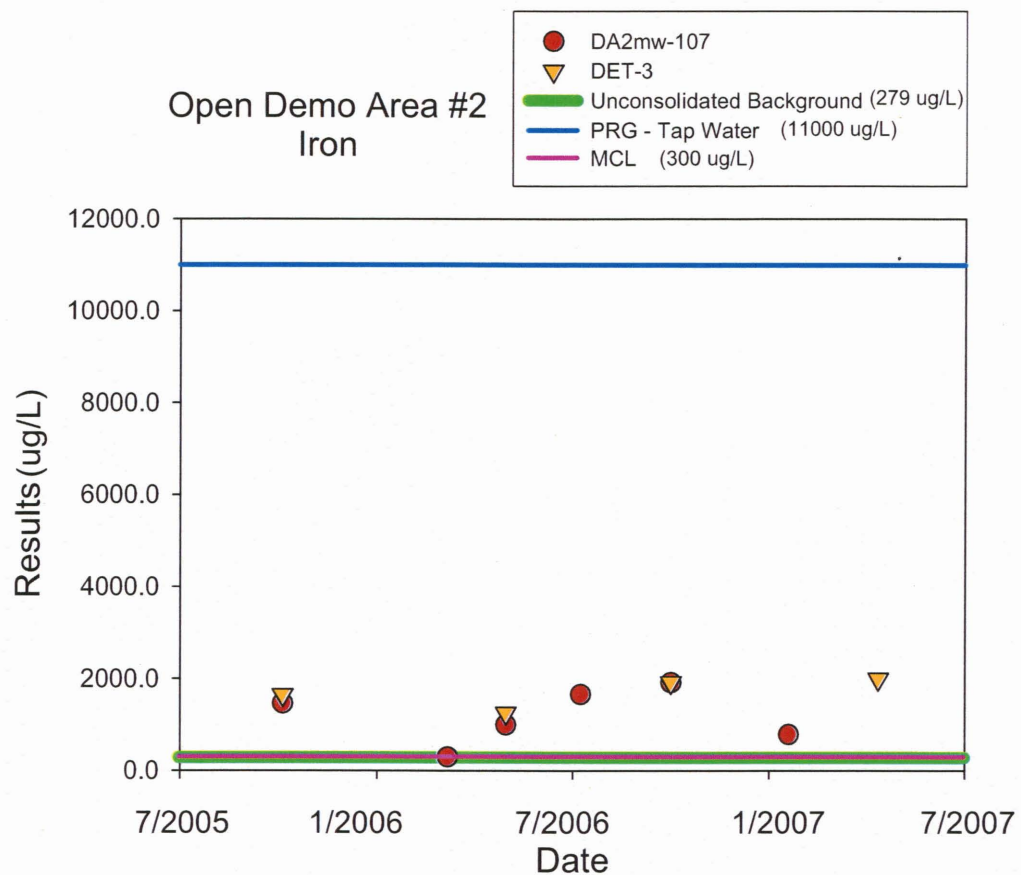
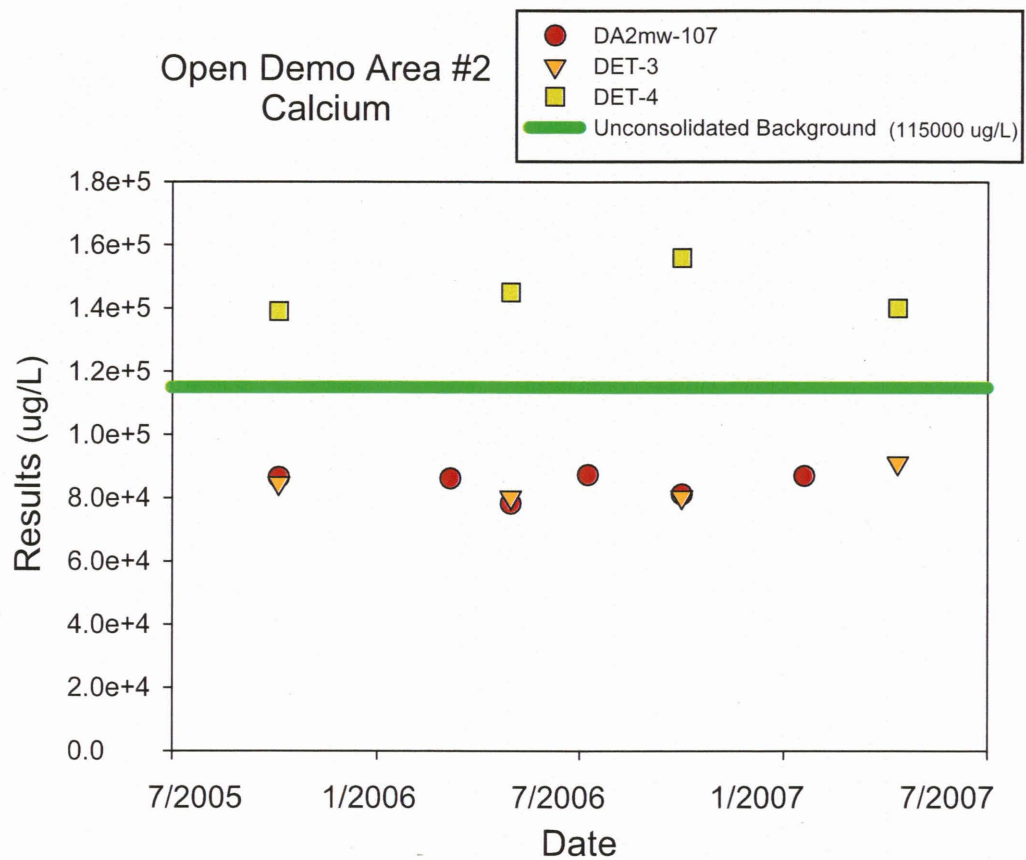


### Central Burn Area Thallium

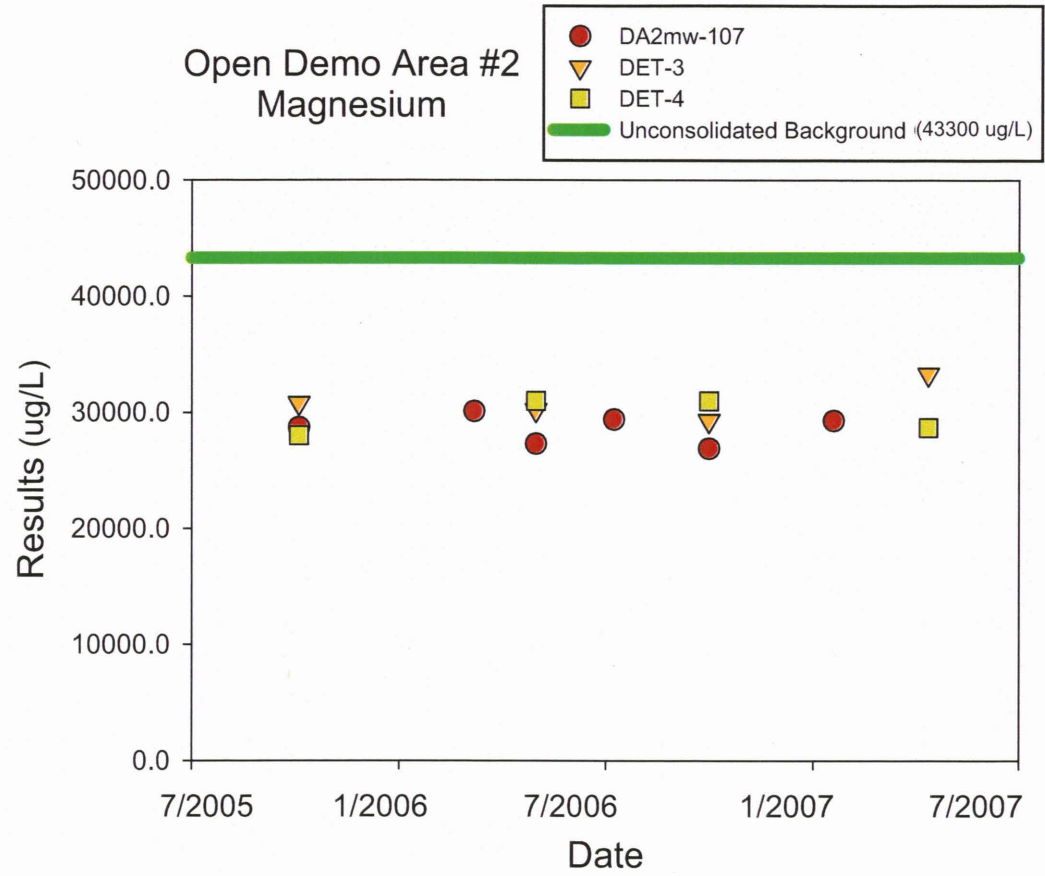


Central Burn Area  
Bis(2-ethylhexyl)phthalate



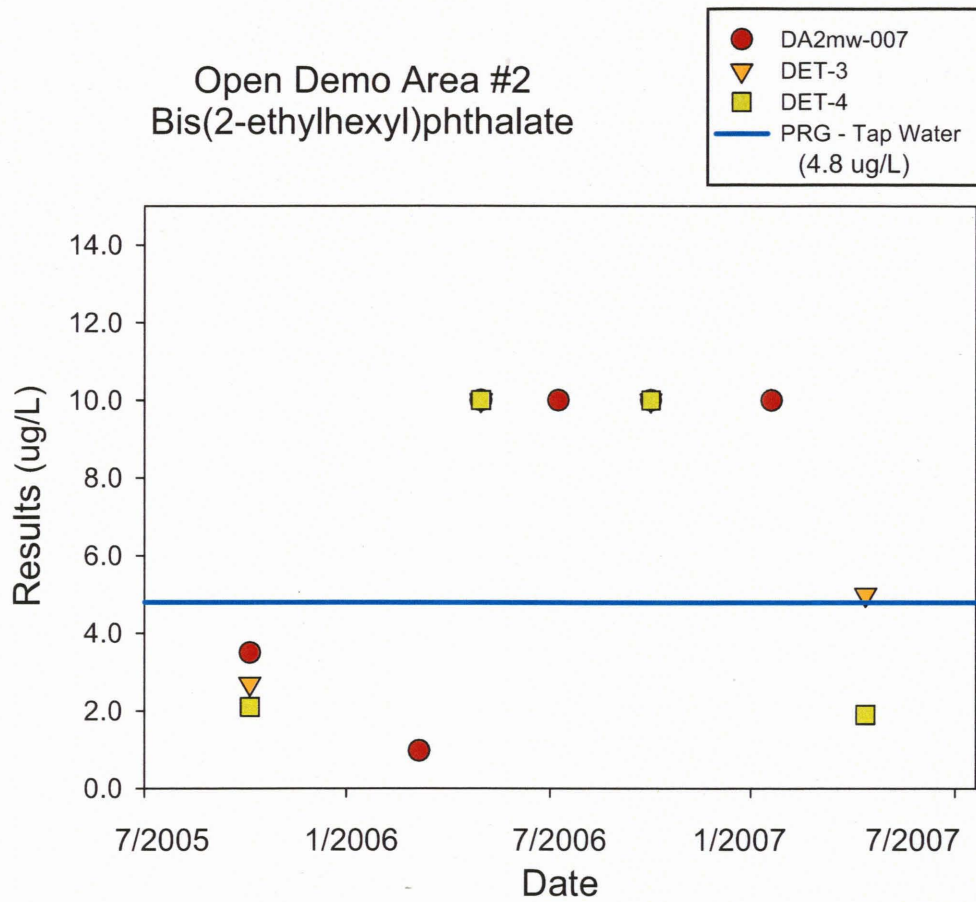


Open Demo Area #2  
Magnesium

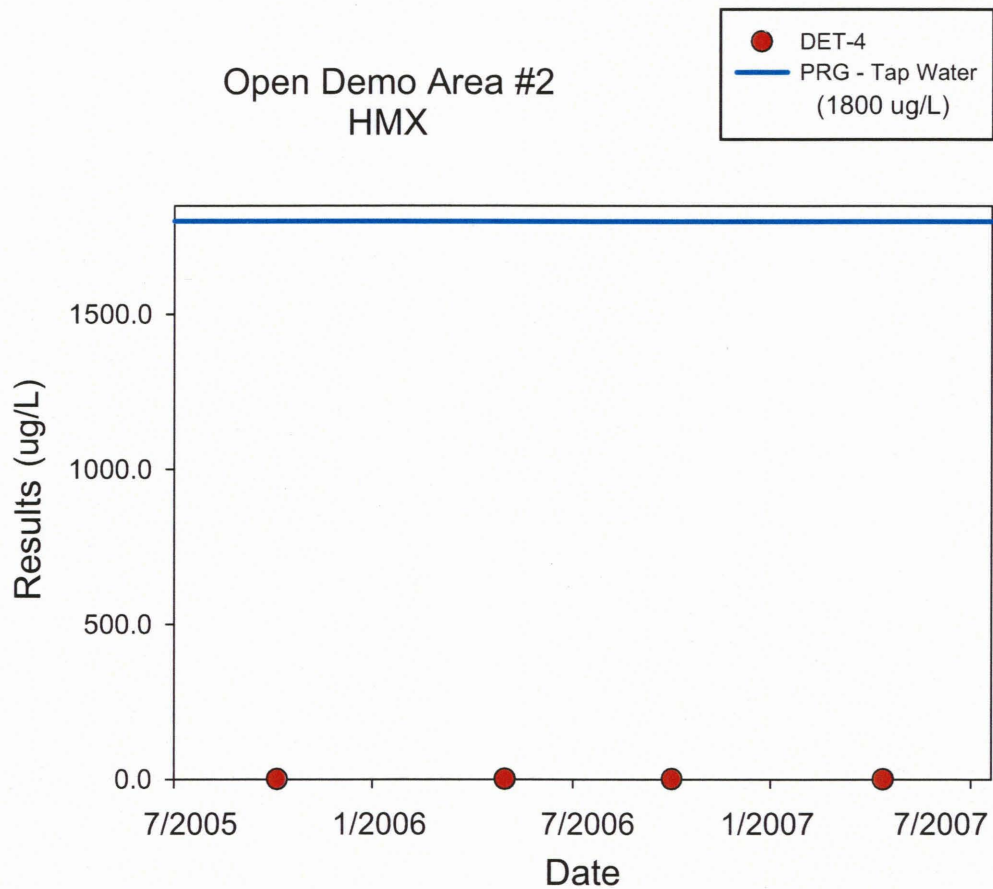




Open Demo Area #2  
Bis(2-ethylhexyl)phthalate

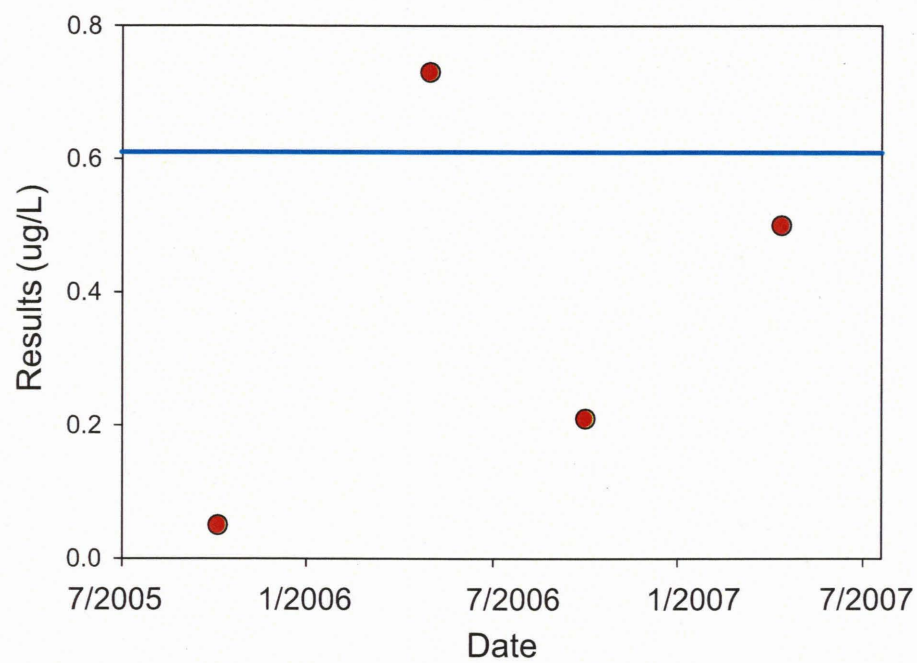
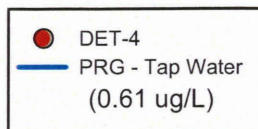


