

FINAL

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

**RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO**

December 18, 2012

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

Prepared for



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

Prepared by



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

REPORT DOCUMENTATION PAGE

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John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

February 28, 2013

RE: RAVENNA ARMY AMMUNITION PLANT
PORTAGE/TRUMBULL COUNTIES
FWGWMP, APPROVAL FOR REVISED,
FINAL, MONITORING WELL INSTALLATION
REPORT DATED FEBRUARY 12, 2013
(OHIO EPA ID # 267-000859-036)

Mr. Mark Patterson
Facility Manager
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, OH 44266

CERTIFIED MAIL
7012 1010 0000 9467 5151

Dear Mr. Patterson:

The Ohio Environmental Protection Agency (Ohio EPA) has received and reviewed the revised "Final, Facility-Wide Groundwater Monitoring Program, RVAAP-66 Facility-Wide Groundwater Monitoring Well Installation Report" for the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio. The revised final report consists of a cover letter, change page instruction sheet with inserts for three hard copies and two electronic copies on CD. This document was received at Ohio EPA's Northeast District Office (NEDO), Division of Environmental Response and Revitalization (DERR), on February 12, 2013, and is dated February 12, 2013. The document was prepared for the U.S. Army Corps of Engineers (USACE) – Louisville District, by EQM under contract no. GS-10F-0293K.

The "Final" report was received at NEDO on December 19, 2013 and is dated December 18, 2012. Ohio EPA had not reviewed the response to comments prior to submittal of the "Final" report and, subsequently, still had some concerns regarding the proposed usage of permeameter data. This issue was also discussed during the February 4, 2013 groundwater meeting at RVAAP.

The response to concerns regarding usage of permeameter data has been adequately addressed and re-worded in the enclosed, revised final report that is acceptable to Ohio EPA. Therefore, the revised final report is approved.

Since a "Final" report has already been submitted to Ohio EPA and the revised final report consists of change page inserts and CDs, Ohio EPA is assuming, after replacing the pages and CDs in the "Final" report, this will comprise the "Revised Final" report and there will not be other revisions of this report forthcoming.

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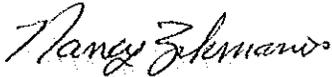
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If you have any questions, please contact Eileen Mohr at Ohio EPA.

Sincerely,



Nancy Zikmanis, CHMM
Environmental Supervisor
Division of Environmental Response and Revitalization

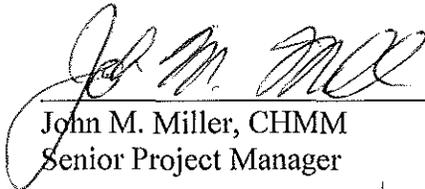
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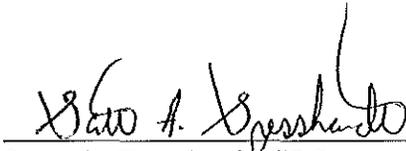
CONTRACTOR'S STATEMENT OF INDEPENDENT TECHNICAL REVIEW

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



John M. Miller, CHMM
Senior Project Manager

Date: 12/13/12



Scott A. Spesshardt, CPG
Senior Geologist

Date: 12/13/12

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RVAAP-66 FACILITY-WIDE GROUNDWATER
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1800 Carillon Boulevard
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**Document Distribution for the
Final
Monitoring Well Installation Report
Ravenna Army Ammunition Plant**

<u>Name/Organization</u>	<u>Number of Printed Copies</u>	<u>Number of Electronic Copies</u>
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Ohio EPA - NEDO, Project Coordinator, Vicki Deppisch	2	2
RVAAP Facility Manager, Mark Patterson	2	2
USACE Technical Manager, Mark Nichter	2	3
EQM Project Manager, John Miller	1	1

ARNG – Army National Guard
Ohio EPA – Ohio Environmental Protection Agency
OHARNG – CRJMTC/ENV – Ohio Army National Guard – Camp Ravenna Joint Military
Training Center – Environmental
RVAAP – Ravenna Army Ammunition Plant
USACE – U.S. Army Corps of Engineers
EQM – Environmental Quality Management, Inc.

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LIST OF GENERAL ACRONYMS

amsl	Above Mean Sea Level
AOC	Area of Concern
APP	Accident Prevention Plan
ARNG	Army National Guard
ASTM	American Society for Testing and Materials
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CHMM	Certified Hazardous Materials Manager
cm	Centimeter
CME	Central Mine Equipment
CPG	Certified Professional Geologist
CR	Compliance Restoration
CRJMTC	Camp Ravenna Joint Military Training Center
CRJMTC/ENV	Camp Ravenna Joint Military Training Center/Environmental
DFFOs	Director's Final Findings and Orders
dia.	Diameter
DLA	Defense Logistics Agency
DO	Dissolved Oxygen
DoD	Department of Defense
DOT	Department of Transportation
EIS	Environmental Investigation Services
EM	Engineering Manual
EQM	Environmental Quality Management, Inc.
EPA	Environmental Protection Agency
FCR	Field Change Request
Frac	Fractionation
Frontz	Frontz Drilling Inc.
FS	Feasibility Study
ft	Feet
FWSAP	Facility-Wide Sampling and Analysis Plan
FWSHP	Facility-Wide Safety and Health Plan
gal	Gallon
GOCO	Government Owned, Contractor Operated
gpm	Gallons per Minute
GSA	Government Services Administration
I.D.	Inner Diameter
IDW	Investigation-Derived Waste
in.	Inch
IRP	Installation Restoration Program
lb	Pound
MEC	Munitions and Explosives of Concern
MR	Munitions Response
NAD83	North American Datum of 1983
NAVD88	North American Vertical Datum of 1988

**LIST OF GENERAL ACRONYMS
(continued)**

NGVD29	National Geodetic Vertical Datum of 1929
No.	Number
O&M	Operations and Maintenance
OHARNG	Ohio Army National Guard
oz	Ounce
%	Percent
PBA	Performance Based Acquisition
PCB	Polychlorinated Biphenyl
PID	Photoionization Detector
PIKA	PIKA International
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
RI	Remedial Investigation
ROD	Record of Decision
RVAAP	Ravenna Army Ammunition Plant
RVAAP-66	Facility-Wide Groundwater AOC
SAIC	Science Applications International Corporation
sec	Second
SSHP	Site Safety and Health Plan
SVOC	Semivolatile Organic Compound
TCLP	Toxicity Characteristic Leaching Procedure
TOC	Total Organic Carbon
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Center
USATHAMA	United States Army Toxic and Hazardous Materials Agency
USGS	United States Geological Survey
USP&FO	United States Property and Fiscal Officer
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound

LIST OF AREA OF CONCERN ACRONYMS

ASY	Atlas Scrap Yard
B12	Building 1200
CBL	C Block
CBP	Central Burn Pits
CP	Cobbs Pond
DA2	Demolition Area #2
EBG	Erie Burning Grounds
FBQ	Fuze and Booster Quarry
FWG	Facility-Wide Groundwater
LNW	Landfill North of Winklepeck
LL	Load Line
MBS	Mustard Burial Site
NACA	National Advisory Committee for Aeronautics
NTA	NACA Test Area
RQL	Ramsdell Quarry Landfill
SCF	Sharon Conglomerate Formation
WBG	Winklepeck Burning Grounds

EXECUTIVE SUMMARY

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

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

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

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

SECTION 1 INTRODUCTION

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

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

1.1 Facility Description

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

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

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

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

1.1.1 Physiographic Setting

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

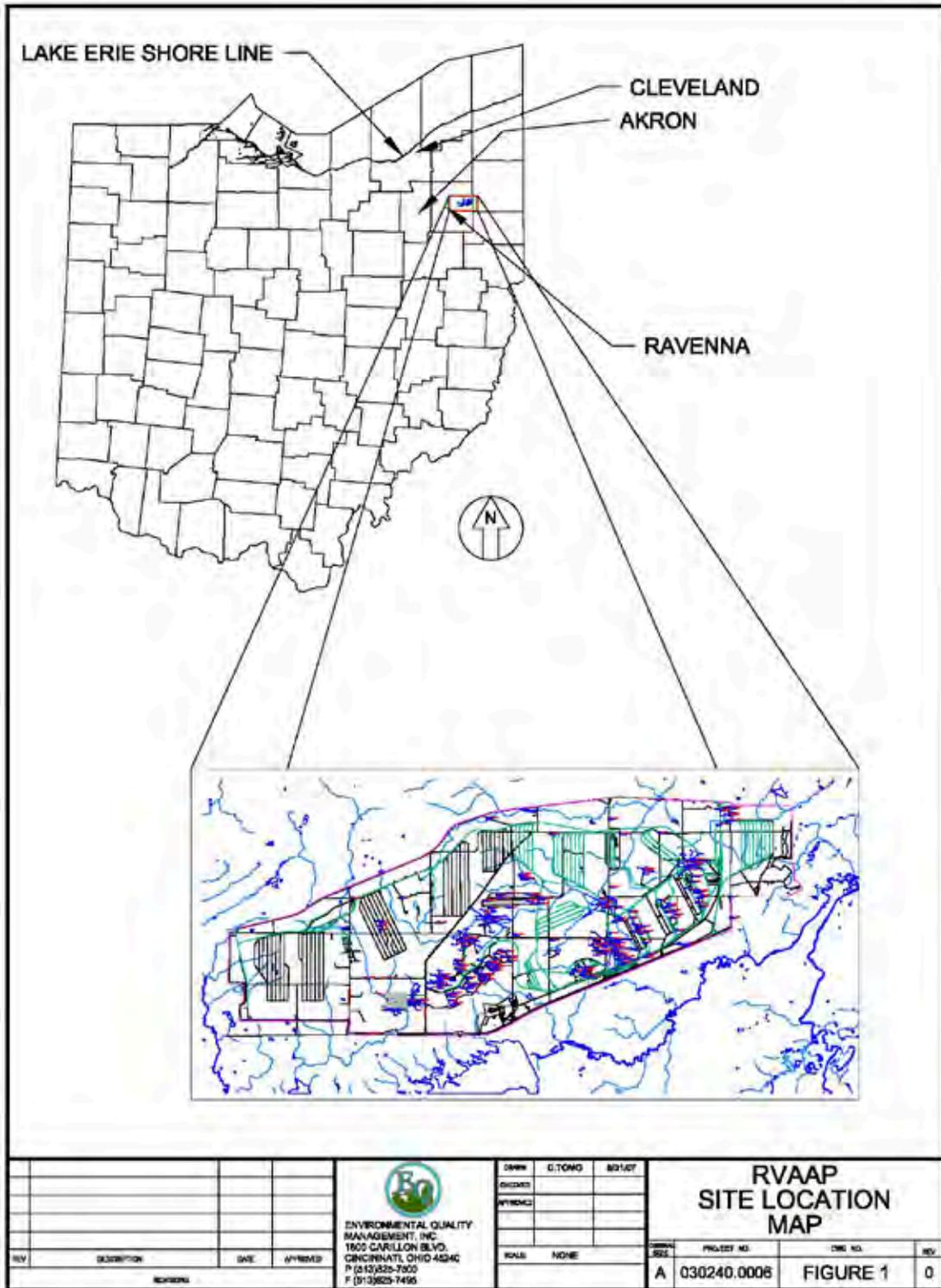


Figure 1-1. RVAAP General Location Map

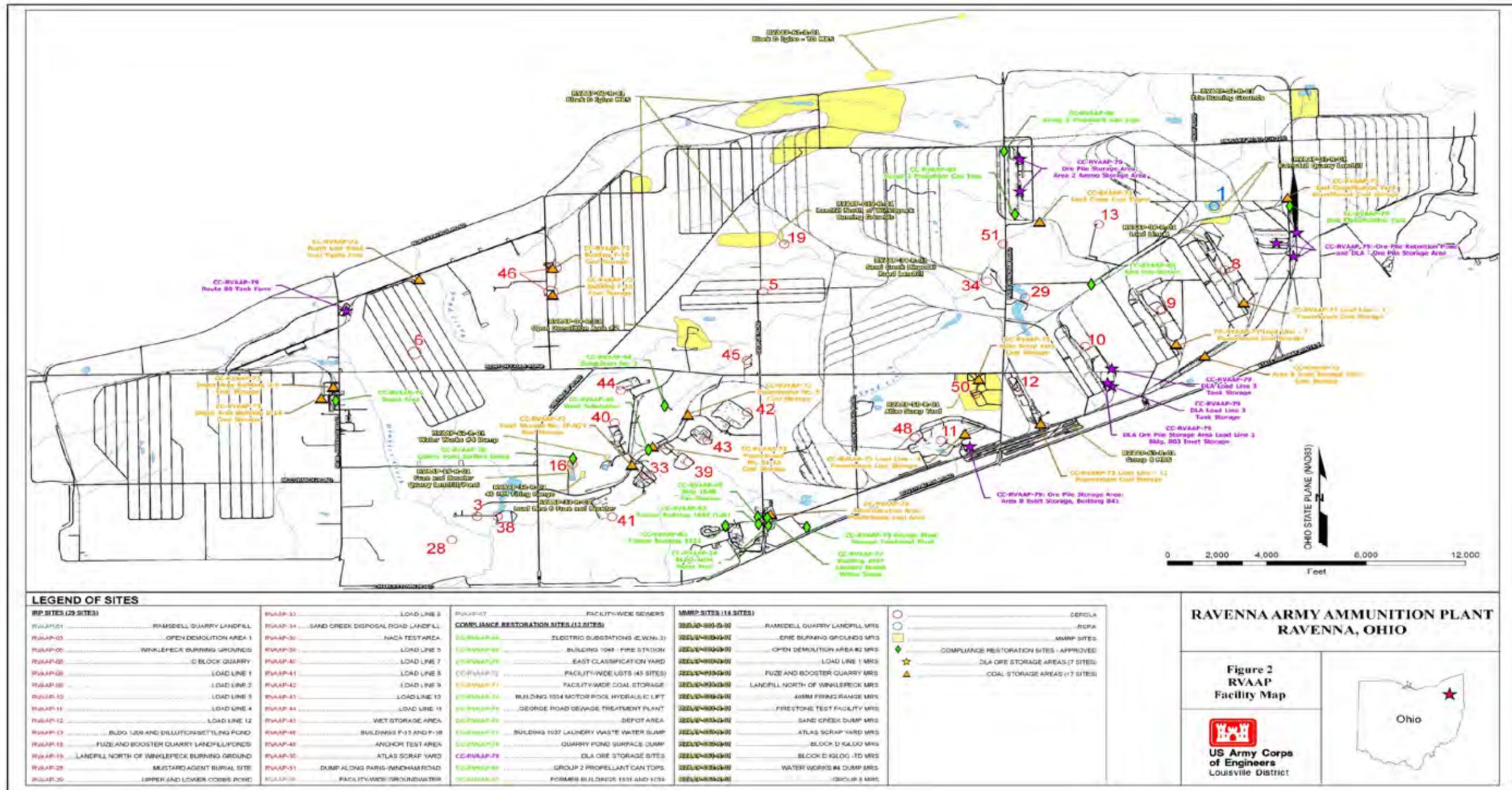


Figure 1-2. RVAAP Facility Map

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

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

1.1.2 Site Geology

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

1.1.2.1 Unconsolidated Deposits

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

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

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

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

1.1.2.2 Bedrock

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

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

1.1.3 Site Hydrogeology

1.1.3.1 Groundwater in Unconsolidated Deposits

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

1.1.3.2 Groundwater in Bedrock Deposits

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

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

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

1.2 Project Description

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

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

1.3 Report Organization

In accordance with the *Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Addendum* (EQM, January 2012), EQM is issuing this report to provide details of the installation of 38 monitoring wells at the site. Results of groundwater monitoring activities will be provided in separate quarterly monitoring reports. This report is organized into five main sections including an introduction with background, field activities, field change requests, investigation-derived waste handling and characterization, and references. Note that Appendix G Comment Response Table has been added to the final report. Per the DFFOs the Ohio EPA comments on the draft report have been incorporate into the text without Ohio EPA review. Additionally, the responses to each of the comments are included in the Comment Response Table included in Appendix G.

SECTION 2 FIELD ACTIVITIES

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

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

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

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

Table 2-1. Justification for New Wells

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

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

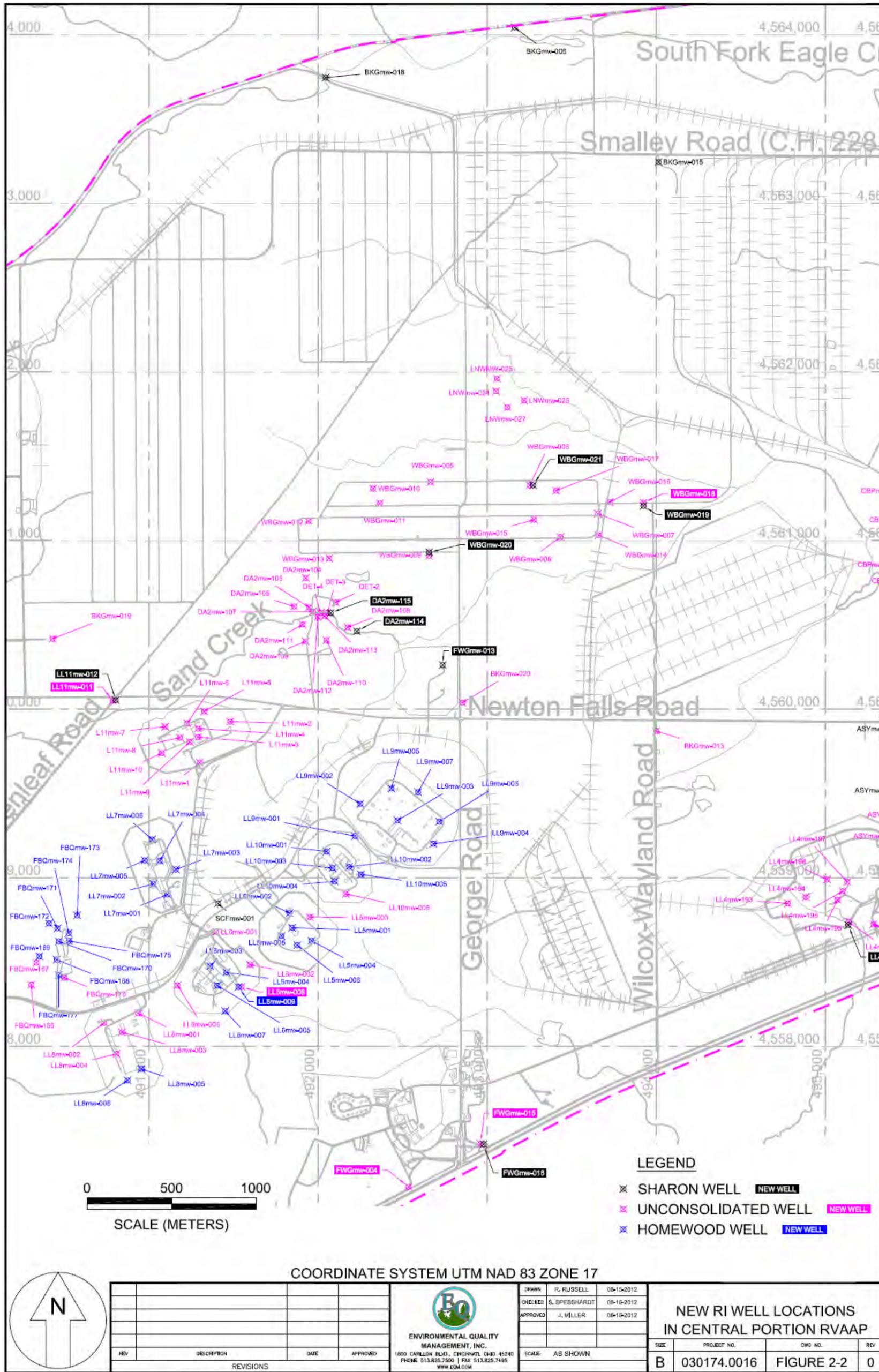


Figure 2-2. New Well Locations in Central Portion of RVAAP

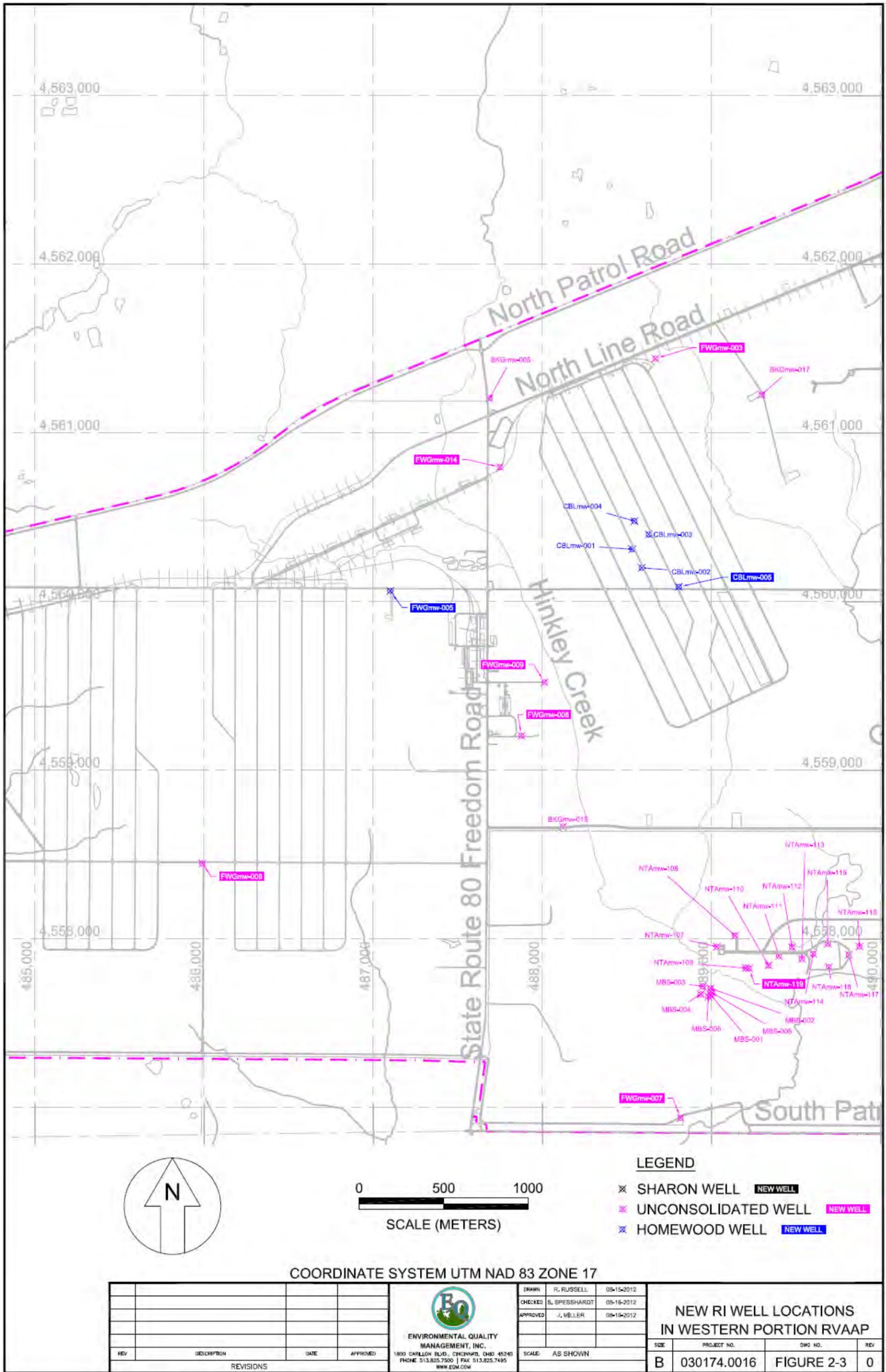


Figure 2-3. New Well Locations in Western Portion of RVAAP

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



Photo 1. Rotary Sonic Rig

2.1 Utility and UXO Clearance

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

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

2.2 Clearing and Grubbing

Several well locations were located in portions of the property that were overgrown with small trees and underbrush. Consequently, access to these locations required minimal clearing and grubbing (e.g., branch trimming, brush-hogging, consolidating gravel stockpiles). EQM coordinated all brush/vegetation clearing with OHARNG personnel. Where a brush-hog, tractor, or backhoe was needed to clear an area or path, EQM subcontracted Frank's Maintenance. Minor branch trimming or removal of undergrowth generally was performed by EQM. No trees greater than 6-in.-diameter were removed during these activities.

2.3 Drilling Methods and Well Installation

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

2.3.1 Overburden Wells

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

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

polyvinyl chloride (PVC) well using the drill rig winch and then overdrilling using 8.25-in.-I.D. hollow-stem augers. The borehole annulus was filled with Portland cement/bentonite grout to within 1 foot of ground surface and topped with a soil cover.

2.3.2 Bedrock Wells

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

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

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

2.3.3 Geologic Findings

During installation of the new RI monitoring well borings, the unconsolidated deposits were found to be variable and ranged from silty clay tills to outwash sands and gravels. The thickness of the unconsolidated deposits varies across the site in general response to site topography (e.g., thinner on hilltops and thicker in buried valleys). For example, at B12mw-013 the thickness of the unconsolidated veneer is less than 1-ft-thick; however, the ground surface elevation at this location is at least 15 to 20 feet higher than the other new wells installed in the eastern portion of the site. Near Sand Creek, which flows on top of shale bedrock, the overburden thickness is less than 4-ft-thick near the valley floor (DA2mw-114). Conversely, several new wells were apparently installed in buried valleys as reflected by the presence of thicker unconsolidated deposits ranging from 71-ft-thick at FWGmw-002 to more than 130-ft-thick at NTAmw-119. In particular, wells LL12mw-012 and NTAmw-119 provide physical evidence that a buried valley exists in the central portion of the site as the overburden thickness ranges from 88 feet to more than 130 feet, respectively, in these two wells. Photograph 2 shows the glacially-derived soils encountered from 90 to 100 feet below grade at well NTAmw-119.



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

The westernmost portion of the RVAAP facility is more than 200 feet higher in elevation than the easternmost portion of the study area with ground surface elevations ranging from 1181.40 feet above mean sea level (amsl) at FWGmw-006 to 937.5 feet amsl at LL1mw-086. Consequently, the stratigraphic sequences encountered during well installation reflect these elevation differences in that members of the upper Pottsville Formation are absent in the eastern portion of the site either due to non-deposition or glacial erosion. The Homewood Member was encountered in wells FWGmw-005, CBLmw-005, and LL6mw-009 in the western portion of the site. The Homewood comprises fine-grained sandstone ranging in color from yellow-brown to red-brown with iron-oxides along fractures and bedding planes to light gray with thin dark laminae. In the latter case, the light gray sandstone of the Homewood was comparable to the Sharon Member identified in the central portion of the site with the primary difference being the elevation in which they occurred indicating that these units were deposited in similar environments.



Photo 3. Homewood Member (CBLmw-005)

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

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

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

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



Photo 4. Homewood Member (LL6mw-009)



Photo 5. Sharon Shale (LL11mw-012)



Photo 6. Sharon Conglomerate (WBGmw-020)



Photo 7. Sharon Conglomerate (FWGmw-016)



Photo 8. Sharon Conglomerate (B12mw-013)



Photo 9. Sharon Conglomerate (EBGmw-131)

2.3.4 Monitoring Well Installation

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

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

2.4 Permeability Testing

Geotechnical samples (i.e., Shelby tubes and rock cores) were collected in accordance with the *Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Addendum* (EQM, January 2012). The collection methodology and results of the permeameter data are presented herein. This data was collected in support of the data inputs to the hydrogeologic and fate-and-transport models. Actual usage of these data, if any, will be discussed in the RI Report as part of the modeling inputs.

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

RVAAP Well ID	Completion Date	Ohio State Plane Easting ^a	Ohio State Plane Northing ^a	Surface Elevation NGVD 1929 ^b	TOC Elevation NGVD 1929 ^b	Surface Elevation NAVD 1988 ^b	TOC Elevation NAVD 1988 ^b	Depth to Bedrock (ft bgs)	Bottom of 6" I.D. Casing (ft bgs)	Total Drilled Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Dominant Lithology across Screened Interval
LL1mw-086	3/7/2012	2380437	561714	938.00	940.63	937.50	940.09	77.2	NA	75	64.5	74.5	Sand & Gravel
EBGmw-131	6/13/2012	2379666	571655	947.50	950.08	947.00	949.54	50.1	53.5	71	60.5	70.5	Sharon SS
LL1mw-087	3/1/2012	2378732	560375	941.80	944.32	941.30	943.78	NA	NA	17.5	7	17	Silt
LL12mw-247	3/1/2012	2368932	555141	981.30	984.25	980.80	983.71	18.25	NA	20.5	10	20	Silty Clay Till
LL4mw-201	4/4/2012	2365417	554607	975.90	978.02	975.40	977.48	42	47	67	56.5	66.5	Sharon SS
LL3mw-244	3/12/2012	2371456	556033	986.20	988.78	985.70	988.24	17.7	21	45	34.5	44.5	Sharon SS
LL3mw-245	4/2/2012	2369249	558573	978.70	981.24	978.20	980.70	24.5	29	47	36.5	46.5	Sharon SS
CBPmw-009	3/28/2012	2367174	561797	969.90	972.48	969.40	971.94	44	47	65	54	64	Sharon SS
FWGmw-001	3/14/2012	2368321	565739	953.60	956.62	953.10	956.08	16	NA	17.5	7	17	Sand
B12mw-013	4/6/2012	2371221	565904	1001.80	1004.48	1001.30	1003.94	1.2	NA	22	11.5	21.5	Sharon SS
FWGmw-002	3/22/2012	2367606	571015	970.60	973.10	970.10	972.56	71	NA	71	57	67	Sand & Gravel
FWGmw-003	3/8/2012	2344042	563118	1129.40	1131.96	1128.90	1131.42	NA	NA	19	8.5	18.5	Silty Clay Till
WBGmw-018	6/14/2012	2361302	562659	990.50	991.45	990.00	990.91	NA	NA	24	13.5	23.5	Sand & Gravel
WBGmw-019	6/15/2012	2361304	562645	989.30	990.25	988.80	989.71	30	33.83	50	39.55	49.55	Sharon SS
WBGmw-020	6/27/2012	2357161	561623	1043.40	1044.31	1042.90	1043.77	24	26.1	43.25	32.9	42.9	Sharon SS
WBGmw-021	6/25/2012	2359106	563009	1010.00	1010.92	1009.50	1010.38	24.1	27	42.5	32	42	Sharon SS
DA2mw-114	6/22/2012	2355785	560109	1029.50	1031.90	1029.00	1031.36	3.5	NA	19.5	9.16	19.16	Sharon Shale
DA2mw-115	6/21/2012	2355269	560459	1035.40	1038.08	1034.90	1037.54	14.25	19	44	33.75	43.75	Sharon SS
FWGmw-004	3/12/2012	2356970	549319	1034.50	1037.15	1034.00	1036.61	16	NA	20	9.5	19.5	Clayey Silt/Shale
FWGmw-005	4/2/2012	2338973	558510	1167.50	1170.10	1167.00	1169.56	17	NA	29.5	19.25	29.25	Homewood SS
FWGmw-006	3/5/2012	2335421	553142	1181.90	1184.33	1181.40	1183.79	NA	NA	18	7.5	17.5	Sand
FWGmw-007	3/9/2012	2344785	548356	1072.80	1075.41	1072.30	1074.87	NA	NA	30	19.5	29.5	Interbedded Till
FWGmw-008	3/6/2012	2341569	555735	1109.00	1111.61	1108.50	1111.07	NA	NA	21	10	20	Interbedded Till
FWGmw-009	3/7/2012	2341998	556784	1099.50	1102.14	1099.00	1101.60	NA	NA	18.5	8	18	Interbedded Till
NTAmw-119	4/10/2012	2346013	551286	1077.40	1080.07	1076.90	1079.53	NA	NA	130	90	100	Sand & Gravel
LL6mw-008	3/20/2012	2353616	553154	1121.30	1124.15	1120.80	1123.61	17.5	NA	17.8	7.2	17.2	Clayey Sand
LL6mw-009	4/12/2012	2353604	553149	1121.40	1123.75	1120.90	1123.21	17.5	19.5	39.5	29	39	Homewood SS
LL11mw-011	3/21/2012	2351119	558680	1077.40	1080.20	1076.90	1079.66	NA	NA	18.5	7.8	17.8	Sand
LL11mw-012	4/17/2012	2351125	558691	1077.90	1080.36	1077.40	1079.82	88	95.5	115	104.5	114.5	Sharon Shale
FWGmw-010	3/2/2012	2379060	565077	959.50	962.15	959.00	961.61	NA	NA	17.3	6	16	Sand
FWGmw-012	3/20/2012	2380389	566790	938.90	941.39	938.40	940.85	17.5	20	40	29.5	39.5	Sharon SS
FWGmw-011	3/13/2012	2380390	566801	939.00	941.61	938.50	941.07	17.5	NA	17.5	6	16	Sand
FWGmw-013	4/9/2012	2357460	559483	1057.10	1059.51	1056.60	1058.97	11	15	34.5	24	34	Sharon SS
FWGmw-014	4/4/2012	2341064	560957	1135.00	1137.57	1134.50	1137.03	NA	NA	18.5	8.25	18.25	Sand & Gravel
CBLmw-005	4/10/2012	2344572	558686	1155.60	1158.10	1155.10	1157.56	9	15	31	22	30	Homewood SS
FWGmw-015	3/13/2012	2358353	550179	1012.10	1014.51	1011.60	1013.97	NA	NA	26	13.5	23.5	Silty Clay Till
FWGmw-016	4/16/2012	2358364	550171	1011.90	1014.39	1011.40	1013.85	36.8	40	65	54.5	64.5	Sharon SS
LL12mw-182ss	3/15/2012	2368867	555897	982.30	985.02	981.80	984.48	38	NA	36	25.25	35.25	Interbedded Till

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

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

bgs = below ground surface

All wells were installed with an above grade completion.

SS = sandstone

2.4.1 Shelby Tubes

At six of the proposed overburden well locations, 3-in.-I.D. by 24-in.-long, thin-walled Shelby Tube samples were collected from the approximate center of the water-bearing zone to be monitored. The Shelby Tube was attached to the sampling rods and hydraulically pushed the length of the tube. The thin-wall sampler was extracted through the auger string, immediately sealed with wax, and capped at both ends upon retrieval pursuant to ASTM Method D-1587. The tube was labeled and marked to orientation (i.e., top of core). The Shelby Tubes were submitted to Terracon Consultants, a geotechnical laboratory, for permeability testing using ASTM Method D-5084, "Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter." The well locations subjected to Shelby Tube testing included LL12mw-247, WBGmw-018, WBGmw-020, FWGmw-009, LL6mw-009, and FWGmw-015. (Note that the Shelby Tube samples from well LL6mw-009 and WBGmw-018 comprised sand or sand and gravel and fell apart at the laboratory; as a result, the permeability test could not be performed on these two samples.) The four overburden samples that were analyzed comprised clayey sandy silt to sandy lean clay with permeability values ranging from 1.3×10^{-7} to 8.5×10^{-8} cm/sec. Porosity values ranged from 21.47 to 31.75 percent in these four overburden samples. Table 2-3 summarizes the Permeability, Porosity, and Total Organic Carbon (TOC) Results for the Shelby Tube samples. The geotechnical laboratory reports are presented in Appendix B. Geotechnical data will be further evaluated within the RI, along with the hydrogeologic system modeling and contaminant fate-and-transport modeling for of a facility-wide groundwater approach.

2.4.2 Rock Cores

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

2.4.3 Total Organic Carbon

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

2.5 Well Completion and Demobilization

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

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

2.6 Well Development

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

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

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

NT = not tested.

a = sample fell apart at laboratory.

- The sediment thickness in the well was less than 1% of the screen length or <3.0 cm (0.1 ft);
- A minimum of five times the standing water volume in the well was purged; and
- Indicator parameters (pH, temperature, and specific conductance) stabilized according to procedures presented in Section 4.1.1 of the *Facility-Wide Groundwater Monitoring Program* (USACE, 2004) over three consecutive readings. Groundwater parameters were obtained using a combination meter (Horiba U-10 or equivalent) designed to measure these parameters.

If the water was not clear after 10 well volumes had been removed, but the indicator parameters were within +/- 10 percent of the stability measurements, then the well was considered properly developed. In addition, any unrecovered water used during well installation was also removed. Field data was entered into an electronic database at the time of well development (i.e., in the field). Field measurements and records are recorded using field-durable laptop computers in conjunction with the use of standard logbooks. The data is direct loaded into a Microsoft Access™ database, which performs check-routines for correct loading and verifies when field parameters have stabilized. Copies of the Well Development Logs are presented in Appendix C.

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

2.7 Well Survey

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

SECTION 3 FIELD CHANGE REQUESTS

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

3.1 Use of #5 Sand for Placement around Well Screens

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

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

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

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

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

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

3.4 Preparation of Accident Prevention Plan for MMRP Well Installations

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

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

3.5 Modification to Surface Casing Completion at Winklepeck Wells

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

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

SECTION 4 IDW GENERATION AND DISPOSAL

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

4.1 Soil Cuttings

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

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

Table 4-1. Summary of Analytical Suite of Chemicals

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

1 EPA Methods for Chemical Analysis of Water and Waste

4.2 Wastewater

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

4.2.1 Decontamination Fluids

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

4.2.2 Purge Water

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

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

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

SECTION 5 REFERENCES

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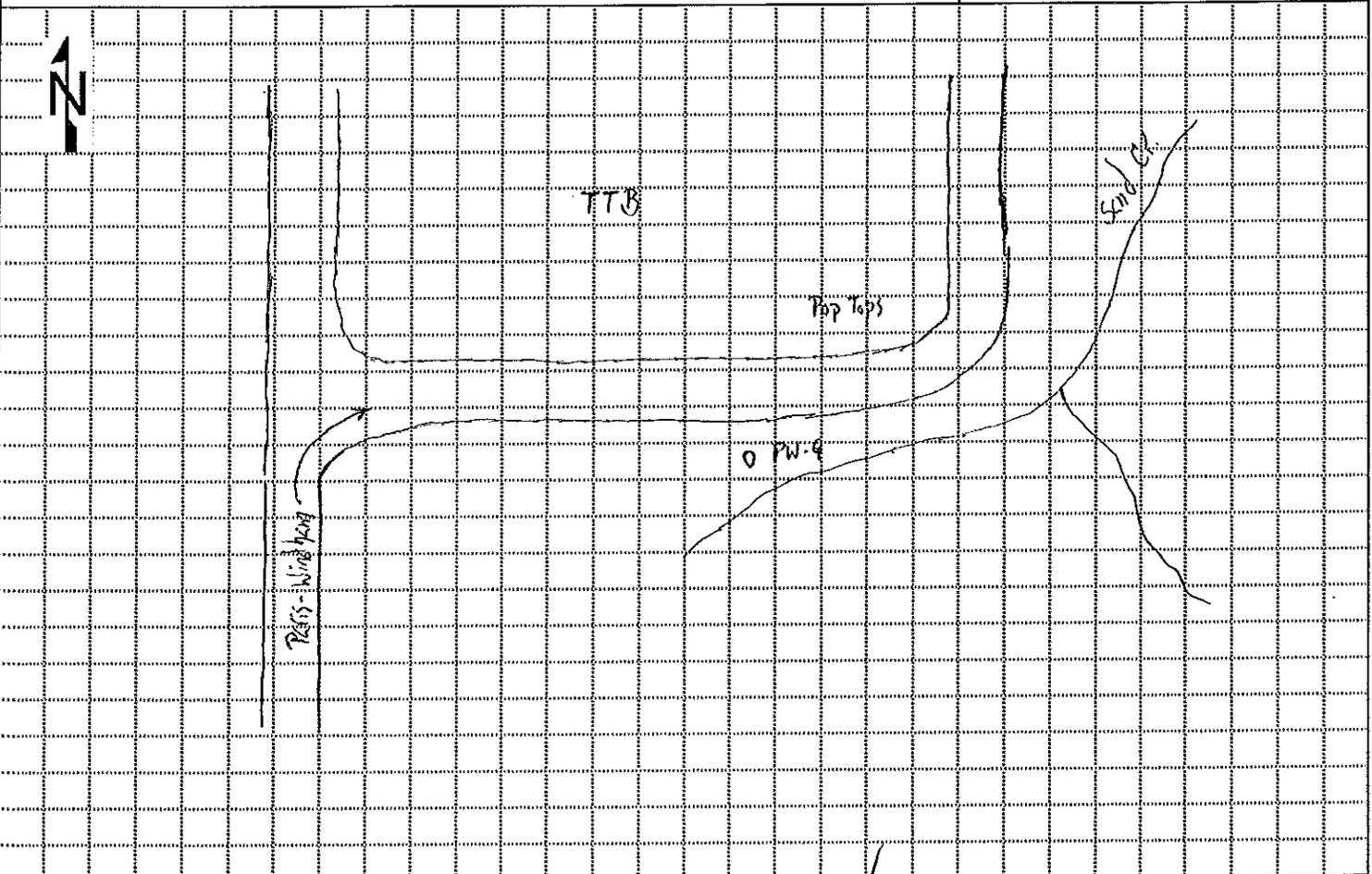
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APPENDIX A

**SOIL BORING LOGS AND
WELL CONSTRUCTION DIAGRAMS**

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-001
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT BVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tetel		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" ID HSA 2" x 24" split spoon		8. BOREHOLE LOCATION PW-9; Paris-Windham next to rd per logs	
		9. SURFACE ELEVATION/DATUM 953.60	
		10. DRILL DATE/TIME STARTED: 3/13/12 COMPLETED: 3/13/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 6 ft	
12. OVERBURDEN THICKNESS 16'		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
13. DEPTH DRILLED INTO BEDROCK 2'		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
14. TOTAL DEPTH OF BOREHOLE 18'			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES --	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY %	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/13/12 DATE COMPLETED/ABANDONED: 3/14/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: ≤Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT BVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>Joe Tetel</i> 3/13/12	BOREHOLE NUMBER FWGMW-001
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWGMW-001	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 Slate Route 5, Ravenna, OH 44266			
5. NAME OF DRILLER Joe Teitel			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: <u>SILVUS MSA</u> WATER LEVEL MAKE/MODEL:			PID SERIAL#: <u>A2-1861</u> WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2		Upper 3" Topsoil, dk brn, silty clay, roots	2-2-		0-2 ft; 1618
		ML	Remainder Silty sandy clay, brn, few small gravel, moist, med-grained sand, crumbly	2-3 R=15/24		
	2-4	CL	Upper 8" Silty clay, brn w/ few red-brn mottles, few sand & gravel, dmry, mod. stiff	2-4- 5-6		2-4 ft; 1624
		SC	Remainder Silty clayey sand, brn, dmry, crumbly, few small gravel	R=19/24		
	4-6	SC	Upper 3" Silty clayey sand, as above	5-9-		4-6 ft; 1634
		GP	Remainder Sand & gravel, lt brn, few silt, fairly loose, dry	11-5 R=12/24		
	6-8		Upper 2" Clayey sand & gravel, wet, soft	2-2-		6-8 ft; 1638
		CL	Remainder Silty clay, gray w/ brn mottles, few sand, wet, fairly soft	3-3 R=18/24		
	8-10	SP	Sand, gray w/ brown mottling, little silt, fn-med grained, wet	1-1- 1-2 R=14/24		8-10 ft; 1646
	10-12	SP	Sand, gray w/ brown mottling, little silt, fn-med grained, wet, 1/2" gravel @ 11'	1-2- 1-2 R=17/24		10-12 ft; 1654
	12-14	SP	Upper 7" Sand, as above	1-1-		12-14 ft; 1659
		CL	Lower 10" Silty clay, gray, wet, sticky, fairly soft, few sand	2-4 R=17/24		
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE Steve Spangher 3/13/12		BOREHOLE NUMBER FWGMW-001	

HTRW DRILLING LOG (continued)	DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-001
1. COMPANY NAME EQM	2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 23 OF 3

3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268
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5. NAME OF DRILLER Joe Tete	6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES
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7. NOTES PID MAKE/MODEL: Sirius MSA	PID SERIAL#: A2-1861	Colors from Munsell Soil Color Chart, Rev
WATER LEVEL MAKE/MODEL:	WATER LEVEL SERIAL#:	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Cora Box/Etc.)
	14-16	SW	Upper 5" Sand, brn, med grained, fairly well-sorted, wet	2-2-		14-16 ft; 1708
		CL	Remainder silty clay, gray, fairly plastic, few small gravel to 1/4", subangular, dk gray clay @ tip	3-4 R=18/24		
	28					
	16-18	SH	Slite, dk gray, hard & brittle	50/2 R=2/24		16-18 ft; 1720
	40					
	48					
	50					
	58					
	60					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Steve Spenshato 3/13/12	BOREHOLE NUMBER FWGmw-001
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MONITORING WELL

PROJECT NAME: *BVAAP-66 RT*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *FWGMW-001*

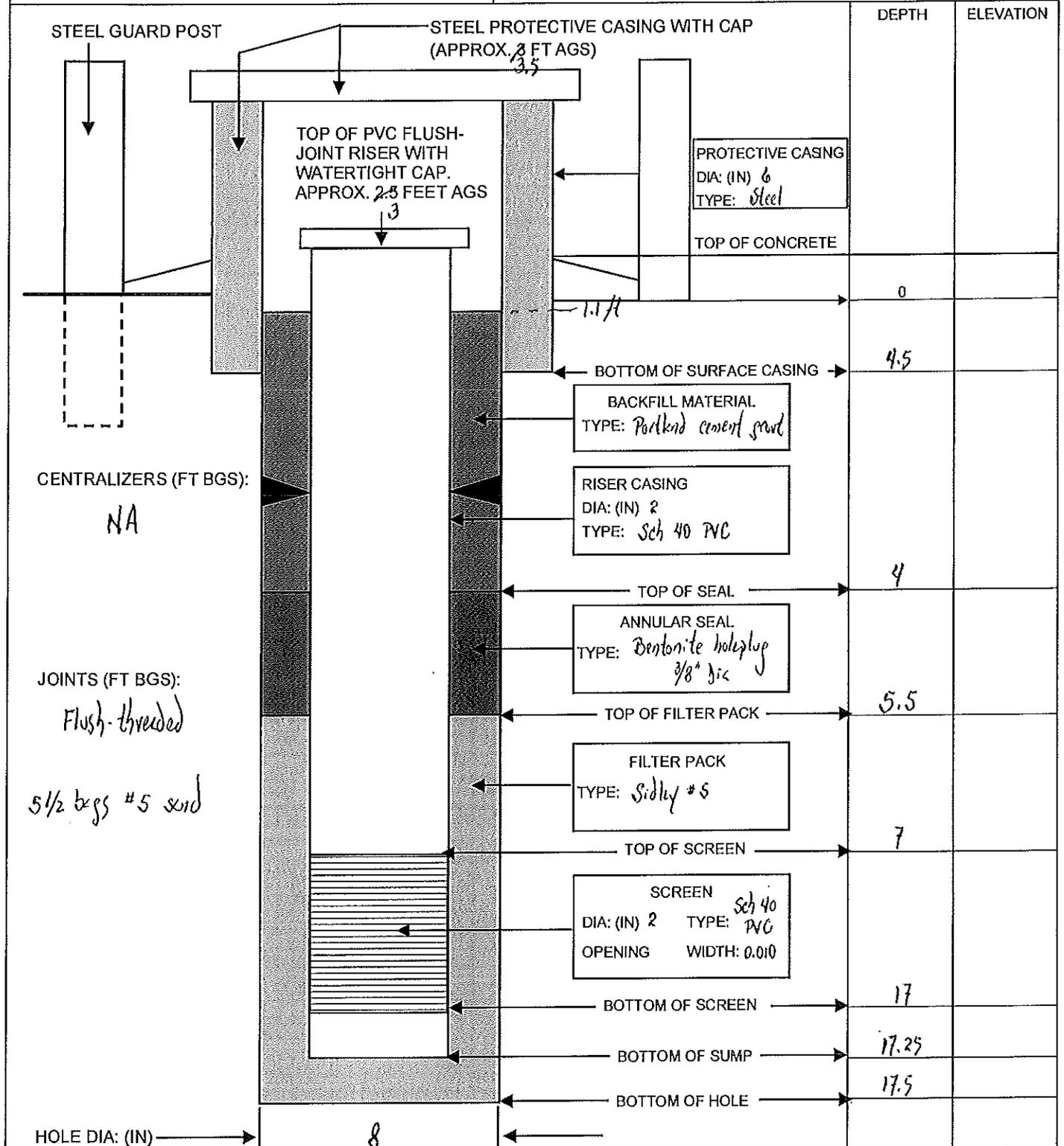
BEGIN: *3/14/12*

END: *3/14/12*

COORDINATES: N: *565739*
E: *2360321*

REFERENCE POINT: *TOC*

ELEVATION: *MSL*
956.62

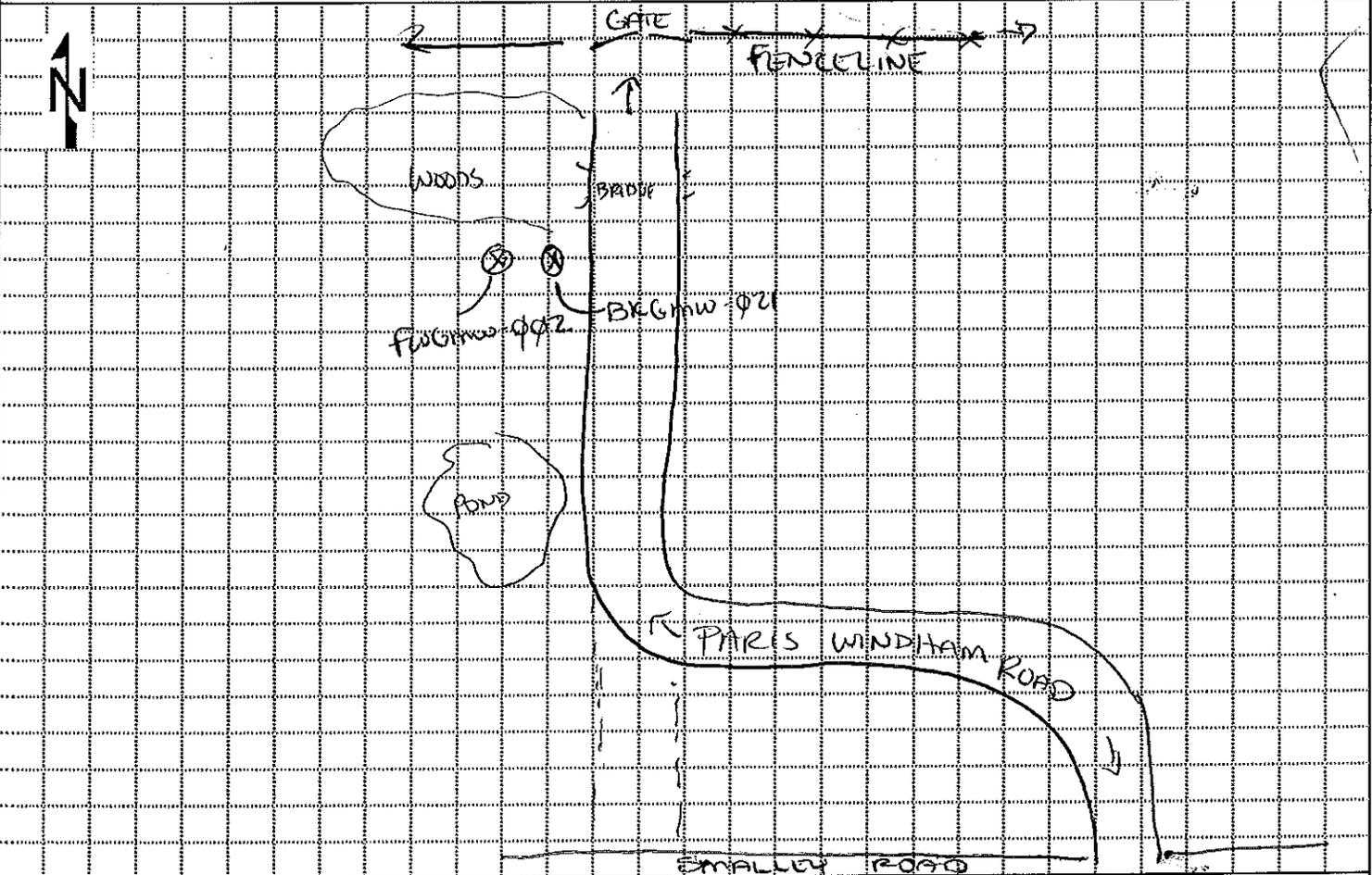


Recorded by: *Scott A. Hernandez*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-002
1. COMPANY NAME SATC		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF 4
3. PROJECT RVAAP-666 RE		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER ARON MACKAY		6. MAKE/MODEL OF DRILL CME 750X	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 8 1/4" ID HSAS 2" x 2' SPLIT SPOONS		8. BOREHOLE LOCATION PARIS WINDHAM ROAD (NORTH)	
		9. SURFACE ELEVATION/DATUM 970.60	
		10. DRILL DATE/TIME STARTED: 03/20/12 COMPLETED: 03/22/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 8.2' / 44.2' / 55.8'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS 71'			
13. DEPTH DRILLED INTO BEDROCK NA		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
14. TOTAL DEPTH OF BOREHOLE 71'			
18. GEOTECHNICAL SAMPLES UNDISTURBED: _____ DISTURBED: _____		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: _____ RAD: NA OTHER: _____		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 03/20/12 DATE COMPLETED/ABANDONED: 03/22/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \leq Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT FWGwmp - RVAAP-666 RE	GEOLOGIST SIGNATURE/DATE Amanda Jentzen 03/22/12	BOREHOLE NUMBER FWGmw-002
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWGMW-002	
1. COMPANY NAME SAIC			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 4	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266			
5. NAME OF DRILLER Aaron Mackey			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Minirae 2000 WATER LEVEL MAKE/MODEL: -			PID SERIAL#: 110-005816 WATER LEVEL SERIAL#: -		Colors from Munsell Soil Color Chart, Rev 2000 Rev Ed	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/MPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
		ML	(0.0' - 1.1') Gravelly silt (ML); fill material gravel, blue concrete (10BS/1) fragments throughout organics + roots, some sand silt is 10YR 4/3 brown dry + soft.	6/4/4/4 1.5/2.0 0-2 5/7/9/11 0.9/2 2-4	A: 0.0 H: 0.1 A: 0.0 H: 0.1	A: Ambient PID H: Headspace PID
	5	CL	(1.1' - 7.1') CLAY (CL); some silt 10YR 5/6 yellowish brown 2.5/6.0/4, light yellowish brown little 10YR 4/1 dark gray; dry; medium stiff; medium plasticity; trace roots PI 2.5 color is 10YR 4/3 brown w/ trace 10YR 5/2 very pale brown along cracks/perms	3/11/7/14 1.4/2.0 4-10 19/27/23/20	A 0.0 H 1.0 A 0.0	
	7		@ 4' STIFF @ 6.7' little shale fragments, black	1.7/2.0 6-8	H 0.0	
			(7.1' - 14.7') SAND (SW); fine grained; dry dense; nonplastic; 10YR 5/4 yellowish brown	2/2/4/3 1.6/2.0 8-10	A 0.0 H 0.7	
	10	SW	@ 8.2' wet.	1/1/1/2 1.7/2.0 10-12	A 0.0 H 0.0	
				4/4/3/4 2.0/2.0 12-14	A 0.0 H 0.5	
	15	SM	(14.7' - 16.4') SILT + SAND (SM); wet; loose; wet; 10YR 5/4 yellowish brown	11/1/1/2 2.0/2.0 14-16	A 0.0 H 0.0	
	16	SW	(16.4' - 18.4') FINE SAND (SW) trace pockets of silt, 10YR 4/6 dark yellowish brown; wet; loose	11/2/2/1 2.2/2 14-18	A 0.0 H 0.0	
	19	ML	@ 16.8' Gray 2.5Y 5/1	1/1/3/3 1.2/2.0 18-20	A 0.0 H 0.0	
	20	GP	(18.4' - 18.8') Laminated silt (ML); stiff; dry 10YR 5/6 yellowish brown; 10YR 2/1 black + 5YR 3/4 dark reddish brown	1/3/3/3 1.0/2.0 20-22	A 0.0 H 1.2	
			(18.8' - 24.0) Subangular Gravel + Sand (GP) poorly sorted; wet; loose; 10YR 3/3 dark brown + 7.5YR 5/6 strong brown	3/3/3/5 1.5/2.0 22-24	A 0.0 H 0.8	
	25		(24.0 - 24.9) 10YR 5/3 brown; coarsening downward	1/3/4/5 2.0/2.0 24-26	A 0.0 H 0.0	
		SW	(24.9 - 25.2) Gravel; some coarse sand; wet	3/5/1/1/2 1.4/2.0 26-28	A 0.0 H 0.2	
			(25.2 - 25.9') Medium grained sand (SW); trace Gravel; 7.5YR 4/6 strong brown; wet; 2.8' fine (25.9' - 26.2') CLAY (CL); some silt; trace fine Gravel	2/6/6/9 1.5/2.0 26-30	A 0.0 H 9.7	
	30	ML	10YR 5/4 yellowish brown; dry; stiff (26.2 - 33.0') SILT (ML); some clay; trace Gravel; stiff dry 10BS/1 bluish gray			
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE Amanda Jester		BOREHOLE NUMBER FWGMW-002	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWGmw-002	
1. COMPANY NAME SAIC			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 3 OF 4	
3. PROJECT RVAAP-606 RT			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266			
5. NAME OF DRILLER AARON MACKAY			6. DIRECTION OF BOREHOLE VERTICAL		INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: <u>MiniRAE 2000</u> WATER LEVEL MAKE/MODEL: <u>---</u>			PID SERIAL#: <u>110-005816</u> WATER LEVEL SERIAL#: <u>---</u>		Colors from Munsell Soil Color Chart, Rev <u>2000 Rev E</u>	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/PPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			~31' Siltier (little clay)	23/5/9 1.5/2.0 30-32	A 0.0 H 6.8	
		ML	(33.0') SILT (mu); very stiff; dry; low plasticity bluish gray; no gravel	12/10/25/33 1.4/2.0 32-34	A 0.0 H 10.6	
35		ML	(34.2' - 41.0') SILT (mu); trace fine/v. fine sand; dry; dense/stiff; 10YR 5/1 gray	9/20/21/23 1.3/2.0 34-36	A 0.0 H 7.9	
		ML		8/14/10/24 1.4/2.0 30-38	A 0.0 H 6.4	
40			(39.0' - 39.4') moist (41.4' - 42.5') Addition of little clay	3/1/11/15 1.7/2.0 38-40	A 0.0 H 1.6	
				3/8/11/19 1.3/2.0 40-42	A 0.0 H 4.1	
			(44.2' - 47') WET SILT (SAA)	21/22/31/32 1.3/2.0 42-44	A 0.0 H 2.5	
45				2/5/6/10 1.7/2.0 44-46	A 0.0 H 2.8	
		SW	(47.0' - 50') SAND (sw); WET; trace subrounded Gravel 48' conglomerate pebbles in split spoon @ 50' rock fragments	15/17/23/23 2.0/2.0 40-48	A 0.0 H 0.0	
		ML	(50' - 51.9') SILT (mu); little sand; some sand lenses; dry; 10YR 5/1 gray; stiff; low plasticity	50 0.25/0.25 48-50	A 0.0 H 0.2	
50		ML	(51.9' - 52.05') Med. grained Sand seam	18/14/5/32 1.4/2.0 50-52	A 0.0 H 4.2	
		SP	(52.05' - 55.8') Fine grained Sand w/ little Gravel Throughout; little med. grained sand partings throughout; very dense/hard, dry	41/42/50/7 1.3/1.3 52-54	A 0.0 H 0.2	
55				11/23/24/20 1.4/2.0 54-56	A 0.0 H 8.3	
		ML	(55.8' - 58.0') SILT (mu); 10YR 4/1 dark gray; wet; stiff; low plasticity; little 10YR 5/3 weak red; little sand w/ alpha; trace fine gravel dry by 56.25	37/47/50/3 1.25/1.25 56-58	A 0.0 H 0.6	
		SW	(58.0' - 64.5') Fine grained Sand (sw); some 1/2" - 1.5" Gravel; wet; gray; hard/dense	12/50/7 0.8/0.85 58-60	A 0.0 H 0.2	
60						
PROJECT FWGWMP - RVAAP-606 RT			GEOLOGIST SIGNATURE/DATE Amanda Jentzen 03/22/12		BOREHOLE NUMBER FWGmw-002	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-002
1. COMPANY NAME SAIC		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RE		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44288	
5. NAME OF DRILLER AARON MACKAY		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES	

7. NOTES PID MAKE/MODEL: <u>MiniRAE 2000</u> WATER LEVEL MAKE/MODEL: _____		PID SERIAL#: <u>110-005816</u> WATER LEVEL SERIAL#: _____	Colors from Munsell Soil Color Chart, Rev <u>2000 REV D</u>
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ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/WCPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)	
		SW	(60.0' - 64.5') SAND w/ some Gravel; hard (SAA)	50/5 0.4/0.4'	A 0.0 H 0.9		
			64' - moist	39/50 0.7/0.9'	A 0.0 H 1.8		
65		GP	(64.5' - 64.7') SS fragments; sand w/ gravel dense/hard	32/50 0.9/0.9'	A 0.0 H 0.0		
			(66' - 68') NO SPLIT SPOON	—	A —		
				166-68	H —		
70		SP	(68' - 70.5') SAND w/ SS Gravel/cobbles dry; light gray	50/3 0.25/0.25'	A 0.0 H 0.2		
		SW	(70.5' - 70.75') white sand; dry; hard	30/50 0.5/0.75'	A 0.0 H 0.6		
		SS	71' SANDSTONE; AUGER REFUSAL	70-72	H 0.6		
			BORING TERMINATED AT 71 FT BGS				
75							
80							
85							
90							

