USACHPPM

U.S. Army Center for Health Promotion and Preventive Medicine

HAZARDOUS AND MEDICAL WASTE
STUDY NO. 37-EF-5360-97
RELATIVE RISK SITE EVALUATION
RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO
28 OCTOBER - 1 NOVEMBER 1996

VOLUME II

Readiness Thru Health

U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE

The U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) lineage can be traced back over a half century to the Army Industrial Hygiene Laboratory which was established at the beginning of World War II under the direct jurisdiction of The Army Surgeon General. It was originally located at the Johns Hopkins School of Hygiene and Public Health with a staff of three and an annual budget not to exceed three thousand dollars. Its mission was to conduct occupational health surveys of Army-operated industrial plants, arsenals, and depots. These surveys were aimed at identifying and eliminating occupational health hazards within the Department of Defense's (DOD) industrial production base and proved to be extremely beneficial to the Nation's war effort.

Most recently, the organization has been nationally and internationally known as the U.S. Army Environmental Hygiene Agency (AEHA) and is located on the Edgewood area of Aberdeen Proving Ground, Maryland. Its mission had been expanded to support the worldwide preventive medicine programs of the Army, DOD and other Federal agencies through consultations, supportive services, investigations and training.

On 1 August 1994, the organization was officially redesignated the U.S. Army Center for Health Promotion and Preventive Medicine and is affectionately referred to as the CHPPM. As always, our mission focus is centered upon the Army Imperatives to that we are optimizing soldier effectiveness by minimizing health risk. The CHPPM's mission is to provide worldwide scientific expertise and services in the areas of:

- Clinical and field preventive medicine
- Environmental and occupational health
- Health promotion and wellness
- Epidemiology and disease surveillance
- Related laboratory services

The Center's quest has always been one of customer satisfaction, technical excellence and continuous quality improvement. Our vision is to be a world-class center of excellence for enhancing military readiness by integrating health promotion and preventive medicine into America's Army. To achieve that end, CHPPM holds everfast to its core values which are steeped in our rich heritage:

- Integrity is our foundation
- Excellence is our standard
- Customer satisfaction is our focus
- Our people are our most valuable resource
- Continuous quality improvement is our pathway

Once again, the organization stands on the threshold of even greater challenges and responsibilities. The CHPPM structure has been reengineered to include General Officer leadership in order to support the Army of the future. The professional disciplines represented at the Center have been expanded to include a wide array of medical, scientific, engineering, and administrative support personnel.

As the CHPPM moves into the next century, we are an organization fiercely proud of our history, yet equally excited about the future. The Center is destined to continue its development as a world-class organization with expanded preventive health care services provided to the Army, DOD, other Federal agencies, the Nation, and the world community.

metals
customer
lism

08 JAN 1997

ANALYSIS REPORT
A970108-3

U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE
BUILDING E2100
ABERDEEN PROVING GROUND, MARYLAND 21010

ANALYTICAL SPECTROMETRY DIVISION

Installation: **RAVENNA**

Project Number: 37-23-5360

Job Number: 6A6206

Number of Samples: 35

Matrix: WATER / SOIL

Analyzed for: METALS

Method(s): EPA SW846

LAB NUMBER(S): E1416-E1451

QC Coordinator: Jennifer Seegar Date: 8 Jan 97

Senior Chemist: David A Rieke Date: 8 Jan 97

Metals Team leader: Lillian Y. Byrd Date: 8 Jan 97

Release Authorized by: Division Chief Date: 8 Jan 97

CASE NARRATIVE REPORT

Installation: Ravenna

Project Number: 6A5975, 6A6206; 37-EF-5360

Project Officer: J. Sheehy

Case Narrative:

- Thirty six samples (4 water and 32 soil/sludge samples for Job 6A5975) were received on 31Oct 96. Thirty five samples (5 water and 30 soil/sludge samples for Job 6A6206) were received on 4 Nov 96.
- The soil samples were prepped by EPA 3052, the water samples by EPA 3015.
- Arsenic, chromium, mercury, and selenium in the prepped soil samples were measured by EPA Methods 7060, 7191, 7471A, and 7740 respectively. For the soils in Job 6A5975, cadmium was determined by EPA 7131A; it was measured by EPA 6010A for the soils in Job 6A6206. Determinations for barium, zinc, copper, lead and antimony in the prepped soil samples were done by EPA 6010A.
- Arsenic, antimony, lead, and selenium in the prepped water samples were measured by EPA Methods 7060, 7041, 7421, and 7740 respectively; barium, zinc, copper, chromium, and cadmium were done by EPA 6010A.
- Mercury determinations in the water samples were performed by EPA 7470A, but when the tests were done the holding time had been exceeded.
- The first copper result in sample RVAP-332 is being reported. As discussed between Chuck Stoner and Jim Sheehy, four additional portions of the sample were analyzed. These results indicated that copper was present at percentage levels and was not distributed evenly throughout the sample.
- All QC data were within acceptable limits except for the following:
- The laboratory control samples (LCSs) for antimony were high (outside the acceptable range of +/- 30 % recovery).
- Two LCSs for chromium and one for barium were low (outside the +/- 30% recovery range).
- Two pre-digestion spikes for selenium were low and one was high. Also, one pre-digestion spike for mercury was low.
- The sample results for antimony, barium, chromium, selenium, and mercury are not adversely affected by the above statements because all other QC data for these analytes are acceptable.
- The reporting units for all metals in the water samples, except for mercury, are mg/L; the units for mercury are ug/L. The reporting units for the metals in the soil samples are mg/Kg calculated on a dry weight basis.

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences (DLS)
5158 Blackhawk Road
Aberdeen Proving Ground, Maryland 21010-5422
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Analytical Spectrometry Division
Analytical Results - Final Report

CLIENT: JAMES SHEEHY
HMWP
BLDG E1677
APG-EA, MD 21010-5422

Client Phone: 5-3651

Project Site: RAVENNA AAP
Project #: 37-23-5360
DLS Job #: 6A6206

REPORT RELEASE AUTHORIZATION:

Signature: _____ 8 Jan 97
Dr. Charles Stoner Date
Chief, Analytical Spectrometry Division

Sample Section

Field ID	Sample	Collected	Matrix
RVAP-263W	E1416	31-Oct-96	NW
RVAP-031W	E1417	31-Oct-96	NW
RVAP-032W	E1418	31-Oct-96	NW
RVAP-033W	E1419	01-Nov-96	NW
RVAP-WW	E1420	01-Nov-96	DW
RVAP-261A	E1422	30-Oct-96	SO
RVAP-261B	E1423	30-Oct-96	SO
RVAP-262A	E1424	30-Oct-96	SO
RVAP-262B	E1425	30-Oct-96	SO
RVAP-263A	E1426	31-Oct-96	SO
RVAP-263B	E1427	31-Oct-96	SO
RVAP-264A	E1428	31-Oct-96	SO
RVAP-264B	E1429	31-Oct-96	SO
RVAP-031B	E1430	31-Oct-96	SS
RVAP-032B	E1431	31-Oct-96	SS
RVAP-251	E1432	31-Oct-96	SO
RVAP-252	E1433	31-Oct-96	SO
RVAP-351A	E1434	31-Oct-96	SO
RVAP-351B	E1435	31-Oct-96	SO
RVAP-181	E1436	01-Nov-96	SO
RVAP-341	E1437	01-Nov-96	SO
RVAP-342	E1438	01-Nov-96	SO
RVAP-343	E1439	01-Nov-96	SO
RVAP-34B	E1440	01-Nov-96	SO
RVAP-331	E1441	01-Nov-96	SO
RVAP-332	E1442	01-Nov-96	SO
RVAP-333	E1443	01-Nov-96	SO
RVAP-334	E1444	01-Nov-96	SO
RVAP-335	E1445	01-Nov-96	SO
RVAP-336	E1446	01-Nov-96	SO
RVAP-337	E1447	01-Nov-96	SO
RVAP-338	E1448	01-Nov-96	SO
RVAP-33B	E1449	01-Nov-96	SS
RVAP-231A	E1450	01-Nov-96	SO
RVAP-231B	E1451	01-Nov-96	SO

** Analytical Results - Final Customer Report **

DLS Job# : 6A6206
Reviewing Laboratory : MET - ASD Metals Team
Analytical Laboratory: MET - ASD Metals Team
Date Released : 08-JAN-97
Generated by : jsseeger

DLS Sample # .....: E1416 Date Sampled: 31-Oct-96 10:05
Field ID # .....: RVAP-263W Date Received: 04-Nov-96 09:15
Sample Description: Water, natural ground

Procedure: 687 - Prep, Microwave
Method : EPA 3015 Analyst: RAS Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	100	mL	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	0.014	mg/L	

Procedure: 724 - Antimony (Sb)
Method : EPA 7041 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<0.004	mg/L	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	0.593	mg/L	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.022	mg/L	

Procedure: 732 - Chromium (Cr)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	0.042	mg/L	

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	0.102	mg/L	

Procedure: 739 - Lead (Pb)
Method : EPA 7421 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	0.178	mg/L	

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Mercury	0.31	ug/L	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<0.004	mg/L	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	0.289	mg/L	

DLS Sample # .....: E1417 Date Sampled: 31-Oct-96 14:05
Field ID # .....: RVAP-031W Date Received: 04-Nov-96 09:15
Sample Description: Water, natural ground

Procedure: 687 - Prep, Microwave
Method : EPA 3015 Analyst: RAS Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	100	mL	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	<0.004	mg/L	

** Analytical Results - Final Customer Report **

Procedure: 724 - Antimony (Sb)
Method : EPA 7041 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<0.004	mg/L	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	0.029	mg/L	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.022	mg/L	

Procedure: 732 - Chromium (Cr)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	<0.022	mg/L	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	0.029	mg/L	

Procedure: 739 - Lead (Pb)
Method : EPA 7421 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	0.011	mg/L	

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.20	ug/L	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<0.004	mg/L	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	<0.044	mg/L	

)LS Sample # .....: E1418 Date Sampled: 31-Oct-96 14:40
?ield ID # .....: RVAP-032W Date Received: 04-Nov-96 09:15
Sample Description: Water, natural ground

Procedure: 687 - Prep, Microwave
Method : EPA 3015 Analyst: RAS Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	100	mL	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	0.004	mg/L	

Procedure: 724 - Antimony (Sb)
Method : EPA 7041 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<0.004	mg/L	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	0.027	mg/L	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.022	mg/L	

** Analytical Results - Final Customer Report **

Procedure: 732 - Chromium (Cr)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	<0.022	mg/L	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	0.029	mg/L	

Procedure: 739 - Lead (Pb)
Method : EPA 7421 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	0.016	mg/L	

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.20	ug/L	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<0.004	mg/L	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	<0.044	mg/L	

DLS Sample # .....: E1419 Date Sampled: 01-Nov-96 10:15
Field ID # .....: RVAP-033W Date Received: 04-Nov-96 09:15
Sample Description: Water, natural ground

Procedure: 687 - Prep, Microwave
Method : EPA 3015 Analyst: RAS Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	100	mL	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	<0.004	mg/L	

Procedure: 724 - Antimony (Sb)
Method : EPA 7041 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<0.004	mg/L	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	0.024	mg/L	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.022	mg/L	

Procedure: 732 - Chromium (Cr)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	<0.022	mg/L	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	0.033	mg/L	

Procedure: 739 - Lead (Pb)
Method : EPA 7421 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	0.020	mg/L	

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.20	ug/L	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<0.004	mg/L	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	<0.044	mg/L	

DLS Sample # .....: E1420 Date Sampled: 01-Nov-96 16:00
Field ID # .....: RVAP-WW Date Received: 04-Nov-96 09:15
Sample Description: Water, domestic waste (sewage

Procedure: 687 - Prep, Microwave
Method : EPA 3015 Analyst: RAS Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	100	mL	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	<0.004	mg/L	

Procedure: 724 - Antimony (Sb)
Method : EPA 7041 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<0.004	mg/L	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	0.027	mg/L	

** Analytical Results - Final Customer Report **

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.022	mg/L	

Procedure: 732 - Chromium (Cr)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	<0.022	mg/L	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	0.029	mg/L	

Procedure: 739 - Lead (Pb)
Method : EPA 7421 Analyst: MAM Date Analyzed: 02-JAN-96

Analyte	Concentration	Units	Qualifier
Lead	0.016	mg/L	

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Mercury	0.29	ug/L	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<0.004	mg/L	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	0.084	mg/L	

DLS Sample # .....: E1422 Date Sampled: 30-Oct-96 10:15
Field ID # .....: RVAP-261A Date Received: 04-Nov-96 09:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.54 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	75.5	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	10.4	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<49.1	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	74.2	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.45	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	19.7	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	20.1	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	145	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	1.21	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.23	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	153	mg/Kg	

DLS Sample # .....: E1423 Date Sampled: 30-Oct-96 14:00
Field ID # .....: RVAP-261B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.53 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	85.7	%	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	11.0	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<44.0	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	39.3	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.20	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	15.4	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	14.5	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	27.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.12	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.10	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	63.6	mg/Kg	

DLS Sample # .....: E1424 Date Sampled: 30-Oct-96 15:35
Field ID # .....: RVAP-262A Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.52 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	73.2	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	11.2	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<52.5	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	46.1	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.63	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	13.3	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	14.7	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<26.3	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.13	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.31	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	72.8	mg/Kg	

LS Sample # .....: E1425 Date Sampled: 30-Oct-96 16:10
ield ID # .....: RVAP-262B Date Received: 04-Nov-96 09:15
ample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.54 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	87.3	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	9.38	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<42.4	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	36.0	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.12	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	17.9	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	11.9	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<21.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.09	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.06	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	57.3	mg/Kg	

DLS Sample # .....: E1426 Date Sampled: 31-Oct-96 09:00
Field ID # .....: RVAP-263A Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.54 g	

** Analytical Results - Final Customer Report **

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	70.5	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	6.70	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<52.5	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	147	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	2.89	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	21.1	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	26.0	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	214	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	1.51	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.31	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	261	mg/Kg	

DLS Sample # .....: E1427 Date Sampled: 31-Oct-96 09:20
Field ID # .....: RVAP-263B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	85.9	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	14.5	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<46.6	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	32.2	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.33	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	15.9	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	13.3	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<23.3	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.16	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	63.8	mg/Kg	

DLS Sample # .....: E1428 Date Sampled: 31-Oct-96 13:00
Field ID # .....: RVAP-264A Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.54 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	88.3	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	17.2	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	41.9	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	27.8	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.10	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	6.97	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	5.98	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<21.0	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.10	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.05	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	135	mg/Kg	

DLS Sample # .....: E1429 Date Sampled: 31-Oct-96 13:00
Field ID # .....: RVAP-264B Date Received: 04-Nov-96 09:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.53 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	86.1	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	20.2	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<43.8	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	55.3	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.19	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	20.3	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	17.9	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<21.9	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.10	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.10	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	62.3	mg/Kg	

DLS Sample # .....: E1430 Date Sampled: 31-Oct-96 14:05
Field ID # .....: RVAP-031B Date Received: 04-Nov-96 09:15
Sample Description: Sludges (Sediments)

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.55 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	47.9	%	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	3.99	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<75.9	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	35.7	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<3.80	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	3.61	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	5.31	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<38.0	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.21	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.90	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	38.3	mg/Kg	

DLS Sample # .....: E1431 Date Sampled: 31-Oct-96 14:40
Field ID # .....: RVAP-032B Date Received: 04-Nov-96 09:15
Sample Description: Sludges (Sediments)

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.53 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	43.1	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	9.94	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<87.6	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	113	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<4.38	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	18.6	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	32.8	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<43.8	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.20	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<2.19	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	217	mg/Kg	

LS Sample # .....: E1432 Date Sampled: 31-Oct-96 15:45
ield ID # .....: RVAP-251 Date Received: 04-Nov-96 09:15
ample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.51 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	79.2	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	16.9	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<49.5	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	98.2	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.48	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	37.1	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	7.18	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<24.8	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.13	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.24	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	57.4	mg/Kg	

DLS Sample # .....: E1433 Date Sampled: 31-Oct-96 16:15
Field ID # .....: RVAP-252 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

** Analytical Results - Final Customer Report **

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	81.1	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	10.2	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<49.3	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	107	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.47	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	34.4	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	7.77	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<24.7	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.12	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.23	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	56.8	mg/Kg	

DLS Sample # .....: E1434 Date Sampled: 31-Oct-96 17:00
Field ID # .....: RVAP-351A Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	82.6	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	16.4	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<48.4	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	61.1	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.42	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	18.5	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	14.4	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<24.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.12	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	27.5	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	15.4	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	28.8	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.16	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.54	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	59.5	mg/Kg	

S Sample # .....: E1389 Date Sampled: 28-Oct-96 17:25
eld ID # .....: RVAP-063 Date Received: 31-Oct-96 10:15
mple Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.55 g	

** Analytical Results - Final Customer Report **

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	22.1	mg/Kg	

DLS Sample # .....: E1388 Date Sampled: 28-Oct-96 17:20
Field ID # .....: RVAP-062 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.52 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	62.6	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	12.3	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<57.1	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	79.6	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.77	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	32.8	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.64	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	394	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	11.7	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	26.8	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.12	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.28	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.14	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.44	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	156	mg/Kg	

DLS Sample # .....: E1387 Date Sampled: 28-Oct-96 17:20
Field ID # .....: RVAP-061 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.51 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	76.3	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	4.70	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<46.8	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	5.18	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<52.4	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	97.3	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.72	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	14.4	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	138	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<26.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	<2.45	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<24.5	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.12	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	1.89	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	7.48	mg/Kg	

DLS Sample # .....: E1386 Date Sampled: 28-Oct-96 11:00
Field ID # .....: RVAP-281 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.51 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	68.1	%	

** Analytical Results - Final Customer Report **

Procedure: 1113. - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.52 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	81.6	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	3.21	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<49.0	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	243	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.59	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	13.1	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.64	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	38.5	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	6.72	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<24.0	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.10	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.27	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	60.7	mg/Kg	

DLS Sample # .....: E1385 Date Sampled: 28-Oct-96 16:35
Field ID # .....: RVAP-242 Date Received: 31-Oct-96 10:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.30	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	44.2	mg/Kg	

DLS Sample # .....: E1384 Date Sampled: 28-Oct-96 16:40
Field ID # .....: RVAP-241 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	78.6	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	11.7	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<48.0	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	126	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<54.9	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	67.6	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.65	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	20.3	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	4.95	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<27.5	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.14	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<25.4	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.10	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.27	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	53.0	mg/Kg	

LS Sample # .....: E1383 Date Sampled: 28-Oct-96 13:00
ield ID # .....: RVAP-38B Date Received: 31-Oct-96 10:15
ample Description: Sludges (Sediments)

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.55 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	70.0	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	3.90	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	78.7	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	10.5	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<50.8	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	105	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.64	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	34.6	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	9.15	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	36.8	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	7.88	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<23.9	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.10	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.22	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	30.7	mg/Kg	

S Sample # .....: E1382 Date Sampled: 28-Oct-96 14:10
eld ID # .....: RVAP-386 Date Received: 31-Oct-96 10:15
mple Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

** Analytical Results - Final Customer Report **

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	50.4	mg/Kg	

DLS Sample # .....: E1381 Date Sampled: 28-Oct-96 14:00
Field ID # .....: RVAP-385 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	82.1	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	9.94	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<47.8	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	50.5	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.61	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	115	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.63	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	20.0	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	9.56	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<22.8	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.25	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.13	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.23	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	51.9	mg/Kg	

DLS Sample # .....: E1380 Date Sampled: 28-Oct-96 13:45
Field ID # .....: RVAP-384 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	79.9	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	10.0	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<45.5	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	11.6	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<45.6	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	142	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.61	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	24.7	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	9.68	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<22.8	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	11.8	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<23.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.12	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.14	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	51.7	mg/Kg	

DLS Sample # .....: E1379 Date Sampled: 28-Oct-96 13:30
Field ID # .....: RVAP-383 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.53 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	77.0	%	

** Analytical Results - Final Customer Report **

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.52 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	84.4	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	12.7	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<46.5	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	179	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.57	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	37.1	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	46.0	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	48.3	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	13.4	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<23.1	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EPG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.10	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.20	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	50.9	mg/Kg	

DLS Sample # .....: E1378 Date Sampled: 28-Oct-96 13:10
Field ID # .....: RVAP-382 Date Received: 31-Oct-96 10:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.08	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	58.2	mg/Kg	

DLS Sample # .....: E1377 Date Sampled: 28-Oct-96 12:55
Field ID # .....: RVAP-381 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.52 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	80.0	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	8.82	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<46.3	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	162	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<48.6	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	162	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	41.1	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	33.8	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	6.20	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<24.3	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	0.26	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<26.6	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.13	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.23	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	52.6	mg/Kg	

DLS Sample # .....: E1376 Date Sampled: 28-Oct-96 12:00
Field ID # .....: RVAP-033 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.56 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	82.3	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	5.97	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	75.3	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	9.00	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<53.1	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	126	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.61	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	21.1	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	13.3	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	19.5	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	10.2	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<26.6	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.13	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.26	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	61.5	mg/Kg	

LS Sample # .....: E1375 Date Sampled: 28-Oct-96 11:45
ield ID # .....: RVAP-032 Date Received: 31-Oct-96 10:15
ample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.54 g	

** Analytical Results - Final Customer Report **

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	315	mg/Kg	

DLS Sample # .....: E1374 Date Sampled: 28-Oct-96 11:45
Field ID # .....: RVAP-031 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.56 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	71.0	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	8.55	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<53.1	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	74.7	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.63	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	114	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	1.00	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	15.6	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	14.3	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	29.5	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EPG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.14	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.31	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.20	ug/L	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<0.004	mg/L	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	0.098	mg/L	

DLS Sample # .....: E1373 Date Sampled: 28-Oct-96 11:15
Field ID # .....: RVAP-282 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.52 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	73.3	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	5.38	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<51.5	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	<0.004	mg/L	

Procedure: 724 - Antimony (Sb)
Method : EPA 7041 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<0.004	mg/L	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	0.071	mg/L	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.022	mg/L	

Procedure: 732 - Chromium (Cr)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	<0.022	mg/L	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	0.047	mg/L	

Procedure: 739 - Lead (Pb)
Method : EPA 7421 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	0.013	mg/L	

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 732 - Chromium (Cr)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	<0.022	mg/L	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	0.049	mg/L	

Procedure: 739 - Lead (Pb)
Method : EPA 7421 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	0.014	mg/L	

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.20	ug/L	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<0.004	mg/L	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	<0.044	mg/L	

DLS Sample # .....: E1372 Date Sampled: 29-Oct-96 08:00
Field ID # .....: RVAP-164W Date Received: 31-Oct-96 00:00
Sample Description: Water, natural ground

Procedure: 687 - Prep, Microwave
Method : EPA 3015 Analyst: RAS Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	100	mL	

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<0.004	mg/L	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	<0.044	mg/L	

DLS Sample # .....: E1371 Date Sampled: 29-Oct-96 08:00
Field ID # .....: RVAP-163W Date Received: 31-Oct-96 00:00
Sample Description: Water, natural ground

Procedure: 687 - Prep, Microwave
Method : EPA 3015 Analyst: RAS Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	100	mL	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	<0.004	mg/L	

Procedure: 724 - Antimony (Sb)
Method : EPA 7041 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<0.004	mg/L	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	0.033	mg/L	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.022	mg/L	

** Analytical Results - Final Customer Report **

Procedure: 724 - Antimony (Sb)
Method : EPA 7041 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	0.004	mg/L	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	0.040	mg/L	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.022	mg/L	

Procedure: 732 - Chromium (Cr)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	<0.022	mg/L	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	0.058	mg/L	

Procedure: 739 - Lead (Pb)
Method : EPA 7421 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	0.017	mg/L	

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.20	ug/L	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	0.069	mg/L	

Procedure: 739 - Lead (Pb)
Method : EPA 7421 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	0.008	mg/L	

Procedure: 742 - Mercury (Hg)
Method : EPA 7470A Analyst: EFG Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.20	ug/L	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 24-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<0.004	mg/L	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	0.095	mg/L	

S Sample # .....: E1370 Date Sampled: 29-Oct-96 08:00
eld ID # .....: RVAP-162W Date Received: 31-Oct-96 00:00
mple Description: Water, natural ground

Procedure: 687 - Prep, Microwave
Method : EPA 3015 Analyst: RAS Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	100	mL	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	<0.004	mg/L	

** Analytical Results - Final Customer Report **

DLS Job# : 6A5975
Reviewing Laboratory : MET - ASD Metals Team
Analytical Laboratory: MET - ASD Metals Team
Date Released : 08-JAN-97
Generated by : jsseeger

DLS Sample # .....: E1369 Date Sampled: 29-Oct-96 08:00
Field ID # .....: RVAP-161W Date Received: 31-Oct-96 00:00
Sample Description: Water, natural ground

Procedure: 687 - Prep, Microwave
Method : EPA 3015 Analyst: RAS Date Analyzed: 23-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	100	mL	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	0.005	mg/L	

Procedure: 724 - Antimony (Sb)
Method : EPA 7041 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	0.006	mg/L	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	0.073	mg/L	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.022	mg/L	

Procedure: 732 - Chromium (Cr)
Method : EPA 6010A Analyst: MPK Date Analyzed: 27-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	<0.022	mg/L	

Sample Section

Field ID	Sample	Collected	Matrix
RVAP-161W	E1369	29-Oct-96	NW
RVAP-162W	E1370	29-Oct-96	NW
RVAP-163W	E1371	29-Oct-96	NW
RVAP-164W	E1372	29-Oct-96	NW
RVAP-282	E1373	28-Oct-96	SO
RVAP-031	E1374	28-Oct-96	SO
RVAP-032	E1375	28-Oct-96	SO
RVAP-033	E1376	28-Oct-96	SO
RVAP-381	E1377	28-Oct-96	SO
RVAP-382	E1378	28-Oct-96	SO
RVAP-383	E1379	28-Oct-96	SO
RVAP-384	E1380	28-Oct-96	SO
RVAP-385	E1381	28-Oct-96	SO
RVAP-386	E1382	28-Oct-96	SO
RVAP-38B	E1383	28-Oct-96	SS
RVAP-241	E1384	28-Oct-96	SO
RVAP-242	E1385	28-Oct-96	SO
RVAP-281	E1386	28-Oct-96	SO
RVAP-061	E1387	28-Oct-96	SO
RVAP-062	E1388	28-Oct-96	SO
RVAP-063	E1389	28-Oct-96	SO
RVAP-161B	E1390	29-Oct-96	SS
RVAP-162B	E1391	29-Oct-96	SS
RVAP-163B	E1392	29-Oct-96	SS
RVAP-164B	E1393	29-Oct-96	SS
RVAP-321	E1394	29-Oct-96	SO
RVAP-322	E1395	29-Oct-96	SO
RVAP-323	E1396	29-Oct-96	SO
RVAP-324	E1397	29-Oct-96	SO
RVAP-301	E1398	29-Oct-96	SO
RVAP-151	E1399	29-Oct-96	SO
RVAP-361	E1400	29-Oct-96	SO
RVAP-362	E1401	29-Oct-96	SO
RVAP-363	E1402	29-Oct-96	SO
RVAP-364	E1403	29-Oct-96	SO
RVAP-36B	E1404	29-Oct-96	SS

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences (DLS)
5158 Blackhawk Road
Aberdeen Proving Ground, Maryland 21010-5422
(410)671-2208 DSN 584-2208 FAX (410)671-4108

Analytical Spectrometry Division
Analytical Results - Final Report

CLIENT: JAMES SHEEHY
HMWP
BLDG E1677
APG-EA, MD 21010-5422

Client Phone: 5-3651

Project Site: RAVENNA AAP
Project #: 37-23-5360
DLS Job #: 6A5975 *6A5975*

REPORT RELEASE AUTHORIZATION:

Signature: _____ 8 Jan 97
Dr. Charles Stoner Date
Chief, Analytical Spectrometry Division

CASE NARRATIVE REPORT

Installation: Ravenna

Project Number: 6A5975, 6A6206; 37-EF-5360

Project Officer: J. Sheehy

Case Narrative:

- Thirty six samples (4 water and 32 soil/sludge samples for Job 6A5975) were received on 31Oct 96. Thirty five samples (5 water and 30 soil/sludge samples for Job 6A6206) were received on 4 Nov 96.
- The soil samples were prepped by EPA 3052, the water samples by EPA 3015.
- Arsenic, chromium, mercury, and selenium in the prepped soil samples were measured by EPA Methods 7060, 7191, 7471A, and 7740 respectively. For the soils in Job 6A5975, cadmium was determined by EPA 7131A; it was measured by EPA 6010A for the soils in Job 6A6206. Determinations for barium, zinc, copper, lead and antimony in the prepped soil samples were done by EPA 6010A.
- Arsenic, antimony, lead, and selenium in the prepped water samples were measured by EPA Methods 7060, 7041, 7421, and 7740 respectively; barium, zinc, copper, chromium, and cadmium were done by EPA 6010A.
- Mercury determinations in the water samples were performed by EPA 7470A, but when the tests were done the holding time had been exceeded.
- The first copper result in sample RVAP-332 is being reported. As discussed between Chuck Stoner and Jim Sheehy, four additional portions of the sample were analyzed. These results indicated that copper was present at percentage levels and was not distributed evenly throughout the sample.
- All QC data were within acceptable limits except for the following:
- The laboratory control samples (LCSs) for antimony were high (outside the acceptable range of +/- 30 % recovery).
- Two LCSs for chromium and one for barium were low (outside the +/- 30% recovery range).
- Two pre-digestion spikes for selenium were low and one was high. Also, one pre-digestion spike for mercury was low.
- The sample results for antimony, barium, chromium, selenium, and mercury are not adversely affected by the above statements because all other QC data for these analytes are acceptable.
- The reporting units for all metals in the water samples, except for mercury, are mg/L; the units for mercury are ug/L. The reporting units for the metals in the soil samples are mg/Kg calculated on a dry weight basis.

metals
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08 JAN 1997

ANALYSIS REPORT
A970108-2

U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE
BUILDING E2100
ABERDEEN PROVING GROUND, MARYLAND 21010

ANALYTICAL SPECTROMETRY DIVISION

Installation: **RAVENNA**

Project Number: 37-23-5360

Job Number: 6A5975

Number of Samples: 36

Matrix: WATER / SOIL

Analyzed for: METALS

Method(s): EPA SW846

LAB NUMBER(S): E1369-E1404

QC Coordinator: Jennifer Boggs Date: 8 Jan 97

Senior Chemist: David A Crook Date: 8 Jan 97

Metals Team leader: Lillian L Byrd Date: 8 Jan 97

Release Authorized by: Division Chief Date: 8 JAN 97

SPIKE DATA (post-digestion):

Target	Date	Sample #	Matrix	Unspike Conc	Vol Spl Taken	Conc of Spike soln	Vol spike soln taken	Final vol	Spike Conc	Units	% Rec	Analyst	Method
Pb	12/13/96	E1440	SO	0.132	10	10	1	11	0.942	mg/L	90.4	JWC	EPA 6010A
Sb	12/13/96	E1440	SO	0	10	10	1	11	0.855	mg/L	94.1	JWC	EPA 6010A
Zn	12/13/96	E1440	SO	0.482	10	5	1	11	0.866	mg/L	94.1	JWC	EPA 6010A
Ba	12/13/96	E1447	SO	0.641	10	5	1	11	1.03	mg/L	98.4	JWC	EPA 6010A
Cu	12/13/96	E1447	SO	2.33	10	10	1	11	3.05	mg/L	102.5	JWC	EPA 6010A
Cd	12/13/96	E1447	SO	0	10	5	1	11	0.441	mg/L	97.0	JWC	EPA 6010A
Pb	12/13/96	E1447	SO	0.369	10	10	1	11	1.18	mg/L	92.9	JWC	EPA 6010A
Sb	12/13/96	E1447	SO	0	10	10	1	11	0.92	mg/L	101.2	JWC	EPA 6010A
Zn	12/13/96	E1447	SO	0.758	10	5	1	11	1.14	mg/L	99.2	JWC	EPA 6010A

INSTALLATION:	RAVENNA
JOB#:	6A6206

SPIKE DATA (post-digestion):

Target	Date	Sample #	Matrix	Unspike Conc	Vol Spl Taken	Conc of Spike soln	Vol spike soln taken	Final vol	Spike Conc	Units	% Rec	Analyst	Method
Hg	11/21/96	E1430	SO	0.05	10	10	1	11	0.95	ug/L	99.5	EFG	EPA 7471
Hg	11/21/96	E1450	SO	0.19	10	10	1	11	1.11	ug/L	103.1	EFG	EPA 7471
Se	12/12/96	E1423	SO	0.004	5	1	0.1	5.1	0.0243	mg/L	103.9	MAM	EPA 7740
Se	12/12/96	E1447	SO	0.0043	5	1	0.1	5.1	0.0209	mg/L	85.1	MAM	EPA 7740
As	12/11/96	E1422	SO	0.017	5	1	0.1	5.1	0.034	mg/L	88.4	MAM	EPA 7060
As	12/11/96	E1446	SO	0.0357	5	1	0.1	5.1	0.0542	mg/L	97.9	MAM	EPA 7060
Cr	12/16/96	E1445	SO	0.0462	5	1	0.1	5.1	0.0652	mg/L	101.5	MAM	EPA 7191
Cr	12/16/96	E1425	SO	0.0169	5	1	0.1	5.1	0.0345	mg/L	91.5	MAM	EPA 7191
Ba	12/27/96	E1416	NW	0.267	10	100	0.05	10.05	0.803	mg/L	108.0	MPK	EPA 6010A
Cd	12/27/96	E1416	NW	0	10	100	0.05	10.05	0.545	mg/L	109.5	MPK	EPA 6010A
Cr	12/27/96	E1416	NW	0.019	10	100	0.05	10.05	0.546	mg/L	105.9	MPK	EPA 6010A
Zn	12/27/96	E1416	NW	0.13	10	100	0.05	10.05	0.662	mg/L	107.1	MPK	EPA 6010A
Cu	12/27/96	E1416	NW	0.045	10	100	0.05	10.05	0.509	mg/L	93.3	MPK	EPA 6010A
Ba	12/13/96	E1422	SO	0.605	10	5	1	11	1	mg/L	99.0	JWC	EPA 6010A
Cu	12/13/96	E1422	SO	0.164	10	10	1	11	1.06	mg/L	100.2	JWC	EPA 6010A
Cd	12/13/96	E1422	SO	0	10	5	1	11	0.442	mg/L	97.2	JWC	EPA 6010A
Pb	12/13/96	E1422	SO	1.18	10	10	1	11	1.93	mg/L	94.3	JWC	EPA 6010A
Sb	12/13/96	E1422	SO	0	10	10	1	11	0.9	mg/L	99.0	JWC	EPA 6010A
Zn	12/13/96	E1422	SO	1.25	10	5	1	11	1.59	mg/L	99.8	JWC	EPA 6010A
Ba	12/13/96	E1431	SO	0.517	10	5	1	11	0.915	mg/L	97.9	JWC	EPA 6010A
Cu	12/13/96	E1431	SO	0.15	10	10	1	11	1.05	mg/L	100.5	JWC	EPA 6010A
Cd	12/13/96	E1431	SO	0	10	5	1	11	0.434	mg/L	95.5	JWC	EPA 6010A
Pb	12/13/96	E1431	SO	0.133	10	10	1	11	0.975	mg/L	94.0	JWC	EPA 6010A
Sb	12/13/96	E1431	SO	0	10	10	1	11	0.863	mg/L	94.9	JWC	EPA 6010A
Zn	12/13/96	E1431	SO	0.992	10	5	1	11	1.36	mg/L	100.8	JWC	EPA 6010A
Ba	12/13/96	E1440	SO	0.362	10	5	1	11	0.757	mg/L	94.1	JWC	EPA 6010A
Cu	12/13/96	E1440	SO	0.084	10	10	1	11	0.965	mg/L	97.8	JWC	EPA 6010A
Cd	12/13/96	E1440	SO	0	10	5	1	11	0.429	mg/L	94.4	JWC	EPA 6010A

INSTALLATION:		RAVENNA								
JOB#:		6A6206								
SPIKE DATA (pre-digestion):										
Target	**Date**	**Sample #**	**Matrix**	**Spike Conc**	**Unspike Conc**	**True Value**	**units**	**% Rec**	**Analyst**	**Method**
Ba	12/13/96	E1430	SOIL	3.96	0.19	4	mg/L	94.3	JWC	EPA 6010A
Cu	12/13/96	E1430	SOIL	0.52	0.03	0.5	mg/L	97.4	JWC	EPA 6010A
Sb	12/13/96	E1430	SOIL	0.95	0.00	1	mg/L	94.9	JWC	EPA 6010A
Zn	12/13/96	E1430	SOIL	1.18	0.20	1	mg/L	97.8	JWC	EPA 6010A
Ba	12/13/96	E1445	SOIL	6.40	3.13	4	mg/L	81.8	JWC	EPA 6010A
Cu	12/13/96	E1445	SOIL	3.49	3.13	0.5	mg/L	72.0	JWC	EPA 6010A
Sb	12/13/96	E1445	SOIL	0.79	0.00	1	mg/L	78.8	JWC	EPA 6010A
Zn	12/13/96	E1445	SOIL	1.25	0.45	1	mg/L	79.7	JWC	EPA 6010A
As	12/11/96	E1430	SOIL	3.90	0.02	4	mg/L	97.0	MAM	EPA 7060
Cd	12/13/96	E1430	SOIL	0.10	0.00	0.1	mg/L	95.0	JWC	EPA 6010A
Cr	12/16/96	E1430	SOIL	0.37	0.02	0.4	mg/L	87.3	MAM	EPA 7191
Pb	12/13/96	E1430	SOIL	1.01	0.00	1	mg/L	101.0	JWC	EPA 6010A
Se	12/12/96	E1430	SOIL	3.91	0.00	4	mg/L	97.8	MAM	EPA 7740
As	12/11/96	E1445	SOIL	3.25	0.17	4	mg/L	77.1	MAM	EPA 7060
Cd	12/13/96	E1445	SOIL	0.11	0.04	0.1	mg/L	72.0	JWC	EPA 6010A
Pb	12/13/96	E1445	SOIL	1.05	0.15	1	mg/L	90.3	JWC	EPA 6010A
Se	12/12/96	E1445	SOIL	3.34	0.02	4	mg/L	82.9	MAM	EPA 7740
Hg	11/21/96	E1422	SOIL	2.65	1.82	1	ug/L	83.0	EFG	EPA 7471
Hg	11/21/96	E1451	SOIL	1.05	0.05	1	ug/L	100.0	EFG	EPA 7471

DUPLICATE DATA (post-digestion):											
Target	**Date**	**Sample #**	**Matrix**		**Value #1**		**Value #2**	**Units**	**% RPD**	**Analyst**	**Method**
Zn	12/13/96	E1443	SO		0.052	<	0.050	mg/L	3.9	JWC	EPA 6010A
Ba	12/13/96	E1448	SO		3.45		3.46	mg/L	-0.3	JWC	EPA 6010A
Cu	12/13/96	E1448	SO		1.40		1.40	mg/L	0.0	JWC	EPA 6010A
Cd	12/13/96	E1448	SO	<	0.020	<	0.020	mg/L	0.0	JWC	EPA 6010A
Pb	12/13/96	E1448	SO		0.459		0.469	mg/L	-2.2	JWC	EPA 6010A
Sb	12/13/96	E1448	SO	<	0.400	<	0.400	mg/L	0.0	JWC	EPA 6010A
Zn	12/13/96	E1448	SO		0.197		0.197	mg/L	0.0	JWC	EPA 6010A

INSTALLATION :		RAVENNA									
JOB#		6A6206									

DUPLICATE DATA (post-digestion):

Target	Date	Sample #	Matrix		Value #1		Value #2	Units	% RPD	Analyst	Method
Hg	11/21/96	E1430	SO	<	0.200	<	0.200	ug/L	0.0	EFG	EPA 7471
Hg	11/21/96	E1450	SO		0.200	<	0.200	ug/L	0.0	EFG	EPA 7471
Se	12/12/96	E1448	SO		0.023		0.024	mg/L	-6.8	MAM	EPA 7740
Se	12/12/96	E1423	SO		0.004		0.003	mg/L	25.4	MAM	EPA 7740
As	12/11/96	E1446	SO		0.036		0.035	mg/L	1.7	MAM	EPA 7060
As	12/11/96	E1422	SO		0.017		0.018	mg/L	-4.0	MAM	EPA 7060
Cr	12/16/96	E1425	SO		0.017		0.016	mg/L	7.4	MAM	EPA 7191
Cr	12/16/96	E1445	SO		0.046		0.050	mg/L	-8.5	MAM	EPA 7191
Ba	12/27/96	E1416	NW		0.243		0.267	mg/L	-9.4	MPK	EPA 6010A
Cd	12/27/96	E1417	NW	<	0.010	<	0.010	mg/L	0.0	MPK	EPA 6010A
Cr	12/27/96	E1417	NW	<	0.010	<	0.010	mg/L	0.0	MPK	EPA 6010A
Zn	12/27/96	E1417	NW	<	0.020	<	0.020	mg/L	0.0	MPK	EPA 6010A
Cu	12/27/96	E1417	NW		0.013		0.022	mg/L	-51.4	MPK	EPA 6010A
Ba	12/13/96	E1424	SO		0.351		0.349	mg/L	0.6	JWC	EPA 6010A
Cu	12/13/96	E1424	SO		0.112		0.112	mg/L	0.0	JWC	EPA 6010A
Cd	12/13/96	E1424	SO	<	0.020	<	0.020	mg/L	0.0	JWC	EPA 6010A
Pb	12/13/96	E1424	SO		0.184		0.181	mg/L	1.6	JWC	EPA 6010A
Sb	12/13/96	E1424	SO	<	0.400	<	0.400	mg/L	0.0	JWC	EPA 6010A
Zn	12/13/96	E1424	SO		0.554		0.560	mg/L	-1.1	JWC	EPA 6010A
Ba	12/13/96	E1432	SO		0.793		0.793	mg/L	0.0	JWC	EPA 6010A
Cu	12/13/96	E1432	SO		0.058		0.057	mg/L	1.7	JWC	EPA 6010A
Cd	12/13/96	E1432	SO	<	0.020	<	0.020	mg/L	0.0	JWC	EPA 6010A
Pb	12/13/96	E1432	SO	<	0.200	<	0.200	mg/L	0.0	JWC	EPA 6010A
Sb	12/13/96	E1432	SO	<	0.400	<	0.400	mg/L	0.0	JWC	EPA 6010A
Zn	12/13/96	E1432	SO		0.464		0.466	mg/L	-0.4	JWC	EPA 6010A
Ba	12/13/96	E1443	SO		1.81		1.78	mg/L	1.7	JWC	EPA 6010A
Cd	12/13/96	E1443	SO	<	0.020	<	0.020	mg/L	0.0	JWC	EPA 6010A
Pb	12/13/96	E1443	SO	<	0.200	<	0.200	mg/L	0.0	JWC	EPA 6010A
Sb	12/13/96	E1443	SO	<	0.400	<	0.400	mg/L	0.0	JWC	EPA 6010A

INSTALLATION :	RAVENNA
JOB#	6A6206

DUPLICATE DATA (pre-digestion SPIKE):

Target	Date	Sample #	Matrix	SPK Value #1	DUP-SPK Value #2	Units	% RPD	Analyst	Method
Ba	12/13/96	E1430	SOIL	3.96	3.87	mg/L	2.3	JWC	EPA 6010A
Cu	12/13/96	E1430	SOIL	0.52	0.51	mg/L	1.8	JWC	EPA 6010A
Sb	12/13/96	E1430	SOIL	0.95	0.95	mg/L	-0.5	JWC	EPA 6010A
Zn	12/13/96	E1430	SOIL	1.18	1.09	mg/L	7.9	JWC	EPA 6010A
Ba	12/13/96	E1445	SOIL	5.49	5.86	mg/L	-6.5	JWC	EPA 6010A
Cu	12/13/96	E1445	SOIL	3.75	3.49	mg/L	7.2	JWC	EPA 6010A
Sb	12/13/96	E1445	SOIL	0.79	0.92	mg/L	-15.7	JWC	EPA 6010A
Zn	12/13/96	E1445	SOIL	1.03	1.25	mg/L	-19.3	JWC	EPA 6010A
As	12/11/96	E1430	SOIL	0.08	0.09	mg/L	-18.5	MAM	EPA 7060
Cd	12/13/96	E1430	SOIL	0.10	0.09	mg/L	1.1	JWC	EPA 6010A
Cr	12/16/96	E1430	SOIL	0.37	0.38	mg/L	-3.2	MAM	EPA 7191
Pb	12/13/96	E1430	SOIL	1.01	1.00	mg/L	1.4	JWC	EPA 6010A
Se	12/12/96	E1430	SOIL	3.91	3.96	mg/L	-1.3	MAM	EPA 7740
As	12/11/96	E1445	SOIL	3.25	4.62	mg/L	-34.8	MAM	EPA 7060
Cd	12/13/96	E1445	SOIL	0.09	0.11	mg/L	-23.8	JWC	EPA 6010A
Pb	12/13/96	E1445	SOIL	0.84	0.93	mg/L	-10.1	JWC	EPA 6010A
Se	12/12/96	E1445	SOIL	3.34	3.88	mg/L	-15.0	MAM	EPA 7740
Hg	11/21/96	E1422	SOIL	2.65	2.73	ug/L	-3.0	EFG	EPA 7471
Hg	11/21/96	E1451	SOIL	1.05	1.05	ug/L	0.0	EFG	EPA 7471

INSTALLATION :		RAVENNA								
JOB#		6A6206								

LABORATORY CONTROL SAMPLE DATA:

Target	Date	Sample #	Matrix	Observed	True Value	Units	% Rec	Analyst	Method
Ba	12/13/96	96ASD 4-59	SOIL	1.78	2.5	mg/L	71.2	JWC	EPA 6010A
Cu	12/13/96	96ASD 4-59	SOIL	1.58	2.1	mg/L	75.2	JWC	EPA 6010A
Sb	12/13/96	96ASD 4-59	SOIL	0.859	0.5	mg/L	171.8	JWC	EPA 6010A
Zn	12/13/96	96ASD 4-59	SOIL	1.58	2.1	mg/L	75.2	JWC	EPA 6010A
Ba	12/13/96	96ASD 4-60	SOIL	1.61	2.4	mg/L	67.1	JWC	EPA 6010A
Cu	12/13/96	96ASD 4-60	SOIL	1.49	2	mg/L	74.5	JWC	EPA 6010A
Sb	12/13/96	96ASD 4-60	SOIL	0.834	0.5	mg/L	166.8	JWC	EPA 6010A
Zn	12/13/96	96ASD 4-60	SOIL	1.46	2	mg/L	73.0	JWC	EPA 6010A
As	12/11/96	96ASD 4-59	SOIL	0.804	0.9	mg/L	89.3	MAM	EPA 7060
Cd	12/13/96	96ASD 4-59	SOIL	0.714	1	mg/L	71.4	JWC	EPA 6010A
Cr	12/16/96	96ASD 4-59	SOIL	1.115	1.8	mg/L	61.9	MAM	EPA 7191
Pb	12/13/96	96ASD 4-59	SOIL	1.29	1.7	mg/L	75.9	JWC	EPA 6010A
Se	12/12/96	96ASD 4-59	SOIL	1.03	1.2	mg/L	85.8	MAM	EPA 7740
As	12/11/96	96ASD 4-60	SOIL	0.698	0.8	mg/L	87.3	MAM	EPA 7060
Cd	12/13/96	96ASD 4-60	SOIL	0.664	0.9	mg/L	73.8	JWC	EPA 6010A
Cr	12/16/96	96ASD 4-60	SOIL	1.035	1.7	mg/L	60.9	MAM	EPA 7191
Pb	12/13/96	96ASD 4-60	SOIL	1.13	1.6	mg/L	70.6	JWC	EPA 6010A
Se	12/12/96	96ASD 4-60	SOIL	0.85	1.1	mg/L	77.3	MAM	EPA 7740
Hg	11/21/96	96ASD 4-57	SOIL	3.25	3.38	ug/L	96.2	EFG	EPA 7471
Hg	11/21/96	96ASD 4-58	SOIL	3.51	3.38	ug/L	103.8	EFG	EPA 7471