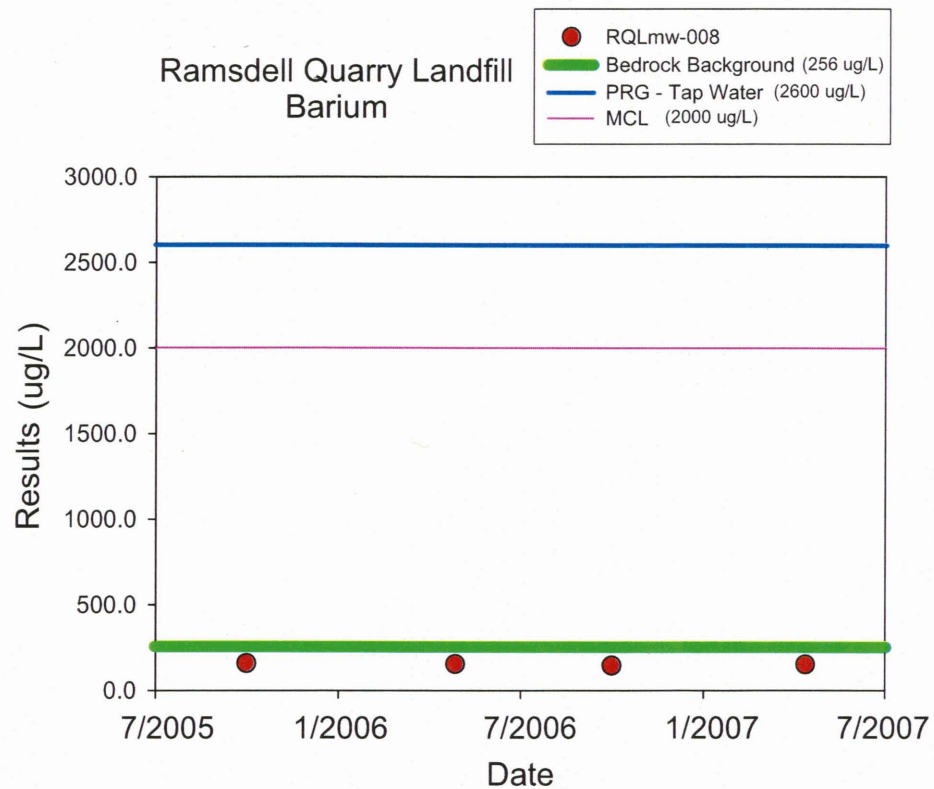
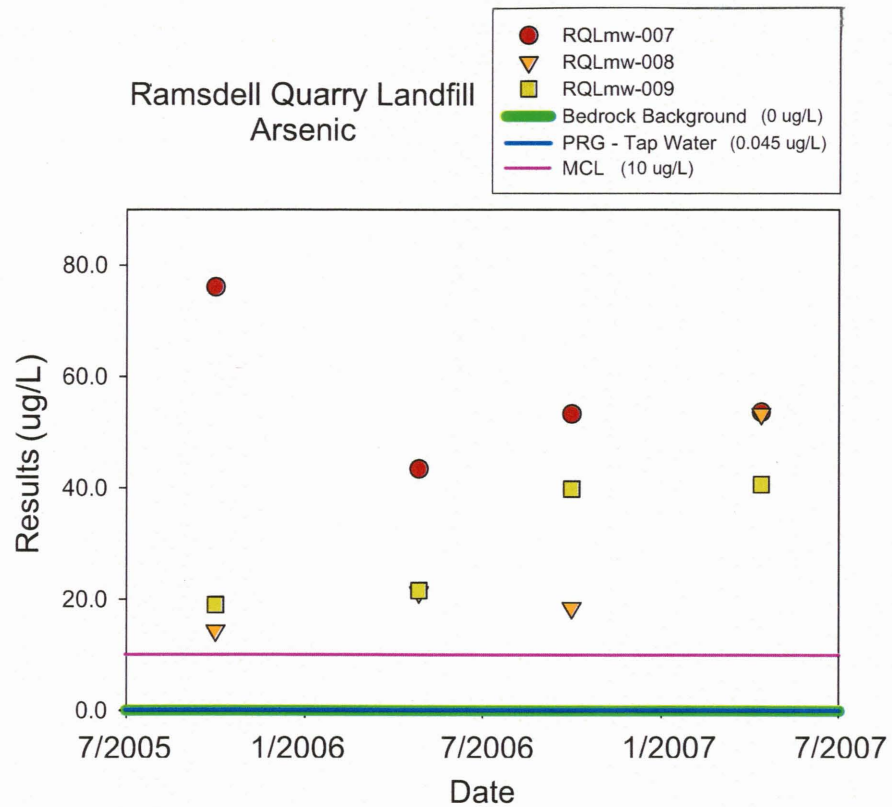
Open Demo Area #2  
HMX

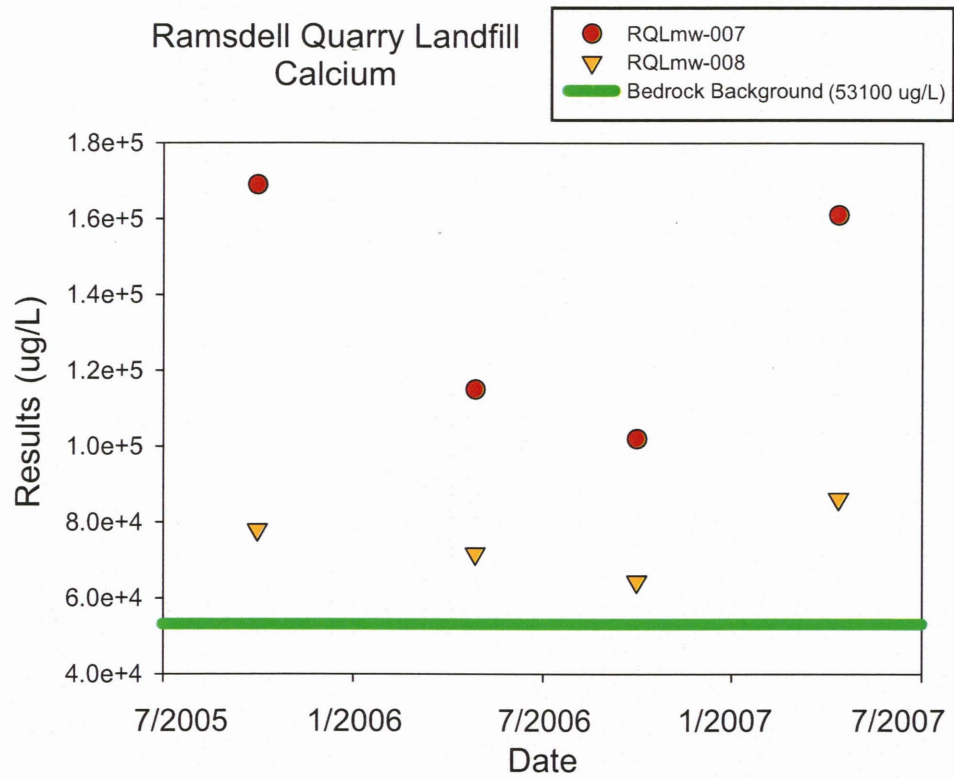
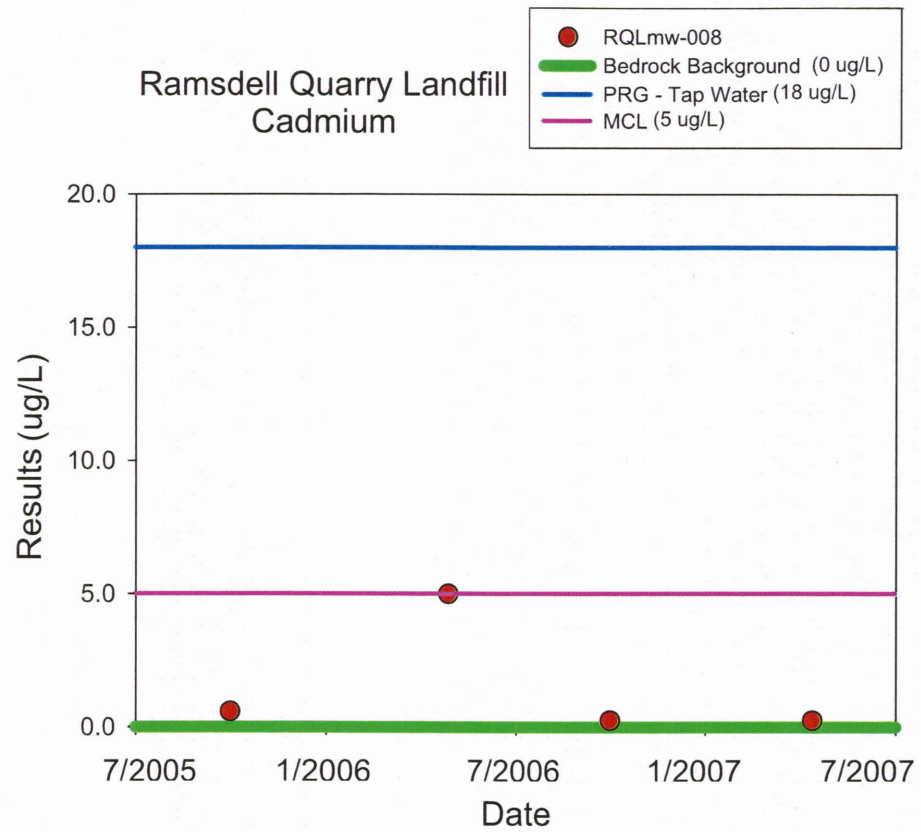


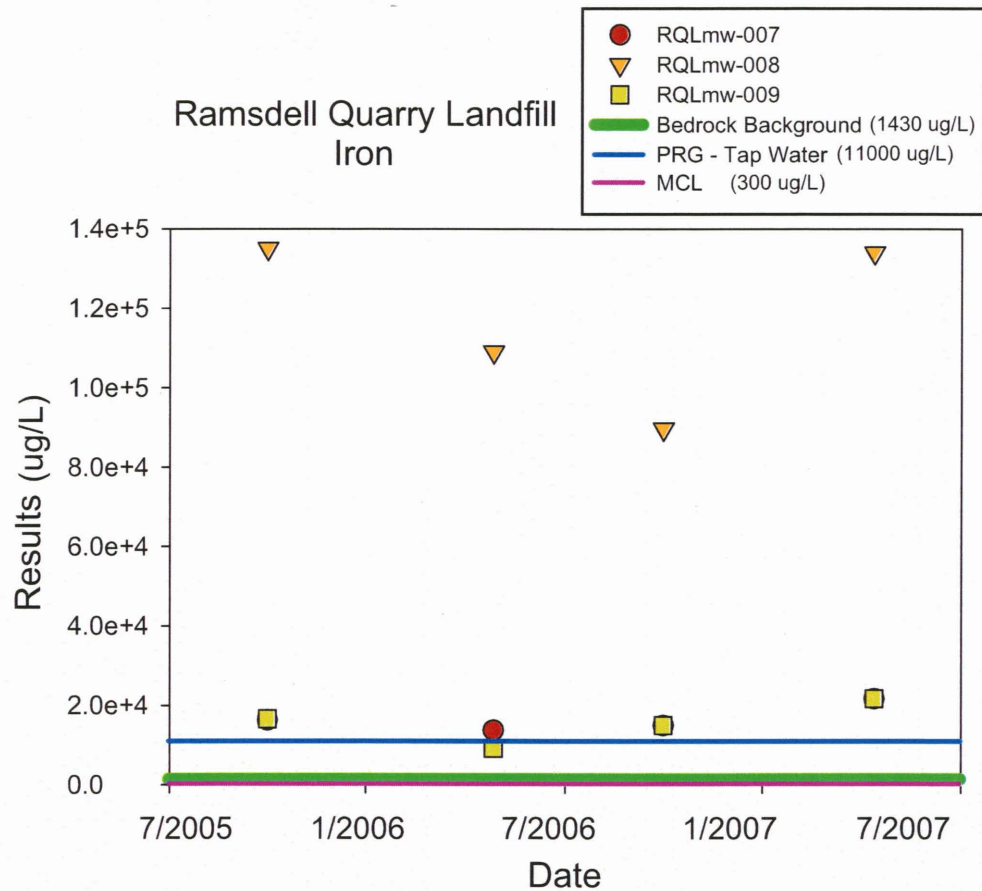
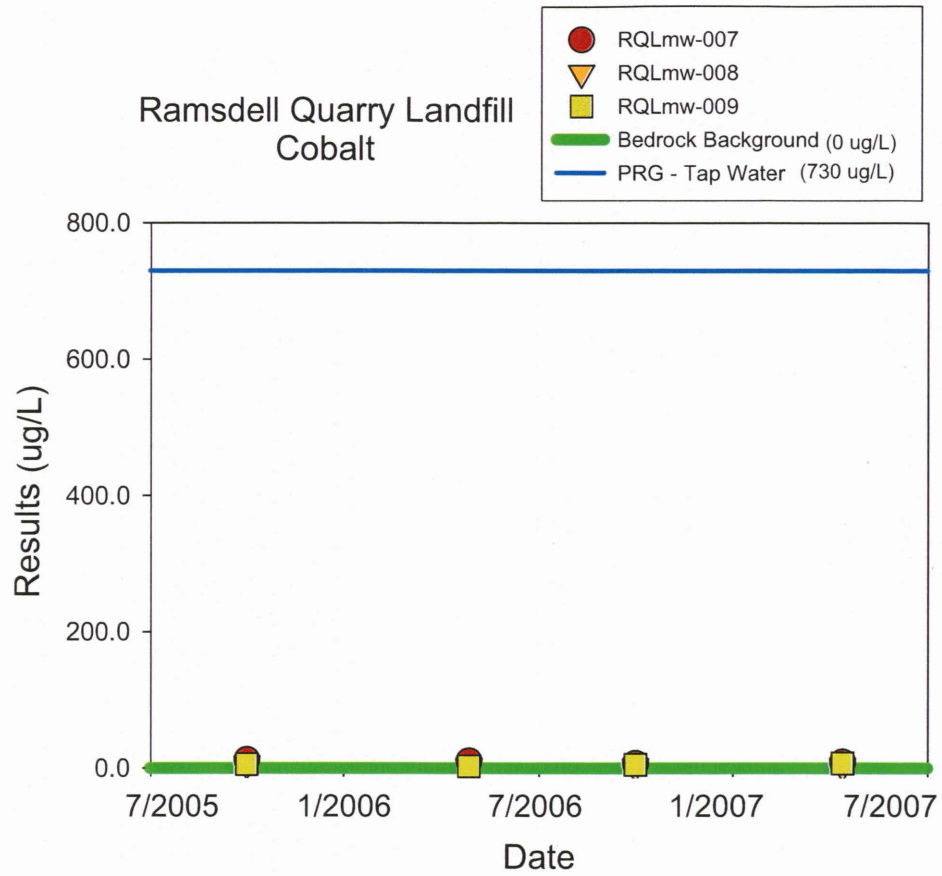