Am

PROJECT FWGwmp RVAAP-66 RE	GEOLOGIST SIGNATURE/DATE <i>Amanda Jester</i> 03/24/12	BOREHOLE NUMBER FWGmw-002
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MONITORING WELL

PROJECT NAME: *RVAAP-666 RE*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *Fw Gmw-002*

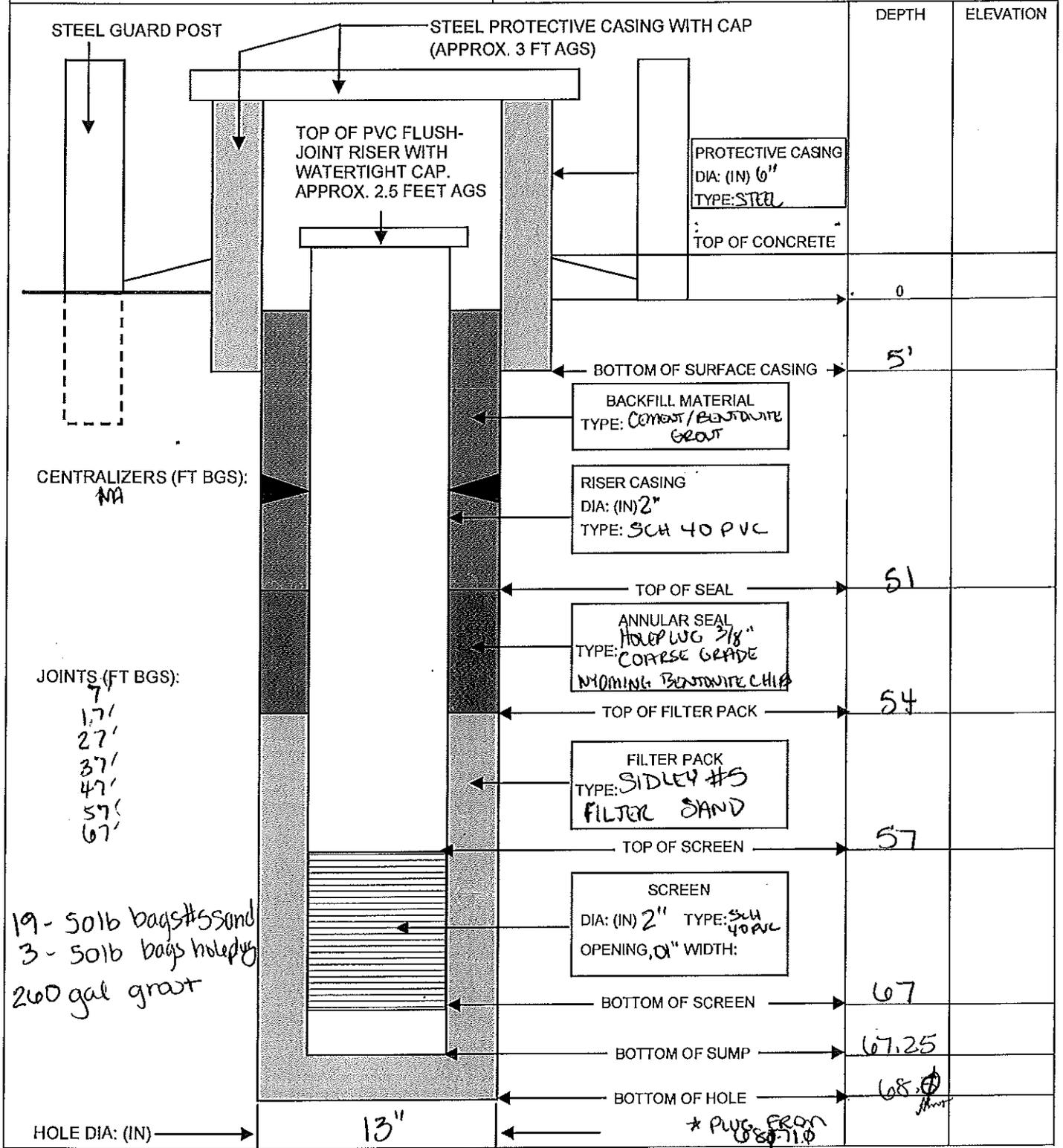
BEGIN: *03/22/12; 0915*

END: *03/22/12; 1645*

COORDINATES: N: *571015*
E: *2367606*

REFERENCE POINT: *TOC*

ELEVATION: *MSL*
973.10

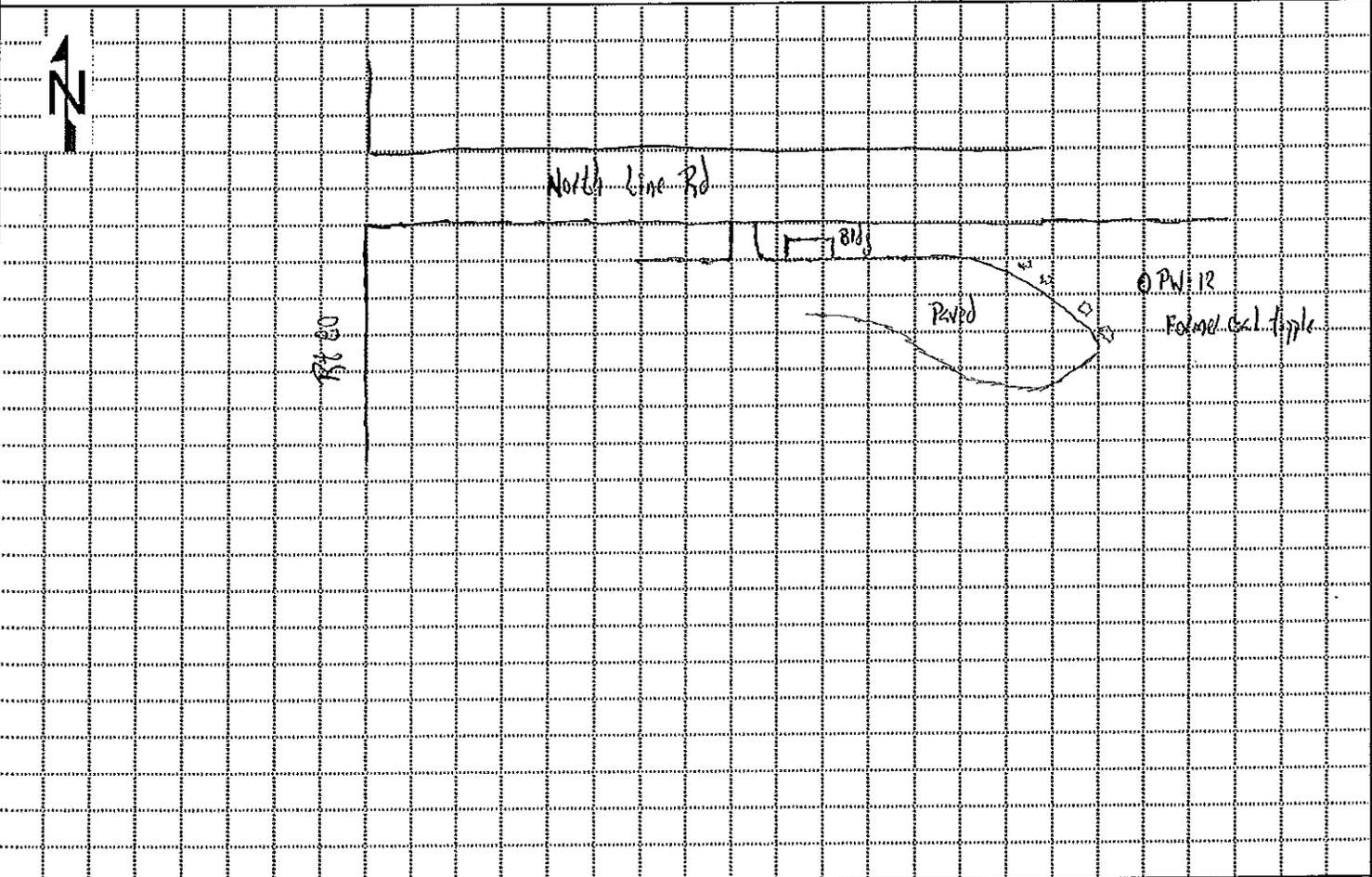


Recorded by: *Amanda Jentz*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-003
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tele		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" ID HSA 2" x 24" split spoon		8. BOREHOLE LOCATION PW-12 : North Line Rd Coal Tipple Area	
		9. SURFACE ELEVATION/DATUM 1129.40	
		10. DRILL DATE/TIME STARTED: 3/8/12 COMPLETED: 3/8/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 10 ft	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS NA		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK NA			
14. TOTAL DEPTH OF BOREHOLE 19			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/8/12		DATE COMPLETED/ABANDONED: 3/9/12	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \leq Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>John [Signature]</i> 3/8/12	BOREHOLE NUMBER FWGMW-003
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWG MW-003
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Fronz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268	
5. NAME OF DRILLER Joe Teitel		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES	

7. NOTES PID MAKE/MODEL: <u>Silvus MSA</u> WATER LEVEL MAKE/MODEL:		PID SERIAL#: <u>A2-1861</u> WATER LEVEL SERIAL#:	Colors from Munsell Soil Color Chart, Rev
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ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPWCPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2	CL	Upper 5" Silty clay, dk brn, some gravel, Casl, roots, moist	3-6- 8-4	0	0-2 ft; 1440
		GP	Next 4" Sand gravel, buff, damp	R = 14/24		
		GC	Lower 5" Clayey gravel, brn, slightly compacted, damp			
	2-4	CL	Upper 6" Silty clay, gray w/ brn mottles, some 1/2" gravel, moist, fairly soft	3-5- 4-4	0	2-4 ft; 1449
			Next 2" Silty clay, dk gray, moist	R = 14/24		
			Lower 6" Silty clay, gray w/ brn mottles, slightly plastic, moist			
	4-6	CL	Silty clay, blue-gray w/ brn mottles, damp, few small gravel, moderately stiff becoming moist, fairly soft w/ increasing sand in lower 3"	1-3- 4-5	0	4-6 ft; 1456
				R = 18/24		
	6-8	CL	Silty clay Till, brn w/ gray along vertical fract., wet in upper 3", then moist	3-5- 5-5	0	6-8 ft; 1505
				R = 20/24		
	8-10	CL	Silty clay till; brn-gray, damp, mod. stiff	3-4- 5-4	0	8-10 ft; 1510
				R = 11/24		
	10-12	CL	Silty clay till, brn-gray, wet, soft, cobble in shoe	1-6- 4-5	0	10-12 ft; 1517
				R = 5/24		
	12-14	SP	Upper 9" Sand, brn, silty, fr-cls grained, wet	4-8-	0	12-14 ft; 1522
		CL	Lower 9" Silty clay, gray, till, few small gravel, damp, mod stiff	10-11		
				R = 24/24		

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>John Speshko</i> 3/8/12	BOREHOLE NUMBER FWG MW-003
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HTRW DRILLING LOG (continued)	DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-003
1. COMPANY NAME EQM	2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 3 OF 3

3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266
5. NAME OF DRILLER Joe Teitel	6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES
7. NOTES PID MAKE/MODEL: Sirius MSA PID SERIAL#: A2-1861	
WATER LEVEL MAKE/MODEL: _____ WATER LEVEL SERIAL#: _____	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14-16	CL	Silty clay Till, gray, damp, mod. stiff	5-7- 7-8 R=16/24	0	14-16 ft; 1531
	38 16-18	CL	Silty clay Till, gray, damp, mod. stiff, little subrounded gravel	5-17- 8-7 R=10/24	0	16-18 ft; 1537
	40					
	48					
	50					
	55					
	60					

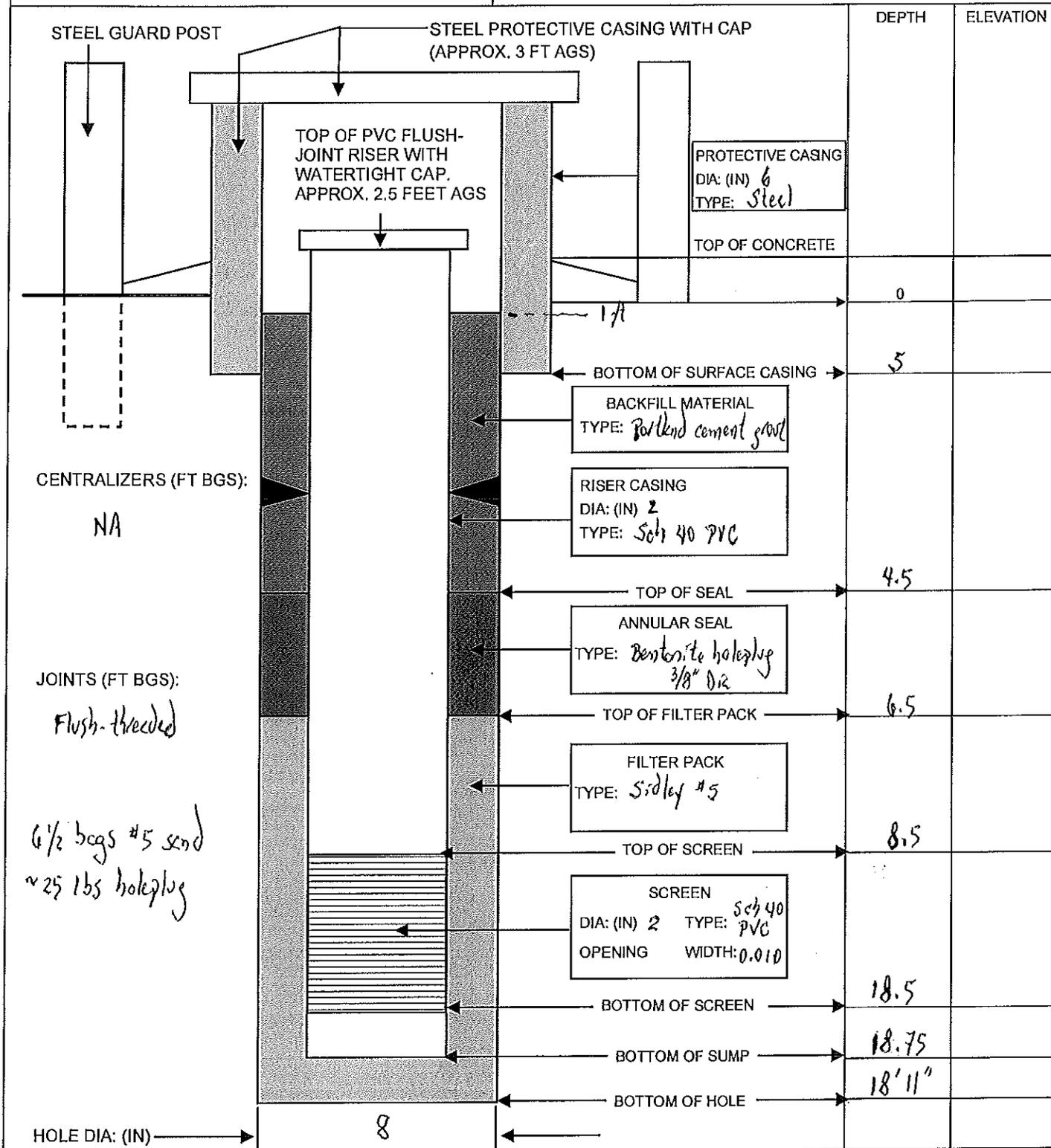
PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>[Signature]</i> 3/8/12	BOREHOLE NUMBER FWGMW-003
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MONITORING WELL

PROJECT NAME: *BVAAP-66 RI* PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *FWGMW-003* BEGIN: *3/8/12* END: *3/9/12*

COORDINATES: N: *563118* E: *2344042* REFERENCE POINT: *TOC* ELEVATION: *MSL 1131.96*

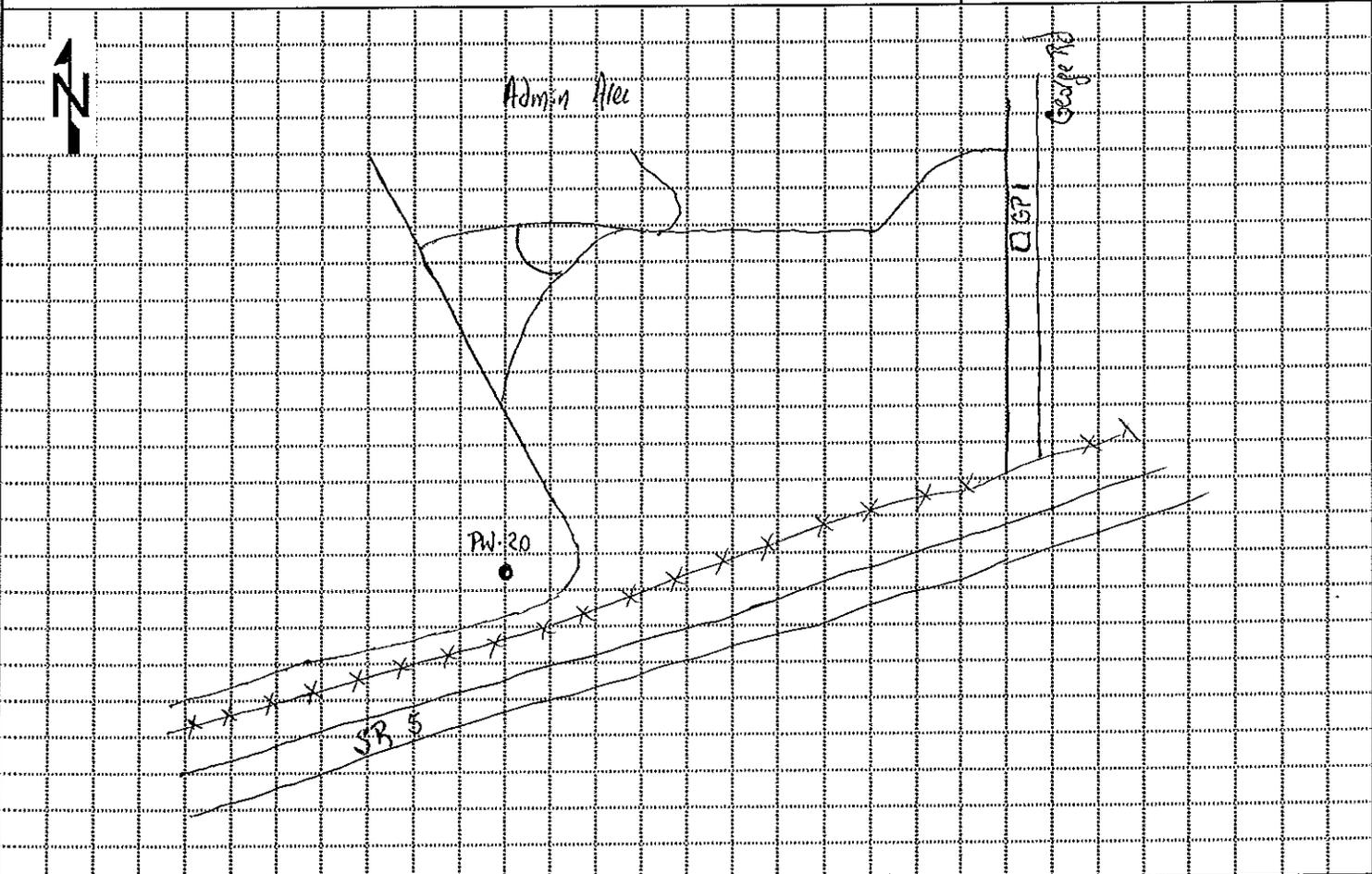


Recorded by: *Scott Spaschke*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-004
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tele		6. MAKE/MODEL OF DRILL CMG 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4/4" ID HSA 2" x 24" SPT S7001		8. BOREHOLE LOCATION PW-20, southwest of Admin near S. Perimeter	
12. OVERBURDEN THICKNESS 16 ft		9. SURFACE ELEVATION/DATUM 1034.50	
13. DEPTH DRILLED INTO BEDROCK 4 ft		10. DRILL DATE/TIME STARTED: 3/12/12 COMPLETED: 3/12/12	
14. TOTAL DEPTH OF BOREHOLE 20		15. DEPTH GROUNDWATER ENCOUNTERED 14.5 ft	
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/12/12		19. TOTAL NUMBER OF CORE BOXES NA	
DATE COMPLETED/ABANDONED: 3/12/12		21. TOTAL CORE RECOVERY % NA	
BACKFILL TYPE: <input type="checkbox"/> GRUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \triangleleft Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>[Signature]</i> 3/12/12	BOREHOLE NUMBER FWGMW-004
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWGmw-004	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266			
5. NAME OF DRILLER Joe Tetel			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2	CL	Upper 7" silty clay topsoil, dk brn, moist, organic Remained silty clay, brn w/ gray along vertical frac, few sand, few gravel, moist in upper 3", then dk brn, mod. stiff	all of sample 1-3-6 R=20/24	0	0-2 ft; 1016
	2-4	CL	Silty clay, brn, few iron oxides, few small gravel @ top, damp along fractures w/ little silt, stiff	4-6- 11-11 R=19/24	0	2-4 ft; 1024
	4-6	CL	Silty clay, brn w/ gray along vert. fract., dry, hard	5-9- 15-18 R=21/24	0	4-6 ft; 1029
	6-8	ML	Clayey silt, brn, few small gravel, dry, hard, stiff	22-24- 28-27 R=20/24	0	6-8 ft; 1037
	8-10	CL	Silty clay, brn, few gray along fractures, few small gravel, med, stiff	6-11- 14-20 R=24/24	0	8-10 ft; 1044
	10-12	ML	Clayey silt, brn w/ gray along fractures, few small gravel, damp in upper 12" becoming gray, very damp, softer in lower 12"	4-8- 10-12 R=24/24	0	10-12 ft; 1050
	12-14	ML	Clayey silt, gray, damp, slightly glistening, few small gravel	5-9- 11-13 R=23/24	0	12-14 ft; 1100
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE Datto Sp... 3/12/12		BOREHOLE NUMBER FWGmw-004	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWGMW-004	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 23 OF 3	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266			
5. NAME OF DRILLER Joe Feter			6. DIRECTION OF BOREHOLE VERTICAL		INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14-16	ML	Upper 5" clayey silt, gray, as above	5-11-	0	14-16 ft; 1107
		SC	Next 7" clayey sand, brn, wet, 2" of weathered sandstone @ top of this zone	13-8		
		CL	Lower 8" silty clay, gray, shale frags @ bottom	R=20/24		
	35'					
	16-18	SH	Weathered shale, gray, clay-rich, stringy, damp, fairly brittle	5-10-	0	16-18 ft; 1117
				11-20		
				R=13/24		
	18-20					
	40'	SH	Weathered shale, gray, moist, fairly brittle	6-11-	0	18-20 ft; 1123
				18-20		
				R=20/24		
	45'					
	50'					
	55'					
	60'					
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE Dato Hernandez 3/12/12		BOREHOLE NUMBER FWGMW-004	

MONITORING WELL

PROJECT NAME: *BVAAP-66 RI*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *FWGMW-004*

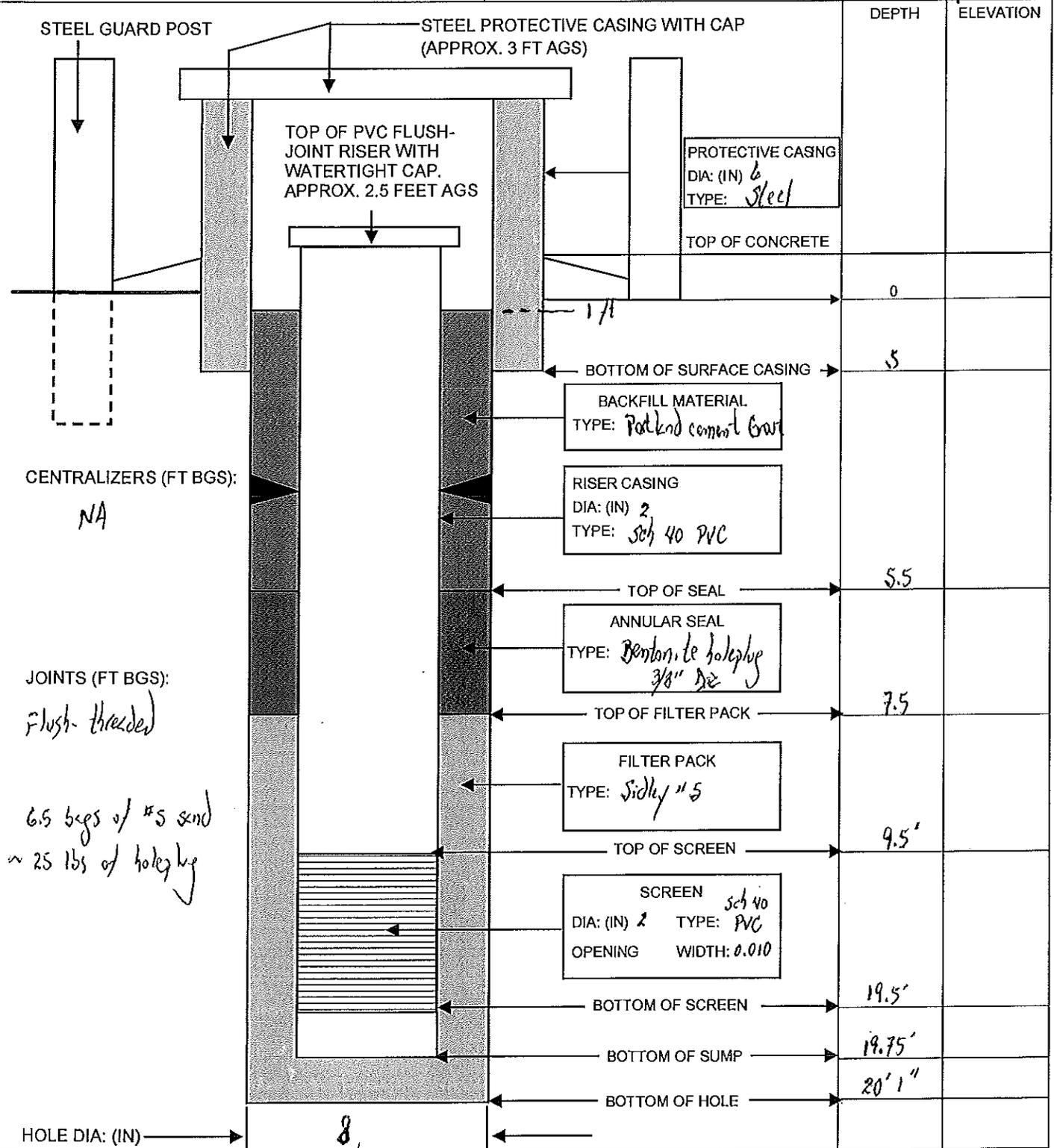
BEGIN: *3/12/12*

END: *3/12/12*

COORDINATES: N: *549319*
E: *2356970*

REFERENCE POINT: *TOC*

ELEVATION: *MSL*
1037.15



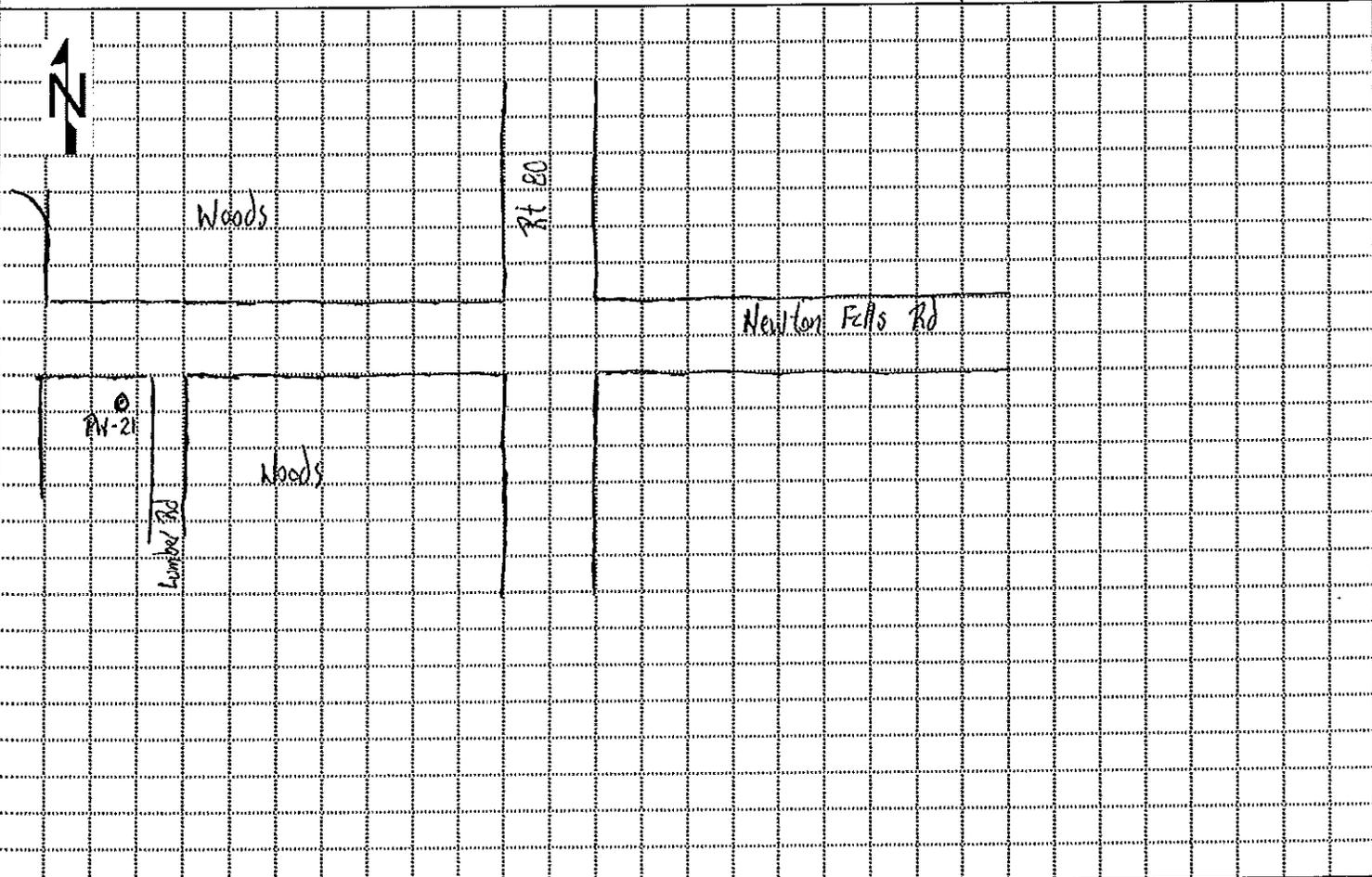
Recorded by: *John P. Espinosa*

QA performed by: _____

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HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-005
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tele		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" ID HSA 2" x 24" 5716 Spoon		8. BOREHOLE LOCATION PW-21: Newton Falls Rd y Lumber Rd	
		9. SURFACE ELEVATION/DATUM 1167.50	
		10. DRILL DATE/TIME STARTED: 3/7/12 COMPLETED: 3/8/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 14/6	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS NA		17. OTHER WATER LEVEL MEASUREMENTS (INCLUE DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK NA			
14. TOTAL DEPTH OF BOREHOLE 16' 11"			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/7/12 DATE COMPLETED/ABANDONED: 3/8/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS	SCALE: None
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PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE [Signature] 3/7/12	BOREHOLE NUMBER FWGMW-005
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-005		
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER Joe Teitel			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2	CL	Upper 6" Silty clay, dk brn, moist, roots Remainder Silty clay, brn w/ gray mottles, iron oxides along fracture zones and mod. stiff w/ few small gravel in lower 6"; otherwise, moist & fairly soft	Wt of hammer - 1- 1-3 R = 21/24	0.1	0-2 ft; 1612
	2-4	CL	Silty clay, brn w/ gray along vert. fractures, little iron oxides, few small gravel, dry, stiff becoming brittle and damp in lower 3"	9-11- 12-12 R = 24/24	0	2-4 ft; 1620
	4-6	ML	Clayey silt, brn, till, few small gravel, damp, mod. stiff	7-9- 9-11 R = 20/24	0	4-6 ft; 1627
	6-8		Note: the spoon was full but the upper 12" looked like wet slough	3-5- 4-5 R = 12/24	0	6-8 ft; 1635
		ML	Lower 12" clayey sandy silt, brn, few small gravel, moist, crumbly			
	8-10	ML	Upper 7" clayey sandy silt, ss above	6-9- 15-18 R = 22/24	0	8-10 ft; 1643
		SM	From 7-10" silty sand, brn, wet, compacts easily			
		CL	Lower 12" silty clay, brn, damp to dry, gravel to 1/2" dia, subrounded, mod. stiff			
	10-12	CL	Silty clay, brn, few sand & small gravel, dry, fairly stiff	10-19- 21-26 R = 24/24	0	10-12 ft; 0858
	12-14		Upper 14" wet brn slough - muck	27-30	0	12-14 ft; 0909
		GP	From 15-17" fn sand & gravel, buff, fairly compact, moist	27-31		
		CL	Remainder silty clay, brn, few sand & gravel, damp, mod. stiff	R = 24/24		
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE David Spenshade 3/8/12			BOREHOLE NUMBER FWGmw-005

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWG MW-005
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 23 OF 3

3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268
5. NAME OF DRILLER Joe Teter	6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES
7. NOTES PID MAKE/MODEL: Sirius MSA	PID SERIAL#: A2-1861
WATER LEVEL MAKE/MODEL: _____ WATER LEVEL SERIAL#: _____	
Colors from Munsell Soil Color Chart, Rev	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14-16	SW	sand, buff, little gravel, moist; can feel water gurgling @ bottom of boring	50/3 R=4/24	0.1	14-16 ft; D918
	16-18	SS	Bedrock	50/1 R=0/24		16-18 ft; D950
	20					
	40					
	45					
	50					
	65					
	80					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>[Signature]</i> 3/8/12	BOREHOLE NUMBER FWG MW-005
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MONITORING WELL

PROJECT NAME: *RVAAP-66 RI*

PROJECT NO: *30179.0016.001.02*

WELL NUMBER: *FWGMW-005*

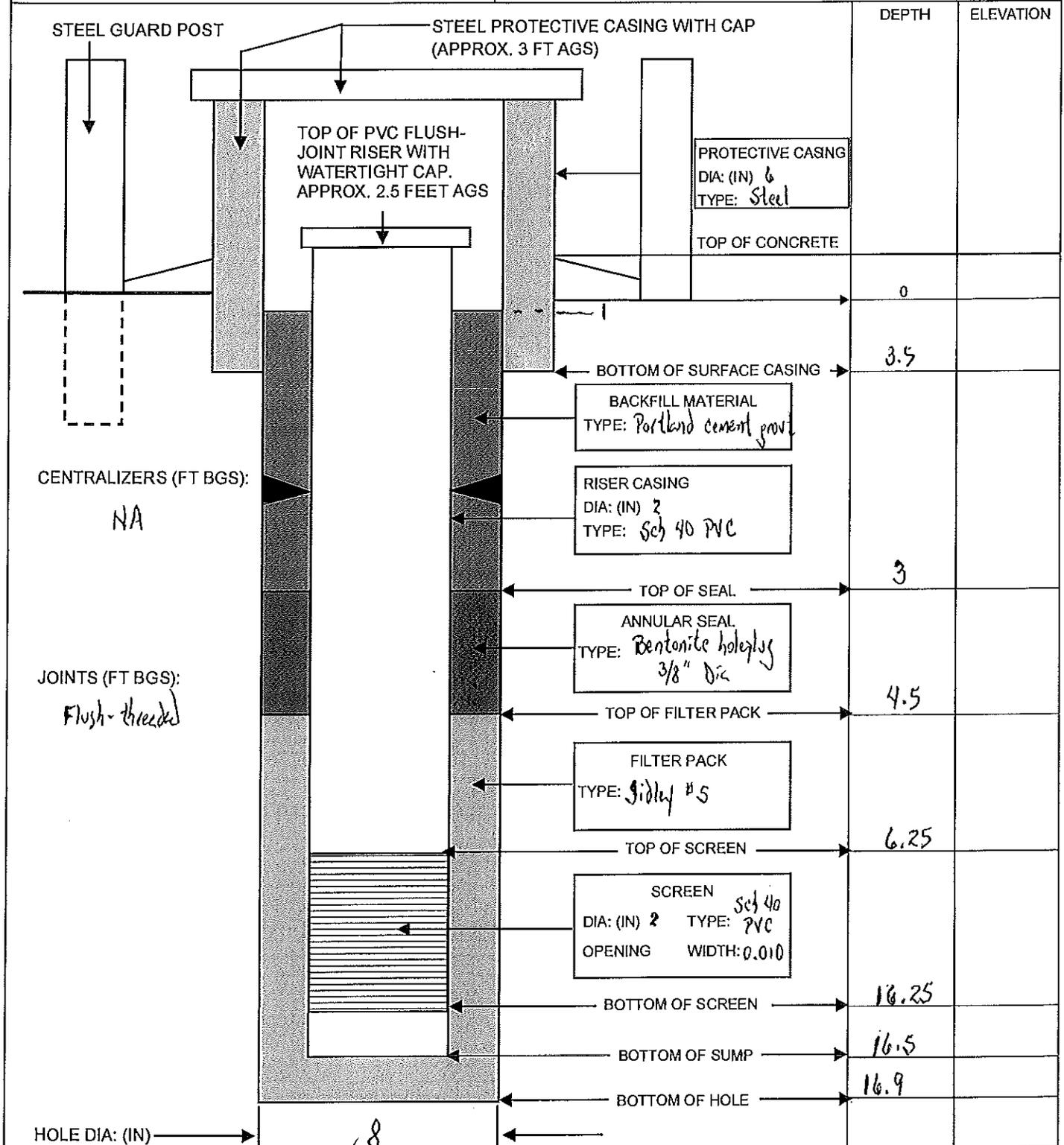
BEGIN: *3/8/12*

END: *3/8/12*

COORDINATES: N: *558510*
E: *2338973*

REFERENCE POINT: *TOC*

ELEVATION: *MSL*
1170.10

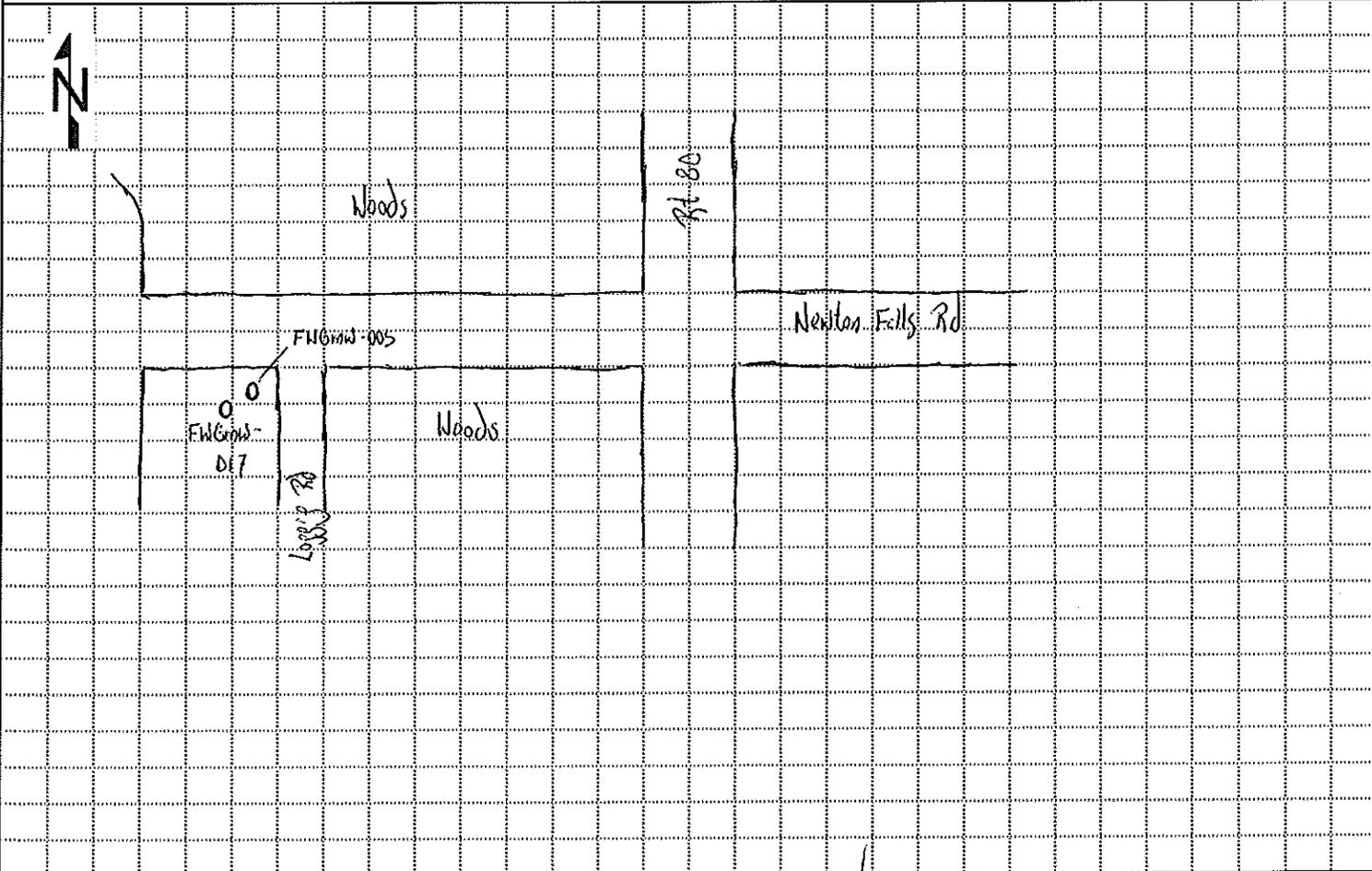


Recorded by: *[Signature]*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-017 ⁰⁰⁵ (replacement)
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Teld		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 8 1/4" HSA 2" x 24" split spoon		8. BOREHOLE LOCATION Rite w/ FWGmw-005; Newton Falls west of Rt 80	
		9. SURFACE ELEVATION/DATUM 1167.50	
		10. DRILL DATE/TIME STARTED: 4/2/12 COMPLETED: 4/2/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 18 ft	
12. OVERBURDEN THICKNESS 17 ft		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
13. DEPTH DRILLED INTO BEDROCK 12.5 ft		17. OTHER WATER LEVEL MEASUREMENTS (INCLUDE DATE/TIME) NA	
14. TOTAL DEPTH OF BOREHOLE 29.5 ft			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 4/2/12 DATE COMPLETED/ABANDONED: 4/3/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: ≤Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS **SCALE:** None



PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>John D. Spaschke</i> 4/2/12	BOREHOLE NUMBER FWGmw-017 ⁰⁰⁵ (replacement)
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER 005 FWGMW-017 (replacement)
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 2 OF 2

3. PROJECT RYAAP-66 RI	4. LOCATION RYAAP 8451 State Route 5, Ravenna, OH 44266
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5. NAME OF DRILLER Joe Teter	6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES
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7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:	PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:	Colors from Munsell Soil Color Chart, Rev
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ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-17		See well log for FWGMW-005			0-17 ft
	17-20	SS	Yellow-brn sand, weathered bedrock			17-20 ft
	20-22	SS	Yellow-brn sand, fin-med grained, well sorted, wet, weathered sandstone	50/2 R = 3/24		20-22 ft; 1450
	22-29	SS	Yellow-brn sand, fin-med grained, weathered sandstone Hard drilling @ 28.5 ft.			22-29 ft (from coll-2)
	28					
	25					
	20					
	18					

PROJECT RYAAP-66 RI	GEOLOGIST SIGNATURE/DATE Sato Spinkado 4/2/12	BOREHOLE NUMBER 005 FWGMW-017 (replacement)
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MONITORING WELL

PROJECT NAME:

RVAAP-66 RI

PROJECT NO:

30174.0016.001.02

WELL NUMBER:

FWGMW-017005 (replacement)

BEGIN:

4/2/12

END:

4/3/12

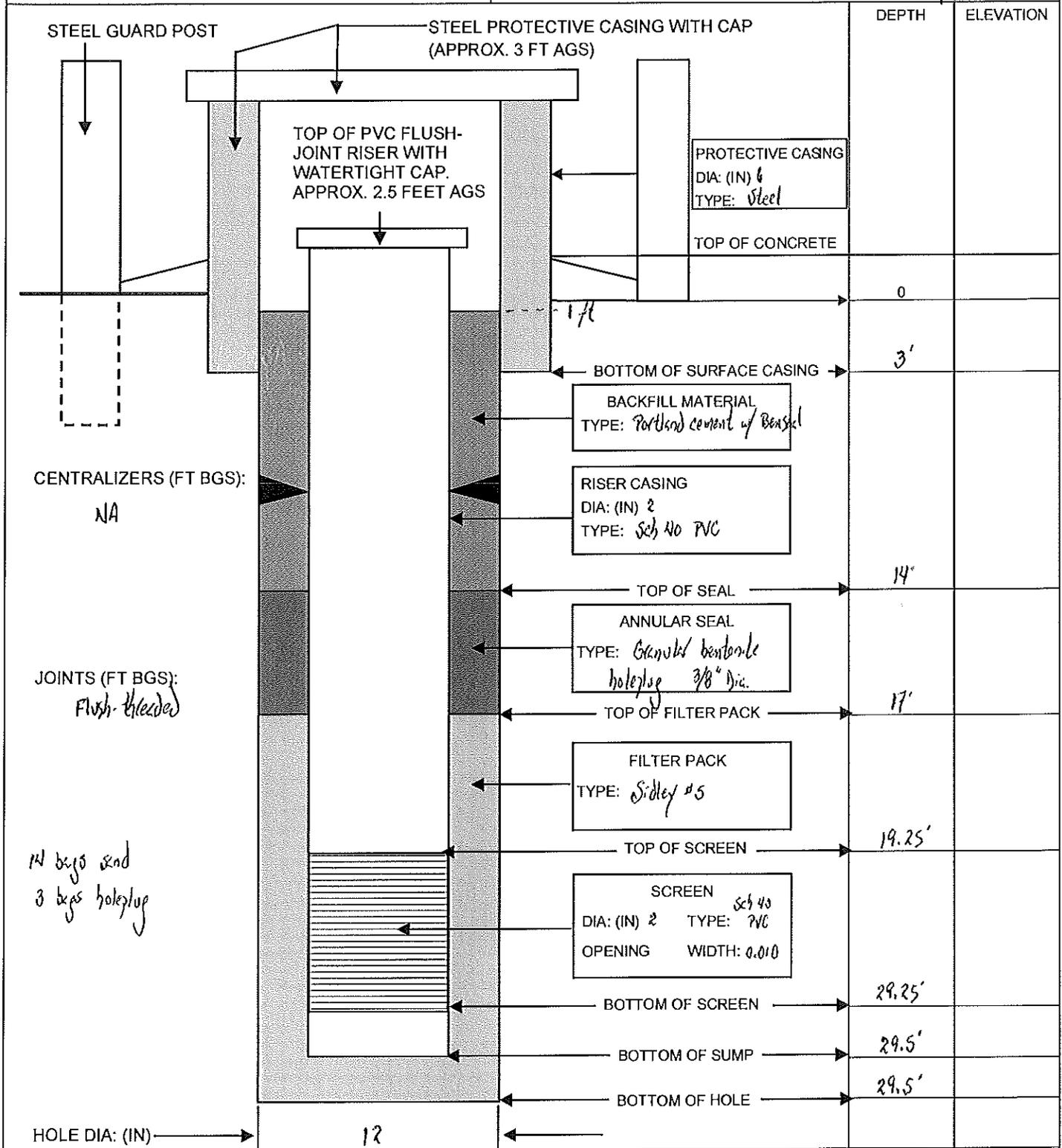
COORDINATES:

N: *558510*
E: *2338973*

REFERENCE POINT: *TOC*

ELEVATION: *MSL*

1170.10



Recorded by:

[Signature]

QA performed by:

HTRW DRILLING LOG		DISTRICT	BOREHOLE NUMBER
		USACE - Louisville	FWGMW-006
1. COMPANY NAME		2. DRILLING SUBCONTRACTOR	
EQM		Frontz Drilling	
3. PROJECT		4. LOCATION	
RVAAP-66 RI		RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER		6. MAKE/MODEL OF DRILL	
Joe Tede		CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOLE LOCATION	
4 1/4" HSA		Block A (PW-22), West side of RVAAP	
2" x 24" 57 bit 5700A		9. SURFACE ELEVATION/DATUM	
		1181.90	
		10. DRILL DATE/TIME	
		STARTED: 3/5/12 COMPLETED: 3/5/12	
		15. DEPTH GROUNDWATER ENCOUNTERED	
		10 ft	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION	
		NA	
12. OVERBURDEN THICKNESS		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME)	
NA		NA	
13. DEPTH DRILLED INTO BEDROCK			
NA			
14. TOTAL DEPTH OF BOREHOLE			
18 ft			
18. GEOTECHNICAL SAMPLES		19. TOTAL NUMBER OF CORE BOXES	
UNDISTURBED: NA DISTURBED: NA		NA	
20. CHEMICAL SAMPLES		21. TOTAL CORE RECOVERY %	
CHEM: NA RAD: NA OTHER:		NA	
22. DISPOSITION OF BOREHOLE		DATE COMPLETED/ABANDONED: 3/6/12	
DATE STARTED/INSTALLED: 3/5/12			
BACKFILL TYPE:		<input checked="" type="checkbox"/> MONITORING WELL	
<input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT			
23. NOTES			
BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million			
▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT		GEOLOGIST/SIGNATURE/DATE	
RVAAP-66 RI		[Signature] 3/5/12	
		BOREHOLE NUMBER	
		FWGMW-006	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWGMW-006	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER Joe Teter			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: <u>SIRIUS MSA</u> WATER LEVEL MAKE/MODEL:			PID SERIAL#: <u>A2-1861</u> WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/WCPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2	CL	Upper 3" clayey silt topsoil, dk brn, roots, little sand, moist; next 7" silty clay, brn w/ black frags, few sand; remainder silty clay, brn w/ gray mottles, fairly soft, moist, increasing silt	4-6- 6-5 R = 20/24	0.2	0-2 ft; 1449
	2-4	CL	Silty clay, brn w/ gray silt clay vertical fractures, few black oxides, damp, mod. stiff	3-4- 6-8 R = 22/24	0	2-4 ft; 1454
	10-4-6	CL	Silty clay, brn w/ gray clay vert. fractures, few iron oxides, mod. stiff, moist & fairly soft in lower 2"	4-7- 8-11 R = 24/24	0	4-6 ft; 1510
	6-8-10	CL	Silty clay, brn, few gray in upper 12", damp	10-10 11-12 R = 24/24	0	6-8 ft; 1520
	8-10-20	CL	Silty clay, as above, becoming wet in lower 2" w/ few sand	3-5- 6-8 R = 21/24	0.1	8-10 ft; 1525
	10-12-25	CL SM	Upper 8" silty clay, brn w/ gray, wet Remainder silty sand, brn, some gravel, wet	1-3- 6-8 R = 17/24	0	10-12 ft; 1530
	12-14-20	SM	Silty sand, brn becoming gray in lower 5" w/ sandstone frags, wet; silty clay @ 7-9" from top - ft to med sand	10-16- 24-28 R = 24/24	0	12-14 ft; 1540
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE Drew Spornhart 3/5/12		BOREHOLE NUMBER FWGMW-006	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FNGMN-006
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT BVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268	
5. NAME OF DRILLER Joe Teitel		6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sinius MSA		PID SERIAL#: A2-1861	
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14-16	SP	Sand, upper 8" brn, fn-med w/ few c/s sand, few silt, wet	47-15-48-50/	0.1	14-16 ft; 1547
			Remained Sand, gray, fn-med, wet, few silt	R=22/24		
	20 16-18		Rock fragments, wet - in shoe	50/1 R=9/24		16-18 ft; 1620
	40					
	45					
	50					
	55					
	58					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>[Signature]</i> 3/5/12	BOREHOLE NUMBER FNGMN-006
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MONITORING WELL

PROJECT NAME:

RVAAP-66 RI

PROJECT NO:

30174.0016.001.02

WELL NUMBER:

FWGMW-006

BEGIN:

3/5/12

END:

3/6/12

COORDINATES:

N: *553142*
E: *2335421*

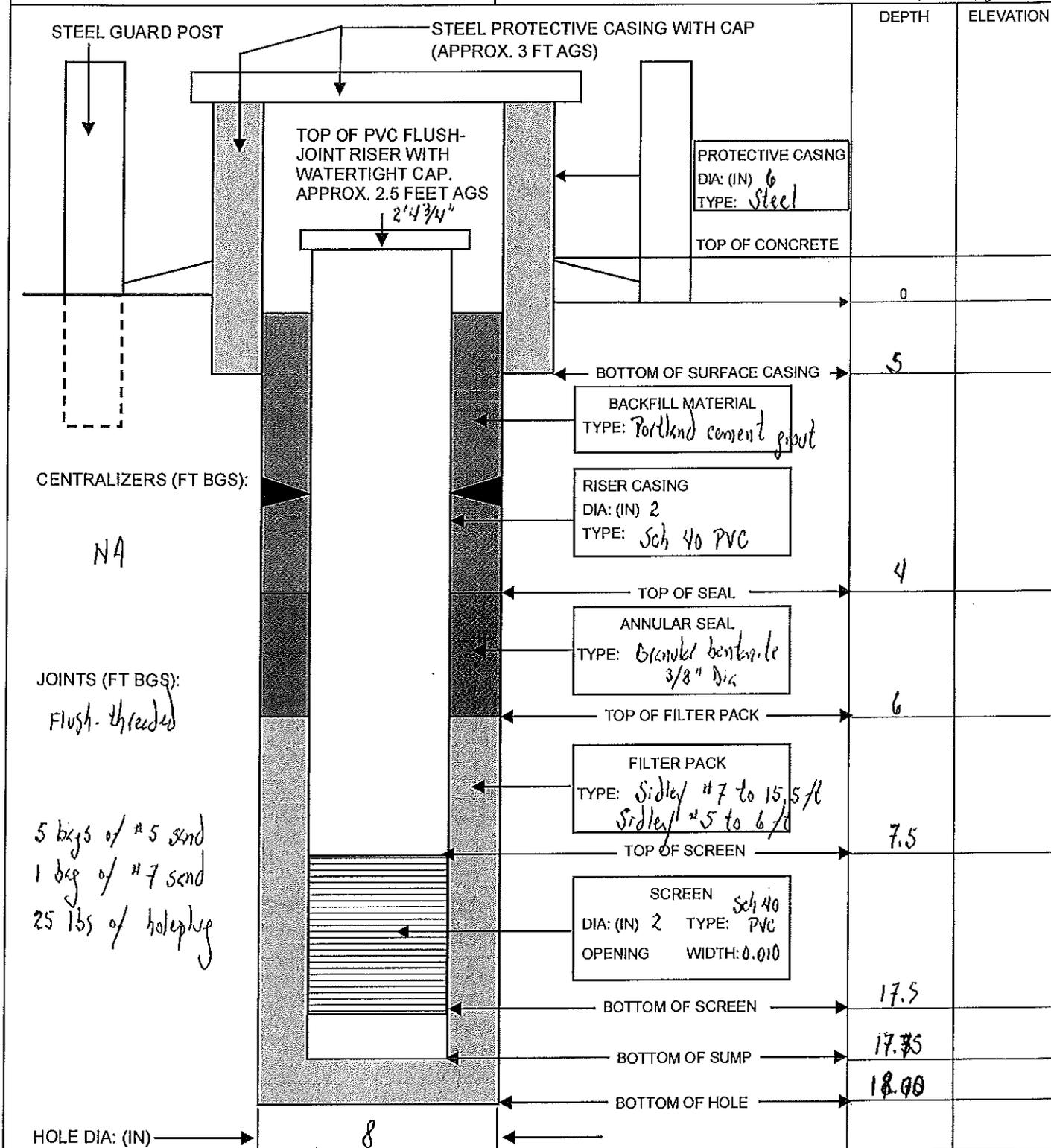
REFERENCE POINT:

TOC

ELEVATION:

MSL

1184.33



CENTRALIZERS (FT BGS):

NA

JOINTS (FT BGS):

Flush-threaded

*5 bags of #5 sand
1 bag of #7 sand
25 lbs of holeplug*

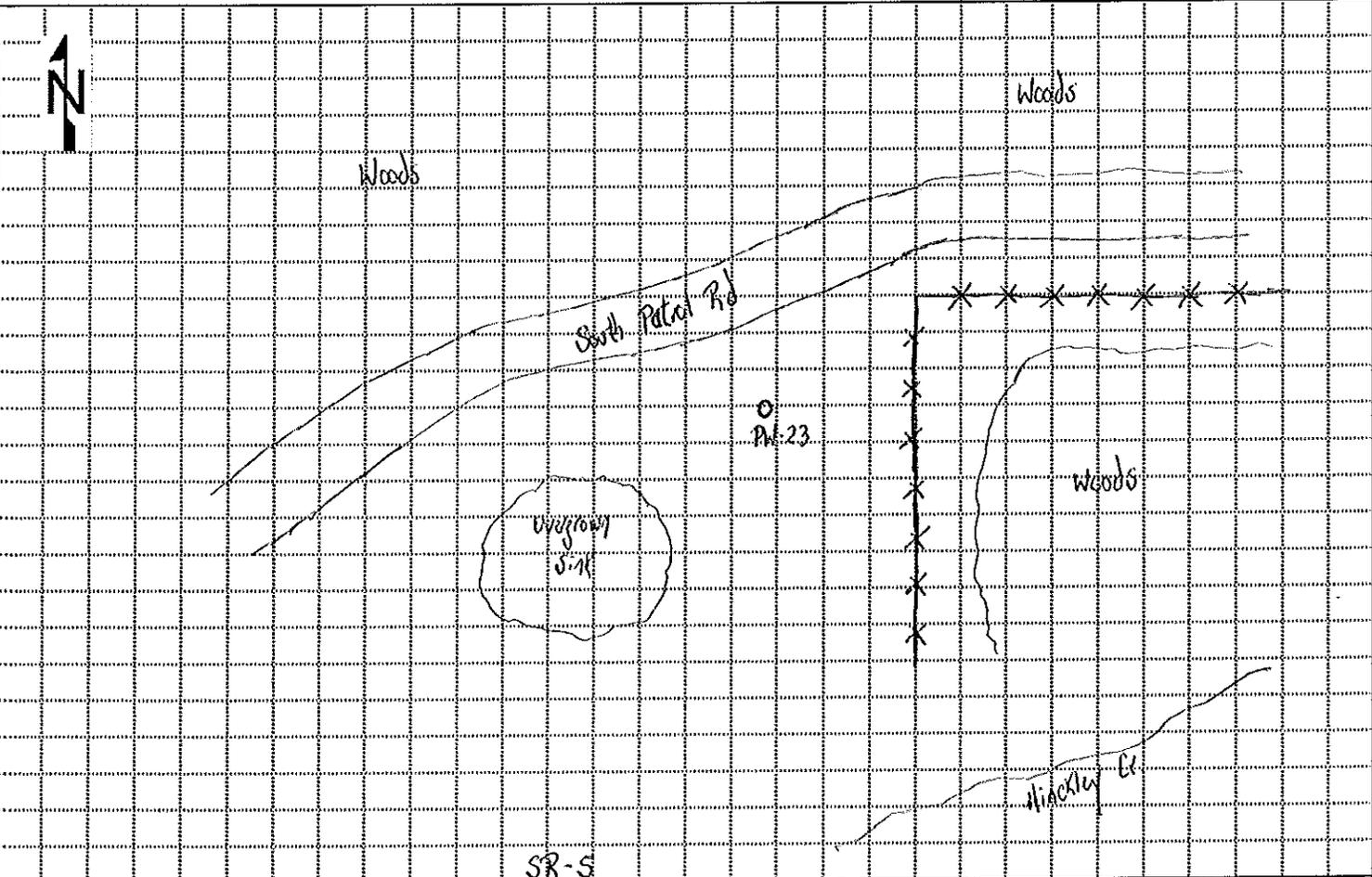
Recorded by:

Saw Freshado

QA performed by:

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-007
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tetel		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" IS HSA 2" x 24" vpl. spoons		8. BOREHOLE LOCATION PW-23; southwest corner along S. Perimeter Rd	
		9. SURFACE ELEVATION/DATUM 1072.80	
		10. DRILL DATE/TIME STARTED: 3/9/12 COMPLETED: 3/9/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 23 ft	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS NA		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK NA			
14. TOTAL DEPTH OF BOREHOLE 30			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/9/12 DATE COMPLETED/ABANDONED: 3/9/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS **SCALE:** None



PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Steve Spenshato	BOREHOLE NUMBER FWGMW-007
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWGMW-007	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 4	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER Joe Teled			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2	SS SC CL	Upper 2" topsoil, dk brn, silty clay, moist Remainder silty clay, brn w/ gray mottles, few small gravel (1/8"), damp, mod. stiff	1-3- 4-5 R=20/24	0	0-2 ft; 1037
	2-4	SS SC CL	Silty clay, brn w/ gray clay vert. fractures, few small gravel, dry, stiff	6-8- 10-12 R=18/24	0	2-4 ft; 1043
	4-6	ML SC CL	Upper 10" clayey silt, brn w/ gray + yellow brn mottles, mod. stiff, slightly plastic, damp Remainder silty clay, brn w/ gray + yellow brn mottles, dry, mod. stiff	4-8- 8-10 R=22/24	0	4-6 ft; 1051
	6-8	CL	Clayey silt, brn, few yellow brn mottles in lower 4", few small gravel (to 1/8"), dry	8-10- 10-14 R=24/24	0	6-8 ft; 1059
	8-10	CL	Clayey silt, as above w/ no yellow-brn mottles clayey sandy silt lens from 16-17", damp	3-7- 11-14 R=24/24	0	8-10 ft; 1104
	10-12	CL	Clayey silt, brn, till, few small gravel, damp, mod. stiff	3-7- 9-9 R=24/24	0	10-12 ft; 1109
	12-14	CL	Clayey silt, brn, few iron oxide stains (reddish) in lower 4", increasing sand w/ 1/2" wet zone @ ~8", damp, mod. stiff	8-10- 10-14 R=24/24	0	12-14 ft; 1115
	30					
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE David [Signature]		BOREHOLE NUMBER FWGMW-007	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-007
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 3 OF 4
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 845f State Route 5 Ravenna, OH 44268	
5. NAME OF DRILLER Joe Tetel		6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius MSA		PID SERIAL#: A2-1861	Colors from Munsell Soil Color Chart, Rev
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14-16	CL	Clayey silt, brn, yellow brn along vert fractures, few small gravel ($1/2''$), dry, mod. stiff	5-7- 9-9 R = 24/24	0	14-16 ft; 1121
28	16-18	CL	Upper 4" clayey silt, brn w/ gray mottles, dry	8-10-	0	16-18 ft; 1128
		SP	Next 4" sand, cts, brn, moist	8-10		
		CL	Lower 10" clayey silt, gray, few brn mottles, dry, mod. stiff	R = 18/24		
28	18-20	CL	Upper 4" silty clay, gray, w/ 1/2" silty sand - wet; clay is moist & fairly soft	1-3- 7-7	0	18-20 ft; 1137
		ML	Remained clayey silt, gray, dry, few small gravel, mod. stiff	R = 23/24		
26	20-22	CL	Silty clay, gray, till, dry	3-5- 6-8 R = 24/24	0	20-22 ft; 1145
22	24	ML	Clayey silt, gray, damp to very moist, mod. stiff, slightly plastic where moist	6-6- 8-9	0	22-24 ft; 1153
58		CL	Lower 4" silty clay, gray-brn, till, few sand & small gravel, damp, mod. stiff	R = 24/24		
24	26	ML	Upper 8" clayey silt, gray, few brn mottles, wet, fairly soft, slightly plastic	1-8- 12-14	0	24-26 ft; 1209
58		GC	Remained silty clayey sand & gravel, brn, wet, angular gravel to 1/2"	R = 15/24		
26	28	GM	Upper 11" sand & gravel, brn, med-cts, wet, some silt	4-5-6-12	0	26-28 ft; 1220
58		ML	Lower 10" clayey sandy silt, gray, wet, few gravel, slightly plastic	R = 21/24		

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE JSCW Spornard 3/9/12	BOREHOLE NUMBER FWGMW-007
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-007
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	

3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268	
5. NAME OF DRILLER Joe Teled		6. DIRECTION OF BOREHOLE <u>VERTICAL</u> INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Virius MSA		PID SERIAL#: 12-1061	
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	
Colors from Munsell Soil Color Chart, Rev			

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	28-30	CL	Upper 10" Silty clay till, gray, wet	7-9-	0	28-30/l; 1239
		GC	Lower 8" Sand & gravel, brown, wet, some clay, angular - subangular gravel to 1/2"	18-26		
				R = 18/24		
	30					
	40					
	50					
	60					

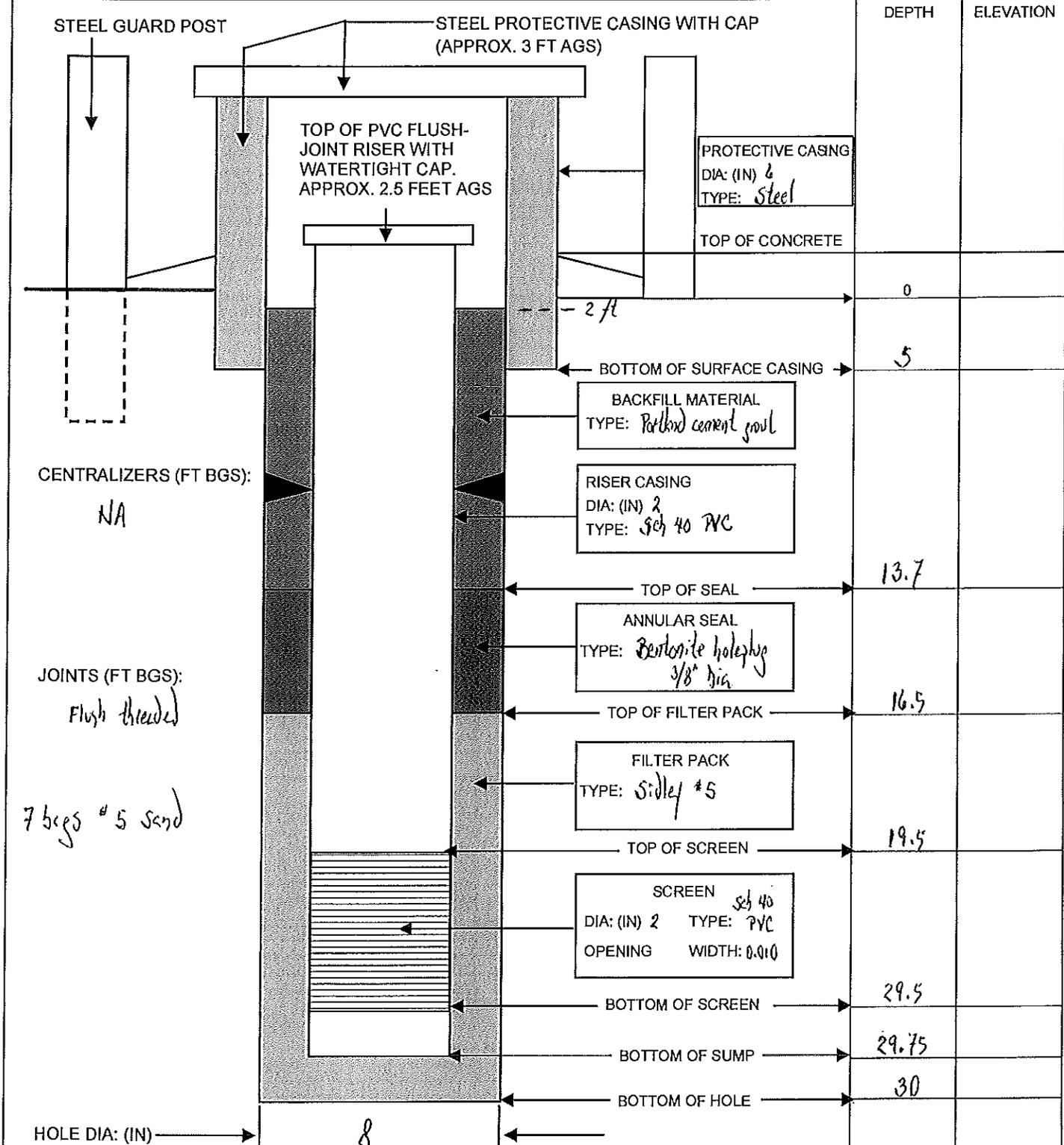
PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Beto Agostino 3/9/12	BOREHOLE NUMBER FWGMW-007
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MONITORING WELL

PROJECT NAME: *RVAAP-66 RT* PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *FWGMW-007* BEGIN: *3/9/12* END: *3/9/12*

COORDINATES: N: *548356* E: *2344785* REFERENCE POINT: *TOC* ELEVATION: *MSL 1075.41*



Recorded by: *Scott Spaschke*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-008
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tele		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" ID HSA 2" x 24" split spoon		8. BOREHOLE LOCATION PW-24; Rt 60 Tank Farm	
		9. SURFACE ELEVATION/DATUM 1109.00	
		10. DRILL DATE/TIME STARTED: 3/6/12 COMPLETED: 3/6/12	
		15. DEPTH GROUNDWATER ENCOUNTERED Patched zone @ 3 ft; 14 ft WT	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS NA		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK NA			
14. TOTAL DEPTH OF BOREHOLE 21			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/6/12 DATE COMPLETED/ABANDONED: 3/6/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽: First Water Encountered ▼: Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT RVAAP-66 RI		GEOLOGIST SIGNATURE/DATE J. C. [Signature] 3/6/12	
		BOREHOLE NUMBER FWGMW-008	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWGMW-008	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER Joe Teter			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2		Upper 3" Topsoil, dk brn, silty clay w/ gravel, roots Next 9" Gravel fill, limestone, dry, few clay CL Lower 4" silty clay, brn, damp, mod. stiff, compacted	2-24- 18-12 R=18/24	0	0-2'; 1335
	2-4	CL	Silty clay, brn w/ few gray mottles, becoming brn-gray in lower 2", moist sand secant @ 8-11", silty	1-2- 2-2 R=16/24	0.3	2-4 ft; 1348
	4-6	ML	Upper 12" clayey silt: brn-gray w/ few rust oxides, damp, fairly soft	1-2- 2-4 R=22/24	0.6	4-6 ft; 1352
		CL	Remainder silty clay, brn w/ gray along vertical fractures, little oxides, fairly soft, moist			
	6-8	CL	Silty clay, gray w/ brn mottles, few oxides in upper 10", very moist, fairly soft	1-2- 2-3 R=15/24	0.6	6-8 ft; 1400
	8-10	ML ML	Clayey silt, gray w/ few brn mottles, few sand, moist to wet in upper 10", then mod. stiff, damp	1-3- 3-2 R=18/24	0.6	8-10 ft; 1415
	10-12	CL	Silty clay Till; brn, few small sand & gravel, damp, mod. stiff	4-5- 8-9 R=19/24	0.5	10-12 ft; 1422
	12-14	ML ML	Clayey silt, brn, few sand, damp; lower 1/2" sand, brn, wet, med. grained, silty	7-9- 11-12 R=16/24	0.3	12-14 ft; 1428
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE [Signature] 3/6/12		BOREHOLE NUMBER FWGMW-008	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-008
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT Joe Telet		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268	
5. NAME OF DRILLER RVAAP-66 RI		6. DIRECTION OF BOREHOLE <u>VERTICAL</u> INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Silius MSA		PID SERIAL#: A2-1861	
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	
Colors from Munsell Soil Color Chart, Rev			

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14-16		Upper 1" wet silty sand, brn, some med-grained	1-3	0.8	14-16 ft; 1438
		ML	Remained clayey silt, gray-brn w/ few gray nodules, Till, few sand & small gravel, mod. stiff, moist	4-5 R: 10.5/24		
	38 16-18		Upper 12" very soft wet silt, sand & gravel - slough	1-6	0.6	16-18 ft; 1445
		ML	Next 5" clayey silt, gray, till, few sand & gravel, mod. stiff	6-7 R: 24/24		
		SP	Lower 6" sand, gray, med-crs, wet, few silt			
	48 18-20		Sand, gray, fn-crs grained, wet, poorly sorted, little silt	Wt of hammer for 1' 2-4 R: 9/24	0.1	18-20 ft; 1527
	45					
	50					
	55					
	60					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Dawn Spenshade 3/6/12	BOREHOLE NUMBER FWGMW-008
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MONITORING WELL

PROJECT NAME: *RVAAP-66 RI*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *FWGMW-008*

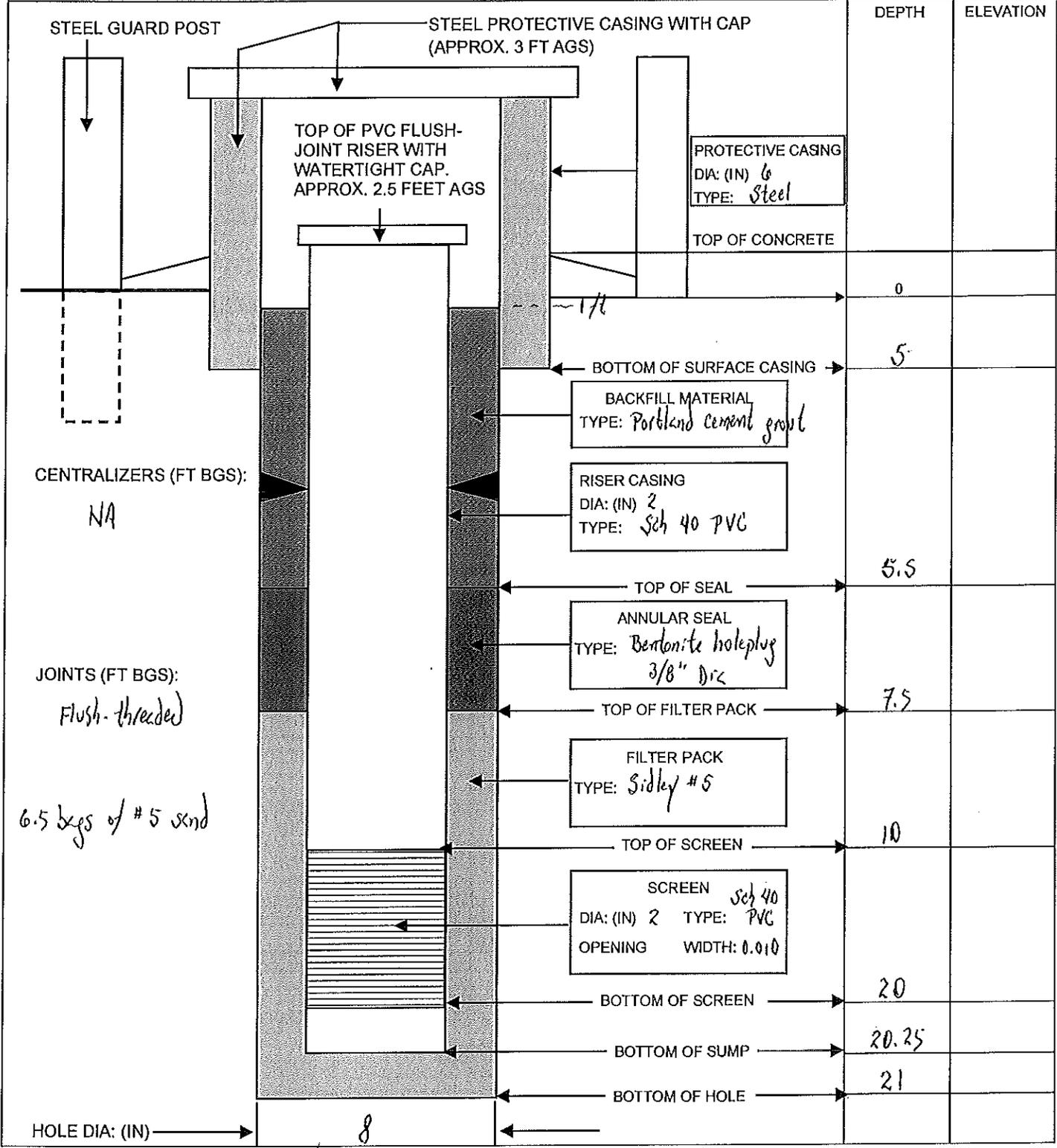
BEGIN: *3/6/12*

END: *3/6/12*

COORDINATES: N: *555735*
E: *2341569*

REFERENCE POINT: *TOC*

ELEVATION: *MSL*
1111.61



CENTRALIZERS (FT BGS):
NA

JOINTS (FT BGS):
Flush-threaded

6.5 bags of #5 sand

PROTECTIVE CASING
DIA: (IN) *6*
TYPE: *Steel*

BACKFILL MATERIAL
TYPE: *Portland cement grout*

RISER CASING
DIA: (IN) *2*
TYPE: *Sch 40 PVC*

ANNULAR SEAL
TYPE: *Bentonite holeplug*
3/8" Dia

FILTER PACK
TYPE: *Sidley #5*

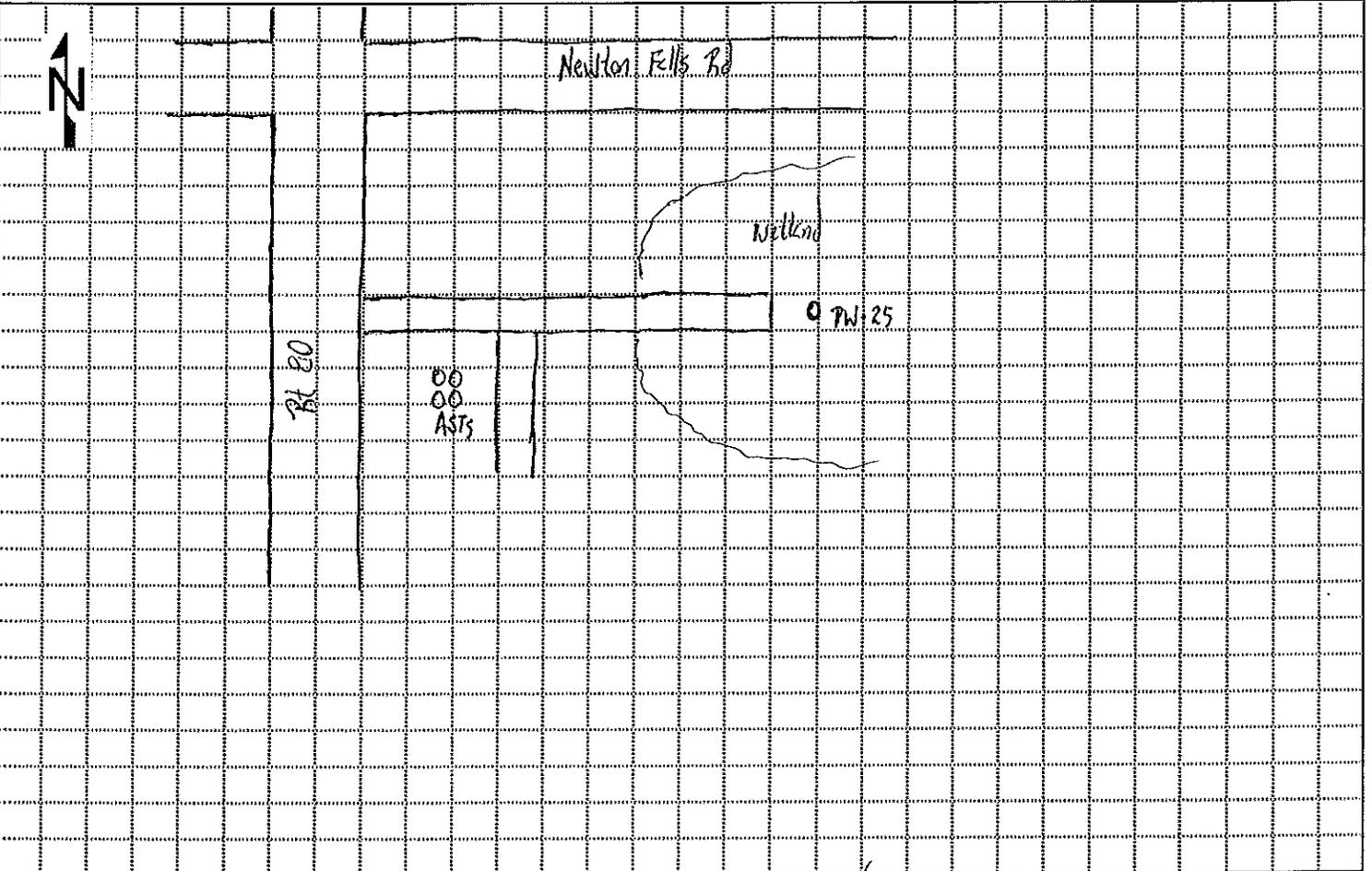
SCREEN
DIA: (IN) *2* TYPE: *PVC*
OPENING WIDTH: *0.010*

Recorded by: *Scott Spenshato*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-009
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tele/		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" ID HSA 2" X 24" Split Spoon		8. BOREHOLE LOCATION PW-25 Rt 80 EnX Fm Alex	
		9. SURFACE ELEVATION/DATUM 1099.50	
		10. DRILL DATE/TIME STARTED: 3/7/12 COMPLETED: 3/7/12	
		15. DEPTH GROUNDWATER ENCOUNTERED Depth 3 ft 12 ft WF 4 ft	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS NA		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK NA			
14. TOTAL DEPTH OF BOREHOLE 18.5 ft			
18. GEOTECHNICAL SAMPLES UNDISTURBED: ST DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/7/12 DATE COMPLETED/ABANDONED: 3/7/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Joe Tele 3/7/12	BOREHOLE NUMBER FWGMW-009
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWG MW-009
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268	
5. NAME OF DRILLER Joe Tetel		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius MSA		PID SERIAL#: A2-1861	
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	
Colors from Munsell Soil Color Chart, Rev			

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Corr Box/Etc.)
	0-2		Fill; sand & gravel, silt, ash, few silt & clay, damp, fairly loose	6-11- 5-6 R=11/24	0.1	0-2 ft; 1009
	2-4		Upper 3" old soil horizon, dk brn crumbly silt clay w/ roots & few gravel	5-7- 7-7 R=21/24	0.8	2-4 ft; 1011
		CL	Remained silty clay, gray w/ brn mottles, damp, moderately stiff, few gravel. Wet clayey sand @ 12-15" and 17-21".			
	4-6	GM	Upper 12" sand & gravel, brn, med-crs grained, some fines, fairly loose, wet	3-2- 2-2 R=19/24	0.6	4-6 ft; 1022
		ML	Lower 7" clayey silt, brn, damp, few sand & gravel, slightly plastic, mod. stiff, Till			
	6-8	GM	Upper 10" sand & gravel, brn, some silt, "mucky", wet, fairly loose, med-crs sand	3-5- 6-7 R=24/24	0.2	6-8 ft; 1032
		ML	Lower 14" clayey silt Till, gray-brn, damp, few sand & small gravel, slightly plastic, mod. stiff			
	8-10		Shelby Tube	R=18/24	-	8-10 ft; 1122 ST = FWGFWGsb- 009-10004-GT
	10-12	SM	Upper 14" silty sand, brn grading to gray, mainly fine w/ some cgs in upper 2" and lower 2", wet	2-4- 5-5 R=20/24	0.3	10-12 ft; 1137
		CL	Lower 6" silty clay, gray, till, moist, mod. stiff			

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>Scott Spesshade</i> 3/7/12	BOREHOLE NUMBER FWG MW-009
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MONITORING WELL

PROJECT NAME: *RVAAP-66 R1*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *FWG MW-009*

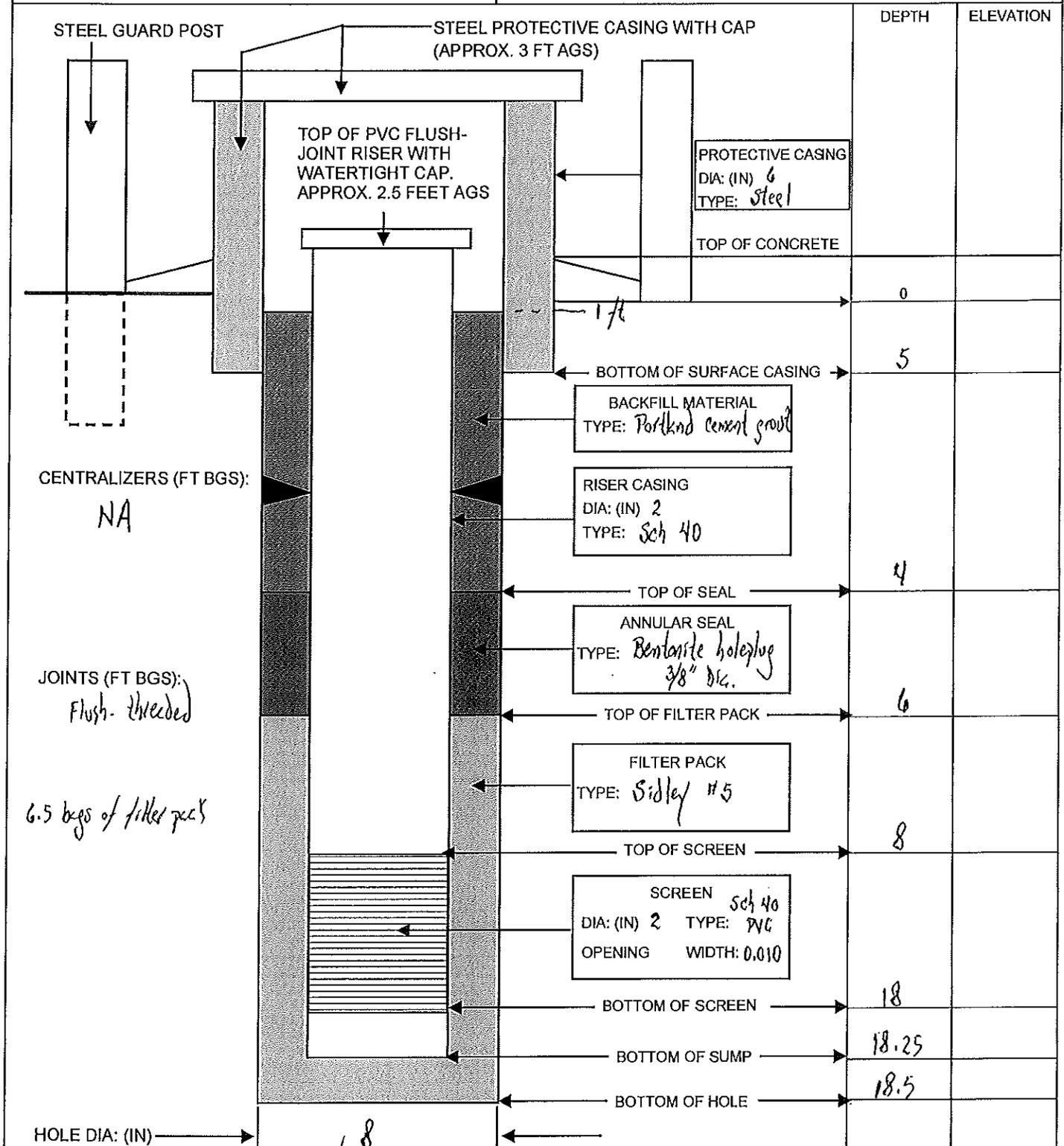
BEGIN: *3/7/12*

END: *3/7/12*

COORDINATES: N: *556784*
E: *2341998*

REFERENCE POINT: *T00*

ELEVATION: *MSL*
1102.14



CENTRALIZERS (FT BGS):
NA

JOINTS (FT BGS):
Flush-threaded

6.5 bags of filter pack

HOLE DIA: (IN) *8*

Recorded by: *SECO Spurduto*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT	BOREHOLE NUMBER
		USACE - Louisville	FWGMW-010
1. COMPANY NAME		2. DRILLING SUBCONTRACTOR	
EQM		Frontz Drilling	
3. PROJECT		4. LOCATION	
RVAAP-66 RI		RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER		6. MAKE/MODEL OF DRILL	
Joe Teter		CME 55 Track-mount	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOLE LOCATION	
4 1/4" ID HSA 2" x 24" split spoon		PW-31	
		9. SURFACE ELEVATION/DATUM	
		959.50	
		10. DRILL DATE/TIME	
		STARTED: 3/2/12 COMPLETED: 3/2/12	
		15. DEPTH GROUNDWATER ENCOUNTERED	
		6 ft	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION	
		NA	
12. OVERBURDEN THICKNESS		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME)	
NA		NA	
13. DEPTH DRILLED INTO BEDROCK			
NA			
14. TOTAL DEPTH OF BOREHOLE			
17.3 ft		NA	
18. GEOTECHNICAL SAMPLES		19. TOTAL NUMBER OF CORE BOXES	
UNDISTURBED: NA DISTURBED: NA		NA	
20. CHEMICAL SAMPLES		21. TOTAL CORE RECOVERY %	
CHEM: NA RAD: NA OTHER:		NA	
22. DISPOSITION OF BOREHOLE		DATE COMPLETED/ABANDONED:	
DATE STARTED/INSTALLED: 3/2/12		3/2/12	
BACKFILL TYPE:		<input checked="" type="checkbox"/> MONITORING WELL	
<input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT			
23. NOTES			
BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million			
▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
<p>Former BGA area</p> <p>PW-31</p> <p>South Service Rd.</p> <p>Ferric-chrome stockpile</p>			
PROJECT		GEOLOGIST SIGNATURE/DATE	
RVAAP-66 RI		J. W. [Signature] 3/2/12	
		BOREHOLE NUMBER	
		FWGMW-010	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWG MW - 010	
1. COMPANY NAME EDM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 2	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266			
5. NAME OF DRILLER Joe Tetel			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA			PID SERIAL#: A2-1861		Colors from Munsell Soil Color Chart, Rev	
WATER LEVEL MAKE/MODEL:			WATER LEVEL SERIAL#:			
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2	CL	Upper 3" dk brn topsoil, clayey silt w/ few sm gravel roots, moist. Next 16" silty clay, brn w/ gray along horiz fractures, few oxides, last 2" brn sand, fn-med grained, moist	3-4- 8-9 R = 2 1/24	0.2	0-2 ft; 1036
	2-4	SM	Silty sand, red-brn buff, fn-grained, damp, fairly loose, some sandstone frags	21-28- 31-32 R = 2 2/24	0.3	2-4 ft; 1042
	4-6	SM	Silty sand, lt brn to buff, fn-grained, damp, more cohesive	14-25- 25-37 R = 1 9/24	0.3	4-6 ft; 1056
	6-8	SM	Silty sand, lt brn to buff, fn-med grained, wet	29-50/5 R = 1 5/24	0.5	6-8 ft; 1104
	8-10	SM	Silty sand, lt brn to buff, fn grained, moist/wet	50/4 R = 5/24	0.6	8-10 ft; 1118
	10-12		No Recovery	50/2 R = 0/24		10-12 ft; 1140
	12-14		No Recovery	50/2 R = 0/24		12-14 ft; 1215
	17.3		Blind drilled to 17.3 ft due to slight heave and no recovery - sand compresses restricting penetration			

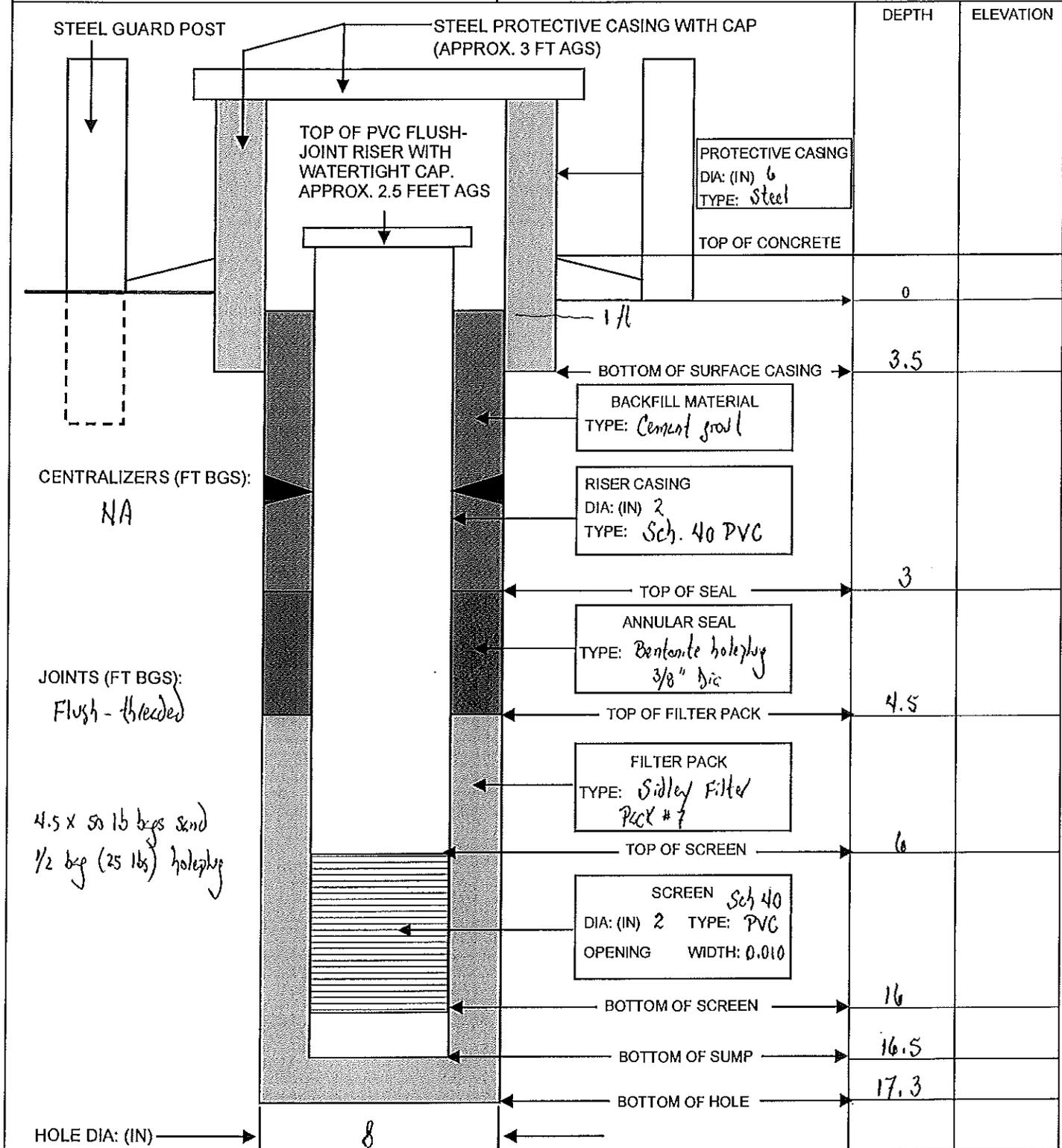
PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Scott Spessherdt 3/2/12	BOREHOLE NUMBER FWG MW - 010
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MONITORING WELL

PROJECT NAME: *RVAAP-66 RI* PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *FWGmw-010* BEGIN: *3/2/12* END: *3/2/12*

COORDINATES: N: *565077* E: *2379060* REFERENCE POINT: *TDC* ELEVATION: *MSL 962.15*

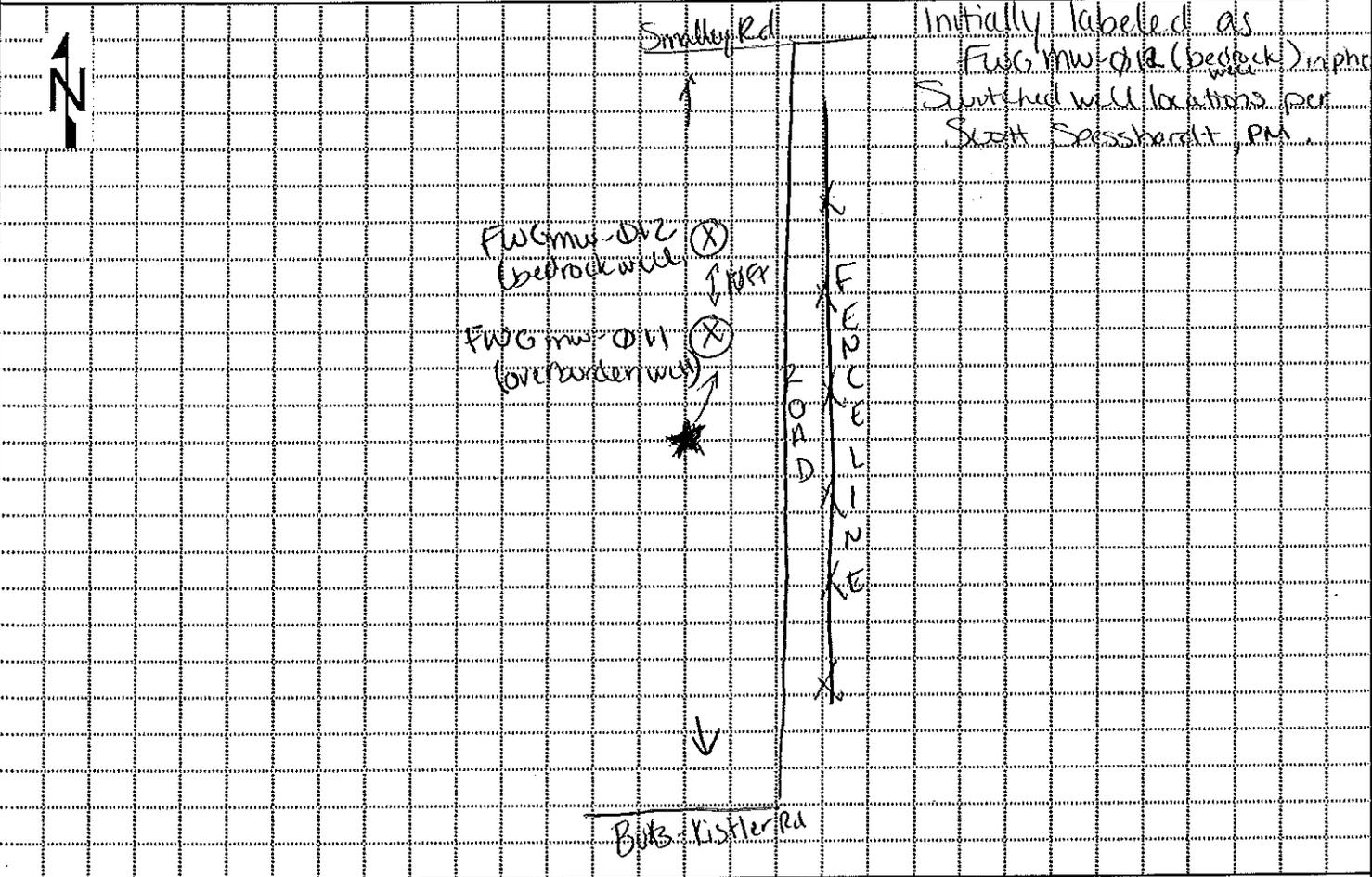


Recorded by: *Xiao X...*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-011
1. COMPANY NAME SPAC		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT FWGWMP RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Bryan Phillips		6. MAKE/MODEL OF DRILL CME 8DX	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4" HSAS 2' x 2" SPLIT SPOONS		8. BOREHOLE LOCATION East Classification Yard	
		9. SURFACE ELEVATION/DATUM 939.00	
		10. DRILL DATE/TIME STARTED: 1215 COMPLETED: 03/13/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 5.2'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS 17.5 FT		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK NA			
14. TOTAL DEPTH OF BOREHOLE 17.5 FT			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES 0	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/12/12		DATE COMPLETED/ABANDONED: 3/13/12	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT		<input checked="" type="checkbox"/> MONITORING WELL	
23. NOTES BKG: \leq Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT FWGWMP RI (RVAAP-06)	GEOLOGIST SIGNATURE/DATE Amanda J. [Signature] 03/13/12	BOREHOLE NUMBER FWGMW-011
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-011
1. COMPANY NAME SACZ		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 2 OF 2

3. PROJECT FWGMW RI	4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266
5. NAME OF DRILLER Bryan Phillips	6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES
7. NOTES PID MAKE/MODEL: Mini RAE 2000 WATER LEVEL MAKE/MODEL: _____	PID SERIAL#: 110-005816 WATER LEVEL SERIAL#: _____ Colors from Munsell Soil Color Chart, Rev 2000 Rev ED

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/OPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			(0.0' - 5.2') Silty clay (C _u); trace fine gravel (< 1/4"); soft; dry (wet from surface/rain) med.	wt/1/3/4 1.7/2.0 0-2	A: 0.0 H: 0.1	A: Ambient PID H: HEADSPACE PID
		CL	plasticity; ^{little} organics + roots throughout; 10YR5/1 gray + 10YR5/6 yellowish brown @ 2.7' - subangular gravel seam @ 3.0' - SS fragment	5/10/12/10 1.2/2.0 2-4	A: 0.0 H: 0.1	@1224
			From 3-4' Gravel content ↑ to little Gravel	1.5/2.0 4-6	H: 0.2	@1235
		GP	(5.2' - 6.0') Poorly sorted Gravel + Sand (GP); some sandstone fragments throughout	1/2/1/7/10 1.5/2.0 4-8	A: 0.0 H: 0.3	@1240
		SM	greenish gray; wet; med dense to dense	4/12/8/7	A: 0.0	
			(6.0' - 6.5') Sand + Silty (SM); very soft; low plasticity	0.9/2.0 8-10	H: 0.2	@1253
		SP	10YR5/1 gray w/ little 10YR4/3 brown; saturated	2/6/7/10	A: 0.0	
			(6.5' - 8.7') Sand (SP) little subrounded Gravel (< 1/4"); saturated; 10YR4/1 dark gray.	1.7/2.0 10-12 8/12/10/7 12-14	H: 0.2 A: 0.0	@1300
			fining downward; silt content ↑ w/ depth	1.5/2.0 12-14	H: 0.2	@1318
			(8.7' - 9.8') Gravel	6/18/10/13	A: 0.0	
			(9.8' - 10.2') Sand (fine) w/ silt (SM); little Gravel; 10B5/1 bluish gray; dry; crumbly; sand + gravel content ↓ w/ depth	1.4/2.0 14-16	H: 0.1	@1332
			(10.2' - 12.0') Silt (MC); 10YR4/1 dark gray; dry; medium stiff; low plasticity	3/11/10/18 1.25/2 16-18	A: 0.0 H: 0.1	@1347 SS @ 17.5'
			(12.0' - 13.2') Sand + Gravel (SP) wet 10YR4/1 dark gray; medium dense			
			(13.2' - 13.4') fine sand; ^{seam} 10YR6/3 brown wet			
			(13.4' - 14.8') Silt (MC); some light brown (10YR6/3) medium grained sand lenses throughout; dry; 10YR4/1			
			(14.8' - 17.5') Sand (SM); little silt; some 1/2" Gravel (subrounded); lenses of coarser sand throughout; dry to damp; dense			
			@ 16' introduction of weathered SS Gravel			
			fining downward, @ 17.5' - weathered SS in edge of split spoon			

PROJECT FWGMW RI (RVAAP-66)	GEOLOGIST SIGNATURE/DATE Amanda Jester	BOREHOLE NUMBER FWGMW-011
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MONITORING WELL

PROJECT NAME: *FWG WMP RI (AATP-106)*

PROJECT NO:

30174.0016.001.02

WELL NUMBER: *FWGmw-011*

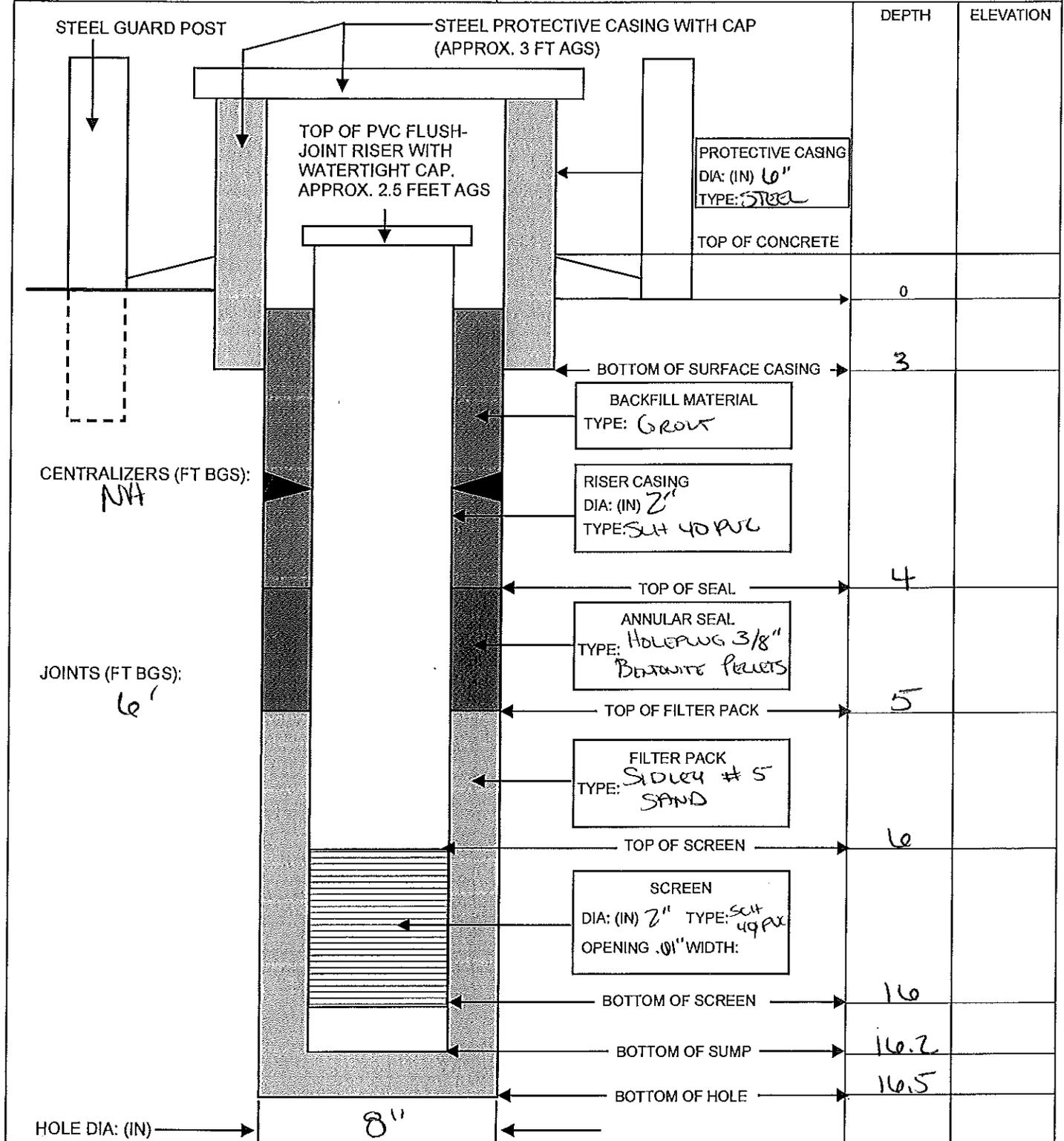
BEGIN: *03/13/12 0845*

END: *03/13/12; 1100*

COORDINATES: N: *566801*
E: *2380390*

REFERENCE POINT: *T00*

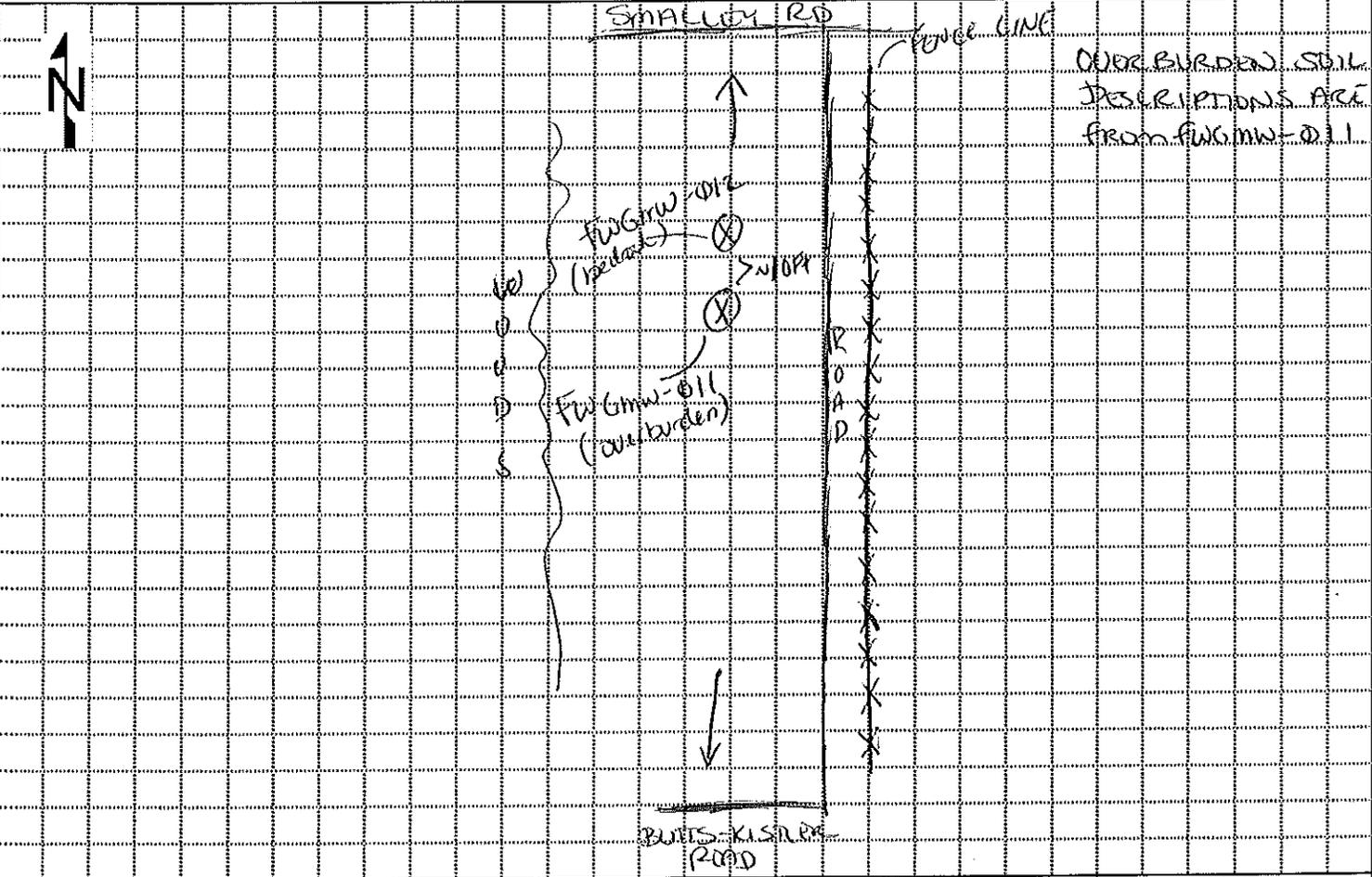
ELEVATION: *MSL*
941.61



Recorded by: *Amanda Nantz* 03/13/12 QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-012
1. COMPANY NAME SACC		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP RI (RVAAP-66)		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER BRYAN PHILLIPS/AARON MACKAY		6. MAKE/MODEL OF DRILL CME 750X	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 8 1/4" HSAS 6" CORING BIT N SERIES ROCK CORE SAMPLER		8. BOREHOLE LOCATION East Classification Yard	
12. OVERBURDEN THICKNESS 17.5 FT		9. SURFACE ELEVATION/DATUM 938.90	
13. DEPTH DRILLED INTO BEDROCK 22.5		10. DRILL DATE/TIME STARTED: 03/13/12 COMPLETED: 03/20/12	
14. TOTAL DEPTH OF BOREHOLE 40		15. DEPTH GROUNDWATER ENCOUNTERED 5.2	
18. GEOTECHNICAL SAMPLES UNDISTURBED: ROCK CORE DISTURBED: —		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION ~2 FT AGS	
20. CHEMICAL SAMPLES CHEM: — RAD: NA OTHER: —		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/13/12 DATE COMPLETED/ABANDONED: 3/20/12		19. TOTAL NUMBER OF CORE BOXES 2	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL		21. TOTAL CORE RECOVERY % 95%	
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-106 RI	GEOLOGIST SIGNATURE/DATE Amanda Jentz	BOREHOLE NUMBER FWGmw-012
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-012
1. COMPANY NAME SAC		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266	
5. NAME OF DRILLER AARON MACKAY/BRYAN PHILLIPS		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: MINIRAE 2000 WATER LEVEL MAKE/MODEL: —		PID SERIAL#: 110-005816 WATER LEVEL SERIAL#: —	Colors from Munsell Soil Color Chart, Rev 2000 REV ED

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			(0.0'-5.2') Silty CLAY (CL); trace fine Gravel (< 1/4") soft; dry (wet from surface) medium plasticity little organics roots throughout. 10YR5/1 gray, 10YR6/1 yellowish brown	SEE LOG FOR FWGmw-011 for PID + recovery data		
		CL	@ 2.7' subangular Gravel seam @ 3.0' sandstone fragment @ 3.0' stiff			
	5		From 3'-4' Gravel content ↑ to little Gravel			
	6.6	GP	(5.2'-6.0') Poorly sorted Gravel + sand (GP); some SS fragments throughout; greenish gray wet; medium dense to dense.			
	6.6	SM	(6.0'-6.5') SAND + SILT (SM); very soft, low plasticity; saturated, 10YR5/1 gray w/ little 10YR4/3 brown			
	10	SP	(6.5'-9.7') SAND (SP); little subrounded Gravel (< 1/4"); saturated, 10YR4/1 dk gray; silt content ↑ w/ depth (9.7'-9.8') Gravel.			
	10	SM	(9.8'-10.2') SAND (fine) w/ Silt (SM); little Gravel 10Y5/1 bluish gray; dry; crumbly; sand + gravel content ↓ w/ depth			
	12	ML	(10.2'-12.0') SILT (ML); 10YR4/1 dark gray; dry medium stiff; low plasticity			
	12	SP	(12.0'-13.2') SAND + GRAVEL (SP); wet, 10YR4/1 dark gray; medium dense			
	12	SW	(13.2'-13.4') Fine Sand seam 10YR6/3 brown; wet			
	15	ML	(13.4'-14.8') SILT (ML); some light brown (10YR6/3) medium grained sand lenses throughout; dry, 10YR4/1			
	17.5	SM	(14.8'-17.5') SAND (SM); little Silt; some 1/2" gravel (subrounded); lenses of coarser sand throughout; dense dry to damp @ 16' Introduction of SS Gravel; fining downward			
	17.5		@ 17.5' SANDSTONE; dry; hard/massive.			
	20		Auger Refusal @ 20' INSTALL CASING		Amesent	
	20	SS	(20.0'-40.0') WHITE SANDSTONE; little yellow brown; some partings; less w/ depth few pebbles throughout; wet		0.0 ppm	20'-30' 03/19/12 6.15'/10.0' @ 1240 (Core fell out - only to 26.5') (6.15/6.5)
	25		By 25' SANDSTONE IS WHITE (no yellow brown) 26.6'-27.0' FEW PARTINGS			
	25				0.0 ppm	26.5'-36.5' 03/19/12 10.0'/10.0' @ 1315
	30		@ 30' few white subrounded pebbles			

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Amanda Jrenter 03/19/12	BOREHOLE NUMBER FWGmw-012
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-012
1. COMPANY NAME SACZ		2. DRILLING SUBCONTRACTOR Frontz Drilling	

3. PROJECT FACILITY WIDE GROUNDWATER RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268
5. NAME OF DRILLER AARON MACKAY	6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES

7. NOTES PID MAKE/MODEL: Moirate 2000	PID SERIAL#: 110-005810	Colors from Munsell Soil Color Chart, Rev 2000 Rev ED
WATER LEVEL MAKE/MODEL: -	WATER LEVEL SERIAL#: -	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
		SS				PERMEABILITY TEST ROCK CORE 31.05' - 32.06' (REMOVED FROM BOX)
	35		@35.75 PARING 35.8 - FEW WHITE PEBBLES		36.5' 40'	36.5' - 40.0'
			~37 FT WHITE + LIGHT GRAY IN COLOR		0.0 PPM	2.75' / 3.5' 03/19/12 @ 1330
	40		BORING TERMINATED AT 40 FT BGS			
	45					
	50					
	55					
	60					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Amanda Jentzen 03/19/12	BOREHOLE NUMBER FWGmw-012
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MONITORING WELL

PROJECT NAME: FWGWMP RE (RUAPP-66)

PROJECT NO: 30174.0016.001.02

WELL NUMBER: FWGmw-012

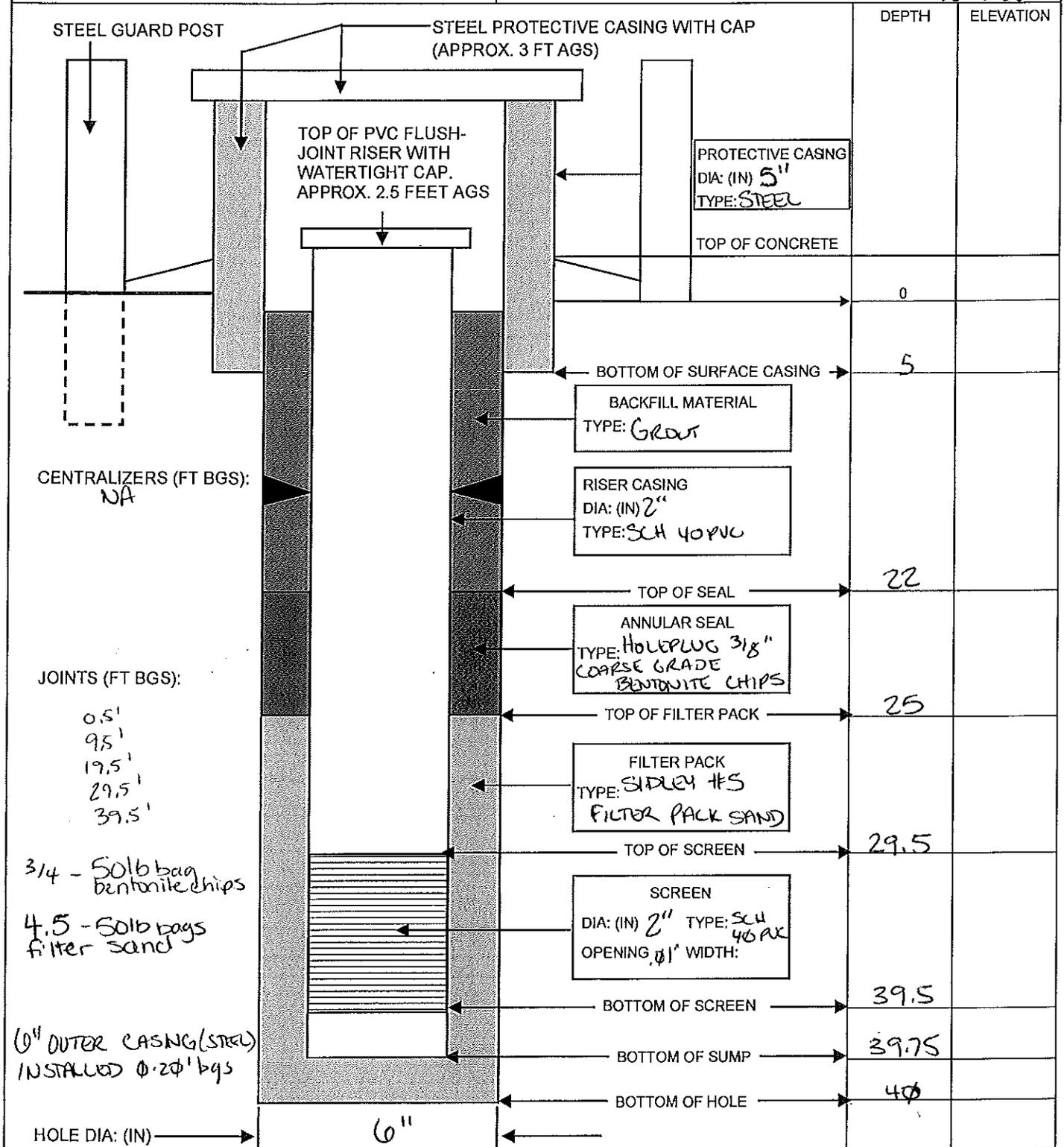
BEGIN: 03/19/12 ; 1415

END: 03/20/12; 0900

COORDINATES: N: 558691
E: 2351125

REFERENCE POINT: T00

ELEVATION: MSL
1080.36



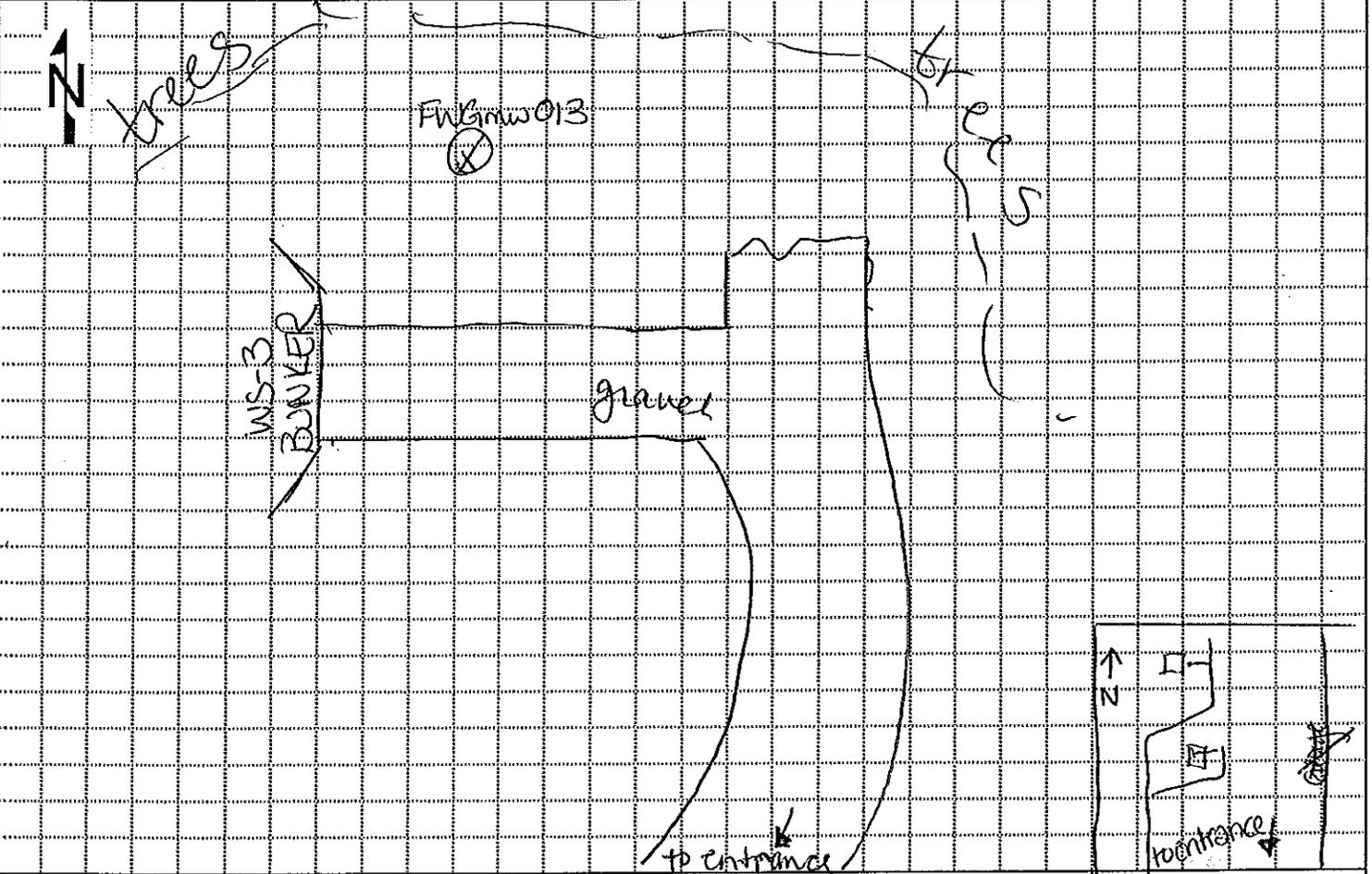
Recorded by: Amanda Trenton

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-013
1. COMPANY NAME EDM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP 66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER JOE TETER		6. MAKE/MODEL OF DRILL CME55CL	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4.5HSA 2 1/2' SS N SERIES ROCK CORE SAMPLER		8. BOREHOLE LOCATION RW34 @ Wet Storage	
		9. SURFACE ELEVATION/DATUM 1057.10	
		10. DRILL DATE/TIME STARTED: 3-20-12 COMPLETED: 04/09/12	
		15. DEPTH GROUNDWATER ENCOUNTERED perched rw @ 10'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION —	
12. OVERBURDEN THICKNESS 11		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) —	
13. DEPTH DRILLED INTO BEDROCK 23.5 ft			
14. TOTAL DEPTH OF BOREHOLE 34.5'			