INSTRUMENT CHECK STANDARDS DATA:									
Target	**Date**	**Sample #**	**Matrix**	**Observed**	**True Value**	**Units**	**% Rec**	**Analyst**	**Method**
Cu	12/13/96	QS 42	WA	0.508	0.5	mg/L	101.6	JWC	EPA 6010A
Cd	12/13/96	QS 43	WA	0.518	0.5	mg/L	103.6	JWC	EPA 6010A
Pb	12/13/96	QS 44	WA	0.501	0.5	mg/L	100.2	JWC	EPA 6010A
Sb	12/13/96	QS 45	WA	0.502	0.5	mg/L	100.4	JWC	EPA 6010A
Zn	12/13/96	QS 46	WA	0.509	0.5	mg/L	101.8	JWC	EPA 6010A
Ba	12/13/96	QS12	WA	3.89	4	mg/L	97.3	JWC	EPA 6010A
Cu	12/13/96	QS 42	WA	0.499	0.5	mg/L	99.8	JWC	EPA 6010A
Cd	12/13/96	QS 43	WA	0.513	0.5	mg/L	102.6	JWC	EPA 6010A
Pb	12/13/96	QS 44	WA	0.511	0.5	mg/L	102.2	JWC	EPA 6010A
Sb	12/13/96	QS 45	WA	0.522	0.5	mg/L	104.4	JWC	EPA 6010A
Zn	12/13/96	QS 46	WA	0.523	0.5	mg/L	104.6	JWC	EPA 6010A
Ba	12/13/96	QS12	WA	4	4	mg/L	100.0	JWC	EPA 6010A

INSTRUMENT CHECK STANDARDS DATA:									
Target	**Date**	**Sample #**	**Matrix**	**Observed**	**True Value**	**Units**	**% Rec**	**Analyst**	**Method**
Cr	12/16/96	CCV/QS11	SO	0.0199	0.02	mg/L	99.5	MAM	EPA 7191
Ba	12/27/96	CCV1	NW	0.974	1	mg/L	97.4	MPK	EP1 6010A
Ba	12/27/96	CCV1	NW	1.07	1	mg/L	107.0	MPK	EPA 6010A
Zn	12/27/96	CCV1	WA	1.02	1	mg/L	102.0	MPK	EPA 6010A
Cd	12/27/96	CCV1	WA	1.04	1	mg/L	104.0	MPK	EPA 6010A
Cr	12/27/96	CCV1	WA	1.04	1	mg/L	104.0	MPK	EPA 6010A
Cu	12/27/96	CCV1	WA	1	1	mg/L	100.0	MPK	EPA 6010A
Zn	12/27/96	CCV2	WA	0.475	0.5	mg/L	95.0	MPK	EPA 6010A
Cd	12/27/96	CCV2	WA	0.494	0.5	mg/L	98.8	MPK	EPA 6010A
Cr	12/27/96	CCV2	WA	0.489	0.5	mg/L	97.8	MPK	EPA 6010A
Cu	12/27/96	CCV2	WA	0.462	0.5	mg/L	92.4	MPK	EPA 6010A
Cu	12/13/96	QS 42	WA	0.523	0.5	mg/L	104.6	JWC	EPA 6010A
Cd	12/13/96	QS 42	WA	0.533	0.5	mg/L	106.6	JWC	EPA 6010A
Pb	12/13/96	QS 42	WA	0.521	0.5	mg/L	104.2	JWC	EPA 6010A
Sb	12/13/96	QS 42	WA	0.517	0.5	mg/L	103.4	JWC	EPA 6010A
Zn	12/13/96	QS 42	WA	0.554	0.5	mg/L	110.8	JWC	EPA 6010A
Ba	12/13/96	QS 12	WA	4.15	4	mg/L	103.8	JWC	EPA 6010A
Cu	12/13/96	QS 13	WA	0.2	0.2	mg/L	100.0	JWC	EPA 6010A
Cd	12/13/96	QS 14	WA	0.206	0.2	mg/L	103.0	JWC	EPA 6010A
Pb	12/13/96	QS 15	WA	0.203	0.2	mg/L	101.5	JWC	EPA 6010A
Sb	12/13/96	QS 16	WA	0.197	0.2	mg/L	98.5	JWC	EPA 6010A
Zn	12/13/96	QS 17	WA	0.209	0.2	mg/L	104.5	JWC	EPA 6010A
Cu	12/13/96	QS 53	WA	0.101	0.1	mg/L	101.0	JWC	EPA 6010A
Cd	12/13/96	QS 54	WA	0.104	0.1	mg/L	104.0	JWC	EPA 6010A
Pb	12/13/96	QS 55	WA	0.11	0.1	mg/L	110.0	JWC	EPA 6010A
Sb	12/13/96	QS 56	WA	0.112	0.1	mg/L	112.0	JWC	EPA 6010A
Zn	12/13/96	QS 57	WA	0.1	0.1	mg/L	100.0	JWC	EPA 6010A
Ba	12/13/96	QS1340	WA	1	1	mg/L	100.0	JWC	EPA 6010A
Cu	12/13/96	QS 53	WA	0.109	0.1	mg/L	109.0	JWC	EPA 6010A
Cd	12/13/96	QS 54	WA	0.107	0.1	mg/L	107.0	JWC	EPA 6010A
Pb	12/13/96	QS 55	WA	0.101	0.1	mg/L	101.0	JWC	EPA 6010A
Sb	12/13/96	QS 56	WA	0.107	0.1	mg/L	107.0	JWC	EPA 6010A
Zn	12/13/96	QS 57	WA	0.093	0.1	mg/L	93.0	JWC	EPA 6010A
Ba	12/13/96	QS1340	WA	1.01	1	mg/L	101.0	JWC	EPA 6010A

INSTALLATION :		RAVENNA							
JOB#		6A6206							

INSTRUMENT CHECK STANDARDS DATA:

Target	Date	Sample #	Matrix	Observed	True Value	Units	% Rec	Analyst	Method
Hg	11/21/96	QS748	SO	0.49	0.5	ug/L	98.0	EFG	EPA 7471
Hg	11/21/96	QS14	SO	1.99	2	ug/L	99.5	EFG	EPA 7471
Hg	11/21/96	QS748	SO	0.49	0.5	ug/L	98.0	EFG	EPA 7471
Hg	11/21/96	QS14	SO	1.98	2	ug/L	99.0	EFG	EPA 7471
Hg	11/21/96	QS748	SO	0.48	0.5	ug/L	96.0	EFG	EPA 7471
Hg	11/21/96	QS14	SO	1.93	2	ug/L	96.5	EFG	EPA 7471
Hg	11/21/96	QS748	SO	0.47	0.5	ug/L	94.0	EFG	EPA 7471
Hg	11/21/96	QS14	SO	1.93	2	ug/L	96.5	EFG	EPA 7471
Hg	11/21/96	QS748	SO	0.46	0.5	ug/L	92.0	EFG	EPA 7471
Hg	11/21/96	QS14	SO	1.9	2	ug/L	95.0	EFG	EPA 7471
Se	12/12/96	ICV/QS11	SO	0.0208	0.02	mg/L	104.0	MAM	EPA 7740
Se	12/12/96	CCV/QS10	SO	0.01	0.01	mg/L	100.0	MAM	EPA 7740
Se	12/12/96	CCV/QS11	SO	0.0207	0.02	mg/L	103.5	MAM	EPA 7740
Se	12/12/96	CCV/QS10	SO	0.0097	0.01	mg/L	97.0	MAM	EPA 7740
Se	12/12/96	CCV/QS11	SO	0.021	0.02	mg/L	105.0	MAM	EPA 7740
Se	12/12/96	CCV/QS11	SO	0.0211	0.02	mg/L	105.5	MAM	EPA 7740
As	12/11/96	ICV/QS11	SO	0.0203	0.02	mg/L	101.5	MAM	EPA 7060
As	12/11/96	CCV/QS792	SO	0.0536	0.05	mg/L	107.2	MAM	EPA 7060
As	12/11/96	CCV/QS11	SO	0.0207	0.02	mg/L	103.5	MAM	EPA 7060
As	12/11/96	CCV/QS792	SO	0.0533	0.05	mg/L	106.6	MAM	EPA 7060
As	12/11/96	CCV/QS11	SO	0.0215	0.02	mg/L	107.5	MAM	EPA 7060
As	12/11/96	CCV/QS792	SO	0.0466	0.05	mg/L	93.2	MAM	EPA 7060
Cr	12/13/96	ICV/QS792	SO	0.0525	0.05	mg/L	105.0	MAM	EPA 7191
Cr	12/13/96	CCV/QS11	SO	0.0191	0.02	mg/L	95.5	MAM	EPA 7191
Cr	12/13/96	CCV/QS792	SO	0.0555	0.05	mg/L	111.0	MAM	EPA 7191
Cr	12/13/96	CCV/QS11	SO	0.0226	0.02	mg/L	113.0	MAM	EPA 7191
Cr	12/13/96	CCV/QS11	SO	0.0203	0.02	mg/L	101.5	MAM	EPA 7191
Cr	12/16/96	ICV/QS11	SO	0.0222	0.02	mg/L	111.0	MAM	EPA 7191
Cr	12/16/96	CCV/QS792	SO	0.0488	0.05	mg/L	97.6	MAM	EPA 7191

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences
Aberdeen Proving Ground, MD 21010-5422

Quality Control Report

Installation: **RAVENNA**

Job#: **6A6206**

Project Officer: SHEEHY

Project #: 37-5360

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.10	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	57.2	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	15.1	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<44.1	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	27.8	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.21	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	8.33	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	17.8	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<22.1	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	17.6	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	33.9	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.12	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.21	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	267	mg/Kg	

LS Sample # .....: E1451 Date Sampled: 01-Nov-96 13:50
ield ID # .....: RVAP-231B Date Received: 04-Nov-96 09:15
mple Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.52 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	87.2	%	

** Analytical Results - Final Customer Report **

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.51 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	81	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	19.2	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<48.4	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	140	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.42	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	77.5	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<3.30	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	33.0	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	21.8	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	33.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.15	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	1.65	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	60.4	mg/Kg	

Sample # .....: E1450 Date Sampled: 01-Nov-96 13:50
ld ID # .....: RVAP-231A Date Received: 04-Nov-96 09:15
›le Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	2.58	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	22.5	mg/Kg	

DLS Sample # .....: E1449 Date Sampled: 01-Nov-96 10:20
Field ID # .....: RVAP-33B Date Received: 04-Nov-96 09:15
Sample Description: Sludges (Sediments)

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.54 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	56.1	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	5.78	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<66.0	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	76.7	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<45.7	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	394	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.29	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	514	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	160	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	52.5	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.10	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	49.1	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.12	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.33	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	100.8	mg/Kg	

DLS Sample # .....: E1448 Date Sampled: 01-Nov-96 11:20
Field ID # .....: RVAP-338 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	87.5	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	5.65	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	75.2	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	12.4	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<53.2	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	85.2	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.66	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	38.0	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	310	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	39.8	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	51.3	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	30.7	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.09	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	2.54	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	39.1	mg/Kg	

DLS Sample # .....: E1447 Date Sampled: 01-Nov-96 11:15
Field ID # .....: RVAP-337 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.55 g	

** Analytical Results - Final Customer Report **

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	48.2	mg/Kg	

DLS Sample # .....: E1446 Date Sampled: 01-Nov-96 11:10
Field ID # .....: RVAP-336 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	87.7	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	4.07	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<44.7	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	239	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.24	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	333	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	3.83	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	984	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	333	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<21.3	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.10	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	2.50	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	1.66	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	36.4	mg/Kg	

DLS Sample # .....: E1445 Date Sampled: 01-Nov-96 11:05
Field ID # .....: RVAP-335 Date Received: 04-Nov-96 09:15
ple Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.51 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	92.1	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	17.6	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<42.6	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	4.17	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<40.8	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	321	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.04	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	67.6	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	48.8	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	33.6	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	164	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<25.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	2.22	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	6.56	mg/Kg	

S Sample # .....: E1444 Date Sampled: 01-Nov-96 11:00
eld ID # .....: RVAP-334 Date Received: 04-Nov-96 09:15
mple Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.56 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	87.5	%	

** Analytical Results - Final Customer Report **

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	79.3	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	2.33	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<50.4	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	228	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.52	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	9.39	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	15.7	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	418	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	304000	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	910	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.14	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.26	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	454	mg/Kg	

Sample # .....: E1443 Date Sampled: 01-Nov-96 10:20
ld ID # .....: RVAP-333 Date Received: 04-Nov-96 09:15
ple Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.40	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	56.3	mg/Kg	

DLS Sample # .....: E1442 Date Sampled: 01-Nov-96 10:20
Field ID # .....: RVAP-332 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.54 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	73.7	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	9.23	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	58.5	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	67.0	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<56.0	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	90.9	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.80	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	24.8	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	58.0	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<28.0	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.14	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<22.4	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.10	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.12	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	54.1	mg/Kg	

DLS Sample # .....: E1441 Date Sampled: 01-Nov-96 10:15
Field ID # .....: RVAP-331 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	71.4	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	11.2	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	82.5	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	11.2	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<44.9	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	40.6	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.24	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	5.01	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	9.43	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	13.9	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	9.85	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<28.1	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.14	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.41	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	109	mg/Kg	

DLS Sample # .....: E1440 Date Sampled: 01-Nov-96 09:20
Field ID # .....: RVAP-34B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.54 g	

** Analytical Results - Final Customer Report **

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	55.8	mg/Kg	

DLS Sample # .....: E1439 Date Sampled: 01-Nov-96 09:10
Field ID # .....: RVAP-343 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.51 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	69.7	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	8.16	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<56.3	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	61.0	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.81	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	36.2	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.52	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	9.81	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	9.31	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<25.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.13	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.26	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.06	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	37.7	mg/Kg	

DLS Sample # .....: E1438 Date Sampled: 01-Nov-96 09:10
Field ID # .....: RVAP-342 Date Received: 04-Nov-96 09:15
ple Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	79.5	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	10.31	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<50.3	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	5.52	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<42.5	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	40.8	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.12	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	9.29	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	5.42	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<21.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	12.0	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<23.8	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.13	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	2.16	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	73.8	mg/Kg	

Sample # .....: E1437 Date Sampled: 01-Nov-96 09:20
ld ID # .....: RVAP-341 Date Received: 04-Nov-96 09:15
ple Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.54 g	

rocedure: 696 - Prep, Percent Solids
ethod : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	87.2	%	

** Analytical Results - Final Customer Report **

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.53 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	79.4	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	2.86	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<47.5	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	229	mg/Kg	

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.38	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	15.3	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 729 - Cadmium (Cd)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<2.39	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 16-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	12.5	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Copper	10.04	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Lead	<23.9	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EPG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.19	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	43.8	mg/Kg	

Sample # .....: E1436 Date Sampled: 01-Nov-96 08:20
d ID # .....: RVAP-181 Date Received: 04-Nov-96 09:15
le Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.21	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Zinc	79.5	mg/Kg	

DLS Sample # .....: E1435 Date Sampled: 31-Oct-96 17:15
Field ID # .....: RVAP-351B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: LCT Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 19-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	83.7	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	10.22	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Antimony	<47.8	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 12-DEC-96

Analyte	Concentration	Units	Qualifier
Barium	29.7	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	75.2	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	10.4	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<48.4	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	104	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.60	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	163	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	20.3	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	31.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.13	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.21	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	51.5	mg/Kg	

DLS Sample # .....: E1390 Date Sampled: 29-Oct-96 08:15
Field ID # .....: RVAP-161B Date Received: 31-Oct-96 10:15
Sample Description: Sludges (Sediments)

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.54 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	31.6	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	6.56	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<127	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	124	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	1.90	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	40.1	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	32.9	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	84.5	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	5.52	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<2.93	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	132	mg/Kg	

DLS Sample # .....: E1391 Date Sampled: 29-Oct-96 08:30
Field ID # .....: RVAP-162B Date Received: 31-Oct-96 10:15
Sample Description: Sludges (Sediments)

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.51 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	57.9	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	4.64	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<66.4	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	74.1	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.85	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	19.0	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	7.47	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<33.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	0.17	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.69	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	43.8	mg/Kg	

DLS Sample # .....: E1392 Date Sampled: 29-Oct-96 08:45
Field ID # .....: RVAP-163B Date Received: 31-Oct-96 10:15
Sample Description: Sludges (Sediments)

** Analytical Results - Final Customer Report **

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	60.9	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	7.13	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<62.0	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	97.1	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.82	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	26.3	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	37.6	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	96.7	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	1.54	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.64	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	212	mg/Kg	

DLS Sample # .....: E1393 Date Sampled: 29-Oct-96 08:20
Field ID # .....: RVAP-164B Date Received: 31-Oct-96 10:15
Sample Description: Sludges (Sediments)

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.52 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	37.7	%	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	5.56	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<100	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	137	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 02-JAN-97

Analyte	Concentration	Units	Qualifier
Cadmium	<1.25	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 02-JAN-97

Analyte	Concentration	Units	Qualifier
Chromium	13.4	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	32.3	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	69.6	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	1.02	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 26-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<2.55	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	340	mg/Kg	

DLS Sample # .....: E1394 Date Sampled: 29-Oct-96 13:35
Field ID # .....: RVAP-321 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.51 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	88.0	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	7.31	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<45.5	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	89.4	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	9.65	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	21.6	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	228	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	43.2	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EPG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.11	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	223	mg/Kg	

DLS Sample # .....: E1395 Date Sampled: 29-Oct-96 13:35
Field ID # .....: RVAP-322 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.53 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	84.7	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	8.62	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<46.3	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	57.6	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	3.33	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	17.0	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	274	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	29.7	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.11	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	531	mg/Kg	

DLS Sample # .....: E1396 Date Sampled: 29-Oct-96 10:35
Field ID # .....: RVAP-323 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.51 g	

** Analytical Results - Final Customer Report **

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	86.6	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	91.0	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<45.3	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	47.0	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	76.3	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	162	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	185	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	29.3	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	102	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	196	mg/Kg	

DLS Sample # .....: E1397 Date Sampled: 29-Oct-96 13:35
Field ID # .....: RVAP-324 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	86.8	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	12.0	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<44.3	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	51.5	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	4.64	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	23.3	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	202	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	26.8	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EPG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.10	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.15	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	471	mg/Kg	

)LS Sample # .....: E1398 Date Sampled: 29-Oct-96 11:00
'ield ID # .....: RVAP-301 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.52 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	85.4	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	8.05	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<44.2	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	46.0	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.56	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	15.3	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	10.1	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<22.1	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.13	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	60.5	mg/Kg	

DLS Sample # .....: E1399 Date Sampled: 29-Oct-96 11:20
Field ID # .....: RVAP-151 Date Received: 31-Oct-96 10:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.52 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	82.4	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	15.0	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<44.1	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	158	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.58	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	22.6	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	11.7	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<22.1	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.17	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	62.0	mg/Kg	

DLS Sample # .....: E1400 Date Sampled: 29-Oct-96 14:50
Field ID # .....: RVAP-361 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	69.3	%	

** Analytical Results - Final Customer Report **

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	11.3	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<55.5	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	80.9	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.72	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	21.6	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	15.7	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	39.0	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EPG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EPG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.14	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.44	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	155	mg/Kg	

DLS Sample # .....: E1401 Date Sampled: 29-Oct-96 14:50
Field ID # .....: RVAP-362 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.56 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	79.8	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	16.6	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<46.4	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	72.9	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.56	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	54.6	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	174	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	1682	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.12	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	67.6	mg/Kg	

DLS Sample # .....: E1402 Date Sampled: 29-Oct-96 14:55
Field ID # .....: RVAP-363 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.56 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	74.3	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	17.4	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<53.8	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	48.0	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.60	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	20.4	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	214	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	2840	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.20	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	81.4	mg/Kg	

DLS Sample # .....: E1403 Date Sampled: 29-Oct-96 14:55
Field ID # .....: RVAP-364 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.5 g	

** Analytical Results - Final Customer Report **

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	74.0	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	11.7	mg/Kg	

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<51.0	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	64.0	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.68	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	18.1	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	372	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	4309	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EFG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.12	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.35	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	106	mg/Kg	

DLS Sample # .....: E1404 Date Sampled: 29-Oct-96 15:00
Field ID # .....: RVAP-36B Date Received: 31-Oct-96 10:15
Sample Description: Sludges (Sediments)

Procedure: 1113 - Prep, Microwave
Method : EPA 3052 Analyst: NLK Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	50 mL	0.51 g	

Procedure: 696 - Prep, Percent Solids
Method : EPA CLP Analyst: NLK Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Procedure has been completed	79.4	%	

Procedure: 722 - Arsenic (As)
Method : EPA 7060 Analyst: MAM Date Analyzed: 11-DEC-96

Analyte	Concentration	Units	Qualifier
Arsenic	8.03	mg/Kg	

** Analytical Results - Final Customer Report **

Procedure: 723 - Antimony (Sb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Antimony	<45.0	mg/Kg	

Procedure: 725 - Barium (Ba)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Barium	56.0	mg/Kg	

Procedure: 730 - Cadmium (Cd)
Method : EPA 7131A Analyst: MAM Date Analyzed: 04-DEC-96

Analyte	Concentration	Units	Qualifier
Cadmium	<0.62	mg/Kg	

Procedure: 733 - Chromium (Cr)
Method : EPA 7191 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Chromium	6.85	mg/Kg	

Procedure: 736 - Copper (Cu)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Copper	5.62	mg/Kg	

Procedure: 738 - Lead (Pb)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Lead	<22.5	mg/Kg	

Procedure: 742 - Mercury (Hg)
Method : EPA 7471A Analyst: EPG Date Analyzed: 21-NOV-96

Analyte	Concentration	Units	Qualifier
Mercury	<0.11	mg/Kg	

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier

** Analytical Results - Final Customer Report **

Procedure: 746 - Selenium (Se)
Method : EPA 7740 Analyst: MAM Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
Selenium	<1.23	mg/Kg	

Procedure: 753 - Zinc (Zn)
Method : EPA 6010A Analyst: JWC Date Analyzed: 26-NOV-96

Analyte	Concentration	Units	Qualifier
Zinc	31.3	mg/Kg	

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences
Aberdeen Proving Ground, MD 21010-5422

Quality Control Report

Installation: **RAVENNA**

Job#: **6A5975**

Project Officer: SHEEHY

Project #: 37-5360

INSTALLATION :		RAVENNA							
JOB#		6A5975							

INSTRUMENT CHECK STANDARDS DATA:

Target	Date	Sample #	Matrix	Observed	True Value	Units	% Rec	Analyst	Method
Ag	11/29/96	ICV-QS25	SO	0.0207	0.02	mg/L	103.5	MAM	EPA 7761
Ag	11/29/96	CV-QS118	SO	0.0049	0.005	mg/L	98.0	MAM	EPA 7761
Ag	11/29/96	CCV-QS25	SO	0.0222	0.02	mg/L	111.0	MAM	EPA 7761
Ag	11/29/96	CV-QS118	SO	0.0048	0.005	mg/L	96.0	MAM	EPA 7761
Ag	11/29/96	CCV-QS25	SO	0.0192	0.02	mg/L	96.0	MAM	EPA 7761
Ag	11/29/96	CCV-QS25	SO	0.0198	0.02	mg/L	99.0	MAM	EPA 7761
Ag	11/29/96	CV-QS118	SO	0.0051	0.005	mg/L	102.0	MAM	EPA 7761
Hg	11/21/96	QS748	SO	0.48	0.5	ug/L	96.0	EFG	EPA 7471
Hg	11/21/96	QS14	SO	1.97	2	ug/L	98.5	EFG	EPA 7471
Hg	11/21/96	QS748	SO	0.51	0.5	ug/L	102.0	EFG	EPA 7471
Hg	11/21/96	QS14	SO	2.03	2	ug/L	101.5	EFG	EPA 7471
Hg	11/21/96	QS748	SO	0.52	0.5	ug/L	104.0	EFG	EPA 7471
Hg	11/21/96	QS14	SO	2.01	2	ug/L	100.5	EFG	EPA 7471
Hg	11/21/96	QS748	SO	0.5	0.5	ug/L	100.0	EFG	EPA 7471
Hg	11/21/96	QS14	SO	2.07	2	ug/L	103.5	EFG	EPA 7471
Hg	11/21/96	QS748	SO	0.48	1.93	ug/L	24.9	EFG	EPA 7471
Hg	11/21/96	QS14	SO	1.93	2	ug/L	96.5	EFG	EPA 7471
Hg	11/21/96	QS748	SO	0.48	0.5	ug/L	96.0	EFG	EPA 7471
Hg	11/21/96	QS14	SO	2	2	ug/L	100.0	EFG	EPA 7471
Cd	12/4/96	ICV/QS11	SO	0.0196	0.02	mg/L	98.0	MAM	EPA 7131
Cd	12/4/96	CCV/QS10	SO	0.097	0.01	mg/L	970.0	MAM	EPA 7131
Cd	12/4/96	CCV/QS118	SO	0.0054	0.005	mg/L	108.0	MAM	EPA 7131
Cd	12/4/96	CCV/QS11	SO	0.0203	0.02	mg/L	101.5	MAM	EPA 7131
Cd	12/4/96	12/7/96	SO	0.0106	0.01	mg/L	106.0	MAM	EPA 7131
Cd	12/4/96	CCV/QS11	SO	0.0213	0.02	mg/L	106.5	MAM	EPA 7131
Cd	12/4/96	CCV/QS10	SO	0.0105	0.01	mg/L	105.0	MAM	EPA 7131
Se	12/7/96	ICV/QS11	SO	0.0209	0.02	mg/L	104.5	MAM	EPA 7740
Se	12/7/96	CCV/QS10	SO	0.0093	0.01	mg/L	93.0	MAM	EPA 7740
Se	12/7/96	CCV/QS11	SO	0.0181	0.02	mg/L	90.5	MAM	EPA 7740

INSTRUMENT CHECK STANDARDS DATA:									
Target	**Date**	**Sample #**	**Matrix**	**Observed**	**True Value**	**Units**	**% Rec**	**Analyst**	**Method**
Se	12/7/96	CCV/QS10	SO	0.0092	0.01	mg/L	92.0	MAM	EPA 7740
Se	12/7/96	CCV/QS11	SO	0.0181	0.02	mg/L	90.5	MAM	EPA 7740
Se	12/7/96	CCV/QS10	SO	0.0091	0.01	mg/L	91.0	MAM	EPA 7740
Se	12/7/96	CCV/QS11	SO	0.02	0.02	mg/L	100.0	MAM	EPA 7740
Cr	12/7/96	ICV/QS11	SO	0.0214	0.02	mg/L	107.0	MAM	EPA 7191
Cr	12/7/96	CCV/QS792	SO	0.0481	0.05	mg/L	96.2	MAM	EPA 7191
Cr	12/7/96	CCV/QS11	SO	0.0222	0.02	mg/L	111.0	MAM	EPA 7191
Cr	12/7/96	CCV/QS792	SO	0.0555	0.05	mg/L	111.0	MAM	EPA 7191
Cr	12/7/96	CCV/QS792	SO	0.0496	0.05	mg/L	99.2	MAM	EPA 7191
Cr	12/7/96	CCV/QS11	SO	0.0213	0.02	mg/L	106.5	MAM	EPA 7191
Cr	12/7/96	CCV/QS792	SO	0.0544	0.05	mg/L	108.8	MAM	EPA 7191
Cr	12/7/96	CCV/QS792	SO	0.0505	0.05	mg/L	101.0	MAM	EPA 7191
Cr	12/7/96	CCV/QS11	SO	0.0213	0.02	mg/L	106.5	MAM	EPA 7191
As	12/11/96	ICV/QS11	SO	0.02	0.02	mg/L	100.0	MAM	EPA 7060
As	12/11/96	CCV/QS792	SO	0.0535	0.05	mg/L	107.0	MAM	EPA 7060
As	12/11/96	CCV/QS11	SO	0.0213	0.02	mg/L	106.5	MAM	EPA 7060
As	12/11/96	CCV/QS792	SO	0.0545	0.05	mg/L	109.0	MAM	EPA 7060
As	12/11/96	CCV/QS11	SO	0.0224	0.02	mg/L	112.0	MAM	EPA 7060
As	12/11/96	CCV/QS792	SO	0.0544	0.05	mg/L	108.8	MAM	EPA 7060
As	12/11/96	CCV/QS11	SO	0.0203	0.02	mg/L	101.5	MAM	EPA 7060
Pb	12/24/96	ICV/QS792	WA	0.0491	0.05	mg/L	98.2	MAM	EPA 7421
Pb	12/24/96	CCV/QS10	WA	0.0099	0.01	mg/L	99.0	MAM	EPA 7421
Pb	12/24/96	CCV/QS792	WA	0.0504	0.05	mg/L	100.8	MAM	EPA 7421
Se	12/24/96	ICV/QS792	WA	0.0495	0.05	mg/L	99.0	MAM	EPA 7740
Se	12/24/96	CCV/QS118	WA	0.0049	0.005	mg/L	98.0	MAM	EPA 7740
Se	12/24/96	CCV/QS118	WA	0.0057	0.005	mg/L	114.0	MAM	EPA 7740
Se	12/24/96	CCV/QS792	WA	0.0503	0.05	mg/L	100.6	MAM	EPA 7740
Se	12/24/96	CCV/QS792	WA	0.0463	0.05	mg/L	92.6	MAM	EPA 7740
As	12/26/96	ICV/QS1182	WA	0.0047	0.005	mg/L	94.0	MAM	EPA 7060
As	12/26/96	CCV/QS10	WA	0.0101	0.01	mg/L	101.0	MAM	EPA 7060
As	12/26/96	CCV/QS10	WA	0.0103	0.01	mg/L	103.0	MAM	EPA 7060
As	12/26/96	CCV/QS10	WA	0.0089	0.01	mg/L	89.0	MAM	EPA 7060
Sb	12/26/96	ICV/QS792	WA	0.0048	0.005	mg/L	96.0	MAM	EPA 7041
Sb	12/26/96	CCV/QS792	WA	0.0263	0.025	mg/L	105.2	MAM	EPA 7041

INSTRUMENT CHECK STANDARDS DATA:									
Target	**Date**	**Sample #**	**Matrix**	**Observed**	**True Value**	**Units**	**% Rec**	**Analyst**	**Method**
Sb	12/26/96	CCV/QS792	WA	0.0528	0.05	mg/L	105.6	MAM	EPA 7041
Zn	12/27/96	CCV1	WA	1.02	1	mg/L	102.0	MPK	EPA 6010A
Ba	12/27/96	CCV1	WA	0.974	1	mg/L	97.4	MPK	EPA 6010A
Cd	12/27/96	CCV1	WA	1.04	1	mg/L	104.0	MPK	EPA 6010A
Cr	12/27/96	CCV1	WA	1.04	1	mg/L	104.0	MPK	EPA 6010A
Cu	12/27/96	CCV1	WA	1	1	mg/L	100.0	MPK	EPA 6010A
Zn	12/27/96	CCV2	WA	0.475	0.5	mg/L	95.0	MPK	EPA 6010A
Ba	12/27/96	CCV2	WA	1.07	1	mg/L	107.0	MPK	EPA 6010A
Cd	12/27/96	CCV2	WA	0.494	0.5	mg/L	98.8	MPK	EPA 6010A
Cr	12/27/96	CCV2	WA	0.489	0.5	mg/L	97.8	MPK	EPA 6010A
Cu	12/27/96	CCV2	WA	0.462	0.5	mg/L	92.4	MPK	EPA 6010A
Pb	11/26/96	QS7	SO	1.06	1	mg/L	106.0	JWC	EPA 6010A
Pb	11/26/96	QS1183	SO	0.2	0.2	mg/L	100.0	JWC	EPA 6010A
Pb	11/26/96	QS 42	SO	0.524	0.5	mg/L	104.8	JWC	EPA 6010A
Pb	11/26/96	QS 1183	SO	0.203	0.2	mg/L	101.5	JWC	EPA 6010A
Pb	11/26/96	QS 53	SO	0.1	0.1	mg/L	100.0	JWC	EPA 6010A
Pb	11/26/96	QS 53	SO	0.102	0.1	mg/L	102.0	JWC	EPA 6010A
Pb	11/26/96	QS 42	SO	0.543	0.5	mg/L	108.6	JWC	EPA 6010A

INSTALLATION :		RAVENNA							
JOB#		6A5975							

LABORATORY CONTROL SAMPLE DATA:

Target	Date	Sample #	Matrix	Observed	True Value	Units	% Rec	Analyst	Method
Ba	11/26/96	96ASD 4-54	SOIL	1.94	2.47	mg/L	78.5	JWC	EPA 6010A
Cu	11/26/96	96ASD 4-54	SOIL	1.6	2.04	mg/L	78.4	JWC	EPA 6010A
Sb	11/26/96	96ASD 4-54	SOIL	0.686	0.557	mg/L	123.2	JWC	EPA 6010A
Zn	11/26/96	96ASD 4-54	SOIL	1.56	2.07	mg/L	75.4	JWC	EPA 6010A
Pb	11/26/96	96ASD 4-54	SOIL	1.28	1.68	mg/L	76.2	JWC	EPA 6010A
Pb	11/26/96	96ASD 4-56	SOIL	0.596	0.774	mg/L	77.0	JWC	EPA 6010A
Ba	11/26/96	96ASD 4-56	SOIL	1.56	1.77	mg/L	88.1	JWC	EPA 6010A
Cu	11/26/96	96ASD 4-56	SOIL	1.41	1.9	mg/L	74.2	JWC	EPA 6010A
Sb	11/26/96	96ASD 4-56	SOIL	0.504	0.419	mg/L	120.3	JWC	EPA 6010A
Zn	11/26/96	96ASD 4-56	SOIL	0.968	1.21	mg/L	80.0	JWC	EPA 6010A
As	12/11/96	96ASD 4-51	SOIL	0.708	0.84	mg/L	84.3	MAM	EPA 7060
Cd	12/4/96	96ASD 4-51	SOIL	0.86	0.918	mg/L	93.7	MAM	EPA 7131
Cr	12/7/96	96ASD 4-51	SOIL	1.435	1.7	mg/L	84.4	MAM	EPA 7191
Se	12/7/96	96ASD 4-51	SOIL	0.97	1.11	mg/L	87.4	MAM	EPA 7740
As	12/11/96	96ASD 4-53	SOIL	0.668	0.654	mg/L	102.1	MAM	EPA 7060
Cd	12/4/96	96ASD 4-53	SOIL	0.758	0.854	mg/L	88.8	MAM	EPA 7131
Cr	12/7/96	96ASD 4-53	SOIL	0.695	0.716	mg/L	97.1	MAM	EPA 7191
Se	12/7/96	96ASD 4-53	SOIL	1.158	1.52	mg/L	76.2	MAM	EPA 7740
Hg	11/21/96	96ASD 4-51	SOIL	3.74	3.38	ug/L	110.7	EFG	EPA 7471
Hg	11/21/96	96ASD 4-52	SOIL	3.65	3.38	ug/L	108.0	EFG	EPA 7471
Hg	11/21/96	96ASD 4-53	SOIL	4.06	3.36	ug/L	120.8	EFG	EPA 7471
Pb	12/24/96	96ASD4-126	WA	0.0938	0.1	mg/L	93.8	MAM	EPA 7421
Se	12/24/96	96ASD4-126	WA	0.0924	0.1	mg/L	92.4	MAM	EPA 7740
As	12/26/96	96ASD4-126	WA	0.106	0.1	mg/L	106.0	MAM	EPA 7060
Sb	12/26/96	96ASD4-126	WA	0.0926	0.1	mg/L	92.6	MAM	EPA 7041
Cd	12/27/96	96ASD4-126	WA	0.094	0.1	mg/L	94.0	MPK	EPA 6010A
Cr	12/27/96	96ASD4-126	WA	0.108	0.1	mg/L	108.0	MPK	EPA 6010A
Zn	12/27/96	96ASD4-126	WA	0.091	0.1	mg/L	91.0	MPK	EPA 6010A
Cu	12/27/96	96ASD4-126	WA	0.125	0.1	mg/L	125.0	MPK	EPA 6010A
Ba	12/27/96	96ASD4-126	WA	0.099	0.1	mg/L	99.0	MPK	EPA 6010A

INSTALLATION :		RAVENNA									
JOB#		6A5975									

DUPLICATE DATA (pre-digestion SPIKE):

					SPK		DUP-SPK				
Target	**Date**	**Sample #**	**Matrix**		**Value #1**		**Value #2**	**Units**	**% RPD**	**Analyst**	**Method**
Ba	11/26/96	E1380	SOIL		4.67		4.63	mg/L	0.9	JWC	EPA 6010A
Cu	11/26/96	E1380	SOIL		0.47		0.49	mg/L	-3.5	JWC	EPA 6010A
Sb	11/26/96	E1380	SOIL	<	0.40	<	0.40	mg/L	0.0	JWC	EPA 6010A
Zn	11/26/96	E1380	SOIL		1.22		1.26	mg/L	-3.2	JWC	EPA 6010A
Ba	11/26/96	E1390	SOIL		4.26		4.18	mg/L	1.9	JWC	EPA 6010A
Cu	11/26/96	E1390	SOIL		0.58		0.56	mg/L	2.8	JWC	EPA 6010A
Sb	11/26/96	E1390	SOIL		0.88		0.77	mg/L	13.8	JWC	EPA 6010A
Zn	11/26/96	E1390	SOIL		1.70		1.52	mg/L	11.2	JWC	EPA 6010A
As	12/11/96	E1373	SOIL		0.02		0.02	mg/L	-12.3	MAM	EPA 7060
Cd	12/4/96	E1373	SOIL		0.05		0.05	mg/L	-1.1	MAM	EPA 7131
Cr	12/7/96	E1373	SOIL		0.02		0.02	mg/L	20.4	MAM	EPA 7191
Pb	11/26/96	E1380	SOIL		0.89		0.89	mg/L	0.6	JWC	EPA 6010A
Se	12/7/96	E1373	SOIL		0.10		0.10	mg/L	5.0	MAM	EPA 7740
As	12/11/96	E1404	SOIL		0.02		0.02	mg/L	-7.0	MAM	EPA 7060
Cd	12/4/96	E1404	SOIL		0.05		0.05	mg/L	-2.6	MAM	EPA 7131
Cr	12/7/96	E1404	SOIL		0.02		0.02	mg/L	-3.5	MAM	EPA 7191
Pb	11/26/96	E1390	SOIL		1.19		1.16	mg/L	2.6	JWC	EPA 6010A
Se	12/7/96	E1404	SOIL		0.01		0.01	mg/L	15.4	MAM	EPA 7740
Hg	11/21/96	E1373	SOIL		1.23		0.65	ug/L	61.7	EFG	EPA 7471
Hg	11/21/96	E1404	SOIL		1.07		1.04	ug/L	2.8	EFG	EPA 7471
Pb	12/24/96	E1369	WA		0.23		0.25	mg/L	-8.8	MAM	EPA 7421
Se	12/24/96	E1369	WA		1.36		1.45	mg/L	-6.1	MAM	EPA 7740
As	12/26/96	E1369	WA		0.96		0.96	mg/L	0.0	MAM	EPA 7060
Sb	12/26/96	E1369	WA		0.23		0.23	mg/L	-0.4	MAM	EPA 7024
Zn	12/27/96	E1369	WA		0.30		0.30	mg/L	-1.0	MPK	EPA 6010A
Ba	12/27/96	E1369	WA		0.98		1.08	mg/L	-10.1	MPK	EPA 6010A
Cd	12/27/96	E1369	WA		0.03		0.03	mg/L	0.0	MPK	EPA 6010A
Cr	12/27/96	E1369	WA		0.11		0.11	mg/L	0.0	MPK	EPA 6010A
Cu	12/27/96	E1369	WA		0.14		0.15	mg/L	-4.8	MPK	EPA 6010A

INSTALLATION :		RAVENNA									
JOB#		6A5975									

DUPLICATE DATA (post-digestion):

Target	Date	Sample #	Matrix		Value #1		Value #2	Units	% RPD	Analyst	Method
Ba	11/26/96	E1375	SOIL		0.946		0.938	mg/L	0.8	JWC	EPA 6010A
Cu	11/26/96	E1375	SOIL		0.100		0.099	mg/L	1.0	JWC	EPA 6010A
Sb	11/26/96	E1375	SOIL	<	0.400	<	0.400	mg/L	0.0	JWC	EPA 6010A
Zn	11/26/96	E1375	SOIL		0.396		0.380	mg/L	4.1	JWC	EPA 6010A
Ba	11/26/96	E1385	SOIL		1.980		1.970	mg/L	0.5	JWC	EPA 6010A
Cu	11/26/96	E1385	SOIL	<	0.020	<	0.020	mg/L	0.0	JWC	EPA 6010A
Sb	11/26/96	E1385	SOIL	<	0.400	<	0.400	mg/L	0.0	JWC	EPA 6010A
Zn	11/26/96	E1385	SOIL		0.061		0.071	mg/L	-15.2	JWC	EPA 6010A
Ba	11/26/96	E1393	SOIL		0.546		0.545	mg/L	0.2	JWC	EPA 6010A
Cu	11/26/96	E1393	SOIL		0.129		0.130	mg/L	-0.8	JWC	EPA 6010A
Sb	11/26/96	E1393	SOIL	<	0.400	<	0.400	mg/L	0.0	JWC	EPA 6010A
Zn	11/26/96	E1393	SOIL		1.360		1.350	mg/L	0.7	JWC	EPA 6010A
Ag	11/29/96	E1375	SO	<	0.050	<	0.050	mg/L	0.0	MAM	EPA 7761
Ag	11/29/96	E1401	SO	<	0.050	<	0.050	mg/L	0.0	MAM	EPA 7761
Hg	11/21/96	E1381	SO	<	0.200	<	0.200	ug/L	0.0	EFG	EPA 7471
Hg	11/21/96	E1391	SO		0.250		0.220	ug/L	12.8	EFG	EPA 7471
Hg	11/21/96	E1403	SO	<	0.200	<	0.200	ug/L	0.0	EFG	EPA 7471
Cd	12/4/96	E1373	SO		0.008		0.007	mg/L	8.2	MAM	EPA 7131
Cd	12/4/96	E1400	SO		0.002		0.002	mg/L	18.2	MAM	EPA 7131
Cr	12/7/96	E1374	SO		0.016		0.017	mg/L	-6.9	MAM	EPA 7191
Cr	12/7/96	E1399	SO		0.019		0.021	mg/L	-7.4	MAM	EPA 7191
As	12/11/96	E1378	SO		0.022		0.023	mg/L	-0.9	MAM	EPA 7060
As	12/11/96	E1398	SO		0.014		0.014	mg/L	0.0	MAM	EPA 7060
Se	12/7/96	E1400	SO		0.003		0.003	mg/L	23.7	MAM	EPA 7740
Se	12/7/96	E1374	SO		0.004		0.004	mg/L	-5.3	MAM	EPA 7740
Pb	12/24/96	E1370	WA		0.008		0.007	mg/L	8.3	MAM	EPA 7421
Se	12/24/96	E1370	WA	<	0.002	<	0.002	mg/L	0.0	MAM	EPA 7740
As	12/26/96	E1371	WA	<	0.002	<	0.002	mg/L	0.0	MAM	EPA 7060
Sb	12/26/96	E1371	WA		0.001		0.002	mg/L	-37.5	MAM	EPA 7041

DUPLICATE DATA (post-digestion):											
Target	**Date**	**Sample #**	**Matrix**		**Value #1**		**Value #2**	**Units**	**% RPD**	**Analyst**	**Method**
Zn	12/27/96	E1369	WA	<	0.020	<	0.020	mg/L	0.0	MPK	EPA 6010A
Ba	12/27/96	E1370	WA		0.018		0.018	mg/L	0.0	MPK	EPA 6010A
Cd	12/27/96	E1369	WA	<	0.010	<	0.010	mg/L	0.0	MPK	EPA 6010A
Cr	12/27/96	E1369	WA	<	0.010	<	0.010	mg/L	0.0	MPK	EPA 6010A
Cu	12/27/96	E1369	WA		0.026		0.027	mg/L	-3.8	MPK	EPA 6010A
Pb	11/26/96	E1375	SO	<	0.200	<	0.200	mg/L	0.0	JWC	EPA 6010A
Pb	11/26/96	E1385	SO	<	0.200	<	0.200	mg/L	0.0	JWC	EPA 6010A
Pb	11/26/96	E1393	SO		0.278		0.276	mg/L	0.7	JWC	EPA 6010A