Open Demo Area #2  
RDX

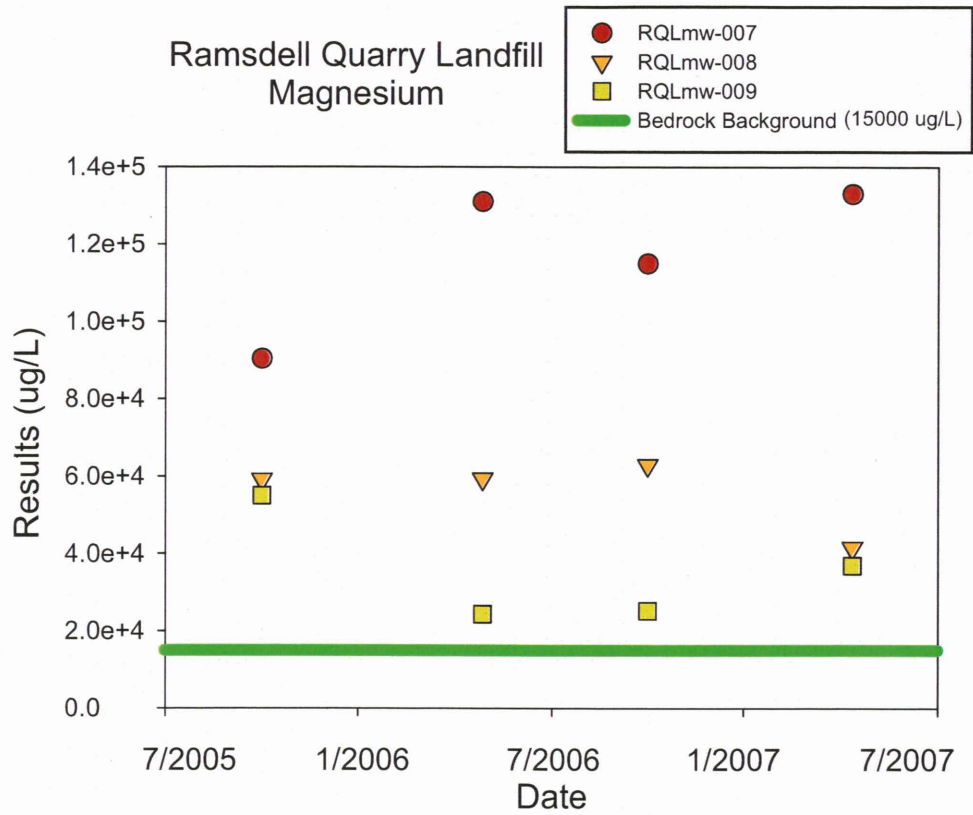




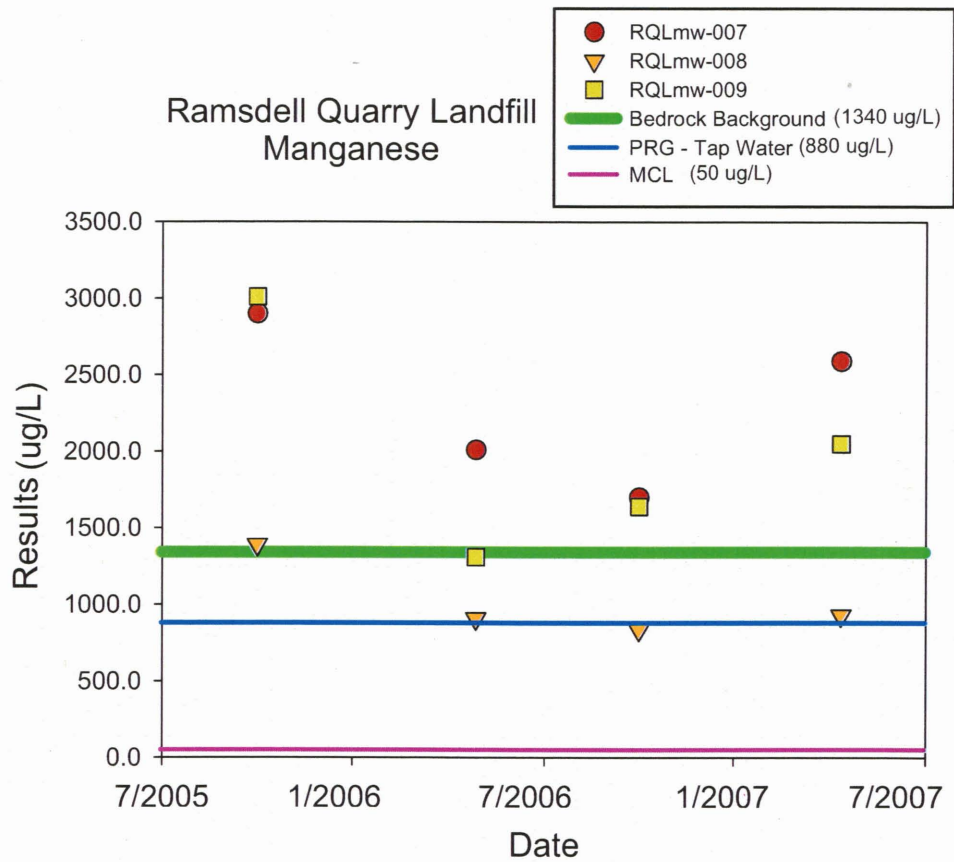


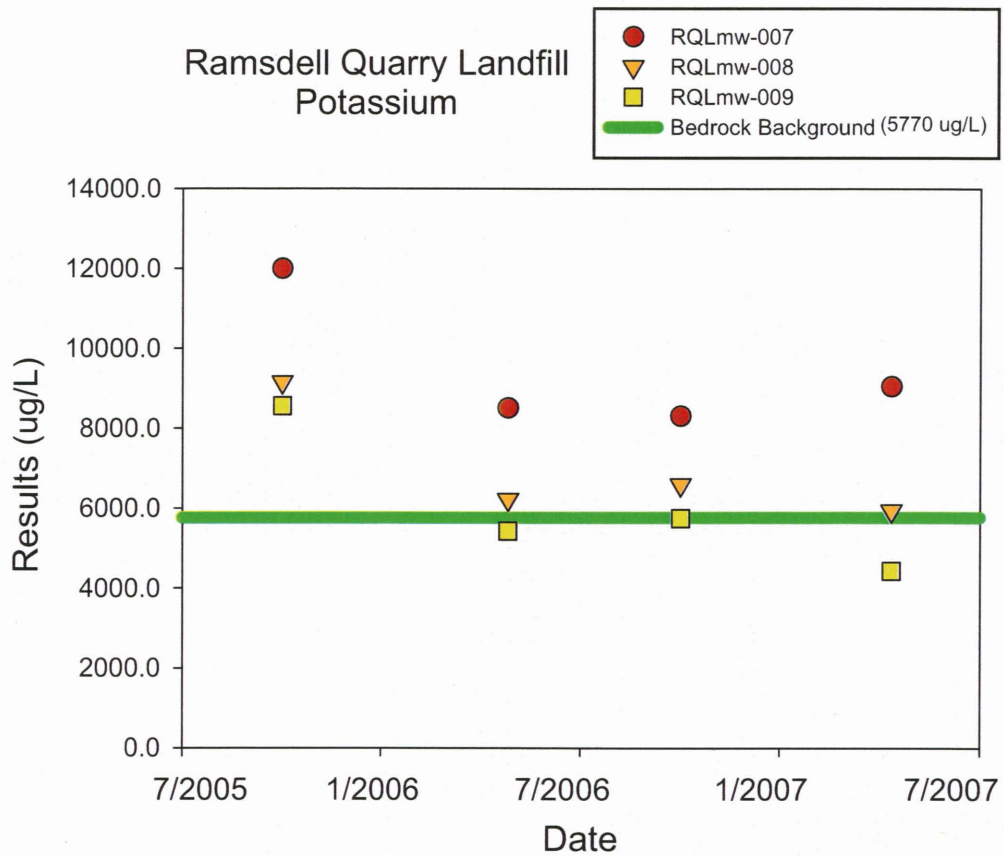
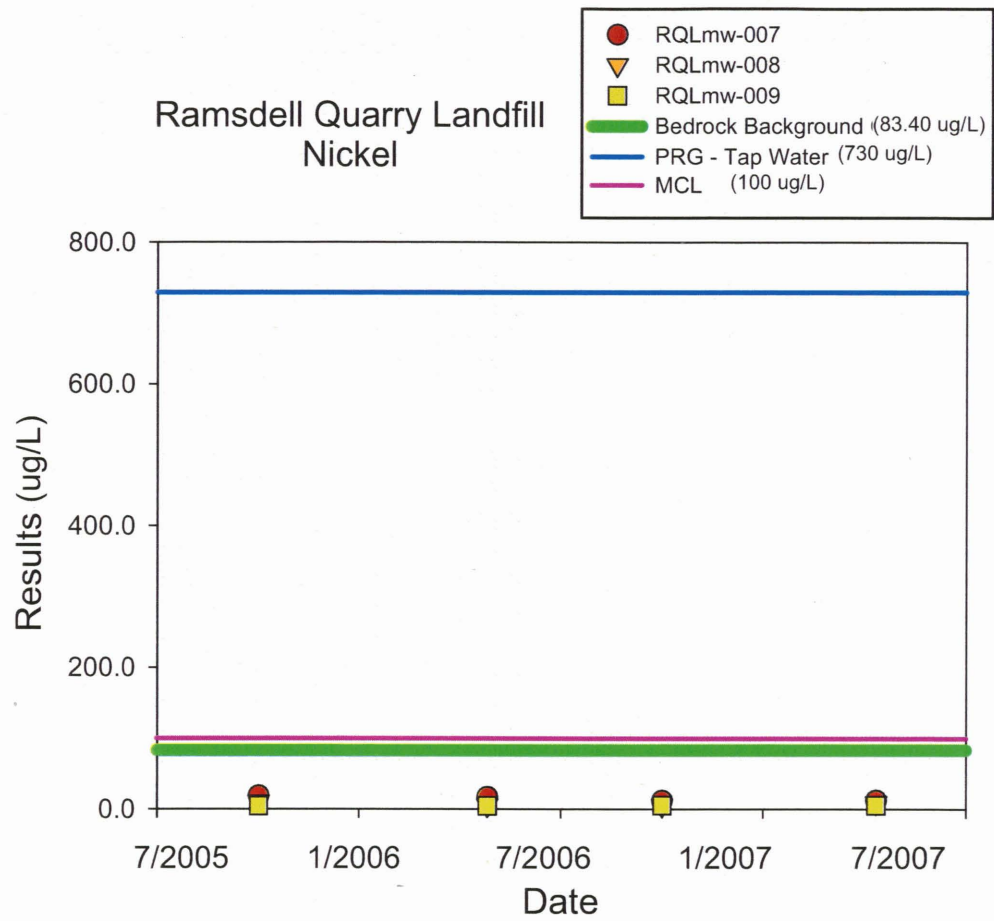


### Ramsdell Quarry Landfill Magnesium

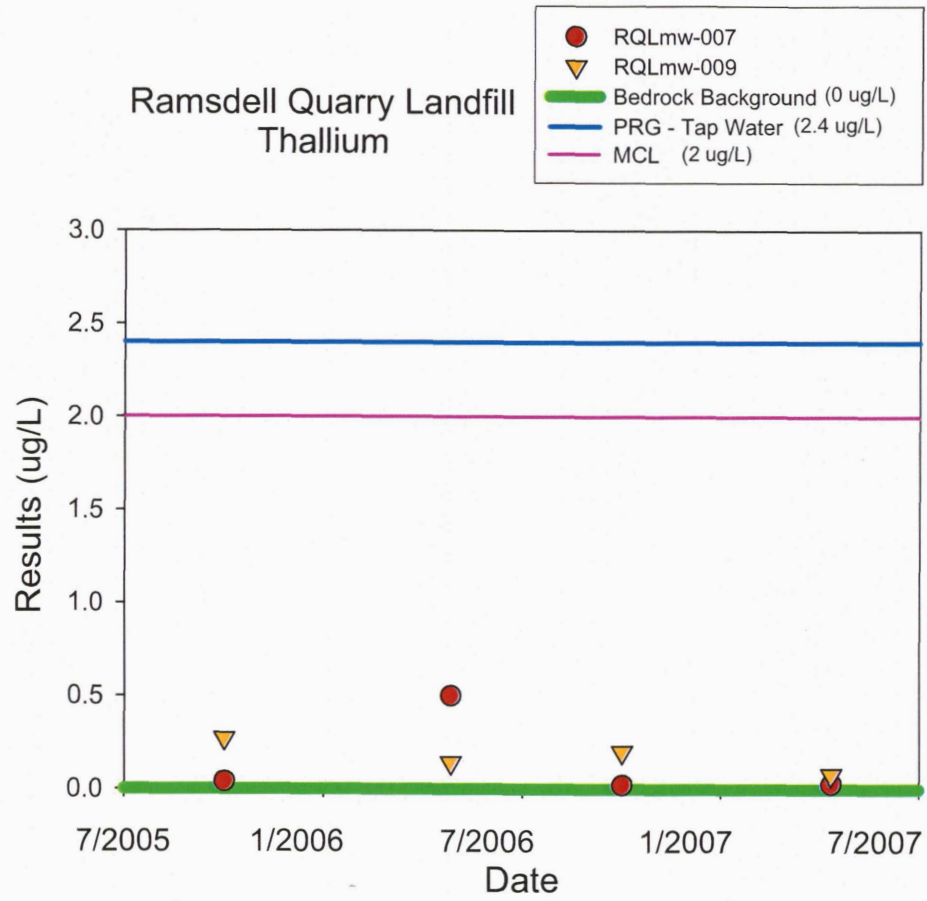


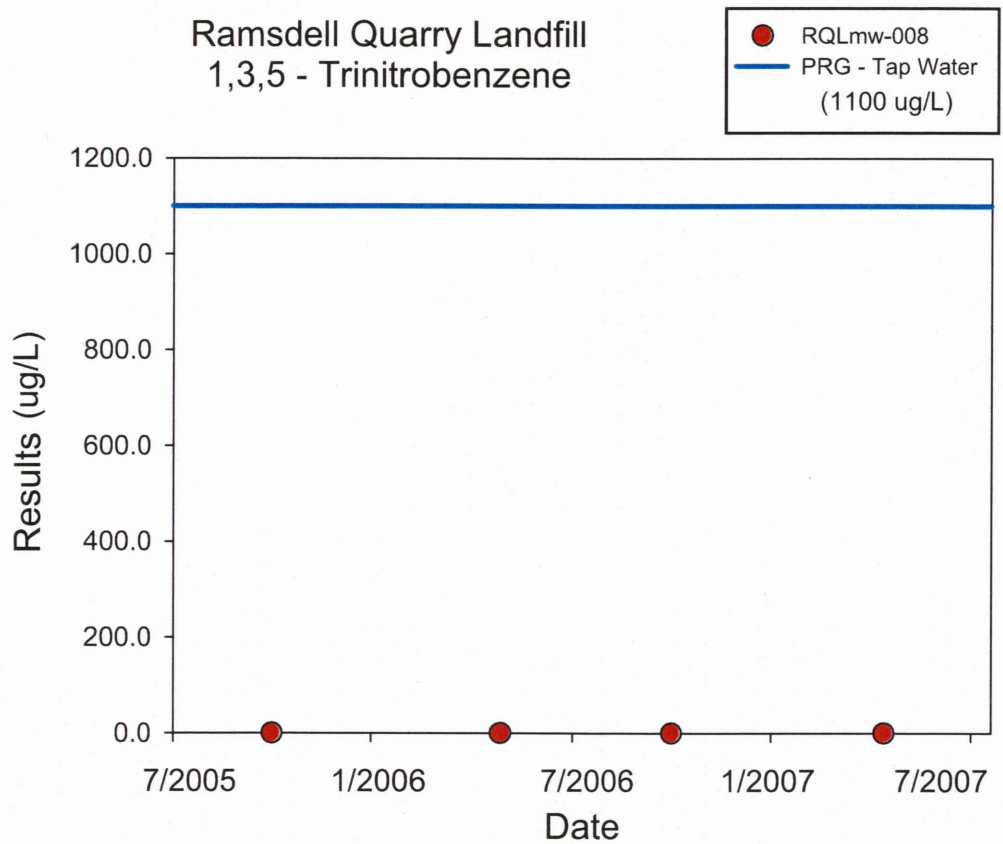
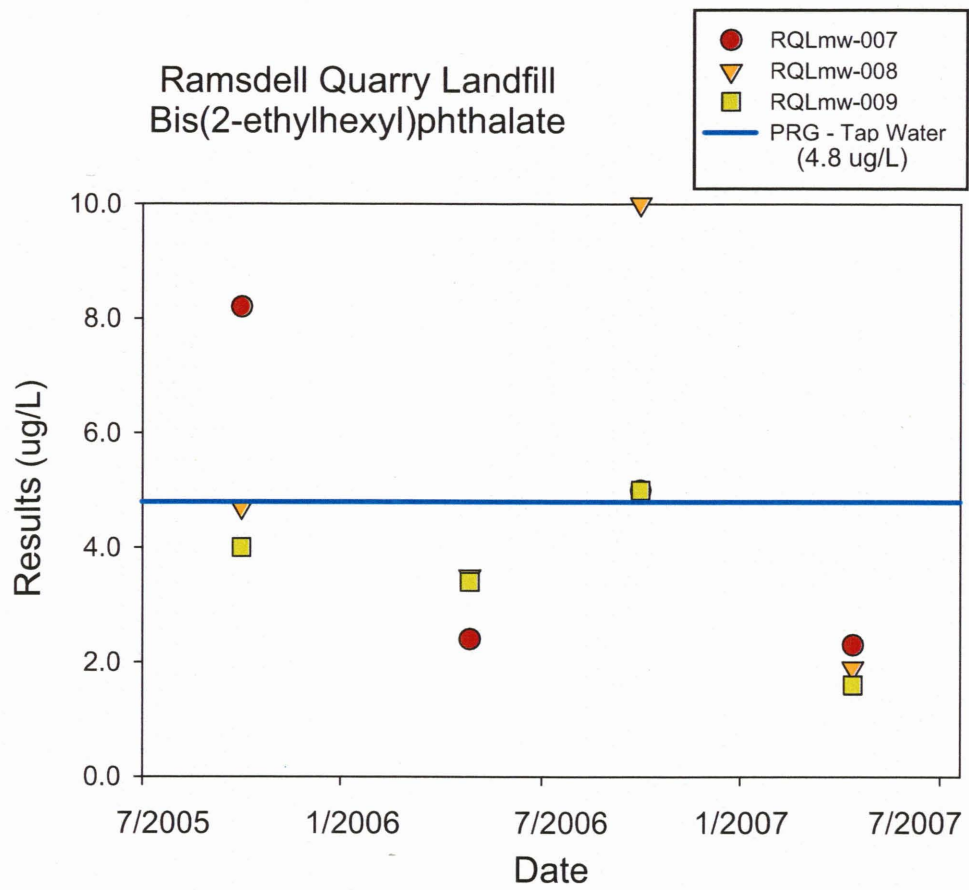
### Ramsdell Quarry Landfill Manganese





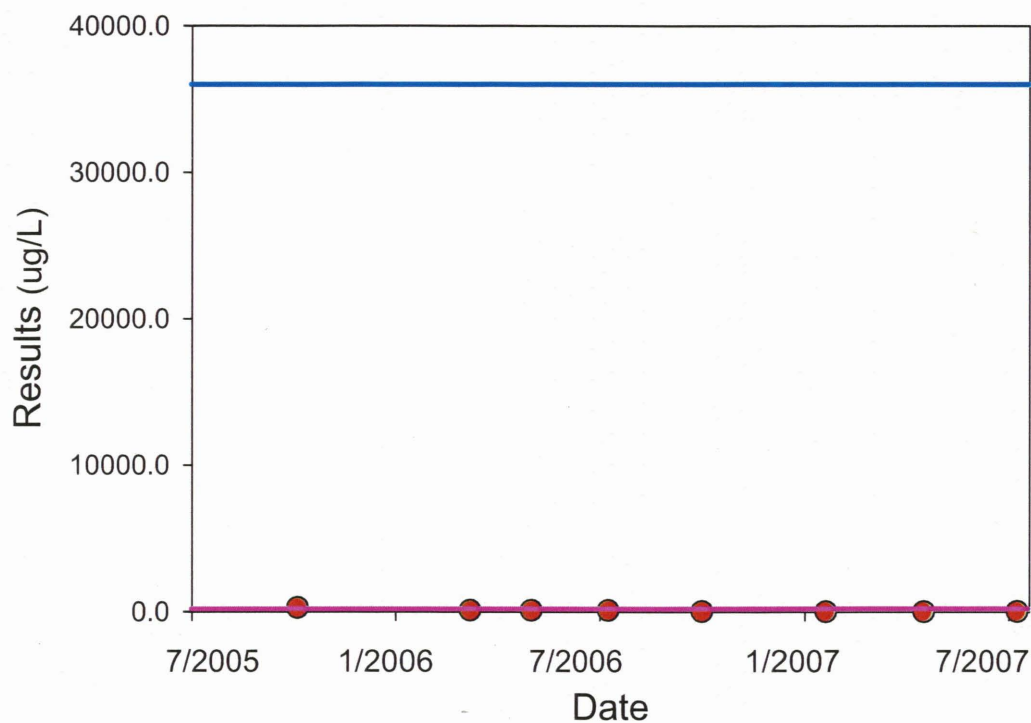
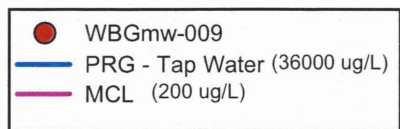
# Ramsdell Quarry Landfill Thallium



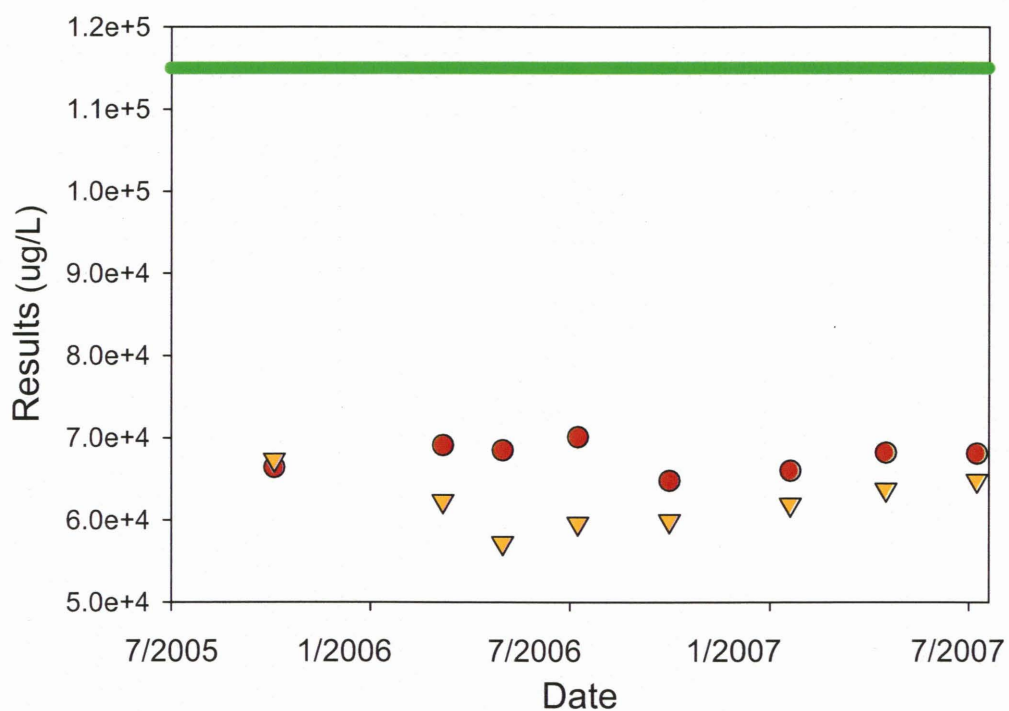
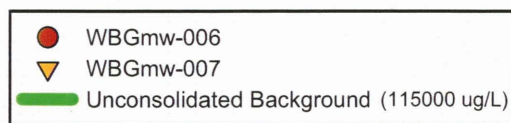