18. GEOTECHNICAL SAMPLES UNDISTURBED: N/A	DISTURBED: —	19. TOTAL NUMBER OF CORE BOXES 1
20. CHEMICAL SAMPLES CHEM: — RAD: NA OTHER: —	21. TOTAL CORE RECOVERY % 82	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3-20-12		DATE COMPLETED/ABANDONED: 04/09/12; 10/15
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL		
23. NOTES BKG: <input checked="" type="checkbox"/> Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable		

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP 66 RI	GEOLOGIST SIGNATURE/DATE Amanda Hester 04/09/12	BOREHOLE NUMBER FWGmw-013
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWGmw013	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP 66 RI			4. LOCATION RVAAP 6451 State Route 5, Ravenna, OH 44266			
5. NAME OF DRILLER DETETER / ^{Area} MACKAY ^{for} ^{04/09/12}			6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES 04/09/12			
7. NOTES PID MAKE/MODEL: SIRIUS USA / mini RAE 2000 WATER LEVEL MAKE/MODEL: _____ WATER LEVEL SERIAL#: _____			PID SERIAL#: A2-1861 / 110-005810		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPH/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			top soil top 4" remaining	2,3,5,7	0	0.2ft; 1617
		CL	Silty Clay ^{orange brown} trace mottled gray low plasticity	R=14/24		
			trace roots @ top dec. mottle w/ depth	11,15,15/5	0	0.4ft; 1622
				R=2/24		
	5		Sandy Clay orange brown trace rock fragments moist	4,5,7/10	0.5	4-6ft 1630
			hard top, @20 sand seam fine 1" remainder Sandy Clay	R=23/24		
		SC	Sandy Clay trace silts orange brown trace rock frag	9,9,10/10	0.2	6-8ft; 1639
			sm. sand seams moist w/c 8ft w/ depth bottom 15" w/ angular gravel	R=24/24		
		SC	Sandy Clay orange brown trace rock fragment	2,3,5/10	0	8-10ft : 1645
	10	SW	soft bottom 4" = sand loose SW wet mottled clay + sand in tip	R=6/4		
			Sandy/Silty Clay, orange brown trace gray	2,1,28,5/4	0	10-12ft 1656
			12" bottom weathered shale buff + gray brittle hard gray tip	R=20/24		
			shale, grey, clay, brittle	40-50/2	-	12-14ft; 1005 (4/5/12)
				R=8/24		
	15	SH	(15.0' - 18.3') SHALE (SH), micaceous gray to tan; few yellowish brown partings few SS partings, dry; less brittle w/ depth		0.0	15'-20' 04/09/12
					Ambient	@ 1005 4.7'/5.0'
		SH	(18.3' - 29.4') Dark gray SHALE (SH) micaceous; dry, competent; wit ~20' bgs			
	20		~20" SS + SH INTERBEDS, WET		0.0	20'-30' 04/09/12
					Ambient	@ 1055 7.4'/10.0'
	25					
	30	SS	(29.4' - 34.5') SANDSTONE (SS) light gray; few SS partings; wet			

PROJECT
RVAAP 66 RI

GEOLOGIST SIGNATURE/DATE
3-20-12 *Celia Shea* 0-12
04/09/12 *Amanda Jester*

BOREHOLE NUMBER
FWGmw013

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw - 013
1. COMPANY NAME SAIZ		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-666 RT		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Aaron Mackey		6. DIRECTION OF BOREHOLE VERTICAL INCLUDED DEGREES	
7. NOTES PID MAKE/MODEL: MiniRTE 2000 WATER LEVEL MAKE/MODEL: —		PID SERIAL#: 110-005816 Colors from Munsell Soil Color Chart, Rev	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
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			Cont from pg 2 (29.4' - 34.5') SANDSTONE (SS); light gray; few shale partings wet		0.0 Ambient	30.0' - 34.5' 04109/12 @ 1142 4.5' / 4.5'
	35		BORING TERMINATED AT 34.5 FT BGS			
	40					
	45					
	50					
	55					
	60					

PROJECT RVAAP-666 RT	GEOLOGIST SIGNATURE/DATE Amanda Jentm 04/09/12	BOREHOLE NUMBER FWGmw - 013
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MONITORING WELL

PROJECT NAME: *RUAPP-66 RI*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *FWGmw-013*

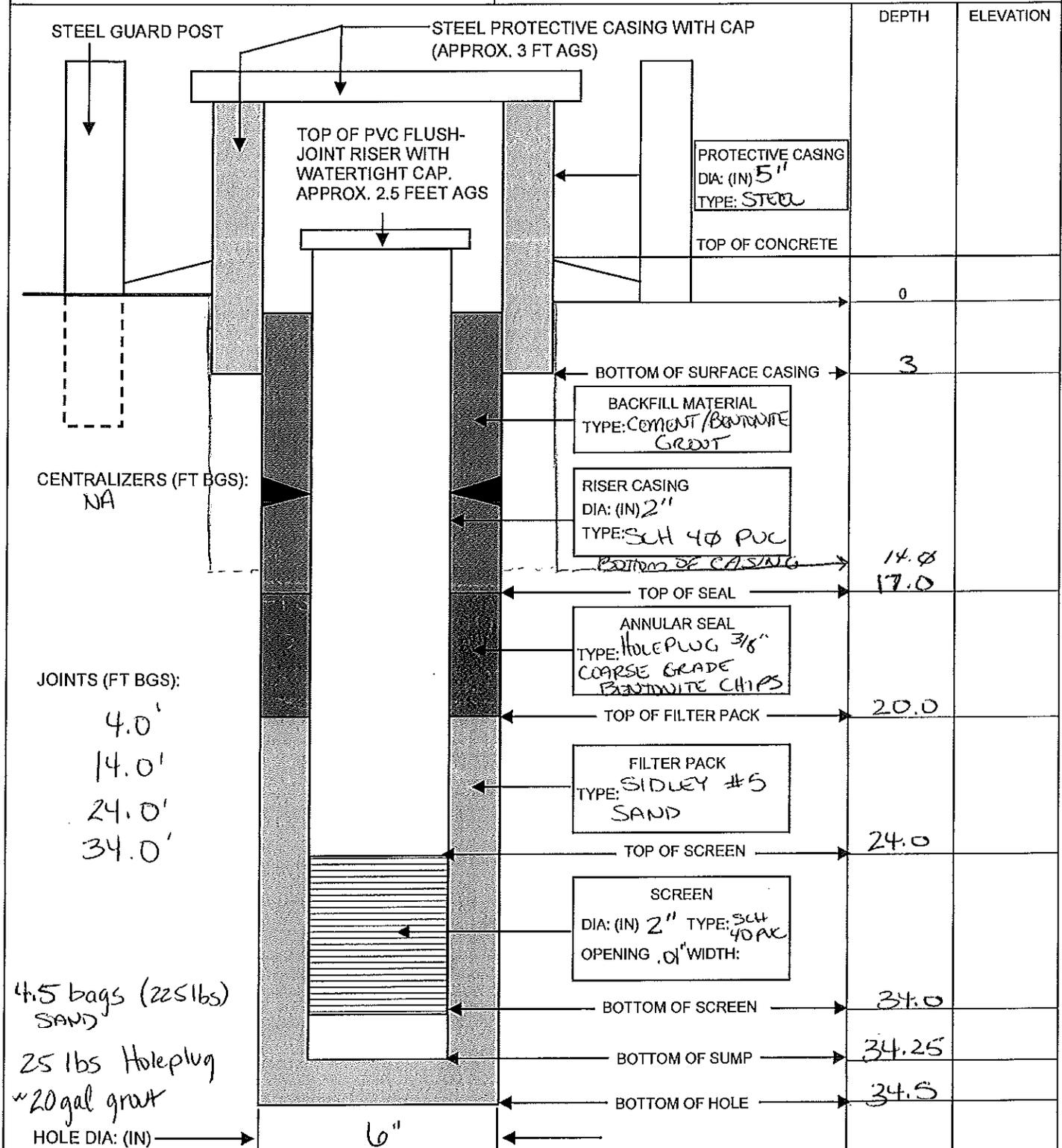
BEGIN: *04/09/12; 1215*

END: *04/09/12; 1015*

COORDINATES: N: *559483*
E: *2357460*

REFERENCE POINT: *70C*

ELEVATION: *MSL*
1059.51



Recorded by: *Amanda Jentz* 04/09/12 QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWG MW - 014
1. COMPANY NAME EOM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tete		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4/4" ID HSA 2" x 24" syt syt		8. BOREHOLE LOCATION PW-35, south of former Monzite sands	
		9. SURFACE ELEVATION/DATUM 1135.00	
		10. DRILL DATE/TIME STARTED: 4/3/12 COMPLETED: 4/3/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 8 ft	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS NA		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK NA			
14. TOTAL DEPTH OF BOREHOLE 18.5 ft			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 4/3/12 DATE COMPLETED/ABANDONED: 4/4/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \triangleleft Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Joe Tete 4/3/12		BOREHOLE NUMBER FWG MW - 014

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-014
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 2 OF 3

3. PROJECT RYAAP-66 RI	4. LOCATION RYAAP 8451 State Route 5, Ravenna, OH 44266
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5. NAME OF DRILLER Joe Telle	6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES
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7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:	PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:	Colors from Munsell Soil Color Chart, Rev
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ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2		Upper 3" Topsoil, dk brn, roots, clumpy Next 5" Fill, blk, stk, dry, cinders	3-11- 10-6		0-2 ft; 1317
		SW	Lower 10" Sand, yellow-brn, sandstone frags, dk, med-grained	R= 13/24		
	2-4	SW	Upper 2" Wet sand w/ sandstone frag, soft, yellow-brn	4-6-		2-4 ft; 1333
		CL	Remained silty clay, brn w/ few gray mottles, few small gravel, dk, mod. stiff	6-7 R= 11/24		
	4-6	CL	Silty clay, brn w/ gray mottles, few small gravel, dk	3-5- 4-7 R= 24/24		4-6 ft; 1343
	6-8	CL	Silty clay, as above, rock in shoe	6-6- 8-11 R= 5/24		6-8 ft; 1348
	8-10	CL	Upper 8" Silty clay, brn w/ gray mottles, few sand & small gravel, wet, soft	2-6- 14-14		8-10 ft; 1358
	20	GM	Lower 7" Silty sand & gravel, brn, wet, fr-cls grained, poorly sorted	R= 15/24		
	10-12	GM	Sand, brn, fr-cls grained, some gravel, few silt, wet	3-10- 17-18		10-12 ft; 1405
	25	ML	Lower 2" Sndy silt, gray, wet, soft, fr-grained sand	R= 19/24		
	12-14	MR	Upper 13" Sand, as before, probably carry down Lower 11" Silt, brn-gray, wet, few sand, fairly soft	10-11- 17-21 R= 24/24		12-14 ft; 1412
	30					

PROJECT RYAAP-66 RI	GEOLOGIST SIGNATURE/DATE Dario Gonzalez 4/3/12	BOREHOLE NUMBER FWGMW-014
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-014
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268	
5. NAME OF DRILLER Joe Teled		6. DIRECTION OF BOREHOLE <u>VERTICAL</u> INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: SILVUS MSA		PID SERIAL#: A2-1861	
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	

7. NOTES PID MAKE/MODEL: SILVUS MSA		PID SERIAL#: A2-1861		Colors from Munsell Soil Color Chart, Rev	
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:			

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14-16	SP	Upper 8" Sand, brn, fr-cls gained, few gravel, wet	5-14		14-16 ft; 1425
		GM	Remained Sand & gravel, gray, gravel to 2", some silt, wet	27-28 R = 29/24		
	²⁸ 16-18	SP	Upper 8" Sand, brn, as above	10-12		16-18 ft; 1441
		GM	Next 10" Silty gravel, gray, little sand, wet, gravel to 2"	24-41 R = 22/24		
		GP	Lower 4" Sand & gravel, gray, wet, med-cls sand			
	40					
	48					
	50					
	55					
	60					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Datto [Signature] 4/3/12	BOREHOLE NUMBER FWGmw-014
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MONITORING WELL

PROJECT NAME:

RVAAP-66 RI

PROJECT NO:

30179.0016.001.02

WELL NUMBER:

FWGMW-014

BEGIN:

4/3/12

END:

4/4/12

COORDINATES:

N: *560957*
E: *2341064*

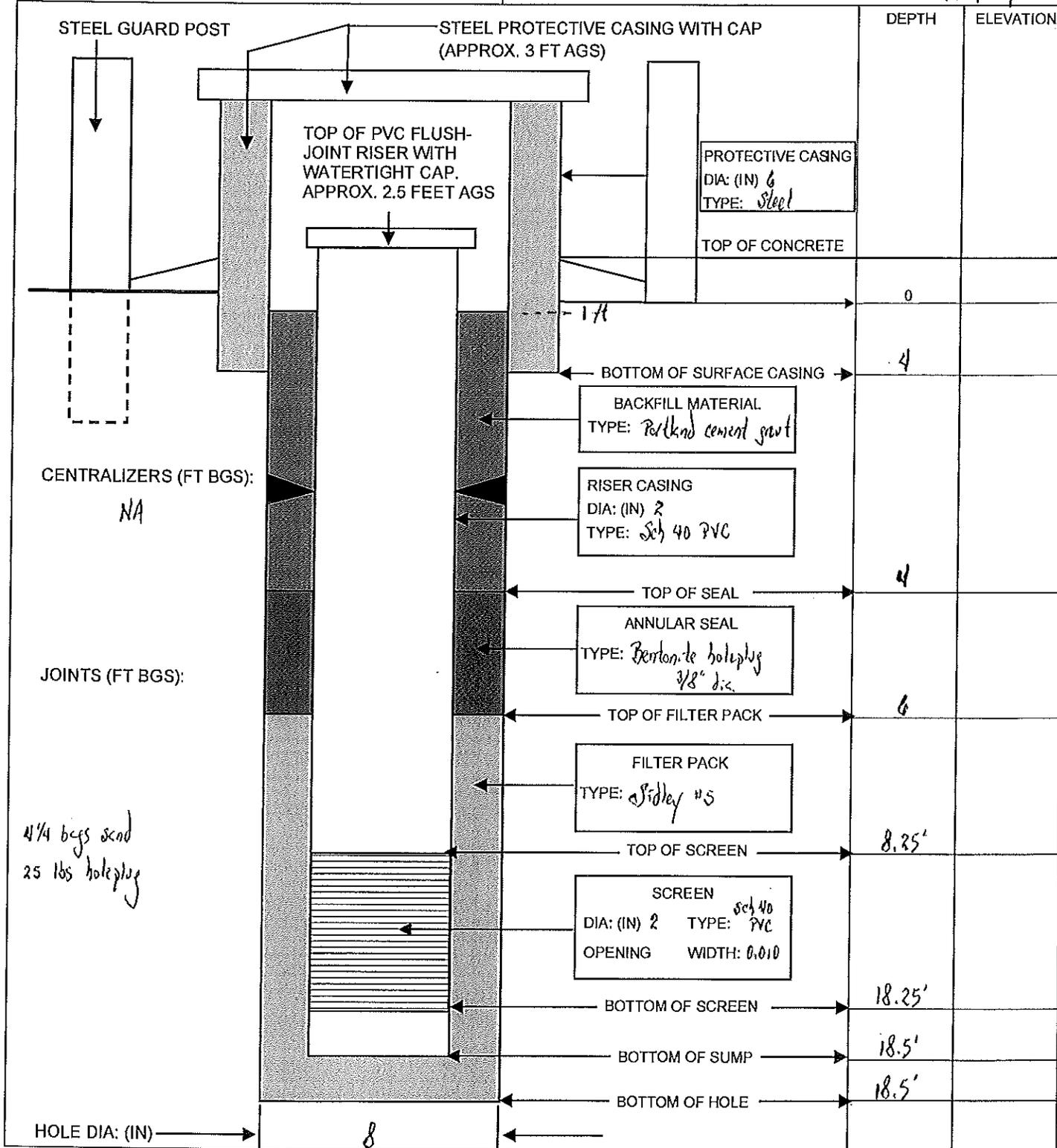
REFERENCE POINT:

TOG

ELEVATION:

MSL

1137.57



Recorded by:

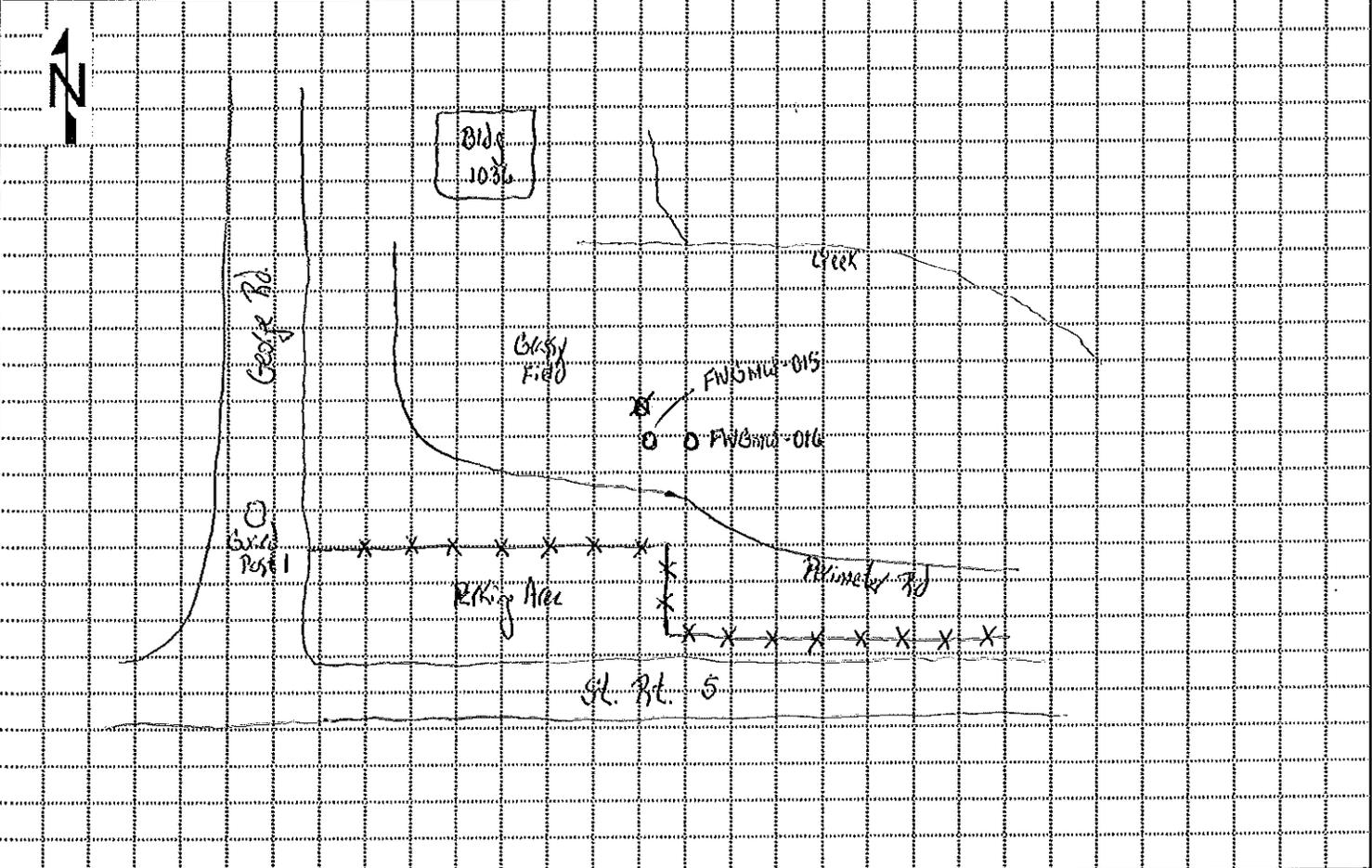
David Spaschke

QA performed by:

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGMW-015
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tele		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4/4" ID HSA 2" x 24" 5/16" spoon		8. BOREHOLE LOCATION PW-37 east of Guard Post 1	
		9. SURFACE ELEVATION/DATUM 1012.10	
		10. DRILL DATE/TIME STARTED: 3/13/12 COMPLETED: 3/13/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 14	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS NA		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK NA			
14. TOTAL DEPTH OF BOREHOLE 26			

18. GEOTECHNICAL SAMPLES UNDISTURBED: ST DISTURBED: NA	19. TOTAL NUMBER OF CORE BOXES NA
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:	21. TOTAL CORE RECOVERY % NA
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/13/12 DATE COMPLETED/ABANDONED: 3/13/12	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL	

23. NOTES BKG: \leq Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million
 ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable



PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>John [Signature]</i> 3/13/12	BOREHOLE NUMBER FWGMW-015
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-015
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 2 OF 3

3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268
5. NAME OF DRILLER Joe Teitel	6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES
7. NOTES PID MAKE/MODEL: Sirius MSA	PID SERIAL#: A2-1861
WATER LEVEL MAKE/MODEL:	
WATER LEVEL SERIAL#:	
Colors from Munsell Soil Color Chart, Rev	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2	CL	Silty clay, dk brn w/ roots in upper 4", few small gravel, few gray mottles, dk, mod. stiff	ML of KMMU 3-3-2 R = 19/24	0	0-2 ft; 0831
	2-4	CL	Upper 4" wet, soft silty clay, dk brn Remainder silty clay, brn w/ gray along vertical fract., dk, stiff, few small gravel	3-7- 5-9 R = 19/24	0	2-4 ft; 0839
	4-6	CL	Silty clay, brn w/ few gray mottles along vert. fract., few small gravel, dk, stiff	5-9- 12-17 R = 21/24	0	4-6 ft; 0846
	6-8	CL	Silty clay, brn w/ few gray along vert. fractures, few iron oxides, dk, stiff	15-19- 21-22 R = 23/24	0	6-8 ft; 0851
	8-10	CL	Silty clay, brn w/ few gray along vert. fractures, dk, stiff - increasing silt	5-7- 11-13 R = 20/24	0	8-10 ft; 0903
	10-12	ML	clayey silt, brn, few gray, dk, stiff	2-4- 7-8 R = 24/24	0	10-12 ft; 0910
	12-14	ML	clayey silt, brn, few gray along fractures, few iron oxides, dk, stiff	9-11- 15-16 R = 24/24	0	12-14 ft; 0916
	20					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE B. C. W. [Signature] 3/13/12	BOREHOLE NUMBER FWGmw-015
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWG MW - 015
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 23 OF 3
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44288	
5. NAME OF DRILLER Joe Telel		6. DIRECTION OF BOREHOLE <u>VERTICAL</u> INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius MSA		PID SERIAL#: A2-1861	Colors from Munsell Soil Color Chart, Rev
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14-16	ML	Upper 16" silt, brn, wet, fairly soft, few clay Lower 8" clayey silt, gray-brn, dk, mod. stiff	2-4- 6-8 R = 24/24	0	14-16 ft; 0931
	³⁸ 16-18		Shelby Tube	R = 24/24	-	16-18 ft; 1013 Shelby Tube FWG FWGsb-015-0006-6
	18-20 ³⁸	ML	clayey silt, gray w/ brn mottles in upper 8" becoming gray, slightly pliable, moist	2-2- 3-7 R = 18/24	0	18-20 ft; 1028
	20-22 ⁴⁵	CL	Silty clay, gray, moist, pliable, fairly soft	wt of hammer 2-3-5 R = 23/24	0	20-22 ft; 1037
	22-24	CL	Silty clay, gray, few fn sand, moist, slightly pliable, fairly soft	2-4- 4-6 R = 21/24	0	22-24 ft; 1043
	⁵⁰ 24-26	CL	Silty clay, gray, little fn-med sand, moist, pliable, fairly soft	3-2- 3-5 R = 17.5/24		24-26 ft; 1131
	⁵⁸					
	⁶⁰					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>Joe Telel</i> 3/13/22	BOREHOLE NUMBER FWG MW - 015
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MONITORING WELL

PROJECT NAME:

RVAAP-66 RI

PROJECT NO:

30174.0016.001.02

WELL NUMBER:

FWGMW-015

BEGIN:

3/13/12

END:

3/13/12

COORDINATES:

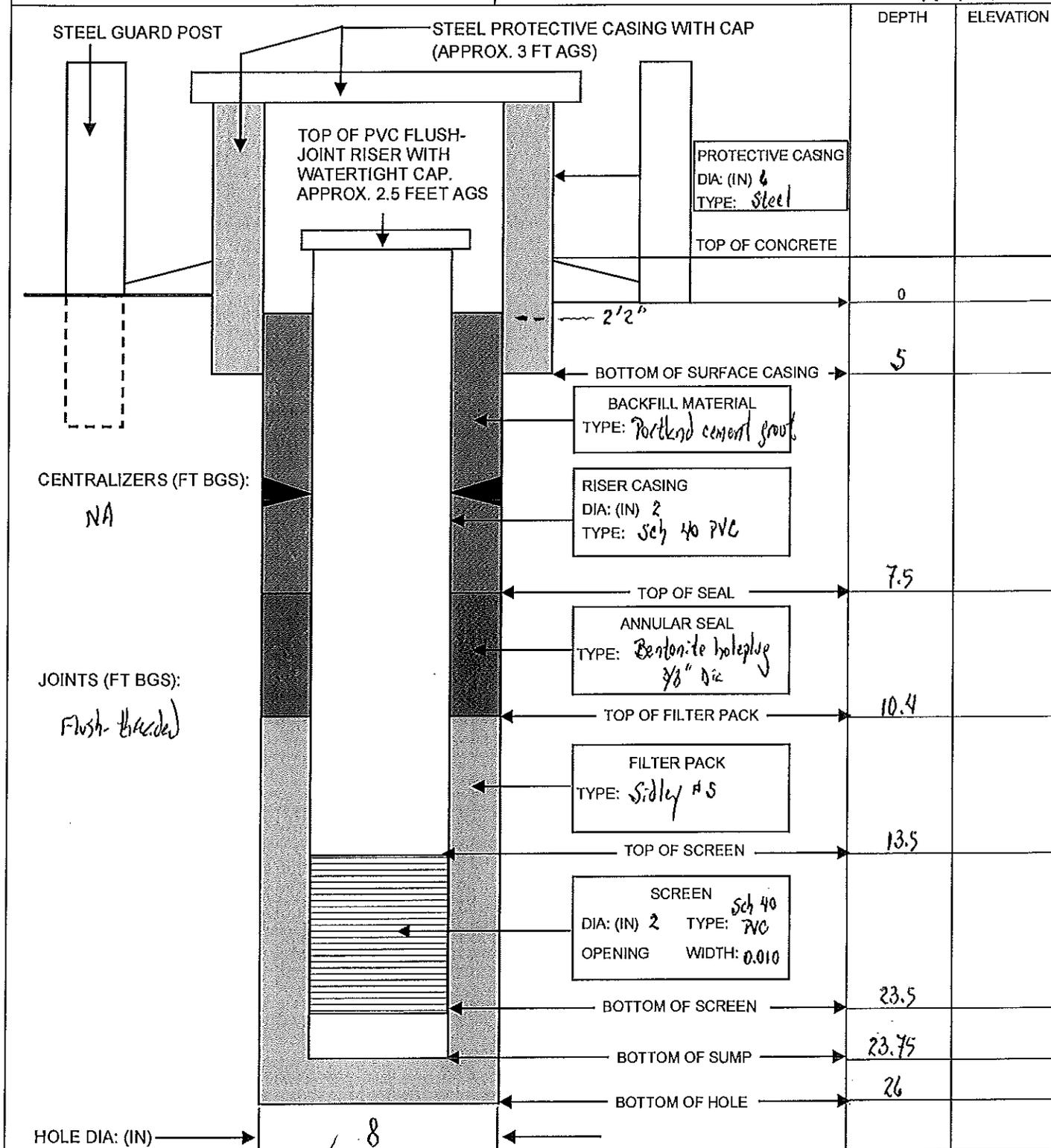
N: *550179*
E: *2358353*

REFERENCE POINT:

TOC

ELEVATION: MSL

1014.51



Recorded by:

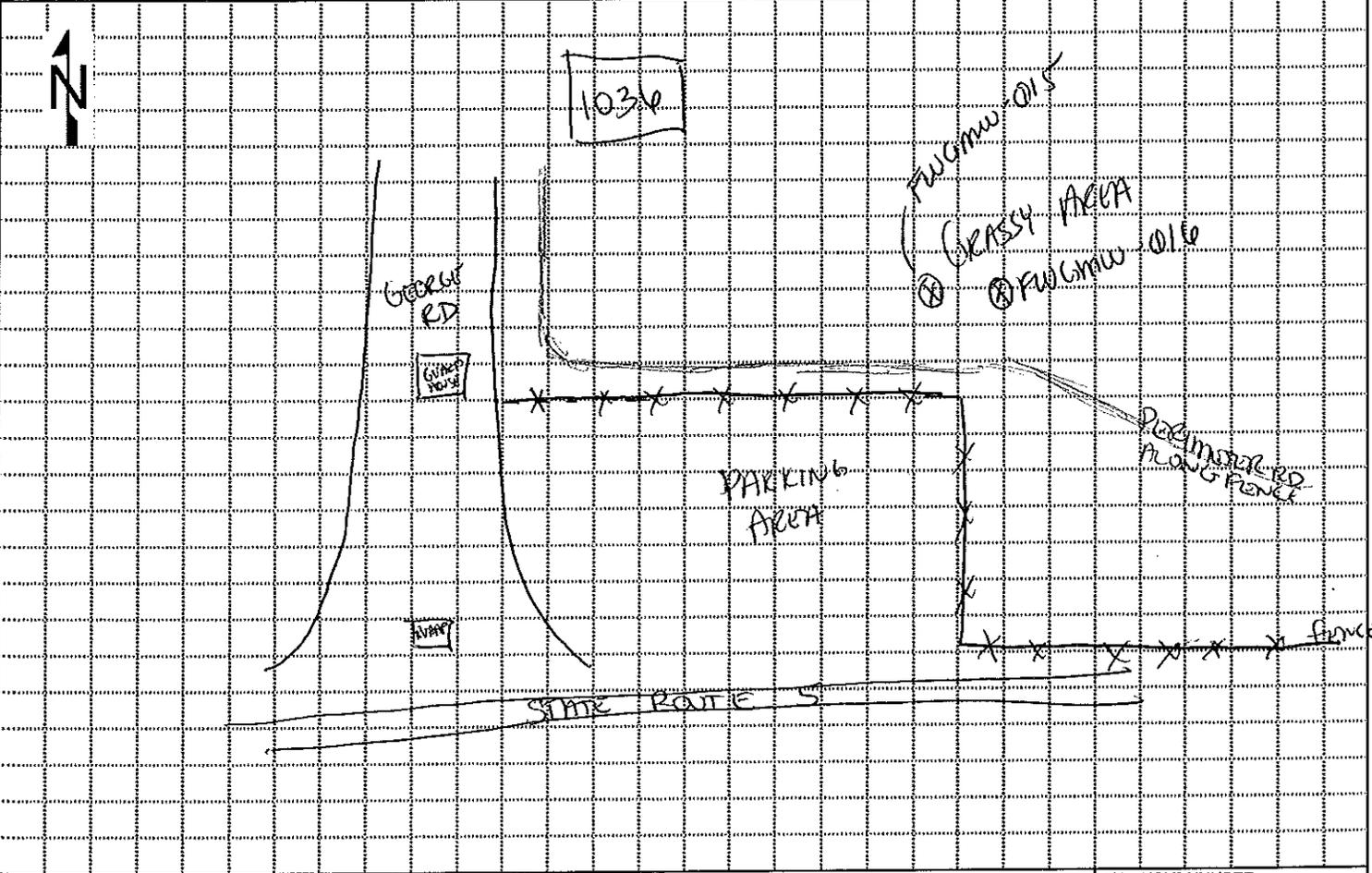
[Signature]

QA performed by:

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-016
1. COMPANY NAME SAIC		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF 3
3. PROJECT RVAAP-106 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER ARON MACKAY		6. MAKE/MODEL OF DRILL CME 750X	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 2" x 2' SPLIT SPOON 3/4" ID HSAIS N SERIES ROCK CORE SAMPLER		8. BOREHOLE LOCATION Admin Area	
12. OVERBURDEN THICKNESS 30.8'		9. SURFACE ELEVATION/DATUM 1011.90	
13. DEPTH DRILLED INTO BEDROCK 28.2'		10. DRILL DATE/TIME STARTED: 04/12/12; 12 ⁰⁰ COMPLETED: 04/16/12	
14. TOTAL DEPTH OF BOREHOLE 65		15. DEPTH GROUNDWATER ENCOUNTERED BEDROCK ~ 50'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	

18. GEOTECHNICAL SAMPLES PERMEABILITY	UNDISTURBED: 60' 01.8'	DISTURBED: —	19. TOTAL NUMBER OF CORE BOXES 2
20. CHEMICAL SAMPLES	CHEM: —	RAD: NA	OTHER: —
22. DISPOSITION OF BOREHOLE			21. TOTAL CORE RECOVERY % 64% (Small not recovered)
DATE STARTED/INSTALLED: 4/12/12			DATE COMPLETED/ABANDONED: 4/16/12
BACKFILL TYPE:	<input type="checkbox"/> GROUT	<input type="checkbox"/> BENTONITE	<input type="checkbox"/> TEMPORARY WELL POINT
			<input checked="" type="checkbox"/> MONITORING WELL
23. NOTES BKG: ≤Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-106 RI	GEOLOGIST SIGNATURE/DATE Amanda Jentzen 04/16/12	BOREHOLE NUMBER FWGmw-016
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER FWGmw-016	
1. COMPANY NAME SAIC			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP-LOU RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266			
5. NAME OF DRILLER Aaron Mackey			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: MiniRAE 2000 WATER LEVEL MAKE/MODEL: _____			PID SERIAL#: 110-005816 WATER LEVEL SERIAL#: _____		Colors from Munsell Soil Color Chart, Rev 2000 REV ED	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			SEE BORELOG FOR FWGmw-015 FOR SOIL DESCRIPTION & PID MEASUREMENTS FOR 0.0' - 24.0'			PID MEASUREMENTS: A = Ambient H = Headspace
	5					
	10					
	15					
	20					
	25		(24.0' - 28.5') Silty CLAY (CL); dk gray, 10YR4/1 soft damp; high plasticity	2/3/3/3	A 0.0	
			CL @ 26; stiffer; trace Gravel	1.1/2.0 24-26	H 0.5	@0811
				7/7/7/11	A 0.0	
			(28.5' - 30.8') Gravel (GM); subangular 1/4" - 1" w/ silty + fine sand matrix. 10YR4/1 dark gray + 10YR3/3 dark brown; clay; medium dense; little shale fragments	2.0/2.0 26-28	H 0.4	@0818
	30			2/4/4/8	A 0.0	
				1.0/2.0 28-30	H 0.4	@0848
PROJECT RVAAP-LOU RI			GEOLOGIST SIGNATURE/DATE Amanda J. Hester 04/10/16		BOREHOLE NUMBER FWGmw-016	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER FWGmw-016
1. COMPANY NAME SATC		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 3 OF 3

3. PROJECT RVAAP-066 RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268
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5. NAME OF DRILLER ARON MACKAY	6. DIRECTION OF BOREHOLE VERTICAL	INCLINED	DEGREES
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7. NOTES PID MAKE/MODEL: MINIRAE 2000 WATER LEVEL MAKE/MODEL: —	PID SERIAL#: 110-005816 WATER LEVEL SERIAL#: —	Colors from Munsell Soil Color Chart, Rev 2000 Rev Ed
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ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM) (OPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			@ 30' fining downward	317/718	A 0.0	COAR BOTTOM FEW OUT
			(30.8' - 33.0') Fine to very fine grained SAND (sw); saturated; 10YR4/2 dk grayish brown medium dense; nat plastic	1.5/2.0 30-32	H 0.4	@0900
			(32.9' - 33.0') GRAVEL - STORM	9113/23/29 2.0/2.6 32-34	A: 0.0 H: 0.1	@0905
35		ML	(33.0' - 36.8') SILT (mw); some Gravel; slightly micaceous; dry; 10YR4/1 dark gray; some shale fragments + little fine sand; stiff	7117/25/28 1.3/2.0 34-36	A 0.0 H 0.2	@0928
			33.8' - 34.0' SHALE fragment	31/39/50/4	A 0.0	
			@ 36' shale content increases w/ depth	1.3/1.3 36-38	H 0.1	
		SH	(36.8' - 37.3') WEATHERED SHALE (SH) dry; brittle - more competent w/ depth		Ambient 0.0	40-50 @0925 3.2'/10.0'
40			10YR4/1 dark gray			
			AUGER TO 40' + SET 6" CASING (04/13/12)			Lost shale core top on the
			(40.0' - 47.9) SHALE; dark gray; dry; brittle			
45		SH				
			(47.9' - 65') SANDSTONE; very light gray; wet; few subrounded Gravels			1125 0411/012 @0925 Amb 411/012
50			@ 50' producing water		Ambient 0.0	50-58.6' 6.4'/8.6'
			(50'-52') very fractured			
		SS				
55			(54' - 54.5') interbedded SH + SS			0411/012 @1220
			(55.5' - 56.5') interbedded SH + SS		Ambient 0.0	58.6' - 65' 6.4'/6.4'
			@ 56.5' coarser grained SS			
60			Boring terminated @ 65 ft bgs.			CORE REMOVED from 60'-61.8' bgs for permeability testing

PROJECT RVAAP-066 RI	GEOLOGIST SIGNATURE/DATE Amanda Trenton 04/16/12	BOREHOLE NUMBER FWGmw-016
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MONITORING WELL

PROJECT NAME: *RUMAP-66 RT*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *FWG mw-016*

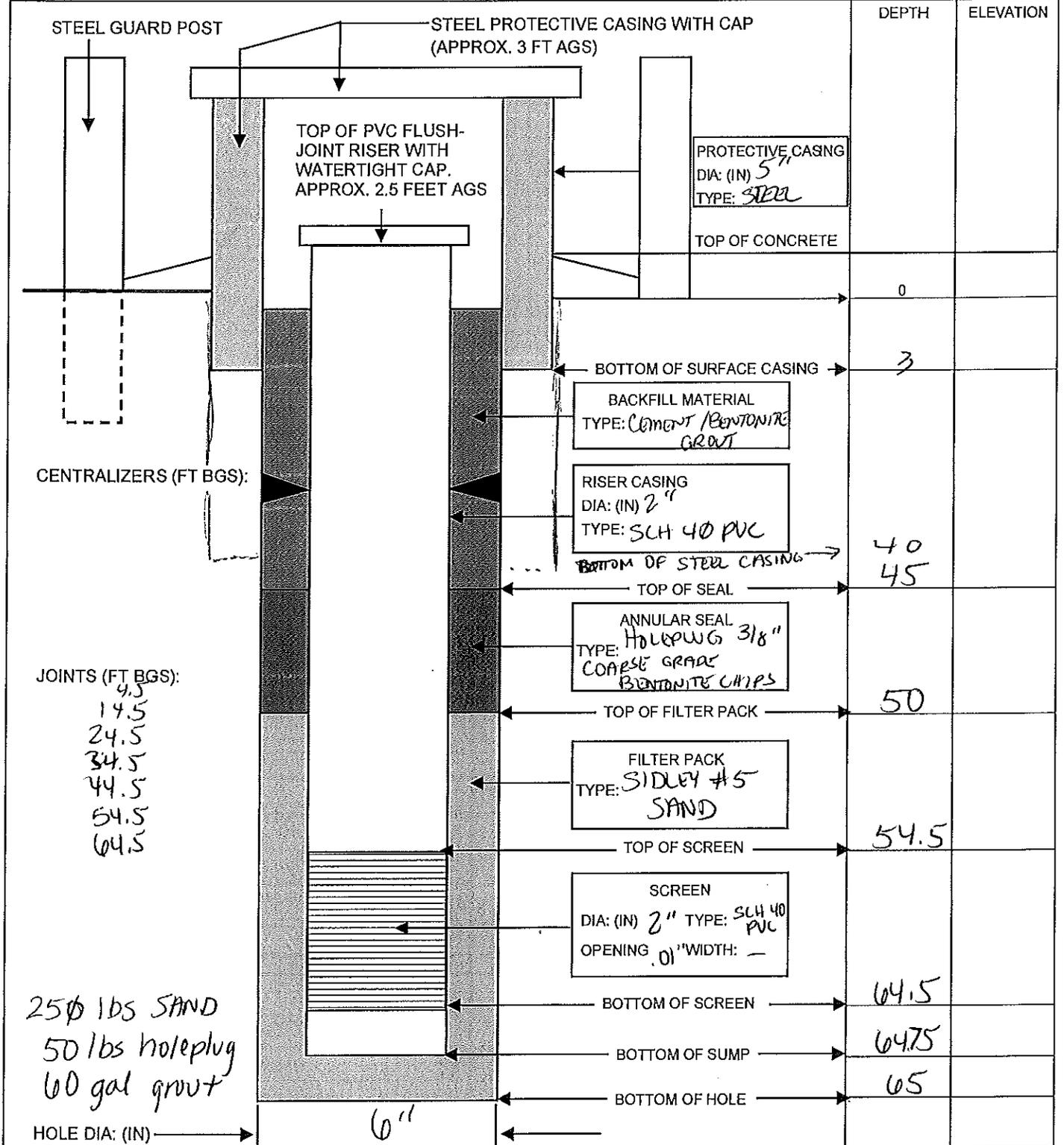
BEGIN: *04/10/12; 1250*

END: *04/10/12; 1515*

COORDINATES: N: *550171*
E: *2358364*

REFERENCE POINT: *T00*

ELEVATION: *MSL*
1014.39

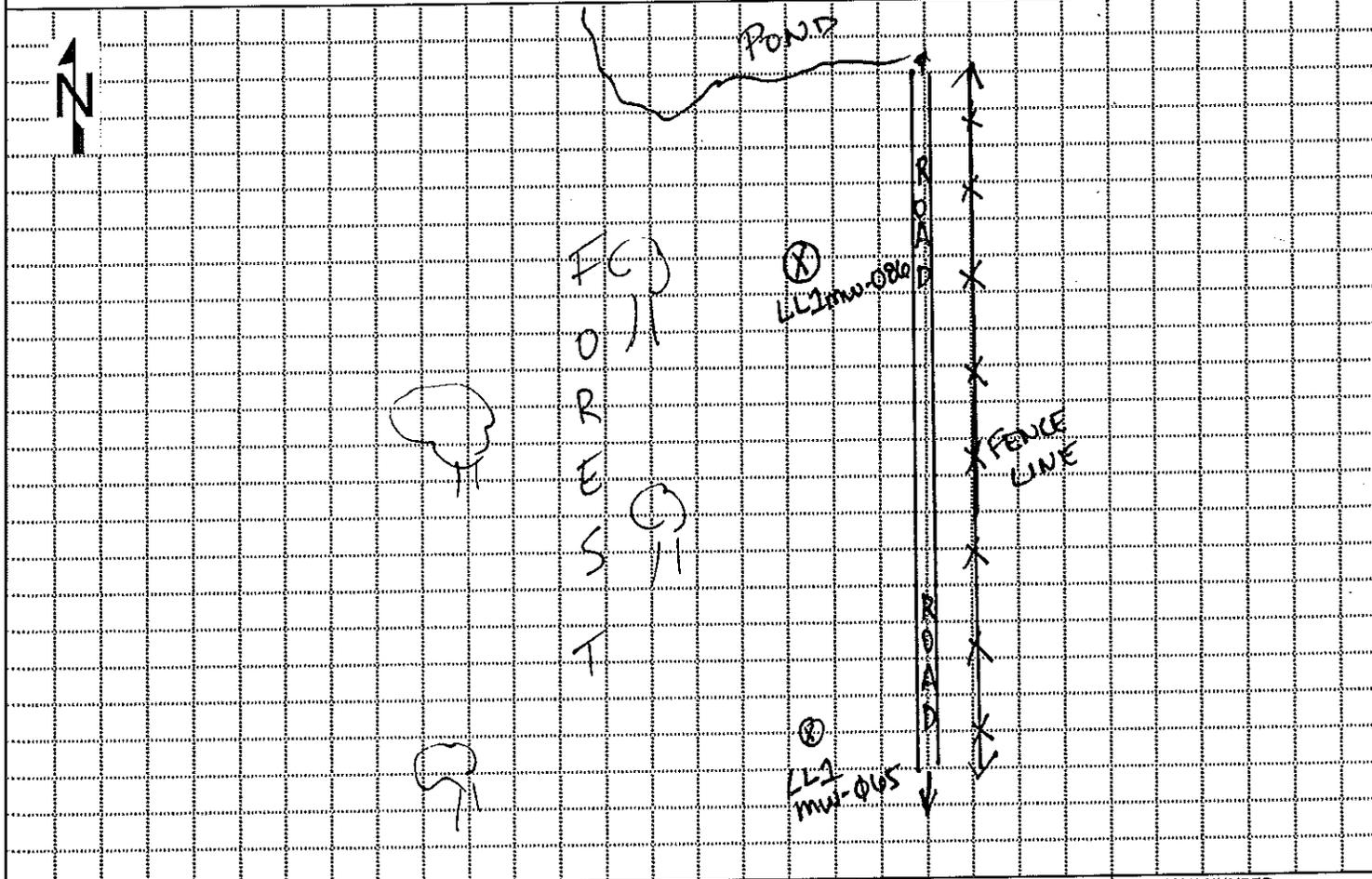


Recorded by: *Amanda Trenton* 04/10/12 QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL1mw-086
1. COMPANY NAME SAIC		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT FWGWMP RI (RVAAP-66)		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER AARON MACKAY		6. MAKE/MODEL OF DRILL CME 750X	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 2' x 2" Split Spoon 8 1/4" ID HSAs		8. BOREHOLE LOCATION Facility SE; NORTH OF LL1mw-086	
		9. SURFACE ELEVATION/DATUM 938.00	
		10. DRILL DATE/TIME STARTED: 02/28/12. COMPLETED: 03/06/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 13.4'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION 4.2' bgs on 03/05/12; 5.0' bgs on 03/06/12	
12. OVERBURDEN THICKNESS 77.3 FT		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK 77.3 FT NA			
14. TOTAL DEPTH OF BOREHOLE 77.3 FT			

18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER: NA		21. TOTAL CORE RECOVERY % —	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 02/28/12 1300 DATE COMPLETED/ABANDONED: 03/06/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT FWGWMP RI (RVAAP-66)	GEOLOGIST SIGNATURE/DATE Amanda Hunter 03/06/12	BOREHOLE NUMBER LL1mw-086
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL1mw-086
1. COMPANY NAME SMC		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT FWGWMP RE (RVAAP-666)		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268	
5. NAME OF DRILLER AARON MACKAY		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: MiniRAE 2000 WATER LEVEL MAKE/MODEL: _____		PID SERIAL#: 110-005810 WATER LEVEL SERIAL#: _____	Colors from Munsell Soil Color Chart, Rev 2000 Rev ED

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM) (CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			(0.0' - 10.5') Silty clay (cy); some organics from 0-0.5'; soft white to light brown, little subangular gravel throughout; 10YR5/6 yellowish brown, 10YR6/1 gray + 10YR5/2 grayish brown; dry; medium plasticity.	2/1/3/5 1.9/2.0 0.7	A: 0.0 H: 0.1	A = Ambient PID (ppm) H = Headspace PID (ppm)
	5	CL	By 4.0' color is primarily 10YR5/4 yellowish brown w/ little 10YR5/1 gray; stiff.	5/9/10/10 1.7/2.0 2-4	A: 0.0 H: 0.0	
			(7.0' Introduction of little fine sand + increase in some gravel (GS); very stiff; dry.	15/13/25/30	A: 0.0	
			(7.5' 2" SS Gravel	1.7/2.0	H: 0.0	
			(8.0' Introduction of little 10YR6/8 reddish yellow	6-8	H: 0.0	
	10		(10.5' - 13.4') Silt (ml); some clay; trace Sand (increases w/ depth); little subangular fine gravel; 10YR5/1 gray; stiff; dry; medium plasticity.	5/11/6/17 1.9/2.0 8-10	A: 0.0 H: 0.1	
		ML		4/8/7/6 0.8/2.0 10-12	A: 0.0 H: 0.0	
	13.4'		(13.4' - 19.4') Fine Sand (sw), wet; medium dense; 10YR4/1 dark gray; coarsening downward to a medium grained sand	8/7/11/12 2.0/2.0 12-14	A: 0.0 H: 0.2	
	16	SW	(15.5' Introduction of trace subangular gravel	w/ut/w/ut 1.0/2.0 14-16	A: 0.0 H: 0.2	
			By 18' less Gravel; medium grained Sand	2/2/2/2 1.4/2.0 14-18	A: 0.0 H: 0.1	
	20	ML	(19.4' - 22.0') Silt (ml); trace Sand; very saturated; 10YR4/1 dark gray; very soft; fluid.	1.6/2.0 18-20	A: 0.8	
	22		(22.0' - 27.4') Fine/V. fine sand + silt (sm), saturated; loose; 10YR4/1 dark gray; some lenses of increased sand	2/1/1/1/2 1.7/2.0 20-22	A: 0.0 H: 0.5	
	25	SM		2/2/2/2 2.0/2.0 22-24	A: 0.0 H: 0.7	
				w/ut/w/2/2 2.0/2.0 24-26	A: 0.0 H: 1.2	
		ML	(27.4' - 31.7') Silt (ml); some fine to very fine Sand; trace clay from 27.1-27.4; 10YR4/1 dark gray; wet; very soft; medium plasticity; moisture content & w/ depth; stiffness w/ depth	2/3/4/4 2.0/2.0 26-28	A: 0.0 H: 0.7	
	30			1/2/2/3 1.5/2.0 25-30	A: 0.0 H: 0.7	02/28/12 - Conclude drilling @ 30ft bgs

PROJECT FWGWMP RE (RVAAP-666)	GEOLOGIST SIGNATURE/DATE Amanda Jentzen 02/28/12	BOREHOLE NUMBER LL1mw-086
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL1mw-086
1. COMPANY NAME SAIC		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 3 OF 4

3. PROJECT FWGWMP RI (RUAAP-66)	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44286
5. NAME OF DRILLER AARON MACKAY	6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES
7. NOTES PID MAKE/MODEL: MiniRAE 2000 WATER LEVEL MAKE/MODEL: —	PID SERIAL#: 110-005810 WATER LEVEL SERIAL#: — Colors from Munsell Soil Color Chart, Rev 2000 Revised

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			cont. SILT (ml); very soft; 10YR4/1 dark gray; wet ~30.0'	1/1/2/1 1.7/2.0 30-32	A: 0.0 H: 0.1	
				5/3/3/4 2.0/2.0 32-34	A: 0.0 H: 0.1	
	35	ML		wt/wt/1/1 2.0/2.0 34-36	A: 0.0 H: 0.2	
				1/1/2/3 1.4/2.0 36-38	A: 0.0 H: 0.1	
	40		(39.7'-40.2') Some Clay; slightly stiffer	1/1/1/1 1.6/2.0 38-40	A: 0.0 H: 0.0	
				1/1/4/5 1.3/2.0 40-42	A: 0.0 H: 0.2	
				4/6/6/8 1.8/2.0 42-44	A: 0.0 H: 0.2	
	45	CL	(43.5'-43.7') Some Clay; slightly stiffer moist to damp	3/4/5/6 1.6/2.0 44-46	A: 0.0 H: 0.0	
			(43.7'-44.8') CLAY (CL); some silt; little subangular gravel; 10YR4/1 dark gray; dry medium stiff; medium plasticity.	6/5/6/8 2.0/2.0 46-48	A: 0.0 H: 0.0	
		ML	(44.8'-51.3') SILT (ml); medium stiff; 10YR4/1 dark gray; wet	1/1/4/3 1.3/2.0 48-50	A: 0.0 H: 0.2	
	50		@49.1' Introduction of little 10YR4/4 weak red & little fine sand	3/4/3/2 2.0/2.0 50-52	A: 0.0 H: 0.2	
			(51.3'-51.4') Medium grained sand layer	10/9/8/7 1.3/2.0 52-54	A: 0.0 H: 0.2	
		CL	(51.4'-53.8') Silty CLAY (CL); little medium grained sand in partings + lenses through-out @53.0' 53.3' + 53.4'; 10YR4/1 dark gray; moist; medium to low plasticity	2/6/8/10 1.0/2.0 54-56	A: 0.0 H: 0.2	
	55		(53.8'-63.8') Silty CLAY (CL); 5Y4/1 dark gray; dry; stiff; high plasticity	11/11/10/10 1.45/2.0 56-58	A: 0.0 H: 0.2	
			@58.0' soft clay w/ some silt.	1/4/4/6 2.0/2.0 58-60	A: 0.0 H: 0.2	
	60					

PROJECT FWGWMP RI (RUAAP-66)	GEOLOGIST SIGNATURE/DATE Amanda Jentzen 03/01/12	BOREHOLE NUMBER LL1mw-086
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HTRW DRILLING LOG (continued)

DISTRICT USACE - Louisville BOREHOLE NUMBER LL1mw-086
 1. COMPANY NAME SAIC 2. DRILLING SUBCONTRACTOR Frontz Drilling SHEET 4 OF 4

3. PROJECT FWGWMP RI (RVAAP-66) 4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268

5. NAME OF DRILLER AARON MACKAY 6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES

7. NOTES PID MAKE/MODEL: MINIRAE 2ΦΦΦ PID SERIAL#: 110-005816 Colors from Munsell Soil Color Chart, Rev 2000 Revised
 WATER LEVEL MAKE/MODEL: WATER LEVEL SERIAL#:

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Samp's IDs/Depths/Core Box/Etc.)
			60' - siltier w/ depth	11/3/15	A: 0.0	
		CL		2.0/2.0 60-62	H: 0.0	
				7/9/15/12	A: 0.0	
		ML	(63.8' - 65.5') SILT (ml); some Clay; sand content increases w/ depth; wet; 10YR 4/1 dark gray; medium stiff	1.7/2.0 62-64	H: 0.0	
	65	SM	(65.5' - 66.3') SAND + SILT (sm); wet; 10YR 4/1 dark gray medium stiff dense	2/2/3/8	A: 0.0	
		SM		1.7/2.0 64-66	H: 0.0	CONCLUDE SSE 66 ON 3/1/12
		SM	(66.3' - 68.0') Fine grained Sand; some silt dense; wet; trace clay lenses; 10YR 4/1	19/17/2/25	A: 0.0	
	70	SW	(68.0' - 70.0') Fine Grained Sand; little silt; no clay; 10YR 4/1; medium dense; wet; coarsening downward w/ depth to	1.5/2.0 66-68	H: 0.0	
		GP	2-7' Medium Grained Sand w/ Gravel	3/6/19/14	A: 0.0	
		GP	(70.0' - 74.0') Poorly sorted subrounded Gravel w/ sand matrix (gp) 10YR 4/1; wet; med. dense	1.3/2.0 68-70	H: 0.0	
		SW	74.2' Fining downward to mostly medium grained sand	0.4/2.0 70-72	H: 0.0	
		GP	(74.0' - 76.0') Fine Sand (sw); wet; 10YR 4/1 dark gray; dense	4/5/9/8	A: 0.0	
		GP	(76.0' - 76.7') Sand + Gravel; coarsening downward; 10YR 4/1 dark gray; wet; dense	1.5/2.0 72-74	H: 0.0	
		GP	(76.7' - 77.2') Sand + Gravel; coarsening downward; 10YR 4/1 dark gray; wet; dense	3/11/19/23	A: 0.0	
		SS	(77.2' - 77.3') SANDSTONE (SS); WET;	1.2/2.0 74-76	H: 0.0	
			BORING TERMINATED AT 77.3 FT BGS	27/44/59/4	A: 0.0	UNABLE TO REMOVE BIT FROM 75-77.3'; HOLE COLLAPSE; WILL SET MW IN 600X DIA
				1.3/1.3 76-77.3	H: 0.0	

PROJECT FWGWMP RI (RVAAP-66) GEOLOGIST SIGNATURE/DATE Amanda Jentz 03/02/12 BOREHOLE NUMBER LL1mw-086

MONITORING WELL

PROJECT NAME: FWGWMP RT (KUMAP-60)

PROJECT NO:

30174.0016.001.02

WELL NUMBER: LL1mw-086

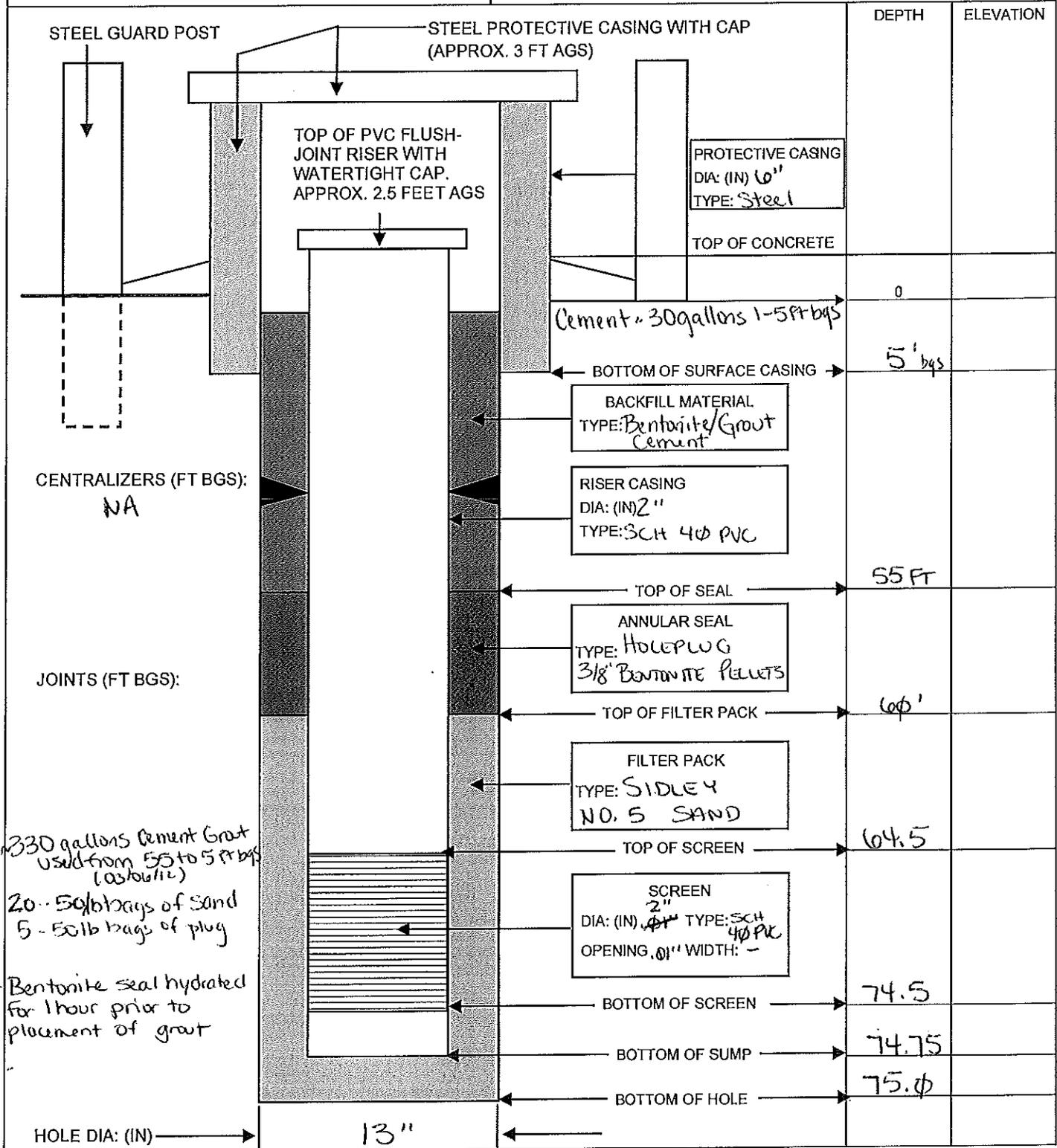
BEGIN: 03/06/12; 0930

END: 03/07/12

COORDINATES: N: 561714
E: 2380437

REFERENCE POINT: T00

ELEVATION: MSL
940.63



Recorded by: Amanda Trenton

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL1mw-087
1. COMPANY NAME SAIC		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT FWGWMP RI (RUAAP-06)		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER JOE Tele		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 2" x 2" SPLIT SPOON 4 1/4" ID HSAs		8. BOREHOLE LOCATION P:100 w/ SCFMW-004	
		9. SURFACE ELEVATION/DATUM 941.80	
		10. DRILL DATE/TIME STARTED: 02/29/12; 1125 COMPLETED: 03/01/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 8.2'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS 18+ FT		17. OTHER WATER LEVEL MEASUREMENTS (INCLUE DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK NA			
14. TOTAL DEPTH OF BOREHOLE 18 FT			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA ...		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER: ...		21. TOTAL CORE RECOVERY % ...	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 02/29/12		DATE COMPLETED/ABANDONED: 03/01/12	
BACKFILL TYPE: <input type="checkbox"/> GRDUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \leq Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT FWGWMP RI (RUAAP-06)		GEOLOGIST SIGNATURE/DATE Amanda Trenton 02/29/12	
		BOREHOLE NUMBER LL1mw-087	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER LL1mw-087	
1. COMPANY NAME SATIC			2. DRILLING SUBCONTRACTOR Fronz Drilling		SHEET 2 OF 2	
3. PROJECT FWGWMP RI (RVAAP-66)			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44286			
5. NAME OF DRILLER JOE TETER			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: MINIRAE 2000 PID			PID SERIAL#: 110-005816		Colors from Munsell Soil Color Chart, Rev 2000 REV ED	
WATER LEVEL MAKE/MODEL: _____			WATER LEVEL SERIAL#: _____			
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
		ML	(0.0' - 0.5') SILT (ml); little sand; clay content ↑ w/ depth; soft, dry; medium plasticity; organics throughout; 10YR 4/3 brown.	3/3/5 1.7/2.0 2-2	A: 0.0 H: 0.0	A = Ambient PID (paw) H = Headspace PID (ppm)
		CL	(0.5' - 3.1') Silty CLAY (cc); some silt; little fine subangular gravel; 10YR 5/6 yellowish brown; 10YR 5/3 brown; soft to medium stiff; dry; medium plasticity.	5/6/8/9 1.7/2.0 2-4	A: 0.0 H: 0.0	
5		ML	(3.1' - 6.8') SILT (ml); little clay; some very fine sand in lenses; trace gravel; 10YR 4/3 brown; 10YR 5/4 yellowish brown + 10YR 5/1 gray; Bl 5; color is 7.5Y 6/8 brownish yellow, 2.5Y 5/4 olive + little 10YR 6/1 gray.	2/4/5/6 2.0/2.0 4-10	A: 0.0 H: 0.0	@1145
		ML	(6.1' - 6.8') MOIST SILT (SPA)	5/5/5/5	A: 0.0	@1152
		CL	(6.8' - 7.2') CLAY; some silt; dry; high plasticity; medium stiff. 2.5Y 5/4, 7.5Y 6/8 + 10YR 6/1	1.7/2.0 6-8	H: 0.2	
8.2			(7.2' - 18.0') SILT (ml); trace lenses of clay	5/4/4/4 2.0/2.0 8-10	A: 0.0 H: 0.3	@1200
10			saturated @ 8.2; 10B5/1 bluish gray; very soft, fluid; very wet; transitions to color of 10YR 5/ greenish gray w/ depth	w/ut/1/2 2.0/2.0 10-12	A: 0.0 H: 0.2	@1211
		ML		1/3/3/4 1.4/2.0 12-14	A: 0.0 H: 0.2	@1220
15				1/2/3/2 1.6/2.0 14-16	A: 0.0 H: 0.2	@1228
				2/3/3/3 2.0/2.0 16-18	A: 0.0 H: 0.2	@1232
18			Split spoon terminated at 18 ft bgs Hollow Stem Augers terminated @ 17.5' bgs Commence well inside @ 1244			
20						
25						
30						

PROJECT FWGWMP RI (RVAAP-66)	GEOLOGIST SIGNATURE/DATE Amanda Hentz 02/29/12	BOREHOLE NUMBER LL1mw-087
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MONITORING WELL

PROJECT NAME: FWGWMP RT (RVAAP-666)

PROJECT NO:

30174.0016.001.02

WELL NUMBER: LL 1mw - 087

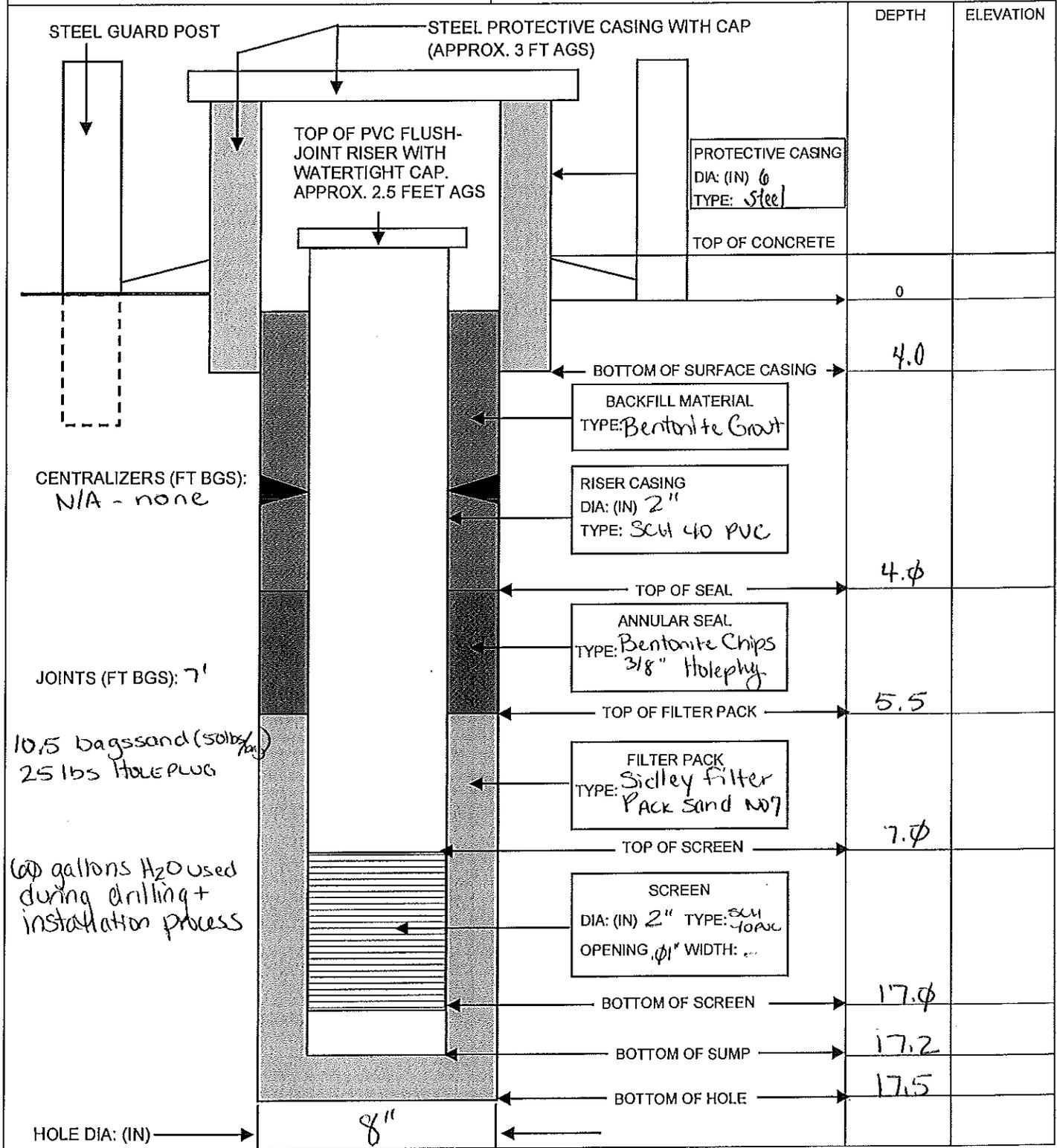
BEGIN: 02/29/12 1530

END: 3/1/12

COORDINATES: N: 560375
E: 2378732

REFERENCE POINT: T06

ELEVATION: MSL
944.32



Recorded by: *David Speckhard*

QA performed by: _____

HTRW DRILLING LOG (continued)			DISTRICT	BOREHOLE NUMBER		
1. COMPANY NAME			USACE - Louisville	LL3 MW - 244		
2. DRILLING SUBCONTRACTOR			Frontz Drilling	SHEET 2 OF 3		
3. PROJECT			4. LOCATION			
FACILITY-WIDE GROUNDWATER RE			RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER			6. DIRECTION OF BOREHOLE			
AARON MACKEY			<input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES			PID MAKE/MODEL:		PID SERIAL#:	
MiniRAE 2000			110-005816		Colors from Munsell Soil Color Chart, Rev	
WATER LEVEL MAKE/MODEL:			WATER LEVEL SERIAL#:		2000 Reo ED	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0.4	ML	(0.0' - 0.4') SILT (ml); little clay; some organics	0-2	A: 0.0 H: 0.0	
			104R3/2; soft; moist from surface; some organics	2/2/3/4	A: 0.0 H: 0.0	
			(0.4' - 6.2') CLAY (cc); some silt; trace v. fine	1.7/2.0	A: 0.0 H: 2-4	
		CL	Sand; 104R4/6 dk yellowish brown; 104R5/1 gray +	2-4	A: 0.0 H: 2-4	
	5		little 104R5/3 brown; trace organics; clay; medium	3/7/7/9	A: 0.0 H: 4-6	
			stiff; medium plasticity; stiffness ↑ w/ depth	1.65/2.0	A: 0.0 H: 4-6	
			@ 5.2' Introduction of fine subrounded gravel (trace)	4-6	A: 0.0 H: 6-8	
			color is primarily 104R4/6	2/5/5/8	A: 0.0 H: 6-8	
		ML	(6.2' - 8.3') SILT (ml); little clay; some	15/2.0	A: 0.0 H: 8-10	
	10		Gravel (<4" - 1.5"); 104R4/4 dk yellowish brown	6-8	A: 0.0 H: 8-10	
			stiff; dry; medium plasticity; SS Gravel @ 6.4' 7.0'	4/12/16/17	A: 0.0 H: 8-9	
		ML	fine sand content ↑ w/ depth starting at ~7.4'	19/2.0	A: 0.0 H: 10-12	
			(8.3' - 9.8') SILT; some clay; some subang gravel	11/8/21/23	A: 0.0 H: 12-14	
			104R4/6 dk yellowish brown + 104R4/2 dk grayish brown;	1.0/2.0 8-10	A: 0.0 H: 12-14	
	15		stiff; dry; low plasticity; ss gravel 9.8' - 9.9'	3/11/17/16	A: 0.0 H: 14-16	
		CL	(9.8' - 10.9') CLAY (cc); some silt; little sub ang	1.0/2.0 10-12	A: 0.0 H: 14-16	
			gravel; ss frag @ 10.5' 104R4/3 brown w/ little 104R4/1	13/11/21/5	A: 0.0 H: 16-18	WEATHERED SANDSTONE (SS) 17.7-20' (SUBANG GR)
			dark gray; clay; stiff; medium plasticity	1.5/2.0 13-14	A: 0.0 H: 16-18	COARSNING DOWNWARD; wet 104R5/3 brown
		SS	(10.9' - 11.1') sandstone gravel	3/13/15/15	A: 0.0 H: 18-20	20' Competent Bedrock Sandstone (SS)
	20	CL	(11.1' - 14.6') Silty CLAY (cc); little fine gravel; 104R4/1	1.4/2.0 14-16	A: 0.0 H: 18-20	104R5/3 brown; wet
			dark gray; stiff; clay; high plasticity	12/20/20/21	A: 0.0 H: NA	DRILL TO 21 FT BGS + SET CASING
			@ 14.2 moist sand seen	2.0/2.0 16-18	A: 0.0 H: NA	02/10/12 (21' - 45') SANDSTONE WET - SEE PG 3
			(14.6' - 14.8') FINE SAND; some silt (sm) 104R6/1	14/15/22/20		
			bluish gray; wet; medium dense nonplastic	1.2/2.0 18-20		
	25		(14.8' - 15.5') SILT (ml) + SAND; trace clay 104R4/4	5/3		
			dark yellowish brown; little subang gravel; clay; stiff	0.5/0.25 20-20.25		
		GP SM SS	Sand content ↑ w/ depth			
			(15.5' - 17.2') Subang Gravel + sand (GP); fining			
			downward; wet; medium dense; 104R5/4 yellowish			
	30		brown (17.2' - 17.7') Sand + SILT (sm); little gravel; 104R5/4 dry			

PROJECT	RVAAP-60	GEOLOGIST SIGNATURE/DATE	02/27/12	BOREHOLE NUMBER	LL3 MW - 244
FACILITY-WIDE GROUNDWATER RE		Amanda Hester			

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER U3mw-244
1. COMPANY NAME SATC		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 3 OF 3

3. PROJECT FACILITY WIDE GROUNDWATER ICF	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268
5. NAME OF DRILLER Aaron Mackey	6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES
7. NOTES PID MAKE/MODEL: Mini RAE 2000 WATER LEVEL MAKE/MODEL: _____	PID SERIAL#: 110-005816 Colors from Munsell Soil Color Chart, Rev 2000 Rev ED WATER LEVEL SERIAL#: _____

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
		SS	(21'-45') Sharon Sandstone (SS); wet; fine grained iron staining from 21'-29'; fractured from 21'-24'		Ambient	CORE BOX #1 21-45 21.0' - 30.0' 0.0 ppm RECOVERY: 7.1/9.0'
	25' 25					
	30' 30		fractures from 30'-31'; iron staining @ 31.5'; fine shale partings within gray sandstone @ 32.5' shale seam; very soft; black			CORE BOX #2 30' - 45' RECOVERY 30-40 8.0/10.0' 40-45' 3.5/5.0
	35' 35					
	40' 40		37.0-37.3 increase in shale partings 37.3-37.5 shale seam; hard			PERMEABILITY TESTING CORE 38.5' - 39.7' (REMOVED FROM) CORE BOX
	45' 45		@ 40' shale seam; hard			
			44' @ 37' increase in shale partings			
	50' 50		Boring terminated at 45 ft logs			

PROJECT RVAAP-666 FACILITY WIDE GROUNDWATER ICF	GEOLOGIST SIGNATURE/DATE Amanda J. [Signature] 03/08/12	BOREHOLE NUMBER U3mw-244
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MONITORING WELL

PROJECT NAME: FACILITY-WIDE GROUNDWATER

PROJECT NO: 30174.0016.001.02

WELL NUMBER: LL3MW-244

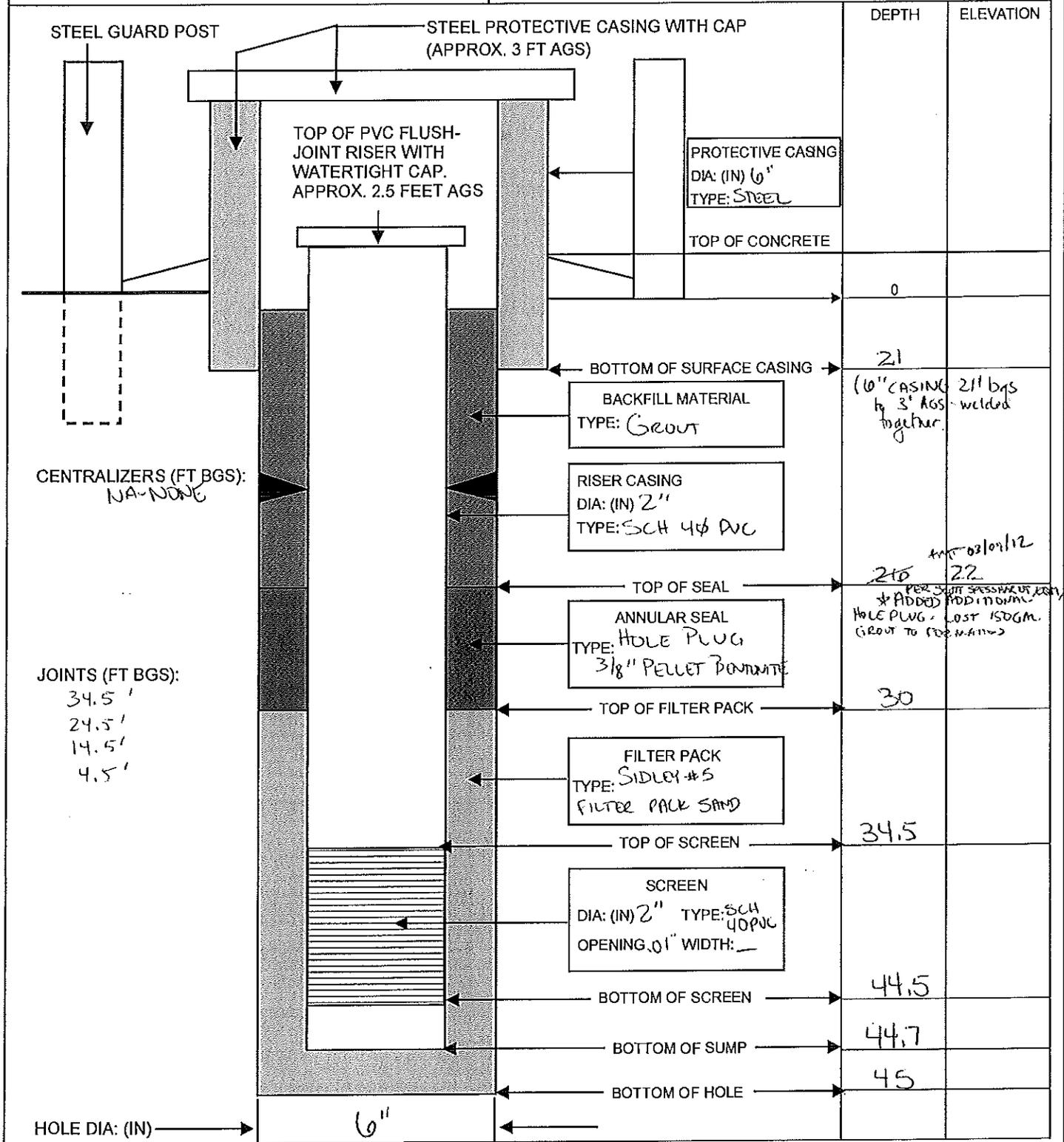
BEGIN: 03/08/12

END: 03/12/12

COORDINATES: N: 556033
E: 2371456

REFERENCE POINT: T00

ELEVATION: MSL
988.78



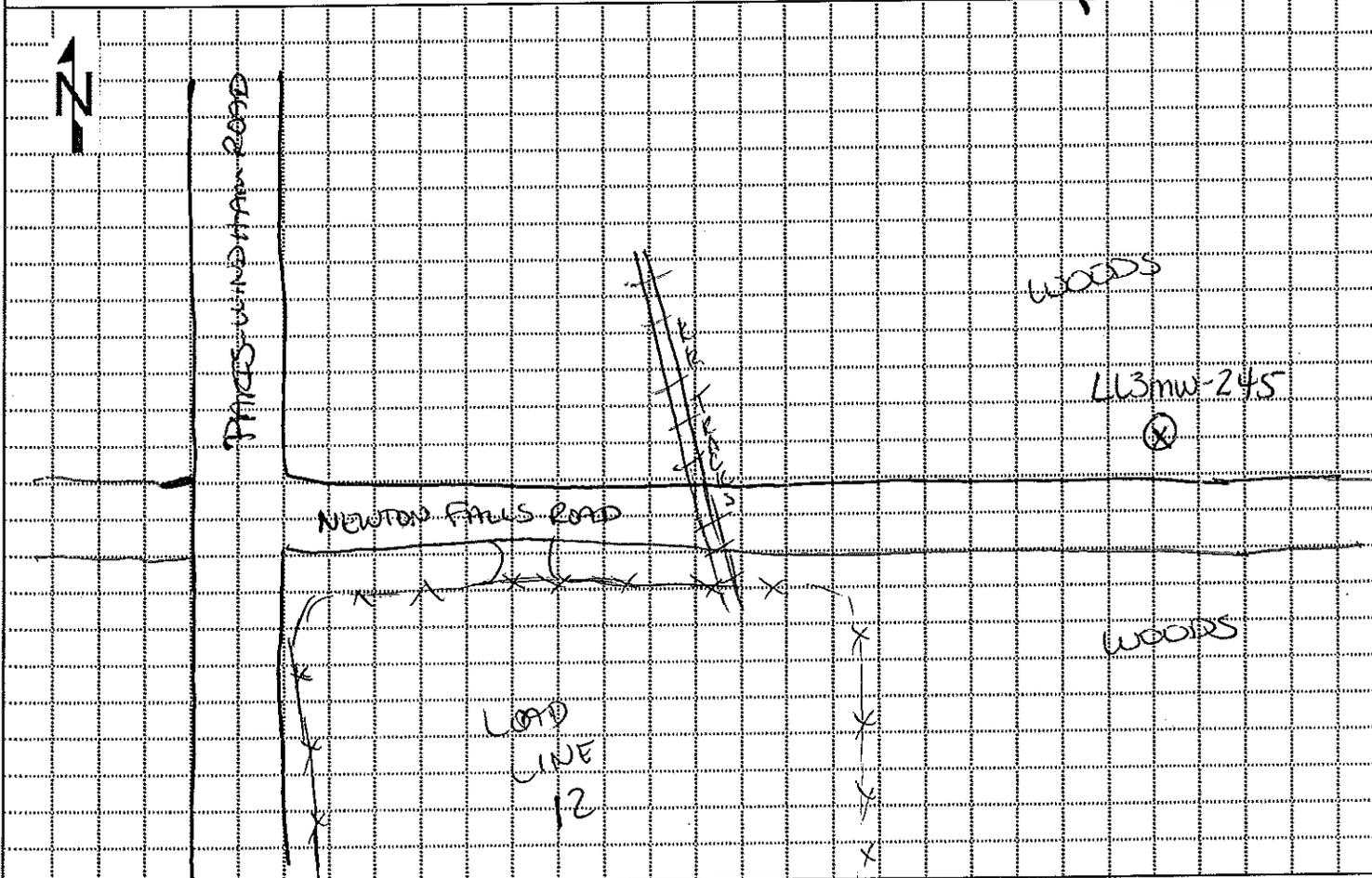
Recorded by: Amanda Inert

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL3 MW-245
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tetel / ^{Mr.} Aaron Mackey		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" ID HSA 2" x 24" Split Spoon N SERIES ROCK CORE SAMPLER		8. BOREHOLE LOCATION PW-7; LL3 road between LL3 & LL12	
		9. SURFACE ELEVATION/DATUM 478.70	
		10. DRILL DATE/TIME STARTED: 3/15/12 COMPLETED: 04/02/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 10' / 10' / 35.3'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION	
12. OVERBURDEN THICKNESS 24'			
13. DEPTH DRILLED INTO BEDROCK 23'			
14. TOTAL DEPTH OF BOREHOLE 47'		17. OTHER WATER LEVEL MEASUREMENTS (INCLUDE DATE/TIME)	

18. GEOTECHNICAL SAMPLES	UNDISTURBED: _____	DISTURBED: _____	19. TOTAL NUMBER OF CORE BOXES 2
20. CHEMICAL SAMPLES	CHEM: _____	RAD: NA	OTHER: _____
22. DISPOSITION OF BOREHOLE			21. TOTAL CORE RECOVERY % 84%
DATE STARTED/INSTALLED: 04/02/12		DATE COMPLETED/ABANDONED: 04/02/12	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE	BOREHOLE NUMBER LL3 MW-245
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Amanda Norton 04/02/12

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL3 MW-245
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 2 OF 4

3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266
5. NAME OF DRILLER Joe Teled	6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:	PID SERIAL#: A2-1861 WATER LEVEL SERIAL#: Colors from Munsell Soil Color Chart, Rev

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2		Upper 4" Silty clay topsoil, dk brn, moist, soft, roots	1-2- 2-3	0	0-2 ft; 1349
			Next 11" Fill, silty clay w/ gravel, dk brn, moist, few cinders, silty soft	R=23/24		
	8	CL	Remainder silty clay, brn w/ gray along vertical fract., damp, silty soft, few iron oxides			
	2-4	CL	Silty clay, brn w/ gray along vertical fractures, few iron oxides, damp, mod. stiff	4-5- 7-9 R=18/24	0	2-4 ft; 1355
	20					
	4-6	CL	Silty clay, brn w/ gray along fractures, few small gravel, dry, Unkd, stiff	5-8- 10-11 R=24/24	0	4-6 ft; 1400
	20					
	6-8	CL	Silty clay, brn, few small gravel, dry, mod. stiff, slightly plastic; from 3-5" wet, brn, silty sand, fn-med grained	9-13- 11-13 R=20/24	0	6-8 ft; 1405
	20					
	8-10	CL ML	Upper 8.5" Silty clay, brn, few small gravel, mod. stiff Lower 7" Silt, gray, little clay, dry, mod. stiff	8-11- 13-14 R=15.5/24	0	8-10 ft; 1413
	10-12	CL	Upper 10" Silty clay, brn w/ gray mottles, wet, soft, little sand & gravel	1-2- 7-7 R=24/24	0	10-12 ft; 1419
	20	ML	Remainder silt, gray, some clay, plastic, sticky, moist			
	12-14	ML	Clayey silt, gray, plastic, damp	7-9-11-10 R=2/24	0	12-14 ft; 1426
	20					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE J. Teled 3/15/12	BOREHOLE NUMBER LL3 MW-245
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL3 MW-245
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268	
5. NAME OF DRILLER Joe Tete/		6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES	

7. NOTES PID MAKE/MODEL: <u>Sims MSA</u> <u>Int 03/30/12 Mini RAE 2640</u>		PID SERIAL#: <u>A2-1861</u>	Colors from Munsell Soil Color Chart, Rev
WATER LEVEL MAKE/MODEL: _____		WATER LEVEL SERIAL#: _____	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14	ML	Clayey silt, gray, damp, fairly plastic, few small gravel	2-3- 5-7 R=18/24	0	14-16 ft; 1433
	16	ML	Clayey silt, gray, wet, plastic, fairly soft	5-7- 6-6 R=24/24	0	16-18 ft; 1436
	18	ML	Upper 9" As above	wt of heavy 2-3-6 R=19/24	0	18-20 ft; 1449
		SM	Next 2" Sand, gray, med-crs, some silt, wet			
		ML	Then 2" silt, gray, wet			
		SM	Then 4" silty sand, wet, gray, fn-crs			
		ML	Last 2" silt, gray, wet, fairly soft			
	20	SP	Upper 12" Sand, brn-gray, med-crs, wet, few small gravel, fairly loose	1-2- 2-3 R=24/24	0	20-22 ft; 1458
		SM	Next 3" silty sand, brn-gray, fn-grained, wet			
		ML	Lower 9" clayey silt, gray, plastic, fairly soft, wet			
	22	SM	Upper 2" Sand, gray, wet, med-grained, few silt	3-4- 6-8 R=20/24	0	22-24 ft; 1514
		CL	Next 15" silty clay, gray, damp, few sand & small gravel slightly plastic			
		SH	Lower 3" weathered shale, dk gray, damp, silty clay			
	24	SH	Upper 5" wet sand, probably carry down	8-15- 27-48 R=18/24	0	24-26 ft; 1529
		SH	Reminded weathered shale, dk gray, damp, fairly brittle, clayey, bed @ top			
			Confirmatory split spoon.			
	28	SH	5" SILTY (SH); dry; very dark gray; somewhat brittle; micaceous; drill to 29'	50/5		28-30 ft 03/30/12 0724
			SET 6' casing 5' INTO BEDROCK			

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE David Hyslop 3/15/12 Amanda Hester 03/30/12	BOREHOLE NUMBER LL3 MW-245
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL3MW-245
1. COMPANY NAME SAIZ		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 2 4 OF 4

3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266
5. NAME OF DRILLER AARON MACKAY	6. DIRECTION OF BOREHOLE VERTICAL INCLUDED DEGREES
7. NOTES PID MAKE/MODEL: MinirAE 2400	PID SERIAL#: 110-005816
WATER LEVEL MAKE/MODEL: _____	WATER LEVEL SERIAL#: _____
Colors from Munsell Soil Color Chart, Rev 2000 Rev 01.	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
		SH	(29-35.3') SHALE (SH); dry; brittle; very dark gray; trace gravel; few sand partings micaceous.	29'-39' 7.2/10.0	0.0 (Ambient)	Portion of shale core lost
			(34.0-35.3') LESS BRITTLE			CORE BOX #1 04/02/12 @ 1110
35	35.3	SS	(35.3'-47') SANDSTONE (SS); wet; grayish white; some shale partings			29'-39' 7.2'/10.0'
40			(41.3'-41.85') SHALE SEAM	39-47 7.85'/8.0'	0.0 (Ambient)	CORE BOX #2 04/02/12 @ 1235
			(43.35'-43.55') SHALE			39'-47' 7.85'/8.0'
45			(44.85-45.2') INTERMITTENT SHALE LENSES (45.54') SHALE PARTING (46.23') SHALE PARTING (46.45'-46.65') SHALE; GRAVEL W/DEPTH			
50			BORING TERMINATED AT 47 FT BGS			
55						
60						

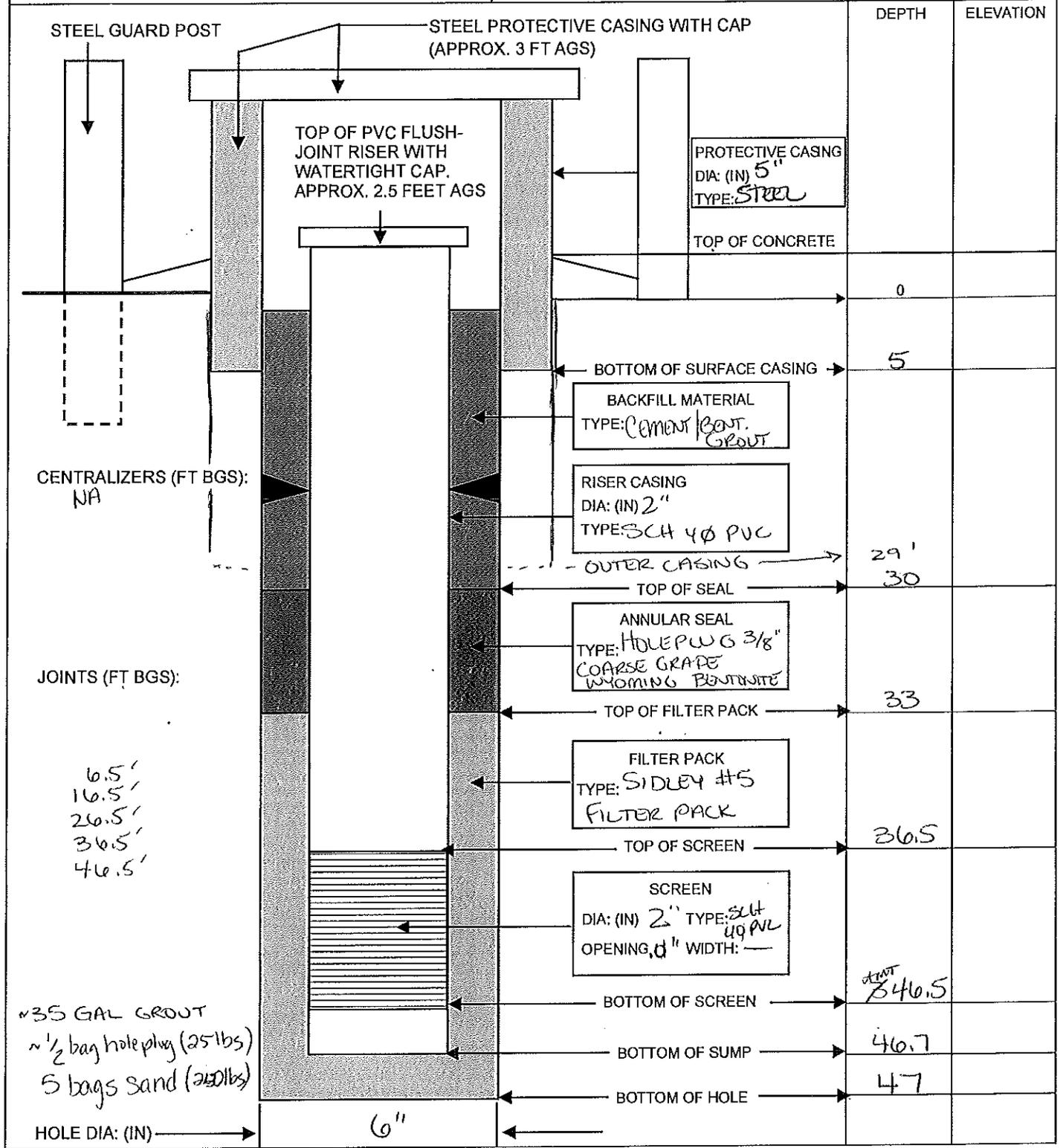
PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Amanda Heston 04/02/12	BOREHOLE NUMBER LL3MW-245
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MONITORING WELL

PROJECT NAME: *RVAAP-666 FWGWMP RI* PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *LL3mw-245* BEGIN: *04/02/12; 1304* END: *04/02/12; 1540*

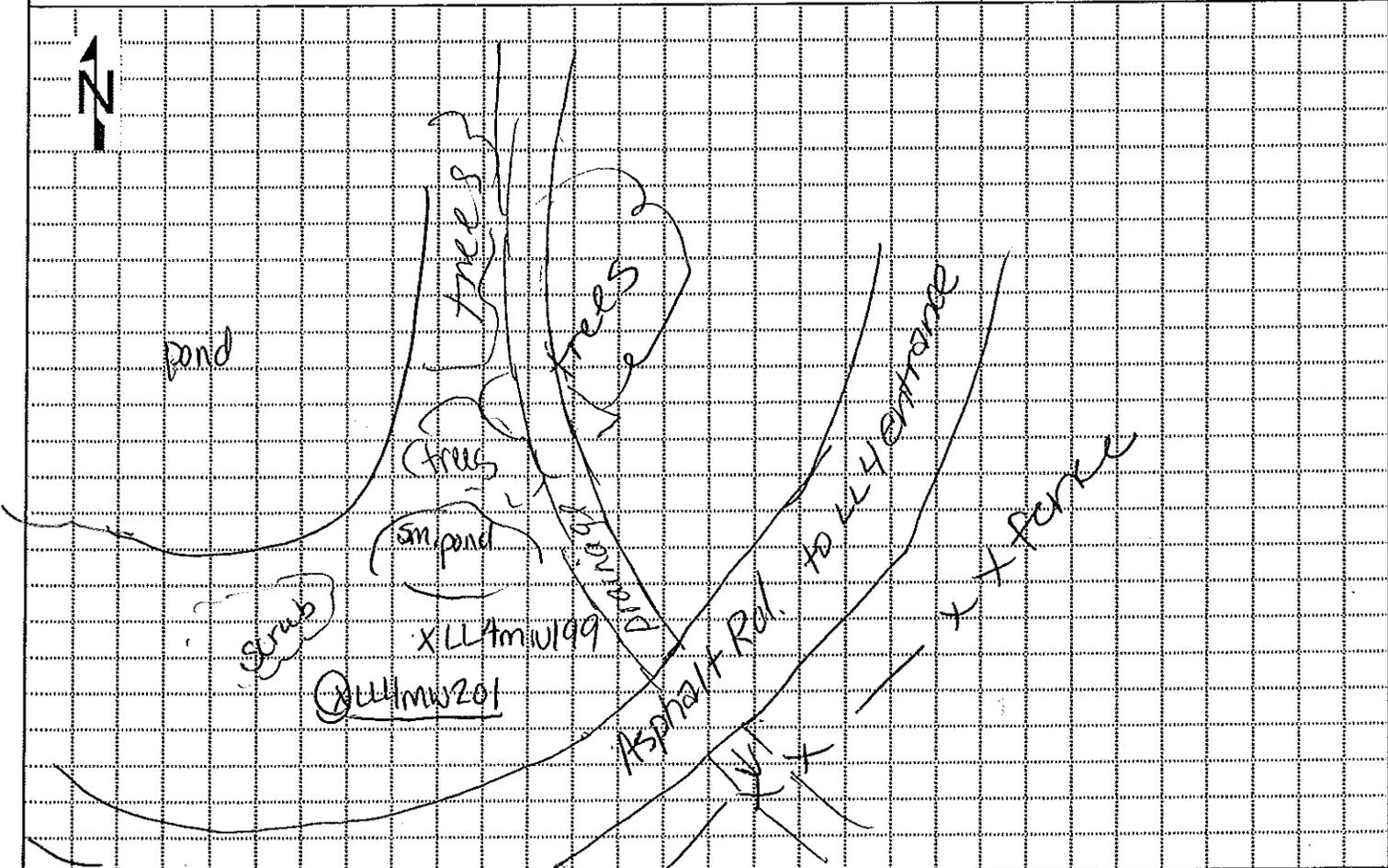
COORDINATES: N: *558573* E: *2369249* REFERENCE POINT: *TDC* ELEVATION: *MSL 981.24*



Recorded by: *Amanda Trenton* 04/02/12 QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL4mw201
1. COMPANY NAME ECM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF 3
3. PROJECT RVAAP 06 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Teter		6. MAKE/MODEL OF DRILL CME55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" ID HSA 2" X 2 1/4" Split Spoon N SERIES ROCK CORE SAMPLER		8. BOREHOLE LOCATION PW-5 LL4 next to LL4mw199	
		9. SURFACE ELEVATION/DATUM 975.90	
		10. DRILL DATE/TIME STARTED: 3/19/12 COMPLETED: 04/04/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 47'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION ---	
12. OVERBURDEN THICKNESS 44 FT		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) ---	
13. DEPTH DRILLED INTO BEDROCK 67 FT 23 FT			
14. TOTAL DEPTH OF BOREHOLE 23 1/4" 67 FT			
18. GEOTECHNICAL SAMPLES UNDISTURBED: 57'-67' DISTURBED: ---		19. TOTAL NUMBER OF CORE BOXES 2	
20. CHEMICAL SAMPLES CHEM: N/A RAD: NA OTHER: N/A		21. TOTAL CORE RECOVERY % 70%	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/19/12 DATE COMPLETED/ABANDONED: 04/04/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-06 RI	GEOLOGIST SIGNATURE/DATE Amanda Henton 04/04/12	BOREHOLE NUMBER LL4MW-201
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER LL4MW-201	
1. COMPANY NAME FRONTZ EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP 66			4. LOCATION RVAAP 6451 State Route 5, Ravenna, OH 44286			
5. NAME OF DRILLER JOE Teker			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: SIRIUS MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			Upper 3" Silty Clay top soil, dk brn, soft roots Next 3" Fill, sand, gravel, brn, moist last 3" Silty Clay, brn, damp, soft.	3-3 2-4 R=15/24	0	SS 0-2ft ; 1117 3/3/2/4
5		CL	Greenish Gray Silty Sand Moist CL + root at upper 6" (trace blk coloring) Next 8" Greenish Gray Silty Sand Moist ML Soft. Remainder Sandy silt moist loose fine grained sand.	2-1 1-1 R=24/24	0	SS 5-7ft ; 1127
10			Blue Gray Silt moist soft top 6" Blue Gray Silty Clay, med plastic, moist Last 6" Blue Gray Silty Clay some w/ sm gravel Subground.	2-2 2-4 R=18/24	0	SS 10-12 ; 1136
15		ML	Blue Gray Saturated Silt ML soft	2-2 2-3 R=19/24	0	SS 15-17 ; 1147
20			Gray Sandy Silt top 8" Wet fine grained sand " Silty Clay trace fine grained sand 6"	3-2 1-2 R=19/24	0	SS 20-22 ; 1156
		ML	Blue Gray Silt ML Soft remainder Blue Gray Sandy Silt Saturated Soft top 8" Blue Gray Silt ML Soft remainder	2-2-3-3 R=20/24	0	SS 22-24 ; 1210
25			SAME	2,2,3 R=20/24	0	SS 24-26 ; 1216
		ML CL	Blue Gray Silt ML Soft top 10" inc. to MLCL w/ depth wet inc to compact w/ depth bottom 3" Silty Clay gray compact plastic wet SAME 19"	3,7,6 R=13/24 2,3,6,7 R=19/24	0	26-28 ; 1228 28-30 1232
30						

PROJECT RVAAP 66 RI	GEOLOGIST SIGNATURE/DATE <i>Chris [Signature]</i> 3/19/12	BOREHOLE NUMBER LL4MW-201
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL4mw-201
1. COMPANY NAME EDM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 31 OF 3

3. PROJECT RVAAP 66p	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44286
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5. NAME OF DRILLER JOE TETER / AARON MACKAY	6. DIRECTION OF BOREHOLE VERTICAL	INCLINED	DEGREES
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7. NOTES PID MAKE/MODEL: SIRIUS MSA WATER LEVEL MAKE/MODEL: _____	PID SERIAL#: A2-1861 WATER LEVEL SERIAL#: _____	Colors from Munsell Soil Color Chart, Rev
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ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/UCPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
		mlt cl	Silty clay with plastic gray wet compact plastic SAME	12,24 R=20/24	0	30-32ft 1242
			WET Silty clay micl, trace red brown trace gravel fragments, compact, wet	346.7 R=20/24	0	32-34ft 1257
35		micl	WET Silty clay micl, trace red brown trace gravel fragments, compact, wet	367.10 R=22/24	0	34-36ft 1520
		micl	WET Silty clay gray micl trace red brown trace (sandstone) compact subangular gravel 20-30mm blue gray clay weathered shale, sandstone in situ	1115.90 R=20/24	0	36-38ft 1531
40		SP-50	Silty clay gray micl trace weather bedrock angular fractured rock inc. w depth inc sand w depth, dense core	2174.40 R=22/24	0	38-40ft 1550
		SP-50	gray wet sorted SP sand fine wet top 19" dense bottom sand w angular fractured bedrock gray tan	2315.13 R=24/24	0	40-42ft 1615
		SW	tan gray sand weathered sandstone/bedrock	1024.44 R=21/24	0	42-44ft 1630
44		GP	poorly sorted fine grained angular sandstone (SS) dense, fractured core w fiber			
45			AUGER THROUGH SS TO SET OUTER CASING			
47		SS	3' INTO SS BEDROCK - AUGER REFUSAL SET CASING FOR 47' BGS ON 04/03/12			04/04/12 PID: MiniRAE 2000 Serial #: 110-005816
50			(47' - 67') Light Gray SANDSTONE (SS) (core gray) some shale partings throughout; few pebbles throughout. (47' - 49') Increased fractures + shale partings		0.0	47'-57' 04/10/12 9.25' / 10.0' 1420 Segment CORE REMOVED FOR PERMEABILITY TESTING
55		SS	~56.5' Quartzose Conglomeratic pebbles; subrounded		0.0	57'-67' 04/10/12 4.7 / 10.0' 1505
60			BORING TERMINATED AT 67 FT FOR WELL INSTALLATION			

PROJECT RVAAP 66 RI	GEOLOGIST SIGNATURE Amanda Heiter 04/10/12	DATE 3-19-12	BOREHOLE NUMBER LL4mw-201
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MONITORING WELL

PROJECT NAME: *RUAPP - C66 RI*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *LL4mw-201*

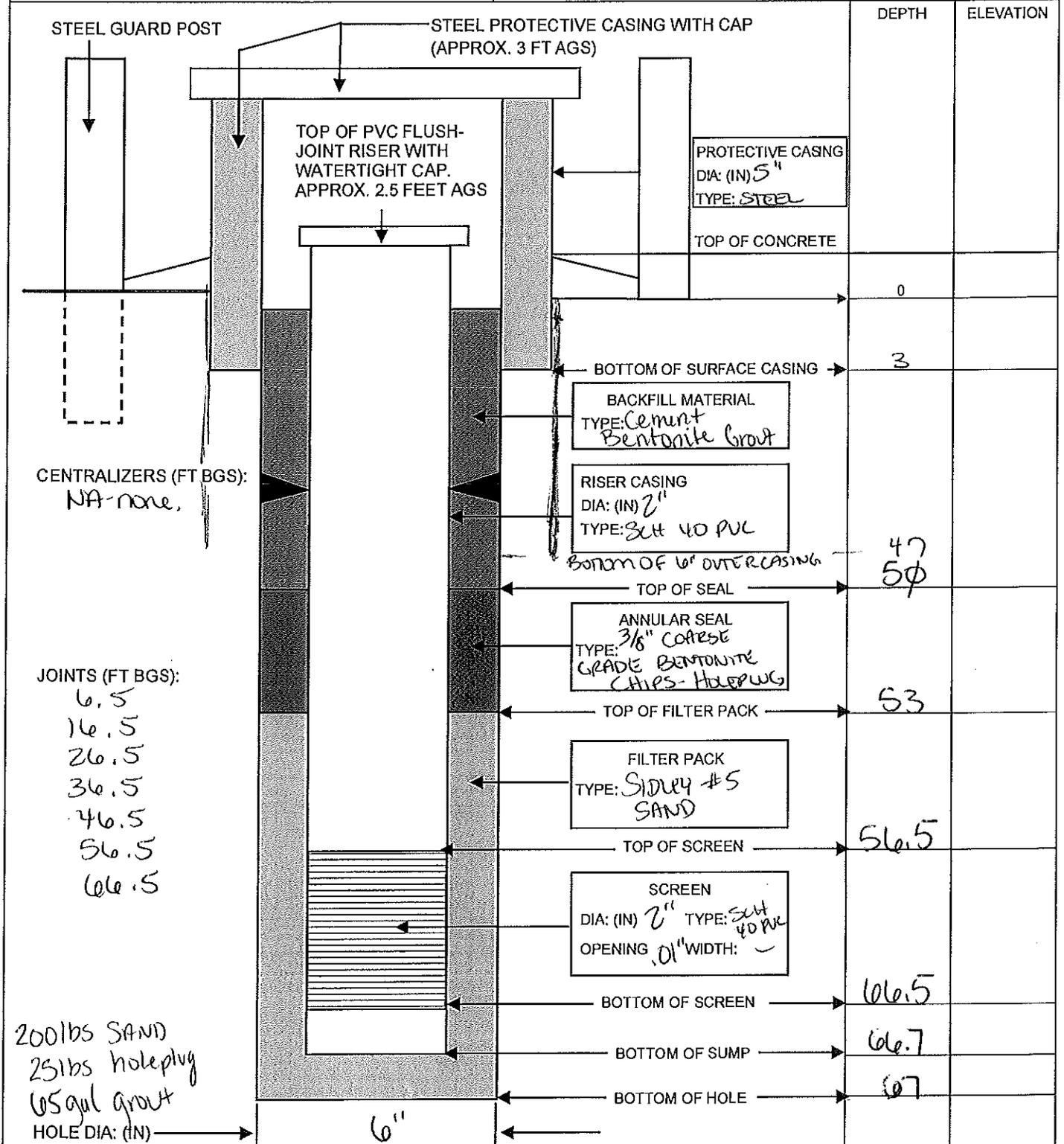
BEGIN: *04/04/12; 1530*

END: *04/04/12*

COORDINATES: N: *554607*
E: *2365417*

REFERENCE POINT: *TOG*

ELEVATION: *MSL 978.02*



Recorded by: *Amanda Shenton* 04/04/12 performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL6mw 008
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF 2
3. PROJECT RVAAP 66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER JOHN TETER		6. MAKE/MODEL OF DRILL CMF 55 LC	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4.5 HSA 2" SS(2')		8. BOREHOLE LOCATION LL6 south end PW27 set LL6mw008	
		9. SURFACE ELEVATION/DATUM 1121.30	
		10. DRILL DATE/TIME STARTED: 3/20/12 COMPLETED: 3/20/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 12	
12. OVERBURDEN THICKNESS 16		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
13. DEPTH DRILLED INTO BEDROCK 1.5-2'		17. OTHER WATER LEVEL MEASUREMENTS (INCLUDE DATE/TIME) NA	
14. TOTAL DEPTH OF BOREHOLE 17.9			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES 0	
20. CHEMICAL SAMPLES CHEM: N/A RAD: NA OTHER: N/A		21. TOTAL CORE RECOVERY % N/A	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/20/12 DATE COMPLETED/ABANDONED: 3/20/12			
BACKFILL TYPE: <input type="checkbox"/> GRDUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \triangle Background BGS: \blacktriangledown Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT RVAAP 66 RI		GEOLOGIST SIGNATURE/DATE <i>Carl J. ...</i>	
		BOREHOLE NUMBER LL6mw-008	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL6mw-008
1. COMPANY NAME EDM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 2 OF 2

3. PROJECT RVAAP 66 R1	4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268
5. NAME OF DRILLER JOE TETER	6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES

7. NOTES PID MAKE/MODEL: SIRIUS MSA WATER LEVEL MAKE/MODEL:	PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:	Colors from Munsell Soil Color Chart, Rev
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ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			Topsoil, grass, trace sand on tip d. brun Moist	44, 2, 3 R=1/24	0	Ambient = 0 SS 0-2ft; 1000
			Pushing Rock Auger's turned: Brun Silty Clay trace sand/grey	5, 6, 4, 6 R=0/24	0	SS 2-4ft; 1004
	5		Silty Clay brun gray mottled low plasticity Moist semi soft	35, 8, 12 R=14/24	0	SS 4-6ft 1012
		CL	Silty Clay ^{tan} low-no plasticity moist-dry sand veins (trace) sm. trace rock fragments	9, 10, 2, 15 R=18/24	0	SS 6-8ft 1020
	10	CL	Silty Clay ^(inc w/ depth) tan ^{low plasticity} sand veins sm trace rock fragments ^{inc. to soil}	8, 9, 10, 12 R=21/24	0	SS 8-10ft 1030
		SC	Sandy Clay tan trace mottling no plasticity moist trace rock fragments	4, 11, 11, 3 R=22/24	0	SS 10-12ft 1038
		SV	Clayey Sand tan orange trace rock fragments 7" wet 10" clayey sand (same) dec to moist + low plasticity	11, 13, 11, 11 R=24/24	0	SS 12-14ft 1042
	15		Sand w/ Clayey Sand tan orange, 6" sat sand remaining w/ weathered bedrock fractures	9, 8, 13, 4, 5 R=18/24	0	SS 14-16; 1100 (NO SHALBY DUE TO SS)
	18	SCSP	Sand top 8" fine-med loose saturated yellow fractured bedrock w/ same as above for bottom 10"	24, 50, 5" R=18/24	0	SS 16-18; 1110
			TERMINATED AUGER AT 17'10"			
	20		-WELL INSTALL - 17'6" on fractured sandstone bedrock.			*take Shelby @ 13'-15' during deep well install
	25					
	30					

PROJECT RVAAP 66 R1	GEOLOGIST SIGNATURE/DATE <i>[Signature]</i> 3-20-12	BOREHOLE NUMBER LL6mw-008
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putland 1 foot.
4 granular
Sand
7' 17'

MONITORING WELL

PROJECT NAME: *RVAAP 66 RI*

PROJECT NO: *30174.0016.001*

WELL NUMBER: *LL6mw-008*

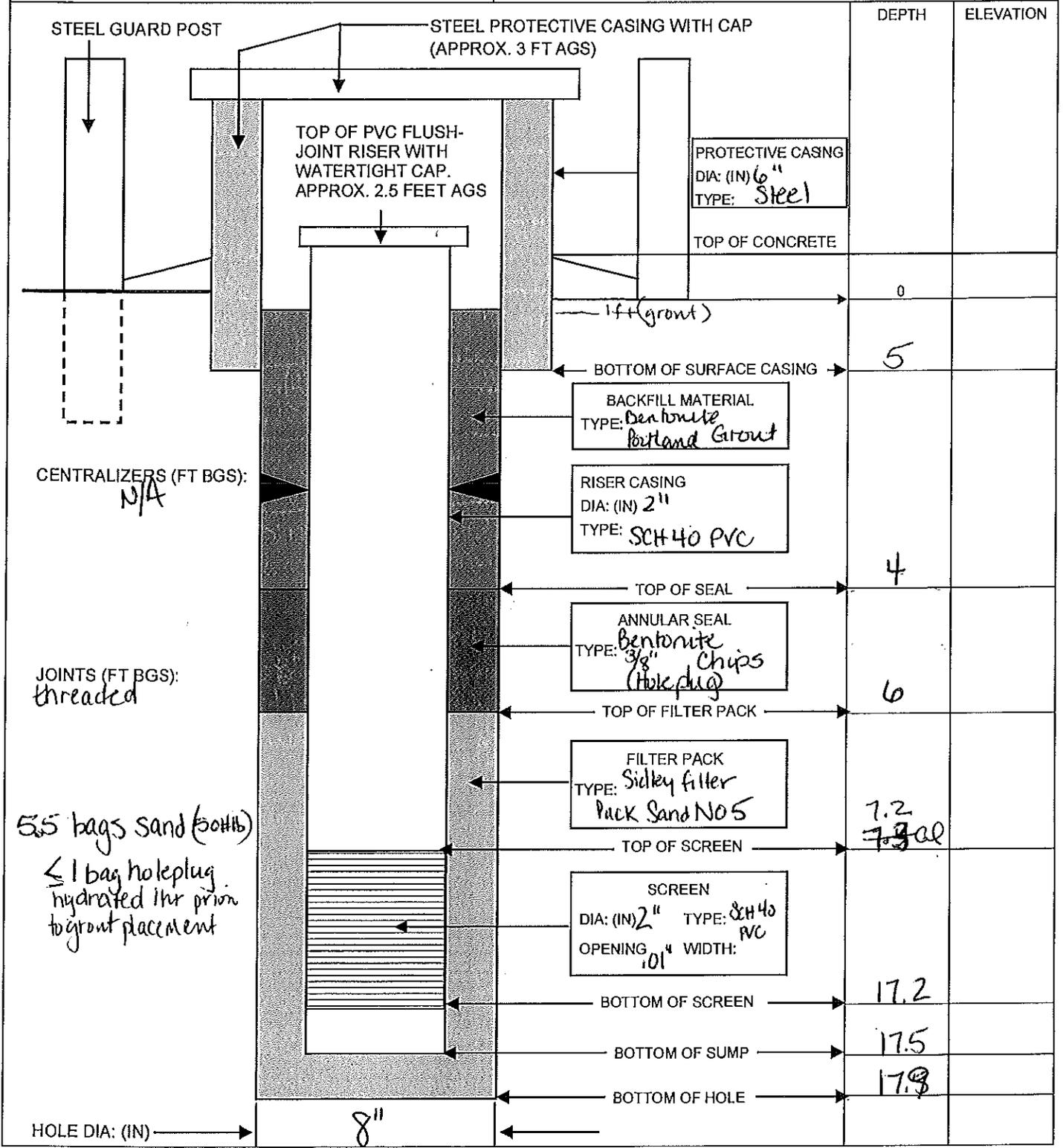
BEGIN: *3/20/12*

END: *3/20/12*

COORDINATES: N: *550154*
E: *2353616*

REFERENCE POINT: *TOG*

ELEVATION: *MSL*
1124.15



Recorded by: *Colleen Lear*

QA performed by: _____

HTRW DRILLING LOG DISTRICT USACE - Louisville BOREHOLE NUMBER L160mw-009

1. COMPANY NAME SAIC 2. DRILLING SUBCONTRACTOR Frontz Drilling SHEET 1 OF 3

3. PROJECT RVAAP-66 RI 4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266

5. NAME OF DRILLER AMELON MACKEY 6. MAKE/MODEL OF DRILL CME 750X

7. SIZES AND TYPES OF SAMPLING EQUIPMENT 8. BOREHOLE LOCATION LOAD LINE 6

8 1/4" ID HSAS 9. SURFACE ELEVATION/DATUM 1121.40

N SERIES ROCK CORE SAMPLER 10. DRILL DATE/TIME STARTED: 04/11/12 COMPLETED: 04/12/12

15. DEPTH GROUNDWATER ENCOUNTERED 12' / 19.5'

16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA

12. OVERBURDEN THICKNESS 17 17. OTHER WATER LEVEL MEASUREMENTS (INCLUDE DATE/TIME) NA

13. DEPTH DRILLED INTO BEDROCK 22.5

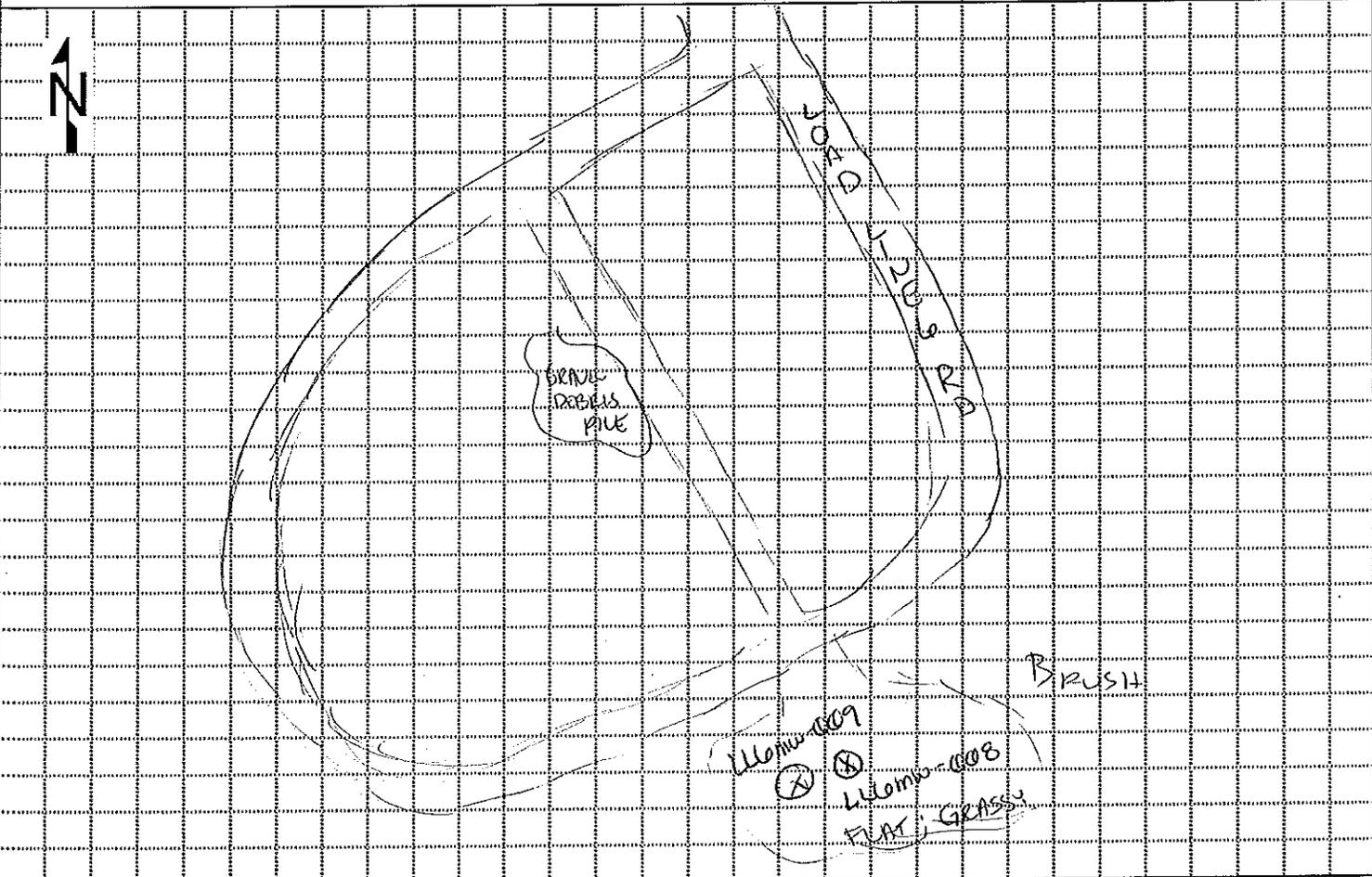
14. TOTAL DEPTH OF BOREHOLE 39.5 18. GEOTECHNICAL SAMPLES UNDISTURBED: 37'-38' DISTURBED: 19. TOTAL NUMBER OF CORE BOXES 2

20. CHEMICAL SAMPLES CHEM: RAD: NA OTHER: 21. TOTAL CORE RECOVERY % 94%

22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 04/11/12 DATE COMPLETED/ABANDONED: 04/12/12

BACKFILL TYPE: GROUT BENTONITE TEMPORARY WELL POINT MONITORING WELL
 23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million
 ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-66 RI GEOLOGIST SIGNATURE/DATE Amanda Jentzen 04/12/12 BOREHOLE NUMBER L160mw-009