INSTALLATION:		RAVENNA									
JOB#:		6A5975									
SPIKE DATA (pre-digestion):											
Target	**Date**	**Sample #**	**Matrix**	**Spike Conc**	**Unspike Conc**	**True Value**	**units**	**% Rec**	**Analyst**	**Method**	
Ba	11/26/96	E1380	SOIL	4.67	1.01	4	mg/L	91.5	JWC	EPA 6010A	
Cu	11/26/96	E1380	SOIL	0.474	0.084	0.5	mg/L	78.0	JWC	EPA 6010A	
Zn	11/26/96	E1380	SOIL	1.22	0.443	1	mg/L	77.7	JWC	EPA 6010A	
Ba	11/26/96	E1390	SOIL	4.26	0.393	4	mg/L	96.7	JWC	EPA 6010A	
Cu	11/26/96	E1390	SOIL	0.576	0.104	0.5	mg/L	94.4	JWC	EPA 6010A	
Sb	11/26/96	E1390	SOIL	0.884	0	1	mg/L	88.4	JWC	EPA 6010A	
Zn	11/26/96	E1390	SOIL	1.7	0.471	1	mg/L	122.9	JWC	EPA 6010A	
As	12/11/96	E1373	SOIL	0.8	0.041	0.8	mg/L	94.9	MAM	EPA 7060	
Cd	12/4/96	E1373	SOIL	0.094	0.0076	0.1	mg/L	86.4	MAM	EPA 7131	
Cr	12/7/96	E1373	SOIL	0.232	0.119	NONE	mg/L	#VALUE!	MAM	EPA 7191	
Pb	11/26/96	E1380	SOIL	0.894	0.179	1	mg/L	71.5	JWC	EPA 6010A	
Se	12/7/96	E1373	SOIL	0.102	0	0.2	mg/L	51.0	MAM	EPA 7740	
As	12/11/96	E1404	SOIL	0.895	0.065	0.8	mg/L	103.8	MAM	EPA 7060	
Cd	12/4/96	E1404	SOIL	0.0902	0	0.1	mg/L	90.2	MAM	EPA 7131	
Cr	12/7/96	E1404	SOIL	0.084	0.0555	NONE	mg/L	#VALUE!	MAM	EPA 7191	
Pb	11/26/96	E1390	SOIL	1.19	0.267	1	mg/L	92.3	JWC	EPA 6010A	
Se	12/7/96	E1404	SOIL	0.126	0	0.2	mg/L	63.0	MAM	EPA 7740	
Hg	11/21/96	E1373	SOIL	0.65	0	1	ug/L	65.0	EFG	EPA 7471	
Hg	11/21/96	E1404	SOIL	1.07	0	1	ug/L	107.0	EFG	EPA 7471	
Pb	12/24/96	E1369	WA	0.228	0.0035	0.25	mg/L	89.8	MAM	EPA 7421	
As	12/26/96	E1369	WA	0.955	0.0021	1	mg/L	95.3	MAM	EPA 7060	
Se	12/24/96	E1369	WA	1.36	0.0015	1	mg/L	135.9	MAM	EPA 7740	
Sb	12/26/96	E1369	WA	0.231	0.0025	0.25	mg/L	91.4	MAM	EPA 7041	
Zn	12/27/96	E1369	WA	0.302	0.043	0.25	mg/L	103.6	MPK	EPA 6010A	
Ba	12/27/96	E1369	WA	0.976	0.033	1	mg/L	94.3	MPK	EPA 6010A	
Cd	12/27/96	E1369	WA	0.026	0	0.025	mg/L	104.0	MPK	EPA 6010A	
Cr	12/27/96	E1369	WA	0.107	0	0.1	mg/L	107.0	MPK	EPA 6010A	
Cu	12/27/96	E1369	WA	0.143	0.031	0.125	mg/L	89.6	MPK	EPA 6010A	

INSTALLATION:	RAVENNA												
JOB#:	6A5975												
SPIKE DATA (post-digestion):													
				Unspike	Vol Spl	Conc of	Vol spike		Spike				
Target	Date	Sample #	Matrix	Conc	Taken	Spike soln	soln taken	Final vol	Conc	Units	% Rec	Analyst	Method
Ba	11/26/96	E1373	SO	0.886	10	5	1	11	1.23	mg/L	93.4	JWC	EPA 6010A
Cu	11/26/96	E1373	SO	0.111	10	10	1	11	0.946	mg/L	93.0	JWC	EPA 6010A
Sb	11/26/96	E1373	SO	0	10	10	1	11	0.805	mg/L	88.6	JWC	EPA 6010A
Zn	11/26/96	E1373	SO	2.45	10	5	1	11	2.64	mg/L	90.8	JWC	EPA 6010A
Ba	11/26/96	E1383	SO	0.492	10	5	1	11	0.861	mg/L	91.0	JWC	EPA 6010A
Cu	11/26/96	E1383	SO	0.036	10	10	1	11	0.851	mg/L	90.0	JWC	EPA 6010A
Sb	11/26/96	E1383	SO	0	10	10	1	11	0.774	mg/L	85.1	JWC	EPA 6010A
Zn	11/26/96	E1383	SO	0.322	10	5	1	11	0.695	mg/L	88.5	JWC	EPA 6010A
Ba	11/26/96	E1391	SO	0.446	10	5	1	11	0.856	mg/L	99.1	JWC	EPA 6010A
Cu	11/26/96	E1391	SO	0.045	10	10	1	11	0.956	mg/L	100.7	JWC	EPA 6010A
Sb	11/26/96	E1391	SO	0	10	10	1	11	0.87	mg/L	95.7	JWC	EPA 6010A
Zn	11/26/96	E1391	SO	0.264	10	5	1	11	0.675	mg/L	95.7	JWC	EPA 6010A
Ba	11/26/96	E1399	SO	1.43	10	5	1	11	1.69	mg/L	85.8	JWC	EPA 6010A
Cu	11/26/96	E1399	SO	0.106	10	10	1	11	0.884	mg/L	86.6	JWC	EPA 6010A
Sb	11/26/96	E1399	SO	0	10	10	1	11	0.807	mg/L	88.8	JWC	EPA 6010A
Zn	11/26/96	E1399	SO	0.562	10	5	1	11	0.898	mg/L	85.2	JWC	EPA 6010A
Hg	11/21/96	E1381	SO	0.07	10	10	1	11	1.03	ug/L	106.3	EFG	EPA 7471
Hg	11/21/96	E1391	SO	0.22	10	10	1	11	1.21	ug/L	111.1	EFG	EPA 7471
Hg	11/21/96	E1403	SO	0.12	10	10	1	11	1.04	ug/L	102.4	EFG	EPA 7471
Cd	12/4/96	E1373	SO	0.0076	5	1	0.05	5.05	0.0161	mg/L	86.6	MAM	EPA 7131
Cd	12/4/96	E1400	SO	0.0024	5	1	0.05	5.05	0.0107	mg/L	84.1	MAM	EPA 7131
Cr	12/7/96	E1374	SO	0.0155	5	1	0.1	5.1	0.0363	mg/L	107.6	MAM	EPA 7191
Cr	12/7/96	E1399	SO	0.0194	5	1	0.1	5.1	0.0361	mg/L	87.1	MAM	EPA 7191
As	12/11/96	E1378	SO	0.0223	5	1	0.1	5.1	0.0442	mg/L	113.9	MAM	EPA 7060
As	12/7/96	E1398	SO	0.0143	5	1	0.1	5.1	0.0324	mg/L	93.7	MAM	EPA 7060
Se	12/7/96	E1374	SO	0.0037	5	1	0.1	5.1	0.0207	mg/L	87.1	MAM	EPA 7740
Se	12/7/96	E1400	SO	0.0033	5	1	0.1	5.1	0.0181	mg/L	75.8	MAM	EPA 7740
Pb	12/24/96	E1370	WA	0.0075	5	1	0.05	5.05	0.0156	mg/L	82.6	MAM	EPA 7421
Se	12/24/96	E1370	WA	0	5	1	0.05	5.05	0.009	mg/L	90.9	MAM	EPA 7740

SPIKE DATA (post-digestion):

Target	Date	Sample #	Matrix	Unspike Conc	Vol Spl Taken	Conc of Spike soln	Vol spike soln taken	Final vol	Spike Conc	Units	% Rec	Analyst	Method
As	12/26/96	E1371	WA	0	5	1	0.05	5.05	0.009	mg/L	90.9	MAM	EPA 7060
Sb	12/26/96	E1371	WA	0.0013	5	1	0.05	5.05	0.0117	mg/L	105.2	MAM	EPA 7041
Zn	12/27/96	E1369	WA	0.13	10	100	0.05	10.05	0.662	mg/L	107.1	MPK	EPA 6010A
Ba	12/27/96	E1369	WA	0.033	10	100	0.05	10.05	0.574	mg/L	108.8	MPK	EPA 6010A
Cd	12/27/96	E1369	WA	0	10	100	0.05	10.05	0.546	mg/L	109.7	MPK	EPA 6010A
Cr	12/27/96	E1369	WA	0.019	10	100	0.05	10.05	0.568	mg/L	110.4	MPK	EPA 6010A
Cu	12/27/96	E1369	WA	0.046	10	100	0.05	10.05	0.509	mg/L	93.1	MPK	EPA 6010A
Hg	12/27/96	E1370	WA		10	100	0.05	10.05		mg/L	0.0	MPK	EPA 6010A
Cd	12/30/96	E1393	SO	0.0044	2	0.05	0.4	2.4	0.0136	mg/L	119.2	MAM	EPA 7131
Cr	12/30/96	E1393	SO	0.0268	2	0.05	0.4	2.4	0.028	mg/L	68.0	MAM	EPA 7191
Pb	11/26/96	E1373	SO	0.229	10	10.3	1	11	1.02	mg/L	86.7	JWC	EPA 6010A
Pb	11/26/96	E1383	SO	0	10	10.3	1	11	0.901	mg/L	96.2	JWC	EPA 6010A
Pb	11/26/96	E1391	SO	0	10	10.3	1	11	1	mg/L	106.8	JWC	EPA 6010A
Pb	11/26/96	E1391	SO	0	10	10.3	1	11	0.896	mg/L	95.7	JWC	EPA 6010A

12 DEC 1996

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Chromatographic Analysis Division
Analytical Results - Final Report

CLIENT: JAMES SHEEHY
HMWP
BLDG E1677
APG-EA, MD 21010-5422

Client Phone: 5-3651

Project Site: RAVENNA AAP
Project #: 37-23-5360
DLS Job #: 6A5975 *6A5975*

REPORT RELEASE AUTHORIZATION:

Signature: Richard W. Bishop for 11 Dec 1996
Dr. Howard Vinopal Date
Chief, Chromatographic Analysis Division

U.S. Army Center For Health Promotion And Preventive Medicine
Chromatographic Analysis Division
Aberdeen Proving Ground, Maryland 21010-5422
DSN: 584-3739 Commercial: (410) 671-3739

11 Dec 1996

Installation: Ravenna A.A.P.
Project Officer: James Sheehy
Sample Numbers: E1369-72, E1374-76, E1390-99, E1415-20, E1422-31, E1434-36, E1441-49.
Job Numbers: 6A5975, 6a6206

SUBJECT: ANALYTICAL RESULTS

1. Provided are the results for the analysis of explosives and related compounds in soil and water samples from Ravenna A.A.P. submitted 4 November 1996.

2. Analysis for the explosive compounds were performed in accordance with protocols established in EPA Method 8330 for soils and CAD SOPs CAB 97.1 (modified to include Tetryl) and MUS 3.1 for waters.

3. All samples were extracted within holding time limits.

4. Discussion:

Soils: One sample, E1374 (RVAP-031), contained 23,000 ug/g TNT. A second, E1398 (RVAP-301), contained HMX at 14 ug/g. A third, E1436 (RVAP-181), contained HMX at 73 ug/g, RDX at 479 ug/g, and TNT at 33 ug/g. These samples were qualitatively confirmed positive by GC analysis. None of the other samples contained any of the target analytes at or above the method reporting limits.

Waters: None of the samples contained target analytes above the method reporting limits. One sample, E1420 (RVAP-WW) contained RDX at a value estimated at 0.61 ug/L. The reporting limits for the 4-amino-2,6-dinitrotoluene and 2-amino-4,6-dinitrotoluene have been raised to 0.10 ug/L (instead of the target 0.02 ug/L level) due to problems with the matrix spikes and quality control.

The sample results are summarized on the LIMs printout pages.

The quality control results are summarized on the following pages:

Soils

Control Results (0.75 ug spikes on control soils)

Compound	97CAD1-61 % Recovered	97CAD1-62 %Recovered
HMX	86	91
RDX	74	98
1,3,5-TNB	103	92
1,3-DNB	103	95
TETRYL	103	85
NB	92	86
2,4,6-TNT	104	98
4A-2,6-DNT	64	86
2A-4,6-DNT	104	98
2,6-DNT	98	89
2,4-DNT	103	95
2-NT	102	100
3-NT	103	107
4-NT	100	98

Matrix Spike Results (0.75 ug spiked onto samples)

Compound	E1376MS % Recovered	E1422MS % Recovered	E1443MS % recovered
HMX	94	96	64
RDX	78	89	40
1,3,5-TNB	90	75	64
1,3-DNB	95	98	71
TETRYL	66	21	22
NB	91	104	64
2,4,6-TNT	89	98	30
4A-2,6-DNT*	160	166	81
2A-4,6-DNT	89	98	30
2,6-DNT	95	99	63
2,4-DNT	93	92	63
2-NT	99	95	70
3-NT	97	103	69
4-NT	93	96	66

* Interference

Waters

Control Results (Varying ug/L spikes into control water)

Compound	97CAD1-58		97CAD1-59		97CAD1-60	
	Theo.	% Recov.	Theo.	% Recov.	Theo.	% Recov.
2,6-DNT	0.040	100	0.056	102	**********	
2,4-DNT	0.080	100	0.080	104	**********	
2,4,6-TNT	0.12	100	0.80	112	**********	
RDX	**********		1.2	100	**********	
TETRYL	**********		2.4	104	**********	
HMX	**********		24	112	**********	
NB	0.12	100	**********		**********	
1,3-DNB	0.36	100	**********		**********	
1,3,5-TNB	0.12	92	**********		**********	
4A-2,6-DNT	**********		**********		0.10	0
2A-4,6-DNT	**********		**********		0.10	48

Matrix Spikes (Varying ug/L spikes into samples)
Recoveries

Compound	E1371MS		E1419MS	
	Theo.	% Recov.	Theo.	% Recov.
2,6-DNT	0.08	98	0.08	102
2,4-DNT	0.16	100	0.16	106
2,4,6-TNT	0.40	98	0.40	105
RDX	0.60	97	0.60	107
TETRYL	1.2	92	1.2	100
HMX	12	92	12	100
NB	0.24	100	0.24	104
1,3-DNB	0.72	99	0.72	103
1,3,5-TNB	0.24	88	0.24	88
4A-2,6-DNT	0.1	0	0.1	22
2A-4,6-DNT	0.1	37	0.1	50

Analyst: Kathleen Houston

Reviewed by:

Analyst: Curtis Oliver

Reviewed by: Richard W. Bishop

Sample Section

Field ID	Sample	Collected	Matrix
RVAP-161W	E1369	29-Oct-96	NW
RVAP-162W	E1370	29-Oct-96	NW
RVAP-163W	E1371	29-Oct-96	NW
RVAP-164W	E1372	29-Oct-96	NW
RVAP-031	E1374	28-Oct-96	SO
RVAP-032	E1375	28-Oct-96	SO
RVAP-033	E1376	28-Oct-96	SO
RVAP-161B	E1390	29-Oct-96	SS
RVAP-162B	E1391	29-Oct-96	SS
RVAP-163B	E1392	29-Oct-96	SS
RVAP-164B	E1393	29-Oct-96	SS
RVAP-321	E1394	29-Oct-96	SO
RVAP-322	E1395	29-Oct-96	SO
RVAP-323	E1396	29-Oct-96	SO
RVAP-324	E1397	29-Oct-96	SO
RVAP-301	E1398	29-Oct-96	SO
RVAP-151	E1399	29-Oct-96	SO

** Analytical Results - Final Customer Report **

LS Job# : 6A5975
eviewing Laboratory : EXP - CAD Exposive Team
nalytical Laboratory: EXP - CAD Explosives Team
ate Released : 11-DEC-96
enerated by : rwbishop

DLS Sample # .....: E1369 Date Sampled: 29-Oct-96 08:00
Field ID # .....: RVAP-161W Date Received: 31-Oct-96 00:00
Sample Description: Water, natural ground

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<0.030	ug/L	
1,3-DINITROBENZENE	<0.090	ug/L	
2,4,6-TRINITROTOLUENE	<0.030	ug/L	
2,4-DINITROTOLUENE	<0.030	ug/L	
2,6-DINITROTOLUENE	<0.010	ug/L	
NITROBENZENE	<0.030	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
HMX	<6.0	ug/L	
RDX	<0.30	ug/L	
TETRYL	<1.0	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
2-AMINO-4,6-DINITROTOLUENE	<0.10	ug/L	
4-AMINO-2,6-DINITROTOLUENE	<0.10	ug/L	

DLS Sample # .....: E1370 Date Sampled: 29-Oct-96 08:00
Field ID # .....: RVAP-162W Date Received: 31-Oct-96 00:00
Sample Description: Water, natural ground

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<0.030	ug/L	
1,3-DINITROBENZENE	<0.090	ug/L	
2,4,6-TRINITROTOLUENE	<0.030	ug/L	

** Analytical Results - Final Customer Report **

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
2,4-DINITROTOLUENE	<0.030	ug/L	
2,6-DINITROTOLUENE	<0.010	ug/L	
NITROBENZENE	<0.030	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
HMX	<6.0	ug/L	
RDX	<0.30	ug/L	
TETRYL	<1.0	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
2-AMINO-4,6-DINITROTOLUENE	<0.10	ug/L	
4-AMINO-2,6-DINITROTOLUENE	<0.10	ug/L	

DLS Sample # .....: E1371 Date Sampled: 29-Oct-96 08:00
Field ID # .....: RVAP-163W Date Received: 31-Oct-96 00:00
Sample Description: Water, natural ground

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<0.030	ug/L	
1,3-DINITROBENZENE	<0.090	ug/L	
2,4,6-TRINITROTOLUENE	<0.030	ug/L	
2,4-DINITROTOLUENE	<0.030	ug/L	
2,6-DINITROTOLUENE	<0.010	ug/L	
NITROBENZENE	<0.030	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
HMX	<6.0	ug/L	
RDX	<0.30	ug/L	
TETRYL	<1.0	ug/L	

** Analytical Results - Final Customer Report **

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
2-AMINO-4,6-DINITROTOLUENE	<0.10	ug/L	
4-AMINO-2,6-DINITROTOLUENE	<0.10	ug/L	

DLS Sample # .....: E1372 Date Sampled: 29-Oct-96 08:00
Field ID # .....: RVAP-164W Date Received: 31-Oct-96 00:00
Sample Description: Water, natural ground

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<0.030	ug/L	
1,3-DINITROBENZENE	<0.090	ug/L	
2,4,6-TRINITROTOLUENE	<0.030	ug/L	
2,4-DINITROTOLUENE	<0.030	ug/L	
2,6-DINITROTOLUENE	<0.010	ug/L	
NITROBENZENE	<0.030	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
HMX	<6.0	ug/L	
RDX	<0.30	ug/L	
TETRYL	<1.0	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
2-AMINO-4,6-DINITROTOLUENE	<0.10	ug/L	
4-AMINO-2,6-DINITROTOLUENE	<0.10	ug/L	

DLS Sample # .....: E1374 Date Sampled: 28-Oct-96 11:45
Field ID # .....: RVAP-031 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.33	ug/g	

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3-DINITROBENZENE	<.33	ug/g	
2,4,6-TRINITROTOLUENE	23000	ug/g	
2,4-DINITROTOLUENE	<.33	ug/g	
2,6-DINITROTOLUENE	<.33	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.33	ug/g	
2-NITROTOLUENE	<.33	ug/g	
3-NITROTOLUENE	<.33	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.33	ug/g	
4-NITROTOLUENE	<.33	ug/g	
HMX	<1.6	ug/g	
NITROBENZENE	<.33	ug/g	
RDX	<.82	ug/g	
TETRYL	<.33	ug/g	

DLS Sample # .....: E1375 Date Sampled: 28-Oct-96 11:45
Field ID # .....: RVAP-032 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.30	ug/g	
1,3-DINITROBENZENE	<.30	ug/g	
2,4,6-TRINITROTOLUENE	<.30	ug/g	
2,4-DINITROTOLUENE	<.30	ug/g	
2,6-DINITROTOLUENE	<.30	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.30	ug/g	
2-NITROTOLUENE	<.30	ug/g	
3-NITROTOLUENE	<.30	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.30	ug/g	
4-NITROTOLUENE	<.30	ug/g	
HMX	<1.5	ug/g	
NITROBENZENE	<.30	ug/g	
RDX	<.74	ug/g	
TETRYL	<.30	ug/g	

DLS Sample # .....: E1376 Date Sampled: 28-Oct-96 12:00
Field ID # .....: RVAP-033 Date Received: 31-Oct-96 10:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.30	ug/g	
1,3-DINITROBENZENE	<.30	ug/g	
2,4,6-TRINITROTOLUENE	<.30	ug/g	
2,4-DINITROTOLUENE	<.30	ug/g	
2,6-DINITROTOLUENE	<.30	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.30	ug/g	
2-NITROTOLUENE	<.30	ug/g	
3-NITROTOLUENE	<.30	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.30	ug/g	
4-NITROTOLUENE	<.30	ug/g	
HMX	<1.5	ug/g	
NITROBENZENE	<.30	ug/g	
RDX	<.74	ug/g	
TETRYL	<.30	ug/g	

DLS Sample # .....: E1390 Date Sampled: 29-Oct-96 08:15
Field ID # .....: RVAP-161B Date Received: 31-Oct-96 10:15
Sample Description: Sludges (Sediments)

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.52	ug/g	
1,3-DINITROBENZENE	<.52	ug/g	
2,4,6-TRINITROTOLUENE	<.52	ug/g	
2,4-DINITROTOLUENE	<.52	ug/g	
2,6-DINITROTOLUENE	<.52	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.52	ug/g	
2-NITROTOLUENE	<.52	ug/g	
3-NITROTOLUENE	<.52	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.52	ug/g	
4-NITROTOLUENE	<.52	ug/g	
HMX	<2.6	ug/g	
NITROBENZENE	<.52	ug/g	
RDX	<1.3	ug/g	
TETRYL	<.52	ug/g	

DLS Sample # .....: E1391 Date Sampled: 29-Oct-96 08:30
Field ID # .....: RVAP-162B Date Received: 31-Oct-96 10:15
Sample Description: Sludges (Sediments)

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.26	ug/g	
1,3-DINITROBENZENE	<.26	ug/g	
2,4,6-TRINITROTOLUENE	<.26	ug/g	
2,4-DINITROTOLUENE	<.26	ug/g	
2,6-DINITROTOLUENE	<.26	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.26	ug/g	
2-NITROTOLUENE	<.26	ug/g	
3-NITROTOLUENE	<.26	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.26	ug/g	
4-NITROTOLUENE	<.26	ug/g	
HMX	<1.3	ug/g	
NITROBENZENE	<.26	ug/g	
RDX	<.66	ug/g	
TETRYL	<.26	ug/g	

DLS Sample # .....: E1392 Date Sampled: 29-Oct-96 08:45
Field ID # .....: RVAP-163B Date Received: 31-Oct-96 10:15
Sample Description: Sludges (Sediments)

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.35	ug/g	
1,3-DINITROBENZENE	<.35	ug/g	
2,4,6-TRINITROTOLUENE	<.35	ug/g	
2,4-DINITROTOLUENE	<.35	ug/g	
2,6-DINITROTOLUENE	<.35	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.35	ug/g	
2-NITROTOLUENE	<.35	ug/g	
3-NITROTOLUENE	<.35	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.35	ug/g	
4-NITROTOLUENE	<.35	ug/g	
HMX	<1.8	ug/g	
NITROBENZENE	<.35	ug/g	
RDX	<.89	ug/g	
TETRYL	<.35	ug/g	

DLS Sample # .....: E1393 Date Sampled: 29-Oct-96 08:20
Field ID # .....: RVAP-164B Date Received: 31-Oct-96 10:15
Sample Description: Sludges (Sediments)

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.38	ug/g	
1,3-DINITROBENZENE	<.38	ug/g	
2,4,6-TRINITROTOLUENE	<.38	ug/g	
2,4-DINITROTOLUENE	<.38	ug/g	
2,6-DINITROTOLUENE	<.38	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.38	ug/g	
2-NITROTOLUENE	<.38	ug/g	
3-NITROTOLUENE	<.38	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.38	ug/g	
4-NITROTOLUENE	<.38	ug/g	
HMX	<1.9	ug/g	
NITROBENZENE	<.38	ug/g	
RDX	<.94	ug/g	
TETRYL	<.38	ug/g	

DLS Sample # .....: E1394 Date Sampled: 29-Oct-96 13:35
Field ID # .....: RVAP-321 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.24	ug/g	
1,3-DINITROBENZENE	<.24	ug/g	
2,4,6-TRINITROTOLUENE	<.24	ug/g	
2,4-DINITROTOLUENE	<.24	ug/g	
2,6-DINITROTOLUENE	<.24	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.24	ug/g	
2-NITROTOLUENE	<.24	ug/g	
3-NITROTOLUENE	<.24	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.24	ug/g	
4-NITROTOLUENE	<.24	ug/g	
HMX	<1.2	ug/g	
NITROBENZENE	<.24	ug/g	
RDX	<.61	ug/g	
TETRYL	<.24	ug/g	

DLS Sample # .....: E1395 Date Sampled: 29-Oct-96 13:35
Field ID # .....: RVAP-322 Date Received: 31-Oct-96 10:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.26	ug/g	
1,3-DINITROBENZENE	<.26	ug/g	
2,4,6-TRINITROTOLUENE	<.26	ug/g	
2,4-DINITROTOLUENE	<.26	ug/g	
2,6-DINITROTOLUENE	<.26	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.26	ug/g	
2-NITROTOLUENE	<.26	ug/g	
3-NITROTOLUENE	<.26	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.26	ug/g	
4-NITROTOLUENE	<.26	ug/g	
HMX	<1.3	ug/g	
NITROBENZENE	<.26	ug/g	
RDX	<.65	ug/g	
TETRYL	<.26	ug/g	

DLS Sample # .....: E1396 Date Sampled: 29-Oct-96 10:35
Field ID # .....: RVAP-323 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.29	ug/g	
1,3-DINITROBENZENE	<.29	ug/g	
2,4,6-TRINITROTOLUENE	<.29	ug/g	
2,4-DINITROTOLUENE	<.29	ug/g	
2,6-DINITROTOLUENE	<.29	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.29	ug/g	
2-NITROTOLUENE	<.29	ug/g	
3-NITROTOLUENE	<.29	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.29	ug/g	
4-NITROTOLUENE	<.29	ug/g	
HMX	<1.5	ug/g	
NITROBENZENE	<.29	ug/g	
RDX	<.73	ug/g	
TETRYL	<.29	ug/g	

DLS Sample # .....: E1397 Date Sampled: 29-Oct-96 13:35
Field ID # .....: RVAP-324 Date Received: 31-Oct-96 10:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.29	ug/g	
1,3-DINITROBENZENE	<.29	ug/g	
2,4,6-TRINITROTOLUENE	<.29	ug/g	
2,4-DINITROTOLUENE	<.29	ug/g	
2,6-DINITROTOLUENE	<.29	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.29	ug/g	
2-NITROTOLUENE	<.29	ug/g	
3-NITROTOLUENE	<.29	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.29	ug/g	
4-NITROTOLUENE	<.29	ug/g	
HMX	<1.5	ug/g	
NITROBENZENE	<.29	ug/g	
RDX	<.73	ug/g	
TETRYL	<.29	ug/g	

DLS Sample # .....: E1398 Date Sampled: 29-Oct-96 11:00
Field ID # .....: RVAP-301 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.29	ug/g	
1,3-DINITROBENZENE	<.29	ug/g	
2,4,6-TRINITROTOLUENE	<.29	ug/g	
2,4-DINITROTOLUENE	<.29	ug/g	
2,6-DINITROTOLUENE	<.29	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.29	ug/g	
2-NITROTOLUENE	<.29	ug/g	
3-NITROTOLUENE	<.29	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.29	ug/g	
4-NITROTOLUENE	<.29	ug/g	
HMX	14	ug/g	
NITROBENZENE	<.29	ug/g	
RDX	<.73	ug/g	
TETRYL	<.29	ug/g	

DLS Sample # .....: E1399 Date Sampled: 29-Oct-96 11:20
Field ID # .....: RVAP-151 Date Received: 31-Oct-96 10:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.26	ug/g	
1,3-DINITROBENZENE	<.26	ug/g	
2,4,6-TRINITROTOLUENE	<.26	ug/g	
2,4-DINITROTOLUENE	<.26	ug/g	
2,6-DINITROTOLUENE	<.26	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.26	ug/g	
2-NITROTOLUENE	<.26	ug/g	
3-NITROTOLUENE	<.26	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.26	ug/g	
4-NITROTOLUENE	<.26	ug/g	
HMX	<1.3	ug/g	
NITROBENZENE	<.26	ug/g	
RDX	<.64	ug/g	
TETRYL	<.26	ug/g	

Sample Section

Field ID	Sample	Collected	Matrix
RVAP-261W	E1415	30-Oct-96	NW
RVAP-263W	E1416	31-Oct-96	NW
RVAP-031W	E1417	31-Oct-96	NW
RVAP-032W	E1418	31-Oct-96	NW
RVAP-033W	E1419	01-Nov-96	NW
RVAP-WW	E1420	01-Nov-96	DW
RVAP-261A	E1422	30-Oct-96	SO
RVAP-261B	E1423	30-Oct-96	SO
RVAP-262A	E1424	30-Oct-96	SO
RVAP-262B	E1425	30-Oct-96	SO
RVAP-263A	E1426	31-Oct-96	SO
RVAP-263B	E1427	31-Oct-96	SO
RVAP-264A	E1428	31-Oct-96	SO
RVAP-264B	E1429	31-Oct-96	SO
RVAP-031B	E1430	31-Oct-96	SS
RVAP-032B	E1431	31-Oct-96	SS
RVAP-351A	E1434	31-Oct-96	SO
RVAP-351B	E1435	31-Oct-96	SO
RVAP-181	E1436	01-Nov-96	SO
RVAP-331	E1441	01-Nov-96	SO
RVAP-332	E1442	01-Nov-96	SO
RVAP-333	E1443	01-Nov-96	SO
RVAP-334	E1444	01-Nov-96	SO
RVAP-335	E1445	01-Nov-96	SO
RVAP-336	E1446	01-Nov-96	SO
RVAP-337	E1447	01-Nov-96	SO
RVAP-338	E1448	01-Nov-96	SO
RVAP-33B	E1449	01-Nov-96	SS

Date: 11-Dec-96 15:56
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Analytical Results - Final Report

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Project Site: RAVENNA AAP
Project #: 37-23-5360
DLS Job #: 6A6206 *6A6206*

REPORT RELEASE AUTHORIZATION:

Signature: Richard W Busby for 11 Dec 96
Dr. Howard Vinopal Date
Chief, Chromatographic Analysis Division

** Analytical Results - Final Customer Report **

DLS Job# : 6A6206
Reviewing Laboratory : EXP - CAD Exposive Team
Analytical Laboratory: EXP - CAD Explosives Team
Date Released : 11-DEC-96
Generated by : rwbishop

DLS Sample # .....: E1415 Date Sampled: 30-Oct-96 13:20
Field ID # .....: RVAP-261W Date Received: 04-Nov-96 09:15
Sample Description: Water, natural ground

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<0.030	ug/L	
1,3-DINITROBENZENE	<0.090	ug/L	
2,4,6-TRINITROTOLUENE	<0.030	ug/L	
2,4-DINITROTOLUENE	<0.030	ug/L	
2,6-DINITROTOLUENE	<0.010	ug/L	
NITROBENZENE	<0.030	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
HMX	<6.0	ug/L	
RDX	<0.30	ug/L	
TETRYL	<1.0	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
2-AMINO-4,6-DINITROTOLUENE	<0.10	ug/L	
4-AMINO-2,6-DINITROTOLUENE	<0.10	ug/L	

DLS Sample # .....: E1416 Date Sampled: 31-Oct-96 10:05
Field ID # .....: RVAP-263W Date Received: 04-Nov-96 09:15
Sample Description: Water, natural ground

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<0.030	ug/L	
1,3-DINITROBENZENE	<0.090	ug/L	
2,4,6-TRINITROTOLUENE	<0.030	ug/L	

** Analytical Results - Final Customer Report **

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
2,4-DINITROTOLUENE	<0.030	ug/L	
2,6-DINITROTOLUENE	<0.010	ug/L	
NITROBENZENE	<0.030	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
HMX	<6.0	ug/L	
RDX	<0.30	ug/L	
TETRYL	<1.0	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
2-AMINO-4,6-DINITROTOLUENE	<0.10	ug/L	
4-AMINO-2,6-DINITROTOLUENE	<0.10	ug/L	

DLS Sample # .....: E1417 Date Sampled: 31-Oct-96 14:05
Field ID # .....: RVAP-031W Date Received: 04-Nov-96 09:15
Sample Description: Water, natural ground

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<0.030	ug/L	
1,3-DINITROBENZENE	<0.090	ug/L	
2,4,6-TRINITROTOLUENE	<0.030	ug/L	
2,4-DINITROTOLUENE	<0.030	ug/L	
2,6-DINITROTOLUENE	<0.010	ug/L	
NITROBENZENE	<0.030	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
HMX	<6.0	ug/L	
RDX	<0.30	ug/L	
TETRYL	<1.0	ug/L	

** Analytical Results - Final Customer Report **

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
2-AMINO-4,6-DINITROTOLUENE	<0.10	ug/L	
4-AMINO-2,6-DINITROTOLUENE	<0.10	ug/L	

DLS Sample # .....: E1418 Date Sampled: 31-Oct-96 14:40
Field ID # .....: RVAP-032W Date Received: 04-Nov-96 09:15
Sample Description: Water, natural ground

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<0.030	ug/L	
1,3-DINITROBENZENE	<0.090	ug/L	
2,4,6-TRINITROTOLUENE	<0.030	ug/L	
2,4-DINITROTOLUENE	<0.030	ug/L	
2,6-DINITROTOLUENE	<0.010	ug/L	
NITROBENZENE	<0.030	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
HMX	<6.0	ug/L	
RDX	<0.30	ug/L	
TETRYL	<1.0	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
2-AMINO-4,6-DINITROTOLUENE	<0.10	ug/L	
4-AMINO-2,6-DINITROTOLUENE	<0.10	ug/L	

DLS Sample # .....: E1419 Date Sampled: 01-Nov-96 10:15
Field ID # .....: RVAP-033W Date Received: 04-Nov-96 09:15
Sample Description: Water, natural ground

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<0.030	ug/L	

** Analytical Results - Final Customer Report **

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
1,3-DINITROBENZENE	<0.090	ug/L	
2,4,6-TRINITROTOLUENE	<0.030	ug/L	
2,4-DINITROTOLUENE	<0.030	ug/L	
2,6-DINITROTOLUENE	<0.010	ug/L	
NITROBENZENE	<0.030	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
HMX	<6.0	ug/L	
RDX	<0.30	ug/L	
TETRYL	<1.0	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
2-AMINO-4,6-DINITROTOLUENE	<0.10	ug/L	
4-AMINO-2,6-DINITROTOLUENE	<0.10	ug/L	

DLS Sample # .....: E1420 Date Sampled: 01-Nov-96 16:00
Field ID # .....: RVAP-WW Date Received: 04-Nov-96 09:15
Sample Description: Water, domestic waste (sewage

Procedure: 014 - Explosives (DNT,TNT,NB,DNB,TNB) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<0.030	ug/L	
1,3-DINITROBENZENE	<0.090	ug/L	
2,4,6-TRINITROTOLUENE	<0.030	ug/L	
2,4-DINITROTOLUENE	<0.030	ug/L	
2,6-DINITROTOLUENE	<0.010	ug/L	
NITROBENZENE	<0.030	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
HMX	<6.0	ug/L	
RDX	0.61	ug/L	

** Analytical Results - Final Customer Report **

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : CAB 97.1 Analyst: COLIVER Date Analyzed: 06-NOV-96

Analyte	Concentration	Units	Qualifier
TETRYL	<1.0	ug/L	

Procedure: 017 - Explosives (DNT,TNT,RDX,HMX,Tetryl) lod = .003 ppb
Method : MUS 3.1 Analyst: COLIVER Date Analyzed: 07-DEC-96

Analyte	Concentration	Units	Qualifier
2-AMINO-4,6-DINITROTOLUENE	<0.10	ug/L	
4-AMINO-2,6-DINITROTOLUENE	<0.10	ug/L	

DLS Sample # .....: E1422 Date Sampled: 30-Oct-96 10:15
Field ID # .....: RVAP-261A Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.34	ug/g	
1,3-DINITROBENZENE	<.34	ug/g	
2,4,6-TRINITROTOLUENE	<.34	ug/g	
2,4-DINITROTOLUENE	<.34	ug/g	
2,6-DINITROTOLUENE	<.34	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.34	ug/g	
2-NITROTOLUENE	<.34	ug/g	
3-NITROTOLUENE	<.34	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.34	ug/g	
4-NITROTOLUENE	<.34	ug/g	
HMX	<1.7	ug/g	
NITROBENZENE	<.34	ug/g	
RDX	<.84	ug/g	
TETRYL	<.34	ug/g	

DLS Sample # .....: E1423 Date Sampled: 30-Oct-96 14:00
Field ID # .....: RVAP-261B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.30	ug/g	
1,3-DINITROBENZENE	<.30	ug/g	

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
2,4,6-TRINITROTOLUENE	<.30	ug/g	
2,4-DINITROTOLUENE	<.30	ug/g	
2,6-DINITROTOLUENE	<.30	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.30	ug/g	
2-NITROTOLUENE	<.30	ug/g	
3-NITROTOLUENE	<.30	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.30	ug/g	
4-NITROTOLUENE	<.30	ug/g	
HMX	<1.5	ug/g	
NITROBENZENE	<.30	ug/g	
RDX	<.74	ug/g	
TETRYL	<.30	ug/g	

DLS Sample # .....: E1424 Date Sampled: 30-Oct-96 15:35
Field ID # .....: RVAP-262A Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.30	ug/g	
1,3-DINITROBENZENE	<.30	ug/g	
2,4,6-TRINITROTOLUENE	<.30	ug/g	
2,4-DINITROTOLUENE	<.30	ug/g	
2,6-DINITROTOLUENE	<.30	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.30	ug/g	
2-NITROTOLUENE	<.30	ug/g	
3-NITROTOLUENE	<.30	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.30	ug/g	
4-NITROTOLUENE	<.30	ug/g	
HMX	<1.5	ug/g	
NITROBENZENE	<.30	ug/g	
RDX	<.75	ug/g	
TETRYL	<.30	ug/g	

DLS Sample # .....: E1425 Date Sampled: 30-Oct-96 16:10
Field ID # .....: RVAP-262B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.27	ug/g	
1,3-DINITROBENZENE	<.27	ug/g	
2,4,6-TRINITROTOLUENE	<.27	ug/g	
2,4-DINITROTOLUENE	<.27	ug/g	
2,6-DINITROTOLUENE	<.27	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.27	ug/g	
2-NITROTOLUENE	<.27	ug/g	
3-NITROTOLUENE	<.27	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.27	ug/g	
4-NITROTOLUENE	<.27	ug/g	
HMX	<1.4	ug/g	
NITROBENZENE	<.27	ug/g	
RDX	<.69	ug/g	
TETRYL	<.27	ug/g	

DLS Sample # .....: E1426 Date Sampled: 31-Oct-96 09:00
Field ID # .....: RVAP-263A Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.34	ug/g	
1,3-DINITROBENZENE	<.34	ug/g	
2,4,6-TRINITROTOLUENE	<.34	ug/g	
2,4-DINITROTOLUENE	<.34	ug/g	
2,6-DINITROTOLUENE	<.34	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.34	ug/g	
2-NITROTOLUENE	<.34	ug/g	
3-NITROTOLUENE	<.34	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.34	ug/g	
4-NITROTOLUENE	<.34	ug/g	
HMX	<1.7	ug/g	
NITROBENZENE	<.34	ug/g	
RDX	<.86	ug/g	
TETRYL	<.34	ug/g	

DLS Sample # .....: E1427 Date Sampled: 31-Oct-96 09:20
Field ID # .....: RVAP-263B Date Received: 04-Nov-96 09:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.26	ug/g	
1,3-DINITROBENZENE	<.26	ug/g	
2,4,6-TRINITROTOLUENE	<.26	ug/g	
2,4-DINITROTOLUENE	<.26	ug/g	
2,6-DINITROTOLUENE	<.26	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.26	ug/g	
2-NITROTOLUENE	<.26	ug/g	
3-NITROTOLUENE	<.26	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.26	ug/g	
4-NITROTOLUENE	<.26	ug/g	
HMX	<1.3	ug/g	
NITROBENZENE	<.26	ug/g	
RDX	<.65	ug/g	
TETRYL	<.26	ug/g	

DLS Sample # .....: E1428 Date Sampled: 31-Oct-96 13:00
Field ID # .....: RVAP-264A Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.24	ug/g	
1,3-DINITROBENZENE	<.24	ug/g	
2,4,6-TRINITROTOLUENE	<.24	ug/g	
2,4-DINITROTOLUENE	<.24	ug/g	
2,6-DINITROTOLUENE	<.24	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.24	ug/g	
2-NITROTOLUENE	<.24	ug/g	
3-NITROTOLUENE	<.24	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.24	ug/g	
4-NITROTOLUENE	<.24	ug/g	
HMX	<1.2	ug/g	
NITROBENZENE	<.24	ug/g	
RDX	<.60	ug/g	
TETRYL	<.24	ug/g	

DLS Sample # .....: E1429 Date Sampled: 31-Oct-96 13:00
Field ID # .....: RVAP-264B Date Received: 04-Nov-96 09:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.27	ug/g	
1,3-DINITROBENZENE	<.27	ug/g	
2,4,6-TRINITROTOLUENE	<.27	ug/g	
2,4-DINITROTOLUENE	<.27	ug/g	
2,6-DINITROTOLUENE	<.27	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.27	ug/g	
2-NITROTOLUENE	<.27	ug/g	
3-NITROTOLUENE	<.27	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.27	ug/g	
4-NITROTOLUENE	<.27	ug/g	
HMX	<1.4	ug/g	
NITROBENZENE	<.27	ug/g	
RDX	<.68	ug/g	
TETRYL	<.27	ug/g	

DLS Sample # .....: E1430 Date Sampled: 31-Oct-96 14:05
Field ID # .....: RVAP-031B Date Received: 04-Nov-96 09:15
Sample Description: Sludges (Sediments)

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.39	ug/g	
1,3-DINITROBENZENE	<.39	ug/g	
2,4,6-TRINITROTOLUENE	<.39	ug/g	
2,4-DINITROTOLUENE	<.39	ug/g	
2,6-DINITROTOLUENE	<.39	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.39	ug/g	
2-NITROTOLUENE	<.39	ug/g	
3-NITROTOLUENE	<.39	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.39	ug/g	
4-NITROTOLUENE	<.39	ug/g	
HMX	<2.0	ug/g	
NITROBENZENE	<.39	ug/g	
RDX	<.98	ug/g	
TETRYL	<.39	ug/g	

DLS Sample # .....: E1431 Date Sampled: 31-Oct-96 14:40
Field ID # .....: RVAP-032B Date Received: 04-Nov-96 09:15
Sample Description: Sludges (Sediments)

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<1.7	ug/g	
1,3-DINITROBENZENE	<1.7	ug/g	
2,4,6-TRINITROTOLUENE	<1.7	ug/g	
2,4-DINITROTOLUENE	<1.7	ug/g	
2,6-DINITROTOLUENE	<1.7	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<1.7	ug/g	
2-NITROTOLUENE	<1.7	ug/g	
3-NITROTOLUENE	<1.7	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<1.7	ug/g	
4-NITROTOLUENE	<1.7	ug/g	
HMX	<8.6	ug/g	
NITROBENZENE	<1.7	ug/g	
RDX	<4.3	ug/g	
TETRYL	<1.7	ug/g	

DLS Sample # .....: E1434 Date Sampled: 31-Oct-96 17:00
Field ID # .....: RVAP-351A Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.27	ug/g	
1,3-DINITROBENZENE	<.27	ug/g	
2,4,6-TRINITROTOLUENE	<.27	ug/g	
2,4-DINITROTOLUENE	<.27	ug/g	
2,6-DINITROTOLUENE	<.27	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.27	ug/g	
2-NITROTOLUENE	<.27	ug/g	
3-NITROTOLUENE	<.27	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.27	ug/g	
4-NITROTOLUENE	<.27	ug/g	
HMX	<1.4	ug/g	
NITROBENZENE	<.27	ug/g	
RDX	<.68	ug/g	
TETRYL	<.27	ug/g	

DLS Sample # .....: E1435 Date Sampled: 31-Oct-96 17:15
Field ID # .....: RVAP-351B Date Received: 04-Nov-96 09:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.26	ug/g	
1,3-DINITROBENZENE	<.26	ug/g	
2,4,6-TRINITROTOLUENE	<.26	ug/g	
2,4-DINITROTOLUENE	<.26	ug/g	
2,6-DINITROTOLUENE	<.26	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.26	ug/g	
2-NITROTOLUENE	<.26	ug/g	
3-NITROTOLUENE	<.26	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.26	ug/g	
4-NITROTOLUENE	<.26	ug/g	
HMX	1.3	ug/g	
NITROBENZENE	<.26	ug/g	
RDX	<.65	ug/g	
TETRYL	<.26	ug/g	

DLS Sample # .....: E1436 Date Sampled: 01-Nov-96 08:20
Field ID # .....: RVAP-181 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.29	ug/g	
1,3-DINITROBENZENE	<.29	ug/g	
2,4,6-TRINITROTOLUENE	33	ug/g	
2,4-DINITROTOLUENE	<.29	ug/g	
2,6-DINITROTOLUENE	<.29	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.29	ug/g	
2-NITROTOLUENE	<.29	ug/g	
3-NITROTOLUENE	<.29	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.29	ug/g	
4-NITROTOLUENE	<.29	ug/g	
HMX	73	ug/g	
NITROBENZENE	<.29	ug/g	
RDX	480	ug/g	
TETRYL	<.29	ug/g	

DLS Sample # .....: E1441 Date Sampled: 01-Nov-96 10:15
Field ID # .....: RVAP-331 Date Received: 04-Nov-96 09:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.33	ug/g	
1,3-DINITROBENZENE	<.33	ug/g	
2,4,6-TRINITROTOLUENE	<.33	ug/g	
2,4-DINITROTOLUENE	<.33	ug/g	
2,6-DINITROTOLUENE	<.33	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.33	ug/g	
2-NITROTOLUENE	<.33	ug/g	
3-NITROTOLUENE	<.33	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.33	ug/g	
4-NITROTOLUENE	<.33	ug/g	
HMX	<1.7	ug/g	
NITROBENZENE	<.33	ug/g	
RDX	<.83	ug/g	
TETRYL	<.33	ug/g	

DLS Sample # .....: E1442 Date Sampled: 01-Nov-96 10:20
Field ID # .....: RVAP-332 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.30	ug/g	
1,3-DINITROBENZENE	<.30	ug/g	
2,4,6-TRINITROTOLUENE	<.30	ug/g	
2,4-DINITROTOLUENE	<.30	ug/g	
2,6-DINITROTOLUENE	<.30	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.30	ug/g	
2-NITROTOLUENE	<.30	ug/g	
3-NITROTOLUENE	<.30	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.30	ug/g	
4-NITROTOLUENE	<.30	ug/g	
HMX	<1.5	ug/g	
NITROBENZENE	<.30	ug/g	
RDX	<.75	ug/g	
TETRYL	<.30	ug/g	

DLS Sample # .....: E1443 Date Sampled: 01-Nov-96 10:20
Field ID # .....: RVAP-333 Date Received: 04-Nov-96 09:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.32	ug/g	
1,3-DINITROBENZENE	<.32	ug/g	
2,4,6-TRINITROTOLUENE	<.32	ug/g	
2,4-DINITROTOLUENE	<.32	ug/g	
2,6-DINITROTOLUENE	<.32	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.32	ug/g	
2-NITROTOLUENE	<.32	ug/g	
3-NITROTOLUENE	<.32	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.32	ug/g	
4-NITROTOLUENE	<.32	ug/g	
HMX	<1.6	ug/g	
NITROBENZENE	<.32	ug/g	
RDX	<.79	ug/g	
TETRYL	<.32	ug/g	

DLS Sample # .....: E1444 Date Sampled: 01-Nov-96 11:00
Field ID # .....: RVAP-334 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.27	ug/g	
1,3-DINITROBENZENE	<.27	ug/g	
2,4,6-TRINITROTOLUENE	<.27	ug/g	
2,4-DINITROTOLUENE	<.27	ug/g	
2,6-DINITROTOLUENE	<.27	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.27	ug/g	
2-NITROTOLUENE	<.27	ug/g	
3-NITROTOLUENE	<.27	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.27	ug/g	
4-NITROTOLUENE	<.27	ug/g	
HMX	<1.4	ug/g	
NITROBENZENE	<.27	ug/g	
RDX	<.68	ug/g	
TETRYL	<.27	ug/g	

DLS Sample # .....: E1445 Date Sampled: 01-Nov-96 11:05
Field ID # .....: RVAP-335 Date Received: 04-Nov-96 09:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.26	ug/g	
1,3-DINITROBENZENE	<.26	ug/g	
2,4,6-TRINITROTOLUENE	<.26	ug/g	
2,4-DINITROTOLUENE	<.26	ug/g	
2,6-DINITROTOLUENE	<.26	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.26	ug/g	
2-NITROTOLUENE	<.26	ug/g	
3-NITROTOLUENE	<.26	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.26	ug/g	
4-NITROTOLUENE	<.26	ug/g	
HMX	<1.3	ug/g	
NITROBENZENE	<.26	ug/g	
RDX	<.66	ug/g	
TETRYL	<.26	ug/g	

DLS Sample # .....: E1446 Date Sampled: 01-Nov-96 11:10
Field ID # .....: RVAP-336 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.27	ug/g	
1,3-DINITROBENZENE	<.27	ug/g	
2,4,6-TRINITROTOLUENE	<.27	ug/g	
2,4-DINITROTOLUENE	<.27	ug/g	
2,6-DINITROTOLUENE	<.27	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.27	ug/g	
2-NITROTOLUENE	<.27	ug/g	
3-NITROTOLUENE	<.27	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.27	ug/g	
4-NITROTOLUENE	<.27	ug/g	
HMX	<1.4	ug/g	
NITROBENZENE	<.27	ug/g	
RDX	<.68	ug/g	
TETRYL	<.27	ug/g	

DLS Sample # .....: E1447 Date Sampled: 01-Nov-96 11:15
Field ID # .....: RVAP-337 Date Received: 04-Nov-96 09:15
Sample Description: Soils

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.31	ug/g	
1,3-DINITROBENZENE	<.31	ug/g	
2,4,6-TRINITROTOLUENE	<.31	ug/g	
2,4-DINITROTOLUENE	<.31	ug/g	
2,6-DINITROTOLUENE	<.31	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.31	ug/g	
2-NITROTOLUENE	<.31	ug/g	
3-NITROTOLUENE	<.31	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.31	ug/g	
4-NITROTOLUENE	<.31	ug/g	
HMX	<1.5	ug/g	
NITROBENZENE	<.31	ug/g	
RDX	<.77	ug/g	
TETRYL	<.31	ug/g	

DLS Sample # .....: E1448 Date Sampled: 01-Nov-96 11:20
Field ID # .....: RVAP-338 Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.28	ug/g	
1,3-DINITROBENZENE	<.28	ug/g	
2,4,6-TRINITROTOLUENE	<.28	ug/g	
2,4-DINITROTOLUENE	<.28	ug/g	
2,6-DINITROTOLUENE	<.28	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.28	ug/g	
2-NITROTOLUENE	<.28	ug/g	
3-NITROTOLUENE	<.28	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.28	ug/g	
4-NITROTOLUENE	<.28	ug/g	
HMX	<1.4	ug/g	
NITROBENZENE	<.28	ug/g	
RDX	<.69	ug/g	
TETRYL	<.28	ug/g	

DLS Sample # .....: E1449 Date Sampled: 01-Nov-96 10:20
Field ID # .....: RVAP-33B Date Received: 04-Nov-96 09:15
Sample Description: Sludges (Sediments)

** Analytical Results - Final Customer Report **

Procedure: 009 - Explosives (EXP)
Method : EPA 8330 Analyst: KHOUSTON Date Analyzed: 06-DEC-96

Analyte	Concentration	Units	Qualifier
1,3,5-TRINITROBENZENE	<.36	ug/g	
1,3-DINITROBENZENE	<.36	ug/g	
2,4,6-TRINITROTOLUENE	<.36	ug/g	
2,4-DINITROTOLUENE	<.36	ug/g	
2,6-DINITROTOLUENE	<.36	ug/g	
2-AMINO-4,6-DINITROTOLUENE	<.36	ug/g	
2-NITROTOLUENE	<.36	ug/g	
3-NITROTOLUENE	<.36	ug/g	
4-AMINO-2,6-DINITROTOLUENE	<.36	ug/g	
4-NITROTOLUENE	<.36	ug/g	
HMX	<1.8	ug/g	
NITROBENZENE	<.36	ug/g	
RDX	<.89	ug/g	
TETRYL	<.36	ug/g	

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A division of Thermo Analytical Inc.