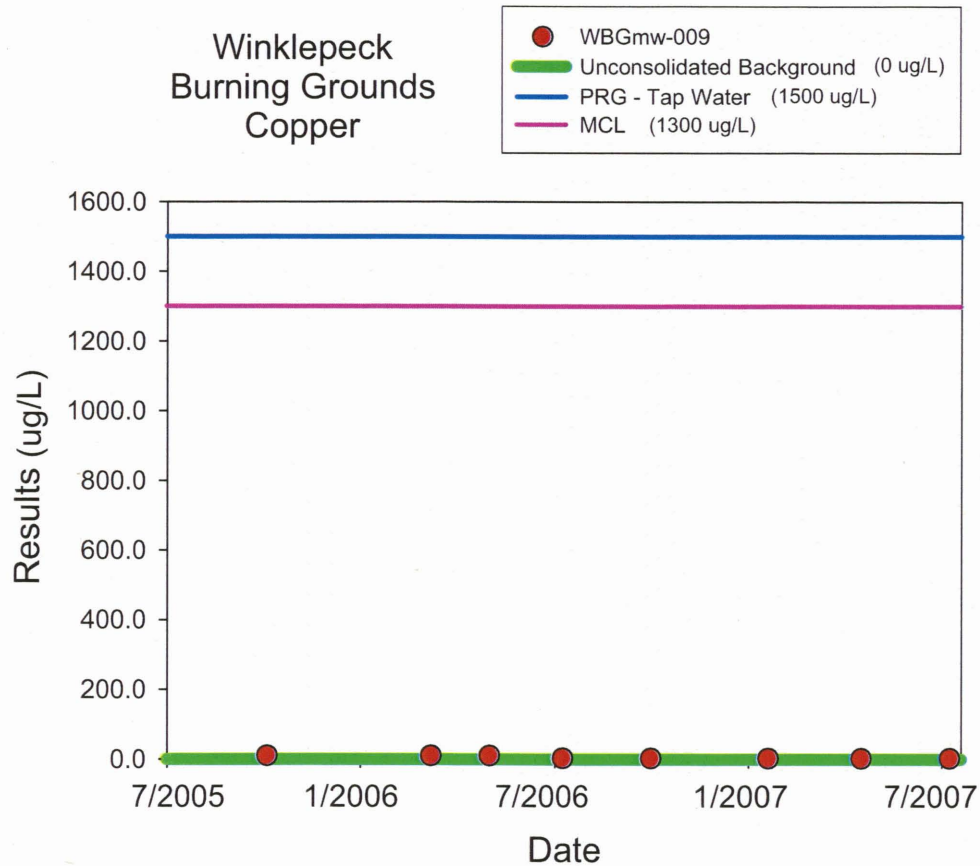
# Winklepeck Burning Grounds Aluminum



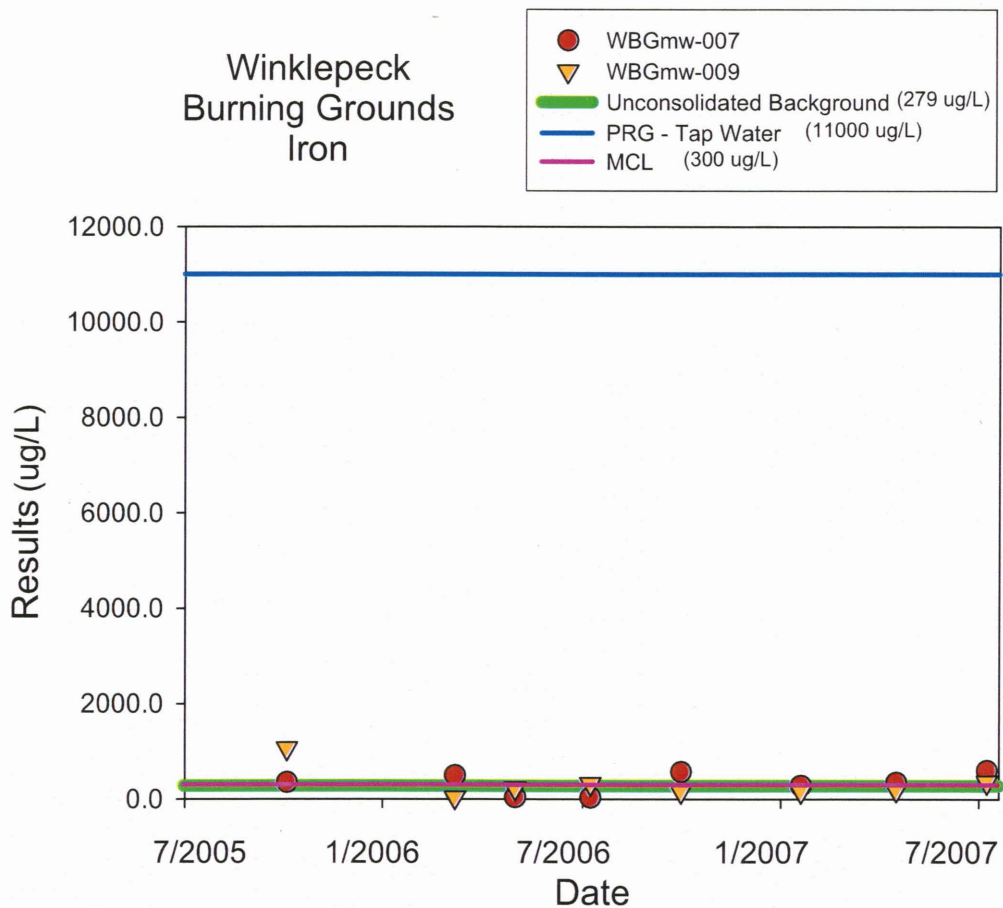
# Winklepeck Burning Grounds Calcium



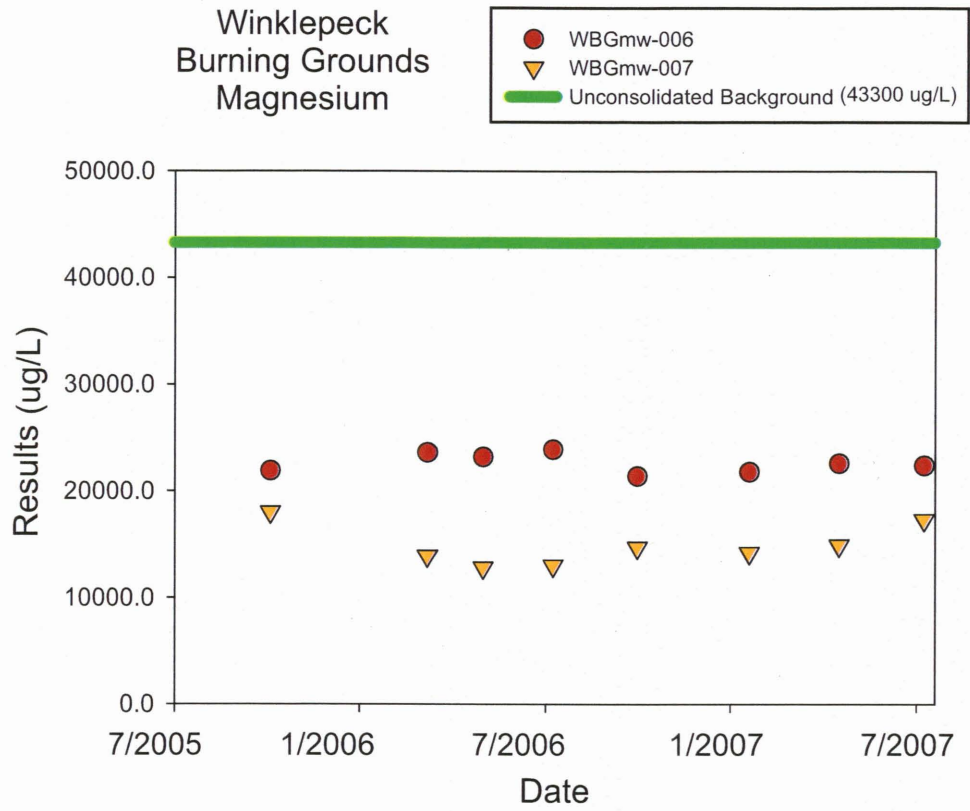
# Winklepeck Burning Grounds Copper



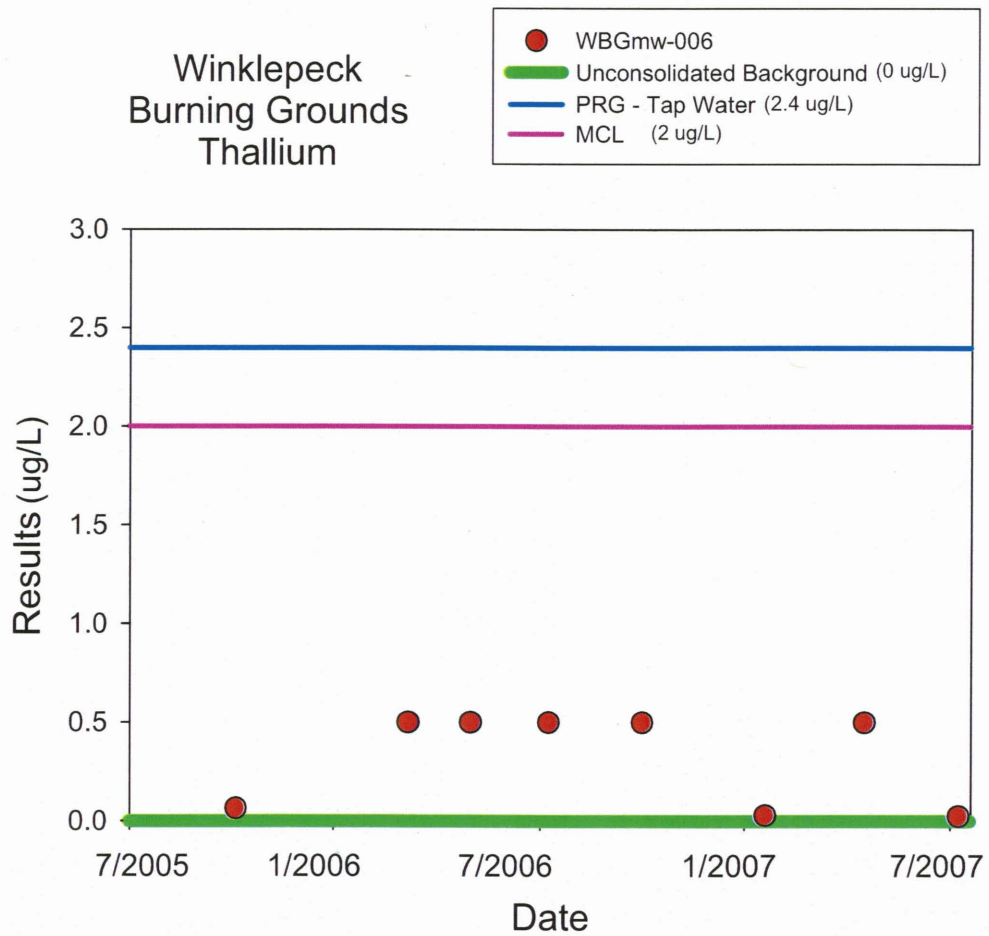
# Winklepeck Burning Grounds Iron



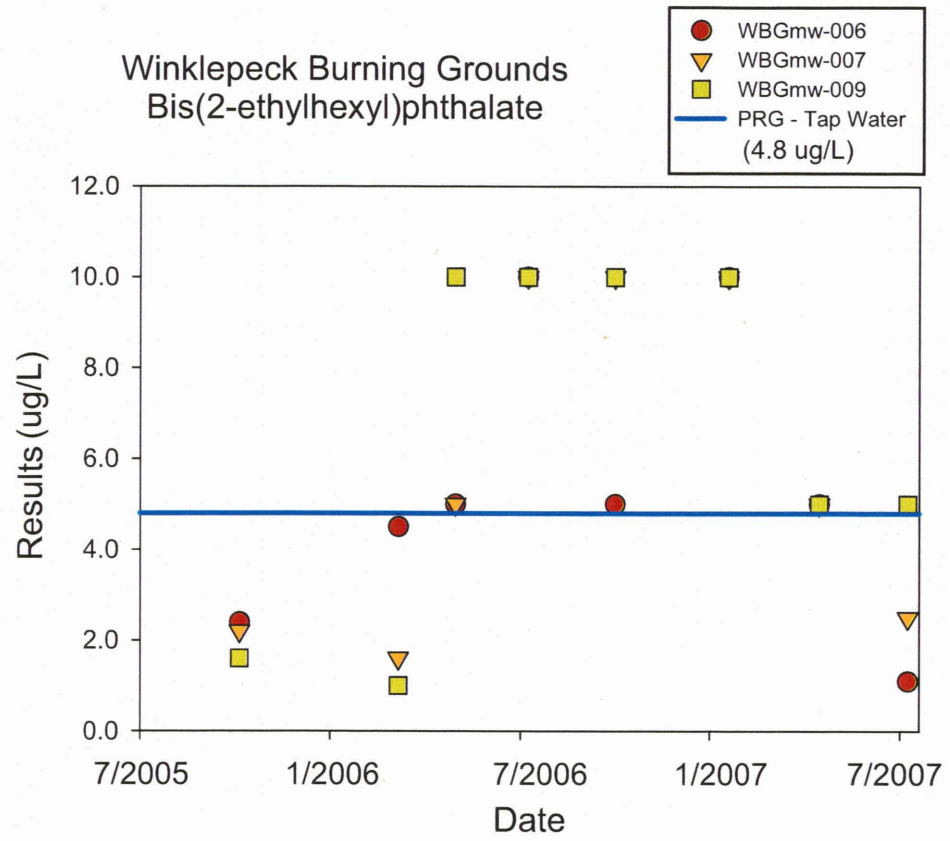
Winklepeck  
Burning Grounds  
Magnesium



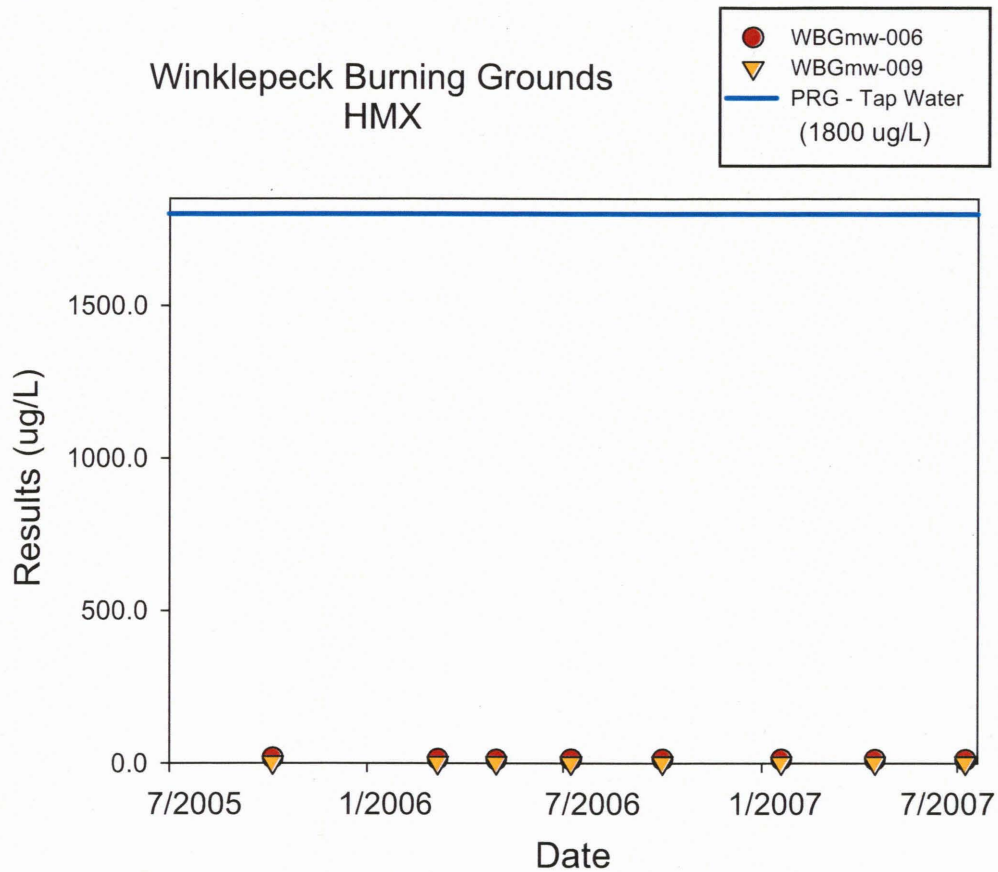
Winklepeck  
Burning Grounds  
Thallium



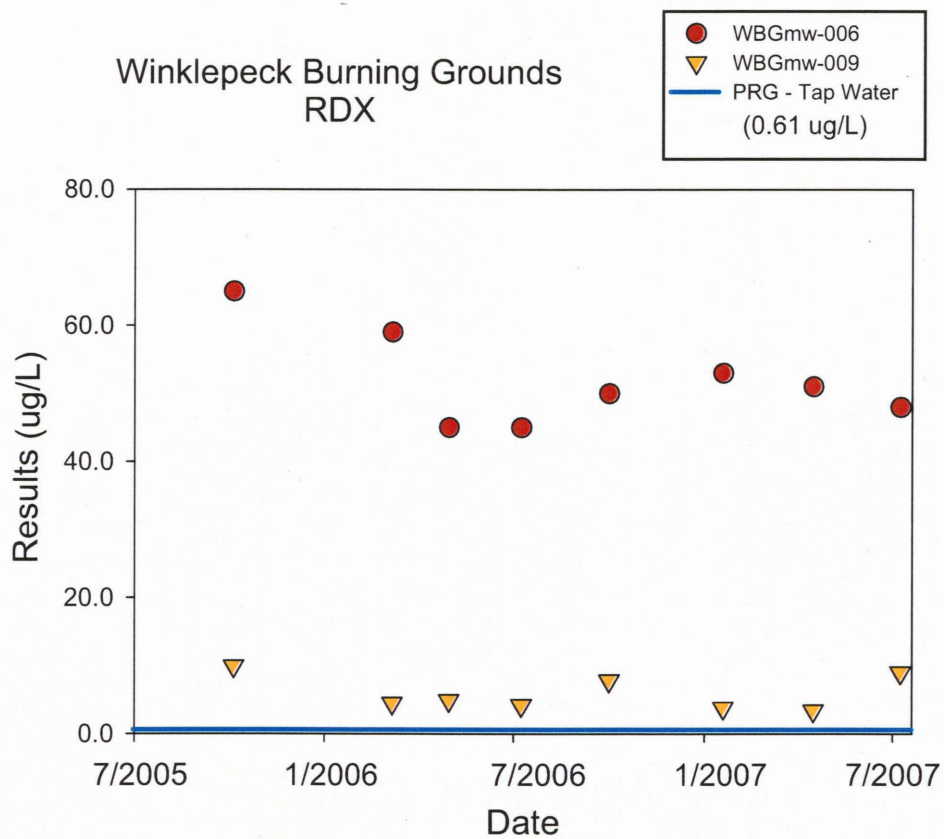
Winklepeck Burning Grounds  
Bis(2-ethylhexyl)phthalate



# Winklepeck Burning Grounds HMX



# Winklepeck Burning Grounds RDX



**APPENDIX F**

**MAPS OF FWGWMP STUDY AREAS**

**Note: The following maps have been reproduced from various separate reports. Each map has not been altered in any way from the original format from which it was copied.**