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER LL6mw-009	
1. COMPANY NAME SAIC			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP-666 RT			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER Aaron Mackey			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Minir AE 2000 WATER LEVEL MAKE/MODEL: _____			PID SERIAL#: 110 - 005816 WATER LEVEL SERIAL#: _____		Colors from Munsell Soil Color Chart, Rev 2000 Rev 03	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			SEE LOG FOR LL6mw-008 for overburden description (0.0'-10.0') Silty CLAY			
	5	CL				
	10		SC (10.0'-12.0') Sandy CLAY			
			(12.0'-16.0') Sand w/ some clay; less clay w/ depth; wet			
	15		(16.0'- 17.0') SAND w/ some SS fragments			
			(17.0'-19.5') AUGERED TO SET CASING-AUGER REFUSAL @ 19.5'			
	20		(19.5'-29.5') SANDSTONE; very light gray; wet; micaceous		0.0 PPM Ambient	(19.5'-29.5') 04/12/12 @ 1005 9.4'/10.0'
		SS	increased amount of fractures			
			@ 21.8 Y Brown clayey parting			
			@ 23-23.5 Gray clayey partings			
	25		@ 25 fracture due to core rods			
			27.5-28 few dk gray + yellow brown laminations			
			@ 29.0' fracture from core rod addition			
	30					
PROJECT RVAAP-666 RT			GEOLOGIST SIGNATURE/DATE Amanda Jester 04/12/12		BOREHOLE NUMBER LL6mw-009	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL6 mw - 009
1. COMPANY NAME SAIC		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RT		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268	
5. NAME OF DRILLER Aaron Mackey		6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: WATER LEVEL MAKE/MODEL:		PID SERIAL#: 110-05816 WATER LEVEL SERIAL#:	Colors from Munsell Soil Color Chart, Rev 2000 Rev 00

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/SPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			@30.0' FRACTURE from CORE ROD ADDITION SOME DARK GRAY PARTINGS THROUGHOUT ~33.0' FRACTURES		0.0 Ambient	29.5'-39.5' 04/12/12 @ 1300 9.4' / 10.0'
	35	SS	@35.0'-35.5' FRACTURES from CORE ROD ADDITION			Approximately 37.0-38.0
			38.0'-38.5' Few fractures; some darker partings w/ siltstone + pyrite			Core for permeability testing
	40		Boring Terminated @ 39.5 ft bgs			
	45					
	50					
	55					
	60					

PROJECT RVAAP-66 RT	GEOLOGIST SIGNATURE/DATE Amanda Jester 04/12/12	BOREHOLE NUMBER LL6 mw - 009
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MONITORING WELL

PROJECT NAME: *RUMAP-66 RT*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *LL6 mw - φφ9*

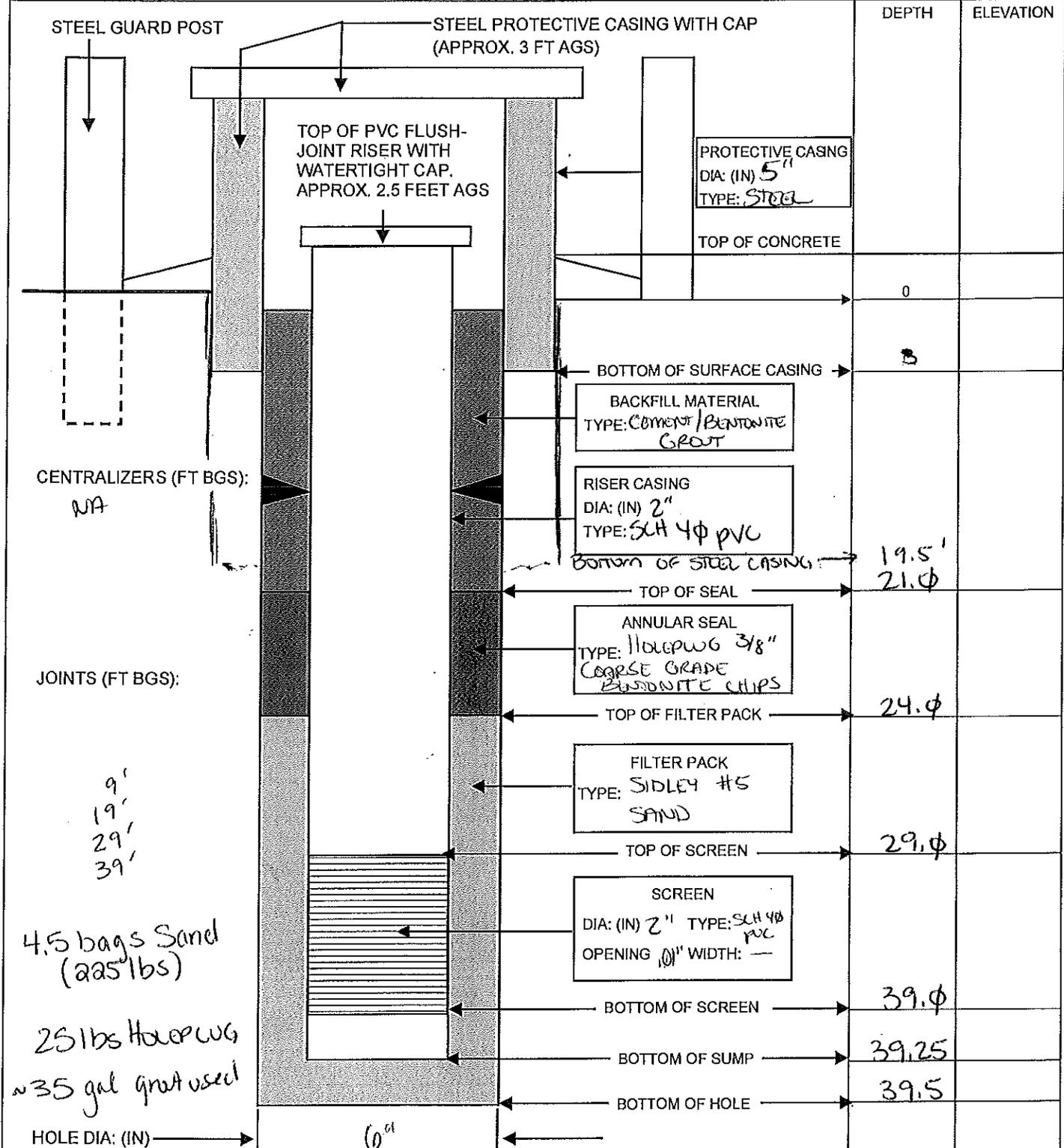
BEGIN: *04/12/12; 133φ*

END: *04/12/12; 152φ*

COORDINATES: N: *553149*
E: *2353604*

REFERENCE POINT: *TOC*

ELEVATION: *MSL 1123.75*



CENTRALIZERS (FT BGS):
NA

JOINTS (FT BGS):
9'
19'
29'
39'

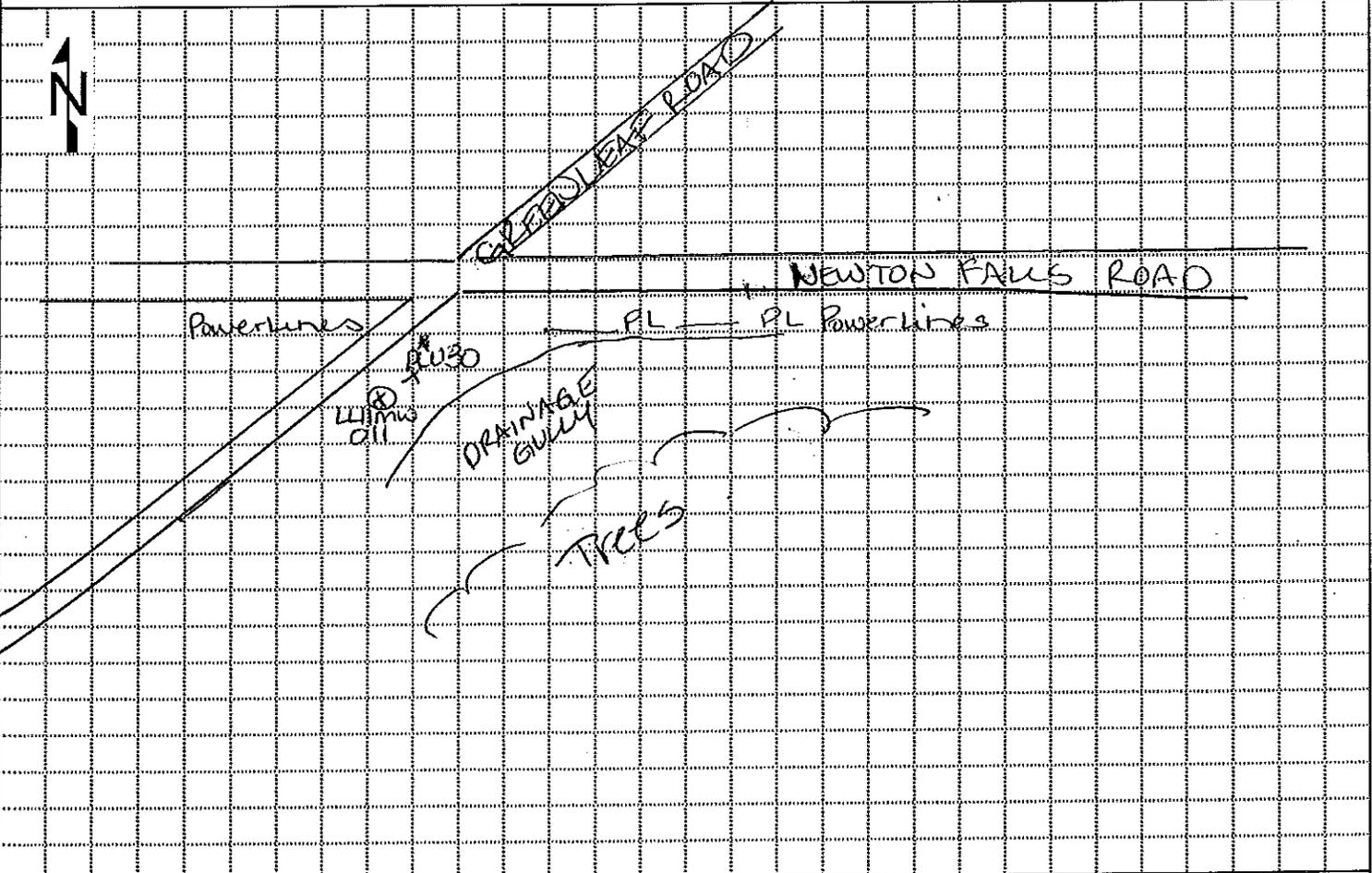
4.5 bags Sand (225 lbs)
25 lbs Hoopwug
~35 gal grout used

HOLE DIA: (IN) → *6"*

Recorded by: *Amanda Inertm 04/12/12* QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL11mw011
1. COMPANY NAME EOM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP 66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER JOE TETER		6. MAKE/MODEL OF DRILL CME 55 LC	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT HSA 4.5 2" SS (2')		8. BOREHOLE LOCATION RW429 Greenleaf/Newton Falls (E)	
		9. SURFACE ELEVATION/DATUM 1077.40	
		10. DRILL DATE/TIME STARTED: 3-21-12 COMPLETED: 3-21-12	
		15. DEPTH GROUNDWATER ENCOUNTERED 7.8'	
12. OVERBURDEN THICKNESS 18.5		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION APPROX. 10' below Below TWC AFTER 16 Hrs.	
13. DEPTH DRILLED INTO BEDROCK 0		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
14. TOTAL DEPTH OF BOREHOLE 18.5			
18. GEOTECHNICAL SAMPLES UNDISTURBED: N/A DISTURBED: N/A		19. TOTAL NUMBER OF CORE BOXES 0/A	
20. CHEMICAL SAMPLES CHEM: N/A RAD: NA OTHER: N/A		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3-21-12 DATE COMPLETED/ABANDONED: 3/21/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \leq Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP 66 RI	GEOLOGIST SIGNATURE/DATE <i>Coals</i> 3/21/12	BOREHOLE NUMBER LL11mw011
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6.5
16.5

HTRW DRILLING LOG (continued)

DISTRICT: USACE - Louisville

BOREHOLE NUMBER: LL11mw-011

1. COMPANY NAME: EQM

2. DRILLING SUBCONTRACTOR: Frontz Drilling

SHEET 2 OF 2

3. PROJECT: RVAAP 66 RI

4. LOCATION: RVAAP 8451 State Route 5, Ravenna, OH 44266

5. NAME OF DRILLER: JOE TETER

6. DIRECTION OF BOREHOLE: VERTICAL INCLINED DEGREES

7. NOTES: PID MAKE/MODEL: SIRIUS MSA PID SERIAL#: A2-1861

WATER LEVEL MAKE/MODEL: WATER LEVEL SERIAL#:

Colors from Munsell Soil Color Chart, Rev

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			Top soil DLBran 7" / next Medium Sand (med) trace	2,7,4	0	SS 0-2ft; 0937
		SW GM	angular gravel Orange Brown / mottled gray med bottom	R=2/24		
		MLC	Silty Clay Orange Brown, soft moist mottled gray trace rock fragment trace sand inc soft w/ depth	3,4,5,1	0	SS 2-4ft; 0942
				R=14/24		
	5	SP	Same top 9" then Sandstem wet 1" med / remainder	2,2,4,6	0	SS 4-6ft; 0950
		MLC	Silty Clay Org Brown soft hard, stiff dec. moist mottled fine silt	R=14		
		SM-SC	Silty Sands Clayey Sand w/ 1" sand lenses wet 6", 10", 1"	8,9,12,13	0	SS 6-8ft; 0958
7.8			dense stiff silts 7" soft clay w/ depth bottom 3" sat. gravel/sand	R=24/24		
			Brun Saturated Sand gravel 1" Rock in shoe	3,2,1,2	0	SS 8-10 ; 1004
	10			R=1/24		
			top 8" loose saturated brun trace gravel	1,1,4,5	0	SS 10-12; 1012
			Silty Clay remaining soft trace sands.	R=17/24		
			Sandy Clay 8" sand 10" loose med fine w/ trace clay	8,9,9,6	0	SS 12-14; 1014
			remainder Sand loose dense orange brown saturated	R=24/24		
	15			5,10,3,3	1.0	SS 14-16; 1025
		SP	Sand sat fine-med grain orange brown	R=12/24		
			poorly graded dense-med dense, gravel @ base	1,3,5,10	0	SS 16-18 ; 1033
18		SW	Sand sat gray medium, coarse-med dense	R=12/24		
			well graded trace gravel - Auger 18.5			terminate
	20		- Set well @ 18" 1100			

PROJECT: RVAAP-66 RI

GEOLOGIST SIGNATURE/DATE: Colleen Lecl 3/21/12

BOREHOLE NUMBER: LL11mw-D11

Printed
3
11.5
6
10.5
6
10.5
10

MONITORING WELL

PROJECT NAME:

RVAAP 66 RI

PROJECT NO:

30174.0016.001

WELL NUMBER:

LL11mw-061

BEGIN:

3-21-12

END:

3/21/12

COORDINATES:

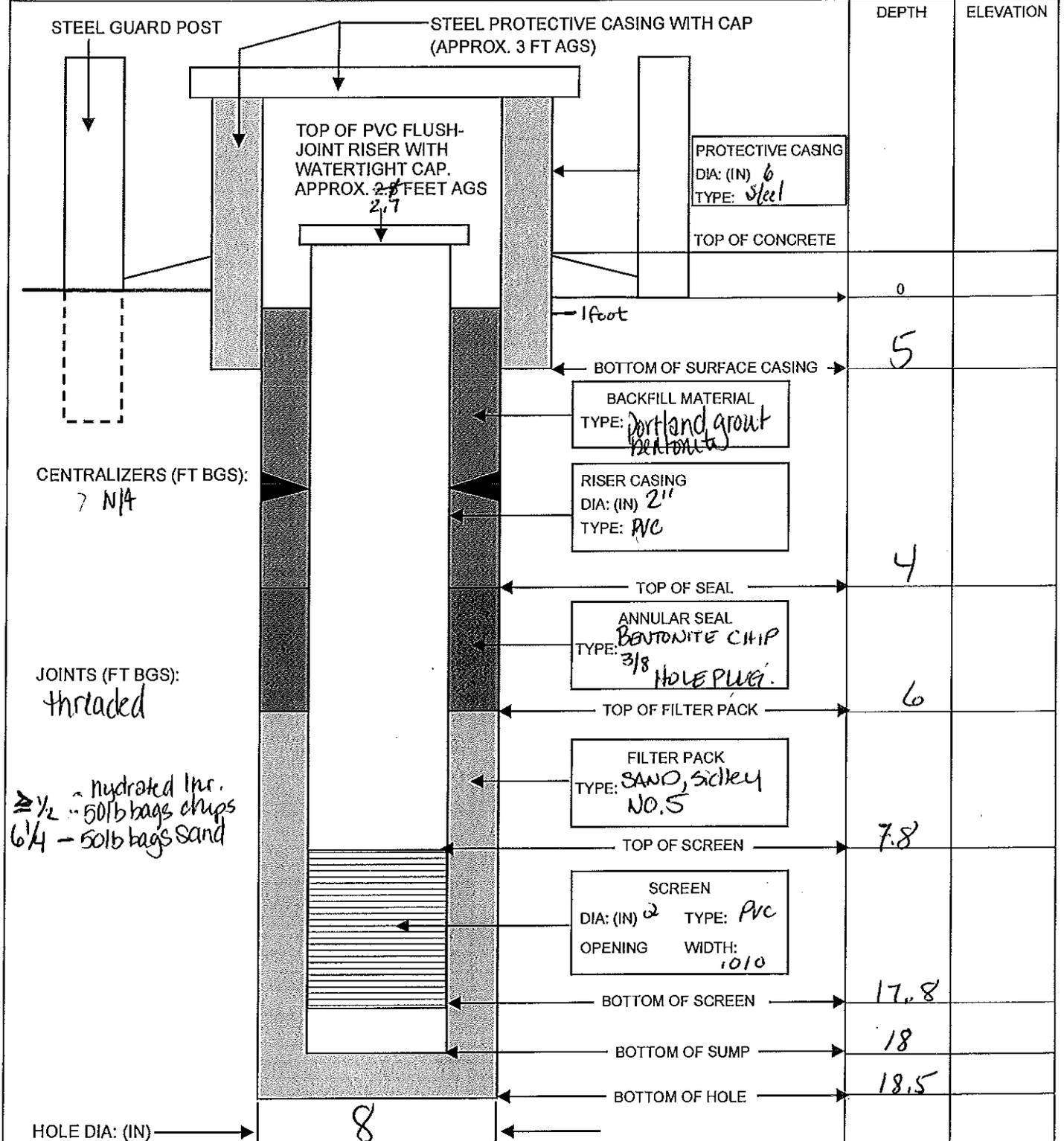
N: *558680*

E: *2351119*

REFERENCE POINT: *T00*

ELEVATION: *MSL*

1080.20



Recorded by: *C. Lear*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL11mw-012
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF 6
3. PROJECT RVAAP 66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER JOE TETER / R. Hamilton		6. MAKE/MODEL OF DRILL CME 55 LC /	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT HSA 425 2" SS (2') Rotary sonic - to set casing N series core barrel		8. BOREHOLE LOCATION PW30 Greenleaf/Newton Falls	
12. OVERBURDEN THICKNESS 88 ft		9. SURFACE ELEVATION/DATUM 1077.90	
13. DEPTH DRILLED INTO BEDROCK 27 ft		10. DRILL DATE/TIME STARTED: 3/21/12 COMPLETED: 04/17/12	
14. TOTAL DEPTH OF BOREHOLE 115 ft		15. DEPTH GROUNDWATER ENCOUNTERED BEDROCK = 100 ft	
18. GEOTECHNICAL SAMPLES UNDISTURBED: N/A DISTURBED:		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION	
19. TOTAL NUMBER OF CORE BOXES 2		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME)	
20. CHEMICAL SAMPLES CHEM: N/A RAD: NA OTHER: N/A		21. TOTAL CORE RECOVERY % 79%	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 03/21/12 DATE COMPLETED/ABANDONED: 04/17/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \leq Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT RVAAP-66 RI		GEOLOGIST SIGNATURE/DATE <i>[Signature]</i> 3/26/12	BOREHOLE NUMBER LL11mw012

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL11mw-012
1. COMPANY NAME EPM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP 66 RI		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268	
5. NAME OF DRILLER JOE TETER		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES	

7. NOTES PID MAKE/MODEL: SICUS MST1		PID SERIAL#: A2-1861	Colors from Munsell Soil Color Chart, Rev
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			Drilled based on LL11mw-011 log from 3-21-12 1430 w Silty Clay brown orange w/gray moist			
	5	ML	Silty Clays + Sands brun + gray (greenish)			
	10		Sands + Silty Sandy Clays Wet Soften			
	15		Sand Wet			
	18	SM	Sand + gravel wet gray			
		SM	Silty Sand saturated gray fine loose to loose w depth, inc sand fine grain w/depth to medium	13, 55 R=17/24	0	18-20ft; 1510
	20	SW	Silty Sand 3" grade to sand dense fine 5" to coarse sand well graded rounded fine gravel gray to dk gray	4, 4, 4, 6 R=13/24		20-22ft; 1519
		SW	Sand	7, 10, 12, 14		22-24ft; 1523
		SW	@ 16"-18" silt (6m) sandy silt (5m) seam then SW flowing sands SW moist	R=20/24 13, 14, 34, 23		24-26ft; 1541
	25	SM ML	hard silty sands dk gray - bottom 15" no plasticity (gone)	R=20/24		
		ML	Silty fine Sands w trace gravel moist SW	3, 13, 19, 21 R=18/24		26-28ft; 1557 (Ambient 1.0)
		SW	Saturated Sands	15, 30, 35, 32 R=24/24		28-30ft;
	30		gravel = bk red buff ss pieces weathered	16, 24, 33, 54, 71		Ambient = 0

PROJECT RVAAP 66 RI	GEOLOGIST SIGNATURE/DATE C. J. [Signature] 3-21-12	BOREHOLE NUMBER LL11mw012
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville	BOREHOLE NUMBER U11mw-012 Lime		
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2/3 OF 6	
3. PROJECT RVAAP 66 R1			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268			
5. NAME OF DRILLER Joe TETER			6. DIRECTION OF BOREHOLE N VERTICAL INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: SIRIUS MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/WCPM)	REMARKS Ambient = 0 (Sample IDs/Depths/Core Box/Etc.)
		SW	Saturated Sand (Coarse 8" gray sa - heave	16, 24, 33 50/4"	0	30-32ft; 1610
		ML	Silts w/ trace gravel (TU) 3" (heavy sands) 1/2 recovery pieces blk + red buff gravel sandstone	R=12/24 21, 27, 31	0	32-34; 1630
		ML	dec. wetness	R=20/24		
	35		hard silt fill gray dump (heaving = 1/2 recovery)	13, 33 50/4"	0	34-36; 1720
			hardness ↓ w/ depth	R=16/24 21, 27, 31	0	36-38; 1726
			inc wetness, inc softness dec gravel pieces	R=16/24		
	40	ML	trace BIK silt (heaving = 1/2 recovery)	15, 23, 31	0	38-40; 1730
			(heaved sand 8' overnight) watered = 100 gal	R=20/24 11, 32, 41 50/5"	0	40-42; 1739, 45
			1/2 R = heaving sands	R=20/24		
			1/2 R = ML silt trace gravel TU gray hard compact	10, 17, 15, 20	0	42-44; 3-22-12 1045
	45	ML-SM	Sandy Silt top saturated bottom 16 hard	R=21/24 14, 33 50/5"	0	44-46; 1659
			trace round gravel, fine sand to med. moist compact	R=21/24		
			SAS watered hole = 50 gals	16, 38 50/5"	0	46-48ft. 1108
			blue gray till in base 2"	R=14/24		
			blue gray + dk gray till silt w/ round gravel hard	20, 43 50/2"	0	48-50ft; 1120
	50		sand still heaving (top 6") wet	R=12/24		
			heaving sand 8"	19, 40 50/4"	0	50-52ft; 1140
			remaining damp TU 20mm	R=19/24		
			hard drilling maximum down pressure	26, 48 50/4"	0	52-54ft; 1159
			moist TU (top 4" sand wet)	R=16/24		
	55	SW	Sand coarse to med wet rounded gray 6" w/ round gravel	13, 38 50/4"	0	54-56ft; 1209
		SM	Sandy silt dense moist 5" silt TU 5"	R=16/24		
			Sandy silt sat 2" soft TU material remains hard	15, 47, 50/4"	0	56-58ft; 1350
			gray	R=13/24		Ambient 0.8 → 1406 = 0
		SW	Sand coarse-med gray wet med dense to ss gray	15, 24, 46 49"	0	58-60ft; 1411
	60	SM	Sandy silt w/ TU trace clay low plastic	R=21/24		

overturning top 6" of split spoon - needed to correct.

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville	BOREHOLE NUMBER U11mw-012		
1. COMPANY NAME EPM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 14 of 16	
3. PROJECT RVAAP 66 R1			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266			
5. NAME OF DRILLER JOE TETER			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: SIRIUS MSA			PID SERIAL#: A2-1861		Colors from Munsell Soil Color Chart, Rev	
WATER LEVEL MAKE/MODEL:			WATER LEVEL SERIAL#:			
ELEVATION	DEPTH (feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS Ambient = 0 (Sample IDs/Depths/Core Box/Etc.)
			8" Silty Sand Sat. 7" Soft Sat. Sand v. loose Silty	56, 39 50/5	0	60-62ft; 1420
			8" hard Silty Till damp trace gravel throughout	R=23/24		
			6" Silty Sand Sat. Coarse-Med wet	62 50/4	0	62-64ft; 1445
			6" hard Silty Till	R=12/24		
	65		Sat 6" then wet Silty Till hard	23 HS 50/5	0	64-66ft; 1458
				R=24/24		
			Silty Sand dec sand w/ depth saturated	1020 35 49		66-68ft 1520
		ML	dec ^{fine in top 3"} till depth - wet base silt trace fine	R=24/24	0	
				2440 50/5	0	68-70 1543
	70	ML	Silts gray - tan gravel round top 3" compact moist	R=24/24		
			Silts compact moist damp	1320 47 50/4	0	70-72 1604
				R=24/24		
			Soft muck top. trace rounded gravel	927 48 50/4	0	72-74 1629
		ML	Silt compact moist	R=10/24		
	75		Sand Sandstone pieces	47 50/4	0	74-76 1654
			Rock Red Blk Buff	R=6/24		
			Muck in layer -	1011, 16, 20	0	5576-78 ft.; 1030
		SP	Silt wet gray flowing Sand med dense - loose tan poorly graded fine	R=22/24		3-23-12
		SO	Sand med dense - loose tan poorly graded fine	20, 22, 25 29		5578-80ft 1124
	80	ML	Silty Clay Till ^{Med stiff} rounded gravel inc clay w/ depth	R=24/24		
			Silty Clay Till dry tight stiff medium plastic swelling clay	2029 37 42		80-82; 1139
			Till Bluegray damp	R=24/24		
			base friable dry bluegray ^{trace shells} brown variegated	R=15/24		82-84; 1220
	85		bluegray - dk gray Silty Clay ^{5% trace shells}	1439 50/4		84-86; 1305
			Friable dry (micaceous?) Silts variegated	R=12/24		
			Friable dry Silty (micaceous?) dk	48 50/4		86-88; 1340
				R=10/24		
PROJECT RVAAP 66 R1			GEOLOGIST SIGNATURE/DATE [Signature] 3-23-12		BOREHOLE NUMBER U11mw012	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER LL11 MW-012	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 75 OF 60	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268			
5. NAME OF DRILLER Joe Tete / Aaron Mackey			6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA / MIRA 2000 WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861 / 110-005811		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/GPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			Weathered shale, friable (88.0-88.7 ft)	29-50/5 R= 11/24	0	88-90 ft; 0920
			Weathered shale, less weathered, dark gray, micaceous, dsf, crumbly (88.7-88.9)			
	90-95		Weathered shale, gray, moist, silty, crumbly	40-50/3 R= 9/24	0	90-92 ft; 1002
	92-94		Upper 4" Sand, brn, fm. med graded, wet Remainder Weathered shale, dk gray, silty, moist, brittle	50/5 R= 10/24	0	92-94 ft; 1545
	94-98		Weathered shale, dark gray, brittle, moist	50/3 R= 4/24	0	94-96 ft; 1640
	98-98		Weathered shale, as above	50/3 R= 5/24		96-98 ft; 1710
	98		04/17/12 CASING INSTALLED AT 95.5 FT BGS USED TRI CONE BIT + CORED THROUGH 12 FT OF GROUT W/IN CASING + CORED TO 98 FT SH + LITRE SS OBSERVED IN DRILL CUTTINGS			
	100-100		STARTED PRODUCING A LOT OF WATER @ 100 FT (98'-100') Sandy SHALE; very dark gray; moist; slightly micaceous (100'-104') Interbedded Sandstone (lt gray) + Shale; hard; horizontal fractures; wet; coal partings throughout			
	105-105		(104'-108') SHALE (SH); little sand throughout; very dark gray; massive; horizontal fractures throughout; wet @ 106' - color is medium gray - increased sand content in shale; sand content ↑ with depth			
	110-110					
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE Scott Spashard 3/26/12 Amanda Inertr 04/17/12		BOREHOLE NUMBER LL11 MW-012	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL17mw-012
1. COMPANY NAME SATC		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 6 th OF 6

3. PROJECT RVAAP-666 RI	4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268
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6. NAME OF DRILLER ARON MACKAY	6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES
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7. NOTES PID MAKE/MODEL: MinirAE 2000 WATER LEVEL MAKE/MODEL: _____	PID SERIAL#: 11Φ-005816 WATER LEVEL SERIAL#: _____	Colors from Munsell Soil Color Chart, Rev _____
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ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CFM)	REMARKS (Sample IDs/Depths/Cora Box/Etc.)
			(108-110.3') SHALE; dark gray, wet; very brittle + crumbly		Ambient	0417/1.2 @ 1300
			(110.3'-114') SHALE + SANDSTONE; laminated		Φ.Φ	108'-115'
			from 113-114 increase in sand content			6.2' / 7.0'
	115		(114'-115') grayish brown; wet SS w/ SH			
			BORING TERMINATED AT 115 FT BGS			
	120					
	125					
	130					
	135					
	140					

PROJECT RVAAP-666 RI	GEOLOGIST SIGNATURE/DATE Amanda Frontz 04/17/12	BOREHOLE NUMBER LL17mw-012
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MONITORING WELL

PROJECT NAME: *RUMAP-66 RI*

PROJECT NO:

30174.0016.001.02

WELL NUMBER: *LL11mw-φ12*

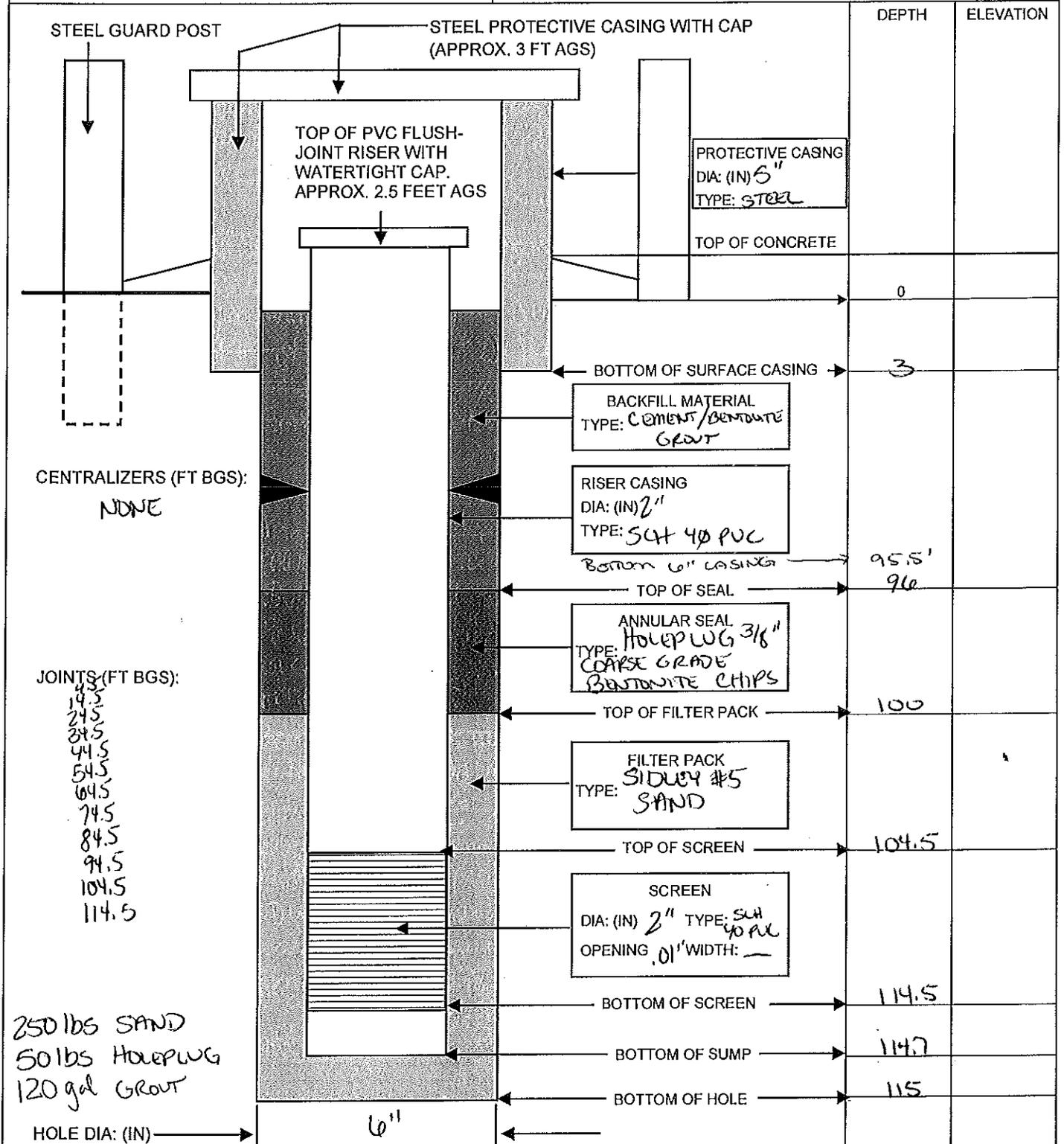
BEGIN: *04/17/12; 1345*

END: *04/17/12; 1715*

COORDINATES: N: *558691*
E: *2351125*

REFERENCE POINT: *TOC*

ELEVATION: *MSL*
1080.36



Recorded by: *Amanda Hunter* 04/17/12 QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL12mw-182SS
1. COMPANY NAME SAIC		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF ^{AMT} 23
3. PROJECT FWGWMP RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER JOE TETER		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/2" ID HSAS 2" x 2' SPLIT SPOONS		8. BOREHOLE LOCATION SOUTH OF LL12 FENCELINE	
		9. SURFACE ELEVATION/DATUM 982.30	
		10. DRILL DATE/TIME STARTED: 03/14/12; 1330 COMPLETED: 03/15/12	
		15. DEPTH GROUNDWATER ENCOUNTERED ~15'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS 38'		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK 0'			
14. TOTAL DEPTH OF BOREHOLE 38'			
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 03/15/12		DATE COMPLETED/ABANDONED: 03/16/12	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million <input type="checkbox"/> : First Water Encountered <input checked="" type="checkbox"/> : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT FWGWMP RI (RVAAP-66)		GEOLOGIST SIGNATURE/DATE Amanda Jester 03/16/12	
		BOREHOLE NUMBER LL12mw-182SS	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER LL12mw - 18255	
1. COMPANY NAME SAIC			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 23	
3. PROJECT FWGWMP RI (RVAAP-66)			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER JOE TETER			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: MiniRAE 2000 WATER LEVEL MAKE/MODEL: NA			PID SERIAL#: 110-005816 WATER LEVEL SERIAL#: NA		Colors from Munsell Soil Color Chart, Rev 2000 REV ED	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/OPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0.1	SM	(0-0.4') SAND w/ SILT (sm); organics throughout dry, loose; 10x23/2 very dark grayish brown	0.1/0.33	A: 0.0	Original log for LL12mw-182 contains complete soil lithology. Split spoon samples
	2	GW	(0.6'-0.9') ss Gravel; dry 7.5x25/8 strong brown (0.9'-2.0') no recovery - rock fragments (2'-5') no split spoons - no soil description	0.9/2.0 0.2	H: 0.9	
	5	CL	(5'-7') Silty CLAY (cl); 10x24/3 brown w/ little 10x6/1 bluish gray; medium stiff; dry; trace gravel; some soil cracks @ 6.7' shale fragment (7'-10') no soil description	3.7/10.1 1.8/2.0 5-7	A: 0.0 H: 0.9	collected every 5' for confirmation purposes.
	10	ML	(10'-12') SILT (ml); little fine sand. 2.5x5/4 light olive brown; dry; stiff; crumbly (10.6'-10.8') Saturated @ 11.9' Saturated + brown 2.5x5/4 (12'-15') no soil description	5.1/13.1 2.0/2.0 10-12	A: 0.0 H: 0.0	A: Ambient PID H: Headspace PID
	15	ML	(15'-17') SILT (ml); some clay; 2.5x4/1 dark gray; wet; very soft; high plasticity (17'-20') no soil description	1.2/2.3 1.5/2.0 15-17	A: 0.0 H: 0.5	
	20	ML	(20'-22') SILT + CLAY (ml); clay content ? w/ depth; 10x4/1 dark gray; damp to moist very soft (22'-25') no soil description	1.1/2.2 2.0/2.0 20-22	A: 0.0 H: 0.8	
	25	CL	(25'-26.5') CLAY (cl); some silt; some fine sand partings throughout; medium stiff; dry; medium plasticity; 2.5x4/2 dark grayish brown	1.3/6.9 2.0/2.0 25-27	A: 0.0 H: 0.4	
		ML	(26.5'-27') SILT (ml); some clay; little fine sand; 2.5x4/2 dark grayish brown; dry medium plasticity; medium stiff			
	30		(27'-30') no soil description			
PROJECT FACILITY WIDE GROUNDWATER RI			GEOLOGIST SIGNATURE/DATE Amanda Jentm 03/14/12		BOREHOLE NUMBER LL12mw-18255	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER LL12mw-182SS
1. COMPANY NAME SAIC		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT FWGWMP RI (RVAAP-06)		4. LOCATION RVAAP 8451 State Route 6 Ravenna, OH 44266	
5. NAME OF DRILLER JOE TARR		6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: MiniRAE 2000 WATER LEVEL MAKE/MODEL: NA		PID SERIAL#: 110-005816 WATER LEVEL SERIAL#: NA Colors from Munsell Soil Color Chart, Rev 2000 REV ED	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
		CL	(30'-31.5') Sandy CLAY; little subrounded Gravel (1/4" - 1/2"); 25Y5/1 Gray; medium dense	24/5/8 12/2.0 30-32	A: 0, 0 H: 1, 6	
	35	GP	(31.5'-34.0') SAND; little fine Gravel; 25Y4/1 dark gray + black; wet; med dense	34-36 7/10/15/19	A: 0, 0	
	38	CL	(34-36) SILTY CLAY w/ MICACEOUS SHALE; trace SS Gravel from 35.5' - 36ft; black; Subang War shale content increases w/ depth; dry SH#.	2.0/2.0 36-38	A: 0, 5 H: 0, 0	
	40		(36'-38') SAA; MORE SILT w/ DEPTH (38.0') SHALE (SH); BLACK, DRY; MICACEOUS	10/0/15/50/6	H: 0, 0	
			BORING TERMINATED AT 38 FT BGS			
	45					
	50					
	55					
	60					

PROJECT FWGWMP RI (RVAAP-06)	GEOLOGIST SIGNATURE/DATE Amanda Hentz 03/15/12	BOREHOLE NUMBER LL12mw-182SS
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MONITORING WELL

PROJECT NAME:

RVAA7-66 RI

PROJECT NO:

30174.0016.001.02

WELL NUMBER:

LL12mw-182SS

BEGIN:

3/14/12; 1500^{ok} / 1500^{ok}

END:

03/15/12

COORDINATES:

N: *555897*

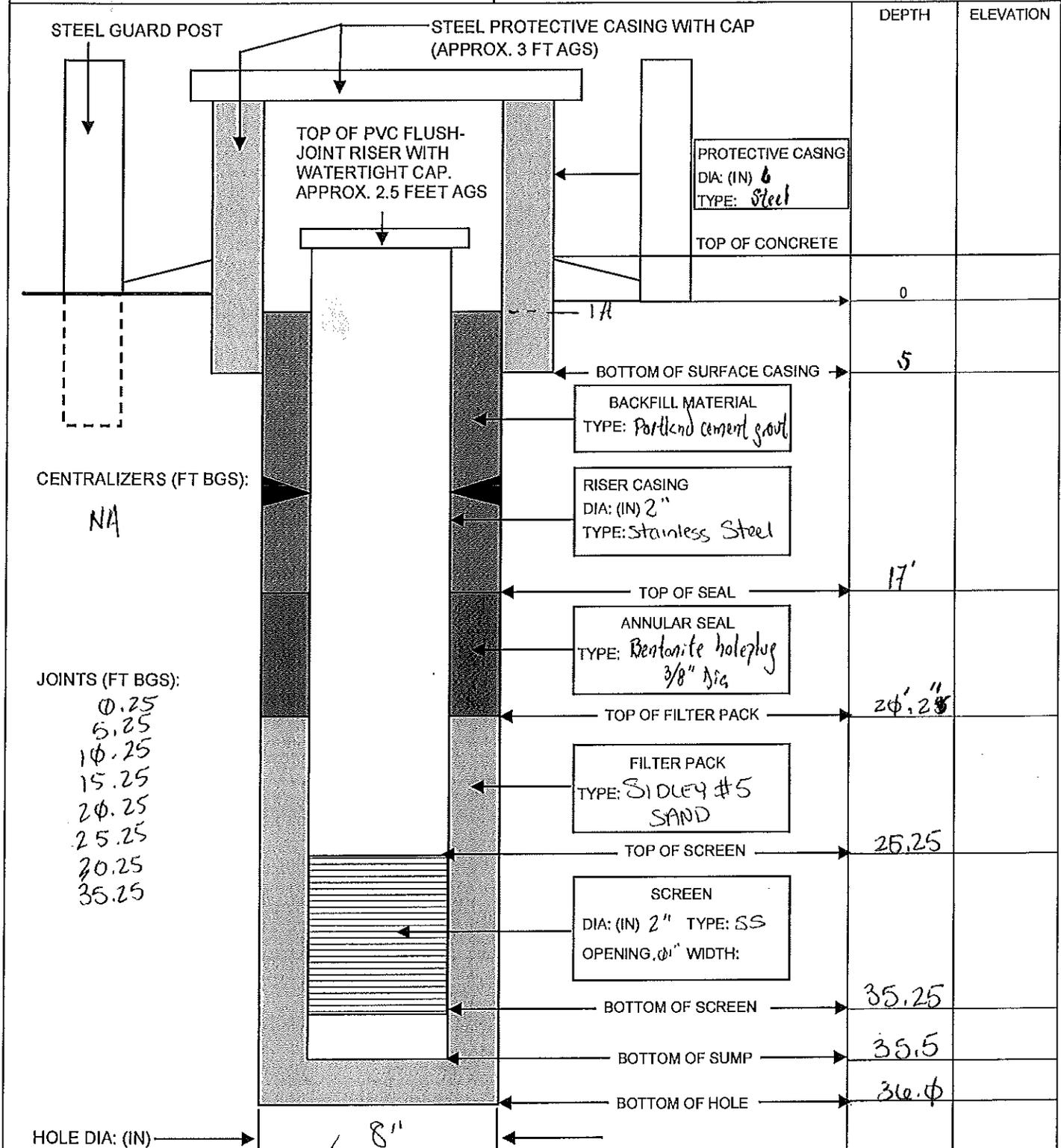
E: *2368867*

REFERENCE POINT:

700

ELEVATION: MSL

985.02



Recorded by:

Walter Hernandez

QA performed by:

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER 2212 MW-247
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RYAAP-66 RI		4. LOCATION RYAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tete		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" ID HSA 2" x 24" Split-Spoon		8. BOREHOLE LOCATION Piped w/ SCFMW-002	
		9. SURFACE ELEVATION/DATUM 981.30	
		10. DRILL DATE/TIME STARTED: 3/1/12 COMPLETED: 3/1/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 8.5 ft	
12. OVERBURDEN THICKNESS NA		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
13. DEPTH DRILLED INTO BEDROCK 0		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
14. TOTAL DEPTH OF BOREHOLE 20.5 ft			
18. GEOTECHNICAL SAMPLES UNDISTURBED: Shelby DISTURBED: NA		19. TOTAL NUMBER OF CORE BOXES NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:		21. TOTAL CORE RECOVERY % NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/1/12		DATE COMPLETED/ABANDONED: 3/1/12	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million 12' ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT RYAAP-66 RI		GEOLOGIST SIGNATURE/DATE Joe Tete 3/1/12	
		BOREHOLE NUMBER 2212 MW-247	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER LL12 MW - 247	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 2	
3. PROJECT RYAAP-66 RI			4. LOCATION RYAAP 8451 State Route 5, Ravenna, OH 44266			
5. NAME OF DRILLER Joe Tete			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA			PID SERIAL#: A2-1861		Colors from Munsell Soil Color Chart, Rev	
WATER LEVEL MAKE/MODEL:			WATER LEVEL SERIAL#:			
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/WCPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0-2	CL	Silty clay, brn w/ roots in upper 4" then w/ gray and rust mottles, increasing silt & gray in lower 6"	1-2-2-4 17/24	0	1330; 0-2 ft
NS	5	CL	Upper 6" silty clay, brn w/ iron oxides grading to brn w/ gray along vertical fractures, root in lower 6"	4-6- 8-10 21/24	0.3	1350; 5-7 ft
	9	CL	Silty clay, brn w/ gray along vertical fractures, med. stiff, few small gravel in lower 12", sand seam (1/4") ~ 5" from bottom, wet.	4-7- 9-10 24/24	0.2	1400; 7-9 ft
NS	12	SP	Upper 4" sand, gray, wet, med-crs, poorly sorted, loose; remainder clayey silt, gray, slightly plastic, moist, few fn sand	1-4- 6-8 18/24	0.1	1418; 12-14 ft
	14	ML				
	15				14-16 ft	Shelby Tube - 1455
	16		Shelby Tube	16/24		FWG LL12S5-247-0001-GT
	18	SS	Fractured sandstone, wet, some silt in upper 4" 3" sandy silty clay, stiff above rock frags	8-8- 12-5/4 8/24	0	1517; 16-18 ft
	20	SS	Upper 4" silty clay, wet, then 3" weathered sandstone	26-8- 10-15 14/24	0	1527; 18-20 ft
		SH	Lower 7" shale, dk gray-blk, clayey, moist			
			End of boring @ 20.5 ft			
	25					
	30					
PROJECT RYAAP-66 RI			GEOLOGIST SIGNATURE/DATE David [Signature] 3-1-12		BOREHOLE NUMBER LL12 MW - 247	

MONITORING WELL

PROJECT NAME:

RVAAP-66 RI

PROJECT NO:

30174.0016.001.02

WELL NUMBER:

LL12MW-247

BEGIN:

3/1/12

END:

3/1/12

COORDINATES:

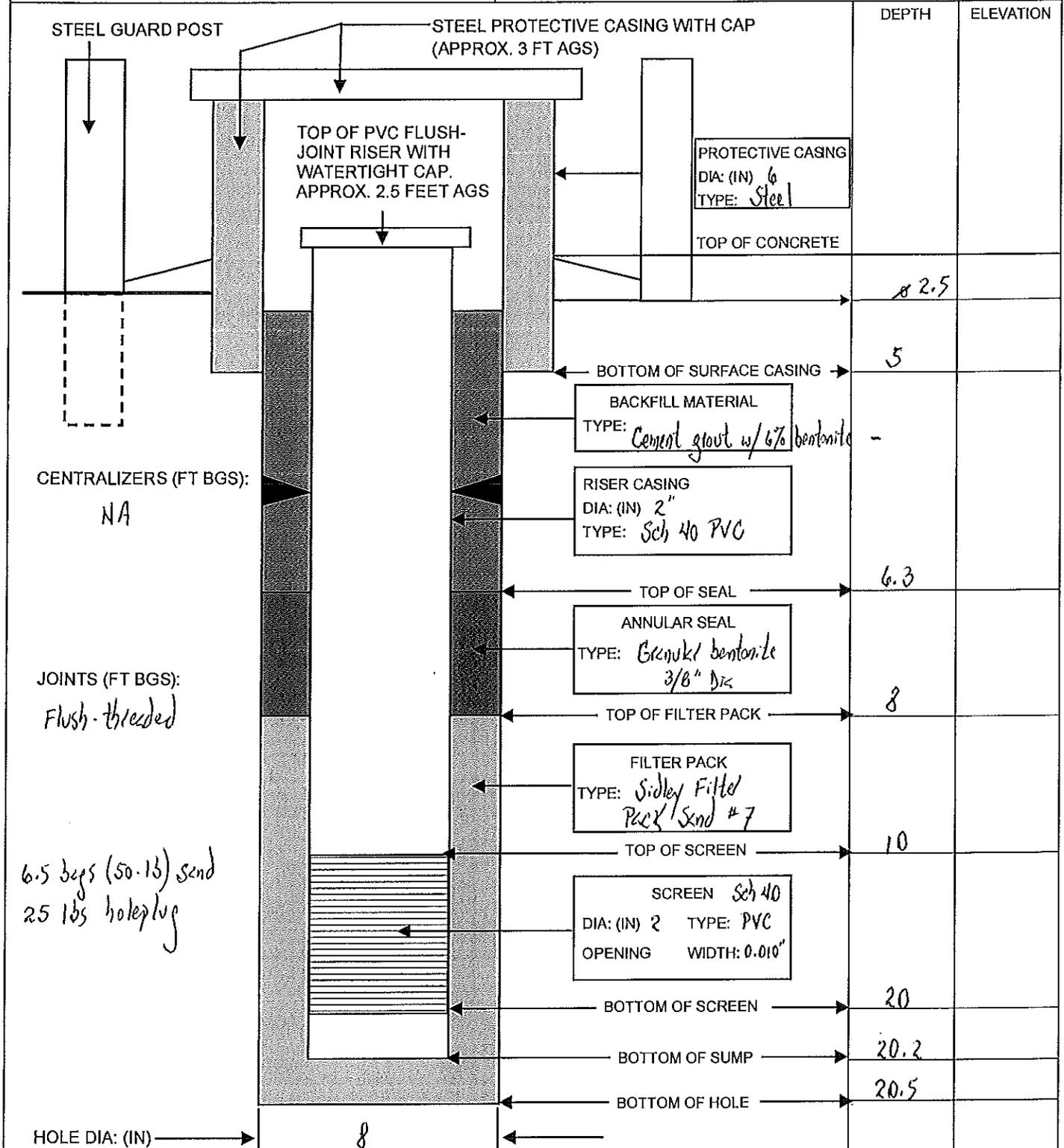
N: *555141*

E: *2368932*

REFERENCE POINT:

ELEVATION: MSL

984.25



Recorded by:

[Signature]

QA performed by:

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER B12mw-013
1. COMPANY NAME		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF 2
3. PROJECT RUAAP-66 RJ		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER AARON MACKAY		6. MAKE/MODEL OF DRILL CME 750X	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 2" x 2" Split spoon 6" tri cone roller bit N series rockcore sampler		8. BOREHOLE LOCATION BUILDING 1200 AOL	
12. OVERBURDEN THICKNESS 1.8'		9. SURFACE ELEVATION/DATUM 1001.80	
13. DEPTH DRILLED INTO BEDROCK 20.2'		10. DRILL DATE/TIME STARTED: 04/05/12; 1345 COMPLETED: 04/06/12; 1345	
14. TOTAL DEPTH OF BOREHOLE 22 FT BGS		15. DEPTH GROUNDWATER ENCOUNTERED 5.2	
18. GEOTECHNICAL SAMPLES UNDISTURBED: _____ DISTURBED: _____		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION _____	
20. CHEMICAL SAMPLES CHEM: _____ RAO: NA OTHER: _____		19. TOTAL NUMBER OF CORE BOXES 2	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 04/05/12; 1540 DATE COMPLETED/ABANDONED: 04/06/12; 1345		21. TOTAL CORE RECOVERY % 64	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \leq Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS		SCALE: None	
PROJECT RUAAP-66 RJ		GEOLOGIST SIGNATURE/DATE Amanda Hester 04/06/12	
		BOREHOLE NUMBER B12mw-013	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER B12 MW-013
1. COMPANY NAME SHAC		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-LOW RI		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266	
5. NAME OF DRILLER AARON MUCKEY		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Mini RAE 2000 WATER LEVEL MAKE/MODEL: —		PID SERIAL#: 110-005816 WATER LEVEL SERIAL#: —	Colors from Munsell Soil Color Chart, Rev 2000 Rev ED

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/SPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
		ML	(0.0' - 0.7') Clayey SILT (m); sand content ↑ w/depth. 10% K ₂ SO ₄ yellowish brown; soft; damp medium plasticity	27/14/18 1.8/1.8 0-2	A 0.0 H 0.1	04/05/12; 15455
		SS	(0.7' - 1.2') SFA AND SANDSTONE			
		SS	(1.2' - 1.8') WEATHERED SANDSTONE MOTTLED GRAY + YELLOWISH BROWN, DRY.			
5		SS	CORE FROM 1.8' - 6.0' w/ tri-cone roller bit (6") set casing + benseal			Commence coring 04/05/12 @ 0745
		SS	(6.0' - 21.5') SANDSTONE, yellowish brown highly fractured shale permeable; ~8.0' fractures noticed while drilling			10'-11.0' @ 0935
10					Ambient 0.0	5.2'/10.0'
			~13.0' shale observed during drilling - 13.5' NOT recovered in core.			
15						04/06/12 @ 1030
					Ambient 0.0	10'-22' 5.0'/6.0'
			17' Grayish white sandstone w/ shale partings 17.5' - 18.5' SHALE @ 20' sandstone is producing slightly more water			
20						
		SS	21.5' - 22' SHALE; dark gray micaceous			
			Boring terminated at 22.0 ft bgs			
25						
30						

PROJECT RVAAP-LOW RI	GEOLOGIST SIGNATURE/DATE Amanda Inertr 04/06/12	BOREHOLE NUMBER B12 MW-013
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MONITORING WELL

PROJECT NAME: *RVAAP-66 RI*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *B12mw-013*

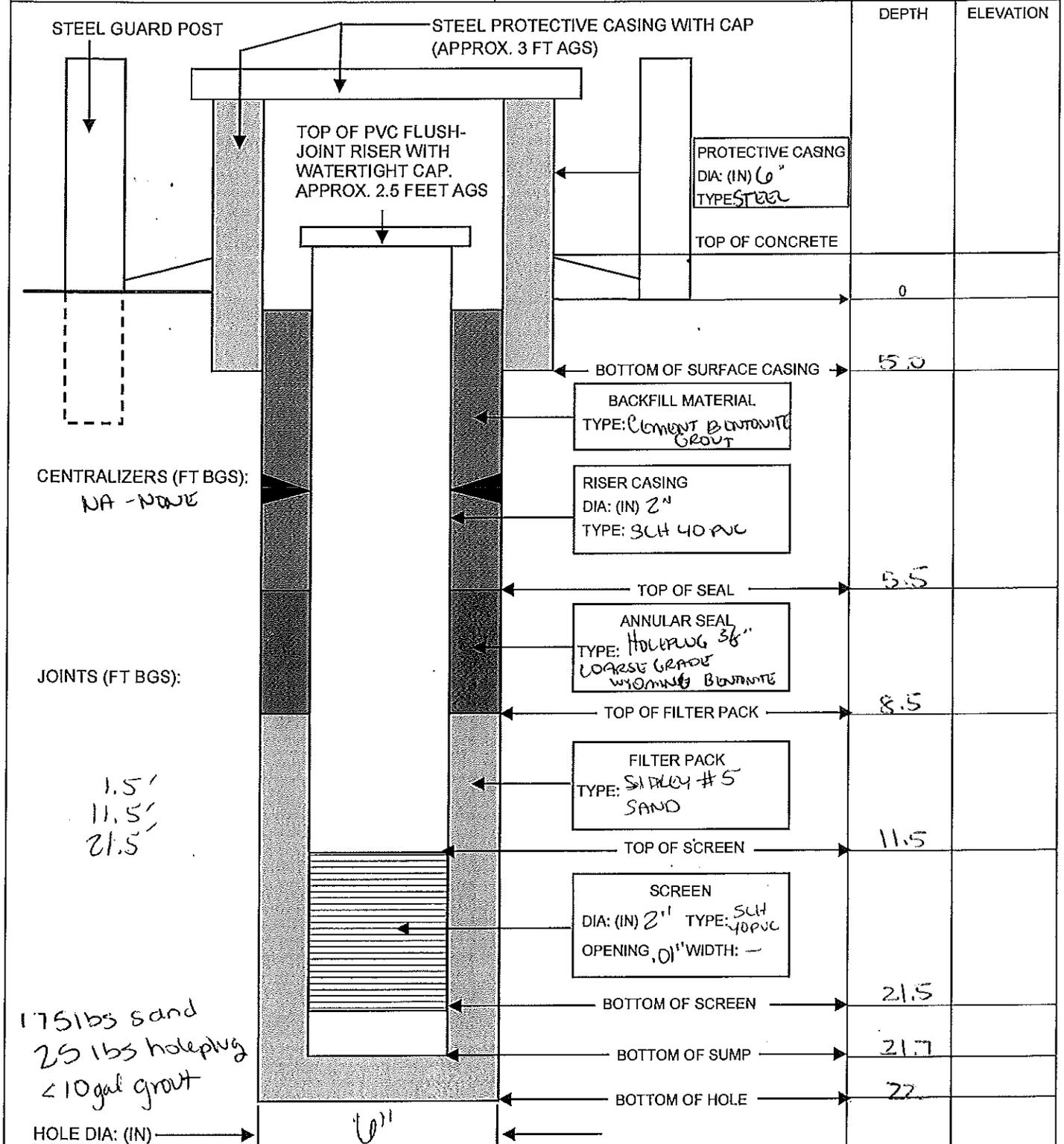
BEGIN: *04/06/12; 1100
1300 AM*

END: *04/06/12, 1345*

COORDINATES: N: *565904*
E: *2371221*

REFERENCE POINT: *TOC*

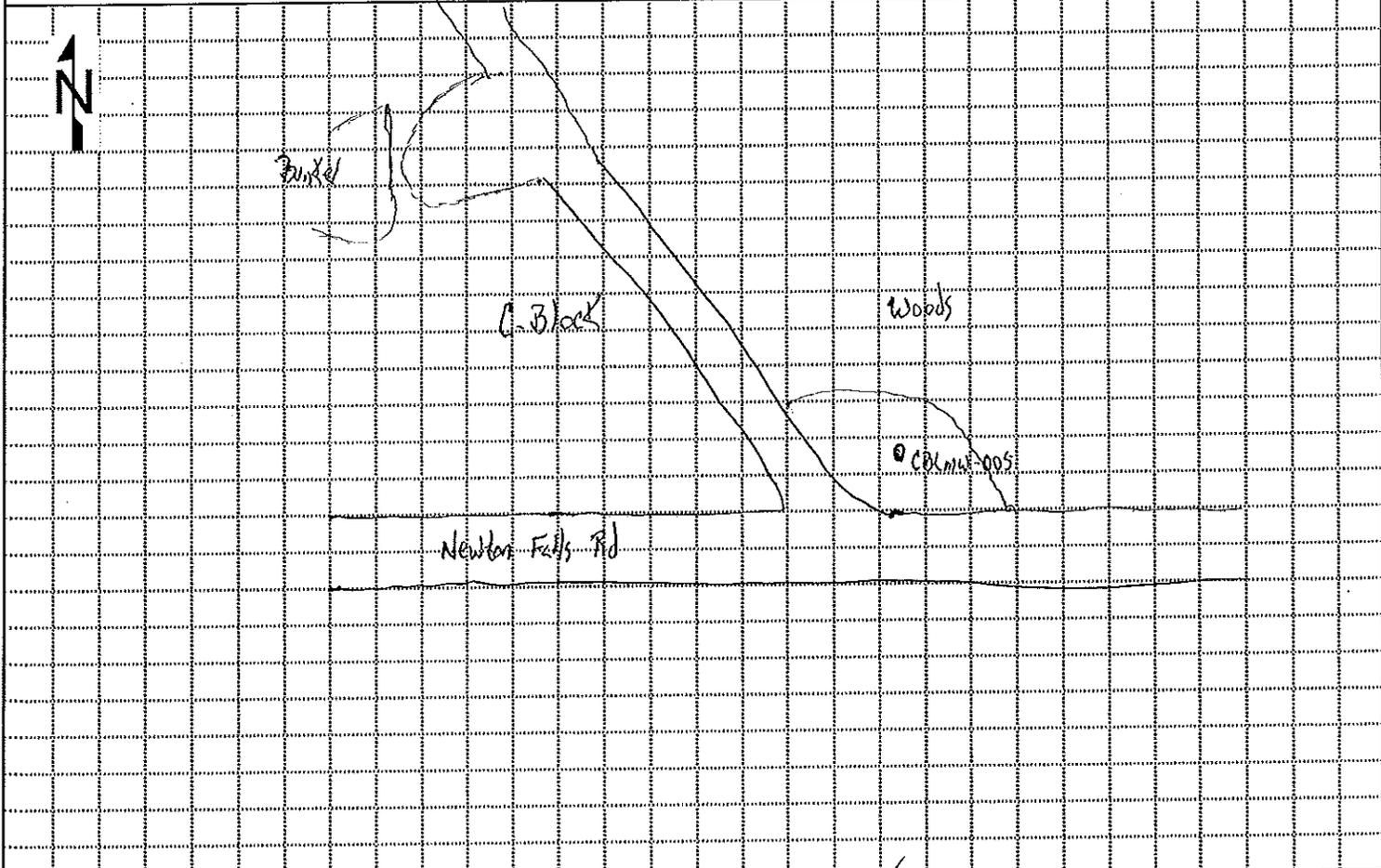
ELEVATION: *MSL*
1004.48



Recorded by: *Amanda Jentm 04/06/12* QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER CBLMW-005
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tele / ^{AMT} / 10/10/12 NARON MALLEY		6. MAKE/MODEL OF DRILL CME-55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" ID HSA 2" X 24" 1/2" Spoon N SERIES ROCK CORE SAMPLER		8. BOREHOLE LOCATION PW-36; south end of C. Block along Newton Falls	
12. OVERBURDEN THICKNESS 9 ft		9. SURFACE ELEVATION/DATUM 1155.60	
13. DEPTH DRILLED INTO BEDROCK 26 FT		10. DRILL DATE/TIME STARTED: 3/27/12 COMPLETED: 04/10/12	
14. TOTAL DEPTH OF BOREHOLE 35 ft		15. DEPTH GROUNDWATER ENCOUNTERED 24 ft	
18. GEOTECHNICAL SAMPLES UNDISTURBED: NA DISTURBED: —		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER: —		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 03/27/12 DATE COMPLETED/ABANDONED: 04/10/12		19. TOTAL NUMBER OF CORE BOXES 2	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL		21. TOTAL CORE RECOVERY % 78%	
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE <i>Seth Speerhake</i> 3/27/12 <i>Amanda Jentz</i> 04/10/12	BOREHOLE NUMBER CBLMW-005
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER CB2 MW-005	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266			
5. NAME OF DRILLER Joe Tele			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0		Upper 3" Topsoil, dk brn, silty clay, roots, brittle	2-2-		0-2 ft; 1440
		CL	Next 4" silty clay, dk brn, some roots, dk, few gravel	2-2		
				R = 22/24		
		CL	Remainder silty clay, brn w/ gray mottles, few organics, few small gravel			
	2	CL	Silty clay, brn w/ gray mottles, little iron oxides, few small gravel, dry - sand from 10-12", dry	5-11-		2-4 ft; 1444
				9-9		
				R = 24/24		
	4	CL	Silty clay, brn w/ gray silt along vert. fractures, few iron oxides, few gravel, dk, mod. stiff becoming dry & brittle in lower 4"	3-3-		4-6 ft; 1454
				7-14		
				R = 19/24		
	6	ML	Clayey silt, brn, few iron oxides, some gravel (1/4"), angular, dry, brittle	15-19-		6-8 ft; 1459
				20-19		
				R = 23/24		
	8	CL	Upper 12" silty clay, brn, few small gravel, dry, somewhat brittle	5-31-		8-10 ft; 1512
				50/0		
		ML	Lower 2" sandy silt, red-brn, micaceous, brittle, dry			
				R = 14/24		
	10	ML	Sandy silt, red brn, micaceous, small siltstone pebble, brittle, dry	50/1		10-12 ft; 1522
				R = 1/24		
	12	ML	Sandy silt, red brn, as above	50/3		12-14 ft; 1550
				R = 3/24		
	18	ML	Augered into rock to 18 ft: silt, red brn, dry, brittle, few sand - bedrock	50/1		18-20 ft; 1645
				R = 4/24		