LLI Sample No. SW 2609494
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Unspiked Cont. No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01BKG

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
5441	EPA SW846/8260 (soil)			See Page 2		
5442	EPA SW846/8260 (soil) cont			See Page 3		
0111	Moisture	18.6	0.50	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:31:39 D 0001 8 540184
40.00 00052950 ASR000

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609494
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Unspiked Cont. No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
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Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil)						
5443	Dichlorodifluoromethane	< 5.	5.	ug/kg	< 6.	6.
5444	Chloromethane	< 5.	5.	ug/kg	< 6.	6.
5445	Vinyl Chloride	< 5.	5.	ug/kg	< 6.	6.
5446	Bromomethane	< 5.	5.	ug/kg	< 6.	6.
5447	Chloroethane	< 5.	5.	ug/kg	< 6.	6.
5448	Trichlorofluoromethane	< 5.	5.	ug/kg	< 6.	6.
5449	1,1-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5450	Methylene Chloride	5.	5.	ug/kg	6.	6.
5451	trans-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5452	1,1-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5453	2,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5454	cis-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5455	Chloroform	< 5.	5.	ug/kg	< 6.	6.
5456	Bromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5457	1,1,1-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5458	Carbon Tetrachloride	< 5.	5.	ug/kg	< 6.	6.
5459	1,1-Dichloropropene	< 5.	5.	ug/kg	< 6.	6.
5460	Benzene	< 5.	5.	ug/kg	< 6.	6.
5461	1,2-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5462	Trichloroethene	< 5.	5.	ug/kg	< 6.	6.
5463	1,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5464	Dibromomethane	< 5.	5.	ug/kg	< 6.	6.
5465	Bromodichloromethane	< 5.	5.	ug/kg	< 6.	6.
5466	Toluene	< 5.	5.	ug/kg	< 6.	6.
5467	1,1,2-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5468	Tetrachloroethene	< 5.	5.	ug/kg	< 6.	6.
5469	1,3-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5470	Dibromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5471	1,2-Dibromoethane	< 5.	5.	ug/kg	< 6.	6.
5472	Chlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Methylene chloride was detected in the method blank at an estimated concentration of 2. ug/kg. The blank value was not subtracted from the analytical result.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

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Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609494
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Unspiked Cont. No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01BKG

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil) cont						
5473	1,1,1,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5474	Ethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5475	m+p-Xylene	< 5.	5.	ug/kg	< 6.	6.
5476	o-Xylene	< 5.	5.	ug/kg	< 6.	6.
5477	Styrene	< 5.	5.	ug/kg	< 6.	6.
5478	Bromoform	< 5.	5.	ug/kg	< 6.	6.
5479	Isopropylbenzene	< 5.	5.	ug/kg	< 6.	6.
5480	1,1,2,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5481	Bromobenzene	< 5.	5.	ug/kg	< 6.	6.
5482	1,2,3-Trichloropropane	< 5.	5.	ug/kg	< 6.	6.
5483	n-Propylbenzene	< 5.	5.	ug/kg	< 6.	6.
5484	2-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5485	1,3,5-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5486	4-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5487	tert-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5488	1,2,4-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5489	sec-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5490	p-Isopropyltoluene	< 5.	5.	ug/kg	< 6.	6.
5491	1,3-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5492	1,4-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5493	n-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5494	1,2-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5495	1,2-Dibromo-3-chloropropane	< 5.	5.	ug/kg	< 6.	6.
5496	1,2,4-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5497	Hexachlorobutadiene	< 5.	5.	ug/kg	< 6.	6.
5498	Naphthalene	< 5.	5.	ug/kg	< 6.	6.
5499	1,2,3-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

17

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Analysis Repor

Lancaster Laboratories
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LABORATORY CHRONICLE

LLI Sample No. SW 2609494
Collected: 10/28/96

Submitted: 11/01/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Unspiked Cont. No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01BKG

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5441	EPA SW846/8260 (soil)	SW-846 8260A	1	11/05/96 2002	David A. Hoppman
5442	EPA SW846/8260 (soil) cont	SW-846 8260A	1	11/05/96 2002	David A. Hoppman
0111	Moisture	EPA 160.3 modified	2	11/09/96 1159	Susan A. Engle

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LLI Sample No. SW 2609495
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Matrix Spike Cont. No.96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01MS

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
5441	EPA SW846/8260 (soil)			See Page 2		
5442	EPA SW846/8260 (soil) cont			See Page 3		
0118	Moisture	18.6	0.50	% by wt.		

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:32:13 D 0001 8 540184
0.00 00000000 ASR000

Respectfully Submitted
Jenifer E. Hess, B.S.
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A division of Thermo Analytical Inc.

LLI Sample No. SW 2609495
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Matrix Spike Cont. No.96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01MS

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil)						
5443	Dichlorodifluoromethane	20.	5.	ug/kg	25.	6.
5444	Chloromethane	16.	5.	ug/kg	20.	6.
5445	Vinyl Chloride	17.	5.	ug/kg	20.	6.
5446	Bromomethane	13.	5.	ug/kg	16.	6.
5447	Chloroethane	10.	5.	ug/kg	12.	6.
5448	Trichlorofluoromethane	9.	5.	ug/kg	11.	6.
5449	1,1-Dichloroethene	16.	5.	ug/kg	19.	6.
5450	Methylene Chloride	22.	5.	ug/kg	27.	6.
5451	trans-1,2-Dichloroethene	15.	5.	ug/kg	18.	6.
5452	1,1-Dichloroethane	17.	5.	ug/kg	21.	6.
5453	2,2-Dichloropropane	16.	5.	ug/kg	20.	6.
5454	cis-1,2-Dichloroethene	17.	5.	ug/kg	21.	6.
5455	Chloroform	18.	5.	ug/kg	22.	6.
5456	Bromochloromethane	17.	5.	ug/kg	21.	6.
5457	1,1,1-Trichloroethane	18.	5.	ug/kg	22.	6.
5458	Carbon Tetrachloride	18.	5.	ug/kg	22.	6.
5459	1,1-Dichloropropene	18.	5.	ug/kg	22.	6.
5460	Benzene	17.	5.	ug/kg	21.	6.
5461	1,2-Dichloroethane	18.	5.	ug/kg	22.	6.
5462	Trichloroethene	18.	5.	ug/kg	22.	6.
5463	1,2-Dichloropropane	18.	5.	ug/kg	22.	6.
5464	Dibromomethane	18.	5.	ug/kg	22.	6.
5465	Bromodichloromethane	16.	5.	ug/kg	20.	6.
5466	Toluene	18.	5.	ug/kg	22.	6.
5467	1,1,2-Trichloroethane	18.	5.	ug/kg	22.	6.
5468	Tetrachloroethene	18.	5.	ug/kg	22.	6.
5469	1,3-Dichloropropane	19.	5.	ug/kg	23.	6.
5470	Dibromochloromethane	16.	5.	ug/kg	20.	6.
5471	1,2-Dibromoethane	17.	5.	ug/kg	21.	6.
5472	Chlorobenzene	18.	5.	ug/kg	22.	6.

Methylene chloride was detected in the method blank at an estimated concentration of 2. ug/kg. The blank value was not subtracted from the analytical result.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

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LLI Sample No. SW 2609495
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Matrix Spike Cont. No.96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01MS

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil) cont						
5473	1,1,1,2-Tetrachloroethane	19.	5.	ug/kg	23.	6.
5474	Ethylbenzene	19.	5.	ug/kg	23.	6.
5475	m+p-Xylene	38.	5.	ug/kg	47.	6.
5476	o-Xylene	18.	5.	ug/kg	23.	6.
5477	Styrene	18.	5.	ug/kg	23.	6.
5478	Bromoform	17.	5.	ug/kg	21.	6.
5479	Isopropylbenzene	20.	5.	ug/kg	25.	6.
5480	1,1,2,2-Tetrachloroethane	19.	5.	ug/kg	23.	6.
5481	Bromobenzene	19.	5.	ug/kg	23.	6.
5482	1,2,3-Trichloropropane	20.	5.	ug/kg	25.	6.
5483	n-Propylbenzene	19.	5.	ug/kg	24.	6.
5484	2-Chlorotoluene	19.	5.	ug/kg	23.	6.
5485	1,3,5-Trimethylbenzene	19.	5.	ug/kg	23.	6.
5486	4-Chlorotoluene	19.	5.	ug/kg	23.	6.
5487	tert-Butylbenzene	20.	5.	ug/kg	25.	6.
5488	1,2,4-Trimethylbenzene	18.	5.	ug/kg	23.	6.
5489	sec-Butylbenzene	18.	5.	ug/kg	23.	6.
5490	p-Isopropyltoluene	20.	5.	ug/kg	24.	6.
5491	1,3-Dichlorobenzene	18.	5.	ug/kg	22.	6.
5492	1,4-Dichlorobenzene	18.	5.	ug/kg	22.	6.
5493	n-Butylbenzene	19.	5.	ug/kg	23.	6.
5494	1,2-Dichlorobenzene	17.	5.	ug/kg	21.	6.
5495	1,2-Dibromo-3-chloropropane	17.	5.	ug/kg	21.	6.
5496	1,2,4-Trichlorobenzene	16.	5.	ug/kg	19.	6.
5497	Hexachlorobutadiene	17.	5.	ug/kg	21.	6.
5498	Naphthalene	15.	5.	ug/kg	18.	6.
5499	1,2,3-Trichlorobenzene	17.	5.	ug/kg	20.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

MEMBER ACIL
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Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.

&&&.

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609495
Collected: 10/28/96

Submitted: 11/01/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Matrix Spike Cont. No.96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01MS

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5441	EPA SW846/8260 (soil)	SW-846 8260A	1	11/05/96 2347	L. Alberto Rodgiguez
5442	EPA SW846/8260 (soil) cont	SW-846 8260A	1	11/05/96 2347	L. Alberto Rodgiguez
0118	Moisture	EPA 160.3 modified	2	11/09/96 1159	Susan A. Engle

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609496
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Matrix Spike Dup Con #96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01MSD

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
5441	EPA SW846/8260 (soil)			See Page 2		
5442	EPA SW846/8260 (soil) cont			See Page 3		
0118	Moisture	18.6	0.50	% by wt.		
0121	Moisture Duplicate	17.3	0.50	% by wt.		

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:34:14 D 0001 8 540184
0.00 00000000 ASR000

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

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Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609496
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Matrix Spike Dup Con #96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01MSD

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil)						
5443	Dichlorodifluoromethane	27.	5.	ug/kg	33.	6.
5444	Chloromethane	16.	5.	ug/kg	19.	6.
5445	Vinyl Chloride	18.	5.	ug/kg	23.	6.
5446	Bromomethane	18.	5.	ug/kg	23.	6.
5447	Chloroethane	11.	5.	ug/kg	14.	6.
5448	Trichlorofluoromethane	19.	5.	ug/kg	23.	6.
5449	1,1-Dichloroethene	19.	5.	ug/kg	24.	6.
5450	Methylene Chloride	23.	5.	ug/kg	28.	6.
5451	trans-1,2-Dichloroethene	17.	5.	ug/kg	21.	6.
5452	1,1-Dichloroethane	17.	5.	ug/kg	21.	6.
5453	2,2-Dichloropropane	20.	5.	ug/kg	25.	6.
5454	cis-1,2-Dichloroethene	19.	5.	ug/kg	24.	6.
5455	Chloroform	19.	5.	ug/kg	23.	6.
5456	Bromochloromethane	20.	5.	ug/kg	25.	6.
5457	1,1,1-Trichloroethane	21.	5.	ug/kg	25.	6.
5458	Carbon Tetrachloride	21.	5.	ug/kg	26.	6.
5459	1,1-Dichloropropene	18.	5.	ug/kg	22.	6.
5460	Benzene	17.	5.	ug/kg	21.	6.
5461	1,2-Dichloroethane	19.	5.	ug/kg	23.	6.
5462	Trichloroethene	19.	5.	ug/kg	24.	6.
5463	1,2-Dichloropropane	17.	5.	ug/kg	21.	6.
5464	Dibromomethane	18.	5.	ug/kg	23.	6.
5465	Bromodichloromethane	17.	5.	ug/kg	21.	6.
5466	Toluene	18.	5.	ug/kg	23.	6.
5467	1,1,2-Trichloroethane	18.	5.	ug/kg	22.	6.
5468	Tetrachloroethene	20.	5.	ug/kg	25.	6.
5469	1,3-Dichloropropane	18.	5.	ug/kg	23.	6.
5470	Dibromochloromethane	18.	5.	ug/kg	23.	6.
5471	1,2-Dibromoethane	18.	5.	ug/kg	22.	6.
5472	Chlorobenzene	18.	5.	ug/kg	22.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Michele McClarin

Respectfully Submitted
Michele McClarin, B.A.
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Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609496
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Matrix Spike Dup Con #96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01MSD

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil) cont						
5473	1,1,1,2-Tetrachloroethane	20.	5.	ug/kg	25.	6.
5474	Ethylbenzene	19.	5.	ug/kg	24.	6.
5475	m+p-Xylene	38.	5.	ug/kg	46.	6.
5476	o-Xylene	19.	5.	ug/kg	23.	6.
5477	Styrene	19.	5.	ug/kg	23.	6.
5478	Bromoform	19.	5.	ug/kg	23.	6.
5479	Isopropylbenzene	20.	5.	ug/kg	24.	6.
5480	1,1,2,2-Tetrachloroethane	19.	5.	ug/kg	23.	6.
5481	Bromobenzene	22.	5.	ug/kg	26.	6.
5482	1,2,3-Trichloropropane	21.	5.	ug/kg	26.	6.
5483	n-Propylbenzene	19.	5.	ug/kg	23.	6.
5484	2-Chlorotoluene	20.	5.	ug/kg	24.	6.
5485	1,3,5-Trimethylbenzene	20.	5.	ug/kg	24.	6.
5486	4-Chlorotoluene	20.	5.	ug/kg	25.	6.
5487	tert-Butylbenzene	19.	5.	ug/kg	24.	6.
5488	1,2,4-Trimethylbenzene	19.	5.	ug/kg	23.	6.
5489	sec-Butylbenzene	16.	5.	ug/kg	20.	6.
5490	p-Isopropyltoluene	19.	5.	ug/kg	23.	6.
5491	1,3-Dichlorobenzene	19.	5.	ug/kg	24.	6.
5492	1,4-Dichlorobenzene	19.	5.	ug/kg	23.	6.
5493	n-Butylbenzene	16.	5.	ug/kg	19.	6.
5494	1,2-Dichlorobenzene	18.	5.	ug/kg	22.	6.
5495	1,2-Dibromo-3-chloropropane	18.	5.	ug/kg	22.	6.
5496	1,2,4-Trichlorobenzene	14.	5.	ug/kg	18.	6.
5497	Hexachlorobutadiene	11.	5.	ug/kg	14.	6.
5498	Naphthalene	14.	5.	ug/kg	17.	6.
5499	1,2,3-Trichlorobenzene	14.	5.	ug/kg	18.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Michele McClarin

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

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See reverse side for explanation of symbols and abbreviations

&&&

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609496
Collected: 10/28/96

Submitted: 11/01/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1377 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-381 Matrix Spike Dup Con #96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1377 SDG#: PSC63-01MSD

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5441	EPA SW846/8260 (soil)	SW-846 8260A	1	11/05/96 2115	David A. Hoppman
5442	EPA SW846/8260 (soil) cont	SW-846 8260A	1	11/05/96 2115	David A. Hoppman
0118	Moisture	EPA 160.3 modified	2	11/09/96 1159	Susan A. Engle
0121	Moisture Duplicate	EPA 160.3 modified	2	11/09/96 1159	Susan A. Engle

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609497
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1378 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-382 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1378 SDG#: PSC63-02

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
5441	EPA SW846/8260 (soil)			See Page 2		
5442	EPA SW846/8260 (soil) cont			See Page 3		
0111	Moisture	19.7	0.50	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:35:51 D 0001 8 540184
0.00 00048950 ASR000

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

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Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609497
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1378 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-382 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1378 SDG#: PSC63-02

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	AS RECEIVED UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil)						
5443	Dichlorodifluoromethane	< 5.	5.	ug/kg	< 6.	6.
5444	Chloromethane	< 5.	5.	ug/kg	< 6.	6.
5445	Vinyl Chloride	< 5.	5.	ug/kg	< 6.	6.
5446	Bromomethane	< 5.	5.	ug/kg	< 6.	6.
5447	Chloroethane	< 5.	5.	ug/kg	< 6.	6.
5448	Trichlorofluoromethane	< 5.	5.	ug/kg	< 6.	6.
5449	1,1-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5450	Methylene Chloride	8.	5.	ug/kg	9.	6.
5451	trans-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5452	1,1-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5453	2,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5454	cis-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5455	Chloroform	< 5.	5.	ug/kg	< 6.	6.
5456	Bromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5457	1,1,1-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5458	Carbon Tetrachloride	< 5.	5.	ug/kg	< 6.	6.
5459	1,1-Dichloropropene	< 5.	5.	ug/kg	< 6.	6.
5460	Benzene	< 5.	5.	ug/kg	< 6.	6.
5461	1,2-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5462	Trichloroethene	< 5.	5.	ug/kg	< 6.	6.
5463	1,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5464	Dibromomethane	< 5.	5.	ug/kg	< 6.	6.
5465	Bromodichloromethane	< 5.	5.	ug/kg	< 6.	6.
5466	Toluene	< 5.	5.	ug/kg	< 6.	6.
5467	1,1,2-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5468	Tetrachloroethene	< 5.	5.	ug/kg	< 6.	6.
5469	1,3-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5470	Dibromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5471	1,2-Dibromoethane	< 5.	5.	ug/kg	< 6.	6.
5472	Chlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Methylene chloride was detected in the method blank at an estimated concentration of 2. ug/kg. The blank value was not subtracted from the analytical result.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

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Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609497
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1378 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-382 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1378 SDG#: PSC63-02

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil) cont						
5473	1,1,1,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5474	Ethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5475	m+p-Xylene	< 5.	5.	ug/kg	< 6.	6.
5476	o-Xylene	< 5.	5.	ug/kg	< 6.	6.
5477	Styrene	< 5.	5.	ug/kg	< 6.	6.
5478	Bromoform	< 5.	5.	ug/kg	< 6.	6.
5479	Isopropylbenzene	< 5.	5.	ug/kg	< 6.	6.
5480	1,1,2,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5481	Bromobenzene	< 5.	5.	ug/kg	< 6.	6.
5482	1,2,3-Trichloropropane	< 5.	5.	ug/kg	< 6.	6.
5483	n-Propylbenzene	< 5.	5.	ug/kg	< 6.	6.
5484	2-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5485	1,3,5-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5486	4-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5487	tert-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5488	1,2,4-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5489	sec-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5490	p-Isopropyltoluene	< 5.	5.	ug/kg	< 6.	6.
5491	1,3-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5492	1,4-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5493	n-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5494	1,2-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5495	1,2-Dibromo-3-chloropropane	< 5.	5.	ug/kg	< 6.	6.
5496	1,2,4-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5497	Hexachlorobutadiene	< 5.	5.	ug/kg	< 6.	6.
5498	Naphthalene	< 5.	5.	ug/kg	< 6.	6.
5499	1,2,3-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

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&&& .

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609497
Collected: 10/28/96

Submitted: 11/01/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1378 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-382 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1378 SDG#: PSC63-02

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5441	EPA SW846/8260 (soil)	SW-846 8260A	1	11/06/96 0150	L. Alberto Rodgiguez
5442	EPA SW846/8260 (soil) cont	SW-846 8260A	1	11/06/96 0150	L. Alberto Rodgiguez
0111	Moisture	EPA 160.3 modified	1	11/07/96 1706	Amy Marie Lawlor

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Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609498
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1379 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-383 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1379 SDG#: PSC63-03

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
5441	EPA SW846/8260 (soil)			See Page 2		
5442	EPA SW846/8260 (soil) cont			See Page 3		
0111	Moisture	18.9	0.50	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:36:27 D 0001 8 540184
0.00 00048950 ASR000

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

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See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609498
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1379 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-383 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1379 SDG#: PSC63-03

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	AS RECEIVED UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil)						
5443	Dichlorodifluoromethane	< 5.	5.	ug/kg	< 6.	6.
5444	Chloromethane	< 5.	5.	ug/kg	< 6.	6.
5445	Vinyl Chloride	< 5.	5.	ug/kg	< 6.	6.
5446	Bromomethane	< 5.	5.	ug/kg	< 6.	6.
5447	Chloroethane	< 5.	5.	ug/kg	< 6.	6.
5448	Trichlorofluoromethane	< 5.	5.	ug/kg	< 6.	6.
5449	1,1-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5450	Methylene Chloride	9.	5.	ug/kg	12.	6.
5451	trans-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5452	1,1-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5453	2,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5454	cis-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5455	Chloroform	< 5.	5.	ug/kg	< 6.	6.
5456	Bromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5457	1,1,1-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5458	Carbon Tetrachloride	< 5.	5.	ug/kg	< 6.	6.
5459	1,1-Dichloropropene	< 5.	5.	ug/kg	< 6.	6.
5460	Benzene	< 5.	5.	ug/kg	< 6.	6.
5461	1,2-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5462	Trichloroethene	< 5.	5.	ug/kg	< 6.	6.
5463	1,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5464	Dibromomethane	< 5.	5.	ug/kg	< 6.	6.
5465	Bromodichloromethane	< 5.	5.	ug/kg	< 6.	6.
5466	Toluene	< 5.	5.	ug/kg	< 6.	6.
5467	1,1,2-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5468	Tetrachloroethene	< 5.	5.	ug/kg	< 6.	6.
5469	1,3-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5470	Dibromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5471	1,2-Dibromoethane	< 5.	5.	ug/kg	< 6.	6.
5472	Chlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Methylene chloride was detected in the method blank at an estimated concentration of 2. ug/kg. The blank value was not subtracted from the analytical result.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted,
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609498
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1379 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-383 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1379 SDG#: PSC63-03

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	AS RECEIVED UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil) cont						
5473	1,1,1,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5474	Ethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5475	m+p-Xylene	< 5.	5.	ug/kg	< 6.	6.
5476	o-Xylene	< 5.	5.	ug/kg	< 6.	6.
5477	Styrene	< 5.	5.	ug/kg	< 6.	6.
5478	Bromoform	< 5.	5.	ug/kg	< 6.	6.
5479	Isopropylbenzene	< 5.	5.	ug/kg	< 6.	6.
5480	1,1,2,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5481	Bromobenzene	< 5.	5.	ug/kg	< 6.	6.
5482	1,2,3-Trichloropropane	< 5.	5.	ug/kg	< 6.	6.
5483	n-Propylbenzene	< 5.	5.	ug/kg	< 6.	6.
5484	2-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5485	1,3,5-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5486	4-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5487	tert-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5488	1,2,4-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5489	sec-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5490	p-Isopropyltoluene	< 5.	5.	ug/kg	< 6.	6.
5491	1,3-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5492	1,4-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5493	n-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5494	1,2-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5495	1,2-Dibromo-3-chloropropane	< 5.	5.	ug/kg	< 6.	6.
5496	1,2,4-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5497	Hexachlorobutadiene	< 5.	5.	ug/kg	< 6.	6.
5498	Naphthalene	< 5.	5.	ug/kg	< 6.	6.
5499	1,2,3-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Michele McClarin
Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.

&&&.

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609498
Collected: 10/28/96

Submitted: 11/01/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1379 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-383 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1379 SDG#: PSC63-03

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5441	EPA SW846/8260 (soil)	SW-846 8260A	1	11/06/96 0226	L. Alberto Rodgiguez
5442	EPA SW846/8260 (soil) cont	SW-846 8260A	1	11/06/96 0226	L. Alberto Rodgiguez
0111	Moisture	EPA 160.3 modified	1	11/07/96 1706	Amy Marie Lawlor

Analysis Report

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609499
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1380 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-384 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1380 SDG#: PSC63-04

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
5441	EPA SW846/8260 (soil)			See Page 2		
5442	EPA SW846/8260 (soil) cont			See Page 3		
0111	Moisture	20.9	0.50	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:37:11 D 0001 8 540184
0.00 00048950 ASR000

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL
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2425 New Holland Pike
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See reverse side for explanation of symbols and abbreviations. 2216 Rev. 5/01/96

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609499
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1380 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-384 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1380 SDG#: PSC63-04

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil)						
5443	Dichlorodifluoromethane	< 5.	5.	ug/kg	< 6.	6.
5444	Chloromethane	< 5.	5.	ug/kg	< 6.	6.
5445	Vinyl Chloride	< 5.	5.	ug/kg	< 6.	6.
5446	Bromomethane	< 5.	5.	ug/kg	< 6.	6.
5447	Chloroethane	< 5.	5.	ug/kg	< 6.	6.
5448	Trichlorofluoromethane	< 5.	5.	ug/kg	< 6.	6.
5449	1,1-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5450	Methylene Chloride	< 5.	5.	ug/kg	< 6.	6.
5451	trans-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5452	1,1-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5453	2,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5454	cis-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5455	Chloroform	< 5.	5.	ug/kg	< 6.	6.
5456	Bromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5457	1,1,1-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5458	Carbon Tetrachloride	< 5.	5.	ug/kg	< 6.	6.
5459	1,1-Dichloropropene	< 5.	5.	ug/kg	< 6.	6.
5460	Benzene	< 5.	5.	ug/kg	< 6.	6.
5461	1,2-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5462	Trichloroethene	< 5.	5.	ug/kg	< 6.	6.
5463	1,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5464	Dibromomethane	< 5.	5.	ug/kg	< 6.	6.
5465	Bromodichloromethane	< 5.	5.	ug/kg	< 6.	6.
5466	Toluene	< 5.	5.	ug/kg	< 6.	6.
5467	1,1,2-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5468	Tetrachloroethene	< 5.	5.	ug/kg	< 6.	6.
5469	1,3-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5470	Dibromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5471	1,2-Dibromoethane	< 5.	5.	ug/kg	< 6.	6.
5472	Chlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609499
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1380 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-384 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1380 SDG#: PSC63-04

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil) cont						
5473	1,1,1,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5474	Ethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5475	m+p-Xylene	< 5.	5.	ug/kg	< 6.	6.
5476	o-Xylene	< 5.	5.	ug/kg	< 6.	6.
5477	Styrene	< 5.	5.	ug/kg	< 6.	6.
5478	Bromoform	< 5.	5.	ug/kg	< 6.	6.
5479	Isopropylbenzene	< 5.	5.	ug/kg	< 6.	6.
5480	1,1,2,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5481	Bromobenzene	< 5.	5.	ug/kg	< 6.	6.
5482	1,2,3-Trichloropropane	< 5.	5.	ug/kg	< 6.	6.
5483	n-Propylbenzene	< 5.	5.	ug/kg	< 6.	6.
5484	2-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5485	1,3,5-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5486	4-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5487	tert-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5488	1,2,4-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5489	sec-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5490	p-Isopropyltoluene	< 5.	5.	ug/kg	< 6.	6.
5491	1,3-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5492	1,4-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5493	n-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5494	1,2-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5495	1,2-Dibromo-3-chloropropane	< 5.	5.	ug/kg	< 6.	6.
5496	1,2,4-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5497	Hexachlorobutadiene	< 5.	5.	ug/kg	< 6.	6.
5498	Naphthalene	< 5.	5.	ug/kg	< 6.	6.
5499	1,2,3-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Michele McClarin
Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

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Lancaster Laboratories
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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

&&& .

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609499
Collected: 10/28/96

Submitted: 11/01/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1380 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-384 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1380 SDG#: PSC63-04

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5441	EPA SW846/8260 (soil)	SW-846 8260A	1	11/06/96 0453	L. Alberto Rodgiguez
5442	EPA SW846/8260 (soil) cont	SW-846 8260A	1	11/06/96 0453	L. Alberto Rodgiguez
0111	Moisture	EPA 160.3 modified	1	11/07/96 1706	Amy Marie Lawlor

Analysis Report

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609500
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1381 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-385 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1381 SDG#: PSC63-05

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
5441	EPA SW846/8260 (soil)			See Page 2		
5442	EPA SW846/8260 (soil) cont			See Page 3		
0111	Moisture	15.8	0.50	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:37:48 D 0001 8 540184
0.00 00048950 ASR000

Respectfully Submitted
Jennifer E. Hess, B.S.
Group Leader Pesticides/PCBs

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Lancaster, PA 17605-2425
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Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609500
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1381 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-385 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1381 SDG#: PSC63-05

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil)						
5443	Dichlorodifluoromethane	< 5.	5.	ug/kg	< 6.	6.
5444	Chloromethane	< 5.	5.	ug/kg	< 6.	6.
5445	Vinyl Chloride	< 5.	5.	ug/kg	< 6.	6.
5446	Bromomethane	< 5.	5.	ug/kg	< 6.	6.
5447	Chloroethane	< 5.	5.	ug/kg	< 6.	6.
5448	Trichlorofluoromethane	< 5.	5.	ug/kg	< 6.	6.
5449	1,1-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5450	Methylene Chloride	9.	5.	ug/kg	10.	6.
5451	trans-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5452	1,1-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5453	2,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5454	cis-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5455	Chloroform	< 5.	5.	ug/kg	< 6.	6.
5456	Bromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5457	1,1,1-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5458	Carbon Tetrachloride	< 5.	5.	ug/kg	< 6.	6.
5459	1,1-Dichloropropene	< 5.	5.	ug/kg	< 6.	6.
5460	Benzene	< 5.	5.	ug/kg	< 6.	6.
5461	1,2-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5462	Trichloroethene	< 5.	5.	ug/kg	< 6.	6.
5463	1,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5464	Dibromomethane	< 5.	5.	ug/kg	< 6.	6.
5465	Bromodichloromethane	< 5.	5.	ug/kg	< 6.	6.
5466	Toluene	< 5.	5.	ug/kg	< 6.	6.
5467	1,1,2-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5468	Tetrachloroethene	< 5.	5.	ug/kg	< 6.	6.
5469	1,3-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5470	Dibromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5471	1,2-Dibromoethane	< 5.	5.	ug/kg	< 6.	6.
5472	Chlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Methylene chloride was detected in the method blank at an estimated concentration of 2. ug/kg. The blank value was not subtracted from the analytical result.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Michele McClarin
Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

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Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609500
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1381 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-385 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1381 SDG#: PSC63-05

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	AS RECEIVED UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil) cont						
5473	1,1,1,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5474	Ethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5475	m+p-Xylene	< 5.	5.	ug/kg	< 6.	6.
5476	o-Xylene	< 5.	5.	ug/kg	< 6.	6.
5477	Styrene	< 5.	5.	ug/kg	< 6.	6.
5478	Bromoform	< 5.	5.	ug/kg	< 6.	6.
5479	Isopropylbenzene	< 5.	5.	ug/kg	< 6.	6.
5480	1,1,2,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5481	Bromobenzene	< 5.	5.	ug/kg	< 6.	6.
5482	1,2,3-Trichloropropane	< 5.	5.	ug/kg	< 6.	6.
5483	n-Propylbenzene	< 5.	5.	ug/kg	< 6.	6.
5484	2-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5485	1,3,5-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5486	4-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5487	tert-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5488	1,2,4-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5489	sec-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5490	p-Isopropyltoluene	< 5.	5.	ug/kg	< 6.	6.
5491	1,3-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5492	1,4-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5493	n-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5494	1,2-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5495	1,2-Dibromo-3-chloropropane	< 5.	5.	ug/kg	< 6.	6.
5496	1,2,4-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5497	Hexachlorobutadiene	< 5.	5.	ug/kg	< 6.	6.
5498	Naphthalene	< 5.	5.	ug/kg	< 6.	6.
5499	1,2,3-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

&&&

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609500
Collected: 10/28/96

Submitted: 11/01/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1381 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-385 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1381 SDG#: PSC63-05

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5441	EPA SW846/8260 (soil)	SW-846 8260A	1	11/06/96 0341	L. Alberto Rodgiguez
5442	EPA SW846/8260 (soil) cont	SW-846 8260A	1	11/06/96 0341	L. Alberto Rodgiguez
0111	Moisture	EPA 160.3 modified	1	11/07/96 1706	Amy Marie Lawlor

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609501
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1382 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-386 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1382 SDG#: PSC63-06*

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
5441	EPA SW846/8260 (soil)			See Page 2		
5442	EPA SW846/8260 (soil) cont			See Page 3		
0111	Moisture	17.0	0.50	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:38:32 D 0001 8 540184
0.00 00048950 ASR000

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609501
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1382 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-386 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1382 SDG#: PSC63-06*

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil)						
5443	Dichlorodifluoromethane	< 5.	5.	ug/kg	< 6.	6.
5444	Chloromethane	< 5.	5.	ug/kg	< 6.	6.
5445	Vinyl Chloride	< 5.	5.	ug/kg	< 6.	6.
5446	Bromomethane	< 5.	5.	ug/kg	< 6.	6.
5447	Chloroethane	< 5.	5.	ug/kg	< 6.	6.
5448	Trichlorofluoromethane	< 5.	5.	ug/kg	< 6.	6.
5449	1,1-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5450	Methylene Chloride	< 5.	5.	ug/kg	< 6.	6.
5451	trans-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5452	1,1-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5453	2,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5454	cis-1,2-Dichloroethene	< 5.	5.	ug/kg	< 6.	6.
5455	Chloroform	< 5.	5.	ug/kg	< 6.	6.
5456	Bromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5457	1,1,1-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5458	Carbon Tetrachloride	< 5.	5.	ug/kg	< 6.	6.
5459	1,1-Dichloropropene	< 5.	5.	ug/kg	< 6.	6.
5460	Benzene	< 5.	5.	ug/kg	< 6.	6.
5461	1,2-Dichloroethane	< 5.	5.	ug/kg	< 6.	6.
5462	Trichloroethene	< 5.	5.	ug/kg	< 6.	6.
5463	1,2-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5464	Dibromomethane	< 5.	5.	ug/kg	< 6.	6.
5465	Bromodichloromethane	< 5.	5.	ug/kg	< 6.	6.
5466	Toluene	< 5.	5.	ug/kg	< 6.	6.
5467	1,1,2-Trichloroethane	< 5.	5.	ug/kg	< 6.	6.
5468	Tetrachloroethene	< 5.	5.	ug/kg	< 6.	6.
5469	1,3-Dichloropropane	< 5.	5.	ug/kg	< 6.	6.
5470	Dibromochloromethane	< 5.	5.	ug/kg	< 6.	6.
5471	1,2-Dibromoethane	< 5.	5.	ug/kg	< 6.	6.
5472	Chlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609501
Collected: 10/28/96

Submitted: 11/ 1/96 Reported: 11/13/96
Discard: 1/23/97

E1382 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-386 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1382 SDG#: PSC63-06*

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	AS RECEIVED UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
EPA SW846/8260 (soil) cont						
5473	1,1,1,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
5474	Ethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5475	m+p-Xylene	< 5.	5.	ug/kg	< 6.	6.
5476	o-Xylene	< 5.	5.	ug/kg	< 6.	6.
5477	Styrene	< 5.	5.	ug/kg	< 6.	6.
5478	Bromoform	< 5.	5.	ug/kg	< 6.	6.
5479	Isopropylbenzene	< 5.	5.	ug/kg	< 6.	6.
5480	1,1,2,2-Tetrachloroethane	< 5.	5.	ug/kg	< 6.	6.
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5484	2-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5485	1,3,5-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5486	4-Chlorotoluene	< 5.	5.	ug/kg	< 6.	6.
5487	tert-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5488	1,2,4-Trimethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5489	sec-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5490	p-Isopropyltoluene	< 5.	5.	ug/kg	< 6.	6.
5491	1,3-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5492	1,4-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5493	n-Butylbenzene	< 5.	5.	ug/kg	< 6.	6.
5494	1,2-Dichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5495	1,2-Dibromo-3-chloropropane	< 5.	5.	ug/kg	< 6.	6.
5496	1,2,4-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.
5497	Hexachlorobutadiene	< 5.	5.	ug/kg	< 6.	6.
5498	Naphthalene	< 5.	5.	ug/kg	< 6.	6.
5499	1,2,3-Trichlorobenzene	< 5.	5.	ug/kg	< 6.	6.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

&&&

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2609501
Collected: 10/28/96

Submitted: 11/01/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1382 RAVENNA AAP 37-?-5360 Sheehy Soil Sample
Field No. RVAP-386 Contract No. 96-D-7027
Pick-Up Order #21 Delivery Order #1 Soil
E1382 SDG#: PSC63-06*

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5441	EPA SW846/8260 (soil)	SW-846 8260A	1	11/07/96 2009	David A. Hoppman
5442	EPA SW846/8260 (soil) cont	SW-846 8260A	1	11/07/96 2009	David A. Hoppman
0111	Moisture	EPA 160.3 modified	1	11/09/96 1159	Susan A. Engle

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib > 5 um/ml**	fibers greater than 5 microns in length per ml

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TIC's only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITATION OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. We disclaim any other warranties, express or implied, including a Warranty of Fitness for Particular Purpose and Warranty of Merchantability. We accept no responsibility for the purpose for which the client uses the test results. No purchase order or other order for work shall be accepted by the company with any conditions that vary from our Standard Terms and Conditions. If Lancaster Laboratories performs work requested by the client, conditions at variance to our Standard Terms and Conditions are not part of the contract.

Lancaster Laboratories
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Where quality is a science.

CASE NARRATIVE

CLIENT: U.S. ARMY CHPPM
SDG: PCS63

LANCASTER LABORATORIES

VOLATILES by GC/MS

LL NUMBERS:	SAMPLE CODE:	MATRIX SOIL	MATRIX WATER	COMMENTS
2609494	E1377	X		UNSPIKED
2609495	E1377MS	X		MATRIX SPIKE
2609496	E1377MSD	X		MATRIX SPIKE DUP
2609497	E1378	X		
2609498	E1379	X		
2609499	E1380	X		
2609500	E1381	X		
2609501	E1382	X		
LABORATORY SUBMITTED QC:				
VBLKG73	VBLKG73	X		METHOD BLANK
VBLKG78	VBLKG78	X		METHOD BLANK

SAMPLE PREPARATION:

No problems were encountered during the sample preparation for the VOA fraction.

ANALYSIS:

The samples were analyzed by EPA SW846 Method 8260A using Lancaster Laboratories Analysis SOP # 5441. All samples were analyzed within method holding times.

No problems were encountered during the analysis of these samples.

QUALITY CONTROL and NONCONFORMANCE SUMMARY:

All MS/MSD and surrogate recoveries met method requirements. All internal standard area counts and retention times complied with method QC requirements.

DATA INTERPRETATION:

No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

Michele M. McClarin Date 11/21/96

Michele M. McClarin, B.A., GC/MS Volatiles

Lancaster Laboratories • 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681

Sample Reference List for SDG # PSC63 with a Package Type of ABERDEEN

Lab Sample Number	Sample Code	Client Sample Description
2609494	E1377	E1377 RAVENNA AAP 37- -5360 Sheehy Soil Sample
2609495	E1377	E1377 RAVENNA AAP 37- -5360 Sheehy Soil Sample
2609496	E1377	E1377 RAVENNA AAP 37- -5360 Sheehy Soil Sample
2609497	E1378	E1378 RAVENNA AAP 37- -5360 Sheehy Soil Sample
2609498	E1379	E1379 RAVENNA AAP 37- -5360 Sheehy Soil Sample
2609499	E1380	E1380 RAVENNA AAP 37- -5360 Sheehy Soil Sample
2609500	E1381	E1381 RAVENNA AAP 37- -5360 Sheehy Soil Sample
2609501	E1382	E1382 RAVENNA AAP 37- -5360 Sheehy Soil Sample

Lancaster Laboratories
A division of Thermo Analytical Inc.