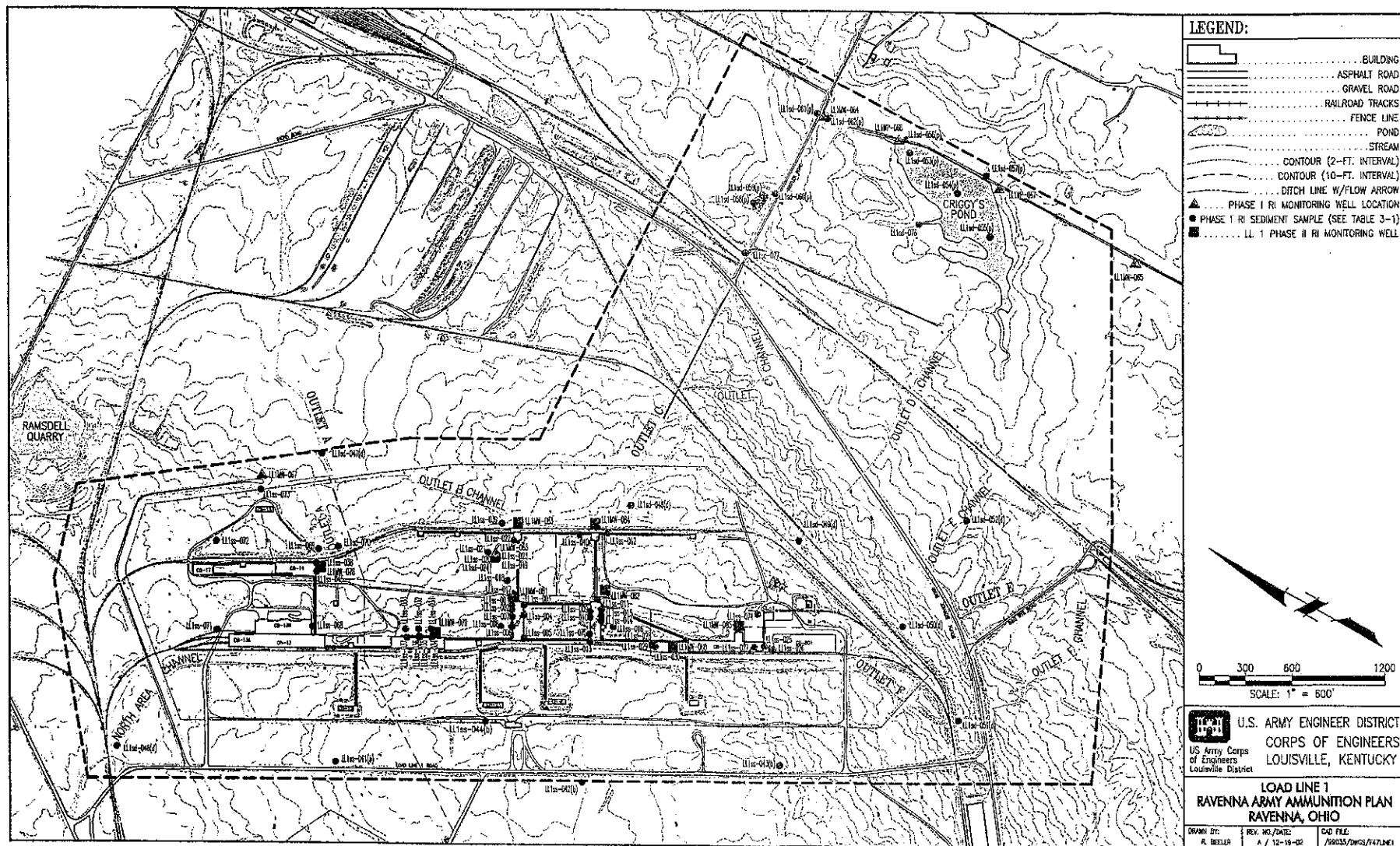


Figure 1-6. Existing Phase I RI Sampling Locations and Phase II RI Monitoring Wells at Load Line 1



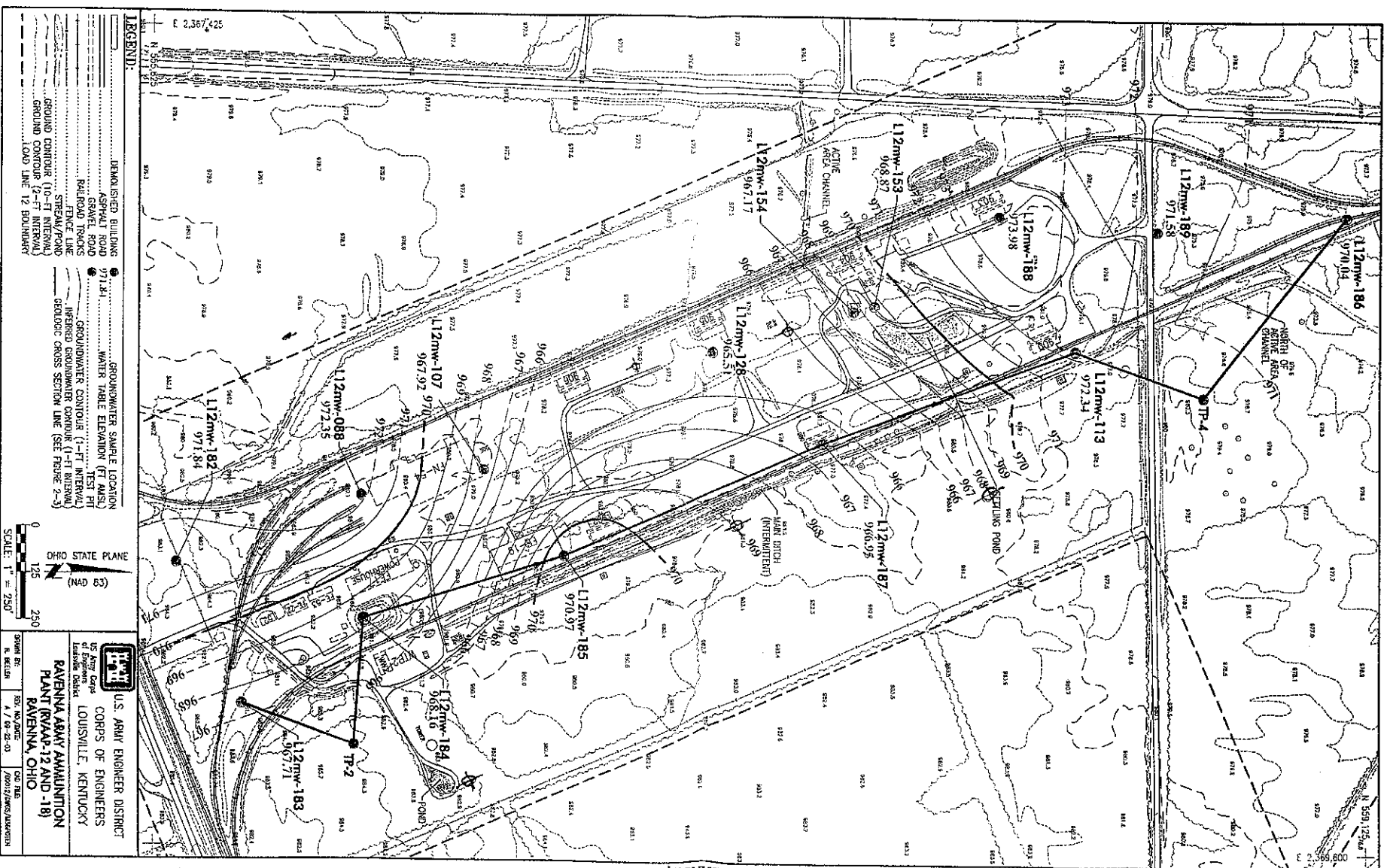


Figure 2-5. Potentiometric Groundwater Surface at Load Line 12, November 9, 2000

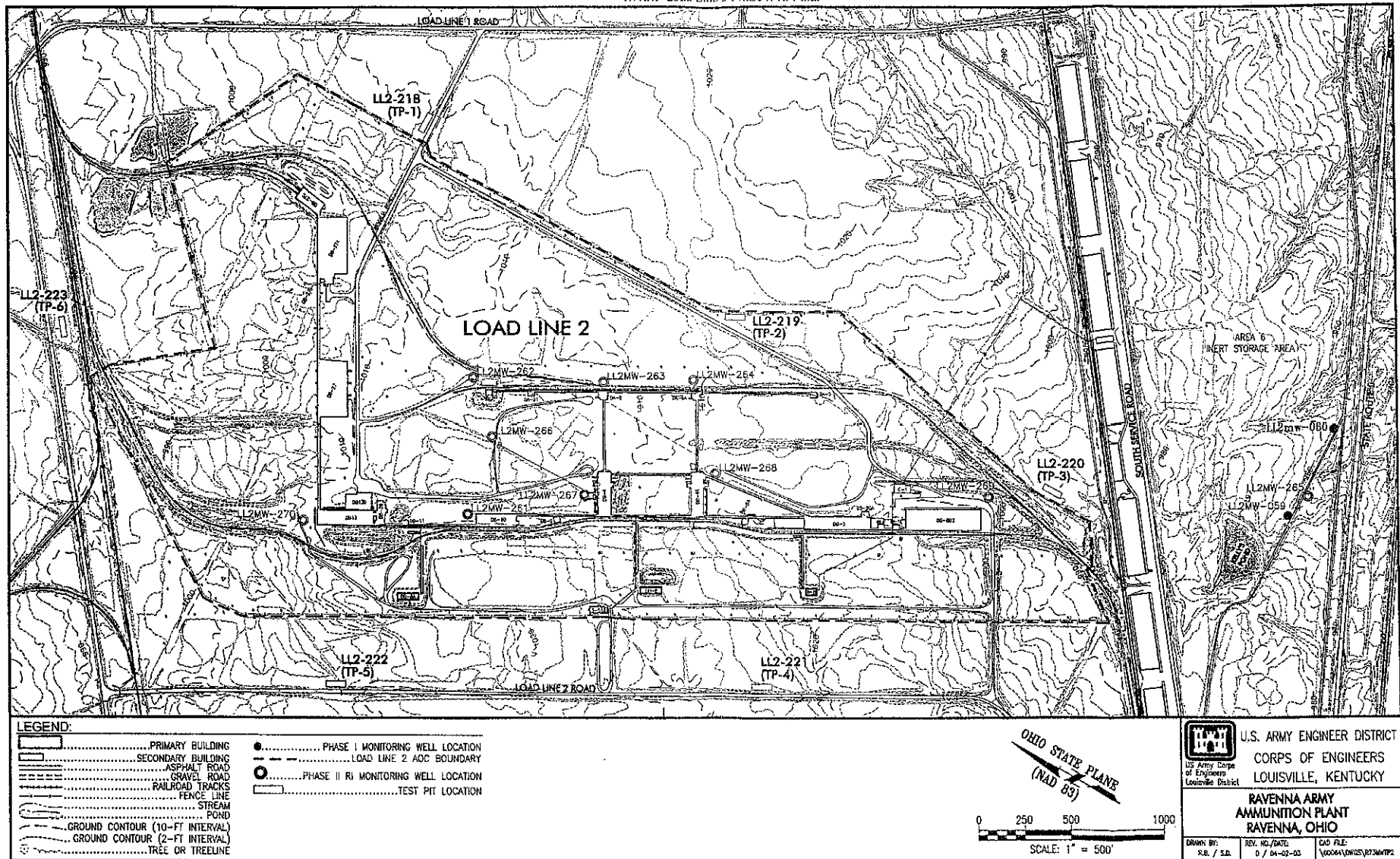


Figure 3-6. Phase II RI Monitoring Well and Test Pit Locations at Load Line 2

RVAAP Load Line 3 Phase II RI Final

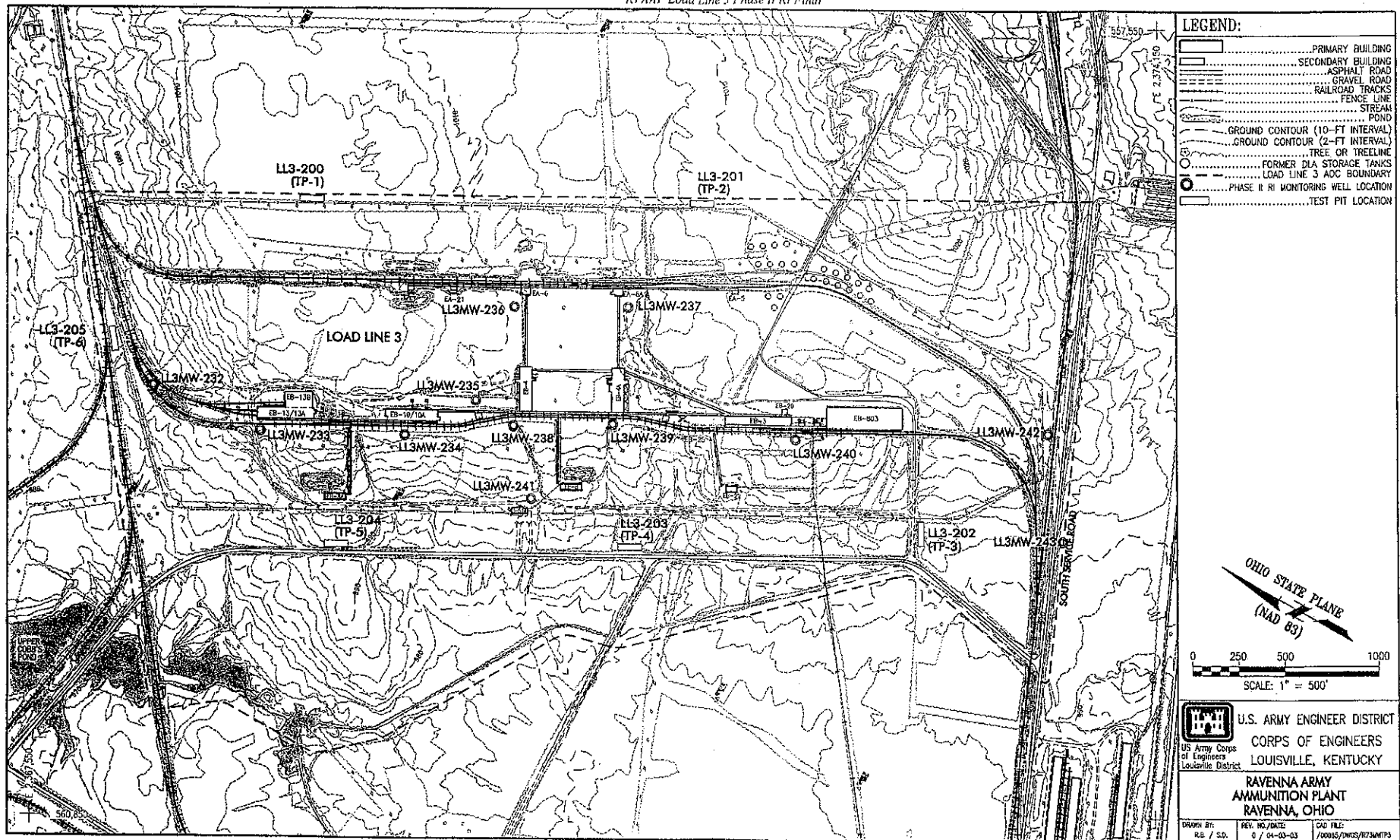
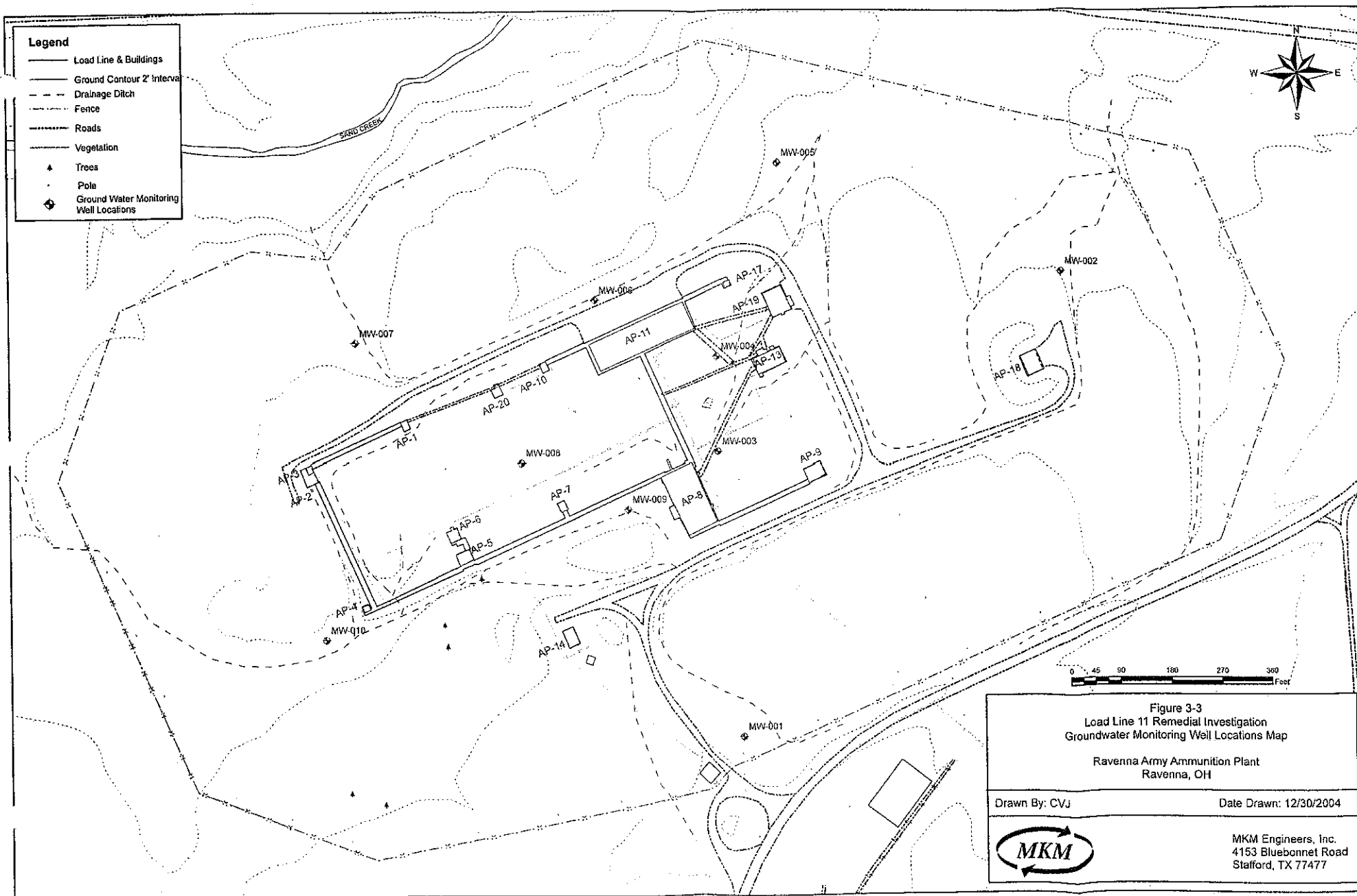