PROJECT	GEOLOGIST SIGNATURE/DATE	BOREHOLE NUMBER
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER CBLMN-005	
1. COMPANY NAME SAIC			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 3 OF 3	
3. PROJECT RVAAP-666			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268			
5. NAME OF DRILLER AARON MACKLEY			6. DIRECTION OF BOREHOLE VERTICAL			
7. NOTES PID MAKE/MODEL: MiniRAE 2000 WATER LEVEL MAKE/MODEL:			PID SERIAL#: 110-005816		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/OPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			CORE 18'-35' ON 4 1/2" 12. GRAN. WATER ENCOUNTERED ~ 24 FT BGS.		0.0 Ambient	18'-28' 04/10/12 8.9'/10.0' 0956
	25 11/05	SS	(18'-30') SANDSTONE (SS); white to light gray w/ pinkish orange staining medium to coarse grained; few horizontal fractures; few plant fragments (black); wet by 24 ft			
			@25' darker reddish brown + white			
			@28' dark pinkish brown		0.0	28'-35' 04/10/12
	30 11/05		@30' SHALE CUTTINGS OBSERVED DURING DRILLING; dark gray; few SS partings (light gray)		Ambient	4.3'/7.0' @1056
		SH	31' COAL SHALE SEAM WITHIN SHALE			
	35 11/05		BORING TERMINATED AT 35 FT			
	40 11/05					
	45 11/05					
	50 11/05					
PROJECT RVAAP-666 RI			GEOLOGIST SIGNATURE/DATE Amanda Jester 04/10/12		BOREHOLE NUMBER CBLMN-005	

MONITORING WELL

PROJECT NAME: *RUMP-66 RT*

PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *CBL MW-005*

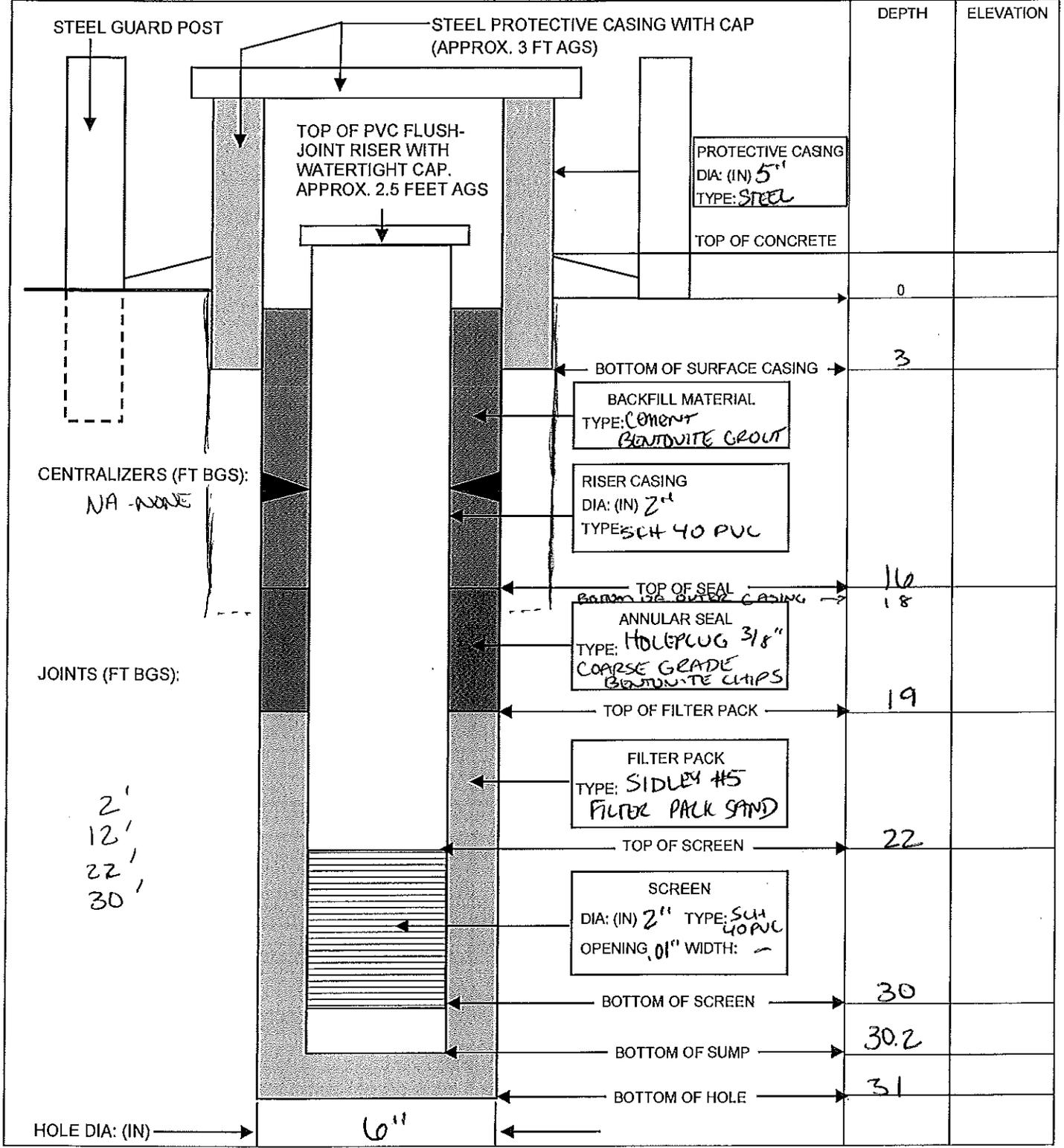
BEGIN: *04/10/12; 1100*

END: *04/10/12; 1410*

COORDINATES: N: *558686*
E: *2344672*

REFERENCE POINT: *TBC*

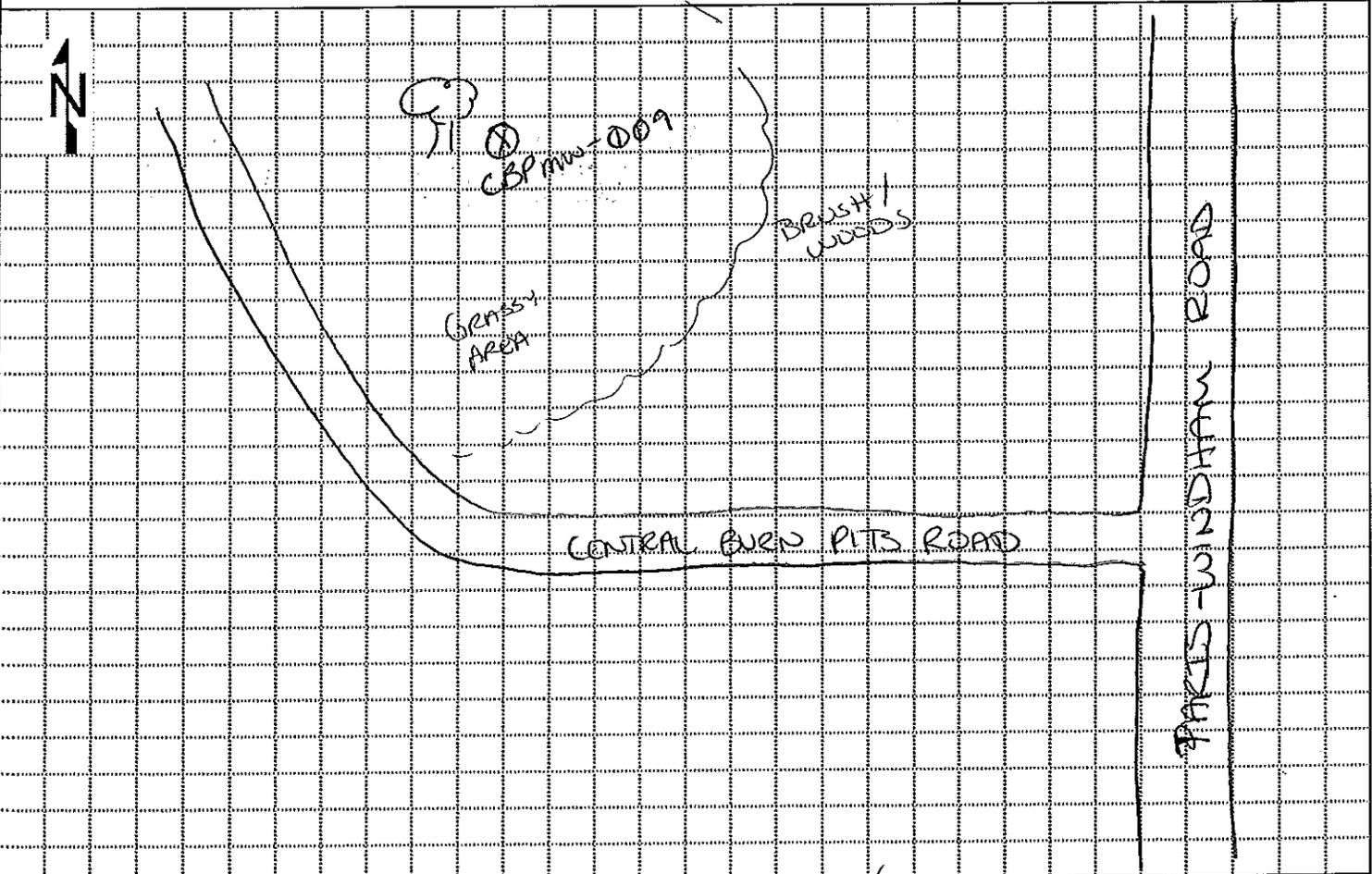
ELEVATION: *MSL*
1158.10



Recorded by: *Amanda Hester 04/10/12* QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER CBPMW-009
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Teitel / Aaron MACEY		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" IA HSA 2" x 24" split spoon N SERIES ROCK CORE SAMPLER		8. BOREHOLE LOCATION PW-0; Centrl Bxn Pits	
		9. SURFACE ELEVATION/DATUM 969.90	
		10. DRILL DATE/TIME STARTED: 3/16/12 COMPLETED: 3/28/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 8'30"/47'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION —	
12. OVERBURDEN THICKNESS 44 FT		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) —	
13. DEPTH DRILLED INTO BEDROCK 21 FT			
14. TOTAL DEPTH OF BOREHOLE 65 FT			
18. GEOTECHNICAL SAMPLES UNDISTURBED: 101.7'-103.2' DISTURBED: —		19. TOTAL NUMBER OF CORE BOXES 2	
20. CHEMICAL SAMPLES CHEM: — RAD: NA OTHER: —		21. TOTAL CORE RECOVERY % 92%	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/16/12 DATE COMPLETED/ABANDONED: 3/28/12			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Joe Teitel 3/16/12	BOREHOLE NUMBER CBPMW-009
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER CBPMW-009	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 5	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER Joe Teitel			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA			PID SERIAL#: A2-1861		Colors from Munsell Soil Color Chart, Rev	
WATER LEVEL MAKE/MODEL:			WATER LEVEL SERIAL#:			
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0		Upper 2" Topsoil, dk brn, moist, roots, silty clay Then 4" Fill, dk brn in upper 1" then gray, ash & of concrete frags, damp, musty odor	10-12- 2-3 R: 9/24		0-2 ft; 0815
	2	CL	Silty clay, brn w/ gray mottles, few iron oxides, few red-brn streaks in lower 3", damp	2-3- 5-7 R: 24/24		2-4 ft; 0822
	4	CL	Silty clay, brn w/ few gray mottles, few red-brn streaks, fairly st.//, dry	3-4- 9-12 R: 23/24		4-6 ft; 0829
	6	CL	Silty clay, brn, few small gravel & sand grains, st.//, dry	4-8- 10-18 R: 12/24		6-8 ft; 0833
	8	SC CL	Upper 2" Silty clayey sand, brn, fn-grained, wet Silty clay grading to clayey silt, brn w/ gray along vertical fractures, damp, stiff; brn-gray in lower 4"	8-10- 14-18 R: 21/24		8-10 ft; 0843
	10	SM ML	Upper 6" Silty sand, brn, some clay, fn-med grained, wet, soft Remained clayey silt, brn w/ gray along vertical fract., few fn sand, hard; becoming gray in lower 2"	4-10- 14-18 R: 22/24		10-12 ft; 0851
	12	ML	Clayey silt, brn w/ gray along fractures, damp, stiff	15-17- 21-16 R: 14/24		12-14 ft; 0857
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE H. E. O. [Signature] 3/16/12		BOREHOLE NUMBER CBPMW-009	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisv2@		BOREHOLE NUMBER CBP MW-009	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Fronz Drilling		SHEET 23 OF 5	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266			
5. NAME OF DRILLER Joe Teled			6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: <u>Vicrus MSA</u> WATER LEVEL MAKE/MODEL:			PID SERIAL#: <u>A2-1861</u> WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14	ML	clayey silt, gray, slightly plastic, mod. stiff, damp	3-4- 7-11 R = 24/24		14-16 ft; 0907
	20	ML	clayey silt, gray, plastic to slightly plastic, moist to damp, mod. stiff, sticky	7-12- 10-11 R = 24/24		16-18 ft; 0911
	18	CL	silty clay, gray, fairly plastic, moist	2-3- 4-5 R = 21/24		18-20 ft; 0920
	20	CL	silty clay, gray, wet & soft in upper 10", then moist, fairly plastic	wt of knud 2-4-6 R = 24/24		20-22 ft; 0928
	22	ML	silt, gray, little clay, damp, more brittle, few med-grained sand	6-7- 8-9 R = 21/24		22-24 ft; 0934
	24	ML	silt, gray, little clay, moist to damp, brittle	4-6- 6-8 R = 20/24		24-26 ft; 1000
	26	ML	silt, gray, little clay, moist, brittle, fairly soft	2-3- 3-4 R = 20/24		26-28 ft; 1006
	28	ML	silt, gray, some clay, moist, slightly plastic becoming silty clay, gray, moist, plastic in lower 4"	1-4-6- 3-4-6 R = 23/24		28-30 ft; 1017
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE J. S. [Signature] 3/16/12		BOREHOLE NUMBER CBP MW-009	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER CBPmw-009	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 24 OF 5	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268			
5. NAME OF DRILLER Joe Teitel / ARON MACKAY			6. DIRECTION OF BOREHOLE <u>VERTICAL</u> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: <u>SIRIUS MDA</u> <u>MINIRAE 2000</u> WATER LEVEL MAKE/MODEL: _____			PID SERIAL#: <u>42-1861</u> <u>110-005810</u> WATER LEVEL SERIAL#: _____		Colors from Munsell Soil Color Chart, Rev <u>MINIRAE 2000 REV ED</u>	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	30	CL	Silty clay, gray, wet, soft	1-2 2-3 R = 24/24		30-32 ft; 1023
	32	CL	Silty clay, gray, wet, soft	5-5 4-5 R = 24/24		32-34 ft; 1030
	35	CL	As above, small piece of hard gray fine-grained sandstone c. 1/2" - 5/16" refusal	50/3 R = 5/24		34-36 ft; 1040
	37	CL	(34.0' - 36.7') Silty clay w/ little sub-rounded gravel stiff, wet; med plasticity; dry by 0.5' in split spoon.	7/17/11/10 1.0/2.0 34-36 15/17/11/15 2.0/2.0 36-38	H: 0.0 H: 2.3 A: 0.0	34-36 - 03/26/12
	37	SM	36.7' - 37.0' SILT + SAND (SM); sand content ↑ w/ depth; fine to med grained	37/10/11/10 1.2/2 38-40	H: 2.1 A: 0.0	37/16/18/16
	37	SS	10YR 1/1 dark gray; wet (37.0' - 37.3') SS fragments; dry; white + 10YR 5/1 gray	0.9/2.0 40-42 14/11/11/10	H: 4.7 A: 0.0 H: 9.9	
	40	SW	(37.3' - 43.8) Sand (SW) w/ little 1/2" - 1/4" SS fragments; dry; dense; white + 10YR 5/1 gray; fine grained; sandstone fragment content increases w/ depth	44/11/17/6 0.9/2.0 42-44 50/1 44-46	A: 0.0 H: 1.5 A: NA H: NA	
	43	ML	(43.8' - 44.0') SILT (ML); some sub-rounded Gravel < 1/2"; 10YR 4/1 dark gray; dry; med stiff trace Sh. fragment			
	44	SS	44' - sandstone; white/light gray. Augered to 47' (Auger Refusal) + SET CASING. BEGIN ROCK CORING @ 47' (see pg 5)			

MONITORING WELL

PROJECT NAME: *BUAAP-606 RI*

PROJECT NO:

30174.0016.001.02

WELL NUMBER: *CBPmw-φφ9*

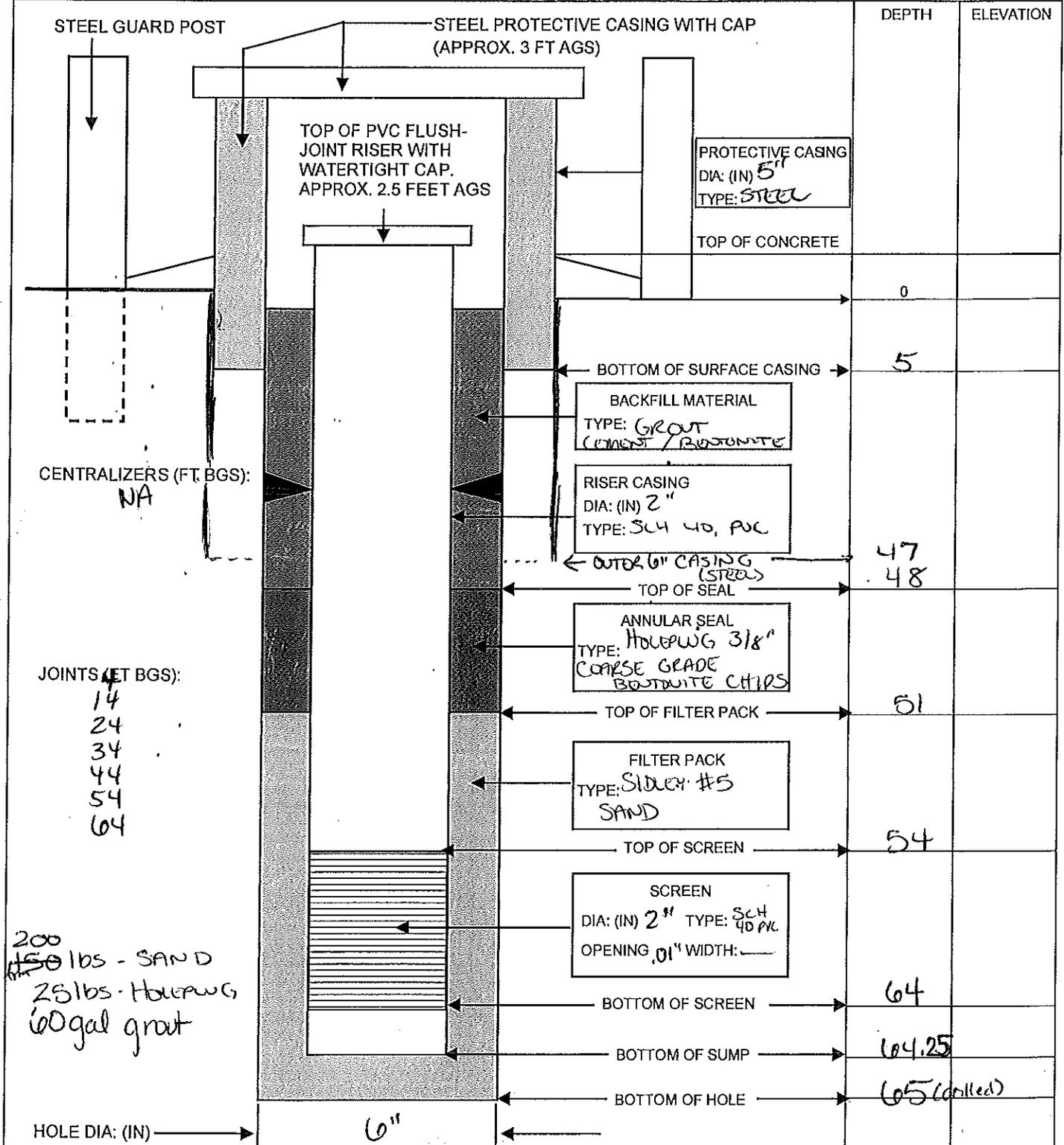
BEGIN: *03/28/12; 1315*

END: *03/28/12; 1702*

COORDINATES: N: *561797*
E: *2367174*

REFERENCE POINT: *TOC*

ELEVATION: *MSL*
972.48



CENTRALIZERS (FT. BGS):
NA

JOINTS (FT BGS):
14
24
34
44
54
64

200 lbs - SAND
25 lbs - HOLESWAG
60 gal grout

HOLE DIA: (IN) → *6"*

Recorded by: *Amanda Jester 03/28/12* QA performed by: _____

HTRW DRILLING LOG		DISTRICT	BOREHOLE NUMBER
1. COMPANY NAME EDM		USACE - Louisville	DA2mw-114
2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 1 OF 2	
3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266		
5. NAME OF DRILLER Joe Tetler / Aaron Muecke	6. MAKE/MODEL OF DRILL CME 55 / CME 75		
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 2" x 24" split spoon 4/4" IA HSA 5/8" Core barrel (N Series)	8. BOREHOLE LOCATION PW-17; Demo Area 2 along creek east of		
	9. SURFACE ELEVATION/DATUM 1029.50 DA2mw-108		
	10. DRILL DATE/TIME STARTED: 5/30/12 COMPLETED: 6/22/12		
	15. DEPTH GROUNDWATER ENCOUNTERED ~ 4'		
	16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA		
12. OVERBURDEN THICKNESS 3.5 ft	17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA		
13. DEPTH DRILLED INTO BEDROCK 16 ft			
14. TOTAL DEPTH OF BOREHOLE 19.5 ft			
18. GEOTECHNICAL SAMPLES UNDISTURBED: Rock core DISTURBED:	19. TOTAL NUMBER OF CORE BOXES 1		
20. CHEMICAL SAMPLES CHEM: NA RAD: NA OTHER:	21. TOTAL CORE RECOVERY % 90		
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: DATE COMPLETED/ABANDONED:			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \leq Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE David Spink 5/30/12		BOREHOLE NUMBER DA2mw-114

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER DAR MW-114	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 2	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266			
5. NAME OF DRILLER Joe Tepler / Aaron Mackey			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0	ML	Upper 9" clayey silt, brn, few sand, roots, brittle	2-2-	0.2	0-2 ft; 1447
		SM	Remainder silty sand, lt brn, fine grained, brittle, dry	3-3 R=19/24		
	2	SM	Upper 8" silty sand, lt brn, ls coarse	3-3-	5.8	2-4 ft; 1457
		ML	Next 9" clayey silt, brn w/ iron oxide mottling along partings, some sand, dry, brittle, few roots	10-50/5 R=21/24		
		SH	Lower 6" shale, dk gray w/ olive green mottles in upper 3" becoming lt gray, micaceous in bottom 3", fairly brittle			
	10					
			Agreed to repair @ 8 ft; on 6/22/12 overdrilled to 9.5 ft bgs using 7/8" rotary bit and installed temporary casing			
	18					
	9.5	SH/SS	Upper 70.5" shale, gray-dk gray, fractured in upper 19", clayey; sandstone, lt gray, calcareous from 15'3" to 17 ft bgs; remainder shale, blk, clayey	R=108/120		9.5-19.5; 0916 (6/22/12) (segment from 16.5 to 17.1 ft submitted for perm. testing)
	20					
	20					
	20					
	20					
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE B. W. [Signature] 5/30/12 6/22/12		BOREHOLE NUMBER DAR MW-114	

MONITORING WELL

PROJECT NAME:

RVAAP-66 RI

PROJECT NO:

30174.0016.001.02

WELL NUMBER:

DA2 MW-114

BEGIN:

6/22/12

END:

6/22/12

COORDINATES:

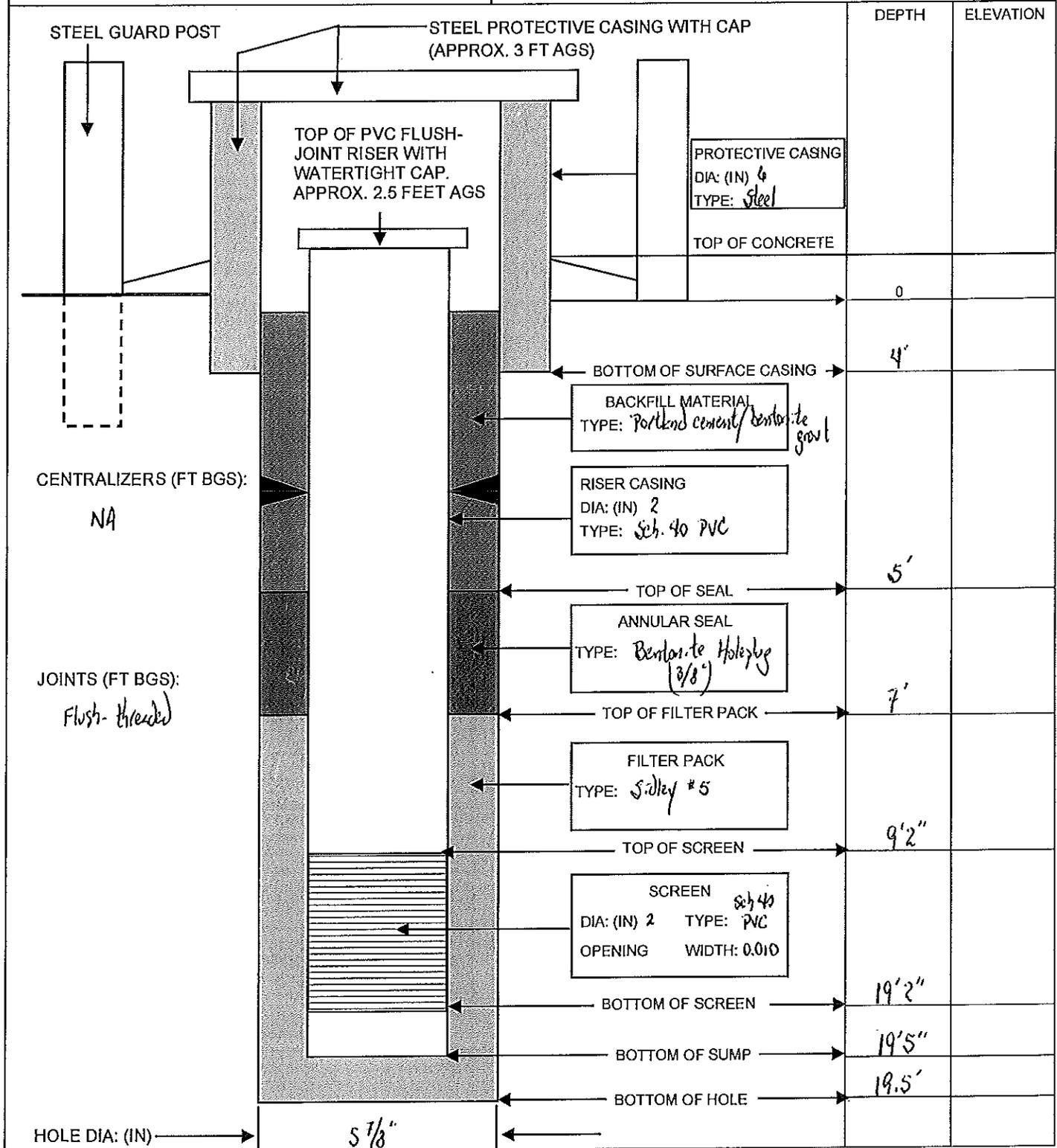
N: *560109*
E: *2355705*

REFERENCE POINT:

TOC

ELEVATION:

MSL
1031.90



CENTRALIZERS (FT BGS):
NA

JOINTS (FT BGS):
Flush-threaded

PROTECTIVE CASING
DIA: (IN) *6*
TYPE: *Steel*

TOP OF CONCRETE

BACKFILL MATERIAL
TYPE: *Portland cement/Bentonite grout*

RISER CASING
DIA: (IN) *2*
TYPE: *Sch. 40 PVC*

ANNULAR SEAL
TYPE: *Bentonite Holeyug (3/8")*

FILTER PACK
TYPE: *Sidley #5*

SCREEN
DIA: (IN) *2* TYPE: *Sch 40 PVC*
OPENING WIDTH: *0.010*

Recorded by: *Steve Hernandez*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER DA2 MW-116 ⁵ _{XX}
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 3I		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Teitel / Aaron Mackey		6. MAKE/MODEL OF DRILL CME 55 / CME 75	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 2" x 24" split spoon 4.25" ID HSA 8.25" ID HSA 5 7/8" Core barrel (N series)		8. BOREHOLE LOCATION PW-19, paired w/ DET MW-003	
12. OVERBURDEN THICKNESS 14.25'		9. SURFACE ELEVATION/DATUM 1035.40'	
13. DEPTH DRILLED INTO BEDROCK 29.75'		10. DRILL DATE/TIME STARTED: 5/30/12 COMPLETED: 6/21/12	
14. TOTAL DEPTH OF BOREHOLE 44'		15. DEPTH GROUNDWATER ENCOUNTERED 5.7'	
18. GEOTECHNICAL SAMPLES NA		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
20. CHEMICAL SAMPLES CHEM: RAD: NA OTHER:		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: DATE COMPLETED/ABANDONED:		19. TOTAL NUMBER OF CORE BOXES 2	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL		21. TOTAL CORE RECOVERY % 96	
23. NOTES BKG: ≤Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS		SCALE: None	
PROJECT RVAAP-66	GEOLOGIST SIGNATURE/DATE Brett Sprenkle 5/30/12		BOREHOLE NUMBER 5/30/12 DA2 MW-116 ⁵ _{XX}

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER DA2 MW-116 ⁸⁸
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268	
5. NAME OF DRILLER Joe Tepler / Action Mackey		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius MSA		PID SERIAL#: A2-1861	
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0		Upper 1" Topsoil, dk brn, silty clay, roots Next 2" clayey gravel fill followed by 3" silty clay fill, brn, fairly soft, dry, few organics	5-5 5-5 R = 13/24	0	0-2 ft; 1007
	2	CL	Lower 3" silty clay, gray, fairly brittle			
	2	CL	Silty clay, gray, some fr-med sand, few organics, damp, fairly brittle, few small gravel	5-3 4-4 R = 21/24	0	2-4 ft; 1019
	104	CL	Upper 8" silty clay, gray, moist, soft, few small gravel & organics, blk streaking from 3-8"	out of hammer 3-5-7 R = 17/24	0	4-6 ft; 1026
		GP	Lower 4" sand & gravel, brn-gray, few clay & silt, wet, crs sand			
	106	GP	Sand & gravel, brn, med-crs grained, wet; rock in size	7-21 19-24 R = 3/24	0	6-8 ft; 1054 (Tried to push Shelby Tube but it would not penetrate @ 1200 psf.)
	208	GC	Clayey sand & gravel, gray, wet, well-rounded gravel (1/4-1/2" dia.)	12-18 29-41 R = 21/24	0	8-10 ft; 1104
	10	GM	Sand & gravel, gray, some silt, wet, subangular to subrounded gravel, lower 3" yellow-brn sandstone, weathered	8-16 31-39 R = 17/24	D	10-12 ft; 1119
	12	SM	Sand w/ some fines & little gravel, gray, wet, med-crs grained	29-25 19-18 R = 16/24	12.5	12-14 ft; 1133

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Hatto [Signature] 5/30/12 6/20/12	BOREHOLE NUMBER DA2 MW-116 ⁸⁸
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER DA2 MW-116 ⁵
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tedler / Akon Mackey		6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius MSA		PID SERIAL#: A2-1861	
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14		Upper 3" Sand, gray, med.-grained, wet	10-20-	2.4	14-16 ft; 1148
		SH	Remainder shale, gray, weathered, brittle	29-50/3		
				R=20/24		
	28		Set casing @ 19 ft bgs (6/20/12)			
	19	SH	Shale, dk gray, weathered & fractured, clayey, more competent in lower 15", damp-moist	R=65/120"		19-29 ft; 0835 (6/21/12)
	10 29	SS	Upper 54" Sandstone, buff w/ yellow-red iron oxide staining, fn-grained, few rounded gravel	R=120/120"		29-39 ft; 1010
		SH	Next 60" shale, dk gray, clayey, thinly laminated, fairly brittle, moist			
		SS	Lower 6" Sandstone, lt gray, fn-grained, fractured			
	18					
	39	SS	Sandstone, lt gray, fn-grained, dk gray shale interbeds ranging from <1/4" to 3" (fractured)	R=53.5/60"		39-44 ft; 1157
			End of boring @ 44 ft			
	50					
	58					
	60					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE David Spink 5/30/12 6/20-21/12	BOREHOLE NUMBER DA2 MW-116 ⁵
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MONITORING WELL

PROJECT NAME:

RVAAP-66 RI

PROJECT NO:

30174.0016.001.02

WELL NUMBER:

NA2 MW-11/6^{SS}

BEGIN:

6/20/12

END:

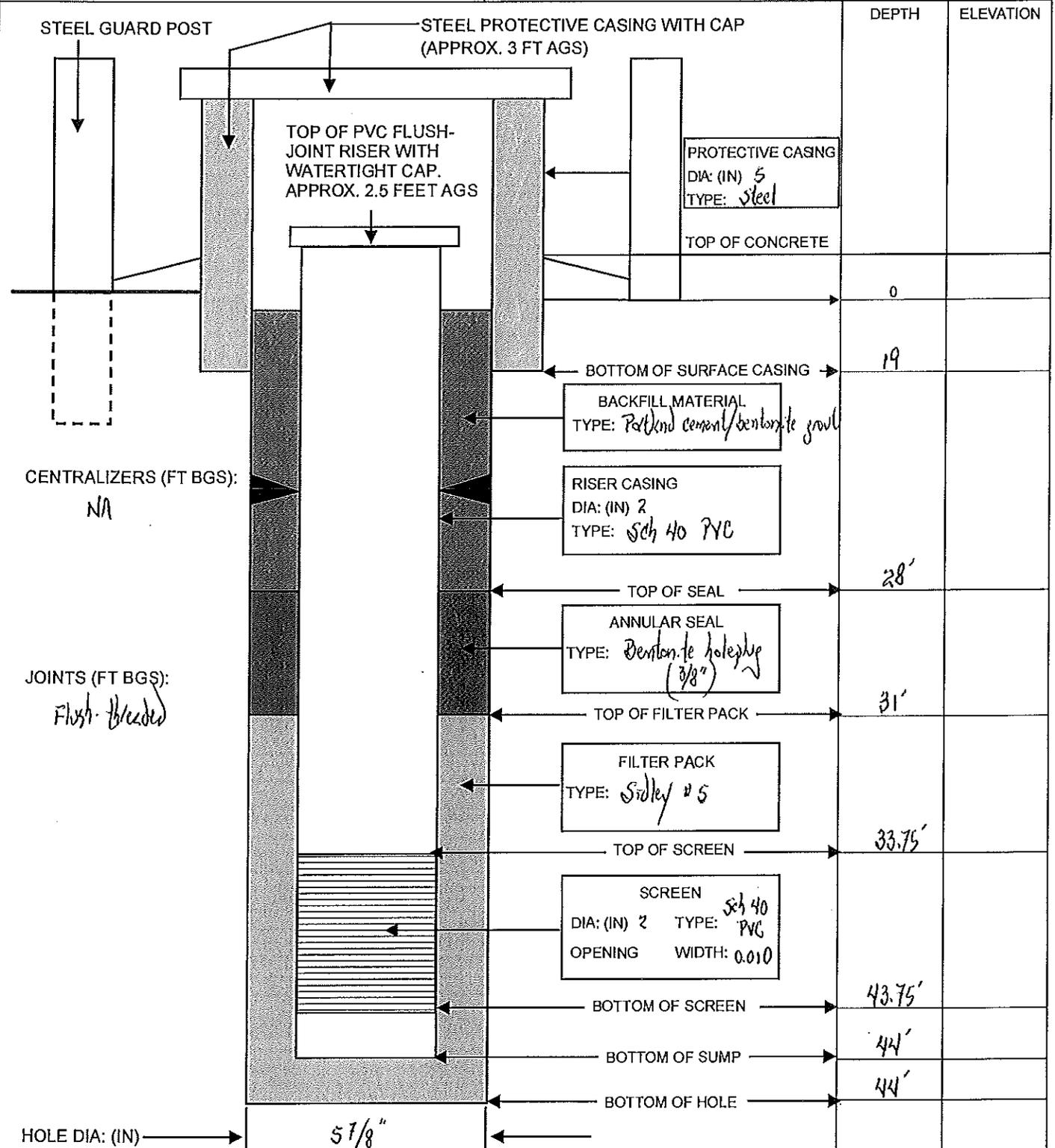
6/21/12

COORDINATES:

N: *560459*
E: *2355269*

REFERENCE POINT: *TOC*

ELEVATION: *MSL*
1038.08



Recorded by:

[Signature]

QA performed by:

HTRW DRILLING LOG		DISTRICT	BOREHOLE NUMBER
1. COMPANY NAME EQM		USACE - Louisville	EBGmw-131
2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 1 OF 4	
3. PROJECT RVAAP-66 BI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266		
5. NAME OF DRILLER Joe Teele	6. MAKE/MODEL OF DRILL CME 55 / CME 75		
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 2" x 24" split spoon 4 1/4" ID HSA 8 1/4" ID HSA 5 1/8" core barrel / drill bit (2" wire-line core)		8. BOREHOLE LOCATION PW-2 (214) w/ EBGmw-125	
12. OVERBURDEN THICKNESS 50.1'		9. SURFACE ELEVATION/DATUM 947.50	
13. DEPTH DRILLED INTO BEDROCK 20.9'		10. DRILL DATE/TIME STARTED: 6/1/12 COMPLETED: 6/12/12	
14. TOTAL DEPTH OF BOREHOLE 71'		15. DEPTH GROUNDWATER ENCOUNTERED 15'	
18. GEOTECHNICAL SAMPLES UNDISTURBED: Rock Core DISTURBED:		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
20. CHEMICAL SAMPLES NA CHEM: RAD: NA OTHER:		19. TOTAL NUMBER OF CORE BOXES 1	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: DATE COMPLETED/ABANDONED:		21. TOTAL CORE RECOVERY % 94	
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \triangleleft Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
<p>The sketch shows a grid with a north arrow pointing up. A road labeled 'RVAAP Rd' runs vertically through the center. Another road labeled 'Smalley Rd' runs horizontally across the bottom. A third road labeled 'East Plank Rd' runs vertically on the right side. A curved road labeled 'Pond' is at the top. A well labeled 'EBGmw-131' is marked with a circle and dot. A shaded area labeled 'Wetland' is located to the right of the well. A road labeled 'P.W. 214' is also shown.</p>			
PROJECT RVAAP-66 BI	GEOLOGIST SIGNATURE/DATE Joe Teele 6/12/12		BOREHOLE NUMBER EBGmw-131

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER EBGMW-131	
1. COMPANY NAME EGM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 4	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER Joe Tepler			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED <input type="checkbox"/> DEGREES			
7. NOTES PID MAKE/MODEL: <u>Sinius MSA</u> WATER LEVEL MAKE/MODEL:			PID SERIAL#: <u>A2-1861</u> WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0		Blind drill; refer to soil boring log for EBGMW-125			0-10 ft
	10	CL	Upper 10" silty clay, brn w/ gray nodules, little fs sand, damp	1-2- 2-4	0	10-12 ft; 1109
	15	SM	Lower 7" silty sand, gray, moist, fn-grained	R: 17/24		
	15	SM	Sand, gray, fn-grained, little silt, wet, well-sorted	1-1- 1-2 R: 16/24	0	15-17 ft; 1123
	20	SM	Sand, gray, fn-grained, little silt, few med sand, wet, fairly well sorted	3-4- 4-7 R: 24 1/2/24	0.1	20-22 ft; 1130
	25	SM	Upper 17" sand, gray, fn-grained w/ little med-grained, little silt, wet	4-4- 4-5 R: 24/24	0	25-27 ft; 1143
heave		SW	Lower 7" silt, gray, wet			
heave	27	SW	Upper 14" sand, gray, fn-med grained, wet (heave?)	1-1-	0	27-29 ft; 1230
	20	ML	Lower 2" silt, gray, wet	1-2 R: 16/24		
heave	29	SW	Upper 12" sand, as above	1-2-	0.1	29-31 ft; 1238
		ML	Lower 12" silt, gray, wet	2-3 R: 24 1/2/24		
	25					
	31	SM	Upper 10" sand, gray, fn-med, little silt, wet	2-2-	0.4	31-33 ft; 1246
		ML	Lower 13" silt, gray, little fs sand, wet	3-3 R: 23/24		
	30					
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE Datto Oberhardt 6/4/12		BOREHOLE NUMBER EBGMW-131	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER EBGmw-131	
1. COMPANY NAME E.O.M			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 3 OF 4	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268			
5. NAME OF DRILLER Joe Tepper			6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: 42-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	33	SM	Upper 9" Sand, fn-med, gray, some silt, wet	2-3-	0.1	33-35 ft; 1254
		ML	Lower 11" silt, gray, some fn sand, wet	3-3 R=20/24		
	35	SM	Upper 3" Sand, as above	2-2-	0.1	35-37 ft; 1300
		ML	Remainder sandy silt, gray, fn-grained, wet	2-3 R=22/24		
	37	SM	Upper 6" Sand, gray, fn-med, some silt, wet	out of barrel 2-4-8	0.1	37-39 ft; 1307
	40	ML	Next 12' sandy silt, gray, fn-grained, wet	3-24/24		
		CL	Lower 9" silty clay, gray, some red-brn mottles, few 1/2" crs sand grains, plastic			
	39	CL	Silty clay, till, gray, few small gravel, damp, plastic becoming 1/2" stiff in lower 4"	1-4- 6-9 R=12/24	0	39-41 ft; 1323
	41	ML	Clayey silt, gray, damp, plastic, few reddish mottles in lower 1"	10-14- 19-17 R=16/24	0.2	41-43 ft; 1330
	43	ML	Clayey silt, gray, moist, few reddish mottles, mod. stiff, few sand	2-5- 7-7 R=15/24	0	43-45 ft; 1437
	45	CL	Silty clay till, gray, few sand, sandstone & gravel frag, slightly plastic, moist	2-5- 10-14 R=12/24	0.4	45-47 ft; 1448
	50					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Dato Espinosa 4/4/12	BOREHOLE NUMBER EBGmw-131
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER EBGMW-131
1. COMPANY NAME EDM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 24 OF 4

3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266
5. NAME OF DRILLER Joe Teffel / Aaron Mackey	6. DIRECTION OF BOREHOLE VERTICAL INCLUDED DEGREES
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:	PID SERIAL#: A2-1861 WATER LEVEL SERIAL#: Colors from Munsell Soil Color Chart, Rev

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	47	CL	Silty clay till, gray, few sand & small gravel, shale frags, moist, mod. stiff	11-22- 26-35 R = 1 1/2 / 24	0.3	47-49 ft; 1500
	49	GP CL	Upper 18" Sand, gray, fa-cis, few gravel, wet; Lower 6" Silty clay, gray, sandstone frags, mod. stiff, moist - sandstone frag & till, stiff	21-29- 50/2 R = 2 1/2 / 24	0.2	49-51 ft; 1522 Bedrock @ 50.1'
	50 50'		No recovery - Spoon & auger refusal Casing to 53.5 ft; rotary drilled to 56 ft before casing	50/1	-	51-53 ft; 1547
	56 55	SS	Sandstone, lt gray, very fine grained, silica cement, thin (< 1/32") dk gray valves, three 1/4" thick crs sand layers in lower 18"	R = 9 1/2' / 108"		56-65'; 1300 (6/12/12)
	65 50		Same as above End of Boring	R = 7 1/4' / 72"		65-71'; 1337 (6/12/12) (submitted core from 65'6" - 67'2" for geom. testing)
	55					
	50					

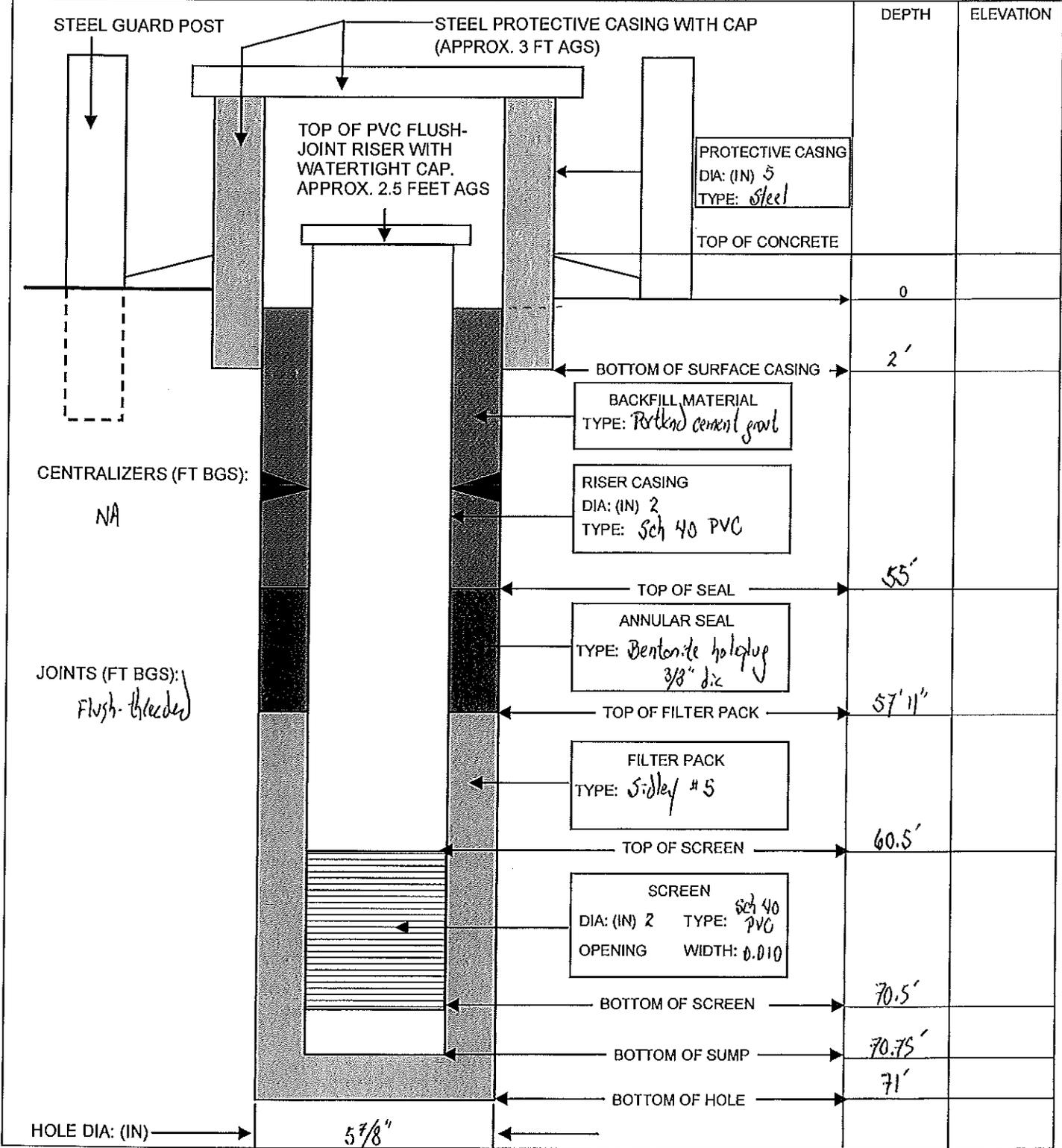
PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Shawn Sporkedo 6/4/12 6/12/12	BOREHOLE NUMBER EBGMW-131
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MONITORING WELL

PROJECT NAME: *RVAAP-66 RI* PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *EBGmw-131* BEGIN: *6/12/12* END: *6/13/12*

COORDINATES: N: *571655* E: *2379666* REFERENCE POINT: *T00* ELEVATION: *MSL 950.08*



CENTRALIZERS (FT BGS):
NA

JOINTS (FT BGS):
Flush-bleeder

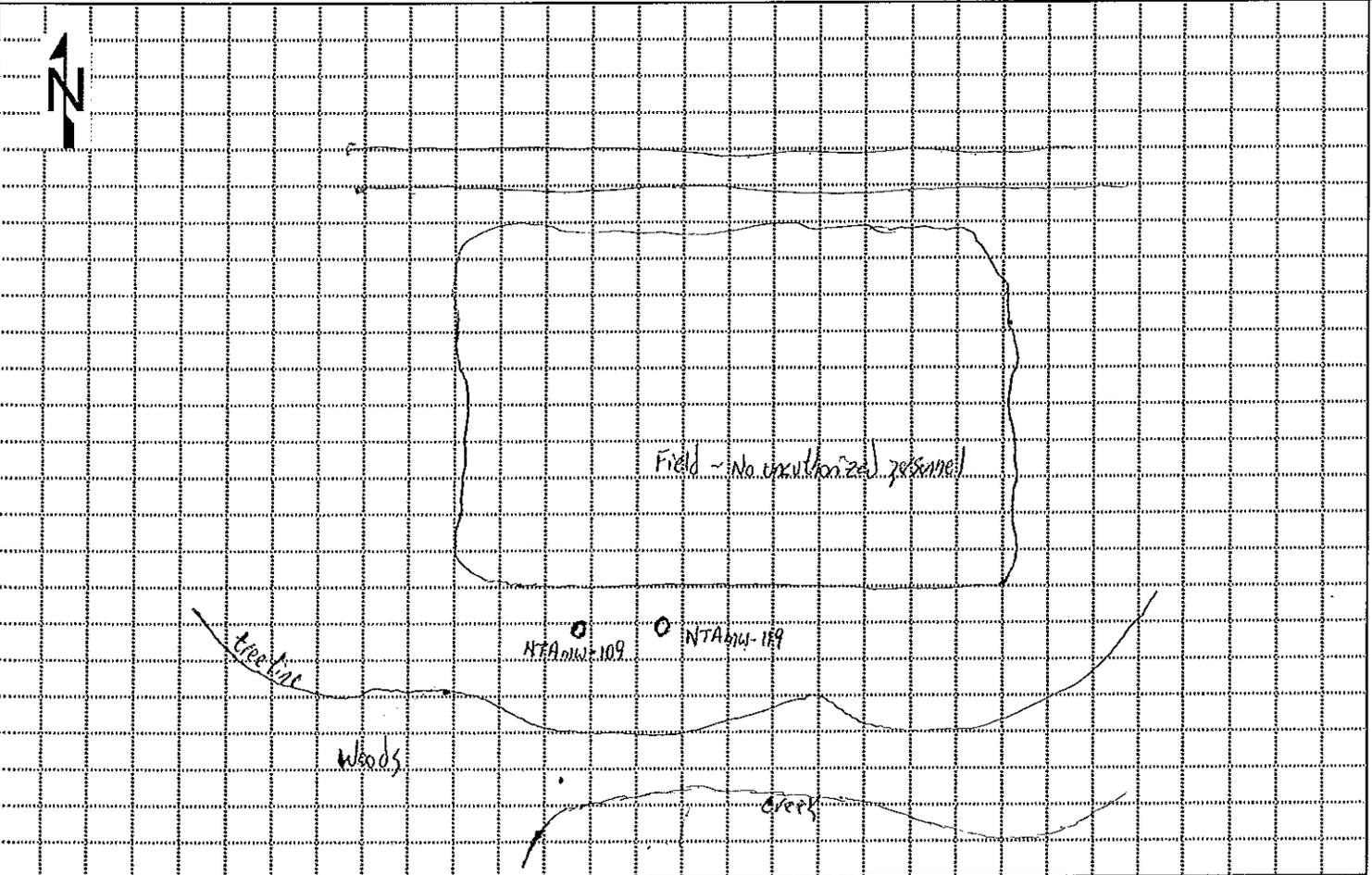
Recorded by: *[Signature]*

QA performed by: _____

HTRW DRILLING LOG		DISTRICT USACE - Louisville	BOREHOLE NUMBER NTAMW-119
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tele		6. MAKE/MODEL OF DRILL CME 55	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT 4 1/4" ID HSA 2" x 24" split spoon		8. BOREHOLE LOCATION PW-26, NTA Field W/ NTAMW-109	
		9. SURFACE ELEVATION/DATUM 1077.40	
		10. DRILL DATE/TIME STARTED: 3/28/12 COMPLETED: 4/10/12	
		15. DEPTH GROUNDWATER ENCOUNTERED 7.7' / 72'	
		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION NA	
12. OVERBURDEN THICKNESS NA		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) NA	
13. DEPTH DRILLED INTO BEDROCK NA			
14. TOTAL DEPTH OF BOREHOLE 130			

18. GEOTECHNICAL SAMPLES	UNDISTURBED: NA NA	DISTURBED: NA	19. TOTAL NUMBER OF CORE BOXES NA
20. CHEMICAL SAMPLES	CHEM: NA	RAD: NA	OTHER: NA
22. DISPOSITION OF BOREHOLE		DATE STARTED/INSTALLED: 3/28/12	DATE COMPLETED/ABANDONED: 4/11/12
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			

LOCATION SKETCH/COMMENTS SCALE: None



PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE [Signature] 3/28/12	BOREHOLE NUMBER NTAMW-119
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HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER NTA MW-119
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tele		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius MSA		PID SERIAL#: A2-1861	
WATER LEVEL MAKE/MODEL:		WATER LEVEL SERIAL#:	
Colors from Munsell Soil Color Chart, Rev			

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPW/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0	CL	Upper 3" Topsoil, dk brn, silty clay, roots Next 4" silty clay, dk brn, few roots, few small gravel. Remainder silty clay, brn w/ few gray nodules, few iron oxides, few organics, damp	2-1- 2-4 R = 20.5/24	0	0-2 ft; 0934
	2	CL	Silty clay, brn w/ few gray clay fractures, fairly compact, dry, mod. stiff	4-5- 6-9 R = 17/24	0	2-4 ft; 0940
	10.6	GC	Sand & gravel, brn, some clay in middle 5", few gravel in lower 2", damp, becoming wet in lower 4"	3-2- 3-2 R = 9/24	0	6-8 ft; 0959
	10	SM	Sand, brn, fn-crs grained, few small gravel, few silt, poorly sorted, saturated	3-4- 2-3 R = 17/24	0	10-12 ft; 1007
	14	SP	Sand, gray, becoming brn in lower 5", med-crs grained, few fn-grained, saturated	wt of hammer for 1"-1-1 R = 29/24	0	14-16 ft; 1015
heave	18	SP	Sand, gray & brn, predominantly fn-grained w/ some med-crs in upper 5", saturated	2-2- 3-3 R = 16/24	0	18-20 ft; 1135
	20	SP SW	Sand, upper 11" brn, med-crs grained, wet Sand, lower 8" gray, fn-grained, wet	2-2- 3-3 R = 19/24	0	20-22 ft; 1140
	28					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Dario Hernandez 3/28/12	BOREHOLE NUMBER NTA MW-119
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* Refer to log for NTA MW-109 for missing intervals