COPY

LLI Sample No. WW 2611920
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/13/96
Discard: 1/23/97

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1420 SDG#: PSC67-01

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS	
5382	EPA SW846/8260 (water)				See Page 2
5383	EPA SW846/8260 (water) cont				See Page 3

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:57:52 D 0001 2 540781
890 40.00 00049000 ASR000

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611920
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/13/96
Discard: 1/23/97

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1420 SDG#: PSC67-01

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
EPA SW846/8260 (water)				
5384	Dichlorodifluoromethane	< 100.	100.	ug/l
5385	Chloromethane	< 100.	100.	ug/l
5386	Vinyl Chloride	< 100.	100.	ug/l
5387	Bromomethane	< 100.	100.	ug/l
5388	Chloroethane	< 100.	100.	ug/l
5389	Trichlorofluoromethane	< 100.	100.	ug/l
5390	1,1-Dichloroethene	< 100.	100.	ug/l
5391	Methylene Chloride	< 100.	100.	ug/l
5392	trans-1,2-Dichloroethene	< 100.	100.	ug/l
5393	1,1-Dichloroethane	< 100.	100.	ug/l
5394	2,2-Dichloropropane	< 100.	100.	ug/l
5395	cis-1,2-Dichloroethene	< 100.	100.	ug/l
5396	Chloroform	< 100.	100.	ug/l
5397	Bromochloromethane	< 100.	100.	ug/l
5398	1,1,1-Trichloroethane	< 100.	100.	ug/l
5399	Carbon Tetrachloride	< 100.	100.	ug/l
5400	1,1-Dichloropropene	< 100.	100.	ug/l
5401	Benzene	< 100.	100.	ug/l
5402	1,2-Dichloroethane	< 100.	100.	ug/l
5403	Trichloroethene	< 100.	100.	ug/l
5404	1,2-Dichloropropane	< 100.	100.	ug/l
5405	Dibromomethane	< 100.	100.	ug/l
5406	Bromodichloromethane	< 100.	100.	ug/l
5407	Toluene	< 100.	100.	ug/l
5408	1,1,2-Trichloroethane	< 100.	100.	ug/l
5409	Tetrachloroethene	< 100.	100.	ug/l
5410	1,3-Dichloropropane	< 100.	100.	ug/l
5411	Dibromochloromethane	< 100.	100.	ug/l
5412	1,2-Dibromoethane	< 100.	100.	ug/l
5413	Chlorobenzene	< 100.	100.	ug/l

The quantitation limits for the GC/MS volatile compounds were raised due to sample foaming.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Robert Kelly for mmm

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

MEMBER ASIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611920
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/13/96
Discard: 1/23/97

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1420 SDG#: PSC67-01

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
EPA SW846/8260 (water) cont				
5414	1,1,1,2-Tetrachloroethane	< 100.	100.	ug/l
5415	Ethylbenzene	< 100.	100.	ug/l
5416	m+p-Xylene	< 100.	100.	ug/l
5417	o-Xylene	< 100.	100.	ug/l
5418	Styrene	< 100.	100.	ug/l
5419	Bromoform	< 100.	100.	ug/l
5420	Isopropylbenzene	< 100.	100.	ug/l
5421	1,1,2,2-Tetrachloroethane	< 100.	100.	ug/l
5422	Bromobenzene	< 100.	100.	ug/l
5423	1,2,3-Trichloropropane	< 100.	100.	ug/l
5424	n-Propylbenzene	< 100.	100.	ug/l
5425	2-Chlorotoluene	< 100.	100.	ug/l
5426	1,3,5-Trimethylbenzene	< 100.	100.	ug/l
5427	4-Chlorotoluene	< 100.	100.	ug/l
5428	tert-Butylbenzene	< 100.	100.	ug/l
5429	1,2,4-Trimethylbenzene	< 100.	100.	ug/l
5430	sec-Butylbenzene	< 100.	100.	ug/l
5431	p-Isopropyltoluene	< 100.	100.	ug/l
5432	1,3-Dichlorobenzene	< 100.	100.	ug/l
5433	1,4-Dichlorobenzene	< 100.	100.	ug/l
5434	n-Butylbenzene	< 100.	100.	ug/l
5435	1,2-Dichlorobenzene	< 100.	100.	ug/l
5436	1,2-Dibromo-3-chloropropane	< 100.	100.	ug/l
5437	1,2,4-Trichlorobenzene	< 100.	100.	ug/l
5438	Hexachlorobutadiene	< 100.	100.	ug/l
5439	Naphthalene	< 100.	100.	ug/l
5440	1,2,3-Trichlorobenzene	< 100.	100.	ug/l

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611920
Collected: 11/01/96

Submitted: 11/06/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1420 SDG#: PSC67-01

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5382	EPA SW846/8260 (water)	SW-846 8260A	1	11/11/96 1026	Tracey Neff
5383	EPA SW846/8260 (water) cont	SW-846 8260A	1	11/11/96 1026	Tracey Neff

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611921
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/13/96
Discard: 1/23/97

E1421 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. FIELD BLANK Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1421 SDG#: PSC67-02*

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
5382	EPA SW846/8260 (water)			See Page 2
5383	EPA SW846/8260 (water) cont			See Page 3

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:58:17 D 0001 2 540781
890 0.00 00045000 ASR000

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

Lancaster Laboratories
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LLI Sample No. WW 2611921
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Submitted: 11/ 6/96 Reported: 11/13/96
Discard: 1/23/97

E1421 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. FIELD BLANK Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1421 SDG#: PSC67-02*

Account No: 04694
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Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
EPA SW846/8260 (water)				
5384	Dichlorodifluoromethane	< 5.	5.	ug/l
5385	Chloromethane	< 5.	5.	ug/l
5386	Vinyl Chloride	< 5.	5.	ug/l
5387	Bromomethane	< 5.	5.	ug/l
5388	Chloroethane	< 5.	5.	ug/l
5389	Trichlorofluoromethane	< 5.	5.	ug/l
5390	1,1-Dichloroethene	< 5.	5.	ug/l
5391	Methylene Chloride	< 5.	5.	ug/l
5392	trans-1,2-Dichloroethene	< 5.	5.	ug/l
5393	1,1-Dichloroethane	< 5.	5.	ug/l
5394	2,2-Dichloropropane	< 5.	5.	ug/l
5395	cis-1,2-Dichloroethene	< 5.	5.	ug/l
5396	Chloroform	< 5.	5.	ug/l
5397	Bromochloromethane	< 5.	5.	ug/l
5398	1,1,1-Trichloroethane	< 5.	5.	ug/l
5399	Carbon Tetrachloride	< 5.	5.	ug/l
5400	1,1-Dichloropropene	< 5.	5.	ug/l
5401	Benzene	< 5.	5.	ug/l
5402	1,2-Dichloroethane	< 5.	5.	ug/l
5403	Trichloroethene	< 5.	5.	ug/l
5404	1,2-Dichloropropane	< 5.	5.	ug/l
5405	Dibromomethane	< 5.	5.	ug/l
5406	Bromodichloromethane	< 5.	5.	ug/l
5407	Toluene	< 5.	5.	ug/l
5408	1,1,2-Trichloroethane	< 5.	5.	ug/l
5409	Tetrachloroethene	< 5.	5.	ug/l
5410	1,3-Dichloropropane	< 5.	5.	ug/l
5411	Dibromochloromethane	< 5.	5.	ug/l
5412	1,2-Dibromoethane	< 5.	5.	ug/l
5413	Chlorobenzene	< 5.	5.	ug/l

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611921
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/13/96
Discard: 1/23/97

E1421 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. FIELD BLANK Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1421 SDG#: PSC67-02*

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
EPA SW846/8260 (water) cont				
5414	1,1,1,2-Tetrachloroethane	< 5.	5.	ug/l
5415	Ethylbenzene	< 5.	5.	ug/l
5416	m+p-Xylene	< 5.	5.	ug/l
5417	o-Xylene	< 5.	5.	ug/l
5418	Styrene	< 5.	5.	ug/l
5419	Bromoform	< 5.	5.	ug/l
5420	Isopropylbenzene	< 5.	5.	ug/l
5421	1,1,2,2-Tetrachloroethane	< 5.	5.	ug/l
5422	Bromobenzene	< 5.	5.	ug/l
5423	1,2,3-Trichloropropane	< 5.	5.	ug/l
5424	n-Propylbenzene	< 5.	5.	ug/l
5425	2-Chlorotoluene	< 5.	5.	ug/l
5426	1,3,5-Trimethylbenzene	< 5.	5.	ug/l
5427	4-Chlorotoluene	< 5.	5.	ug/l
5428	tert-Butylbenzene	< 5.	5.	ug/l
5429	1,2,4-Trimethylbenzene	< 5.	5.	ug/l
5430	sec-Butylbenzene	< 5.	5.	ug/l
5431	p-Isopropyltoluene	< 5.	5.	ug/l
5432	1,3-Dichlorobenzene	< 5.	5.	ug/l
5433	1,4-Dichlorobenzene	< 5.	5.	ug/l
5434	n-Butylbenzene	< 5.	5.	ug/l
5435	1,2-Dichlorobenzene	< 5.	5.	ug/l
5436	1,2-Dibromo-3-chloropropane	< 5.	5.	ug/l
5437	1,2,4-Trichlorobenzene	< 5.	5.	ug/l
5438	Hexachlorobutadiene	< 5.	5.	ug/l
5439	Naphthalene	< 5.	5.	ug/l
5440	1,2,3-Trichlorobenzene	< 5.	5.	ug/l

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Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

&&&.

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611921
Collected: 11/01/96

Submitted: 11/06/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1421 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. FIELD BLANK Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1421 SDG#: PSC67-02*

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5382	EPA SW846/8260 (water)	SW-846 8260A	1	11/08/96 1128	Tracey Neff
5383	EPA SW846/8260 (water) cont	SW-846 8260A	1	11/08/96 1128	Tracey Neff

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611920
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/13/96
Discard: 1/23/97

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1420 SDG#: PSC67-01

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
5382	EPA SW846/8260 (water)			See Page 2
5383	EPA SW846/8260 (water) cont			See Page 3

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:57:52 D 0001 2 540781
890 40.00 00049000 ASR000

Respectfully Submitted
Michele McClarin, B.A:
Group Leader, GC/MS Volatiles

MEMBER ASIA

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611920
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Submitted: 11/ 6/96 Reported: 11/13/96
Discard: 1/23/97

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
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Pick-Up Order #25 Delivery Order #1 Water
E1420 SDG#: PSC67-01

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
EPA SW846/8260 (water)				
5384	Dichlorodifluoromethane	< 100.	100.	ug/l
5385	Chloromethane	< 100.	100.	ug/l
5386	Vinyl Chloride	< 100.	100.	ug/l
5387	Bromomethane	< 100.	100.	ug/l
5388	Chloroethane	< 100.	100.	ug/l
5389	Trichlorofluoromethane	< 100.	100.	ug/l
5390	1,1-Dichloroethene	< 100.	100.	ug/l
5391	Methylene Chloride	< 100.	100.	ug/l
5392	trans-1,2-Dichloroethene	< 100.	100.	ug/l
5393	1,1-Dichloroethane	< 100.	100.	ug/l
5394	2,2-Dichloropropane	< 100.	100.	ug/l
5395	cis-1,2-Dichloroethene	< 100.	100.	ug/l
5396	Chloroform	< 100.	100.	ug/l
5397	Bromochloromethane	< 100.	100.	ug/l
5398	1,1,1-Trichloroethane	< 100.	100.	ug/l
5399	Carbon Tetrachloride	< 100.	100.	ug/l
5400	1,1-Dichloropropene	< 100.	100.	ug/l
5401	Benzene	< 100.	100.	ug/l
5402	1,2-Dichloroethane	< 100.	100.	ug/l
5403	Trichloroethene	< 100.	100.	ug/l
5404	1,2-Dichloropropane	< 100.	100.	ug/l
5405	Dibromomethane	< 100.	100.	ug/l
5406	Bromodichloromethane	< 100.	100.	ug/l
5407	Toluene	< 100.	100.	ug/l
5408	1,1,2-Trichloroethane	< 100.	100.	ug/l
5409	Tetrachloroethene	< 100.	100.	ug/l
5410	1,3-Dichloropropane	< 100.	100.	ug/l
5411	Dibromochloromethane	< 100.	100.	ug/l
5412	1,2-Dibromoethane	< 100.	100.	ug/l
5413	Chlorobenzene	< 100.	100.	ug/l

The quantitation limits for the GC/MS volatile compounds were raised due to sample foaming.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611920
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/13/96
Discard: 1/23/97

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1420 SDG#: PSC67-01

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
EPA SW846/8260 (water) cont				
5414	1,1,1,2-Tetrachloroethane	< 100.	100.	ug/l
5415	Ethylbenzene	< 100.	100.	ug/l
5416	m+p-Xylene	< 100.	100.	ug/l
5417	o-Xylene	< 100.	100.	ug/l
5418	Styrene	< 100.	100.	ug/l
5419	Bromoform	< 100.	100.	ug/l
5420	Isopropylbenzene	< 100.	100.	ug/l
5421	1,1,2,2-Tetrachloroethane	< 100.	100.	ug/l
5422	Bromobenzene	< 100.	100.	ug/l
5423	1,2,3-Trichloropropane	< 100.	100.	ug/l
5424	n-Propylbenzene	< 100.	100.	ug/l
5425	2-Chlorotoluene	< 100.	100.	ug/l
5426	1,3,5-Trimethylbenzene	< 100.	100.	ug/l
5427	4-Chlorotoluene	< 100.	100.	ug/l
5428	tert-Butylbenzene	< 100.	100.	ug/l
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5431	p-Isopropyltoluene	< 100.	100.	ug/l
5432	1,3-Dichlorobenzene	< 100.	100.	ug/l
5433	1,4-Dichlorobenzene	< 100.	100.	ug/l
5434	n-Butylbenzene	< 100.	100.	ug/l
5435	1,2-Dichlorobenzene	< 100.	100.	ug/l
5436	1,2-Dibromo-3-chloropropane	< 100.	100.	ug/l
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5438	Hexachlorobutadiene	< 100.	100.	ug/l
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5440	1,2,3-Trichlorobenzene	< 100.	100.	ug/l

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Katherine A. Klinefelter at (717) 656-2300

Robert Wallace for MMM

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

Lancaster Laboratories
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LLI Sample No. WW 2611920
Collected: 11/01/96

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Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1420 SDG#: PSC67-01

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5382	EPA SW846/8260 (water)	SW-846 8260A	1	11/11/96 1026	Tracey Neff
5383	EPA SW846/8260 (water) cont	SW-846 8260A	1	11/11/96 1026	Tracey Neff

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611921
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/13/96
Discard: 1/23/97

E1421 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. FIELD BLANK Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1421 SDG#: PSC67-02*

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
5382	EPA SW846/8260 (water)			See Page 2
5383	EPA SW846/8260 (water) cont			See Page 3

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
06:58:17 D 0001 2 540781
890 0.00 00045000 ASR000

for mmm

Respectfully Submitted
Michele McClarin, B.A.
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Field No. FIELD BLANK Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1421 SDG#: PSC67-02*

Account No: 04694
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Attn: DFAS-IN/EM-BJ-V
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P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
EPA SW846/8260 (water)				
5384	Dichlorodifluoromethane	< 5.	5.	ug/l
5385	Chloromethane	< 5.	5.	ug/l
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5397	Bromochloromethane	< 5.	5.	ug/l
5398	1,1,1-Trichloroethane	< 5.	5.	ug/l
5399	Carbon Tetrachloride	< 5.	5.	ug/l
5400	1,1-Dichloropropene	< 5.	5.	ug/l
5401	Benzene	< 5.	5.	ug/l
5402	1,2-Dichloroethane	< 5.	5.	ug/l
5403	Trichloroethene	< 5.	5.	ug/l
5404	1,2-Dichloropropane	< 5.	5.	ug/l
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5407	Toluene	< 5.	5.	ug/l
5408	1,1,2-Trichloroethane	< 5.	5.	ug/l
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Michele McClarin, B.A.
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Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/13/96
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E1421 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. FIELD BLANK Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1421 SDG#: PSC67-02*

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Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
EPA SW846/8260 (water) cont				
5414	1,1,1,2-Tetrachloroethane	< 5.	5.	ug/l
5415	Ethylbenzene	< 5.	5.	ug/l
5416	m+p-Xylene	< 5.	5.	ug/l
5417	o-Xylene	< 5.	5.	ug/l
5418	Styrene	< 5.	5.	ug/l
5419	Bromoform	< 5.	5.	ug/l
5420	Isopropylbenzene	< 5.	5.	ug/l
5421	1,1,2,2-Tetrachloroethane	< 5.	5.	ug/l
5422	Bromobenzene	< 5.	5.	ug/l
5423	1,2,3-Trichloropropane	< 5.	5.	ug/l
5424	n-Propylbenzene	< 5.	5.	ug/l
5425	2-Chlorotoluene	< 5.	5.	ug/l
5426	1,3,5-Trimethylbenzene	< 5.	5.	ug/l
5427	4-Chlorotoluene	< 5.	5.	ug/l
5428	tert-Butylbenzene	< 5.	5.	ug/l
5429	1,2,4-Trimethylbenzene	< 5.	5.	ug/l
5430	sec-Butylbenzene	< 5.	5.	ug/l
5431	p-Isopropyltoluene	< 5.	5.	ug/l
5432	1,3-Dichlorobenzene	< 5.	5.	ug/l
5433	1,4-Dichlorobenzene	< 5.	5.	ug/l
5434	n-Butylbenzene	< 5.	5.	ug/l
5435	1,2-Dichlorobenzene	< 5.	5.	ug/l
5436	1,2-Dibromo-3-chloropropane	< 5.	5.	ug/l
5437	1,2,4-Trichlorobenzene	< 5.	5.	ug/l
5438	Hexachlorobutadiene	< 5.	5.	ug/l
5439	Naphthalene	< 5.	5.	ug/l
5440	1,2,3-Trichlorobenzene	< 5.	5.	ug/l

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Group Leader, GC/MS Volatiles

&&&

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611921
Collected: 11/01/96

Submitted: 11/06/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1421 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. FIELD BLANK Contract No. 96-D-7027
Pick-Up Order #25 Delivery Order #1 Water
E1421 SDG#: PSC67-02*

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
5382	EPA SW846/8260 (water)	SW-846 8260A	1	11/08/96 1128	Tracey Neff
5383	EPA SW846/8260 (water) cont	SW-846 8260A	1	11/08/96 1128	Tracey Neff

LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER, PA 17601
(717) 656-2301

USAEHA DATA PACKAGE CHECK LIST

CONTRACT NUMBER: 96-D-7027

PICK-UP ORDER #: 25

DELIVERY ORDER #: 1

DATE AND TIME RECEIVED: 11/06/96, 10:00

LL #: 2611920-2611921

PACKAGE CONTENTS:

- INVOICE
- PICK-UP ORDER/BUCKSLIP
- LLI REQUISITION FORMS
- ANALYTICAL REPORTS
- QC DATA
- VOLATILE TUNING AND RIC DATA
- DISK DATA

Lancaster Laboratories
A division of Thermo Analytical Inc.
Where quality is a science.

Sample Reference List for SDG # PSC67 with a Package Type of ABERDEEN

Lab Sample Number	Sample Code	Client Sample Description
2611920	E1420	E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
2611921	E1421	E1421 RAVENNA AAP 37-EF-5360 Sheehy Water

Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Shipping Address:
Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601
717-656-2300 Fax: 717-656-2681

CLIENT: U.S. ARMY CHPPM
SDG: PSC67

LANCASTER LABORATORIES
VOLATILES by GC/MS

LL NUMBERS:	SAMPLE CODE:	MATRIX SOIL	MATRIX WATER	COMMENTS
2611920	E1420		X	20X DILUTION
2611921	E1421		X	CLIENT BLANK
LABORATORY SUBMITTED QC:				
VBLKI70	VBLKI70		X	METHOD BLANK
VBLKI71	VBLKI71		X	METHOD BLANK
VBLKI72	VBLKI72		X	METHOD BLANK
2610956	EF114		X	UNSPIKED
2610906	EF114MS		X	MATRIX SPIKE
2610906	EF114MSD		X	MATRIX SPIKE DUP
LCSI03	LCSIW03		X	LAB CONTROL SAMPLE
LCSDIW03	LCSDIW03		X	LAB CONTROL SAMPLE DUP

SAMPLE PREPARATION:

No sample preparation was necessary for the VOA fraction.

ANALYSIS:

The samples were analyzed by EPA SW846 Method 8260A using Lancaster Laboratories Analysis SOP # 5382.

Sample preservation for E1420 was checked at the time of analysis and determined to be approximately pH 7. According to EPA SW846 8260A, samples are to be acidified to a pH of 2 or less at the time of collection. The pH result indicates that the method preservation requirements were not met. This sample was collected on 1 November 1996, submitted on 6 November 1996, and analyzed on 11 November 1996.

E1420 needed to be analyzed at a 1:20 dilution due to foaming during the sample purge step. Due to this, the limits of quantitation were raised.

QUALITY CONTROL and NONCONFORMANCE SUMMARY:

Client-specific QC was not analyzed since E1420 foamed and had limited sample volume and E1421 was a field blank. As requested by the client, the LCS/LCSD analyses were performed. In addition, batch MS/MSD is included.

All MS/MSD, LCS/LCSD, and surrogate recoveries met method requirements. All internal standard area counts and retention times complied with method QC requirements.

DATA INTERPRETATION:

No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

Date 11/22/96

John F. Morton, M.S, GC/MS Volatiles

27 NOV 1996

ANALYSIS REPORT

U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE
Building E2100, APG, MD 21010
ANALYTICAL SPECTROMETRY DIVISION

Installation: RAVENNA AAP

Project Number: 37-EF-5360

Job Number: 6A6206, 6A5975

Project Officer: SHEEHY

Number of Samples: 14

Matrix: SOIL/WATER

Analyzed for: Semivolatiles

Method: 8270B

FIELD #	LAB #	DATA FILE #
RVAP381	E1377	XSB45.D
RVAP382	E1378	XSB46.D
RVAP383	E1379	XSB47.D
RVAP384	E1380	XSB48.D
RVAP385	E1381	XSB49.D
RVAP386	E1382	XSB50.D
RVAP38B	E1383	XSB51.D, XMB55.D, XMB56.D
RVAP241	E1384	XSB52.D
RVAP242	E1385	XSB53.D, XECA53.D
RVAPWW	E1420	SSC00.D
RVAP251	E1432	XSCA38.D, XECA38.D
RVAP252	E1433	XSCA39.D
RVAP231A	E1450	XSCA40.D
RVAP231B	E1451	XSCA41.D, XECA41.D, XMECA42.D, XMECA43.D, XMCA42.D, XMCA43.D

Analyst: _____ Date: 26Nov96

Reviewed by: Roseann Maroni Date: 26Nov96

Reviewed by: Duane Herbert Date: 26Nov96

Release authorized by: _____ 26Nov96

SUMMARY OF RESULTS
RAVENNA AAP
37-EF-5360

The sample set was collected 28 October through 1 November 96, received 31 October and 5 November 96, and extracted 4 through 5 November 96. Samples were analyzed 7 through 20 November 96. Surrogate solution had not been added to sample RVAP231B. It was re-extracted with surrogate solution outside of the fourteen day extraction holding time. All other samples met the 14 day extraction holding time and 40 day analytical holding time.

Polynuclear aromatic hydrocarbons were found in samples RVAP38B and RVAP241. High levels of fluoranthene and phenanthrene were found in samples RVAP242 and RVAP251 which were then diluted 1:2 and reanalyzed. Other target compounds were detected in some of the samples and the results are detailed in the data analysis sheets.

A matrix spike and matrix spike duplicate were run on sample RVAP38B, and lab water*. Two matrix spike/matrix spike duplicate were done on sample RVAP231B; one set for each day of extraction. One matrix spike recovery for sample RVAP38B slightly exceeded the quality control limits. All other matrix spike recoveries were within the quality control limits for each matrix spike and matrix spike duplicate. All surrogate recoveries were within quality control limits with the exception of the unspiked version of RVAP231B and water sample RVAPWW. These surrogate water failures appear to be the result of a matrix effect. All internal standard area counts were within the quality control limits.

These results were generated using extraction by EPA method 3550 (ASD SOP 124.2) and analysis by EPA method 8270B (POCP SOP72-3).

* Laboratory water was used for a matrix spike and spike duplicate for the water sample because an adequate amount of the water sample was not provided.

Analyst: _____ Date: 26Nov96

Analysis Data Sheet Qualifier codes:

B - Indicates analyte was found in the associated blank as well as in the sample.

D - Indicates sample was diluted.

E - Indicates reported value exceeds the upper limit of the quantitation curve.

J - Indicates reported value is an estimate.

U - Indicates compound was analyzed for but not detected.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SBLK01

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: BLK01

Sample wt/vol: 30.0 (g/mL G Lab File ID: XBCA44.D

Level: (low/med) LOW Date Received: 11/5/96

% Moisture: 1 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
108-95-2	Phenol	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
100-51-6	Benzyl alcohol	340	U
108-60-1	bis(2-chloroisopropyl)ether	340	U
95-48-7	2-Methylphenol	340	U
67-72-1	Hexachloroethane	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
106-44-5	4-Methylphenol	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	340	U
208-96-8	Acenaphthylene	340	U
131-11-3	Dimethylphthalate	340	U
606-20-2	2,6-Dinitrotoluene	340	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SBLK01

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: BLK01

Sample wt/vol: 30.0 (g/mL G Lab File ID: XBCA44.D

Level: (low/med) LOW Date Received: 11/5/96

% Moisture: 1 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	340	U
99-09-2	3-Nitroaniline	670	U
51-28-5	2,4-Dinitrophenol	670	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
100-02-7	4-Nitrophenol	670	U
86-73-7	Fluorene	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
84-66-2	Diethylphthalate	340	U
100-01-6	4-Nitroaniline	670	U
534-52-1	4,6-Dinitro-2-methylphenol	670	U
86-30-6	n-Nitrosodiphenylamine	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	670	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
56-55-3	Benzo[a]anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	340	U
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo[b]fluoranthene	340	U
207-08-9	Benzo[k]fluoranthene	340	U
50-32-8	Benzo[a]pyrene	340	U
193-39-5	Indeno[1,2,3-cd]pyrene	340	U
53-70-3	Dibenz[a,h]anthracene	340	U
191-24-2	Benzo[g,h,i]perylene	340	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SBLK02

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) WATER Lab Sample ID: BLK02

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: SBC01.D

Level: (low/med) Date Received: 11/5/96

% Moisture: 100 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/8/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
100-51-6	Benzyl alcohol	10	U
108-60-1	bis(2-chloroisopropyl)ether	10	U
95-48-7	2-Methylphenol	10	U
67-72-1	Hexachloroethane	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	10	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SBLK02

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) WATER Lab Sample ID: BLK02

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: SBC01.D

Level: (low/med) Date Received: 11/5/96

% Moisture: 100 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/8/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	20	U
51-28-5	2,4-Dinitrophenol	20	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	20	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	n-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SBLK05

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: BLK05

Sample wt/vol: 30.0 (g/mL G Lab File ID: XBB54.D

Level: (low/med) LOW Date Received: 11/4/96

% Moisture: 1 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
108-95-2	Phenol	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
100-51-6	Benzyl alcohol	340	U
108-60-1	bis(2-chloroisopropyl)ether	340	U
95-48-7	2-Methylphenol	340	U
67-72-1	Hexachloroethane	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
106-44-5	4-Methylphenol	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	340	U
208-96-8	Acenaphthylene	340	U
131-11-3	Dimethylphthalate	340	U
606-20-2	2,6-Dinitrotoluene	340	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SBLK05

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: BLK05

Sample wt/vol: 30.0 (g/mL G Lab File ID: XBB54.D

Level: (low/med) LOW Date Received: 11/4/96

% Moisture: 1 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	340	U
99-09-2	3-Nitroaniline	670	U
51-28-5	2,4-Dinitrophenol	670	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
100-02-7	4-Nitrophenol	670	U
86-73-7	Fluorene	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
84-66-2	Diethylphthalate	340	U
100-01-6	4-Nitroaniline	670	U
534-52-1	4,6-Dinitro-2-methylphenol	670	U
86-30-6	n-Nitrosodiphenylamine	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	670	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
56-55-3	Benzo[a]anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	340	U
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo[b]fluoranthene	340	U
207-08-9	Benzo[k]fluoranthene	340	U
50-32-8	Benzo[a]pyrene	340	U
193-39-5	Indeno[1,2,3-cd]pyrene	340	U
53-70-3	Dibenz[a,h]anthracene	340	U
191-24-2	Benzo[g,h,i]perylene	340	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SBLK06

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: BLK06

Sample wt/vol: 30.0 (g/mL G Lab File ID: XBECA44.D

Level: (low/med) LOW Date Received: 11/19/96

% Moisture: 1 decanted: (Y/N): N Date Extracted: 11/19/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
108-95-2	Phenol	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
100-51-6	Benzyl alcohol	340	U
108-60-1	bis(2-chloroisopropyl)ether	340	U
95-48-7	2-Methylphenol	340	U
67-72-1	Hexachloroethane	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
106-44-5	4-Methylphenol	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	340	U
208-96-8	Acenaphthylene	340	U
131-11-3	Dimethylphthalate	340	U
606-20-2	2,6-Dinitrotoluene	340	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SBLK06

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: BLK06

Sample wt/vol: 30.0 (g/mL G Lab File ID: XBECA44.D

Level: (low/med) LOW Date Received: 11/19/96

% Moisture: 1 decanted: (Y/N): N Date Extracted: 11/19/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	340	U
99-09-2	3-Nitroaniline	670	U
51-28-5	2,4-Dinitrophenol	670	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
100-02-7	4-Nitrophenol	670	U
86-73-7	Fluorene	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
84-66-2	Diethylphthalate	340	U
100-01-6	4-Nitroaniline	670	U
534-52-1	4,6-Dinitro-2-methylphenol	670	U
86-30-6	n-Nitrosodiphenylamine	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	670	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
56-55-3	Benzo[a]anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	340	U
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo[b]fluoranthene	340	U
207-08-9	Benzo[k]fluoranthene	340	U
50-32-8	Benzo[a]pyrene	340	U
193-39-5	Indeno[1,2,3-cd]pyrene	340	U
53-70-3	Dibenz[a,h]anthracene	340	U
191-24-2	Benzo[g,h,i]perylene	340	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP381

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1377

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB45.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 17 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	400	U
111-44-4	bis(2-Chloroethyl)ether	400	U
108-95-2	Phenol	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
100-51-6	Benzyl alcohol	400	U
108-60-1	bis(2-chloroisopropyl)ether	400	U
95-48-7	2-Methylphenol	400	U
67-72-1	Hexachloroethane	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
106-44-5	4-Methylphenol	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	400	U
208-96-8	Acenaphthylene	400	U
131-11-3	Dimethylphthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP381

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1377

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB45.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 17 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	400	U
99-09-2	3-Nitroaniline	810	U
51-28-5	2,4-Dinitrophenol	810	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
100-02-7	4-Nitrophenol	810	U
86-73-7	Fluorene	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
84-66-2	Diethylphthalate	400	U
100-01-6	4-Nitroaniline	810	U
534-52-1	4,6-Dinitro-2-methylphenol	810	U
86-30-6	n-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	810	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
56-55-3	Benzo[a]anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	400	U
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo[b]fluoranthene	400	U
207-08-9	Benzo[k]fluoranthene	400	U
50-32-8	Benzo[a]pyrene	400	U
193-39-5	Indeno[1,2,3-cd]pyrene	400	U
53-70-3	Dibenz[a,h]anthracene	400	U
191-24-2	Benzo[g,h,i]perylene	400	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP382

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1378

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB46.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 18 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	410	U
111-44-4	bis(2-Chloroethyl)ether	410	U
108-95-2	Phenol	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
100-51-6	Benzyl alcohol	410	U
108-60-1	bis(2-chloroisopropyl)ether	410	U
95-48-7	2-Methylphenol	410	U
67-72-1	Hexachloroethane	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	410	U
208-96-8	Acenaphthylene	410	U
131-11-3	Dimethylphthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP382

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1378

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB46.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 18 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	810	U
51-28-5	2,4-Dinitrophenol	810	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	810	U
86-73-7	Fluorene	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
84-66-2	Diethylphthalate	410	U
100-01-6	4-Nitroaniline	810	U
534-52-1	4,6-Dinitro-2-methylphenol	810	U
86-30-6	n-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	810	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butylbenzylphthalate	410	U
56-55-3	Benzo[a]anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)phthalate	410	U
117-84-0	Di-n-octylphthalate	410	U
205-99-2	Benzo[b]fluoranthene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
50-32-8	Benzo[a]pyrene	410	U
193-39-5	Indeno[1,2,3-cd]pyrene	410	U
53-70-3	Dibenz[a,h]anthracene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP383

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1379

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB47.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 23 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	430	U
111-44-4	bis(2-Chloroethyl)ether	430	U
108-95-2	Phenol	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
95-50-1	1,2-Dichlorobenzene	430	U
100-51-6	Benzyl alcohol	430	U
108-60-1	bis(2-chloroisopropyl)ether	430	U
95-48-7	2-Methylphenol	430	U
67-72-1	Hexachloroethane	430	U
621-64-7	N-Nitroso-di-n-propylamine	430	U
106-44-5	4-Methylphenol	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	bis(2-Chloroethoxy)methane	430	U
120-83-2	2,4-Dichlorophenol	430	U
120-82-1	1,2,4-Trichlorobenzene	430	U
91-20-3	Naphthalene	430	U
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-methylphenol	430	U
91-57-6	2-Methylnaphthalene	430	U
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	430	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	430	U
208-96-8	Acenaphthylene	430	U
131-11-3	Dimethylphthalate	430	U
606-20-2	2,6-Dinitrotoluene	430	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP383

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1379

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB47.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 23 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	430	U
99-09-2	3-Nitroaniline	860	U
51-28-5	2,4-Dinitrophenol	860	U
132-64-9	Dibenzofuran	430	U
121-14-2	2,4-Dinitrotoluene	430	U
100-02-7	4-Nitrophenol	860	U
86-73-7	Fluorene	430	U
7005-72-3	4-Chlorophenyl-phenylether	430	U
84-66-2	Diethylphthalate	430	U
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	U
86-30-6	n-Nitrosodiphenylamine	430	U
101-55-3	4-Bromophenyl-phenylether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	860	U
85-01-8	Phenanthrene	430	U
120-12-7	Anthracene	430	U
84-74-2	Di-n-butylphthalate	430	U
206-44-0	Fluoranthene	430	U
129-00-0	Pyrene	430	U
85-68-7	Butylbenzylphthalate	430	U
56-55-3	Benzo[a]anthracene	430	U
218-01-9	Chrysene	430	U
117-81-7	bis(2-Ethylhexyl)phthalate	430	U
117-84-0	Di-n-octylphthalate	430	U
205-99-2	Benzo[b]fluoranthene	430	U
207-08-9	Benzo[k]fluoranthene	430	U
50-32-8	Benzo[a]pyrene	430	U
193-39-5	Indeno[1,2,3-cd]pyrene	430	U
53-70-3	Dibenz[a,h]anthracene	430	U
191-24-2	Benzo[g,h,i]perylene	430	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP384

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1380

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB48.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 19 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	410	U
111-44-4	bis(2-Chloroethyl)ether	410	U
108-95-2	Phenol	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
100-51-6	Benzyl alcohol	410	U
108-60-1	bis(2-chloroisopropyl)ether	410	U
95-48-7	2-Methylphenol	410	U
67-72-1	Hexachloroethane	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	410	U
208-96-8	Acenaphthylene	410	U
131-11-3	Dimethylphthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP384

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1380

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB48.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 19 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	820	U
51-28-5	2,4-Dinitrophenol	820	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	820	U
86-73-7	Fluorene	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
84-66-2	Diethylphthalate	410	U
100-01-6	4-Nitroaniline	820	U
534-52-1	4,6-Dinitro-2-methylphenol	820	U
86-30-6	n-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	820	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butylbenzylphthalate	410	U
56-55-3	Benzo[a]anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)phthalate	410	U
117-84-0	Di-n-octylphthalate	410	U
205-99-2	Benzo[b]fluoranthene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
50-32-8	Benzo[a]pyrene	410	U
193-39-5	Indeno[1,2,3-cd]pyrene	410	U
53-70-3	Dibenz[a,h]anthracene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP385

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1381

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB49.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 18 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	410	U
111-44-4	bis(2-Chloroethyl)ether	410	U
108-95-2	Phenol	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
100-51-6	Benzyl alcohol	410	U
108-60-1	bis(2-chloroisopropyl)ether	410	U
95-48-7	2-Methylphenol	410	U
67-72-1	Hexachloroethane	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	410	U
208-96-8	Acenaphthylene	410	U
131-11-3	Dimethylphthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP385

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1381

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB49.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 18 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	810	U
51-28-5	2,4-Dinitrophenol	810	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	810	U
86-73-7	Fluorene	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
84-66-2	Diethylphthalate	410	U
100-01-6	4-Nitroaniline	810	U
534-52-1	4,6-Dinitro-2-methylphenol	810	U
86-30-6	n-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	810	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butylbenzylphthalate	410	U
56-55-3	Benzo[a]anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)phthalate	410	U
117-84-0	Di-n-octylphthalate	410	U
205-99-2	Benzo[b]fluoranthene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
50-32-8	Benzo[a]pyrene	410	U
193-39-5	Indeno[1,2,3-cd]pyrene	410	U
53-70-3	Dibenz[a,h]anthracene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP386

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1382

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB50.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 21 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	420	U
111-44-4	bis(2-Chloroethyl)ether	420	U
108-95-2	Phenol	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
100-51-6	Benzyl alcohol	420	U
108-60-1	bis(2-chloroisopropyl)ether	420	U
95-48-7	2-Methylphenol	420	U
67-72-1	Hexachloroethane	420	U
621-64-7	N-Nitroso-di-n-propylamine	420	U
106-44-5	4-Methylphenol	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	bis(2-Chloroethoxy)methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	420	U
208-96-8	Acenaphthylene	420	U
131-11-3	Dimethylphthalate	420	U
606-20-2	2,6-Dinitrotoluene	420	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP386

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1382

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB50.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 21 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	420	U
99-09-2	3-Nitroaniline	840	U
51-28-5	2,4-Dinitrophenol	840	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
100-02-7	4-Nitrophenol	840	U
86-73-7	Fluorene	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
84-66-2	Diethylphthalate	420	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	n-Nitrosodiphenylamine	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	420	U
120-12-7	Anthracene	420	U
84-74-2	Di-n-butylphthalate	420	U
206-44-0	Fluoranthene	420	U
129-00-0	Pyrene	420	U
85-68-7	Butylbenzylphthalate	420	U
56-55-3	Benzo[a]anthracene	420	U
218-01-9	Chrysene	420	U
117-81-7	bis(2-Ethylhexyl)phthalate	420	U
117-84-0	Di-n-octylphthalate	420	U
205-99-2	Benzo[b]fluoranthene	420	U
207-08-9	Benzo[k]fluoranthene	420	U
50-32-8	Benzo[a]pyrene	420	U
193-39-5	Indeno[1,2,3-cd]pyrene	420	U
53-70-3	Dibenz[a,h]anthracene	420	U
191-24-2	Benzo[g,h,i]perylene	420	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP38B

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1383

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB51.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 29 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	470	U
111-44-4	bis(2-Chloroethyl)ether	470	U
108-95-2	Phenol	3800	
95-57-8	2-Chlorophenol	3600	
541-73-1	1,3-Dichlorobenzene	2000	
106-46-7	1,4-Dichlorobenzene	1900	
95-50-1	1,2-Dichlorobenzene	470	U
100-51-6	Benzyl alcohol	250	J
108-60-1	bis(2-chloroisopropyl)ether	330	J
95-48-7	2-Methylphenol	470	U
67-72-1	Hexachloroethane	470	U
621-64-7	N-Nitroso-di-n-propylamine	2300	
106-44-5	4-Methylphenol	470	U
98-95-3	Nitrobenzene	470	U
78-59-1	Isophorone	470	U
88-75-5	2-Nitrophenol	470	U
105-67-9	2,4-Dimethylphenol	470	U
111-91-1	bis(2-Chloroethoxy)methane	470	U
120-83-2	2,4-Dichlorophenol	470	U
120-82-1	1,2,4-Trichlorobenzene	2100	
91-20-3	Naphthalene	470	U
106-47-8	4-Chloroaniline	470	U
87-68-3	Hexachlorobutadiene	470	U
59-50-7	4-Chloro-3-methylphenol	4000	
91-57-6	2-Methylnaphthalene	1600	
77-47-4	Hexachlorocyclopentadiene	470	U
88-06-2	2,4,6-Trichlorophenol	470	U
95-95-4	2,4,5-Trichlorophenol	470	U
91-58-7	2-Chloronaphthalene	470	U
88-74-4	2-Nitroaniline	470	U
208-96-8	Acenaphthylene	470	U
131-11-3	Dimethylphthalate	470	U
606-20-2	2,6-Dinitrotoluene	470	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP38B

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1383

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB51.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 29 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	2000	
99-09-2	3-Nitroaniline	940	U
51-28-5	2,4-Dinitrophenol	940	U
132-64-9	Dibenzofuran	470	U
121-14-2	2,4-Dinitrotoluene	2200	
100-02-7	4-Nitrophenol	3900	
86-73-7	Fluorene	470	U
7005-72-3	4-Chlorophenyl-phenylether	470	U
84-66-2	Diethylphthalate	470	U
100-01-6	4-Nitroaniline	940	U
534-52-1	4,6-Dinitro-2-methylphenol	940	U
86-30-6	n-Nitrosodiphenylamine	470	U
101-55-3	4-Bromophenyl-phenylether	470	U
118-74-1	Hexachlorobenzene	470	U
87-86-5	Pentachlorophenol	4400	
85-01-8	Phenanthrene	470	U
120-12-7	Anthracene	470	U
84-74-2	Di-n-butylphthalate	470	U
206-44-0	Fluoranthene	470	U
129-00-0	Pyrene	2200	
85-68-7	Butylbenzylphthalate	470	U
56-55-3	Benzo[a]anthracene	470	U
218-01-9	Chrysene	470	U
117-81-7	bis(2-Ethylhexyl)phthalate	470	U
117-84-0	Di-n-octylphthalate	470	U
205-99-2	Benzo[b]fluoranthene	470	U
207-08-9	Benzo[k]fluoranthene	470	U
50-32-8	Benzo[a]pyrene	470	U
193-39-5	Indeno[1,2,3-cd]pyrene	470	U
53-70-3	Dibenz[a,h]anthracene	470	U
191-24-2	Benzo[g,h,i]perylene	470	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP241

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1384

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB52.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 21 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	420	U
111-44-4	bis(2-Chloroethyl)ether	420	U
108-95-2	Phenol	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
100-51-6	Benzyl alcohol	420	U
108-60-1	bis(2-chloroisopropyl)ether	420	U
95-48-7	2-Methylphenol	420	U
67-72-1	Hexachloroethane	420	U
621-64-7	N-Nitroso-di-n-propylamine	420	U
106-44-5	4-Methylphenol	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	bis(2-Chloroethoxy)methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	420	U
208-96-8	Acenaphthylene	420	U
131-11-3	Dimethylphthalate	420	U
606-20-2	2,6-Dinitrotoluene	420	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP241

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1384

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB52.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 21 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	420	U
99-09-2	3-Nitroaniline	840	U
51-28-5	2,4-Dinitrophenol	840	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
100-02-7	4-Nitrophenol	840	U
86-73-7	Fluorene	270	J
7005-72-3	4-Chlorophenyl-phenylether	420	U
84-66-2	Diethylphthalate	420	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	n-Nitrosodiphenylamine	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	2100	
120-12-7	Anthracene	590	
84-74-2	Di-n-butylphthalate	420	U
206-44-0	Fluoranthene	2200	
129-00-0	Pyrene	1500	
85-68-7	Butylbenzylphthalate	420	U
56-55-3	Benzo[a]anthracene	810	
218-01-9	Chrysene	700	
117-81-7	bis(2-Ethylhexyl)phthalate	420	U
117-84-0	Di-n-octylphthalate	420	U
205-99-2	Benzo[b]fluoranthene	610	
207-08-9	Benzo[k]fluoranthene	540	
50-32-8	Benzo[a]pyrene	650	
193-39-5	Indeno[1,2,3-cd]pyrene	360	J
53-70-3	Dibenz[a,h]anthracene	420	U
191-24-2	Benzo[g,h,i]perylene	340	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP242

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1385

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB53.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 20 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	420	U
111-44-4	bis(2-Chloroethyl)ether	420	U
108-95-2	Phenol	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
100-51-6	Benzyl alcohol	420	U
108-60-1	bis(2-chloroisopropyl)ether	420	U
95-48-7	2-Methylphenol	420	U
67-72-1	Hexachloroethane	420	U
621-64-7	N-Nitroso-di-n-propylamine	420	U
106-44-5	4-Methylphenol	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	bis(2-Chloroethoxy)methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	1000	
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	260	J
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	420	U
208-96-8	Acenaphthylene	420	U
131-11-3	Dimethylphthalate	420	U
606-20-2	2,6-Dinitrotoluene	420	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP242

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1385

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSB53.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 20 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	550	
99-09-2	3-Nitroaniline	830	U
51-28-5	2,4-Dinitrophenol	830	U
132-64-9	Dibenzofuran	950	
121-14-2	2,4-Dinitrotoluene	420	U
100-02-7	4-Nitrophenol	830	U
86-73-7	Fluorene	1000	
7005-72-3	4-Chlorophenyl-phenylether	420	U
84-66-2	Diethylphthalate	420	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	U
86-30-6	n-Nitrosodiphenylamine	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	830	U
85-01-8	Phenanthrene	5300	
120-12-7	Anthracene	1700	
84-74-2	Di-n-butylphthalate	420	U
206-44-0	Fluoranthene	4100	
129-00-0	Pyrene	2700	
85-68-7	Butylbenzylphthalate	420	U
56-55-3	Benzo[a]anthracene	1400	
218-01-9	Chrysene	1200	
117-81-7	bis(2-Ethylhexyl)phthalate	420	U
117-84-0	Di-n-octylphthalate	420	U
205-99-2	Benzo[b]fluoranthene	1200	
207-08-9	Benzo[k]fluoranthene	680	
50-32-8	Benzo[a]pyrene	1000	
193-39-5	Indeno[1,2,3-cd]pyrene	550	
53-70-3	Dibenz[a,h]anthracene	260	J
191-24-2	Benzo[g,h,i]perylene	480	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP242DL

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1385DL

Sample wt/vol: 30.0 (g/mL G Lab File ID: XECA53.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 20 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/14/96

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	830	UD
111-44-4	bis(2-Chloroethyl)ether	830	UD
108-95-2	Phenol	830	UD
95-57-8	2-Chlorophenol	830	UD
541-73-1	1,3-Dichlorobenzene	830	UD
106-46-7	1,4-Dichlorobenzene	830	UD
95-50-1	1,2-Dichlorobenzene	830	UD
100-51-6	Benzyl alcohol	830	UD
108-60-1	bis(2-chloroisopropyl)ether	830	UD
95-48-7	2-Methylphenol	830	UD
67-72-1	Hexachloroethane	830	UD
621-64-7	N-Nitroso-di-n-propylamine	830	UD
106-44-5	4-Methylphenol	830	UD
98-95-3	Nitrobenzene	830	UD
78-59-1	Isophorone	830	UD
88-75-5	2-Nitrophenol	830	UD
105-67-9	2,4-Dimethylphenol	830	UD
111-91-1	bis(2-Chloroethoxy)methane	830	UD
120-83-2	2,4-Dichlorophenol	830	UD
120-82-1	1,2,4-Trichlorobenzene	830	UD
91-20-3	Naphthalene	1200	D
106-47-8	4-Chloroaniline	830	UD
87-68-3	Hexachlorobutadiene	830	UD
59-50-7	4-Chloro-3-methylphenol	830	UD
91-57-6	2-Methylnaphthalene	830	UD
77-47-4	Hexachlorocyclopentadiene	830	UD
88-06-2	2,4,6-Trichlorophenol	830	UD
95-95-4	2,4,5-Trichlorophenol	830	UD
91-58-7	2-Chloronaphthalene	830	UD
88-74-4	2-Nitroaniline	830	UD
208-96-8	Acenaphthylene	830	UD
131-11-3	Dimethylphthalate	830	UD
606-20-2	2,6-Dinitrotoluene	830	UD

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP242DL

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1385DL

Sample wt/vol: 30.0 (g/mL G Lab File ID: XECA53.D

Level: (low/med) LOW Date Received: 10/28/96

% Moisture: 20 decanted: (Y/N): N Date Extracted: 11/4/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/14/96

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	620	JD
99-09-2	3-Nitroaniline	1700	UD
51-28-5	2,4-Dinitrophenol	1700	UD
132-64-9	Dibenzofuran	1100	D
121-14-2	2,4-Dinitrotoluene	830	UD
100-02-7	4-Nitrophenol	1700	UD
86-73-7	Fluorene	1100	D
7005-72-3	4-Chlorophenyl-phenylether	830	UD
84-66-2	Diethylphthalate	830	UD
100-01-6	4-Nitroaniline	1700	UD
534-52-1	4,6-Dinitro-2-methylphenol	1700	UD
86-30-6	n-Nitrosodiphenylamine	830	UD
101-55-3	4-Bromophenyl-phenylether	830	UD
118-74-1	Hexachlorobenzene	830	UD
87-86-5	Pentachlorophenol	1700	UD
85-01-8	Phenanthrene	6300	D
120-12-7	Anthracene	2000	D
84-74-2	Di-n-butylphthalate	830	UD
206-44-0	Fluoranthene	4800	D
129-00-0	Pyrene	3700	D
85-68-7	Butylbenzylphthalate	830	UD
56-55-3	Benzo[a]anthracene	1700	D
218-01-9	Chrysene	1500	D
117-81-7	bis(2-Ethylhexyl)phthalate	830	UD
117-84-0	Di-n-octylphthalate	830	UD
205-99-2	Benzo[b]fluoranthene	1200	D
207-08-9	Benzo[k]fluoranthene	980	D
50-32-8	Benzo[a]pyrene	1200	D
193-39-5	Indeno[1,2,3-cd]pyrene	750	JD
53-70-3	Dibenz[a,h]anthracene	830	UD
191-24-2	Benzo[g,h,i]perylene	660	JD