Figure 3-6. Phase II RI Monitoring Well and Test Pit Locations at Load Line 3



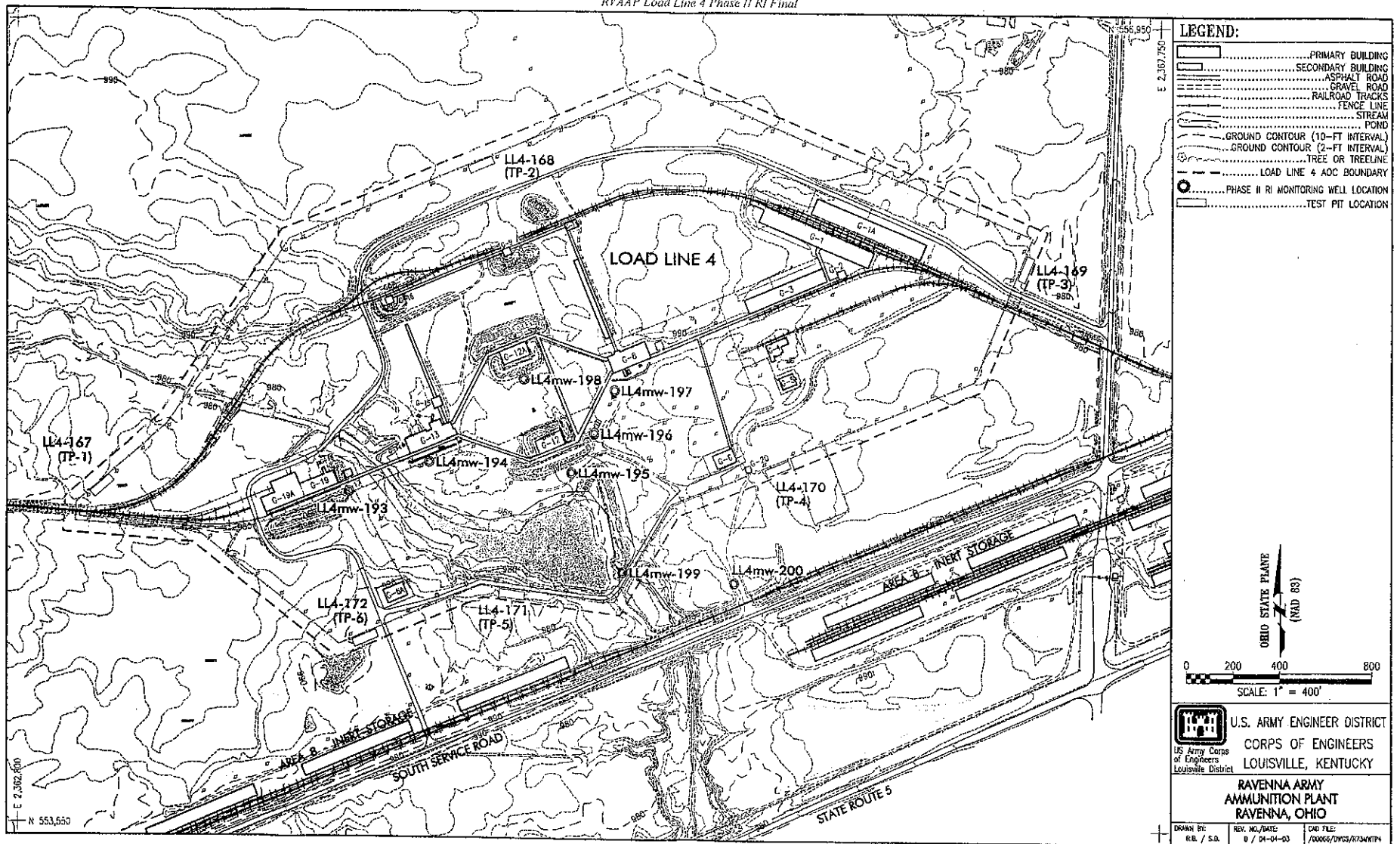
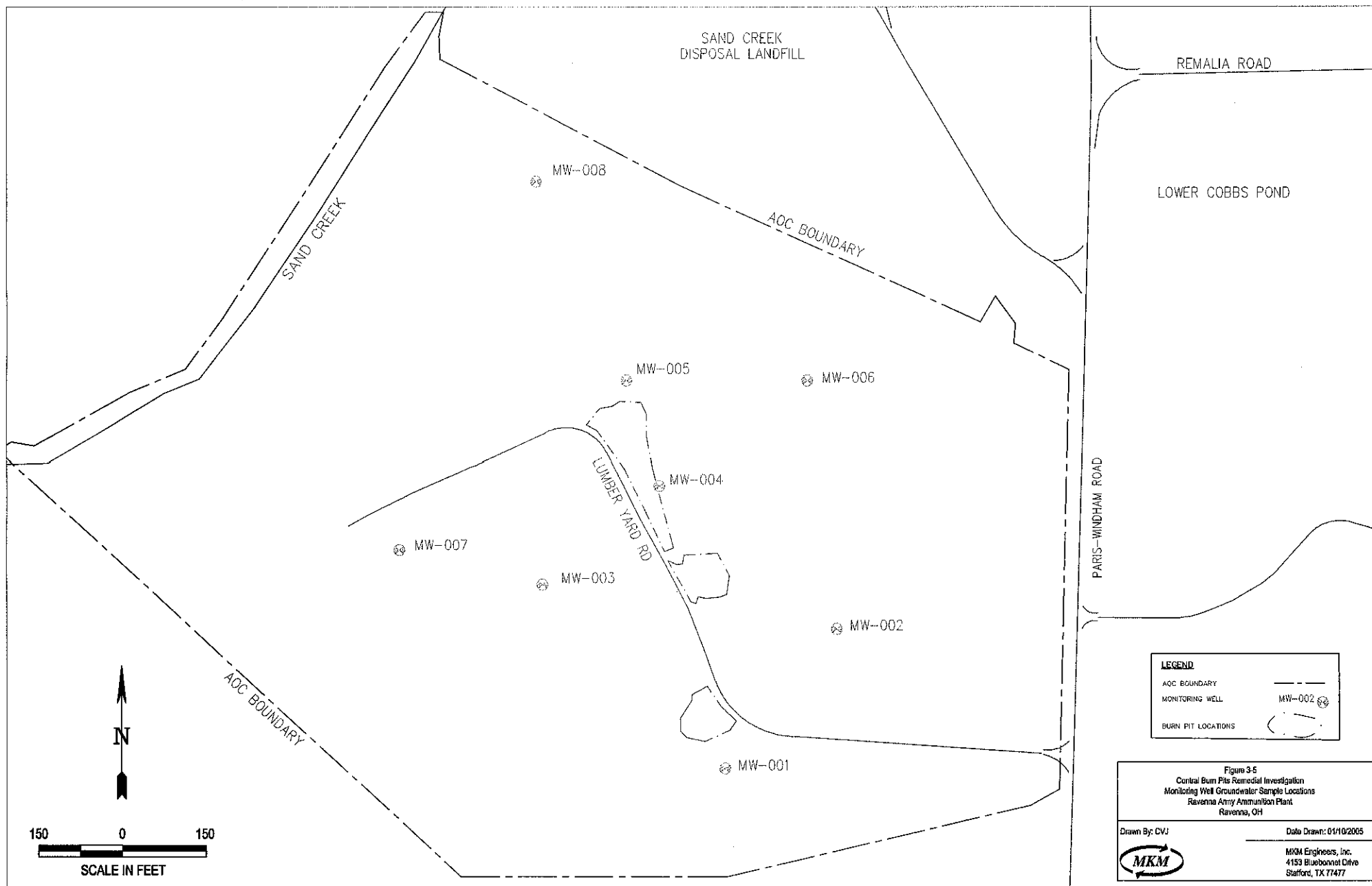


Figure 3-5. Phase II RI Monitoring Well and Test Pit Locations for Load Line 4



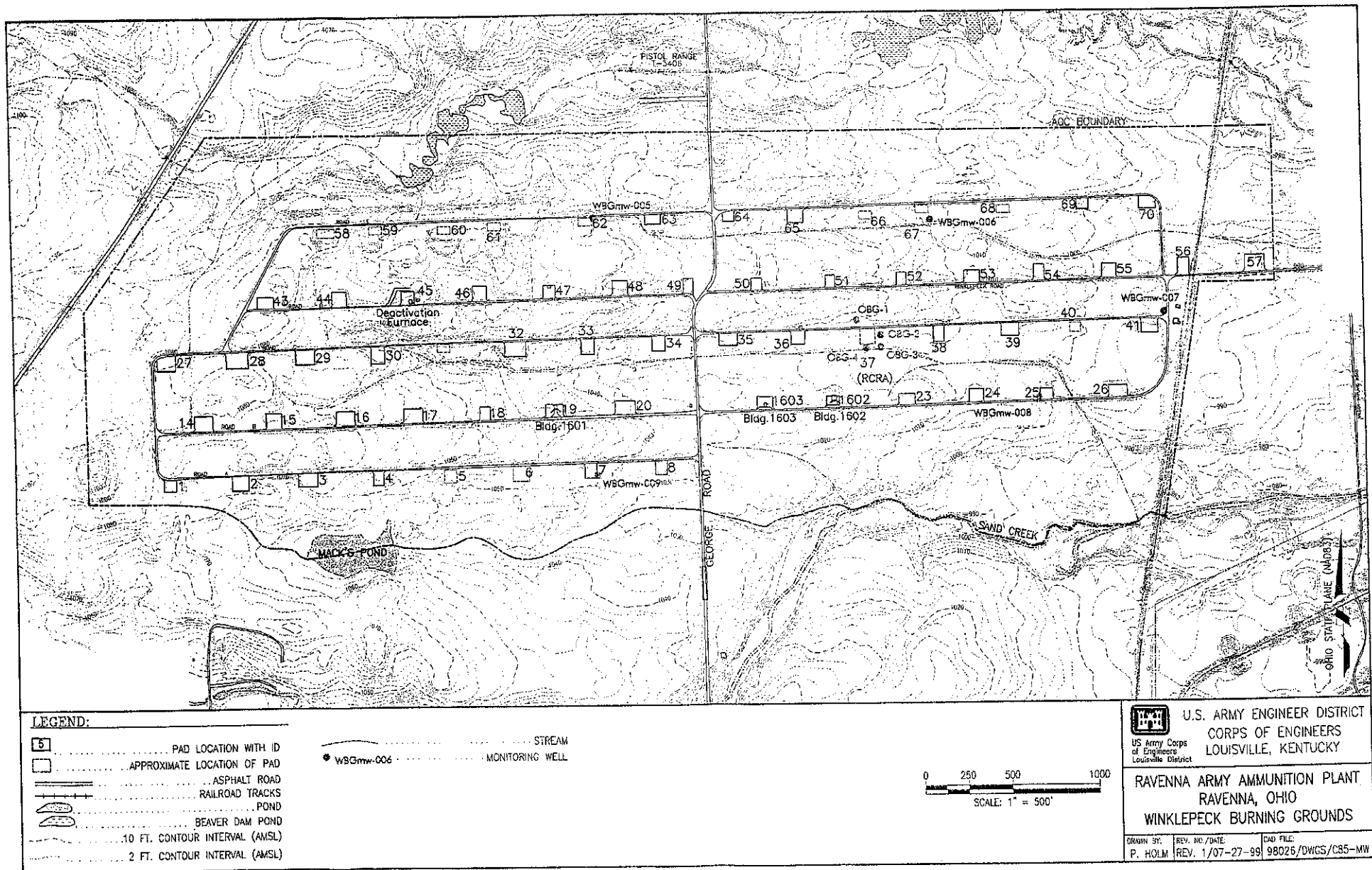
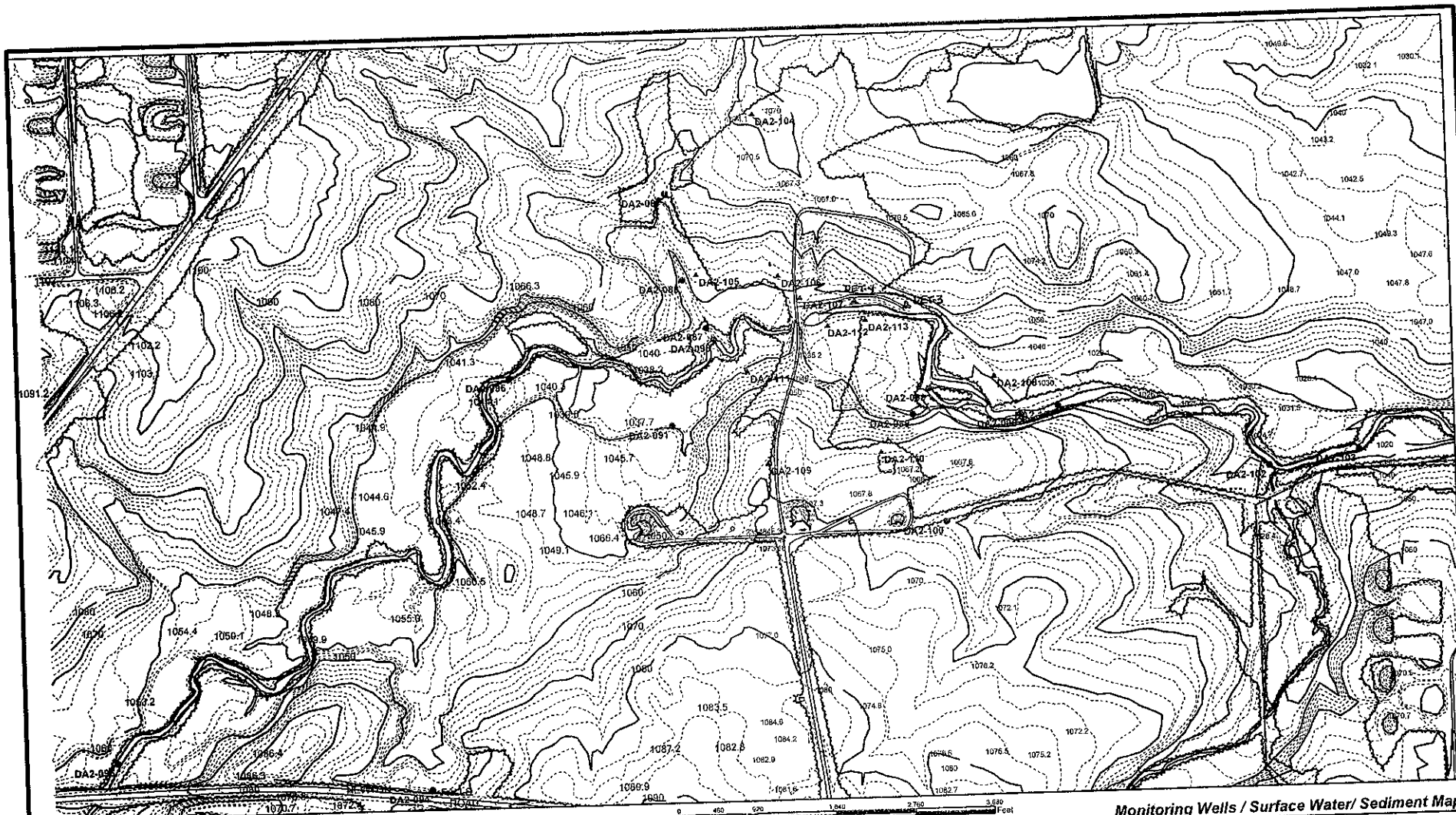


Figure 3-5 WRC Monitoring Well Locations





DEMOLITION AREA 2  
**Figure 3-2 : Sediment, Surface Water, and Groundwater Sample Location Map**

- Legend**
- |                    |                          |                 |                 |
|--------------------|--------------------------|-----------------|-----------------|
| <b>Sample Type</b> | ● Sediment/Surface Water | <b>Features</b> | — Water         |
|                    | ▲ Monitor Well           | — Roads         | — Fence         |
|                    |                          | — Rail Road     | --- 2' Contour  |
|                    |                          | — Vegetation    | --- 10' Contour |