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAPWW

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) WATER Lab Sample ID: E1420

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: SSC00.D

Level: (low/med) Date Received: 11/1/96

% Moisture: 100 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
100-51-6	Benzyl alcohol	10	U
108-60-1	bis(2-chloroisopropyl)ether	10	U
95-48-7	2-Methylphenol	10	U
67-72-1	Hexachloroethane	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	10	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAPWW

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) WATER Lab Sample ID: E1420

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: SSC00.D

Level: (low/med) Date Received: 11/1/96

% Moisture: 100 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	20	U
51-28-5	2,4-Dinitrophenol	20	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	20	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	n-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP251

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1432

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSCA38.D

Level: (low/med) LOW Date Received: 10/31/96

% Moisture: 16 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	390	U
111-44-4	bis(2-Chloroethyl)ether	390	U
108-95-2	Phenol	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
100-51-6	Benzyl alcohol	390	U
108-60-1	bis(2-chloroisopropyl)ether	390	U
95-48-7	2-Methylphenol	390	U
67-72-1	Hexachloroethane	390	U
621-64-7	N-Nitroso-di-n-propylamine	390	U
106-44-5	4-Methylphenol	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	440	
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	390	U
208-96-8	Acenaphthylene	390	U
131-11-3	Dimethylphthalate	390	U
606-20-2	2,6-Dinitrotoluene	390	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP251

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1432

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSCA38.D

Level: (low/med) LOW Date Received: 10/31/96

% Moisture: 16 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	520	
99-09-2	3-Nitroaniline	790	U
51-28-5	2,4-Dinitrophenol	790	U
132-64-9	Dibenzofuran	410	
121-14-2	2,4-Dinitrotoluene	390	U
100-02-7	4-Nitrophenol	790	U
86-73-7	Fluorene	640	
7005-72-3	4-Chlorophenyl-phenylether	390	U
84-66-2	Diethylphthalate	390	U
100-01-6	4-Nitroaniline	580	J
534-52-1	4,6-Dinitro-2-methylphenol	790	U
86-30-6	n-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	790	U
85-01-8	Phenanthrene	4000	
120-12-7	Anthracene	1300	
84-74-2	Di-n-butylphthalate	390	U
206-44-0	Fluoranthene	5100	
129-00-0	Pyrene	3500	
85-68-7	Butylbenzylphthalate	390	U
56-55-3	Benzo[a]anthracene	2300	
218-01-9	Chrysene	1900	
117-81-7	bis(2-Ethylhexyl)phthalate	390	U
117-84-0	Di-n-octylphthalate	390	U
205-99-2	Benzo[b]fluoranthene	1800	
207-08-9	Benzo[k]fluoranthene	1200	
50-32-8	Benzo[a]pyrene	1700	
193-39-5	Indeno[1,2,3-cd]pyrene	1100	
53-70-3	Dibenz[a,h]anthracene	310	J
191-24-2	Benzo[g,h,i]perylene	890	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP251DL

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1432DL

Sample wt/vol: 30.0 (g/mL G Lab File ID: XECA38.D

Level: (low/med) LOW Date Received: 10/31/96

% Moisture: 16 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/14/96

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	790	UD
111-44-4	bis(2-Chloroethyl)ether	790	UD
108-95-2	Phenol	790	UD
95-57-8	2-Chlorophenol	790	UD
541-73-1	1,3-Dichlorobenzene	790	UD
106-46-7	1,4-Dichlorobenzene	790	UD
95-50-1	1,2-Dichlorobenzene	790	UD
100-51-6	Benzyl alcohol	790	UD
108-60-1	bis(2-chloroisopropyl)ether	790	UD
95-48-7	2-Methylphenol	790	UD
67-72-1	Hexachloroethane	790	UD
621-64-7	N-Nitroso-di-n-propylamine	790	UD
106-44-5	4-Methylphenol	790	UD
98-95-3	Nitrobenzene	790	UD
78-59-1	Isophorone	790	UD
88-75-5	2-Nitrophenol	790	UD
105-67-9	2,4-Dimethylphenol	790	UD
111-91-1	bis(2-Chloroethoxy)methane	790	UD
120-83-2	2,4-Dichlorophenol	790	UD
120-82-1	1,2,4-Trichlorobenzene	790	UD
91-20-3	Naphthalene	490	JD
106-47-8	4-Chloroaniline	790	UD
87-68-3	Hexachlorobutadiene	790	UD
59-50-7	4-Chloro-3-methylphenol	790	UD
91-57-6	2-Methylnaphthalene	790	UD
77-47-4	Hexachlorocyclopentadiene	790	UD
88-06-2	2,4,6-Trichlorophenol	790	UD
95-95-4	2,4,5-Trichlorophenol	790	UD
91-58-7	2-Chloronaphthalene	790	UD
88-74-4	2-Nitroaniline	790	UD
208-96-8	Acenaphthylene	790	UD
131-11-3	Dimethylphthalate	790	UD
606-20-2	2,6-Dinitrotoluene	790	UD

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP251DL

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1432DL

Sample wt/vol: 30.0 (g/mL G Lab File ID: XECA38.D

Level: (low/med) LOW Date Received: 10/31/96

% Moisture: 16 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/14/96

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	560	JD
99-09-2	3-Nitroaniline	1600	UD
51-28-5	2,4-Dinitrophenol	1600	UD
132-64-9	Dibenzofuran	460	JD
121-14-2	2,4-Dinitrotoluene	790	UD
100-02-7	4-Nitrophenol	1600	UD
86-73-7	Fluorene	820	D
7005-72-3	4-Chlorophenyl-phenylether	790	UD
84-66-2	Diethylphthalate	790	UD
100-01-6	4-Nitroaniline	1600	UD
534-52-1	4,6-Dinitro-2-methylphenol	1600	UD
86-30-6	n-Nitrosodiphenylamine	790	UD
101-55-3	4-Bromophenyl-phenylether	790	UD
118-74-1	Hexachlorobenzene	790	UD
87-86-5	Pentachlorophenol	1600	UD
85-01-8	Phenanthrene	4500	D
120-12-7	Anthracene	1300	D
84-74-2	Di-n-butylphthalate	790	UD
206-44-0	Fluoranthene	5300	D
129-00-0	Pyrene	3900	D
85-68-7	Butylbenzylphthalate	790	UD
56-55-3	Benzo[a]anthracene	2300	D
218-01-9	Chrysene	2000	D
117-81-7	bis(2-Ethylhexyl)phthalate	790	UD
117-84-0	Di-n-octylphthalate	790	UD
205-99-2	Benzo[b]fluoranthene	1900	D
207-08-9	Benzo[k]fluoranthene	1200	D
50-32-8	Benzo[a]pyrene	1700	D
193-39-5	Indeno[1,2,3-cd]pyrene	1200	D
53-70-3	Dibenz[a,h]anthracene	790	UD
191-24-2	Benzo[g,h,i]perylene	1000	D

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP252

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1433

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSCA39.D

Level: (low/med) LOW Date Received: 10/31/96

% Moisture: 16 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	400	U
111-44-4	bis(2-Chloroethyl)ether	400	U
108-95-2	Phenol	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
100-51-6	Benzyl alcohol	400	U
108-60-1	bis(2-chloroisopropyl)ether	400	U
95-48-7	2-Methylphenol	400	U
67-72-1	Hexachloroethane	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
106-44-5	4-Methylphenol	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	400	U
208-96-8	Acenaphthylene	400	U
131-11-3	Dimethylphthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP252

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1433

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSCA39.D

Level: (low/med) LOW Date Received: 10/31/96

% Moisture: 16 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	400	U
99-09-2	3-Nitroaniline	790	U
51-28-5	2,4-Dinitrophenol	790	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
100-02-7	4-Nitrophenol	790	U
86-73-7	Fluorene	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
84-66-2	Diethylphthalate	400	U
100-01-6	4-Nitroaniline	790	U
534-52-1	4,6-Dinitro-2-methylphenol	790	U
86-30-6	n-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	790	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
56-55-3	Benzo[a]anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	400	U
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo[b]fluoranthene	400	U
207-08-9	Benzo[k]fluoranthene	400	U
50-32-8	Benzo[a]pyrene	400	U
193-39-5	Indeno[1,2,3-cd]pyrene	400	U
53-70-3	Dibenz[a,h]anthracene	400	U
191-24-2	Benzo[g,h,i]perylene	400	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP231A

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1450

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSCA40.D

Level: (low/med) LOW Date Received: 11/1/96

% Moisture: 19 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	410	U
111-44-4	bis(2-Chloroethyl)ether	410	U
108-95-2	Phenol	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
100-51-6	Benzyl alcohol	410	U
108-60-1	bis(2-chloroisopropyl)ether	410	U
95-48-7	2-Methylphenol	410	U
67-72-1	Hexachloroethane	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	410	U
208-96-8	Acenaphthylene	410	U
131-11-3	Dimethylphthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP231A

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1450

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSCA40.D

Level: (low/med) LOW Date Received: 11/1/96

% Moisture: 19 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	820	U
51-28-5	2,4-Dinitrophenol	820	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	820	U
86-73-7	Fluorene	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
84-66-2	Diethylphthalate	410	U
100-01-6	4-Nitroaniline	820	U
534-52-1	4,6-Dinitro-2-methylphenol	820	U
86-30-6	n-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	820	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butylbenzylphthalate	410	U
56-55-3	Benzo[a]anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)phthalate	410	U
117-84-0	Di-n-octylphthalate	410	U
205-99-2	Benzo[b]fluoranthene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
50-32-8	Benzo[a]pyrene	410	U
193-39-5	Indeno[1,2,3-cd]pyrene	410	U
53-70-3	Dibenz[a,h]anthracene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP231B

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1451

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSCA41.D

Level: (low/med) LOW Date Received: 11/1/96

% Moisture: 12 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	380	U
111-44-4	bis(2-Chloroethyl)ether	380	U
108-95-2	Phenol	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
100-51-6	Benzyl alcohol	380	U
108-60-1	bis(2-chloroisopropyl)ether	380	U
95-48-7	2-Methylphenol	380	U
67-72-1	Hexachloroethane	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
106-44-5	4-Methylphenol	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	380	U
208-96-8	Acenaphthylene	380	U
131-11-3	Dimethylphthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP231B

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1451

Sample wt/vol: 30.0 (g/mL G Lab File ID: XSCA41.D

Level: (low/med) LOW Date Received: 11/1/96

% Moisture: 12 decanted: (Y/N): N Date Extracted: 11/5/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/7/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	380	U
99-09-2	3-Nitroaniline	760	U
51-28-5	2,4-Dinitrophenol	760	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
100-02-7	4-Nitrophenol	760	U
86-73-7	Fluorene	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
84-66-2	Diethylphthalate	380	U
100-01-6	4-Nitroaniline	760	U
534-52-1	4,6-Dinitro-2-methylphenol	760	U
86-30-6	n-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	760	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
56-55-3	Benzo[a]anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)phthalate	380	U
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo[b]fluoranthene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
50-32-8	Benzo[a]pyrene	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
53-70-3	Dibenz[a,h]anthracene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP231B

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1451

Sample wt/vol: 30.0 (g/mL G Lab File ID: XECA41.D

Level: (low/med) LOW Date Received: 11/1/96

% Moisture: 12 decanted: (Y/N): N Date Extracted: 11/19/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
62-75-9	N-Nitrosodimethylamine	380	U
111-44-4	bis(2-Chloroethyl)ether	380	U
108-95-2	Phenol	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
100-51-6	Benzyl alcohol	380	U
108-60-1	bis(2-chloroisopropyl)ether	380	U
95-48-7	2-Methylphenol	380	U
67-72-1	Hexachloroethane	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
106-44-5	4-Methylphenol	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	380	U
208-96-8	Acenaphthylene	380	U
131-11-3	Dimethylphthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RVAP231B

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix: (soil/water) SOIL Lab Sample ID: E1451

Sample wt/vol: 30.0 (g/mL G Lab File ID: XECA41.D

Level: (low/med) LOW Date Received: 11/1/96

% Moisture: 12 decanted: (Y/N): N Date Extracted: 11/19/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
83-32-9	Acenaphthene	380	U
99-09-2	3-Nitroaniline	760	U
51-28-5	2,4-Dinitrophenol	760	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
100-02-7	4-Nitrophenol	760	U
86-73-7	Fluorene	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
84-66-2	Diethylphthalate	380	U
100-01-6	4-Nitroaniline	760	U
534-52-1	4,6-Dinitro-2-methylphenol	760	U
86-30-6	n-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	760	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
56-55-3	Benzo[a]anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)phthalate	380	U
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo[b]fluoranthene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
50-32-8	Benzo[a]pyrene	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
53-70-3	Dibenz[a,h]anthracene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Level: (low/med) LOW

	SAMPLE NO.	S1 (2FP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	#	#	TOT OUT
01	RVAP381	60	69	67	77	79	84			
02	RVAP382	63	76	72	77	83	81			
03	RVAP383	70	81	74	82	84	83			
04	RVAP384	65	76	74	79	83	79			
05	RVAP385	60	70	66	72	72	72			
06	RVAP386	68	81	73	79	90	78			
07	RVAP38B	70	79	75	80	93	91			
08	RVAP241	61	70	66	72	80	69			
09	RVAP242	67	80	71	76	85	73			
10	RVAP38BMS	68	78	73	77	84	71			
11	RVAP38BMSD	63	70	67	72	78	65			
12	SBLK05	66	76	72	81	73	75			
13	RVAP231B	50	58	52	59	56	58			
14	RVAP231BMS	63	72	68	73	74	75			
15	RVAP231BMSD	66	76	70	78	72	77			
16	SBLK06	66	75	69	79	75	82			
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

	QC LIMITS
S1 (2FP) = 2-Fluorophenol	(25-121)
S2 (PHL) = Phenol-d5	(24-113)
S3 (NBZ) = Nitrobenzene-d5	(23-120)
S4 (FBP) = 2-Fluorobiphenyl	(30-115)
S5 (TBP) = 2,4,6-Tribromophenol	(19-122)
S6 (TPH) = Terphenyl-d14	(18-137)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: _____ Group: GCMS

	SAMPLE NO.	S1 (2FP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	#	#	TOT OUT
01	RVAPWW	27	21	30 *	32 *	31	26 *			3
02	LFBMS	73	75	77	67	79	86			
03	LFBMSD	74	77	81	72	79	80			
04	SBLK02	63	63	68	61	68	81			
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

	QC LIMITS
S1 (2FP) = 2-Fluorophenol	(21-100)
S2 (PHL) = Phenol-d5	(10-94)
S3 (NBZ) = Nitrobenzene-d5	(35-114)
S4 (FBP) = 2-Fluorobiphenyl	(43-116)
S5 (TBP) = 2,4,6-Tribromophenol	(10-123)
S6 (TPH) = Terphenyl-d14	(33-141)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: _____ Group: GCMS

Level: (low/med) LOW

	SAMPLE NO.	S1 (2FP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	#	#	TOT OUT
01	RVAP251	69	72	74	80	76	81			
02	RVAP252	71	72	75	78	73	87			
03	RVAP231A	70	73	73	80	79	82			
04	RVAP231B	0 *	0 *	0 *	0 *	0 *	0 *			6
05	RVAP231BMS	60	67	74	79	51	85			
06	RVAP231BMSD	59	60	69	74	52	77			
07	SBLK01	76	76	84	91	78	98			
08	RVAP251DL	76 D	83 D	81 D	90 D	82 D	95 D			
09	RVAP242DL	81 D	86 D	83 D	91 D	88 D	96 D			
10	SBLK03	78	85	86	88	79	93			
11	SBLK04	64	72	74	81	61	76			
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

	QC LIMITS
S1 (2FP) = 2-Fluorophenol	(25-121)
S2 (PHL) = Phenol-d5	(24-113)
S3 (NBZ) = Nitrobenzene-d5	(23-120)
S4 (FBP) = 2-Fluorobiphenyl	(30-115)
S5 (TBP) = 2,4,6-Tribromophenol	(19-122)
S6 (TPH) = Terphenyl-d14	(18-137)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix Spike - Sample No.: RVAP38B Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	#	QC. LIMITS REC.
Phenol	4700	0	3800	81		(26-90)
2-Chlorophenol	4700	0	3600	77		(25-102)
1,4-Dichlorobenzene	2400	0	1900	79		(28-104)
N-Nitroso-di-n-propylamine	2400	0	2300	96		(41-126)
1,2,4-Trichlorobenzene	2400	0	2100	88		(41-126)
4-Chloro-3-methylphenol	4700	0	4000	85		(26-103)
Acenaphthene	2400	0	2000	83		(31-137)
2,4-Dinitrotoluene	2400	0	2200	92	*	(28-89)
4-Nitrophenol	4700	0	3900	83		(11-114)
Pentachlorophenol	4700	0	4400	94		(17-109)
Pyrene	2400	0	2200	92		(35-142)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	#	% RPD	#	QC LIMITS RPD	QC LIMITS REC.
Phenol	4700	3300	70		14		35	(26-90)
2-Chlorophenol	4700	3100	66		15		50	(25-102)
1,4-Dichlorobenzene	2400	1600	67		17		27	(28-104)
N-Nitroso-di-n-propylamine	2400	2000	83		14		38	(41-126)
1,2,4-Trichlorobenzene	2400	1800	75		15		38	(41-126)
4-Chloro-3-methylphenol	4700	3600	77		11		33	(26-103)
Acenaphthene	2400	1700	71		16		19	(31-137)
2,4-Dinitrotoluene	2400	1800	75		20		47	(28-89)
4-Nitrophenol	4700	3600	77		8		50	(11-114)
Pentachlorophenol	4700	3500	74		23		47	(17-109)
Pyrene	2400	1600	67		32		36	(35-142)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 1 out of 22 outside limits

Comments: _____

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SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix Spike - Sample No.: RVAP231B Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Phenol	3800	0	2800	74	(26-90)
2-Chlorophenol	3800	0	2500	66	(25-102)
1,4-Dichlorobenzene	1900	0	1600	84	(28-104)
N-Nitroso-di-n-propylamine	1900	0	1900	100	(41-126)
1,2,4-Trichlorobenzene	1900	0	1600	84	(41-126)
4-Chloro-3-methylphenol	3800	0	3200	84	(26-103)
Acenaphthene	1900	0	1700	89	(31-137)
2,4-Dinitrotoluene	1900	0	1700	89	(28-89)
4-Nitrophenol	3800	0	2700	71	(11-114)
Pentachlorophenol	3800	0	2900	76	(17-109)
Pyrene	1900	0	1800	95	(35-142)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	3800	2300	61	20	35	(26-90)
2-Chlorophenol	3800	2200	58	13	50	(25-102)
1,4-Dichlorobenzene	1900	1400	74	13	27	(28-104)
N-Nitroso-di-n-propylamine	1900	1600	84	17	38	(41-126)
1,2,4-Trichlorobenzene	1900	1400	74	13	38	(41-126)
4-Chloro-3-methylphenol	3800	2800	74	13	33	(26-103)
Acenaphthene	1900	1500	79	13	19	(31-137)
2,4-Dinitrotoluene	1900	1400	74	19	47	(28-89)
4-Nitrophenol	3800	2300	61	16	50	(11-114)
Pentachlorophenol	3800	2500	66	15	47	(17-109)
Pyrene	1900	1600	84	12	36	(35-142)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

Comments: _____

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SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Matrix Spike - Sample No.: RVAP231B Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Phenol	3800	0	2800	74	(26-90)
2-Chlorophenol	3800	0	2700	71	(25-102)
1,4-Dichlorobenzene	1900	0	1500	79	(28-104)
N-Nitroso-di-n-propylamine	1900	0	1600	84	(41-126)
1,2,4-Trichlorobenzene	1900	0	1600	84	(41-126)
4-Chloro-3-methylphenol	3800	0	3000	79	(26-103)
Acenaphthene	1900	0	1500	79	(31-137)
2,4-Dinitrotoluene	1900	0	1500	79	(28-89)
4-Nitrophenol	3800	0	2800	74	(11-114)
Pentachlorophenol	3800	0	2800	74	(17-109)
Pyrene	1900	0	1600	84	(35-142)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	3800	2900	76	4	35	(26-90)
2-Chlorophenol	3800	2700	71	0	50	(25-102)
1,4-Dichlorobenzene	1900	1500	79	0	27	(28-104)
N-Nitroso-di-n-propylamine	1900	1700	89	6	38	(41-126)
1,2,4-Trichlorobenzene	1900	1600	84	0	38	(41-126)
4-Chloro-3-methylphenol	3800	2900	76	3	33	(26-103)
Acenaphthene	1900	1600	84	6	19	(31-137)
2,4-Dinitrotoluene	1900	1600	84	6	47	(28-89)
4-Nitrophenol	3800	2800	74	0	50	(11-114)
Pentachlorophenol	3800	2700	71	4	47	(17-109)
Pyrene	1900	1600	84	0	36	(35-142)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

Comments: _____

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Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\8271.M
Title : CLP BNA Calibration
Last Update : Wed Nov 20 09:53:37 1996
Response via : Initial Calibration

Non-Spiked Sample: SBC01.D

	Spike Sample	Spike Duplicate Sample
File ID :	SMC02.D	SMC03.D
Sample :	LB MS	LB MSD
Acq Time:	8 Nov 96 12:48 am	8 Nov 96 1:41 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	0.0	100	74	75	74	75	2	42	12-110
2-Chlorophenol	0.0	100	74	78	74	78	5	40	27-123
1,4-Dichlorobenzene	0.0	50	25	27	50	55	10	28	36- 97
N-Nitroso-di-n-propy	0.0	50	48	50	96	100	5	38	41-116
1,2,4-Trichlorobenze	0.0	50	27	30	53	61	13	28	39- 98
4-Chloro-3-methylphe	0.0	100	92	93	92	93	1	42	23- 97
Acenaphthene	0.0	50	41	44	82	88	7	31	46-118
2,4-Dinitrotoluene	0.0	50	39	41	78	82	5	38	24- 96
4-Nitrophenol	0.0	100	71	70	71	70	2	50	10- 80
Pentachlorophenol	0.0	100	82	78	82	78	5	50	9-103
Pyrene	0.0	50	46	47	92	94	3	31	26-127

4B

SEMIVOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

SBLK01

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID: XBCA44.D Lab Sample ID: BLK01

Instrument ID: ABN1 Date Extracted: 11/5/96

Matrix: (soil/water) SOIL Date Analyzed: 11/7/96

Level: (low/med) LOW Time Analyzed: 2302

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	RVAP251	E1432	XSCA38.D	11/07/96
02	RVAP252	E1433	XSCA39.D	11/07/96
03	RVAP231A	E1450	XSCA40.D	11/07/96
04	RVAP231B	E1451	XSCA41.D	11/07/96
05	RVAP231BMS	E1451MS	XMCA42.D	11/07/96
06	RVAP231BMSD	E1451MSD	XMCA43.D	11/07/96
07				
08				
09				
10				
11				
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COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

SBLK02

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID: SBC01.D Lab Sample ID: BLK02

Instrument ID: ABN1 Date Extracted: 11/5/96

Matrix: (soil/water) WATER Date Analyzed: 11/8/96

Level: (low/med) Time Analyzed: 0233

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	RVAPWW	E1420	SSC00.D	11/07/96
02	LFBMS	LFBMS	SMC02.D	11/08/96
03	LFBMSD	LFBMSD	SMC03.D	11/08/96
04				
05				
06				
07				
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COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

SBLK05

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID: XBB54.D Lab Sample ID: BLK05

Instrument ID: ABN2 Date Extracted: 11/4/96

Matrix: (soil/water) SOIL Date Analyzed: 11/12/96

Level: (low/med) LOW Time Analyzed: 2107

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	RVAP381	E1377	XSB45.D	11/12/96
02	RVAP382	E1378	XSB46.D	11/12/96
03	RVAP383	E1379	XSB47.D	11/12/96
04	RVAP384	E1380	XSB48.D	11/12/96
05	RVAP385	E1381	XSB49.D	11/12/96
06	RVAP386	E1382	XSB50.D	11/12/96
07	RVAP38B	E1383	XSB51.D	11/12/96
08	RVAP241	E1384	XSB52.D	11/12/96
09	RVAP242	E1385	XSB53.D	11/12/96
10	RVAP38BMS	E1383MS	XMB55.D	11/12/96
11	RVAP38BMSD	E1383MSD	XMB56.D	11/12/96
12				
13				
14				
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COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

SBLK06

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID: XBECA44.D Lab Sample ID: BLK06

Instrument ID: ABN2 Date Extracted: 11/19/96

Matrix: (soil/water) SOIL Date Analyzed: 11/20/96

Level: (low/med) LOW Time Analyzed: 1338

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	RVAP231B	E1451	XECA41.D	11/20/96
02	RVAP231BMS	E1451MS	XMECA42.D	11/20/96
03	RVAP231BMSD	E1451MSD	XMECA43.D	11/20/96
04				
05				
06				
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COMMENTS:

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID: STAA10.D DFTPP Injection Date: 10/22/96

Instrument ID: ABN1 DFTPP Injection Time: 0806

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	51.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	68.5
70	Less than 2.0% of mass 69	0.2 (0.3)1
127	25.0 - 75.0% of mass 198	42.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	20.9
365	Greater than 0.75% of mass 198	2.4
441	Present, but less than mass 443	12.0
442	40.0 - 110.0% of mass 198	83.7
443	15.0 - 24.0% of mass 442	16.0 (19.1)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD160	STD120	SCAA51.D	10/22/96	0923
02	SSTD120	STD80	SCAA52.D	10/22/96	1015
03	SSTD50	STD20	SCAA54.D	10/22/96	1158
04	SSTD20	STD10	SCAA55.D	10/22/96	1251
05	SSTD80	STD50	SCAA56.D	10/22/96	1346
06					
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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID: STAB06.D DFTPP Injection Date: 11/7/96

Instrument ID: ABN1 DFTPP Injection Time: 1539

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	53.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	68.1
70	Less than 2.0% of mass 69	0.3 (0.4)1
127	25.0 - 75.0% of mass 198	41.7
197	Less than 1.0% of mass 198	0.4
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	20.7
365	Greater than 0.75% of mass 198	2.3
441	Present, but less than mass 443	12.3
442	40.0 - 110.0% of mass 198	79.9
443	15.0 - 24.0% of mass 442	15.5 (19.4)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	CC50	SKAB06.D	11/7/96	1605
02	RVAP251	E1432	XSCA38.D	11/7/96	1749
03	RVAP252	E1433	XSCA39.D	11/7/96	1841
04	RVAP231A	E1450	XSCA40.D	11/7/96	1933
05	RVAP231B	E1451	XSCA41.D	11/7/96	2026
06	RVAP231BMS	E1451MS	XMCA42.D	11/7/96	2118
07	RVAP231BMSD	E1451MSD	XMCA43.D	11/7/96	2210
08	SBLK01	BLK01	XBCA44.D	11/7/96	2302
09	RVAPWW	E1420	SSC00.D	11/7/96	2355
10	LFBMS	LFBMS	SMC02.D	11/8/96	0048
11	LFBMSD	LFBMSD	SMC03.D	11/8/96	0141
12	SBLK02	BLK02	SBC01.D	11/8/96	0233
13					
14					
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19					
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21					
22					

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: _____ Group: GCMS

Lab File ID: STAB08.D DFTPP Injection Date: 11/14/96

Instrument ID: ABN1 DFTPP Injection Time: 0833

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	47.2
68	Less than 2.0% of mass 69	0.1 (0.1)1
69	Mass 69 relative abundance	60.6
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	25.0 - 75.0% of mass 198	40.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	20.6
365	Greater than 0.75% of mass 198	2.5
441	Present, but less than mass 443	10.5
442	40.0 - 110.0% of mass 198	77.3
443	15.0 - 24.0% of mass 442	14.6 (18.8)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	2CC50	SKAB08.D	11/14/96	0857
02	RVAP251DL	E1432DL	XECA38.D	11/14/96	0949
03	RVAP242DL	E1385DL	XECA53.D	11/14/96	1041
04	SBLK03	BLK03	XBEA44.D	11/14/96	1133
05	SBLK04	BLK04	XBEA54.D	11/14/96	1225
06					
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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID: STB03.D DFTPP Injection Date: 11/6/96

Instrument ID: ABN2 DFTPP Injection Time: 0747

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	34.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	50.1
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	25.0 - 75.0% of mass 198	42.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	14.7
365	Greater than 0.75% of mass 198	1.3
441	Present, but less than mass 443	9.5
442	40.0 - 110.0% of mass 198	64.5
443	15.0 - 24.0% of mass 442	12.9 (20.0)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD160	STD120	SCB01.D	11/6/96	0912
02	SSTD120	STD80	SCB02.D	11/6/96	1009
03	SSTD80	STD50	SCB03.D	11/6/96	1106
04	SSTD50	STD20	SCB04.D	11/6/96	1203
05	SSTD20	STD10	SCB05.D	11/6/96	1300
06					
07					
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18					
19					
20					
21					
22					

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID: STB07.D DFTPP Injection Date: 11/12/96

Instrument ID: ABN2 DFTPP Injection Time: 0924

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	37.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	50.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	41.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	17.0
365	Greater than 0.75% of mass 198	1.3
441	Present, but less than mass 443	11.0
442	40.0 - 110.0% of mass 198	73.8
443	15.0 - 24.0% of mass 442	13.9 (18.8)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	CC50	SKB07.D	11/12/96	0950
02	RVAP381	E1377	XSB45.D	11/12/96	1047
03	RVAP382	E1378	XSB46.D	11/12/96	1143
04	RVAP383	E1379	XSB47.D	11/12/96	1240
05	RVAP384	E1380	XSB48.D	11/12/96	1336
06	RVAP385	E1381	XSB49.D	11/12/96	1432
07	RVAP386	E1382	XSB50.D	11/12/96	1529
08	RVAP38B	E1383	XSB51.D	11/12/96	1626
09	RVAP241	E1384	XSB52.D	11/12/96	1723
10	RVAP242	E1385	XSB53.D	11/12/96	1819
11	RVAP38BMS	E1383MS	XMB55.D	11/12/96	1916
12	RVAP38BMSD	E1383MSD	XMB56.D	11/12/96	2012
13	SBLK05	BLK05	XBB54.D	11/12/96	2107
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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID: STB08.D DFTPP Injection Date: 11/20/96

Instrument ID: ABN2 DFTPP Injection Time: 0829

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	37.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	53.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	44.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	10.4
365	Greater than 0.75% of mass 198	1.3
441	Present, but less than mass 443	9.4
442	40.0 - 110.0% of mass 198	65.1
443	15.0 - 24.0% of mass 442	11.9 (18.2)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	3CC50	SKB08.D	11/20/96	0856
02	RVAP231B	E1451	XECA41.D	11/20/96	0953
03	RVAP231BMS	E1451MS	XMECA42.D	11/20/96	1051
04	RVAP231BMSD	E1451MSD	XMECA43.D	11/20/96	1150
05	SBLK06	BLK06	XBECA44.D	11/20/96	1338
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6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN2 Calibration Date(s): 11/6/96 11/6/96

Calibration Times: 0912 1300

Lab File ID: RRF20 = SCB05.D RRF50 = SCB04.D
RRF80 = SCB03.D RRF120 = SCB02.D RRF160 = SCB01.D

COMPOUND		RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	
N-Nitrosodimethylamine		0.694	0.674	0.696	0.701	0.686	0.690	1.5	
bis(2-Chloroethyl)ether		1.492	1.380	1.305	1.359	1.209	1.349	7.7	
Phenol	*	1.547	1.553	1.557	1.581	1.490	1.546	2.2	*
2-Chlorophenol		1.311	1.303	1.269	1.294	1.229	1.281	2.6	
1,3-Dichlorobenzene		1.545	1.519	1.489	1.507	1.418	1.496	3.2	
1,4-Dichlorobenzene	*	1.599	1.520	1.499	1.516	1.406	1.508	4.6	*
1,2-Dichlorobenzene		1.482	1.429	1.381	1.399	1.301	1.398	4.8	
Benzyl alcohol		0.441	0.554	0.695	0.768	0.755	0.643	22.0	
bis(2-chloroisopropyl)ether		1.256	1.154	1.094	1.179	1.091	1.155	5.9	
2-Methylphenol		1.194	1.078	1.080	1.126	1.061	1.108	4.9	
Hexachloroethane		0.660	0.619	0.606	0.649	0.613	0.629	3.8	
N-Nitroso-di-n-propylamine	*	0.887	0.855	0.836	0.889	0.838	0.861	3.0	*
4-Methylphenol		1.153	1.131	1.070	1.092	1.019	1.093	4.8	
Nitrobenzene		0.451	0.430	0.427	0.417	0.399	0.425	4.5	
Isophorone		0.849	0.790	0.790	0.840	0.671	0.788	9.0	
2-Nitrophenol	*	0.240	0.247	0.259	0.271	0.268	0.257	5.2	*
2,4-Dimethylphenol		0.276	0.329	0.367	0.388	0.384	0.349	13.4	
bis(2-Chloroethoxy)methane		0.521	0.512	0.499	0.498	0.372	0.480	12.8	
2,4-Dichlorophenol	*	0.347	0.341	0.350	0.366	0.361	0.353	2.9	*
1,2,4-Trichlorobenzene		0.388	0.378	0.377	0.369	0.358	0.374	3.0	
Naphthalene		1.188	1.102	1.036	1.024	0.959	1.062	8.2	
4-Chloroaniline		0.441	0.463	0.475	0.466	0.429	0.455	4.2	
Hexachlorobutadiene	*	0.183	0.175	0.176	0.178	0.171	0.177	2.5	*
4-Chloro-3-methylphenol	*	0.320	0.327	0.349	0.352	0.341	0.338	4.1	*
2-Methylnaphthalene		0.786	0.746	0.719	0.713	0.661	0.725	6.3	
Hexachlorocyclopentadiene	*	0.126	0.130	0.162	0.181	0.190	0.158	18.4	*
2,4,6-Trichlorophenol	*	0.397	0.375	0.395	0.409	0.401	0.395	3.2	*
2,4,5-Trichlorophenol		0.450	0.461	0.477	0.483	0.438	0.462	4.0	
2-Chloronaphthalene		1.243	1.158	1.113	1.119	1.033	1.133	6.7	
2-Nitroaniline		0.369	0.366	0.384	0.395	0.365	0.376	3.5	
Acenaphthylene		1.591	1.531	1.430	1.391	1.209	1.430	10.3	
Dimethylphthalate		1.436	1.353	1.289	1.274	1.141	1.299	8.4	
2,6-Dinitrotoluene		0.338	0.338	0.361	0.379	0.355	0.354	4.9	
Acenaphthene	*	1.184	1.112	1.072	1.052	0.931	1.070	8.7	*
3-Nitroaniline			0.298	0.359	0.367	0.340	0.341	9.0	
2,4-Dinitrophenol	*		0.095	0.183	0.220	0.229	0.182	33.7	*
Dibenzofuran		1.666	1.565	1.555	1.570	1.468	1.565	4.5	

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN1 Calibration Date(s): 10/22/96 10/22/96

Calibration Times: 0923 1346

Lab File ID: RRF20 = SCAA55.D RRF50 = SCAA54.D
RRF80 = SCAA56.D RRF120 = SCAA52.D RRF160 = SCAA51.D

COMPOUND		RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	
N-Nitrosodimethylamine		0.758	0.621	0.686	0.753	0.781	0.720	9.1	
bis(2-Chloroethyl)ether		1.546	1.440	1.474	1.502	1.407	1.474	3.7	
Phenol	*	1.802	1.765	1.741	1.704	1.491	1.701	7.2	*
2-Chlorophenol		1.385	1.352	1.358	1.360	1.151	1.321	7.3	
1,3-Dichlorobenzene		1.526	1.535	1.476	1.517	1.419	1.495	3.2	
1,4-Dichlorobenzene	*	1.655	1.567	1.589	1.585	1.417	1.563	5.6	*
1,2-Dichlorobenzene		1.560	1.495	1.489	1.500	1.352	1.479	5.2	
Benzyl alcohol		0.704	0.744	0.809	0.827	0.844	0.786	7.5	
bis(2-chloroisopropyl)ether		1.125	1.647	1.668	1.805	1.714	1.592	16.8	
2-Methylphenol		1.131	1.145	1.185	1.205	1.094	1.152	3.8	
Hexachloroethane		0.682	0.711	0.732	0.752	0.728	0.721	3.6	
N-Nitroso-di-n-propylamine	*	1.157	1.112	1.129	1.267	1.144	1.162	5.3	*
4-Methylphenol		1.227	1.203	1.262	1.292	1.189	1.235	3.4	
Nitrobenzene		0.511	0.498	0.511	0.561	0.515	0.519	4.7	
Isophorone		0.998	0.926	0.925	1.025	1.003	0.975	4.8	
2-Nitrophenol	*	0.222	0.240	0.253	0.273	0.264	0.250	8.0	*
2,4-Dimethylphenol		0.354	0.389	0.423	0.448	0.423	0.407	9.0	
bis(2-Chloroethoxy)methane		0.586	0.593	0.575	0.598	0.580	0.586	1.6	
2,4-Dichlorophenol	*	0.348	0.370	0.371	0.378	0.361	0.366	3.2	*
1,2,4-Trichlorobenzene		0.454	0.428	0.406	0.421	0.393	0.420	5.5	
Naphthalene		1.198	1.175	1.092	1.115	1.005	1.117	6.8	
4-Chloroaniline		0.502	0.506	0.490	0.495	0.473	0.493	2.6	
Hexachlorobutadiene	*	0.283	0.291	0.267	0.272	0.251	0.273	5.6	*
4-Chloro-3-methylphenol	*	0.379	0.379	0.418	0.410	0.413	0.400	4.8	*
2-Methylnaphthalene		0.816	0.812	0.750	0.734	0.702	0.763	6.5	
Hexachlorocyclopentadiene	*	0.105	0.158	0.212	0.255	0.277	0.201	35.0	*
2,4,6-Trichlorophenol	*	0.438	0.460	0.448	0.468	0.439	0.451	2.9	*
2,4,5-Trichlorophenol		0.464	0.495	0.498	0.508	0.468	0.487	4.0	
2-Chloronaphthalene		1.224	1.187	1.141	1.123	1.064	1.148	5.3	
2-Nitroaniline		0.408	0.444	0.516	0.549	0.554	0.494	13.2	
Acenaphthylene		1.511	1.521	1.519	1.517	1.395	1.493	3.7	
Dimethylphthalate		1.550	1.497	1.477	1.530	1.444	1.500	2.8	
2,6-Dinitrotoluene		0.280	0.327	0.359	0.378	0.378	0.344	12.1	
Acenaphthene	*	1.240	1.192	1.091	1.090	0.972	1.117	9.3	*
3-Nitroaniline			0.408	0.460	0.492	0.497	0.464	8.8	
2,4-Dinitrophenol	*		0.100	0.190	0.205	0.245	0.185	33.1	*
Dibenzofuran		1.775	1.730	1.699	1.616	1.555	1.675	5.3	

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN1 Calibration Date(s): 10/22/96 10/22/96

Calibration Times: 0923 1346

Lab File ID: RRF20 = SCAA55.D RRF50 = SCAA54.D
RRF80 = SCAA56.D RRF120 = SCAA52.D RRF160 = SCAA51.D

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	
2,4-Dinitrotoluene	0.431	0.457	0.508	0.529	0.520	0.489	8.7	
4-Nitrophenol *		0.137	0.176	0.166	0.181	0.165	11.9	*
Fluorene	1.365	1.315	1.281	1.309	1.172	1.288	5.6	
4-Chlorophenyl-phenylether	0.717	0.697	0.644	0.648	0.588	0.659	7.7	
Diethylphthalate	1.584	1.629	1.570	1.596	1.496	1.575	3.1	
4-Nitroaniline		0.230	0.329	0.322	0.396	0.319	21.4	
4,6-Dinitro-2-methylphenol		0.128	0.168	0.182	0.194	0.168	17.1	
n-Nitrosodiphenylamine *	0.535	0.533	0.491	0.488	0.430	0.495	8.6	*
4-Bromophenyl-phenylether	0.267	0.270	0.250	0.266	0.238	0.258	5.3	
Hexachlorobenzene	0.390	0.378	0.362	0.377	0.331	0.368	6.2	
Pentachlorophenol *		0.196	0.226	0.240	0.226	0.222	8.4	*
Phenanthrene	1.208	1.142	1.056	1.135	0.997	1.108	7.4	
Anthracene	1.101	1.041	1.006	1.058	0.937	1.029	6.0	
Di-n-butylphthalate	1.720	1.765	1.688	1.796	1.604	1.715	4.3	
Fluoranthene *	1.306	1.186	1.203	1.192	1.039	1.185	8.0	*
Pyrene	1.363	1.391	1.288	1.369	1.267	1.336	4.1	
Butylbenzylphthalate	0.813	0.853	0.824	0.881	0.836	0.841	3.2	
Benzo[a]anthracene	1.216	1.167	1.200	1.208	1.149	1.188	2.4	
Chrysene	1.292	1.207	1.155	1.141	1.004	1.160	9.1	
bis(2-Ethylhexyl)phthalate	1.226	1.236	1.199	1.223	1.148	1.206	2.9	
Di-n-octylphthalate *	1.836	1.804	1.791	2.049	1.623	1.821	8.4	*
Benzo[b]fluoranthene	1.142	1.094	1.099	1.237	1.130	1.140	5.1	
Benzo[k]fluoranthene	1.144	1.083	1.067	1.120	0.880	1.059	9.9	
Benzo[a]pyrene *	1.019	0.961	0.986	1.055	0.959	0.996	4.1	*
Indeno[1,2,3-cd]pyrene	0.864	0.860	0.908	0.993	1.005	0.926	7.5	
Dibenz[a,h]anthracene	0.778	0.818	0.872	0.933	0.869	0.854	6.9	
Benzo[g,h,i]perylene	0.924	0.898	0.899	0.970	0.944	0.927	3.3	
2-Fluorophenol	1.115	1.057	1.209	1.289	1.282	1.190	8.6	
Phenol-d5	1.722	1.717	1.711	1.789	1.631	1.714	3.3	
Nitrobenzene-d5	0.506	0.495	0.524	0.575	0.558	0.532	6.4	
2-Fluorobiphenyl	1.437	1.416	1.304	1.292	1.175	1.325	8.0	
2,4,6-Tribromophenol	0.214	0.214	0.220	0.239	0.214	0.220	4.9	
Terphenyl-d14	0.972	0.987	0.946	0.943	0.903	0.950	3.4	

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN1 Calibration Date: 11/7/96 Time: 1605

Lab File ID: SKAB06.D Init. Calib. Date(s): 10/22/96 10/22/96

Init. Calib. Times: 0923 1346

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
N-Nitrosodimethylamine	0.720	0.766		-6.4	
bis(2-Chloroethyl)ether	1.474	1.481		-0.5	
Phenol	1.701	1.549		8.9	20.0
2-Chlorophenol	1.321	1.234		6.6	
1,3-Dichlorobenzene	1.495	1.445		3.3	
1,4-Dichlorobenzene	1.563	1.563		0.0	20.0
1,2-Dichlorobenzene	1.479	1.420		4.0	
Benzyl alcohol	0.786	0.694		11.7	
bis(2-chloroisopropyl)ether	1.592	1.890		-18.7	
2-Methylphenol	1.152	1.066		7.5	
Hexachloroethane	0.721	0.764		-6.0	
N-Nitroso-di-n-propylamine	1.162	1.157	0.050	0.4	
4-Methylphenol	1.235	1.124		9.0	
Nitrobenzene	0.519	0.494		4.8	
Isophorone	0.975	0.922		5.4	
2-Nitrophenol	0.250	0.235		6.0	20.0
2,4-Dimethylphenol	0.407	0.391		3.9	
bis(2-Chloroethoxy)methane	0.586	0.542		7.5	
2,4-Dichlorophenol	0.366	0.333		9.0	20.0
1,2,4-Trichlorobenzene	0.421	0.401		4.8	
Naphthalene	1.117	1.052		5.8	
4-Chloroaniline	0.493	0.499		-1.2	
Hexachlorobutadiene	0.273	0.273		0.0	20.0
4-Chloro-3-methylphenol	0.400	0.379		5.3	20.0
2-Methylnaphthalene	0.763	0.989		-29.6	
Hexachlorocyclopentadiene	0.201	0.296	0.050	-47.3	
2,4,6-Trichlorophenol	0.451	0.420		6.9	20.0
2,4,5-Trichlorophenol	0.487	0.465		4.5	
2-Chloronaphthalene	1.148	1.103		3.9	
2-Nitroaniline	0.494	0.512		-3.6	
Acenaphthylene	1.493	1.405		5.9	
Dimethylphthalate	1.500	1.407		6.2	
2,6-Dinitrotoluene	0.344	0.333		3.2	
Acenaphthene	1.117	1.083		3.0	20.0
3-Nitroaniline	0.476	0.440		7.6	
2,4-Dinitrophenol	0.203	0.154	0.050	24.1	
Dibenzofuran	1.675	1.642		2.0	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN1 Calibration Date: 11/7/96 Time: 1605

Lab File ID: SKAB06.D Init. Calib. Date(s): 10/22/96 10/22/96

Init. Calib. Times: 0923 1346

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
2,4-Dinitrotoluene	0.489	0.478		2.2	
4-Nitrophenol	0.171	0.145	0.050	15.2	
Fluorene	1.288	1.247		3.2	
4-Chlorophenyl-phenylether	0.659	0.665		-0.9	
Diethylphthalate	1.575	1.556		1.2	
4-Nitroaniline	0.341	0.286		16.1	
4,6-Dinitro-2-methylphenol	0.176	0.156		11.4	
n-Nitrosodiphenylamine	0.496	0.444		10.5	20.0
4-Bromophenyl-phenylether	0.258	0.251		2.7	
Hexachlorobenzene	0.368	0.350		4.9	
Pentachlorophenol	0.227	0.210		7.5	20.0
Phenanthrene	1.107	1.021		7.8	
Anthracene	1.029	0.985		4.3	
Di-n-butylphthalate	1.715	1.693		1.3	
Fluoranthene	1.185	1.194		-0.8	20.0
Pyrene	1.336	1.279		4.3	
Butylbenzylphthalate	0.842	0.786		6.7	
Benzo[a]anthracene	1.188	1.077		9.3	
Chrysene	1.160	1.078		7.1	
bis(2-Ethylhexyl)phthalate	1.206	1.161		3.7	
Di-n-octylphthalate	1.821	1.799		1.2	20.0
Benzo[b]fluoranthene	1.140	1.059		7.1	
Benzo[k]fluoranthene	1.059	1.015		4.2	
Benzo[a]pyrene	0.996	0.945		5.1	20.0
Indeno[1,2,3-cd]pyrene	0.926	0.857		7.5	
Dibenz[a,h]anthracene	0.854	0.762		10.8	
Benzo[g,h,i]perylene	0.927	0.878		5.3	
2-Fluorophenol	1.190	1.155		2.9	
Phenol-d5	1.714	1.643		4.1	
Nitrobenzene-d5	0.532	0.507		4.7	
2-Fluorobiphenyl	1.325	1.266		4.5	
2,4,6-Tribromophenol	0.220	0.203		7.7	
Terphenyl-d14	0.950	0.947		0.3	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN1 Calibration Date: 11/14/96 Time: 0857

Lab File ID: SKAB08.D Init. Calib. Date(s): 10/22/96 10/22/96

Init. Calib. Times: 0923 1346

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
N-Nitrosodimethylamine	0.720	0.796		-10.6	
bis(2-Chloroethyl)ether	1.474	1.435		2.6	
Phenol	1.701	1.701		0.0	20.0
2-Chlorophenol	1.321	1.306		1.1	
1,3-Dichlorobenzene	1.495	1.419		5.1	
1,4-Dichlorobenzene	1.563	1.484		5.1	20.0
1,2-Dichlorobenzene	1.479	1.429		3.4	
Benzyl alcohol	0.786	0.654		16.8	
bis(2-chloroisopropyl)ether	1.592	1.822		-14.4	
2-Methylphenol	1.152	1.160		-0.7	
Hexachloroethane	0.721	0.743		-3.1	
N-Nitroso-di-n-propylamine	1.162	1.224	0.050	-5.3	
4-Methylphenol	1.235	1.250		-1.2	
Nitrobenzene	0.519	0.528		-1.7	
Isophorone	0.975	0.943		3.3	
2-Nitrophenol	0.250	0.241		3.6	20.0
2,4-Dimethylphenol	0.407	0.410		-0.7	
bis(2-Chloroethoxy)methane	0.586	0.581		0.9	
2,4-Dichlorophenol	0.366	0.344		6.0	20.0
1,2,4-Trichlorobenzene	0.421	0.393		6.7	
Naphthalene	1.117	1.078		3.5	
4-Chloroaniline	0.493	0.496		-0.6	
Hexachlorobutadiene	0.273	0.247		9.5	20.0
4-Chloro-3-methylphenol	0.400	0.385		3.8	20.0
2-Methylnaphthalene	0.763	0.974		-27.7	
Hexachlorocyclopentadiene	0.201	0.270	0.050	-34.3	
2,4,6-Trichlorophenol	0.451	0.395		12.4	20.0
2,4,5-Trichlorophenol	0.487	0.468		3.9	
2-Chloronaphthalene	1.148	1.104		3.8	
2-Nitroaniline	0.494	0.509		-3.0	
Acenaphthylene	1.493	1.449		2.9	
Dimethylphthalate	1.500	1.425		5.0	
2,6-Dinitrotoluene	0.344	0.343		0.3	
Acenaphthene	1.117	1.091		2.3	20.0
3-Nitroaniline	0.476	0.447		6.1	
2,4-Dinitrophenol	0.203	0.094	0.050	53.7	
Dibenzofuran	1.675	1.598		4.6	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN1 Calibration Date: 11/14/96 Time: 0857

Lab File ID: SKAB08.D Init. Calib. Date(s): 10/22/96 10/22/96

Init. Calib. Times: 0923 1346

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
2,4-Dinitrotoluene	0.489	0.464		5.1	
4-Nitrophenol	0.171	0.152	0.050	11.1	
Fluorene	1.288	1.209		6.1	
4-Chlorophenyl-phenylether	0.659	0.643		2.4	
Diethylphthalate	1.575	1.573		0.1	
4-Nitroaniline	0.341	0.341		0.0	
4,6-Dinitro-2-methylphenol	0.176	0.107		39.2	
n-Nitrosodiphenylamine	0.496	0.468		5.6	20.0
4-Bromophenyl-phenylether	0.258	0.251		2.7	
Hexachlorobenzene	0.368	0.343		6.8	
Pentachlorophenol	0.227	0.185		18.5	20.0
Phenanthrene	1.107	1.030		7.0	
Anthracene	1.029	0.980		4.8	
Di-n-butylphthalate	1.715	1.631		4.9	
Fluoranthene	1.185	1.108		6.5	20.0
Pyrene	1.336	1.298		2.8	
Butylbenzylphthalate	0.842	0.789		6.3	
Benzo[a]anthracene	1.188	1.167		1.8	
Chrysene	1.160	1.131		2.5	
bis(2-Ethylhexyl)phthalate	1.206	1.147		4.9	
Di-n-octylphthalate	1.821	1.797		1.3	20.0
Benzo[b]fluoranthene	1.140	1.137		0.3	
Benzo[k]fluoranthene	1.059	1.043		1.5	
Benzo[a]pyrene	0.996	1.000		-0.4	20.0
Indeno[1,2,3-cd]pyrene	0.926	0.987		-6.6	
Dibenz[a,h]anthracene	0.854	0.972		-13.8	
Benzo[g,h,i]perylene	0.927	0.980		-5.7	
2-Fluorophenol	1.190	1.196		-0.5	
Phenol-d5	1.714	1.708		0.4	
Nitrobenzene-d5	0.532	0.538		-1.1	
2-Fluorobiphenyl	1.325	1.238		6.6	
2,4,6-Tribromophenol	0.220	0.205		6.8	
Terphenyl-d14	0.950	0.934		1.7	

All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN2 Calibration Date: 11/12/96 Time: 0950

Lab File ID: SKB07.D Init. Calib. Date(s): 11/6/96 11/6/96

Init. Calib. Times: 0912 1300

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
N-Nitrosodimethylamine	0.690	0.599		13.2	
bis(2-Chloroethyl)ether	1.349	1.219		9.6	
Phenol	1.546	1.427		7.7	20.0
2-Chlorophenol	1.281	1.188		7.3	
1,3-Dichlorobenzene	1.496	1.464		2.1	
1,4-Dichlorobenzene	1.508	1.484		1.6	20.0
1,2-Dichlorobenzene	1.398	1.364		2.4	
Benzyl alcohol	0.643	0.715		-11.2	
bis(2-chloroisopropyl)ether	1.155	0.956		17.2	
2-Methylphenol	1.108	1.029		7.1	
Hexachloroethane	0.629	0.617		1.9	
N-Nitroso-di-n-propylamine	0.861	0.757	0.050	12.1	
4-Methylphenol	1.093	1.038		5.0	
Nitrobenzene	0.425	0.387		8.9	
Isophorone	0.788	0.757		3.9	
2-Nitrophenol	0.257	0.259		-0.8	20.0
2,4-Dimethylphenol	0.349	0.364		-4.3	
bis(2-Chloroethoxy)methane	0.480	0.465		3.1	
2,4-Dichlorophenol	0.353	0.360		-2.0	20.0
1,2,4-Trichlorobenzene	0.374	0.391		-4.5	
Naphthalene	1.062	1.024		3.6	
4-Chloroaniline	0.455	0.470		-3.3	
Hexachlorobutadiene	0.177	0.183		-3.4	20.0
4-Chloro-3-methylphenol	0.338	0.331		2.1	20.0
2-Methylnaphthalene	0.725	0.710		2.1	
Hexachlorocyclopentadiene	0.158	0.161	0.050	-1.9	
2,4,6-Trichlorophenol	0.395	0.404		-2.3	20.0
2,4,5-Trichlorophenol	0.462	0.459		0.6	
2-Chloronaphthalene	1.133	1.048		7.5	
2-Nitroaniline	0.376	0.335		10.9	
Acenaphthylene	1.430	1.376		3.8	
Dimethylphthalate	1.299	1.209		6.9	
2,6-Dinitrotoluene	0.354	0.346		2.3	
Acenaphthene	1.070	0.993		7.2	20.0
3-Nitroaniline	0.341	0.347		-1.8	
2,4-Dinitrophenol	0.197	0.166	0.050	15.7	
Dibenzofuran	1.565	1.520		2.9	

All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN2 Calibration Date: 11/12/96 Time: 0950

Lab File ID: SKB07.D Init. Calib. Date(s): 11/6/96 11/6/96

Init. Calib. Times: 0912 1300

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
2,4-Dinitrotoluene	0.461	0.451		2.2	
4-Nitrophenol	0.128	0.111	0.050	13.3	
Fluorene	1.123	1.058		5.8	
4-Chlorophenyl-phenylether	0.593	0.625		-5.4	
Diethylphthalate	1.280	1.226		4.2	
4-Nitroaniline	0.312	0.280		10.3	
4,6-Dinitro-2-methylphenol	0.164	0.166		-1.2	
n-Nitrosodiphenylamine	0.498	0.511		-2.6	20.0
4-Bromophenyl-phenylether	0.222	0.230		-3.6	
Hexachlorobenzene	0.268	0.282		-5.2	
Pentachlorophenol	0.149	0.151		-1.3	20.0
Phenanthrene	1.111	1.065		4.1	
Anthracene	1.038	1.010		2.7	
Di-n-butylphthalate	1.553	1.415		8.9	
Fluoranthene	1.129	1.128		0.1	20.0
Pyrene	2.075	1.897		8.6	
Butylbenzylphthalate	1.195	1.040		13.0	
Benzo[a]anthracene	1.389	1.279		7.9	
Chrysene	1.386	1.223		11.8	
bis(2-Ethylhexyl)phthalate	1.660	1.415		14.8	
Di-n-octylphthalate	2.592	2.331		10.1	20.0
Benzo[b]fluoranthene	1.329	1.324		0.4	
Benzo[k]fluoranthene	1.168	1.187		-1.6	
Benzo[a]pyrene	1.121	1.117		0.4	20.0
Indeno[1,2,3-cd]pyrene	1.094	1.008		7.9	
Dibenz[a,h]anthracene	0.829	0.814		1.8	
Benzo[g,h,i]perylene	0.929	0.847		8.8	
2-Fluorophenol	1.314	1.233		6.2	
Phenol-d5	1.577	1.458		7.5	
Nitrobenzene-d5	0.471	0.433		8.1	
2-Fluorobiphenyl	1.322	1.283		3.0	
2,4,6-Tribromophenol	0.103	0.100		2.9	
Terphenyl-d14	1.360	1.300		4.4	

All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN2 Calibration Date: 11/20/96 Time: 0856

Lab File ID: SKB08.D Init. Calib. Date(s): 11/6/96 11/6/96

Init. Calib. Times: 0912 1300

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
N-Nitrosodimethylamine	0.690	0.718		-4.1	
bis(2-Chloroethyl)ether	1.349	1.258		6.7	
Phenol	1.546	1.552		-0.4	20.0
2-Chlorophenol	1.281	1.213		5.3	
1,3-Dichlorobenzene	1.496	1.440		3.7	
1,4-Dichlorobenzene	1.508	1.434		4.9	20.0
1,2-Dichlorobenzene	1.398	1.343		3.9	
Benzyl alcohol	0.643	0.729		-13.4	
bis(2-chloroisopropyl)ether	1.155	0.882		23.6	
2-Methylphenol	1.108	1.054		4.9	
Hexachloroethane	0.629	0.622		1.1	
N-Nitroso-di-n-propylamine	0.861	0.771	0.050	10.5	
4-Methylphenol	1.093	1.050		3.9	
Nitrobenzene	0.425	0.404		4.9	
Isophorone	0.788	0.771		2.2	
2-Nitrophenol	0.257	0.268		-4.3	20.0
2,4-Dimethylphenol	0.349	0.356		-2.0	
bis(2-Chloroethoxy)methane	0.480	0.473		1.5	
2,4-Dichlorophenol	0.353	0.357		-1.1	20.0
1,2,4-Trichlorobenzene	0.374	0.367		1.9	
Naphthalene	1.062	1.006		5.3	
4-Chloroaniline	0.455	0.472		-3.7	
Hexachlorobutadiene	0.177	0.169		4.5	20.0
4-Chloro-3-methylphenol	0.338	0.331		2.1	20.0
2-Methylnaphthalene	0.725	0.693		4.4	
Hexachlorocyclopentadiene	0.158	0.172	0.050	-8.9	
2,4,6-Trichlorophenol	0.395	0.421		-6.6	20.0
2,4,5-Trichlorophenol	0.462	0.460		0.4	
2-Chloronaphthalene	1.133	1.077		4.9	
2-Nitroaniline	0.376	0.351		6.6	
Acenaphthylene	1.430	1.378		3.6	
Dimethylphthalate	1.299	1.274		1.9	
2,6-Dinitrotoluene	0.354	0.348		1.7	
Acenaphthene	1.070	1.016		5.0	20.0
3-Nitroaniline	0.341	0.347		-1.8	
2,4-Dinitrophenol	0.197	0.188	0.050	4.6	
Dibenzofuran	1.565	1.506		3.8	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: USACHPPM Contract: SHEEHY

Project No. 37--5360 Site: RVAP Location: Group: GCMS

Instrument ID: ABN2 Calibration Date: 11/20/96 Time: 0856

Lab File ID: SKB08.D Init. Calib. Date(s): 11/6/96 11/6/96

Init. Calib. Times: 0912 1300

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
2,4-Dinitrotoluene	0.461	0.472		-2.4	
4-Nitrophenol	0.128	0.123	0.050	3.9	
Fluorene	1.123	1.074		4.4	
4-Chlorophenyl-phenylether	0.593	0.607		-2.4	
Diethylphthalate	1.280	1.244		2.8	
4-Nitroaniline	0.312	0.300		3.8	
4,6-Dinitro-2-methylphenol	0.164	0.172		-4.9	
n-Nitrosodiphenylamine	0.498	0.509		-2.2	20.0
4-Bromophenyl-phenylether	0.222	0.227		-2.3	
Hexachlorobenzene	0.268	0.268		0.0	
Pentachlorophenol	0.149	0.144		3.4	20.0
Phenanthrene	1.111	1.050		5.5	
Anthracene	1.038	1.003		3.4	
Di-n-butylphthalate	1.553	1.424		8.3	
Fluoranthene	1.129	1.079		4.4	20.0
Pyrene	2.075	2.006		3.3	
Butylbenzylphthalate	1.195	1.079		9.7	
Benzo[a]anthracene	1.389	1.333		4.0	
Chrysene	1.386	1.268		8.5	
bis(2-Ethylhexyl)phthalate	1.660	1.497		9.8	
Di-n-octylphthalate	2.592	2.146		17.2	20.0
Benzo[b]fluoranthene	1.329	1.190		10.5	
Benzo[k]fluoranthene	1.168	1.119		4.2	
Benzo[a]pyrene	1.121	1.006		10.3	20.0
Indeno[1,2,3-cd]pyrene	1.094	0.982		10.2	
Dibenz[a,h]anthracene	0.829	0.733		11.6	
Benzo[g,h,i]perylene	0.929	0.784		15.6	
2-Fluorophenol	1.314	1.297		1.3	
Phenol-d5	1.577	1.568		0.6	
Nitrobenzene-d5	0.471	0.453		3.8	
2-Fluorobiphenyl	1.322	1.313		0.7	
2,4,6-Tribromophenol	0.103	0.098		4.9	
Terphenyl-d14	1.360	1.294		4.9	

All other compounds must meet a minimum RRF of 0.010.

Analytical Report: A961126-
Page 75 of 82 Pages

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID (Standard): SKAB06.D Date Analyzed: 11/7/96

Instrument ID: ABN1 Time Analyzed: 1605

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	802459	9.00	2673316	12.80	1800636	18.21
	UPPER LIMIT	1604918	9.50	5346632	13.30	3601272	18.71
	LOWER LIMIT	401230	8.50	1336658	12.30	900318	17.71
	SAMPLE NO.						
01	RVAP251	886150	9.01	3019329	12.80	2037276	18.21
02	RVAP252	998422	9.01	3406338	12.80	2395860	18.21
03	RVAP231A	936255	9.02	3227738	12.80	2066526	18.22
04	RVAP231B	934780	9.01	3090815	12.80	2062456	18.21
05	RVAP231BMS	979954	9.02	3509035	12.81	2456714	18.22
06	RVAP231BMSD	981599	9.02	3317160	12.80	2292610	18.22
07	SBLK01	943380	9.02	3118811	12.80	2124062	18.22
08	RVAPWW	737637	9.00	2521109	12.80	1630993	18.22
09	LFBMS	830069	9.01	2897536	12.80	2017734	18.22
10	LFBMSD	783184	9.02	2657101	12.81	1812680	18.23
11	SBLK02	894283	9.01	2851878	12.80	1966480	18.23
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21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID (Standard): SKAB06.D Date Analyzed: 11/7/96

Instrument ID: ABN1 Time Analyzed: 1605

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	3216162	22.69	3121692	30.89	3573042	34.96
	UPPER LIMIT	6432324	23.19	6243384	31.39	7146084	35.46
	LOWER LIMIT	1608081	22.19	1560846	30.39	1786521	34.46
	SAMPLE NO.						
01	RVAP251	2919103	22.70	2894715	30.90	3498038	34.98
02	RVAP252	4357062	22.69	3948692	30.90	4693565	34.98
03	RVAP231A	3549536	22.70	3186256	30.89	3530305	34.99
04	RVAP231B	3805493	22.69	3425851	30.90	3823561	34.98
05	RVAP231BMS	4439644	22.70	4043687	30.90	4624542	34.98
06	RVAP231BMSD	4112139	22.70	3744589	30.90	4381607	34.98
07	SBLK01	3744984	22.70	3152842	30.90	3585741	34.97
08	RVAPWW	2817529	22.70	2608765	30.90	2913673	34.98
09	LFBMS	3445813	22.70	3137126	30.92	3334346	34.99
10	LFBMSD	3114497	22.71	2875310	30.90	3181458	34.99
11	SBLK02	3399844	22.71	2951304	30.90	3258423	34.98
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22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID (Standard): SKAB08.D Date Analyzed: 11/14/96

Instrument ID: ABN1 Time Analyzed: 0857

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	801160	8.84	2695602	12.64	1823691	18.04
	UPPER LIMIT	1602320	9.34	5391204	13.14	3647382	18.54
	LOWER LIMIT	400580	8.34	1347801	12.14	911846	17.54
	SAMPLE NO.						
01	RVAP251DL	777284	8.84	2697644	12.63	1822268	18.04
02	RVAP242DL	726851	8.84	2585649	12.63	1763269	18.04
03	SBLK03	696438	8.85	2417211	12.63	1648463	18.03
04	SBLK04	669103	8.85	2268442	12.63	1579314	18.04
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID (Standard): SKAB08.D Date Analyzed: 11/14/96

Instrument ID: ABN1 Time Analyzed: 0857

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	3068750	22.51	2689163	30.70	3002190	34.76
	UPPER LIMIT	6137500	23.01	5378326	31.20	6004380	35.26
	LOWER LIMIT	1534375	22.01	1344582	30.20	1501095	34.26
	SAMPLE NO.						
01	RVAP251DL	3113413	22.51	2777446	30.69	3427306	34.77
02	RVAP242DL	3145407	22.51	2694405	30.70	2997658	34.77
03	SBLK03	2873327	22.50	2731603	30.69	3165880	34.76
04	SBLK04	2920199	22.51	2889096	30.69	3505776	34.77
05							
06							
07							
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20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID (Standard): SKB07.D Date Analyzed: 11/12/96

Instrument ID: ABN2 Time Analyzed: 0950

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	732633	11.27	2214578	15.15	1471231	20.72
	UPPER LIMIT	1465266	11.77	4429156	15.65	2942462	21.22
	LOWER LIMIT	366317	10.77	1107289	14.65	735616	20.22
	SAMPLE NO.						
01	RVAP381	813508	11.27	2466152	15.13	1519702	20.70
02	RVAP382	876799	11.27	2741622	15.13	1740805	20.71
03	RVAP383	865075	11.28	2781903	15.14	1756170	20.71
04	RVAP384	825065	11.28	2523638	15.14	1582106	20.71
05	RVAP385	816430	11.27	2587485	15.14	1640894	20.71
06	RVAP386	871851	11.28	2823525	15.14	1817870	20.71
07	RVAP38B	840540	11.28	2714548	15.14	1740960	20.71
08	RVAP241	818829	11.28	2629028	15.14	1642597	20.71
09	RVAP242	836455	11.27	2766672	15.14	1801345	20.71
10	RVAP38BMS	934534	11.27	3001991	15.13	1884609	20.70
11	RVAP38BMSD	868737	11.27	2776274	15.13	1815439	20.71
12	SBLK05	845055	11.27	2700000	15.13	1660705	20.70
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID (Standard): SKB07.D Date Analyzed: 11/12/96

Instrument ID: ABN2 Time Analyzed: 0950

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	2327064	25.34	1392701	33.76	1407836	37.95
	UPPER LIMIT	4654128	25.84	2785402	34.26	2815672	38.45
	LOWER LIMIT	1163532	24.84	696351	33.26	703918	37.45
	SAMPLE NO.						
01	RVAP381	2163969	25.33	1071528	33.75	1057048	37.95
02	RVAP382	2646305	25.33	1406538	33.75	1444020	37.95
03	RVAP383	2782054	25.35	1566272	33.76	1574215	37.95
04	RVAP384	2370580	25.34	1364650	33.76	1373913	37.96
05	RVAP385	2586612	25.34	1550629	33.76	1578871	37.97
06	RVAP386	2817360	25.34	1663618	33.75	1791813	37.96
07	RVAP38B	2750900	25.35	1461381	33.77	1502960	37.96
08	RVAP241	2598793	25.34	1597652	33.76	1625124	37.97
09	RVAP242	2818961	25.35	1743701	33.78	1757218	38.00
10	RVAP38BMS	2866370	25.33	1879969	33.75	1714497	37.96
11	RVAP38BMSD	2894372	25.34	1949464	33.76	1786001	37.96
12	SBLK05	2516083	25.33	1544526	33.74	1661093	37.95
13							
14							
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17							
18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

Analytical Report: A961126-1
Page 81 of 82 Pages

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID (Standard): SKB08.D Date Analyzed: 11/20/96

Instrument ID: ABN2 Time Analyzed: 0856

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	540803	11.27	1612655	15.15	1021131	20.72
	UPPER LIMIT	1081606	11.77	3225310	15.65	2042262	21.22
	LOWER LIMIT	270402	10.77	806328	14.65	510566	20.22
	SAMPLE NO.						
01	RVAP231B	530889	11.26	1656835	15.12	1072938	20.70
02	RVAP231BMS	536423	11.27	1682710	15.13	1066122	20.70
03	RVAP231BMSD	539870	11.27	1765153	15.13	1068641	20.70
04	SBLK06	467920	11.26	1471542	15.13	893748	20.70
05							
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21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM Contract: SHEEHY

Project No.: 37--5360 Site: RVAP Location: Group: GCMS

Lab File ID (Standard): SKB08.D Date Analyzed: 11/20/96

Instrument ID: ABN2 Time Analyzed: 0856

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	1637788	25.35	910956	33.76	1058325	37.96
	UPPER LIMIT	3275576	25.85	1821912	34.26	2116650	38.46
	LOWER LIMIT	818894	24.85	455478	33.26	529163	37.46
	SAMPLE NO.						
01	RVAP231B	1621643	25.33	995827	33.75	1040716	37.95
02	RVAP231BMS	1605172	25.34	951881	33.75	801775	37.96
03	RVAP231BMSD	1656281	25.34	973173	33.75	847367	37.95
04	SBLK06	1334562	25.34	785370	33.74	701649	37.95
05							
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07							
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18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

RP

02 DEC 1996

ANALYSIS REPORT

U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE
BUILDING E2100
ABERDEEN PROVING GROUND, MARYLAND 21010

CHROMATOGRAPHIC ANALYSIS DIVISION
PESTICIDES TEAM

Installation: Ravenna AAP

Project Number: 37-EF-5360

Project Officer: Sheehy

Job Number: 6A6206

Number of Samples: 2

Matrix: Soil

Analyzed for: Organochlorine Pesticides & PCBs

Method: CAD SOP #114.2

DLS NUMBER	FIELD NUMBER
E1452	RVAP-371
E1453	RVAP-372

Analyst: Mike Lanahan

Extracted by: Mike Lanahan

Reviewed by: Carmen Adrover-Farra

Release Authorized by: J. Howard Vinopal
Chief, Chromatographic Analysis Division

Date: 2 Dec 1996

SUMMARY OF RESULTS

Installation: Ravenna AAP

Project Number: 37-EF-5360

Project Officer: James Sheehy

Case Narrative:

1. Attached are the sample and quality control (QC) data summaries for organochlorine pesticides and PCBs.

2. The soil samples were extracted and analyzed using USACHPPM/DLS SOP#: CAD 114.2; Method for the Extraction and Analysis of Pesticides and PCBs in Soil and Sediment for Regulatory Purposes using EPA Methods 3550A and 8080A/8081.

3. All samples were initially extracted into organic solvent within the required holding time of 14 days.

4. The recovery for the surrogate compound DCBP in sample E1453 fell below the lower control limit. Since the other surrogate, TCMX, was recovered successfully, the results for this sample are acceptable. All other surrogate and QC results were recovered within acceptable ranges.

5. No other problems were encountered with the extraction and analysis of these samples.

Analyst: _____ Date: 12/2/96

QUALITY CONTROL RESULTS

QUALITY CONTROL SAMPLE RECOVERIES

CAD QC #: LCS-C6031
TYPE: PESTICIDES

INSTALLATION: RAVENNA AAP
PROJECT#: 37-EF-5360
DLS PROCEDURE #: PES522

MATRIX: SOIL
EXTRACTION DATE: 05-NOV-96
ANALYSIS COMPLETED: 27-NOV-96

ASSOCIATED SAMPLES	COMPOUND	SPIKING LEVEL, ug/g	PERCENT RECOVERED	CONTROL LIMITS (%)
BLANK	LINDANE	0.033	79	39 - 111
LCS-S6062	HEPTACHLOR	0.033	88	52 - 124
E1453 MS	ALDRIN	0.033	84	34 - 124
E1452	HEPTACHLOR EPOXIDE	0.033	83	51 - 123
E1452 DUP	ENDOSULFAN I	0.083	76	43 - 119
E1453	DIELDRIN	0.083	83	54 - 126
	ENDOSULFAN II	0.083	88	43 - 133
	DDT, p,p'-	0.083	100	47 - 140
	METHOXYCHLOR	0.170	119	42 - 132
	ENDRIN ALDEHYDE	0.083	61	25 - 115

* = VALUE OUTSIDE OF CONTROL LIMITS

QUALITY CONTROL RESULTS

SURROGATE RECOVERIES

INSTALLATION:	RAVENNA AAP	MATRIX:	SOIL
PROJECT#:	37-EF-5360	EXTRACTION DATE(S):	05-NOV-96
DLS PROCEDURE #:	PES522	ANALYSIS COMPLETED:	27-NOV-96

#	SAMPLE #	SURR1 TCMX	SURR2 DCBP	SURR3	COMMENTS
1	BLANK	72	91		
2	QC S6062	123	120		
3	QC C6031	82	104		
4	E1453 MS	71	77		
5	E1452	65	65		
6	E1452 DUP	55	57		
7	E1453	50	34 *		
8					
9					
10					
11					
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28					
29					
30					
31					

SURR1 = TETRACHLORO-meta-XYLENE (TCMX)
SURR2 = DECACHLOROBIPHENYL (DCBP)
SURR3 = NOT USED

CONTROL LIMITS
50-150%

* = VALUE OUTSIDE OF CONTROL LIMITS

QUALITY CONTROL RESULTS

QUALITY CONTROL SAMPLE RECOVERIES

CAD QC #: E1453 MS
TYPE: PESTICIDES

INSTALLATION: RAVENNA AAP
PROJECT#: 37-EF-5360
DLS PROCEDURE #: PES522

MATRIX: SOIL
EXTRACTION DATE: 05-NOV-96
ANALYSIS COMPLETED: 27-NOV-96

ASSOCIATED SAMPLES	COMPOUND	SPIKING LEVEL, ug/g	PERCENT RECOVERED	CONTROL LIMITS (%)
BLANK	LINDANE	0.033	79	39 - 111
LCS-S6062	HEPTACHLOR	0.033	79	52 - 124
LCS-C6031	ALDRIN	0.033	76	34 - 124
E1452	HEPTACHLOR EPOXIDE	0.033	90	51 - 123
E1452 DUP	ENDOSULFAN I	0.083	50	43 - 119
E1453	DIELDRIN	0.083	68	54 - 126
	ENDOSULFAN II	0.083	66	43 - 133
	DDT, p,p'-	0.083	110	47 - 140
	METHOXYCHLOR	0.170	107	42 - 132
	ENDRIN ALDEHYDE	0.083	34	25 - 115

* = VALUE OUTSIDE OF CONTROL LIMITS

QUALITY CONTROL RESULTS

QUALITY CONTROL SAMPLE RECOVERIES

CAD QC #: LCS-S6062
TYPE: PCB

INSTALLATION: RAVENNA AAP
PROJECT#: 37-EF-5360
DLS PROCEDURE #: PES522

MATRIX: SOIL
EXTRACTION DATE: 05-NOV-96
ANALYSIS COMPLETED: 27-NOV-96

ASSOCIATED SAMPLES	COMPOUND	SPIKING LEVEL, ug/g	PERCENT RECOVERED	CONTROL LIMITS (%)
BLANK	PCB (AROCLOR 1016)	0.500	102	55 - 129
LCS-C6031	PCB (AROCLOR 1260)	0.500	116	55 - 129
E1453 MS				
E1452				
E1452 DUP				
E1453				

* = VALUE OUTSIDE OF CONTROL LIMITS

REPORT OF ANALYSIS

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences
Chromatographic Analysis Division

Installation:	RAVENNA AAP	Date Collected:	01-NOV-96
Project #:	37-EF-5360	Date Received by CAD:	04-NOV-96
Project Officer:	SHEEHY	Extraction Date:	05-NOV-96
DLS JOB#:	6A6206	Analysis Completed:	27-NOV-96
DLS Sample #:	E1452 PAGE 1 OF 1	DLS Procedure #:	PES522
Field #:	RVAP-371	% Moisture:	21.8
Matrix:	SOIL	Sample Amount:	30.3 g

	TARGET COMPOUNDS	RESULTS, ug/g *	
1	ALDRIN		< 0.010
2	BHC-alpha		< 0.010
3	BHC-beta		< 0.010
4	BHC-delta		< 0.010
5	CHLORDANE, cis-		< 0.010
6	CHLORDANE, TECHNICAL		< 0.050
7	CHLORDANE, trans-		< 0.010
8	DDD, p,p'-		< 0.010
9	DDE, p,p'-		< 0.010
10	DDT, p,p'-		< 0.010
11	DIELDRIN		< 0.010
12	ENDOSULFAN I		< 0.010
13	ENDOSULFAN II		< 0.010
14	ENDOSULFAN SULFATE		< 0.010
15	ENDRIN		< 0.010
16	ENDRIN ALDEHYDE		< 0.010
17	HEPTACHLOR		< 0.010
18	HEPTACHLOR EPOXIDE		< 0.010
19	LINDANE		< 0.010
20	METHOXYCHLOR		< 0.010
21	PCB (AROCLOR 1016)		< 0.10
22	PCB (AROCLOR 1221)		< 0.10
23	PCB (AROCLOR 1232)		< 0.10
24	PCB (AROCLOR 1242)		< 0.10
25	PCB (AROCLOR 1248)		< 0.10
26	PCB (AROCLOR 1254)		< 0.10
27	PCB (AROCLOR 1260)		< 0.10
28	TOXAPHENE		< 0.13
29			
30			
31			
32			

(*) - ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

REPORT OF ANALYSIS

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences
Chromatographic Analysis Division

Installation:	RAVENNA AAP	Date Collected:	01-NOV-96
Project #:	37-EF-5360	Date Received by CAD:	04-NOV-96
Project Officer:	SHEEHY	Extraction Date:	05-NOV-96
DLS JOB#:	6A6206	Analysis Completed:	27-NOV-96
DLS Sample #:	E1452 DUP PAGE 1 OF 1	DLS Procedure #:	PES522
Field #:	RVAP-371	% Moisture:	21.8
Matrix:	SOIL	Sample Amount:	30.2 g

	TARGET COMPOUNDS		RESULTS, ug/g *
1	ALDRIN		< 0.010
2	BHC-alpha		< 0.010
3	BHC-beta		< 0.010
4	BHC-delta		< 0.010
5	CHLORDANE, cis-		< 0.010
6	CHLORDANE, TECHNICAL		< 0.050
7	CHLORDANE, trans-		< 0.010
8	DDD, p,p'-		< 0.010
9	DDE, p,p'-		< 0.010
10	DDT, p,p'-		< 0.010
11	DIELDRIN		< 0.010
12	ENDOSULFAN I		< 0.010
13	ENDOSULFAN II		< 0.010
14	ENDOSULFAN SULFATE		< 0.010
15	ENDRIN		< 0.010
16	ENDRIN ALDEHYDE		< 0.010
17	HEPTACHLOR		< 0.010
18	HEPTACHLOR EPOXIDE		< 0.010
19	LINDANE		< 0.010
20	METHOXYCHLOR		< 0.010
21	PCB (AROCLOR 1016)		< 0.10
22	PCB (AROCLOR 1221)		< 0.10
23	PCB (AROCLOR 1232)		< 0.10
24	PCB (AROCLOR 1242)		< 0.10
25	PCB (AROCLOR 1248)		< 0.10
26	PCB (AROCLOR 1254)		< 0.10
27	PCB (AROCLOR 1260)		< 0.10
28	TOXAPHENE		< 0.13
29			
30			
31			
32			

(*) - ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

REPORT OF ANALYSIS

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences
Chromatographic Analysis Division

Installation:	RAVENNA AAP	Date Collected:	01-NOV-96
Project #:	37-EF-5360	Date Received by CAD:	04-NOV-96
Project Officer:	SHEEHY	Extraction Date:	05-NOV-96
DLS JOB#:	6A6206	Analysis Completed:	27-NOV-96
DLS Sample #:	E1453 PAGE 1 OF 1	DLS Procedure #:	PES522
Field #:	RVAP-372	% Moisture:	15.5
Matrix:	SOIL	Sample Amount:	30.9 g

	TARGET COMPOUNDS	RESULTS, ug/g *	
1	ALDRIN		< 0.010
2	BHC-alpha		< 0.010
3	BHC-beta		< 0.010
4	BHC-delta		< 0.010
5	CHLORDANE, cis-		< 0.010
6	CHLORDANE, TECHNICAL		< 0.050
7	CHLORDANE, trans-		< 0.010
8	DDD, p,p'-		< 0.010
9	DDE, p,p'-		< 0.010
10	DDT, p,p'-		< 0.010
11	DIELDRIN		< 0.010
12	ENDOSULFAN I		< 0.010
13	ENDOSULFAN II		< 0.010
14	ENDOSULFAN SULFATE		< 0.010
15	ENDRIN		< 0.010
16	ENDRIN ALDEHYDE		< 0.010
17	HEPTACHLOR		< 0.010
18	HEPTACHLOR EPOXIDE		< 0.010
19	LINDANE		< 0.010
20	METHOXYCHLOR		< 0.010
21	PCB (AROCLOR 1016)		< 0.10
22	PCB (AROCLOR 1221)		< 0.10
23	PCB (AROCLOR 1232)		< 0.10
24	PCB (AROCLOR 1242)		< 0.10
25	PCB (AROCLOR 1248)		< 0.10
26	PCB (AROCLOR 1254)		< 0.10
27	PCB (AROCLOR 1260)		< 0.10
28	TOXAPHENE		< 0.13
29			
30			
31			
32			

(*) - ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611975
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/28/96
Discard: 2/ 7/97

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #24 Delivery Order #1 Water
E1420 SDG#: PSC66-01

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
1794	Herbicides in Water - (515.1)			See Page 2
4203	AEHA Appendix 2 by EPA 608			See Page 3
9402	trans-Nonachlor	< 0.2	0.2	ug/l

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
08:00:51 D 0001 3 540802
40.00 00075200 ASR000

Respectfully Submitted
Erik Frederiksen, BA
Group Leader, Water Quality

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611975
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/28/96
Discard: 2/ 7/97

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #24 Delivery Order #1 Water
E1420 SDG#: PSC66-01

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
Herbicides in Water - (515.1)				
1795	Dalapon	< 40.	40.	ug/l
1796	3,5-Dichlorobenzoic acid	< 40.	40.	ug/l
1797	4-Nitrophenol	< 200.	200.	ug/l
1798	Dicamba	< 10.	10.	ug/l
1799	Dichlorprop	< 40.	40.	ug/l
1800	2,4-D	< 40.	40.	ug/l
1801	Pentachlorophenol (PCP)	< 4.	4.	ug/l
1802	Chloramben	< 40.	40.	ug/l
1803	2,4,5-TP	< 10.	10.	ug/l
1805	2,4,5-T	< 20.	20.	ug/l
1806	2,4-DB	< 60.	60.	ug/l
1807	Dinoseb	< 20.	20.	ug/l
1808	Bentazon	< 20.	20.	ug/l
1809	Picloram	< 10.	10.	ug/l
1811	Acifluorfen	< 20.	20.	ug/l

Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The Limits of Quantitation (LOQ's) were raised accordingly.

The surrogate recoveries for the Laboratory Control Sample and batch QC were outside QC limits. However the surrogate recovery for the sample and all spike recoveries in the LCS and batch QC were within specification.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611975
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/28/96
Discard: 2/ 7/97

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #24 Delivery Order #1 Water
E1420 SDG#: PSC66-01

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
AEHA Appendix 2 by EPA 608				
4204	Hexachlorobenzene	< 0.2	0.2	ug/l
1902	Alpha BHC	< 0.2	0.2	ug/l
0453	Gamma BHC - Lindane	< 0.2	0.2	ug/l
1903	Beta BHC	< 0.2	0.2	ug/l
0454	Heptachlor	< 0.2	0.2	ug/l
1904	Delta BHC	< 0.2	0.2	ug/l
0455	Aldrin	< 0.2	0.2	ug/l
4205	Oxychlordane	< 0.2	0.2	ug/l
1905	Heptachlor Epoxide	< 0.2	0.2	ug/l
4206	Trans-Chlordane	< 0.2	0.2	ug/l
4207	Cis-Chlordane	< 0.2	0.2	ug/l
4208	Technical Chlordane	< 6.	6.	ug/l
4210	Gamma Chlordene	< 0.2	0.2	ug/l
4211	o,p-DDE	< 0.2	0.2	ug/l
4212	p,p-DDE	< 0.2	0.2	ug/l
4213	o,p-DDD	< 0.2	0.2	ug/l
4214	p,p-DDD	< 0.2	0.2	ug/l
4215	o,p-DDT	< 0.2	0.2	ug/l
4216	p,p-DDT	< 0.2	0.2	ug/l
4217	Mirex	< 0.2	0.2	ug/l
4218	Methoxychlor	< 1.	1.	ug/l
1913	PCB-1016	< 20.	20.	ug/l
1914	PCB-1221	< 20.	20.	ug/l
1915	PCB-1232	< 20.	20.	ug/l
1916	PCB-1242	< 20.	20.	ug/l
1917	PCB-1248	< 20.	20.	ug/l
1918	PCB-1254	< 20.	20.	ug/l
1919	PCB-1260	< 20.	20.	ug/l
1909	Toxaphene	< 80.	80.	ug/l
0469	Dieldrin	< 0.2	0.2	ug/l
1910	Endosulfan I	< 0.2	0.2	ug/l
0477	Endrin	< 0.2	0.2	ug/l
1911	Endosulfan II	< 0.2	0.2	ug/l
0638	Endrin Aldehyde	< 2.	2.	ug/l
1912	Endosulfan Sulfate	< 0.6	0.6	ug/l

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

17

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

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Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2611975
Collected: 11/01/96

Submitted: 11/06/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
Field No. RVAP-WW Contract No. 96-D-7027
Pick-Up Order #24 Delivery Order #1 Water
E1420 SDG#: PSC66-01

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0817	Water Sample Pest. Extraction	EPA 608	1	11/08/96 0900	Christina A. Walters
1794	Herbicides in Water - (515.1)	EPA 515.1	1	11/12/96 1942	Rick Shober
4203	AEHA Appendix 2 by EPA 608	EPA 608	1	11/19/96 1658	Jenifer Hess
6369	Method 515.1 Extraction	EPA 515.1	1	11/11/96 0800	Lillyam S. Nguyen
9402	trans-Nonachlor	EPA 608		11/19/96 1740	Jenifer Hess

18

Analysis Report

Lancaster Laboratories
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LLI Sample No. SW 2611976
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/28/96
Discard: 2/ 7/97

E1452 RAVENNA AAP 37-EF-5360 Sheehy Soil
Field No. RVAP-371 Contract No. 96-D-7027
Pick-Up Order #24 Delivery Order #1 Soil
E1452 SDG#: PSC66-02

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
1865	Herbicides in Soils			See Page 2		
9403	PCP	< 200.	200.	ug/kg	< 300.	300.
0111	Moisture	25.9	0.50	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
08:01:10 D 0001 3 540802
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Respectfully Submitted
Erik Frederiksen, BA
Group Leader, Water Quality

9

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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax 717-656-2681

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2611976
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/28/96
Discard: 2/ 7/97

E1452 RAVENNA AAP 37-EF-5360 Sheehy Soil
Field No. RVAP-371 Contract No. 96-D-7027
Pick-Up Order #24 Delivery Order #1 Soil
E1452 SDG#: PSC66-02

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
Herbicides in Soils						
4249	Dalapon	< 1,000.	1,000.	ug/kg	< 1,000.	1,000.
4250	Dicamba	< 50.	50.	ug/kg	< 70.	70.
4251	MCPP (Mecoprop)	< 50,000.	50,000.	ug/kg	< 70,000.	70,000.
4252	MCPA	< 50,000.	50,000.	ug/kg	< 70,000.	70,000.
4253	2,4-DP (Dichloroprop)	< 200.	200.	ug/kg	< 300.	300.
4174	2,4-D	< 200.	200.	ug/kg	< 300.	300.
4176	2,4,5-TP (Silvex)	< 50.	50.	ug/kg	< 70.	70.
4177	2,4,5-T	< 50.	50.	ug/kg	< 70.	70.
4254	2,4-DB	< 200.	200.	ug/kg	< 300.	300.
4175	Dinoseb	< 200.	200.	ug/kg	< 300.	300.
6653	DCPA (Dacthal)	< 20.	20.	ug/kg	< 30.	30.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

20

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Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2611976
Collected: 11/01/96

Submitted: 11/06/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1452 RAVENNA AAP 37-EF-5360 Sheehy Soil
Field No. RVAP-371 Contract No. 96-D-7027
Pick-Up Order #24 Delivery Order #1 Soil
E1452 SDG#: PSC66-02

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
1865	Herbicides in Soils	SW-846 8151	1	11/13/96 0345	Henry L. Evans
4181	Herbicide Soil Extraction	SW-846 3550A/8151	1	11/08/96 0730	Deborah M. Zimmerman
9403	PCP	SW-846 8151		11/13/96 0345	Henry L. Evans
0111	Moisture	EPA 160.3 modified	1	11/07/96 1759	Amy Marie Lawlor

21

Analysis Report

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2611977
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/28/96
Discard: 2/ 7/97

E1453 RAVENNA AAP 37-EF-5360 Sheehy Soil
Field No. RVAP-372 Contract No. 96-D-7027
Pick-Up Order #24 Delivery Order #1 Soil
E1453 SDG#: PSC66-03*

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	AS RECEIVED UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
1865	Herbicides in Soils			See Page 2		
9403	PCP	< 200.	200.	ug/kg	< 200.	200.
0111	Moisture	15.4	0.50	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO U.S. Army CHPPM ATTN: Mr. Rick Puzniak

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300
08:01:28 D 0001 3 540802
0.00 00046700 ASR000

Respectfully Submitted
Erik Frederiksen, BA
Group Leader, Water Quality

22

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Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2611977
Collected: 11/ 1/96

Submitted: 11/ 6/96 Reported: 11/28/96
Discard: 2/ 7/97

E1453 RAVENNA AAP 37-EF-5360 Sheehy Soil
Field No. RVAP-372 Contract No. 96-D-7027
Pick-Up Order #24 Delivery Order #1 Soil
E1453 SDG#: PSC66-03*

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

P.O. DAAD05-96-D-7027
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
Herbicides in Soils						
4249	Dalapon	< 1,000.	1,000.	ug/kg	< 1,000.	1,000.
4250	Dicamba	< 50.	50.	ug/kg	< 60.	60.
4251	MCPP (Mecoprop)	< 50,000.	50,000.	ug/kg	< 60,000.	60,000.
4252	MCPA	< 50,000.	50,000.	ug/kg	< 60,000.	60,000.
4253	2,4-DP (Dichloroprop)	< 200.	200.	ug/kg	< 200.	200.
4174	2,4-D	< 200.	200.	ug/kg	< 200.	200.
4176	2,4,5-TP (Silvex)	< 50.	50.	ug/kg	< 60.	60.
4177	2,4,5-T	< 50.	50.	ug/kg	< 60.	60.
4254	2,4-DB	< 200.	200.	ug/kg	< 200.	200.
4175	Dinoseb	< 200.	200.	ug/kg	< 200.	200.
6653	DCPA (Dacthal)	< 20.	20.	ug/kg	< 20.	20.

Questions? Contact your Client Services Representative
Katherine A. Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

23

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&&&

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2611977
Collected: 11/01/96

Submitted: 11/06/96

Account No: 04694
U.S. Army CHPPM
Attn: DFAS-IN/EM-BJ-V
Bldg. 310, Wing 7
Aberdeen Prov Gd MD 21005-5001

E1453 RAVENNA AAP 37-EF-5360 Sheehy Soil
Field No. RVAP-372 Contract No. 96-D-7027
Pick-Up Order #24 Delivery Order #1 Soil
E1453 SDG#: PSC66-03*

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
1865	Herbicides in Soils	SW-846 8151	1	11/13/96 0424	Henry L. Evans
4181	Herbicide Soil Extraction	SW-846 3550A/8151	1	11/08/96 0730	Deborah M. Zimmerman
9403	PCP	SW-846 8151		11/13/96 0424	Henry L. Evans
0111	Moisture	EPA 160.3 modified	1	11/07/96 1759	Amy Marie Lawlor

24

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib > 5 um/ml**	fibers greater than 5 microns in length per ml

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TIC's only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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CLIENT: Aberdeen
SDG: PSC66

LANCASTER LABORATORIES

HERBICIDES (EPA 515.1)

		MATRIX		
LL SAMPLE #	SAMPLE CODE	SOLID	WATER	COMMENTS
1794BLK11/11	1794BLK11/11		X	Method Blank
1794LCS11/11	1794LCS11/11		X	Lab Spike
2611975	E1420		X	
Lab Submitted QC:				
1794BLK11/05	1794BLK11/05		X	Method Blank
1794LCS11/05	1794LCS11/05		X	Lab Spike
2609485	BKG		X	Unspiked
2609485MS	MS		X	Matrix Spike
2609485MSD	MSD		X	Matrix Spike Duplicate

A. Sample Preparation:

Florisil cleanup was used to minimize interferences. Due to the limited amount of sample available reduced aliquots were extracted for the MS/MSD samples. The LOQ's and spike added amounts were adjusted accordingly. No other problems were encountered with the preparation of the samples.

B. Analysis:

The analysis was performed using the following runs:

- 1C6317 (DB608 column) and 1C6317B (DB1701 column) on 11/12/96. No problems were encountered.