**Monitoring Wells / Surface Water/ Sediment Map**

Sheet No.  
 FLLNES/R1415/R1516

Drawn By: Chantelle Carroll

ArcView File: Ravenna\_Sediment\_SWGW

Date: 5-10-03



RVAAP RQL Phase I RI Report

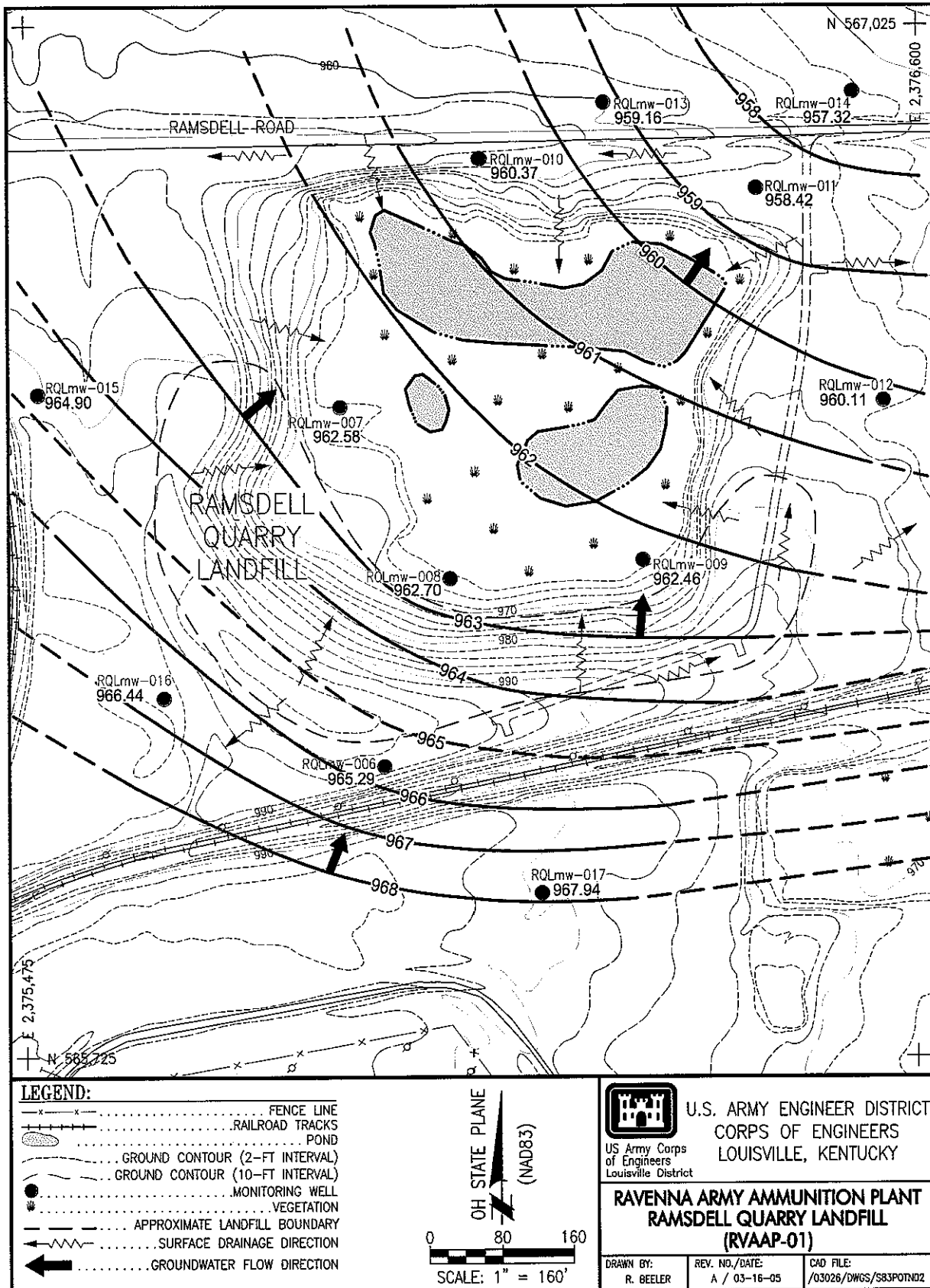


Figure 2-4. Ramsdell Quarry Potentiometric Surface, May 2004

**APPENDIX G**

**PROPOSED WELL SAMPLING SEQUENCE**

**Table 4. Sampling Sequence**

RTLS/RVAAP Area	Well ID	Number of previous non-FWGWMP sampling events	RCRA well?	Current FWGWMP well?	Included in LL-1 thru LL-4 LTM?	Additional sampling proposed?	Sampling Sequence
Background	BKGmw-004			yes		no	
	BKGmw-005			yes		no	
	BKGmw-006			yes		no	
	BKGmw-008			yes		no	
	BKGmw-010			yes		no	
	BKGmw-012			yes		no	
	BKGmw-013			yes		no	
	BKGmw-015			yes		no	
	BKGmw-016			yes		no	
	BKGmw-017			yes		no	
	BKGmw-018			yes		no	
	BKGmw-019			yes		no	
	BKGmw-020			yes		no	
	BKGmw-021			yes		no	
Load Line 1	LL1mw-063	3				yes	1
	LL1mw-064	3				yes	2
	LL1mw-065	3				yes	3
	LL1mw-067	3			yes	no	
	LL1mw-078			yes	yes	no	
	LL1mw-079	2				yes	4
	LL1mw-080			yes		no	
	LL1mw-081	2			yes	no	
	LL1mw-082	2			yes	no	
	LL1mw-083			yes		no	
	LL1mw-084	2			yes	no	
	LL1mw-085	2			yes	no	
Load Line 2	LL2mw-059			yes		no	
	LL2mw-060	4				yes	5
	LL2mw-261	1				yes	6
	LL2mw-262			yes	yes	no	
	LL2mw-263			yes	yes	no	
	LL2mw-264	1				yes	7
	LL2mw-265	1				yes	8
	LL2mw-266	1			yes	no	
	LL2mw-267	1			yes	no	
	LL2mw-268	1				yes	9
	LL2mw-269	1			yes	no	
	LL2mw-270	1				yes	10
Load Line 3	LL3mw-232	1				yes	11
	LL3mw-233	1				yes	12
	LL3mw-234	1				yes	13
	LL3mw-235	1				yes	14
	LL3mw-236	1			yes	no	
	LL3mw-237	1				yes	15
	LL3mw-238			yes	yes	no	
	LL3mw-239	1			yes	no	
	LL3mw-240	1				yes	16
	LL3mw-241	1				yes	17
	LL3mw-242			yes		no	
	LL3mw-243	1				yes	18
Load Line 4	LL4mw-193	1				yes	19
	LL4mw-194	1				yes	20
	LL4mw-195	1				yes	21
	LL4mw-196	1			yes	no	
	LL4mw-197	1			yes	no	
	LL4mw-198			yes	yes	no	
	LL4mw-199			yes		no	
Load Line 5	LL4mw-200	1				yes	22
	LL5mw-001	1				yes	124
	LL5mw-002	1				yes	125
	LL5mw-003	1				yes	126
	LL5mw-004	1				yes	127

Table 4. Sampling Sequence

RTLS/RVAAP Area	Well ID	Number of previous non-FWGWMP sampling events	RCRA well?	Current FWGWMP well?	Included in LL-1 thru LL-4 LTM?	Additional sampling proposed?	Sampling Sequence
	LL5mw-005	1				yes	128
	LL5mw-006	1				yes	129
Load Line 6	LL6mw-001	1				yes	130
	LL6mw-002	1				yes	131
	LL6mw-003	1				yes	132
	LL6mw-004	1				yes	133
	LL6mw-005	1				yes	134
	LL6mw-006	1				yes	135
	LL6mw-007	1				yes	136
Load Line 7	LL7mw-001	1				yes	137
	LL7mw-002	1				yes	138
	LL7mw-003	1				yes	139
	LL7mw-004	1				yes	140
	LL7mw-005	1				yes	141
	LL7mw-006	1				yes	142
Load Line 8	LL8mw-001	1				yes	143
	LL8mw-002	1				yes	144
	LL8mw-003	1				yes	145
	LL8mw-004	1				yes	146
	LL8mw-005	1				yes	147
	LL8mw-006	1				yes	148
Load Line 9	LL9mw-001	1				yes	149
	LL9mw-002	1				yes	150
	LL9mw-003	1				yes	151
	LL9mw-004	1				yes	152
	LL9mw-005	1				yes	153
	LL9mw-006	1				yes	154
	LL9mw-007	1				yes	155
Load Line 10	LL10mw-001	1				yes	156
	LL10mw-002	1				yes	157
	LL10mw-003	1				yes	158
	LL10mw-004	1				yes	159
	LL10mw-005	1				yes	160
	LL10mw-006	1				yes	161
Load Line 11	L11mw-1	1				yes	162
	L11mw-2			yes		no	
	L11mw-3	1				yes	163
	L11mw-4	1				yes	164
	L11mw-5	1				yes	165
	L11mw-6	1				yes	166
	L11mw-7			yes		no	
	L11mw-8	1				yes	167
	L11mw-9	1				yes	168
	L11mw-10	1				yes	169
Load Line 12	L12mw-088	2				yes	23
	L12mw-107	2				yes	24
	L12mw-113	2				yes	25
	L12mw-128	2				yes	26
	L12mw-153			yes		no	
	L12mw-154	2				yes	27
	L12mw-182			yes		no	
	L12mw-183			yes		no	
	L12mw-184	2				yes	28
	L12mw-185	2				yes	29
	L12mw-186			yes		no	
	L12mw-187	2				yes	30
	L12mw-188	2				yes	31
	L12mw-189	2				yes	32
	LL12mw-242	1				yes	33
	LL12mw-243	1				yes	34
	LL12mw-244	1				yes	35
	LL12mw-245	1				yes	36

Table 4. Sampling Sequence

RTLS/RVAAP Area	Well ID	Number of previous non-FWGWMP sampling events	RCRA well?	Current FWGWMP well?	Included in LL-1 thru LL-4 LTM?	Additional sampling proposed?	Sampling Sequence
	LL12mw-246	1				yes	37
Atlas Scrap Yard	ASYmw-001	1				yes	170
	ASYmw-002	1				yes	171
	ASYmw-003	1				yes	172
	ASYmw-004	1				yes	173
	ASYmw-005	1				yes	174
	ASYmw-006	1				yes	175
	ASYmw-007	1				yes	176
	ASYmw-008	1				yes	177
	ASYmw-009	1				yes	178
	ASYmw-010	1				yes	179
Building 1200	B12mw-010	1				yes	109
	B12mw-011	1				yes	110
	B12mw-012	1				yes	111
C-Block Quarry	CBLmw-001	1				yes	38
	CBLmw-002	1				yes	39
	CBLmw-003	1				yes	40
	CBLmw-004	1				yes	41
Central Burn Pits	CBPmw-1	1				yes	112
	CBPmw-2	1				yes	113
	CBPmw-3	1				yes	114
	CBPmw-4	1				yes	115
	CBPmw-5			yes		no	
	CBPmw-6	1				yes	116
	CBPmw-7			yes		no	
	CBPmw-8	1				yes	117
Cobbs Pond	CPmw-1	1				yes	118
	CPmw-2	1				yes	119
	CPmw-3	1				yes	120
	CPmw-4	1				yes	121
	CPmw-5	1				yes	122
	CPmw-6	1				yes	123
Demo. Area 2	DET-1	22				no	
	DET-2	22				no	
	DET-3		yes			yes	
	DET-4		yes			yes	
	DA2mw-104	1				yes	42
	DA2mw-105	1				yes	43
	DA2mw-106	1				yes	44
	DA2mw-107			yes		no	
	DA2mw-108	1				yes	45
	DA2mw-109	1				yes	46
	DA2mw-110	1				yes	47
	DA2mw-111	1				yes	48
	DA2mw-112	1				yes	49
	DA2mw-113	1				yes	50
Erie Burning Grounds	EBGmw-123	1				yes	51
	EBGmw-124	1				yes	52
	EBGmw-125	1				yes	53
	EBGmw-126	1				yes	54
	EBGmw-127	1				yes	55
	EBGmw-128	1				yes	56
	EBGmw-129	1				yes	57
	EBGmw-130	1				yes	58
Fuze and Booster Quarry	FBQmw-166	1				yes	59
	FBQmw-167	1				yes	60
	FBQmw-168	1				yes	61
	FBQmw-169	1				yes	62
	FBQmw-170	1				yes	63
	FBQmw-171	1				yes	64
	FBQmw-172	1				yes	65
	FBQmw-173	1				yes	66

Table 4. Sampling Sequence

RTLS/RVAAP Area	Well ID	Number of previous non-FWGWMP sampling events	RCRA well?	Current FWGWMP well?	Included in LL-1 thru LL-4 LTM?	Additional sampling proposed?	Sampling Sequence
	FBQmw-174	1				yes	67
	FBQmw-175	1				yes	68
	FBQmw-176	1				yes	69
	FBQmw-177	1				yes	70
Landfill North of Winklepeck	LNWmw-024	1				yes	71
	LNWmw-025	1				yes	72
	LNWmw-026	1				yes	73
	LNWmw-027	1				yes	74
NACA Test Area	NTAmw-107	1				yes	75
	NTAmw-108	1				yes	76
	NTAmw-109	1				yes	77
	NTAmw-110	1				yes	78
	NTAmw-111	1				yes	79
	NTAmw-112	1				yes	80
	NTAmw-113	1				yes	81
	NTAmw-114	1				yes	82
	NTAmw-115	1				yes	83
	NTAmw-116	1				yes	84
Ramsdell Quarry Landfill	NTAmw-117	1				yes	85
	NTAmw-118	1				yes	86
	RQLmw-006	18				no	
	RQLmw-007		yes			yes	
	RQLmw-008		yes			yes	
	RQLmw-009		yes			yes	
	RQLmw-010	17				no	
	RQLmw-011	17				no	
	RQLmw-012	3				yes	87
	RQLmw-013	3				yes	88
Winklepeck Burning Grounds	RQLmw-014	3				yes	89
	RQLmw-015	3				yes	90
	RQLmw-016	3				yes	91
	RQLmw-017	3				yes	92
	WBGmw-005	2				yes	93
	WBGmw-006			yes		no	
	WBGmw-007			yes		no	
	WBGmw-008	2				yes	94
	WBGmw-009			yes		no	
	WBGmw-010	1				yes	95
Mustard Agent Burial Site	WBGmw-011	1				yes	96
	WBGmw-012	2				yes	97
	WBGmw-013	2				yes	98
	WBGmw-014	1				yes	99
	WBGmw-015	1				yes	100
	WBGmw-016	1				yes	101
	WBGmw-017	1				yes	102
	MBS-001	2				yes	103
	MBS-002	2				yes	104
	MBS-003	2				yes	105
	MBS-004	2				yes	106
	MBS-005	1				yes	107
	MBS-006	1				yes	108

Current FWGWMP wells are shown in red.  
RCRA wells are shown in blue.

## **COMMENT/RESPONSE TABLES**



State of Ohio Environmental Protection Agency

Northeast District Office

2110 East Aurora Rd.  
Twinsburg, Ohio 44087

TELE: (330) 963-1200 FAX: (330) 487-0769  
www.epa.state.oh.us

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director

March 6, 2008

RE: RAVENNA ARMY AMMUNITION PLANT,  
PORTAGE/TRUMBULL COUNTIES,  
DRAFT, FWGWMP, RESPONSE TO  
OHIO EPA COMMENTS, ANNUAL  
REPORT FOR 2007

Mr. Mark Patterson  
Installation Manager  
Ravenna Army Ammunition Plant  
8451 State Route 5  
Ravenna, OH 44266

**CERTIFIED MAIL**

Dear Mr. Patterson:

The Ohio Environmental Protection Agency (Ohio EPA) has received and reviewed the "Response to Ohio EPA Comments, Facility-Wide Ground Water Monitoring Program (FWGWMP) Draft Annual Report for 2007" document. The document was received at Ohio EPA, Northeast District Office (NEDO), Division of Emergency and Remedial Response (DERR), on February 8, 2008. The document was prepared for the U.S. Army Corps of Engineers (USACE) – Louisville District, by Environmental Quality Management, Inc. (EQM), under contract no. W912QR-04-D-0036. This document was reviewed by Ohio EPA personnel in NEDO's DERR, and NEDO's Division of Drinking and Ground Waters (DDAGW).

All Ohio EPA comments have been adequately addressed and the report is approved; however, please note the following:

- (1) EQM states that well maintenance activities are expected to be conducted in May - June and Ohio EPA will be advised. Please make sure Ohio EPA is advised when these activities will begin.
- (2) Although EQM provided a detailed explanation regarding the integrity of the background wells, this issue will require additional dialogue at a later time.
- (3) EQM has requested raising the RL for potassium from 200 ug/L to 1,000 ug/L, due to the high detected levels. That is acceptable to Ohio EPA.
- (4) The analytical data prior to the April 2007 sampling event has opposite inorganic and organic designations for the B and J qualifiers. EQM indicated that switching the historical data qualifiers is not scheduled. Does USACE have plans to switch the historical qualifiers?

Please coordinate with all other stakeholders to ensure that their comments have been incorporated into the final document. Please forward two copies of the replacement pages and titles.





MR. MARK PATTERSON  
RAVENNA ARMY AMMUNITION PLANT  
MARCH 6, 2008  
PAGE 2

If you have any questions, please call me at (330) 963-1207.

Sincerely,



Vicki Deppisch  
Project Coordinator  
Division of Emergency and Remedial Response

VD/kss

cc: Bonnie Buthker, Ohio EPA, DERR, SWDO  
Eileen Mohr, Ohio EPA, DERR, NEDO  
Katie Elgin, OHARNG RTLS  
Maj. Ed Meade, OHARNG RTLS  
Glen Beckham, USACE Louisville  
Rick Hockett, USACE Louisville  
Mark Krivansky, AEC  
John Miller, EQM  
Conni McCambridge, Ohio EPA, DERR, NEDO

ec: Mike Eberle, Ohio EPA, DERR, NEDO  
Todd Fisher, Ohio EPA, DERR, NEDO

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE  
NOVEMBER 16, 2007**

Page 1 of 5

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
<i>Army (R. Hockett/K. Krantz)</i>					
A-1	various	NA	A number of typos were detected in the document.	Please review and revise accordingly. Examples: Table of Contents, lines 14, 15, 19, 20 – improper capitalization.	Agree. Changes made.
A-2	4, 1 <sup>st</sup> paragraph	No Change	Tense switches from “are sampled” to “were sampled”	Revise for consistency.	Agree. Change made.
A-3	4, 8	No Change	“September, 200)”	Should be “September, 2004”	Agree. Change made.
A-4	4, various	No Change	“Facility-Wide” and “Facility- Wide” should be replaced with “Facility-wide”. That is, there should not be spaces on either side of the hyphen, and “Wide” should not be capitalized.	Revise throughout document.	Agree. Changes made, except if a reference is made to an earlier report that did not use this convention.
A-5	5, 32	No Change	“will be”	Replace with “were”	Agree. Change made.
A-6	7, 4	7,4	During this period, some metals methods were changed from 6010 to 6020. Detection limits were lowered. In the July 2006 event, only thallium was analyzed by method 6020; other metals were analyzed using 6010 (except mercury). Beginning in October 2006, antimony, iron, beryllium, zinc, cadmium, aluminum were added to the 6020, and deleted from the 6010 list.	Include a brief summary of analytical changes.	Agree. The text will be revised to indicate that the change to 6020 was implemented in order to achieve lower RLs.
A-7	9, 41	No Change	“collect”	Change to “collected”.	Per comment 23 the referenced paragraph deleted.
A-8	23	No Change	No line numbering	Add line numbering	Line numbers will be added
A-9	23, 2 <sup>nd</sup> para., last sentence	No Change	“member”	Change to “Member”, and check entire document to ensure formation names are capitalized.	Agree. Changes made.
A-10	30, 6	No Change	Line 6 should be a separate bulleted item in the list	Add bullet.	Agree. Change made.
A-11	30, 5	No Change	No period	Add period.	Agree. Change made.
A-12	31, 13	No Change	“MCL”	Change to “MCLs”.	Agree. Change made.
A-13	31, 20	No	Sentence appears to be incomplete.	Check and revise.	Sentence revised..

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE  
NOVEMBER 16, 2007**

Page 2 of 5

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
		Change			
A-14	50, 5	75	"September 22, 2007"	The draft that was submitted to Ohio EPA was dated October 22, 2007, and was submitted two days later. Suggest rewording to reference the report date (October 22, 2007).	Agree. Change made.
A-15	52, 11	77	"")	Remove extra closing parenthesis.	Agree. Format of reference revised to be consistent with others.
A-16	Appendix A	No Change	The target compounds are not what don't meet, it's the reporting limits	Revise throughout document to reference the RLs rather than target compounds.	Agree.
A-17	Plates 2 and 3	No Change	General comment: The equipotential lines that are presented do not adequately account for ground surface topography. Three examples: <ol style="list-style-type: none"> <li>1. Plate 3, the 1110 line at the south end of the Fuze &amp; Booster Hill area is located downhill of the 1100 line.</li> <li>2. Same area, same 1100 line as item 1: The ground surface elevation where the 1100 line crosses the drainage that exits LL8 to the west is approximately 10 ft above the ground surface. This suggests that the aquifer is artesian at this point, which is unlikely.</li> <li>3. Most equipotential lines that cross surface water drainages do not "V" upstream. In areas where the potentiometric surface is at or near the surface, the lines should follow the ground surface topography more closely.</li> </ol>	The ground water flow maps should be reviewed and presented in a more detailed manner that accounts for the impact of surface topography in greater detail.	Agreed. Plate 2 has been extensively revised per comments 17, 18 and 22.
A-18	Plate 2	No Change	The use of 50-ft contours makes the potentiometric surface depicted on Plate 2 very generalized and limits its usefulness. The use of 10-ft intermediate contours, along with the recommendation in	Revise appropriately.	Use of a 10-foot contour interval was evaluated and determined to be too speculative. There is just too much of RVAAP without data to support. A 25-foot intermediate contour interval has been used.