C. Quality Control:

The LCS, BKG, MS, & MSD surrogate recoveries are low. Since the spike recoveries are within the limits the data are reported. All other surrogate recoveries are within the QC limits.

The dinoseb and dalapon RPD's are outside the QC limits for the MS/MSD. Since both recoveries are within the QC limits no action is required.

The LCS data are within the QC limits.

D. Data Interpretation:

The method blank was evaluated to the MDL. Values between the MDL and the LOQ are reported on the QC Summary form with a "J" qualifier.

No further interpretation is needed.

Narrative reviewed and approved by:

Jennifer E. Hess, Group Leader — Date: 11/29/96

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A subsidiary of Thermo Process Systems Inc., a Thermo Electron company

CLIENT: Aberdeen
SDG: PSC66

LANCASTER LABORATORIES

HERBICIDES (SW-846)

LL SAMPLE #	SAMPLE CODE	MATRIX SOLID	MATRIX WATER	COMMENTS
1865BLK11/08	1865BLK11/08	X		Method Blank
1865LCS11/08	1865LCS11/08	X		Lab Spike
2611976	E1452	X		
2611977	E1453	X		
Lab Submitted QC:				
1865BLK10/29	1865BLK10/29	X		Method Blank
1865LCS10/29	1865LCS10/29	X		Lab Spike
2603363BKG	BKG	X		Unspiked
2603363MS	MS	X		Matrix Spike
2603363MSD	MSD	X		Matrix Spike Duplicate

A. Sample Preparation:

No problems were encountered with the preparation of the samples.

B. Analysis:

The analysis was performed using the following runs:

- 1-2C6303 (DB608 column) and 1-2C6303B (DB1701 column) from 10/29/96 through 11/13/96. No problems were encountered.

C. Quality Control:

All surrogate data are within the QC limits.

The dinoseb RPD and MS recovery and the MS/MSD MCPA and MCPP recoveries are outside the QC limits.
The LCS data are within the QC limits.

D. Data Interpretation:

The method blank was evaluated to the MDL. Values between the MDL and the LOQ are reported on the QC Summary form with a "J" qualifier.

No further interpretation is needed.

Narrative reviewed and approved by:

Jennifer E. Hess, Group Leader — **Date** 11/29/96

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CLIENT: Aberdeen
SDG: PSC66

LANCASTER LABORATORIES

PESTICIDES/PCB's

		MATRIX		
LL SAMPLE #	SAMPLE CODE	SOLID	WATER	COMMENTS
BLANKA 11/08	BLANKA 11/08		X	Method Blank
LCSA 11/08	LCSA 11/08		X	Lab Spike
2611975	E1420		X	
Lab Submitted QC:				
2612396	396BGD		X	Unspiked
2612396MS	396MS		X	Matrix Spike
2612396MSD	396MSD		X	Matrix Spike Duplicate

A. Sample Preparation:

Due to the limited amount of sample available a reduced aliquot was extracted for sample E1420. The LOQ's were adjusted accordingly. No other problems were encountered with the preparation of the samples.

B. Analysis:

The analysis was performed using the following runs:

- 1-2C6P318 (DB608 column) and 1-2C6P318B (DB1701 column) from 11/12/96 through 11/16/96.
- 1C6P323 (DB608 column) and 1C6P323B (DB1701 column) from 11/18/96 through 11/20/96.
- 1C7324 (DB608 column) and 1C7324B (DB1701 column) from 11/22/96 through 11/23/96. These were used for HCB, o,p-DDE, o,p-DDE, o,p-DDT, and mirex only.

No problems were encountered. All continuing calibration data are within specifications since any target analytes which have RPD values outside the criteria on one column are within the criteria on the second column.

C. Quality Control:

Accurate surrogate recoveries could not be determined for sample E1420 due to matrix interferences. All other surrogate recoveries meet the requirements that at least one of the two compounds is within the QC limits.

Various MSD recoveries are outside the QC limits. The MS data are within the limits.

The LCS data are within the QC limits.

D. Data Interpretation:

The method blanks were evaluated to the MDL. Values between the MDL and the LOQ are reported on the QC Summary forms with a "J" qualifier.

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Due to the presence of interfering peaks, some quantitation limits were determined from a replotted chromatogram representing an increase in attenuation. The reported quantitation limits were raised accordingly. The affected compounds are flagged on the data page with a qualifier. The samples, associated qualifiers, and degree of replot are listed below:

- Y = 5-fold replot: 396BGD

No further interpretation is needed.

Narrative reviewed and approved by:

Jenifer E. Hess /DM — 11/29/96

Jenifer E. Hess, Group Leader — **Date**

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Sample Reference List for SDG # PSC66 with a Package Type of ABERDEEN

Lab Sample Number	Sample Code	Client Sample Description
2611975	E1420	E1420 RAVENNA AAP 37-EF-5360 Sheehy Water
2611976	E1452	E1452 RAVENNA AAP 37-EF-5360 Sheehy Soil
2611977	E1453	E1453 RAVENNA AAP 37-EF-5360 Sheehy Soil

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717-656-2300 Fax: 717-656-2681

Shipping Address:
Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601
717-656-2300 Fax: 717-656-2681

Surrogate Recovery
Herbicides

Matrix: water

LLI Sample No.	Client Designation	S1 (DCAA)	S2	S3	S4
17948LK11/11	17948LK11/11	74			
1794LCS11/11	1794LCS11/11	65 *			
2611975	E1420	121			
17948LK11/05	17948LK11/05	106			
1794LCS11/05	1794LCS11/05	39 *			
2609485 BKG	BKG	54 *			
2609485 MS	MS	53 *			
2609485 MSD	MSD	63 *			

S1 (DCAA)	2,4-Dichlorophenylacetic Acid	70	130
S2			
S3			
S4			

Comments:

62

Quality Control Summary

Method Blank
Herbicides

Matrix.....: water

Sample Information		Blank Contamination Information					
LLI Sample No.	Client Designation	CAS Number	Compound	Analysis Date	Blank Result	Units	MDL
1794BLK11/05	1794BLK11/05	75-99-0	Dalapon	11/12/96	ND	ug/l	1
1794LCS11/05	1794LCS11/05	51-36-5	3,5-Dichlorobenzoic acid	11/12/96	ND	ug/l	0.226
2609485 BKG	BKG	100-02-7	4-Nitrophenol	11/12/96	ND	ug/l	0.217
2609485 MS	MS	1918-00-9	Dicamba	11/12/96	ND	ug/l	0.1
2609485 MSD	MSD	120-36-5	Dichlorprop	11/12/96	ND	ug/l	0.24
		94-75-7	2,4-D	11/12/96	ND	ug/l	0.3
		87-86-5	Pentachlorophenol (PCP)	11/12/96	ND	ug/l	0.04
		93-72-1	2,4,5-TP	11/12/96	ND	ug/l	0.2
		133-90-4	Chloramben	11/12/96	ND	ug/l	0.237
		93-76-5	2,4,5-T	11/12/96	ND	ug/l	0.128
		94-82-6	2,4-DB	11/12/96	ND	ug/l	0.565
		88-85-7	Dinoseb	11/12/96	ND	ug/l	0.2
		25057-89-0	Bentazon	11/12/96	ND	ug/l	0.171
		1918-02-1	Picloram	11/12/96	ND	ug/l	0.1
		50594-66-6	Acifluorfen	11/12/96	ND	ug/l	0.184

Abbreviation Key:
LOQ = Limit of Quantitation
MDL = Minimum Detection Limit
ND = None detected
* = Outside QC Limits
J = Estimated value below LOQ

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Method Blank
Herbicides

Matrix.....: water

Sample Information		Blank Contamination Information					
LLI Sample No.	Client Designation	CAS Number	Compound	Analysis Date	Blank Result	Units	MDL
1794BLK11/11	1794BLK11/11	75-99-0	Dalapon	11/12/96	ND	ug/l	1
1794LCS11/11	1794LCS11/11	51-36-5	3,5-Dichlorobenzoic acid	11/12/96	ND	ug/l	0.226
2611975	E1420	100-02-7	4-Nitrophenol	11/12/96	ND	ug/l	0.217
		1918-00-9	Dicamba	11/12/96	ND	ug/l	0.1
		120-36-5	Dichlorprop	11/12/96	ND	ug/l	0.24
		94-75-7	2,4-D	11/12/96	ND	ug/l	0.3
		87-86-5	Pentachlorophenol (PCP)	11/12/96	ND	ug/l	0.04
		93-72-1	2,4,5-TP	11/12/96	ND	ug/l	0.2
		133-90-4	Chloramben	11/12/96	ND	ug/l	0.237
		93-76-5	2,4,5-T	11/12/96	ND	ug/l	0.128
		94-82-6	2,4-DB	11/12/96	ND	ug/l	0.565
		88-85-7	Dinoseb	11/12/96	ND	ug/l	0.2
		25057-89-0	Bentazon	11/12/96	ND	ug/l	0.171
		1918-02-1	Picloram	11/12/96	ND	ug/l	0.1
		50594-66-6	Acifluorfen	11/12/96	ND	ug/l	0.184

Abbreviation Key:
LOQ = Limit of Quantitation
MDL = Minimum Detection Limit
ND = None detected
* = Outside QC Limits
J = Estimated value below LOQ

64

Matrix Spike/Matrix Spike Duplicate

Unspiked Sample #....:2609485 BKG
Spiked Sample #.....:2609485 MS
Spiked Dup Sample #..:2609485 MSD

Matrix: water

This MS/MSD applies to the following samples	Compound	Spike Added (ug/l)	Sample Conc (ug/l)	MS Conc (ug/l)	MSD Conc (ug/l)	MS % REC	MSD % REC	QC Limits REC	RPD	QC Limits RPD
1794BLK11/11	Dalapon	10.000	ND	4.664	2.841	47	28	1 -155	49 *	20
1794LCS11/11	3,5-Dichlorobenzoic acid	20.000	ND	15.544	18.623	78	93	57 -149	18	20
2611975	4-Nitrophenol	50.000	ND	1.360	1.682	3	3	D -158	0	20
1794BLK11/05	Dicamba	10.000	ND	9.164	10.197	92	102	70 -138	11	20
1794LCS11/05	Dichlorprop	20.000	ND	18.854	21.474	94	107	74 -142	13	20
2609485 BKG	2,4-D	20.000	ND	19.525	21.589	98	108	61 -159	10	20
2609485 MS	Pentachlorophenol (PCP)	2.000	ND	1.584	1.584	79	79	34 -126	0	20
2609485 MSD	2,4,5-TP	10.000	ND	9.017	10.135	90	101	48 -149	12	20
	Chloramben	20.000	ND	10.820	12.029	54	60	D -148	11	20
	2,4,5-T	10.000	ND	9.459	10.176	95	102	63 -145	7	20
	2,4-DB	50.000	ND	13.230	14.480	26	29	D -212	9	20
	Dinoseb	10.000	ND	1.466	1.084	15	11	D -106	30 *	20
	Bentazon	50.000	ND	35.373	37.167	71	74	37 -156	5	20
	Picloram	20.000	ND	13.871	13.399	69	67	16 -151	3	20
	Acifluorfen	20.000	ND	10.897	9.218	54	46	14 -124	17	20

MS = Matrix Spike
MSD = Matrix Spike Dup
ND = None Detected
RPD = Relative Percent Difference
--- = Analysis not requested
= No established limits

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Quality Control Summary

Lab Control Spike/Lab Control Spike Duplicate
Herbicides

Unspiked Sample #....:1794BLK11/05
Spiked Sample #.....:1794LCS11/05
Spiked Dup Sample #..:

Matrix: Water

This LCS/LCSD applies to the following samples	Compound	Spike Added (ug/l)	BKGD Conc (ug/l)	LCS Conc (ug/l)	LCSD Conc (ug/l)	LCS % REC	LCSD % REC	QC Limits REC	RPD	QC Limits RPD
1794BLK11/05	Dalapon	2.500	ND	1.898		76		1 -155		
1794LCS11/05	3,5-Dichlorobenzoic acid	5.000	ND	3.988		80		57 -149		
2609485 BKG	4-Nitrophenol	12.500	ND	0.798		6		D -158		
2609485 MS	Dicamba	2.500	ND	2.493		100		70 -138		
2609485 MSD	Dichlorprop	5.000	ND	4.806		96		74 -142		
	2,4-D	5.000	ND	4.834		97		61 -159		
	Pentachlorophenol (PCP)	0.500	ND	0.427		85		34 -126		
	2,4,5-TP	2.500	ND	2.310		92		48 -149		
	Chloramben	5.000	ND	2.254		45		D -148		
	2,4,5-T	2.500	ND	2.391		96		63 -145		
	2,4-DB	12.500	ND	2.796		22		D -212		
	Dinoseb	2.500	ND	0.703		28		D -106		
	Bentazon	12.500	ND	8.484		68		37 -156		
	Picloram	5.000	ND	2.647		53		16 -151		
	Acifluorfen	5.000	ND	3.407		68		14 -124		

ABBREVIATION KEY

LCS = Lab Control Spike LCSD = Lab Control Spike Duplicate
ND = None Detected --- = Analysis not requested
# = No established limits
RPD = Relative Percent Difference

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Quality Control Summary

Lab Control Spike/Lab Control Spike Duplicate
Herbicides

Unspiked Sample #....:1794BLK11/11
Spiked Sample #.....:1794LCS11/11
Spiked Dup Sample #..:

Matrix: water

This LCS/LCSD applies to the following samples	Compound	Spike Added (ug/l)	BKGD Conc (ug/l)	LCS Conc (ug/l)	LCSD Conc (ug/l)	LCS % REC	LCSD % REC	QC Limits REC	RPD	QC Limits RPD
1794BLK11/11	Dalapon	2.500	ND	0.714		29		1 -155		
1794LCS11/11	3,5-Dichlorobenzoic acid	5.000	ND	4.762		95		57 -149		
2611975	4-Nitrophenol	12.500	ND	1.002		8		D -158		
	Dicamba	2.500	ND	2.693		108		70 -138		
	Dichlorprop	5.000	ND	5.107		102		74 -142		
	2,4-D	5.000	ND	5.203		104		61 -159		
	Pentachlorophenol (PCP)	0.500	ND	0.447		89		34 -126		
	2,4,5-TP	2.500	ND	2.519		101		48 -149		
	Chloramben	5.000	ND	1.515		30		D -148		
	2,4,5-T	2.500	ND	2.553		102		63 -145		
	2,4-DB	12.500	ND	4.092		33		D -212		
	Dinoseb	2.500	ND	0.913		37		D -106		
	Bentazon	12.500	ND	8.991		72		37 -156		
	Picloram	5.000	ND	3.163		63		16 -151		
	Acifluorfen	5.000	ND	3.943		79		14 -124		

ABBREVIATION KEY
LCS = Lab Control Spike LCSD = Lab Control Spike Duplicate
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Quality Control Summary

Surrogate Recovery
Herbicides

Matrix: soil

LLI Sample No.	Client Designation	S1 (DCAA)	S2	S3	S4
1865BLK11/08	1865BLK11/08	66			
1865LCS11/08	1865LCS11/08	81			
2611976	E1452	103			
2611977	E1453	110			
1865BLK10/29	1865BLK10/29	76			
1865LCS10/29	1865LCS10/29	95			
2603363BKG	BKG	104			
2603363MS	MS	100			
2603363MSD	MSD	95			

S1 (DCAA) 2,4-Dichlorophenylacetic Acid 50 120
S2
S3
S4

* = Surrogate Recovery is outside specifications
D = Surrogates diluted out
I = Interferences present

Comments:

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Method Blank
Herbicides

Matrix.....: soil

Sample Information		Blank Contamination Information					
LLI Sample No.	Client Designation	CAS Number	Compound	Analysis Date	Blank Result	Units	MDL
1865BLK10/29	1865BLK10/29	94-75-7	2,4-D	10/30/96	ND	ug/kg	18
1865LCS10/29	1865LCS10/29	93-72-1	2,4,5-TP	10/30/96	ND	ug/kg	2
2603363BKG	BKG	88-85-7	Dinoseb	10/30/96	ND	ug/kg	5
2603363MS	MS	75-99-0	Dalapon	10/30/96	ND	ug/kg	38
2603363MSD	MSD	93-72-1	2,4,5-T	10/30/96	ND	ug/kg	2
		1918-00-9	Dicamba	10/30/96	ND	ug/kg	2
		7085-19-0	MCPP	10/30/96	ND	ug/kg	40000
		94-74-6	MCPA	10/30/96	ND	ug/kg	4000
		120-36-5	2,4-DP	10/30/96	ND	ug/kg	23
		94-82-6	2,4-DB	10/30/96	ND	ug/kg	26

Abbreviation Key:
LOQ = Limit of Quantitation
ND = None detected
J = Estimated value below LOQ
MDL = Minimum Detection Limit
* = Outside Specifications

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Quality Control Summary

Method Blank
Herbicides

Matrix.....: soil

Sample Information		Blank Contamination Information					
LLI Sample No.	Client Designation	CAS Number	Compound	Analysis Date	Blank Result	Units	MDL
1865BLK11/08	1865BLK11/08	94-75-7	2,4-D	11/13/96	ND	ug/kg	18
1865LCS11/08	1865LCS11/08	93-72-1	2,4,5-TP	11/13/96	ND	ug/kg	2
2611976	E1452	88-85-7	Dinoseb	11/13/96	ND	ug/kg	5
2611977	E1453	75-99-0	Dalapon	11/13/96	ND	ug/kg	38
		93-72-1	2,4,5-T	11/13/96	ND	ug/kg	2
		1918-00-9	Dicamba	11/13/96	ND	ug/kg	2
		7085-19-0	MCPP	11/13/96	ND	ug/kg	40000
		94-74-6	MCPA	11/13/96	ND	ug/kg	4000
		120-36-5	2,4-DP	11/13/96	ND	ug/kg	23
		94-82-6	2,4-DB	11/13/96	ND	ug/kg	26

Abbreviation Key:
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Quality Control Summary

Matrix Spike/Matrix Spike Duplicate
Herbicides

Unspiked Sample #....:2603363BKG
Spiked Sample #.....:2603363MS
Spiked Dup Sample #..:2603363MSD

Matrix: soil

This MS/MSD applies to the following samples	Compound	Spike Added (ug/kg)	Sample Conc (ug/kg)	MS Conc (ug/kg)	MSD Conc (ug/kg)	MS % REC	MSD % REC	QC Limits REC	RPD	QC Limits RPD
1865BLK11/08	2,4-D	1202.000	ND	1928.644	1814.879	160	151	D -165	6	50
1865LCS11/08	2,4,5-TP	120.000	ND	98.615	65.419	82	55	38 -120	40	50
2611976	Dinoseb	602.000	ND	0.000	72.422	0 *	12	D -120	200 *	50
2611977	Dalapon	3010.000	ND	2546.977	2505.271	85	83	41 -104	2	50
1865BLK10/29	2,4,5-T	120.000	ND	142.339	133.734	119	111	23 -135	6	50
1865LCS10/29	Dicamba	120.000	ND	137.288	125.997	114	105	61 -146	9	50
2603363BKG	MCPP	120290.000	ND	181065.562	167331.000	151 *	139 *	65 -130	8	50
2603363MS	MCPA	120535.000	ND	169219.234	159418.609	140 *	132 *	68 -124	6	50
2603363MSD	2,4-DP	1205.000	ND	1816.289	1735.610	151	144	59 -156	5	50
	2,4-DB	1202.000	ND	1398.010	1308.961	116	109	27 -129	7	50

ABBREVIATION KEY

MS = Matrix Spike
MSD = Matrix Spike Duplicate
ND = None Detected
RPD = Relative Percent Difference
--- = Analysis not requested
= No established limits
* = Outside Specifications
D = Detection Limit

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Quality Control Summary

Lab Control Spike/Lab Control Spike Duplicate
Herbicides

Unspiked Sample #....:1865BLK10/29
Spiked Sample #.....:1865LCS10/29
Spiked Dup Sample #..:

MATRIX: soil

This LCS/LCSD applies to the following samples	Compound	Spike Added (ug/kg)	BKGD Conc (ug/kg)	LCS Conc (ug/kg)	LCSD Conc (ug/kg)	LCS % REC	LCSD % REC	QC Limits REC	RPD	QC Limits RPD
1865BLK10/29	2,4-D	1202.000	ND	1804.921		150		D -165		
1865LCS10/29	2,4,5-TP	120.000	ND	119.118		99		38 -120		
2603363BKG	Dinoseb	602.000	ND	173.085		29		D -120		
2603363MS	Dalapon	3010.000	ND	2522.386		84		41 -104		
2603363MSD	2,4,5-T	120.000	ND	129.774		108		23 -135		
	Dicamba	120.000	ND	129.787		108		61 -146		
	MCPP	120293.000	ND	122158.984		102		65 -130		
	MCPA	120353.000	ND	118756.148		99		68 -124		
	2,4-DP	1205.000	ND	1780.665		148		59 -156		
	2,4-DB	1202.000	ND	1292.400		108		27 -129		

ABBREVIATION KEY

LCS = Lab Control Spike — LCSD = Lab Control Spike Duplica
ND = None Detected — --- = Analysis not requested
# = No established limits — * = Outside Specificaitons
RPD = Relative Percent Difference — D = Detection Limit

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Quality Control Summary

~~Lab Control Spike/Lab Control Spike Duplicate~~
Herbicides

Unspiked Sample #....:1865BLK11/08
Spiked Sample #.....:1865LCS11/08 MATRIX: soil
Spiked Dup Sample #..:

This LCS/LCSD applies to the following samples	Compound	Spike Added (ug/kg)	BKGD Conc (ug/kg)	LCS Conc (ug/kg)	LCSD Conc (ug/kg)	LCS % REC	LCSD % REC	QC Limits REC	RPD	QC Limits RPD
1865BLK11/08	2,4-D	1200.000	ND	1608.446		134		D -165		
1865LCS11/08	2,4,5-TP	120.000	ND	118.715		99		38 -120		
2611976	Dinoseb	603.000	ND	78.090		13		D -120		
2611977	Dalapon	3010.000	ND	1978.249		66		41 -104		
	2,4,5-T	120.000	ND	117.629		98		23 -135		
	Dicamba	120.000	ND	114.148		95		61 -146		
	MCPP	120000.000	ND	103167.851		86		65 -130		
	MCPA	120000.000	ND	100002.695		83		68 -124		
	2,4-DP	1200.000	ND	1626.392		136		59 -156		
	2,4-DB	1200.000	ND	1101.052		92		27 -129		

ABBREVIATION KEY

LCS = Lab Control Spike LCSD = Lab Control Spike Duplica
ND = None Detected --- = Analysis not requested
# = No established limits * = Outside Specificaitons
RPD = Relative Percent Difference D = Detection Limit

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Quality Control Summary

Surrogate Recovery
Pesticides

Matrix: WATER

LLI Sample No.	Sample Code	S1 (TCX)	S2 (DCB)	S3	S4
BLANKA 11/08	PBLKPO	67	95		
LCSA 11/08	LCSKH	64	95		
2611975	E1420	51 I	20 I		
2612396	396BGD	99	99		
2612396MS	396MS	65	90		
2612396MSD	396MSD	50 *	82		

		QC REC Limits Low	High
S1 (TCX)	Tetrachlorometaxylene	60	120
S2 (DCB)	Decachlorobiphenyl	60	120
S3			
S4			

* = Surrogate Recovery is outside specifications
# = No established limits
D = Surrogates diluted out I = Interferences present

Comments:

74

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Quality Control Summary

Method Blank
Pesticides

Matrix..: WATER

Sample Information		Blank Contamination Information					
LLI Sample No.	Sample Code	CAS Number	Compound	Analysis Date	Blank Result	Units	MDL
BLANKA 11/08	PBLKP0	319-84-6	alpha-BHC	11/19/96	ND	ug/l	0.001
LCSA 11/08	LCSKH	319-85-7	beta-BHC	11/19/96	ND	ug/l	0.001
2611975	E1420	319-86-8	delta-BHC	11/19/96	ND	ug/l	0.003
2612396	396BGD	58-89-9	gamma-BHC (Lindane)	11/19/96	ND	ug/l	0.001
2612396MS	396MS	76-44-8	Heptachlor	11/19/96	ND	ug/l	0.002
2612396MSD	396MSD	309-00-2	Aldrin	11/19/96	ND	ug/l	0.005
		1024-57-3	Heptachlor epoxide	11/19/96	ND	ug/l	0.001
		959-98-8	Endosulfan I	11/19/96	ND	ug/l	0.002
		60-57-1	Dieldrin	11/19/96	ND	ug/l	0.001
		72-55-9	4,4'-DDE	11/19/96	ND	ug/l	0.001
		72-20-8	Endrin	11/19/96	ND	ug/l	0.005
		33213-65-9	Endosulfan II	11/19/96	ND	ug/l	0.005
		72-54-8	4,4'-DDD	11/19/96	ND	ug/l	0.005
		1031-07-8	Endosulfan sulfate	11/19/96	ND	ug/l	0.003
		50-29-3	4,4'-DDT	11/19/96	ND	ug/l	0.01
		72-43-5	Methoxychlor	11/19/96	ND	ug/l	0.015
		7421-92-4	Endrin Aldehyde	11/19/96	ND	ug/l	0.005
			Oxychlordane	11/19/96	ND	ug/l	0.01
		12789-03-6	Chlordane-Technical	11/19/96	ND	ug/l	0.02
		118-74-1	HCB	11/23/96	ND	ug/l	0.005
			cis-chlordane	11/19/96	ND	ug/l	0.01
		8001-35-2	Toxaphene	11/19/96	ND	ug/l	0.4
			trans-chlordane	11/19/96	ND	ug/l	0.01
		3424-82-6	o,p'-DDE	11/23/96	ND	ug/l	0.01
		53-19-0	o,p'-DDD	11/23/96	ND	ug/l	0.005
		789-02-6	o,p'-DDT	11/23/96	ND	ug/l	0.005
			gamma-chlordane	11/19/96	ND	ug/l	0.01
			trans-Nonachlor	11/19/96	ND	ug/l	0.01
		2385-85-5	Mirex	11/23/96	ND	ug/l	0.01
		12674-11-2	PCB-1016	11/19/96	ND	ug/l	0.045
		11104-28-2	PCB-1221	11/19/96	ND	ug/l	0.1
		11141-16-5	PCB-1232	11/19/96	ND	ug/l	0.05
		53469-21-9	PCB-1242	11/19/96	ND	ug/l	0.1
		12672-29-6	PCB-1248	11/19/96	ND	ug/l	0.04
		11097-69-1	PCB-1254	11/19/96	ND	ug/l	0.15
		11096-82-5	PCB-1260	11/19/96	ND	ug/l	0.035

COMMENTS:

Abbreviation Key
--- = Analysis not requested
ND = None detected
J = Estimated value below LOQ
LOQ = Limit of Quantitation
MDL = Minimum Detection Limit
* = Outside Specifications

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Quality Control Summary

Matrix Spike/Matrix Spike Duplicate
Pesticides

Unspiked Sample #....:2612396
Spiked Sample #.....:2612396MS
Spiked Dup Sample #..:2612396MSD

Matrix: WATER

This MS/MSD applies to the following samples	Compound	Spike Added (ug/l)	Sample Conc (ug/l)	MS Conc (ug/l)	MSD Conc (ug/l)	MS % REC	MSD % REC	QC Limits REC	RPD	QC Limits RPD
BLANKA 11/08	alpha-BHC	0.20	ND	0.14	0.11	71	57 *	67 -122	23	30
LCSA 11/08	gamma-BHC (Lindane)	0.20	ND	0.15	0.12	74	59 *	66 -120	23	30
2611975	Aldrin	0.20	ND	0.15	0.11	73	56	42 -120	26	30
2612396	Dieldrin	0.20	ND	0.17	0.16	86	78	66 -120	10	30
2612396MS	4,4'-DDT	0.20	ND	0.20	0.16	101	78	71 -120	26	30
2612396MSD	Malathion	NA								
	beta-BHC	0.20	ND	0.17	0.14	84	69 *	74 -120	20	30
	delta-BHC	0.20	ND	0.17	0.13	85	67 *	69 -126	23	30
	Heptachlor	0.20	ND	0.14	0.11	71	56	54 -120	24	30
	4,4'-DDE	0.20	ND	0.17	0.13	85	67	60 -120	24	30
	4,4'-DDD	0.20	ND	0.18	0.14	90	70	67 -126	26	30
	Methoxychlor	0.20	ND	0.22	0.17	112	87	57 -140	25	30
	Endrin	0.20	ND	0.20	0.16	101	79	73 -129	25	30
	Diazinon	NA								
	Endosulfan sulfate	0.20	ND	0.21	0.16	103	80	53 -120	26	30
	Endosulfan I	0.20	ND	0.16	0.12	78	60	60 -120	25	30
	Endosulfan II	0.20	ND	0.19	0.15	93	72	67 -120	24	30
	Heptachlor epoxide	0.20	ND	0.17	0.13	83	65	64 -120	24	30
	trans-chlordane	0.20	ND	0.16	0.13	82	64 *	75 -125	25	30
	cis-chlordane	0.20	ND	0.17	0.13	83	66 *	75 -125	22	30

ABBREVIATION KEY
MS = Matrix Spike
MSD = Matrix Spike Duplicate
ND = None Detected
RPD = Relative Percent Difference
--- = Analysis not requested
\# = No established limits
* = Outside Specifications

COMMENTS:

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A subsidiary of Thermo Process Systems Inc., a Thermo Electron company

Lancaster Laboratories
A Thermo Analytical Laboratory
Where quality is a science.

Quality Control Summary

Lab Control Spike/Lab Control Spike Duplicate
Pesticides

Unspiked Sample #....:BLANKA 11/08
Spiked Sample #.....:LCSA 11/08
Spiked Dup Sample #..:

MATRIX: WATER

This LCS/LCSD applies to the following samples	Compound	Spike Added (ug/l)	BKGD Conc (ug/l)	LCS Conc (ug/l)	LCSD Conc (ug/l)	LCS % REC	LCSD % REC	QC Limits REC	RPD	QC Limits RPD
BLANKA 11/08	alpha-BHC	0.20	ND	0.15		73		67 -122		
LCSA 11/08	beta-BHC	0.20	ND	0.18		89		74 -120		
2611975	delta-BHC	0.20	ND	0.16		80		69 -120		
2612396	gamma-BHC (Lindane)	0.20	ND	0.15		73		66 -120		
2612396MS	Heptachlor	0.20	ND	0.13		63		54 -120		
2612396MSD	Aldrin	0.20	ND	0.12		59		42 -120		
	Heptachlor epoxide	0.20	ND	0.16		80		64 -120		
	Endosulfan I	0.20	ND	0.15		75		60 -120		
	Dieldrin	0.20	ND	0.17		83		66 -120		
	4,4'-DDE	0.20	ND	0.16		79		60 -120		
	Endrin	0.20	ND	0.20		99		73 -129		
	Endosulfan II	0.20	ND	0.18		92		67 -120		
	4,4'-DDD	0.20	ND	0.17		85		67 -121		
	Endosulfan sulfate	0.20	ND	0.19		95		53 -128		
	4,4'-DDT	0.20	ND	0.17		85		71 -120		
	Methoxychlor	0.20	ND	0.24		120		57 -140		
	Endrin Aldehyde	0.20	ND	0.17		85		59 -126		
	trans-chlordane	0.20	ND	0.15		75		71 -113		
	cis-chlordane	0.20	ND	0.16		80		75 -114		

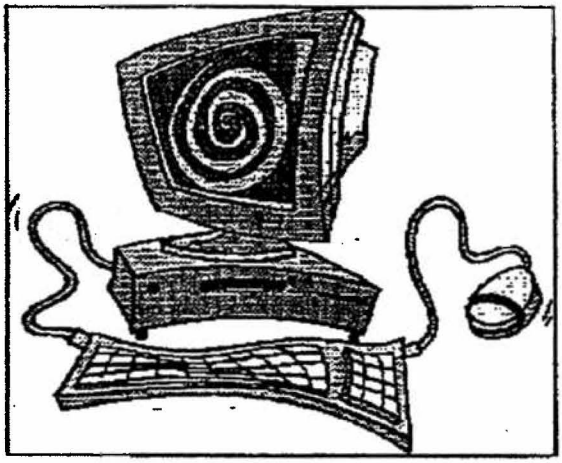
ABBREVIATION KEY

LCS = Lab Control Spike LCSD = Lab Control Spike Duplicate
ND = None Detected --- = Analysis not requested
RPD = Relative Percent Difference
# = No established limits * = Outside Specifications

COMMENTS:

77

FROM:
ERDEC
SCBRD-RTC
J. Mike Lochner
410-67-2730 FAX 1846



TO: CHPPM / E2100
WHOM: Bob Valus
ORGANIZATION: DLS/LCO
PHONE#: 671-8271
FAX#: 671-8315

DATE: 11/19/96

ANALYTICAL REQUEST AND RESULTS

02 DEC 96

TO: (REQUESTOR, PLEASE FILL IN NAME AND ADDRESS)	DATE
CHPPM, R. Valis	18 Nov 96
	PHONE NO. X8271

FROM: Analytical Chemistry Team (ACT)

ANALYSIS OF (structure or further description IF UNCLASSIFIED on reverse side)

Soil Samples - Ravenna AD

SAMPLE NO.

RVAP-281 OTH23896-1

TOXIC	NON-TOXIC	MOL. WT.	EMP. FORM.

DETERMINE:

Thiodiglycol by ACT Method 030

RESULTS AS FOLLOWS BY: B. S. Ince

PROCEDURE:

About 5 g of the soil sample was weighed into a 15-mL screw-capped test tube. 5.0 mL of deionized, distilled (DD) water was added, the test tube was capped and the sample/water mixture was vigorously shaken for about 5 min. A Pasteur pipet was used to remove the liquid from the test tube, and another 5.0 mL of DD water was added to the test tube containing the sample. The shaking/removal of liquid sequence was repeated, with the second 5.0 mL added to the first, for a total extraction volume of 10.0 mL. This extract was centrifuged at 3100 rpm for about 1 hour, after which 1 mL was transferred to a sample vial for analysis by HPLC.

RESULTS:

Thiodiglycol was not detected at/above the 22.5 ppm level (MDL).

TEAM LEADER: MICHAEL W. ELLZY — DATE: 19 Nov 96

SCBRD Form 49, 15 Jun 94 replaces SMCCR Form 49, 1 May 85 which is obsolete.

E1386

ANALYTICAL REQUEST AND RESULTS

TO: (REQUESTOR, PLEASE FILL IN NAME AND ADDRESS)	DATE
CHPPM, R. Valis	05 Dec 96
	PHONE NO. X8271

FROM: Analytical Chemistry Team (ACT)

ANALYSIS OF (structure or further description IF UNCLASSIFIED on reverse side)

Soil Samples - Ravenna AD

SAMPLE NO.	
RVAP-282	OTH23896-2

TOXIC	NON-TOXIC	MOL. WT.	EMP. FORM.

DETERMINE:

Thiodiglycol by ACT Method 030

RESULTS AS FOLLOWS BY: B. S. Ince

PROCEDURE:

About 5 g of the soil sample was weighed into a 15-mL screw-capped test tube. 5.0 mL of deionized, distilled (DD) water was added, the test tube was capped and the sample/water mixture was vigorously shaken for about 5 min. A Pasteur pipet was used to remove the liquid from the test tube, and another 5.0 mL of DD water was added to the test tube containing the sample. The shaking/removal of liquid sequence was repeated, with the second 5.0 mL added to the first, for a total extraction volume of 10.0 mL. This extract was centrifuged at 3100 rpm for about 1 hour, after which 1 mL was transferred to a sample vial for analysis by HPLC.

RESULTS:

Thiodiglycol was not detected at/above the 21.8 ppm level (MDL).

TEAM LEADER Richard W Ellzy Richard W Ellzy DATE 9 Dec 96

SCBRD Form 49, 15 Jun 94 replaces SMCCR Form 49, 1 May 85 which is obsolete.

Date: 20-Nov-96 17:58
Format #: r2001c
Serial #: 140431 *140431*

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences (DLS)
5158 Blackhawk Road
Aberdeen Proving Ground, Maryland 21010-5422
(410)671-2208 DSN 584-2208 FAX (410)671-4108

Radiologic, Classic and Clinical Chemistry Division
Analytical Results - Final Report

CLIENT: JAMES SHEEHY
HMWP
BLDG E1677
APG-EA, MD 21010-5422

Client Phone: 5-3651

22 NOV 1996

Project Site: RAVENNA AAP
Project #: 37-23-5360
DLS Job #: 6A5975 *6A5975*

REPORT RELEASE AUTHORIZATION:

Signature: _____ 22 NOV 96
Mr. Ronald Swatski Date
Chief, Radiologic, Classic and Clinical Chemistry Division

Sample Section

Field ID	Sample	Collected	Matrix
RVAP-061	E1387	28-Oct-96	SO
RVAP-062	E1388	28-Oct-96	SO
RVAP-063	E1389	28-Oct-96	SO

** Analytical Results - Final Customer Report **

DLS Job# : 6A5975
Reviewing Laboratory : CLS - RCCCD Classic Team
Analytical Laboratory: CLS - RCCCD Classic Team
Date Released : 20-NOV-96
Generated by : staylor

DLS Sample # .....: E1387 Date Sampled: 28-Oct-96 17:20
Field ID # .....: RVAP-061 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 237 - Cyanide (CN)
Method : EPA 335.2 Analyst: ST Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Cyanide	<0.65	UG/G	

Procedure: 317 - Total Moisture
Method : CS PAGE 475 Analyst: DGG Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
MOISTURE	24	% MOISTURE	

DLS Sample # .....: E1388 Date Sampled: 28-Oct-96 17:20
Field ID # .....: RVAP-062 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 237 - Cyanide (CN)
Method : EPA 335.2 Analyst: ST Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Cyanide	<0.65	UG/G	

Procedure: 317 - Total Moisture
Method : CS PAGE 475 Analyst: DGG Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
MOISTURE	28	% MOISTURE	

DLS Sample # .....: E1389 Date Sampled: 28-Oct-96 17:25
Field ID # .....: RVAP-063 Date Received: 31-Oct-96 10:15
Sample Description: Soils

Procedure: 237 - Cyanide (CN)
Method : EPA 335.2 Analyst: ST Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Cyanide	<0.65	UG/G	

** Analytical Results - Final Customer Report **

Procedure: 317 - Total Moisture
Method : CS PAGE 475 Analyst: DGG Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
MOISTURE	25	% MOISTURE	

RAVENNA AAP
37-23-5360
JOB # 6A5975

CASE NARRATIVE:

1. Moisture was analyzed using the method on page 475 of the Chemistry of the Soil by Bear.

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences
Aberdeen Proving Ground, MD 21010-5422

Quality Control Report

Note: Site or project specific data in this report may not be extracted in part without review and written approval of the USACHPPM program manager of concern. Individual specific screening data may be extracted for inclusion in appropriate personnel/medicinal records.

Installation: Ravenna AAP **Job #:** 6A5975 **Project Officer:** Sheehy **Project #:** 37-23-5360

Signature: _____ 22 NOV 95
Mr. Ronald Swatski Date
Radiologic, Classic, and Clinical
Chemistry Division

QC Coordinator: _____

The following three pages include the quality control analyzed with these samples.

INSTALLATION: Ravenna AAP
JOB #: 6A5975
PROJECT #: 37-23-5360

QUALITY CONTROL DATA:											
Target	Run ID	Date	Sample #	Observed	TRUE	Units	% Recovery	Analyst	Method	Test	DIVISION
MOIST	4094	96-11-07	QS1379	29.4385	28.5673	%	103.0	DGG	CS PAGE 475	CLS317	RCCCD
MOIST	4094	96-11-07	QS1380	45.273	44.439	%	101.9	DGG	CS PAGE 475	CLS317	RCCCD
CN	4101	96-11-07	QS1385	0.05111	0.05748	MG/L	88.9	ST	EPA 335.2	CLS236	RCCCD
CN	4101	96-11-07	QS1386	0.1811	0.1916	MG/L	94.5	ST	EPA 335.2	CLS236	RCCCD

INSTALLATION: Ravenna AAP
JOB #: 6A5975
PROJECT #: 37-23-5360

DUPLICATE DATA:													
Target	Run ID	Date	Sample #		Value #1		Value #2	Units	% Diff	Analyst	Method	Test	DIVISION
MOIST	4094	96-11-07	E1387		24.36		24.28	%	0.33	DGG	CS PAGE 475	CLS317	RCCCD
CN	4101	96-11-07	E1387	<	0.65	<	0.65	UG/G	0.00	ST	EPA 335.2	CLS236	RCCCD

INSTALLATION: Ravenna AAP
JOB #: 6A5975
PROJECT #: 37-23-5360

SPIKE DATA:															
Target	Run ID	Date	Sample #	Unspike	Vol Spl Taken	Conc of Spike soln	Vol spk taken	Final vol	Spike	Units	% Rec	Analyst	Method	Test	DIVISION
CN	4101	96-11-07	E1388	0	235	0.958	15	250	0.05484	UG/G	95.4	ST	EPA 335.2	CLS236	RCCCD

Date: 20-Nov-96 17:58
Format #: r2001c
Serial #: 140429 *140429*

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences (DLS)
5158 Blackhawk Road
Aberdeen Proving Ground, Maryland 21010-5422
(410)671-2208 DSN 584-2208 FAX (410)671-4108

Radiologic, Classic and Clinical Chemistry Division
Analytical Results - Final Report

22 NOV 1996 ea

CLIENT: JAMES SHEEHY
HMWP
BLDG E1677
APG-EA, MD 21010-5422

Client Phone: 5-3651

Project Site: RAVENNA AAP
Project #: 37-23-5360
DLS Job #: 6A6206 *6A6206*

REPORT RELEASE AUTHORIZATION:

Signature: Ronald Swatski 22NOV 95
Mr. Ronald Swatski Date
Chief, Radiologic, Classic and Clinical Chemistry Division

Sample Section

Field ID	Sample	Collected	Matrix
RVAP-WW	E1420	01-Nov-96	DW
RVAP-261B	E1423	30-Oct-96	SO
RVAP-262B	E1425	30-Oct-96	SO
RVAP-263B	E1427	31-Oct-96	SO
RVAP-264B	E1429	31-Oct-96	SO
RVAP-351B	E1435	31-Oct-96	SO
RVAP-231B	E1451	01-Nov-96	SO

** Analytical Results - Final Customer Report **

DLS Job# : 6A6206
Reviewing Laboratory : CLS - RCCCD Classic Team
Analytical Laboratory: CLS - RCCCD Classic Team
Date Released : 20-NOV-96
Generated by : staylor

DLS Sample # .....: E1420 Date Sampled: 01-Nov-96 16:00
Field ID # .....: RVAP-WW Date Received: 04-Nov-96 09:15
Sample Description: Water, domestic waste (sewage

Procedure: 236 - Cyanide (CN)
Method : EPA 335.2 Analyst: ST Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
Cyanide	<0.01	MG/L	

DLS Sample # .....: E1423 Date Sampled: 30-Oct-96 14:00
Field ID # .....: RVAP-261B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 272 - pH [1:1 H2O or CaCl2 Extraction]
Method : SW846 M.9045 Analyst: SCT Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
pH	7.2	PH UNITS	

DLS Sample # .....: E1425 Date Sampled: 30-Oct-96 16:10
Field ID # .....: RVAP-262B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 272 - pH [1:1 H2O or CaCl2 Extraction]
Method : SW846 M.9045 Analyst: SCT Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
pH	6.4	PH UNITS	

DLS Sample # .....: E1427 Date Sampled: 31-Oct-96 09:20
Field ID # .....: RVAP-263B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 272 - pH [1:1 H2O or CaCl2 Extraction]
Method : SW846 M.9045 Analyst: SCT Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
pH	7.5	PH UNITS	

** Analytical Results - Final Customer Report **

DLS Sample # .....: E1429 Date Sampled: 31-Oct-96 13:00
Field ID # .....: RVAP-264B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 272 - pH [1:1 H2O or CaCl2 Extraction]
Method : SW846 M.9045 Analyst: SCT Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
pH	7.5	PH UNITS	

DLS Sample # .....: E1435 Date Sampled: 31-Oct-96 17:15
Field ID # .....: RVAP-351B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 272 - pH [1:1 H2O or CaCl2 Extraction]
Method : SW846 M.9045 Analyst: SCT Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
pH	7.9	PH UNITS	

DLS Sample # .....: E1451 Date Sampled: 01-Nov-96 13:50
Field ID # .....: RVAP-231B Date Received: 04-Nov-96 09:15
Sample Description: Soils

Procedure: 272 - pH [1:1 H2O or CaCl2 Extraction]
Method : SW846 M.9045 Analyst: SCT Date Analyzed: 07-NOV-96

Analyte	Concentration	Units	Qualifier
pH	7.4	PH UNITS	

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences
Aberdeen Proving Ground, MD 21010-5422

Quality Control Report

Note: Site or project specific data in this report may not be extracted in part without review and written approval of the USACHPPM program manager of concern. Individual specific screening data may be extracted for inclusion in appropriate personnel/medicinal records.

Installation: Ravenna AAP **Job #:** 6A6206 **Project Officer:** Sheehy **Project #:** 37-23-5360

Signature: _____ 22NOV97
Mr. Ronald Swatski Date
Radiologic, Classic, and Clinical
Chemistry Division

QC Coordinator: _____

The following three pages include the quality control analyzed with these samples.

INSTALLATION: Ravenna AAP
JOB #: 6A6206
PROJECT #: 37-23-5360

QUALITY CONTROL DATA:											
Target	Run ID	Date	Sample #	Observed	TRUE	Units	% Recovery	Analyst	Method	Test	DIVISION
PH	4141	96-11-07	QS1187	5.997	6.0	PH UNITS	100.0	SCT	SW846 M. 9045	CLS272	RCCCD
PH	4141	96-11-07	QS1187	6.01	6.0	PH UNITS	100.2	SCT	SW846 M. 9045	CLS272	RCCCD
CN	4101	96-11-07	QS1385	0.05111	0.05748	MG/L	88.9	ST	EPA 335.2	CLS236	RCCCD
CN	4101	96-11-07	QS1386	0.1811	0.1916	MG/L	94.5	ST	EPA 335.2	CLS236	RCCCD

INSTALLATION: Ravenna AAP
JOB #: 6A6206
PROJECT #: 37-23-5360

SPIKE DATA:

Target	Run ID	Date	Sample #	Unspike	Vol Spl Taken	Conc of Spike soln	Vol spk taken	Final vol	Spike	Units	% Rec	Analyst	Method	Test	DIVISION
CN	4101	96-11-07	E1420	0	235	0.958	15	250	0.05538	MG/L	96.3	ST	EPA 335.2	CLS236	RCCCD

INSTALLATION: Ravenna AAP
JOB #: 6A6206
PROJECT #: 37-23-5360

DUPLICATE DATA:													
Target	Run ID	Date	Sample #		Value #1		Value #2	Units	% Diff	Analyst	Method	Test	DIVISION
PH	4141	96-11-07	E1451		7.376		7.356	PH UNITS	0.27	SCT	SW846 M. 9045	CLS272	RCCCD
CN	4101	96-11-07	E1420	<	0.01	<	0.01	MG/L	0.00	ST	EPA 335.2	CLS236	RCCCD