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE  
NOVEMBER 16, 2007**

Page 3 of 5

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
			Comment 17, will tremendously increase the usefulness of the map.		
A-19	Plate 3	No Change	The 1120 equipotential line is located outside of the area where the Homewood Member is present. Several wells inside the Homewood member area at Fuze & Booster Hill have static water levels greater than 1120 (these wells are located at FBQ).	Check all contouring for accuracy.	Agreed. Plate 3 has been extensively revised per comments 19, 20 and 21.
A-20	Plate 3	No Change	The 1130 equipotential line does not accurately depict the direction of ground water flow indicated by the C-Block Quarry wells. Flow direction in that area of the Homewood member appears to be southwesterly, instead of the southeasterly flow shown on Plate 3.	Suggest using a single 1136 equipotential, or an 1137 & 1135 couple in the CBL area, and showing flow to the southwest.	
A-21	Plate 3	No Change	The 970 equipotential line is missing in the Sharon Conglomerate area.	Add the line.	Agreed. 970 contour line has been added.
A-22	Plate 2	No Change	<p>Part of the rationale for mapping bedrock units separately from unconsolidated deposits is to emphasize that in those areas, the bedrock is generally the uppermost aquifer. The mapping of flow in the unconsolidated deposits depicted on Plate 2 does not exclude the Homewood Member area, or portions of the Sharon Conglomerate area where the unconsolidated deposits are relatively thin and do not serve as a significant water-bearing unit.</p> <p>As presented in Plate 2, one could interpret flow to be continuous in a west to east direction through unconsolidated deposits in the LL-1, LL-3, and LL-3 area, which is not accurate.</p>	Suggest that the mapping presented in Plate 2 be revised to more closely resemble the area shown in Figure 18 of the "Draft Proposal to Update the Facility-wide Ground Water Monitoring Program", including a line depicting the limits of mapping..	<p>Agreed. Plate 2 has been revised.</p> <p>However, based on your classification of wells by water-bearing zone, both unconsolidated and bedrock wells are present at sites Load Line 12, Fuze and Booster Hill, Load Line 5, Load Line 6, and Load Line 10. These sites are within the areas of Homewood and Sharon depicted on Figure 18 of the "Draft Proposal to Update the Facility-wide Ground Water Monitoring Program". Thus, at these sites there may be two over-laying water bearing zones.</p> <p>Plate 2 includes demarcations of locations where EQ interprets that the unconsolidated aquifer is missing based on water-level data. These areas do not directly correspond to the demarcation in Figure 18.</p>
A-23		No	Given the extensive revisions to Plates 2	Suggest that 2- or 5-ft intermediate contours	The text on page 9 has been revised to

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE  
NOVEMBER 16, 2007**

Page 4 of 5

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
		Change	and 3 that Comments 17 through 22 will generate, the paragraph on page 9 that is referenced in Comment 7 above can be deleted, as the ground water flow mapping will become much more detailed and there will be no need to generate separate AOC flow maps. The intent of the recommendations in the "Draft Proposal to Update the Facility-wide Ground Water Monitoring Program" was to produce more accurate and detailed flow maps that will add to the general comprehension of ground water flow conditions at RVAAP. While reviewing the flow maps with regard to comments 17 through 22, please keep in mind that producing a document that lends itself to developing a clear understanding of ground water flow will significantly improve our effort to close ground water related issues at RVAAP.	be added to the Fuze and Booster Hill and Sharon Conglomerate area on Plate 3.	reflect the changes made to Plates 2 and 3.  The water-level data were re-evaluated and EQ determined that there is not a sufficient range of water levels at these sites to support interpretation and construction of 2-foot or 5-foot contour intervals.  Inspection of the October 2007 water-level data, by site (e.g., Load Line 1, Ramsdell Quarry, Fuze and Booster Hill, Load Line 12, etc.), indicates that there was very little variability among the site wells. In most cases the range was only one or two feet. The locations of wells with higher water-levels, however, do fit the configurations presented on Plates 2 and 3.
A-24	Section 1.6, last paragraph	No Change	Needs editing to depict the following: Several analytical methods used for VOCs, SVOCs, pesticides, PCBs and explosives analyses result in reporting limits that can not meet Region 9 PRGs for some analytes. Additionally, three explosive analytes did not meet the RL requirements of the project QAPP. Tables listing these compounds are presented in Appendix A.	Revise appropriately.	Agree. Changes made.
<b>Ohio EPA (Insert commenter name)</b>					
O-1					?
O-2					
O-3					
O-4					
O-5					
O-6					
O-7					

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE  
NOVEMBER 16, 2007**

Page 5 of 5

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
O-8					
<i>RTLS-Environmental (Insert commenter name)</i>					
R-1					
R-2					
R-3					

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007 DRAFT  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE**

Page 1 of 8

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
<i>Army</i>					
<i>Ohio EPA (V. Deppisch)</i>					
O-1	Section 3.0		Section 3.0 provides a summary of 2007 FWGWMP events. However, this section does not contain a discussion concerning the issue of sampling coolers being received at temperatures greater than $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (April and July 2007 FWGWMP Reports).	Sample preservation temperature seems to be a reoccurring issue and should be addressed in the Annual 2007 Report. Please provide a brief discussion as to how this issue will be addressed during the 2008 sampling season.	The following text will be added to Section 3.4: <i>As discussed in the April and July groundwater reports elevated sample receipt temperatures were an issue for two coolers received by the laboratory in 2007 (one from the April event and one from the July event). In order to ensure that this situation does not re-occur, EQM has instituted the policy that temperature blanks accompany the samples at all times prior to shipment. Additionally, a secondary check will be performed prior to cooler shipment to ensure that sufficient ice has been placed in each cooler. Further, the laboratory (TestAmerica) has been notified that any temperature exceedances must immediately be reported to EQM so that an evaluation can be made as to the need for re-sampling. It should be noted that while every attempt is made to meet the temperature requirement, exceptions may have to be made for this requirement when samples are collected and then submitted to the laboratory within a relatively short time period of sample collection as detailed in Section 5.4.3 of the FWSAP. Should this situation occur in the future, the Ohio EPA will be notified immediately upon discovery of the situation.</i>
O-2	Section 3.2,		Section 3.2 indicates that "four wells..."	Please revise Table 3-2 to include a	Table 3-2 will be revised to show the

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007 DRAFT  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE**

Page 2 of 8

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
	Table 3-2, Page 25, and Appendix C - Well Inspection Sheets		have reported an accumulation of sediment from 0.50 to 1 foot over the past year. However, Table 3-2 does not provide the total sediment accumulation amount for each well. Thus, it is unclear to which wells Section 3.2 is referring.	column detailing the total sediment accumulation amount for each well. Please include the four well locations referred to in Section 3.2.	calculated sediment accumulation for each well.
O-3	Section 3.3, Table 3-4, Pages 25 - 27		<p>a) Section 3.3 indicates that well inspections were conducted on all FWGWMP monitoring wells in October 2007. Maintenance issues were noted in Table 3-4. It is unclear when these maintenance issues would be resolved in 2008.</p> <p>b) It was previously noted that CBPmw-007 had a total sediment accumulation of 1.02 feet (see July 2007 FWGWMP report). The facility's response to this issue indicated that this well would be "...redeveloped during the annual maintenance activities conducted in 2008" (Facility's November 30, 2007 Response to Ohio EPA Comments). However, well CBPmw-007, along with this recommendation, is not listed in the Well Inspection Summary Table (Table 3-4).</p>	<p>a) Please provide a brief discussion concerning the time line connected with the resolution of the maintenance issues concerning the FWGWMP wells.</p> <p>b) Please include well CBPmw-007, along with any other well(s) that report a total sediment accumulation of greater than 10% of the screen length, and the redevelopment recommendation in Table 3-4.</p>	<p>a) The USACE has not currently funded this work. Funding is expected prior to the 2<sup>nd</sup> quarter 2008. EQM anticipates that the maintenance activities will be conducted in the May-June timeframe. We will provide the Ohio EPA notification once an exact date is determined.</p> <p>b) CBPmw-007 has been removed from the active list of wells to be sampled during 2008. The sediment accumulation in this well is noted and since it may not be sampled again for several years, it is recommended that redevelopment of this well be delayed until the next time CBPmw-007 is sampled.</p>
O-4	Section 4.2, Table 4-1, Page 32		Several chemicals of potential concern (COPCs) and common pesticides were detected in background wells during the 2006-2007 quarterly sampling events. While Table 4-1 listed many of these results as "J" (estimated) valued, there is a concern that all background wells may	The data indicate that many of the background wells have been impacted by historical operations and, thus, are not capable of providing a representative "background" sample unaffected by the facility.	The following text will be added to Section 5.2: <i>The specific issues related to the background wells at RVAAP include the presence of explosives and the exceedance of health/aesthetic criteria (MCLs). An additional question is related to the presence of naturally</i>



**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007 DRAFT  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE**

Page 3 of 8

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
			<p>have been impacted by the facility to some degree over time.</p> <p>The issue of detected concentrations of explosive compounds, inorganics, and pesticides in the background wells continues to question the integrity of these wells as background. This issue has been noted by Ohio EPA on many occasions and continues to be unresolved.</p>	<p>Ohio EPA has previously requested that the background wells issue be addressed in the 2007 Annual Report. However, no such discussion could be found in the 2007 Annual Report. Please provide a discussion on how this issue will be resolved.</p>	<p><i>occurring elements (e.g., aluminum, copper, nickel, etc) previously establish to have a "0" background concentration in background wells. Prior to addressing the concern that background needs to be re-evaluated, it is necessary to point out that the background data are not conclusive that explosives are present. While a few explosive compounds have been reported in samples at estimated ("J") concentrations, these reports are isolated and not recurrent. Background wells can be used to address one or both of the following: 1) define regional water-quality conditions without the effects of human activities and 2) define the quality of groundwater flowing into an area of interest (e.g., AOC) from a neighboring site that may show effects of outside actions (i.e., groundwater contaminated from other sources). The Army recognizes that there are issues associated with background water-quality data and suggests that background data require re-evaluation. This re-evaluation should include the actual quality of water in the wells and the location of the wells with respect to objective. The Army considers the FWGWMP to be a fluid program allowing for re-evaluation and re-definition. The Army has initiated this re-evaluation with the presentation in October 2007 of the Draft Proposal to Update the Facility-Wide Ground Water Monitoring Program. The</i></p>

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007 DRAFT  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE**

Page 4 of 8

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
					<p><i>major premise of this document is that previous interpretations of the groundwater regime at RVAAP are not completely accurate. If the Ohio EPA agrees with this conclusion and the subsequent reinterpretation of groundwater flow systems, the locations and objectives of background wells can be re-considered.</i></p> <p><i>Inspection of the locations of background wells in relationship to the newly interpreted groundwater flow regime (as described in the Annual Report) suggests that only wells BKGmw 005, BKGmw-006, and BKGmw-018 may be located to establish unaffected regional water-quality conditions. All other background wells may be located hydraulically down gradient from activities and practices at RVAAP that may result in measurable affects.</i></p>
O-5	Section 4.0, Page 74, Table 4-1		Arsenic results from Load Lines 2, 4, 11, 12, Central Burn Pits, Ramsdell Quarry Landfill, and Winklepeck Burning Grounds repeatedly exceeded its MCL (10 ug/L) during 2006-2007 sampling. The highest reported result for this pesticide was 53.3 ug/L in Ramsdell Quarry Landfill. It is unclear what course of action will be implemented to address this issue.	Please provide a discussion to address this issue.	As noted in Table 4-3 there are a number of compounds/elements that exceed the associated MCLs and/or Region 9 PRGs. The purpose of the FWGWMP is to ascertain the water quality and determine if hazardous constituents from past activities are causing current or future risk via groundwater use on-site or via groundwater migration to off-site receptors. Once all of the facility-wide data has been collected and evaluated, decisions will be made to implement cost-effective remedial actions as necessary.
O-6	Appendix C		Appendix C well logs indicate that	Please provide a discussion concerning	Any wells with a greater than 10%

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007 DRAFT  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE**

Page 5 of 8

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
			several wells (i.e., CBLmw-001 and CBPmw-001) may have a thickness of sediment accumulation of greater than 10% of their screen lengths (10 feet). This could be indicative of excessive silting in the well (FWGWMPP, Section 4.1, pg. 4-1).	how excessive silting will be addressed in these wells during the 2008 sampling season.	sediment accumulation that are being sampled during 2008 will be redeveloped during 2008 groundwater monitoring timeframe. Additionally, several wells that were sampled in January 2008 exhibited high turbidity. These wells will also be redeveloped. This list of wells to be redeveloped is as follows: LL3mw-233, LL3mw-241 LL4mw-194, LL12mw-113, and LL12mw-244. Finally, any wells, such as CBLmw-001 and CBP-001, identified as having a greater than 10% sediment accumulation during the annual facility-wide groundwater level measurement event will be redeveloped prior to future (i.e. 2009 and beyond) sampling.
O-7	General		Bis(2-ethylhexyl)Phthalate continues to be detected in various concentrations.	Please verify that this is not a laboratory contaminant and add this to the report in Section 4.2.2.2 and other appropriate areas.	The following text will be added to Section 4.2.2.2: <i>There has been no bis(2-ethylhexyl)phthalate found in the laboratory blanks and/or field blanks/rinse samples associated with the detected concentrations of bis(2-ethylhexyl)phthalate in the unconsolidated background wells.</i>
O-8	General - April 2007 sampling event report and CRTs		The final approval letter from Ohio EPA for the April 2007 Sampling Event noted that a discussion regarding not meeting the potassium RL would be discussed in the annual report. Ohio EPA could not locate this discussion. Has the lab met the potassium RL?	Please verify if the potassium RL has been met. If not, please include a discussion in the annual report and add to Appendix A Table.	The following text will be added to Section 4.1 of the Annual Report: <i>Since potassium is a naturally occurring inorganic element in environmental samples, and has consistently been above the specified reporting limit (RL) of 200 µg/L in historical samples at RVAAP, it is apparent that the need for this degree of sensitivity for potassium is not necessary. It is suggested that the RL for potassium be raised to 1,000 µg/L.</i>

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007 DRAFT  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE**

Page 6 of 8

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
					<i>Pending approval of this change by the Ohio EPA, potassium has been added to the list of RLs that currently do not meet RVAAP QAAAP PQLs in Appendix A of the 2007 Annual Report.</i>
0-9	General		Ohio EPA could not locate a table identifying all current RLs.	Please include tables for all current RLs (PQLs for water), including VOCs, SVOCs, pesticides, PCBs, PAHs, explosives, metals, etc. Please include the corresponding analysis method. Please review, revise, and include with each annual report. Please advise Ohio EPA of any changes of the RLs with the corresponding sampling event report.	Tables 3-3 through 3-9 from the QAPP (March 2001) have been added to Appendix A of the 2007 Annual report showing the current practical quantitation limits for all constituents.
0-10	General - Final approval letter from Ohio EPA for April 2007 sampling event		The April 2007 sampling report data and qualifier B: The lab used the B designation for inorganics as an estimated value and a J designation for blank contamination. The EQM response indicated during the data validation process by EQM, the B qualifier, as an estimate value for inorganics, was changed to a J. This designation overrode the Contract Laboratory Program (CLP) B designation when used by the lab as an estimated value for inorganics. Ohio EPA agreed that opposite inorganic and organic designations of B and J were confusing; however, all data prior to April 2007 have opposite designations. Considering the volume of data that will be generated under the FWGWMP, this will be confusing when reviewing old and new data.	Please specify if there are plans to change and unify the B and J designations for all data prior to April 2007 for the B and J designations. And, if so, please specify the timeline.	As part of the preparation for the annual report (2007) the last eight quarters of data (going back to October 2005) were verified to be consistent in the use of J as estimated and B as blank contamination qualifiers. The data prior to October 2005 have not as yet been checked. At this time additional review of the historical data as it relates to qualifiers is not scheduled.
0-11	General		EQM noted that during past sampling	Please continue to monitor this situation	The following language will be added to

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007 DRAFT  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE**

Page 7 of 8

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
			events some of the monitoring wells were dry and that many of the water levels in other wells had dropped.	and include a summary paragraph in the 2007 annual report, all future annual reports, and each quarterly report regarding this issue.	<p>the 2007 Annual Report:  <i>During the July and October monitoring events EQM determined that groundwater levels in some wells had declined significantly from April levels. EQM initiated an evaluation of conditions, which may have caused this decline. Through reviewing data available from the USDA and NOAA it was determined that starting about June 1, the RVAAP area was experiencing abnormally dry weather conditions. This condition lasted until about August 10. Ohio EPA's Technical Guidance for Ground Water Investigations – Chapter 3 (Characterization of Site Hydrogeology) (October 2006) indicates that the fluctuation of groundwater levels are affected by groundwater recharge (i.e., infiltration to the water table) and evapotranspiration and phreatophytic consumption (i.e., utilization of groundwater by plants to sustain growth and health). During an abnormal dry period it can be expected that the amount of recharge to groundwater will be less than "normal" and that the amount of plant use will be above "normal" resulting in abnormal (i.e., lower than "normal") groundwater levels. For the purpose of comparison, the changes in groundwater elevation in sampled wells were determined for the Spring to Summer sampling events for 2006 and 2007. In 2006, groundwater</i></p>

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM  
ANNUAL REPORT FOR 2007 DRAFT  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE**

Page 8 of 8

Comment Number	Page or Sheet	New Page or Sheet	Comment	Recommendation	Response
					<p>levels in wells increased by an average of 0.79 feet (actual range was up to 2.4 feet). USDA and NOAA records indicate that the RVAAP area was not experiencing abnormally dry conditions during that time.</p> <p>In 2007, groundwater levels in wells declined an average of 2.94 feet (actual range was up to 8 feet). As previously indicated USDA and NOAA record indicate that the RVAAP area was experiencing abnormally dry conditions during this time. Thus, EQM concluded that the low water levels measured in wells in July and October 2007 were climatically controlled.</p> <p>(Note that water levels for the January monitoring event were up just under 2-ft. on average).</p>
0-12	Section 5, annual recommendations		Re: protocol for adding and removing wells from the FWGWPM	This issue has been resolved with the USACE. Beginning with the January 2008 sampling event, previously sampled wells (excluding the RCRA wells) with 8-10 sampling events (including the background wells) will be moved out and wells with less than 4 quarters of sampling will be moved in. Ohio EPA agreed with the USACE proposed well sampling sequence as presented in Appendix G of the annual report. The new wells will be sampled for 4 consecutive quarters.	Noted.
<b>RTLS-Environmental )</b>					
R-1					
R-2					