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER NTA MW-119	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 23 OF 7	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44288			
5. NAME OF DRILLER Joe Teter			6. DIRECTION OF BOREHOLE VERTICAL		INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius MSA			PID SERIAL#: A2-1861		Colors from Munsell Soil Color Chart, Rev	
WATER LEVEL MAKE/MODEL:			WATER LEVEL SERIAL#:			
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	22	SP/ SW	Sand, as before w/ lower 5" fr-grained gray sand, extracted	2-2- 2-3 R = 24/24	160.5 0	22-24 ft; 1145
	20-24	SP/ GC	Sand, gray, fr-grained, wet, few silty clay and gravel in lower 2"	wt of hand 1-2-4 R = 8/24	0	24-26 ft; 1152
	26	SP	Upper 3" med-cs sand	2-2-	0	26-28 ft; 1157
	30	CL	Next 2" gray silty clay, some gravel, wet	2-1		
		SM	Last 5" silty sand, gray, few gravel & clay, wet	R = 10/24		
	28		Upper 14" appears to be clay sand, wet	3-1-	0	28-30 ft; 1202
	45	SP	Lower 10" sand, gray, med-cs grained, few small gravel, wet	1-1 R = 24/24		
	30	SP	Sand, gray, med-cs grained, few fr-grained sand, few small gravel, wet	2-1- 2-1 R = 12/24	0	30-32 ft; 1207
	50					
	32	SP	Sand, gray, med-cs grained, increasing gravel in lower 2", angular, wet throughout	7-4- 2-2 R = 22/24	0	32-34 ft; 1217
	55-34	SP	As above, sand, gray, med-cs, little angular gravel, wet	4-3- 3-3 R = 14/24	0	34-36 ft; 1222
	50					
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE J. G. D. [Signature] 3/28/12		BOREHOLE NUMBER NTA MW-119	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER NTA MW-119	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 24 OF 7	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266			
5. NAME OF DRILLER Joe Tetel			6. DIRECTION OF BOREHOLE VERTICAL		INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius M5A			PID SERIAL#: A2-1861		Colors from Munsell Soil Color Chart, Rev	
WATER LEVEL MAKE/MODEL:			WATER LEVEL SERIAL#:			
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
heave	36	SP	Upper 12" Sand, gray, med-cls grained, few fine sand	1-1-	0	36-38 ft; 1232
		ML	Next 6" clayey silt, gray, soft, slightly plastic	4-11		
		GC	Last 6" clayey gravel, wet, sticky, gray	R = 24/24		
heave	38	SP	Upper 15" Sand, brn-gray, fine to med grained, wet	3-3-	0	38-40 ft; 1240
		GC	Remainder Sand & gravel, gray, some clay & silt, wet, gravel to 1" (subangular)	4-6		
				R = 22/24		
heave	40	SP	Upper 12" Sand, brn-gray, fn-cls grained, wet	3-11-	0	40-42 ft; 1248
		GC	Remainder Sand & gravel, dk gray, med-cls grained, wet, some silt & clay @ top of this zone	10-17		
				R = 24/24		
heave	42	SP	Upper 7" Sand, brn-gray, fine-cls grained, wet	7-20-	0	42-44 ft; 1258
	48	ML	Remainder Till, clayey silt, gray, few sand & gravel, brittle, dry	27-38		
				R = 24/24		
heave	44	SP	Upper 8" Sand, fn-med grained, brn-gray, moist	9-29-	0	44-46 ft; 1315
		CL	Next 7" Silty clay & gravel, gray, moist	50/4		
	50	CL	Lower 9" Till, silty clay, gray, dry, brittle but hard	R = 24/24		
heave	46		Upper 6" Sand	21-41-		46-48 ft; 1445
		CL	Remainder Till, gray, silty clay, some small gravel, dry, hard, piece of weathered shale @ top	44-50/5	0	
				R = 24/24		
	50	CL	Silty clay till, gray, some gravel, dry, hard	32-47	0	48-50 ft; 1500
				- 50/4		
				R = 14/24		
	50	CL	Silty clay till, ss above, few sand & sandstone frags	29-50/5	0	50-52 ft; 1514
	50			R = 18/24		
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE J. Tetel 3/28/12		BOREHOLE NUMBER NTA MW-119	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville		BOREHOLE NUMBER NTA MW-119		
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 25 OF 7		
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268				
5. NAME OF DRILLER Joe Teter		6. DIRECTION OF BOREHOLE VERTICAL		INCLINED DEGREES		
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:		PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev		
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	52	CL	Silty clay till, gray, some gravel, damp, hard	37-50/3 R = 13/24	0	52-54 ft; 1544
	54	SM	Upper 3" Sand, gray, fn-med grained, few silt	13-13-	0	54-56 ft; 1549
	38	ML	Next 9" Clayey silt, gray, damp, fairly plastic	20-30		
		CL	Lower 7" Silty clay, gray, till, few small gravel, damp	R = 19/24		
	56	SP	Upper 3" Sand, fn-med grained, gray, wet	19-24-	0	56-58 ft; 1612
	40	CL	Remainder Silty clay till, gray, little small gravel, dry, hard	34-50/3 R = 20/24		
	58	CL	Silty clay till, as above, reddish-yellow sandstone frag in lower 2"	30-38- 46-50 R = 15/24	0	58-60 ft; 1635
	60	CL	Silty clay till, as above, gray, damp, hard, fairly stiff, few gravel, little wet sand @ top	19-29- 30-43 R = 17/24	0	60-62 ft; 1652
	58	SM	Upper 1.5" Sand, gray, med-ccs, silty, wet	24-27-	0	62-64 ft; 0854
		CL	Remainder Silty clay till, gray, some sand & gravel, damp, mod. stiff, crumbly	31-19 R = 18/24		
	64	CL	Silty clay till, gray, little sand & gravel (to 1"), damp, mod. stiff	17-32- 40-43 R = 20/24	0	64-66 ft; 0913
	66	CL	Upper 3" Silty clay till, as above	36-50/1	0	66-68 ft; 0939
		SM	Next 7" Silty sand, gray, few small gravel, med-ccs	R = 11.8/24		
	80	CL	Lower 1.5" Silty clay till w/ white sandstone @ top			
PROJECT RVAAP-66 RI		GEOLOGIST SIGNATURE/DATE Drew Dyerhald 3/29/12			BOREHOLE NUMBER NTA MW-119	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER NTA MW-119	
1. COMPANY NAME ERM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 86 OF 7	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 6451 State Route 5 Ravenna, OH 44266			
5. NAME OF DRILLER Joe Tetel			6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: 42-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	68	CL	Silty clay till, gray, few sand & small gravel, damp, hard	50/4 R=4/24	0	68-70 ft; 1006
	70	CL	Silty clay till, as above	50/5 R=5/24	0	70-72 ft; 1026
	72	SM	Upper 13" Sand, gray, fn-cs grained, little silt, poorly sorted, wet	3-14-50/5 R=20/24	0	72-74 ft; 1049
	70	CL	Remainder silty clay till, gray, few sand & small gravel, damp, mod. stiff			
	74	SP	Upper 10" Sand, gray, fn-med grained, few cs, wet	25-46-50	0	74-76 ft; 1448
		ML	Next 4" clayey sandy silt, gray, wet, crumbly, few gravel	R=23/24		
		CL	Remainder silty clay till, gray, few sand & small gravel, damp, mod. stiff			
	76	SW	Upper 5" Sand, gray, med-grained, wet	9-24-	0	76-78 ft; 1523
		ML	Next 4" clayey sandy silt, gray, moist, few gravel, crumbly	44-45		
		CL	Remainder silty clay till, gray, few sand, some gravel (1/4-1/2"), damp, hard	R=22/24		
	78	SP	Upper 6" Sand, gray, med-cs grained, wet	5-26-50/4	0	78-80 ft; 1539
		CL	Next 4" silty clay, brn, soft, wet, some sand	R=21/24		
			Remainder silty clay till, gray, little sand & gravel, damp, fairly hard			
	80	SP	Upper 3" Sand, gray, med-grained, wet (probably catty base)	20-35-	0	80-82 ft; 1559
		GC	Remainder clayey gravel, gray, moist, few sand, gravel to 1" dia.	46-50/5 R=16/24		
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE J. Tetel 3/29/12		BOREHOLE NUMBER NTA MW-119	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville		BOREHOLE NUMBER NTA mw-119		
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 7 OF 7		
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268				
5. NAME OF DRILLER Joe Teler & Bob Hamilton (88-13076)		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES				
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:		PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev		
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	82	CL	Upper 12" silty clay till, gray, some gravel, few sand, damp, hard	30-26- 43-50/5	0	82-84 ft; 1630
		GC	Lower 12" sand & gravel, gray, moist, few silt & clay, c/s sand	R = 24/24		
	84	CL	Silty clayey till, gray, little sand & gravel, moist, hard	33-36-	0	84-86 ft; 1658
		GC	Clayey sand & gravel in lower 4"	50/5 R = 16/24		
	86	GM	Silty sand & gravel, gray, moist, compacted, hard, coal flecks in lower 3"	100-86- 100/3 R = 24/24		86-88 ft; 1030 (3/30/12)
	90		Upper 1 ft, cobble zone, fist size w/ sand & gravel, gray	R = 120/120		90-100 ft; 1516 (4/4/12)
		GM	Next 4 ft, sand & gravel, gray, fn-med grained, little c/s grained, little silt			
		GP	From 5-10 ft c/s sand & gravel, gray, little fn-med, poorly sorted			
		GM	From 10-11 ft, silty clay till, gray, some med sand & gravel (to 1") - wet all through			
	100	CL	Silty clay till, gray, few fn sand, few small gravel, hard, dense, damp	R = 120/120		100-110 ft; 1620
	110	ML	Silt, gray, some clay, moist, fairly brittle	R = 10'		110-120 ft; 1040 (4/10/12)
	120	GM/CL	Upper 2' silt, as above then 14" fn-med sand w/ gravel, some silt, wet, followed by 15" silty clay till, gray, damp, st. fl.	R = 10'		120-130 ft; 1247
		GM/CL	Next 30" silty sand & gravel, wet, compactible; remainder silty clay till, gray, dense, little sand & gravel			

PROJECT

RVAAP-66 RI

GEOLOGIST SIGNATURE/DATE

D. C. O. Spornhardt

3/30/12
+ 4/10/12

BOREHOLE NUMBER

NTA mw-119

MONITORING WELL

PROJECT NAME:

BVAAP-66 RI

PROJECT NO:

30174.0016.001.02

WELL NUMBER:

NTA MW-119

BEGIN:

4/10/12

END:

4/11/12

COORDINATES:

N: *551286*

E: *2346013*

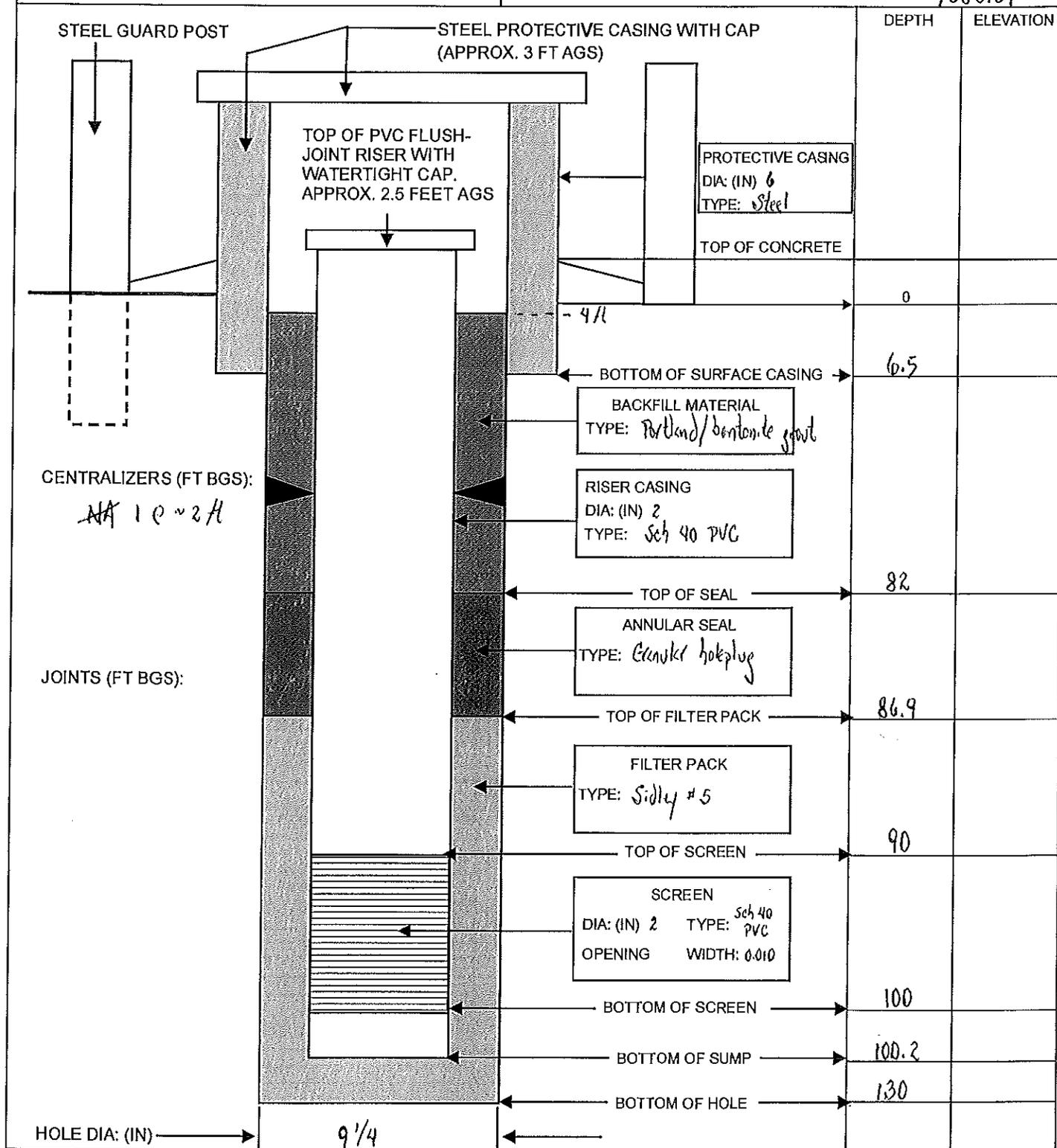
REFERENCE POINT:

TOC

ELEVATION:

MSL

1080.07



CENTRALIZERS (FT BGS):

NA 10 ~ 2 ft

JOINTS (FT BGS):

Note: 4" size from 120-130 ft

Recorded by:

Scott A. Spenshato

QA performed by:

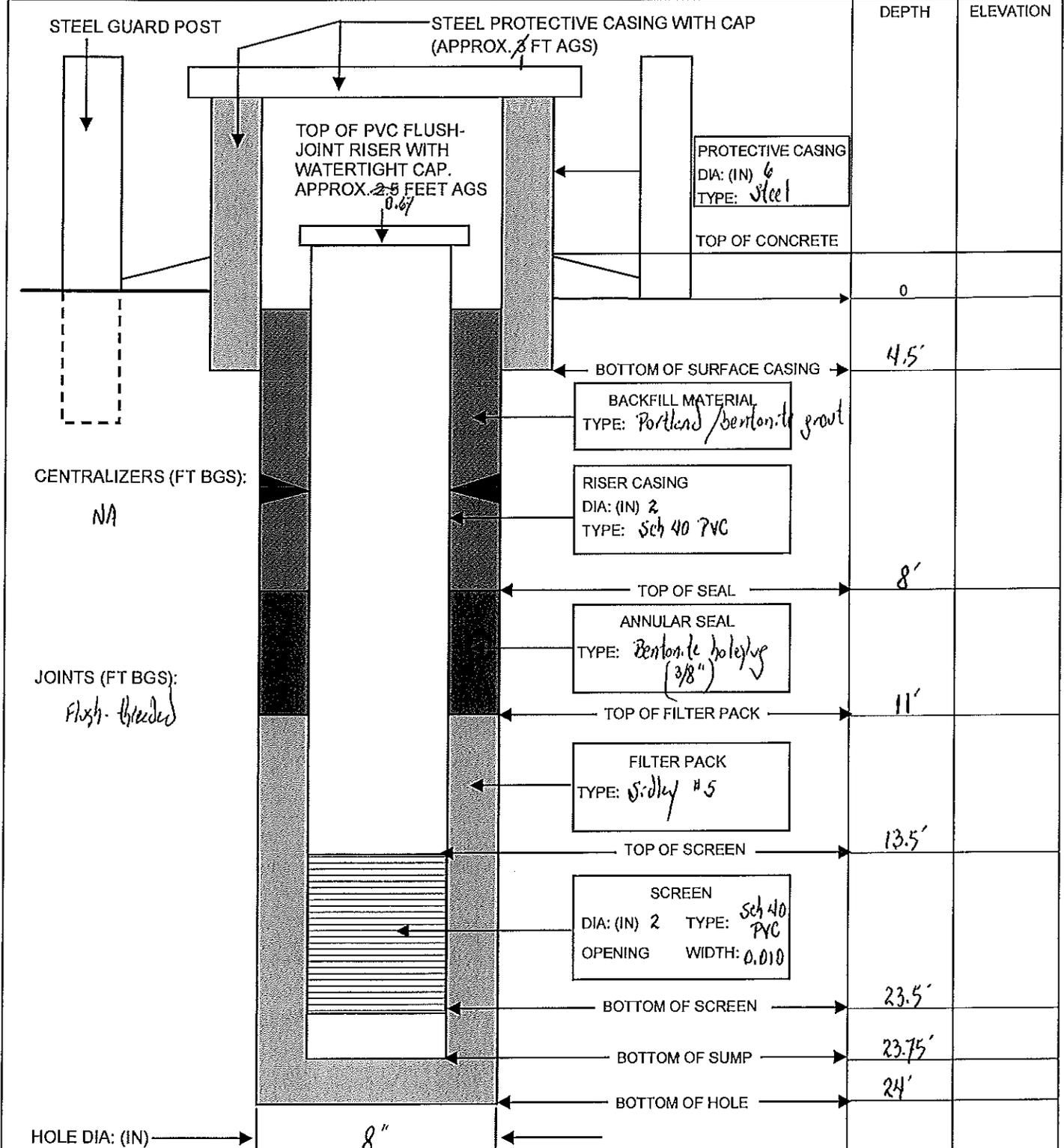
HTRW DRILLING LOG		DISTRICT	BOREHOLE NUMBER
1. COMPANY NAME <i>EQM</i>		USACE - Louisville	<i>WBGmw-018</i>
2. DRILLING SUBCONTRACTOR <i>Frontz Drilling</i>		SHEET 1 OF 2	
3. PROJECT <i>RVAAP-66 RI</i>	4. LOCATION <i>RVAAP 8451 State Route 5 Ravenna, OH 44266</i>		
5. NAME OF DRILLER <i>Akon Mackey</i>	6. MAKE/MODEL OF DRILL <i>CME 75</i>		
7. SIZES AND TYPES OF SAMPLING EQUIPMENT <i>4 1/4" ID HSA 3" Shelby Tube</i>		8. BOREHOLE LOCATION <i>PW-13; Winkley Rd, tied w/WBGmw-018</i>	
		9. SURFACE ELEVATION/DATUM <i>990.50</i>	
		10. DRILL DATE/TIME STARTED: <i>6/14/12</i> COMPLETED: <i>6/14/12</i>	
		15. DEPTH GROUNDWATER ENCOUNTERED <i>14 ft</i>	
12. OVERBURDEN THICKNESS <i>NA</i>		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION <i>NA</i>	
13. DEPTH DRILLED INTO BEDROCK <i>NA</i>		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME) <i>NA</i>	
14. TOTAL DEPTH OF BOREHOLE <i>24 ft</i>			
18. GEOTECHNICAL SAMPLES UNDISTURBED: <i>Shelby Tube</i> DISTURBED:		19. TOTAL NUMBER OF CORE BOXES <i>NA</i>	
20. CHEMICAL SAMPLES <i>NA</i> CHEM: RAD: <i>NA</i> OTHER:		21. TOTAL CORE RECOVERY % <i>NA</i>	
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: DATE COMPLETED/ABANDONED:			
BACKFILL TYPE: <input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL			
23. NOTES BKG: \triangleleft Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ∇ : First Water Encountered \blacktriangledown : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT <i>RVAAP-66 RI</i>	GEOLOGIST SIGNATURE/DATE <i>[Signature]</i> <i>6/14/12</i>		BOREHOLE NUMBER <i>WBGmw-018</i>

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER WBGmw-018	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 2	
3. PROJECT BVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER Acron Mackay			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: NA WATER LEVEL MAKE/MODEL:			PID SERIAL#: WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
			Refer to soil log for WBGmw-019			
	16			R = 9/24		16-18 ft; 1409 Shelby Tube - no recovery, extracted wet
	18			R = 12/24		18-20 ft; 1430 Shelby Tube 12-in. recovery, water in tube
			Blind drill to 24 ft - end of boring			
	20					
	28					
	30					
PROJECT BVAAP-66 RI			GEOLOGIST SIGNATURE/DATE J. S. [Signature] 6/14/12		BOREHOLE NUMBER WBGmw-018	

MONITORING WELL

PROJECT NAME: *RVAAP-66 RI* PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *WBCmw-018* BEGIN: *6/14/12* END: *6/14/12*
 COORDINATES: N: *562659* E: *2361302* REFERENCE POINT: *TOC* ELEVATION: *MSL 991.45*



Recorded by: *[Signature]*

QA performed by: _____

HTRW DRILLING LOG DISTRICT: USACE - Louisville BOREHOLE NUMBER: WBG MW-019

1. COMPANY NAME: **EDM** 2. DRILLING SUBCONTRACTOR: **Frontz Drilling** SHEET **1** OF **4**

3. PROJECT: **RVAAP-66 RI** 4. LOCATION: **RVAAP 8451 State Route 5 Ravenna, OH 44266**

5. NAME OF DRILLER: **Joe Tettel / Arden Mackey** 6. MAKE/MODEL OF DRILL: **CME-55 / CME 75**

7. SIZES AND TYPES OF SAMPLING EQUIPMENT: **2" x 24" split spoon, 4 1/4" ID HSA, 8 1/4" ID HSA, 5 7/8" core bucket (N Series)** 8. BOREHOLE LOCATION: **PW-14; located along Winklebeck Rd east of**

9. SURFACE ELEVATION/DATUM: **989.30** 10. DRILL DATE/TIME: **STARTED: 5/31/12 COMPLETED: 6/15/12**

11. DEPTH GROUNDWATER ENCOUNTERED: **14 ft** 12. OVERBURDEN THICKNESS: **30'**

13. DEPTH DRILLED INTO BEDROCK: **30-20'** 14. TOTAL DEPTH OF BOREHOLE: **50'**

15. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION: **NA**

16. OTHER WATER LEVEL MEASUREMENTS (INCLUDE DATE/TIME): **NA**

18. GEOTECHNICAL SAMPLES: **Perme. Test** 19. TOTAL NUMBER OF CORE BOXES: **1**

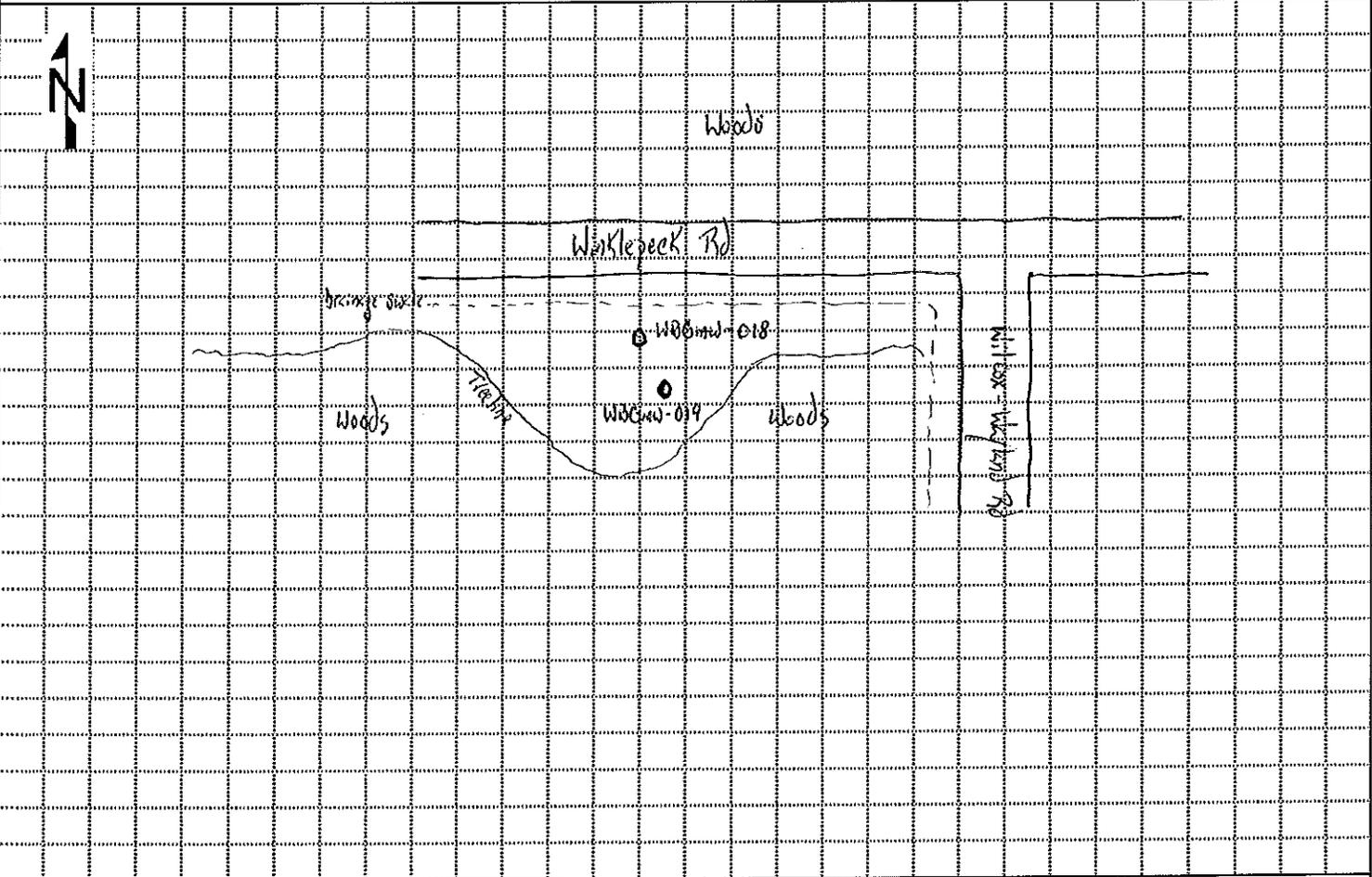
20. CHEMICAL SAMPLES: **NA** 21. TOTAL CORE RECOVERY %: **50**

22. DISPOSITION OF BOREHOLE: **DATE STARTED/INSTALLED:** **DATE COMPLETED/ABANDONED:**

BACKFILL TYPE: GROUT BENTONITE TEMPORARY WELL POINT MONITORING WELL

23. NOTES: **BKG: <Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million**
▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable

LOCATION SKETCH/COMMENTS SCALE: **None**



PROJECT: **RVAAP-66 RI** GEOLOGIST SIGNATURE/DATE: **[Signature] 5/31/12** BOREHOLE NUMBER: **WBG MW-019**

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER WBG MW-019	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 4	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER Joe Terler			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED <input type="checkbox"/> DEGREES			
7. NOTES PID MAKE/MODEL: <u>Sirius MSA</u> WATER LEVEL MAKE/MODEL:			PID SERIAL#: <u>A2-1861</u> WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0	ML	Clayey silt; upper 7" dk brn, remainder brn w/ few gray mottles, few small gravel, roots in upper 7", dry, fairly brittle	4-3- 5-6 R: 18/24	0	0-2 ft; 1344
	2	ML	Clayey silt, brn w/ few gray mottles in upper 6", few small gravel, dry, fairly stiff	7-9- 11-13 R: 20.5/24	0	2-4 ft; 1354
	4	ML	Upper 5" Clayey silt, brn, few small gravel, dry, mod. stiff	5-9- 10-8 R: 20/24	0	4-6 ft; 1402
	20	SW	Remainder Sand, lt brn, med-grained, dry, loose, fairly well-sorted			
	6	SP	Sand, lt brn, fn-med grained, few gravel, few fines, damp to dry, loose	8-7- 4-5 R: 18/24	0	6-8 ft; 1408
	8	SP	Sand, brn, med-grained, little gravel, few fn & c/s sand, poorly sorted, damp, rock in shoe	2-4- 4-6 R: 9/24	0	8-10 ft; 1414
	10	SP	Same as above	2-3- 5-5 R: 9/24	0	10-12 ft; 1427
	20					
	12	SP	Sand & gravel, brn, few yellow-brn sandstone cherts, damp becoming wet in lower 1"	7-5- 4-3 R: 13/24	0	12-14 ft; 1433
	30					
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE Seth Spornetto 5/31/12		BOREHOLE NUMBER WBG MW-019	

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER WBG MW-019	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 3 OF 4	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268			
5. NAME OF DRILLER Joe Tepler			6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	14	SP	Sand, brn, med-cls grained, few gravel (angular), few silt, wet	1-3- 3-4 R = 16/24	0	14-16 ft; 1447
	20	SP	Sand, brn, fn-med grained, few gravel, little silt, wet	3-5- 4-6 R = 16/24	0	16-18 ft; 1458
	18	SP	Upper 8" Sand, as above w/ few cls grains	3-5-	0	18-20 ft; 1559
	20	SM	Next 6" Silty fn sand, brn, wet	7-4		
		SS	Next 4" Yellow-brn weathered sandstone, wet	R = 20/24		
		CL	Lower 2" Silty clay, gray, little sand, few gravel, moist			
	20	SP	Sand & gravel, brn, fn-cls grained, wet, poorly sorted	3-6- 5-7 R = 8/24	0	20-22 ft; 1607
	22	SP	Sand & gravel, brn, cls-grained, "slippy," wet	5-5- 5-5 R = 18/24	0	22-24 ft; 1612
	24	GC	Clayey sand & gravel, brn, poorly sorted, compactable, wet	5-5- 4-4 R = 24+/24	0	24-26 ft; 1622
	26		No recovery; cobble in shoe	5-6- 4-5 R = 9/24	-	26-28 ft; 1640

heave

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Jaco Speerhardt 5/31/12	BOREHOLE NUMBER WBG MW-019
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER NBG MW-019	
1. COMPANY NAME EDM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 84 OF 4	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44266			
5. NAME OF DRILLER Joe Teffel / Akron Mackey			6. DIRECTION OF BOREHOLE <u>VERTICAL</u>		INCLINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius MSA			PID SERIAL#: A2-1861		Colors from Munsell Soil Color Chart, Rev	
WATER LEVEL MAKE/MODEL:			WATER LEVEL SERIAL#:			
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depth/Core Box/Etc.)
	28	SP	Sand & gravel, brn & grey, med-cis sand, wet, loose, 2" gravel in shoe - appears to be micaceous grey shale	4-5 7-9 R: 13/24	0	28-30 ft; 1644
	28-30		Approx 6" sand in spoon; believe it is heave (no photo); auger refusal @ 30 ft	50/1	-	30-32 ft; 1658
			Set bottom of overburden casing @ 33'10"			
	30-34	SS	Sandstone, buff w/ reddish hue, fn-grained, fractures @ 3-3 1/2" and 7 3/4-9" from top (horiz), conglomeric zone 26-29" from top, scattered cis sand grains throughout, conglomeric grains subrounded (up to 1/4")	R: 53 1/4" / 18"		33.8-40.4 ft; 0925 (6/15/12)
	40	SS	Sandstone, buff w/ iron bandings, fn-grained, vertical fracture from 26-32.5' from top of run.	R: 53 1/4" / 115"		40.4-50 ft; 1159 (Submitted core segment from 41'5" to 42'7" for rem. testing)
	50					
	55					
	60					
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE Octo Hernandez 6/15/12		BOREHOLE NUMBER NBG MW-019	

MONITORING WELL

PROJECT NAME:

BVAAP-66 RI

PROJECT NO:

30174.0016.001.02

WELL NUMBER:

WBG MW-019

BEGIN:

6/15/12

END:

6/15/12

COORDINATES:

N: *562645*

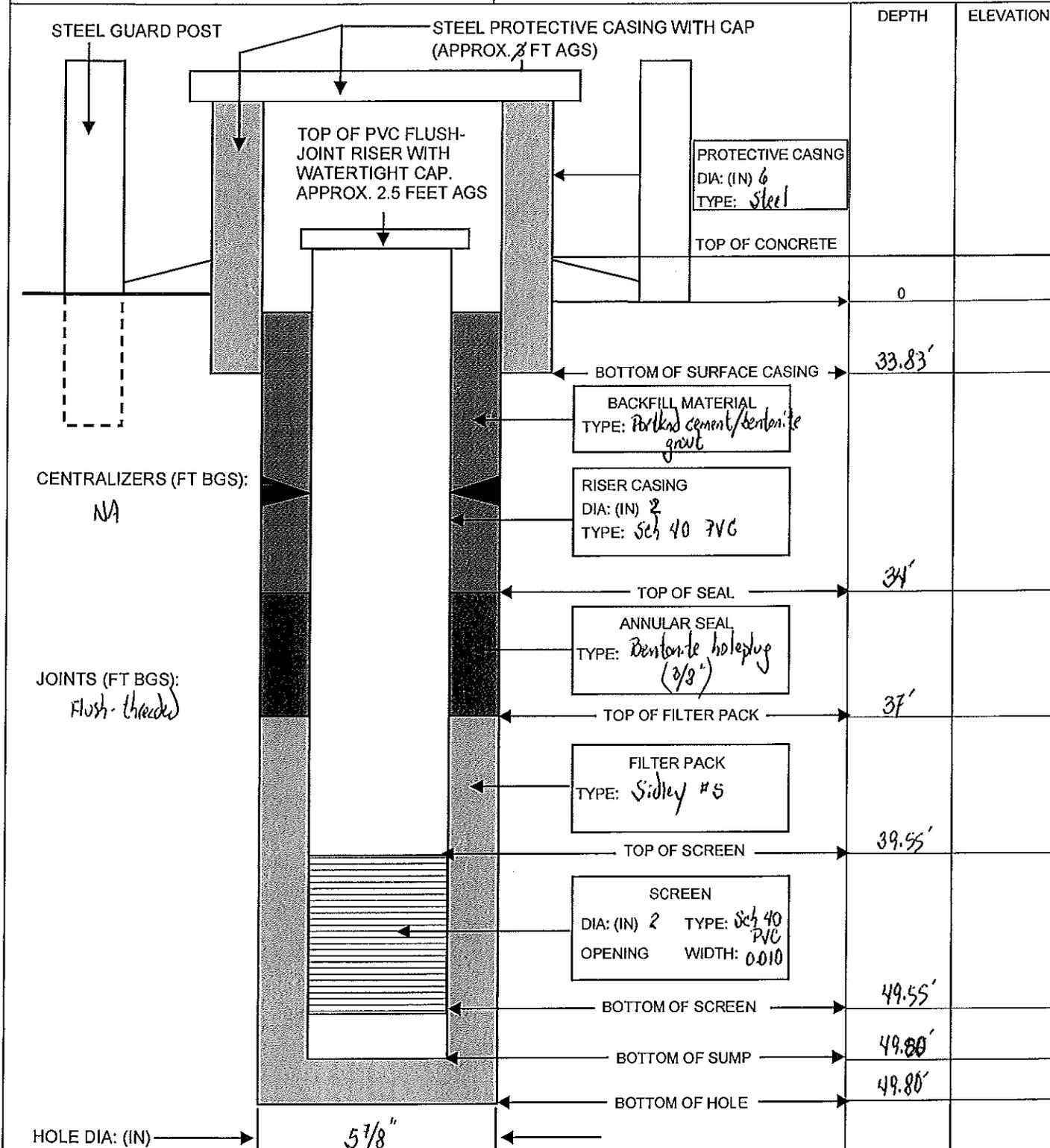
E: *2361304*

REFERENCE POINT:

TOC

ELEVATION: **MSL**

990.25



CENTRALIZERS (FT BGS):
NA

JOINTS (FT BGS):
Flush-threaded

PROTECTIVE CASING
DIA: (IN) *6*
TYPE: *Steel*

BACKFILL MATERIAL
TYPE: *Portland cement/bentonite grout*

RISER CASING
DIA: (IN) *2*
TYPE: *Sch 40 PVC*

ANNULAR SEAL
TYPE: *Bentonite holeplug (3/8")*

FILTER PACK
TYPE: *Sidley #5*

SCREEN
DIA: (IN) *2* TYPE: *Sch 40 PVC*
OPENING WIDTH: *0.010*

Recorded by:

Steve Sperhardt

QA performed by:

HTRW DRILLING LOG		DISTRICT	BOREHOLE NUMBER
		USACE - Louisville	WBGmw-020
1. COMPANY NAME		2. DRILLING SUBCONTRACTOR	
EQM		Frontz Drilling	
3. PROJECT		4. LOCATION	
RVAAP-66 R2		RVAAP 8451 State Route 5 Ravenna, OH 44266	
5. NAME OF DRILLER		6. MAKE/MODEL OF DRILL	
Joe Tefel / Aaron Mackey		CME 55 / CME 75	
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOLE LOCATION	
2" x 24" cyl. w/ spdm		PW-15; 20' w/ WBGmw-009	
4 1/4" ID HSA		9. SURFACE ELEVATION/DATUM	
5 7/8" core barrel (N series)		1043.40'	
8 1/4" ID HSA		10. DRILL DATE/TIME	
12. OVERBURDEN THICKNESS		STARTED: 5/31/12 COMPLETED: 6/26/12	
24 ft		15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO BEDROCK		22'	
19 ft		16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION	
14. TOTAL DEPTH OF BOREHOLE		NA	
43.25 ft		17. OTHER WATER LEVEL MEASUREMENTS (INCL. DATE/TIME)	
18. GEOTECHNICAL SAMPLES		19. TOTAL NUMBER OF CORE BOXES	
UNDISTURBED: Rock core		1	
20. CHEMICAL SAMPLES		21. TOTAL CORE RECOVERY %	
NA		90	
22. DISPOSITION OF BOREHOLE		DATE STARTED/INSTALLED:	
DATE COMPLETED/ABANDONED:			
BACKFILL TYPE:		<input type="checkbox"/> GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> TEMPORARY WELL POINT <input checked="" type="checkbox"/> MONITORING WELL	
23. NOTES			
BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable			
LOCATION SKETCH/COMMENTS			SCALE: None
PROJECT		GEOLOGIST SIGNATURE/DATE	
RVAAP-66 R2		5/31/12	
		BOREHOLE NUMBER	
		WBGmw-020	

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER WBGmw-020
1. COMPANY NAME EQM		2. DRILLING SUBCONTRACTOR Frontz Drilling	
3. PROJECT RVAAP-66 RI		4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44266	
5. NAME OF DRILLER Joe Tedder / Aaron Mackey		6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCINED DEGREES	
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:		PID SERIAL#: A2-1861 WATER LEVEL SERIAL#: Colors from Munsell Soil Color Chart, Rev	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0		Upper 2" Topsoil, dk brn	5-5-	3.7	0-2 ft; 0939
		ML	Remained clayey silt, brn, few gravel, few roots, dry, brittle	3-3 R = 22/24		
	2	ML	Upper 6" clayey silt, as above	3-3-	0.4	2-4 ft; 0946
		CL	Remained silty clay, brn w/ gray clay vertical fractures, few sand, damp, fairly soft	3-3 R = 20/24		
	4	CL	Silty clay, brn w/ gray clay fractures, few iron oxides, mod. stiff	3-5-	16.8	4-6 ft; 1005
	10			6-7 R = 24/24	0	
	6	CL	Silty clay, brn w/ gray clay fractures, few iron oxides, few pieces wood (near top), few sand grains in lower 6", mod. stiff, dry	5-8-	0	6-8 ft; 1009
	15			10-11 R = 24/24		
	8	CL	Silty clay, brn, few iron oxides, piece of wood (carry-down), dry, mod. stiff	5-8-	0	8-10 ft; 1016
	20			13-15 R = 21/24		
			See log for WBGmw-009 for missing intervals			
	15	CL	Silty clay, gray & brn mottled, mod. stiff	R = 10.5"	-	15-17 ft; 1352 (6/19/12) Shelby Tube
	20	CL	Silty clay till, gray, few sand & small gravel, damp, slightly plastic in upper 6"	20-2-3 4-6 R = 14.5/24	0	20-22 ft; 1414
	30					

PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE Brett [Signature] 5/31/12 6/19/12	BOREHOLE NUMBER WBGmw-020
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HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER WBG MW-020	
1. COMPANY NAME EQM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RYAAP-66 RI			4. LOCATION RYAAP 8451 State Route 5 Ravenna, OH 44266			
5. NAME OF DRILLER Acorn Mckey			6. DIRECTION OF BOREHOLE VERTICAL INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: <u>Silvus MSA</u> WATER LEVEL MAKE/MODEL:			PID SERIAL#: <u>A2-1861</u> WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/WCPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	22	CL	Upper 4" silty clay till, gray, wet, some gravel	7-8-	D.3	22-24 ft; 1420
		SN	Next 8" sand, gray, some silt, in-grained w/ few c/s sand, wet	10-11 R-19/24		
		SP	Lower 6" sand gravel, wet, gray, poorly sorted, c/s sand, some fines			
	25					
	24	SS	Sandstone, lt gray, in-grained, weathered	50/2 R-2/24	-	24-26 ft; 1432
	40 26		Set casing @ 26' 1"			
		SS	Sandstone, lt gray, in-grained, thin dark kink throughout, few pebbles	R-83/108"		26-35 ft; 1550 (6/26/12)
	45 35		Same as above	R-100.5/96"		35-43 ft; 1655
			TH @ 43' 3"			Removed segment from 37' 4" - 38' 1/2" for geom. test
	50					
	55					
	60					
PROJECT RYAAP-66 RI			GEOLOGIST SIGNATURE/DATE <i>[Signature]</i> 6/19/12 6/26/12			BOREHOLE NUMBER WBG MW-020

MONITORING WELL

PROJECT NAME:

RVAAP-66 BI

PROJECT NO:

30174.0016.001.02

WELL NUMBER:

WBG MW-020

BEGIN:

6/19/12

END:

6/27/12

COORDINATES:

N: *561623*

E: *2357161*

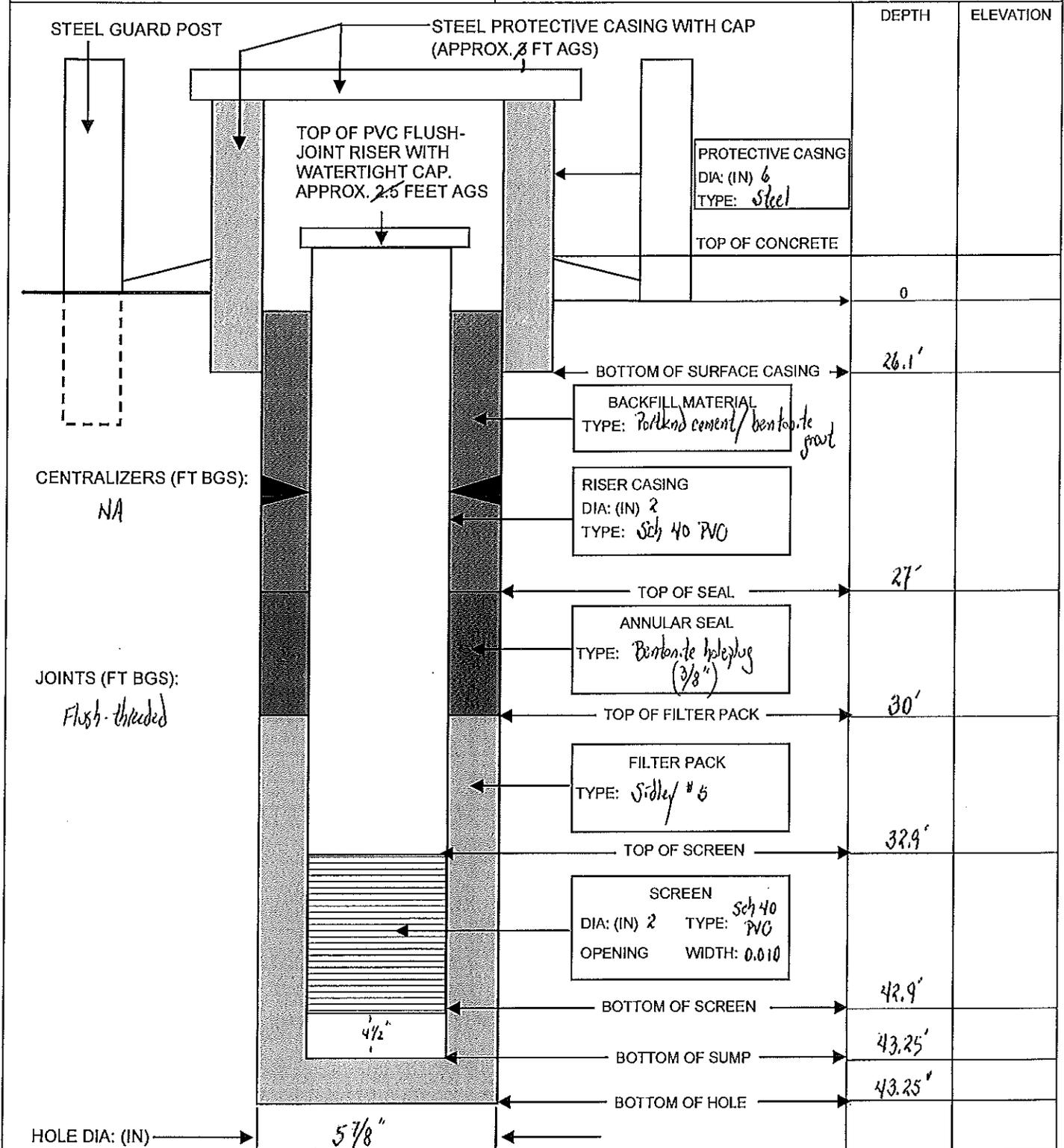
REFERENCE POINT:

TOC

ELEVATION:

MSL

1044.31



Recorded by: *Ben Hernandez*

QA performed by: _____

HTRW DRILLING LOG

DISTRICT: USACE - Louisville
 BOREHOLE NUMBER: WBG MW - 021
 SHEET 1 OF 3

1. COMPANY NAME: EOM

2. DRILLING SUBCONTRACTOR: Frontz Drilling

3. PROJECT: RVAAP-66 RI

4. LOCATION: RVAAP 8451 State Route 5 Ravenna, OH 44266

5. NAME OF DRILLER: Joe Tepler / Akon Mackey

6. MAKE/MODEL OF DRILL: CME 55 / CME 75

7. SIZES AND TYPES OF SAMPLING EQUIPMENT:
 2" X 24" Split Spoon
 4 1/4" ID HSA
 5 7/8" Core bit (N series)
 8 1/4" ID HSA

8. BOREHOLE LOCATION: PW-16 : 7/5/12 w/ WBG MW - 006

9. SURFACE ELEVATION/DATUM: 1010.00

10. DRILL DATE/TIME: STARTED: 5/31/12 COMPLETED: 6/25/12

15. DEPTH GROUNDWATER ENCOUNTERED: 8'

16. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION: NA

12. OVERBURDEN THICKNESS: 24.1'

13. DEPTH DRILLED INTO BEDROCK: 18.4'

14. TOTAL DEPTH OF BOREHOLE: 42.5'

17. OTHER WATER LEVEL MEASUREMENTS (INCLUDE DATE/TIME): NA

18. GEOTECHNICAL SAMPLES: UNDISTURBED: Rock Core DISTURBED:

19. TOTAL NUMBER OF CORE BOXES: 1

20. CHEMICAL SAMPLES: NA CHEM: RAD: NA OTHER:

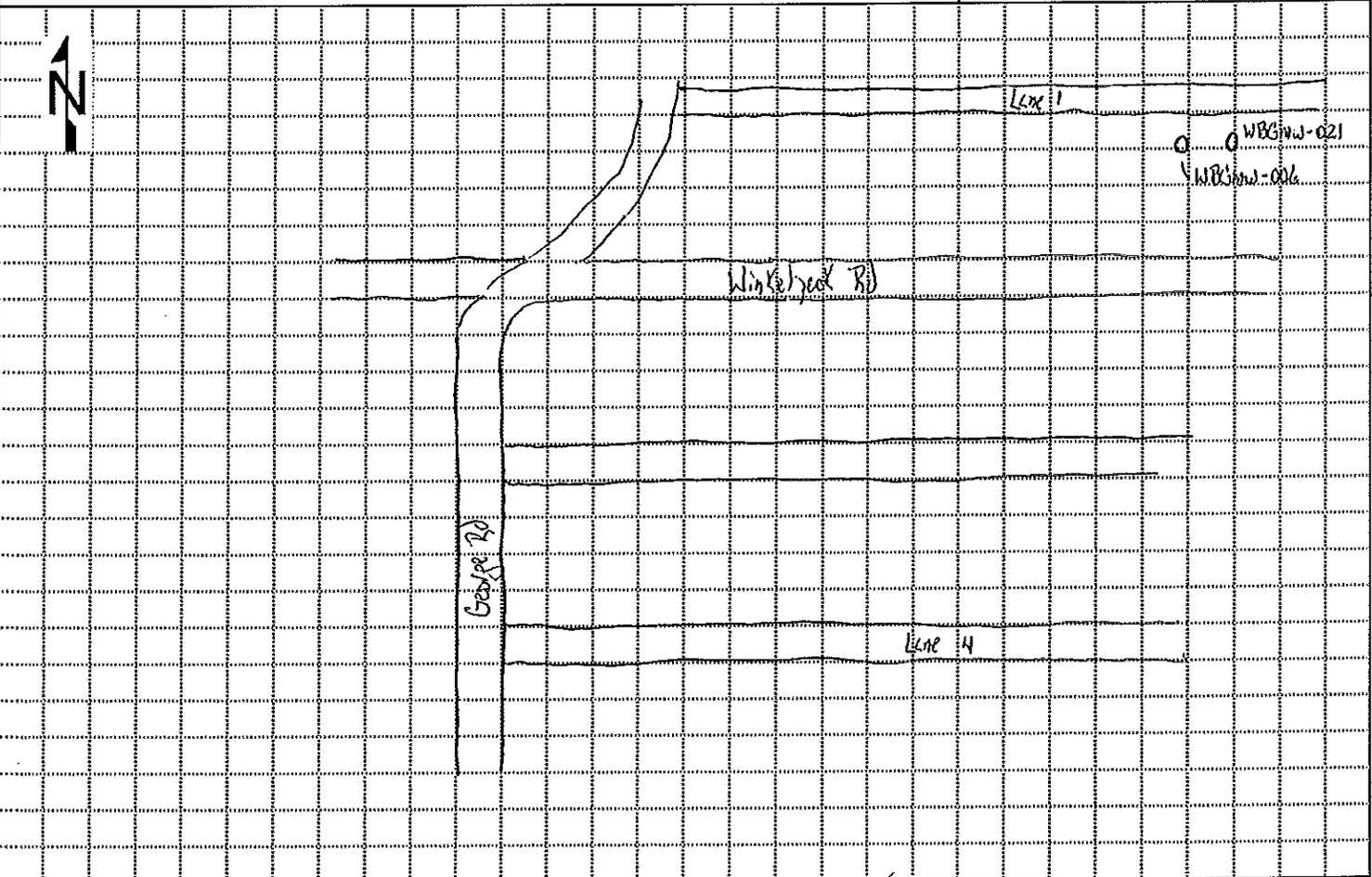
21. TOTAL CORE RECOVERY %: 88

22. DISPOSITION OF BOREHOLE: DATE STARTED/INSTALLED: DATE COMPLETED/ABANDONED:
 BACKFILL TYPE: GROUT BENTONITE TEMPORARY WELL POINT MONITORING WELL

23. NOTES: BKG: Background BGS: Below Ground Surface CPM: Counts per Minute PPM: Parts per Million
 ▽ : First Water Encountered ▼ : Static Water Level NA: Not Applicable

LOCATION SKETCH/COMMENTS

SCALE: None



PROJECT: RVAAP-66 RI

GEOLOGIST SIGNATURE/DATE: [Signature] 5/31/12

BOREHOLE NUMBER: WBG MW - 021

HTRW DRILLING LOG (continued)			DISTRICT USACE - Louisville		BOREHOLE NUMBER WBG MW-021	
1. COMPANY NAME EOM			2. DRILLING SUBCONTRACTOR Frontz Drilling		SHEET 2 OF 3	
3. PROJECT RVAAP-66 RI			4. LOCATION RVAAP 8451 State Route 5, Ravenna, OH 44268			
5. NAME OF DRILLER Joe Tate / Akron Mackey			6. DIRECTION OF BOREHOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES			
7. NOTES PID MAKE/MODEL: Sirius MSA WATER LEVEL MAKE/MODEL:			PID SERIAL#: A2-1861 WATER LEVEL SERIAL#:		Colors from Munsell Soil Color Chart, Rev	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	0		Upper 5" Topsoil, dk brn, clayey silt, roots, dry, brittle	5-4- 4-4	0	0-2 ft; 1118
			Next 3" Sand gravel, lt brn, loose, dry, fr-med	R: 10/24		
	5	CL	Lower 2" Silty clay, gray, w/ dk brn mottles, few small gravel, dry, brittle			
	2	ML	Clayey silt, brn w/ gray mottles, some iron oxides (dk), few small gravel, few sand, dry, brittle	4-6- 8-9 R: 24/24	0	2-4 ft; 1127
	20					
	4	CL	Silty clay, brn w/ gray along fractures, few dk oxides, few small gravel, dry, stiff	4-5- 9-12 R: 18.5/24	0	4-6 ft; 1133
	20					
	20	CL	Silty clay, as above, less clay, few sand grains 1" wet sand secm from 3-4" from bottom, gravel, dk staining	15-23- 21-18 R: 13/24	0	6-8 ft; 1139
	8	SP	Upper 7" Sand gravel, brn, med-grained, wet, few silt	2-4-	0	8-10 ft; 1148
	20	CL	Lower 3" Silty clay, brn, med, few gravel, stiff	6-8 R: 10/24		
	12	CL	Silty clay till, gray, hrd, stiff, dry, few small gravel (1/8")	4-9- 11-12 R: 14/24	0.4	12-14 ft; 1345 (6/18/12)
	20					
	18	SM	Upper 3" Silty sand gravel, gray, wet, soft	1-3-	1.3	18-20 ft; 1414
		CL	Remainder Silty clay till, gray, cngkr. w/brn spots gravel (1/2"), med stiff	2-3 R: 8/24		
	20					
PROJECT RVAAP-66 RI			GEOLOGIST SIGNATURE/DATE Dawn [Signature] 5/31/12 6/18/12			BOREHOLE NUMBER WBG MW-021

HTRW DRILLING LOG (continued)		DISTRICT USACE - Louisville	BOREHOLE NUMBER WBGmw-021
1. COMPANY NAME EDM		2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 3 OF 3

3. PROJECT RVAAP-66 RI	4. LOCATION RVAAP 8451 State Route 5 Ravenna, OH 44268
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5. NAME OF DRILLER Aaron Mcke/	6. DIRECTION OF BOREHOLE VERTICAL	INCINED	DEGREES
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7. NOTES PID MAKE/MODEL: Sirius /MSA	PID SERIAL#: A2-1861	Colors from Munsell Soil Color Chart, Rev
WATER LEVEL MAKE/MODEL:	WATER LEVEL SERIAL#:	

ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	SPT DATA (0.5 Feet)	MONITORING (PPM/CPM)	REMARKS (Sample IDs/Depths/Core Box/Etc.)
	20	SM	Upper 9" Sand, gray, fn-med grained, little gravel and silt, wet	2-5-	0.7	20-22 ft; 1421
		CL	Next 2" silty clay till, gray, dry, kd, few gravel	11-16 R=14/24		
	35	SS	Lower 1" Sandstone, gray, micaceous			
	22	SP	Upper 2" Sand, fn-med, gray, wet	3-3-	0.1	22-24 ft; 1440
		CL	Next 4" silty clay till, gray, some coarse gravel, damp	10-11 R=8/24		
	40	SS	Lower 2" Sandstone, gray, fn-grained, weathered/fract.			
	24	CL	Silty clay till, gray, upper 2" soft, wet, remainder damp, kd, few gravel, weathered sandstone @ tip -- believe to be carry down	50/4 R=7/24	-	24-26 ft; 1451
	45		Set casing @ 27 ft bgs			
	27	SS	Sandstone, H gray, fn-grained, heavily fractured, some thin sh ending	R=39/120"		27-37 ft; 1229 (6/25/12)
	50					
	37	SS	Sandstone, ss above, less fractured, few shale xtlgs	R=120/60'		37-42 ft; 1456 Segment from 40'8"-42' removed for permeability testing.
			Th @ 42.5 ft			
	55					
	60					

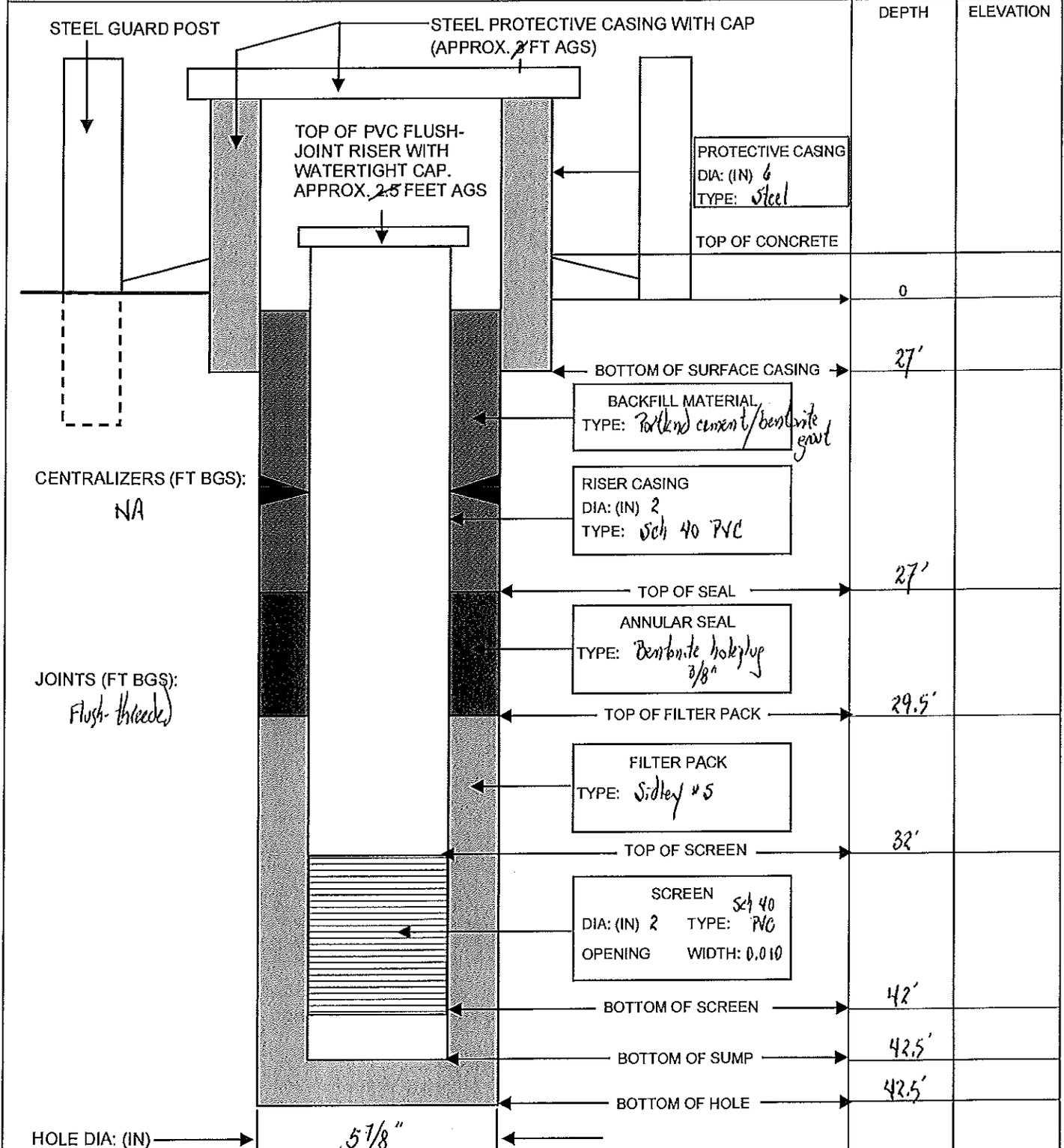
PROJECT RVAAP-66 RI	GEOLOGIST SIGNATURE/DATE [Signature] 6/18/12 6/25/12	BOREHOLE NUMBER WBGmw-021
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MONITORING WELL

PROJECT NAME: *BVAAP-66 B2* PROJECT NO: *30174.0016.001.02*

WELL NUMBER: *WBG MW-021* BEGIN: *6/18/12* END: *6/25/12*

COORDINATES: N: *563009* E: *2359106* REFERENCE POINT: *TOC* ELEVATION: *MSL 1010.92*



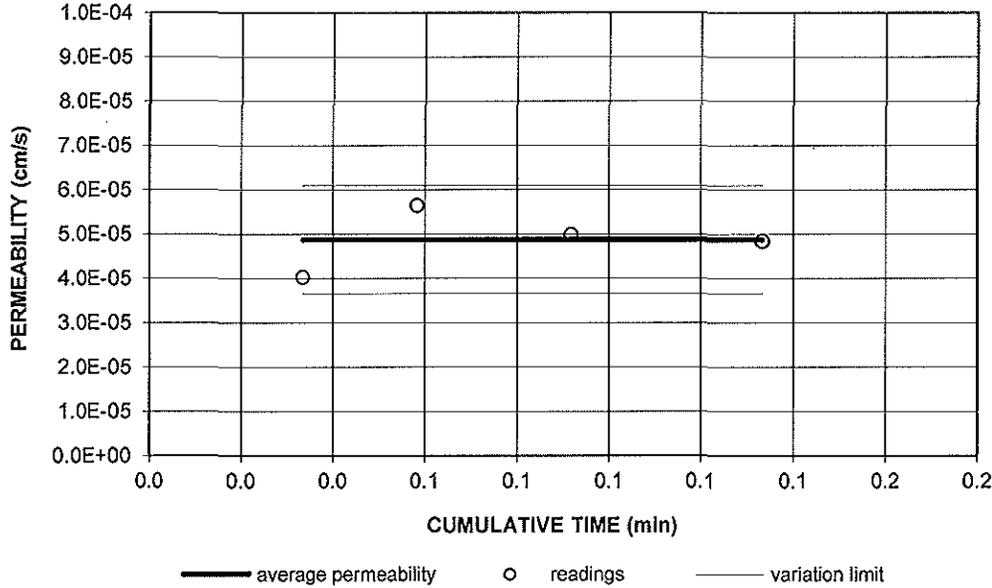
Recorded by: *Shawn A. Spenshade*

QA performed by: _____

APPENDIX B

FLEXIBLE WALL PERMEABILITY TEST RESULTS

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

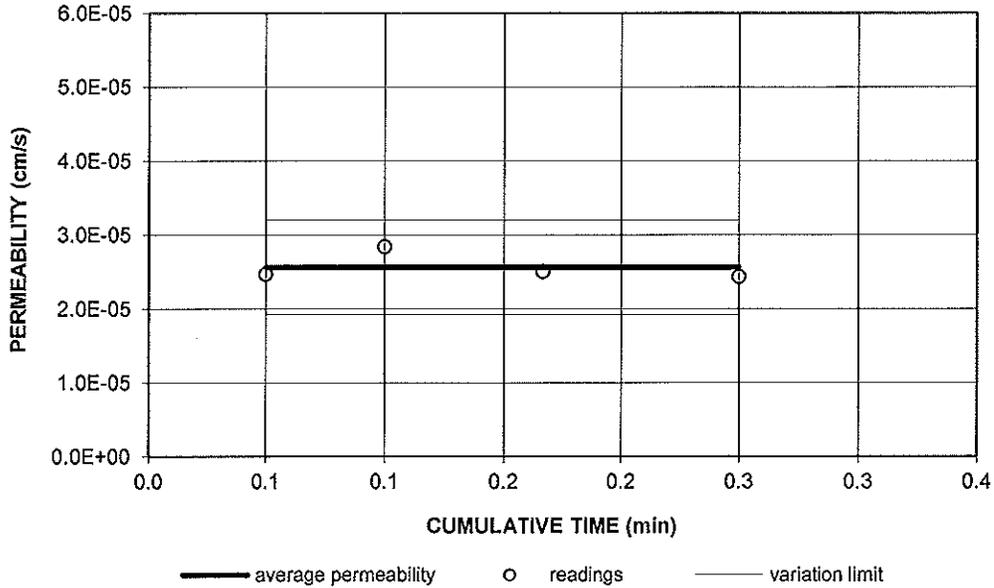
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.03	0.03	14.74	4.03E-05	4.9E-05
21.00	0.02	0.06	12.69	5.65E-05	
21.00	0.03	0.09	10.64	4.98E-05	
21.00	0.04	0.13	8.60	4.84E-05	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.72	2.72
Opti. M.C., (%)		Specimen Diameter, (inches)		2.38	2.72
Comp. Method		Moisture Content, (%)		0.32	4.41
% Recompct.		Percent Saturation (%)		8.89	25.92
Test Pressures (psi)		Wet Mass Density (pcf)		141.06	112.63
Backpressure	90.00	Dry Mass Density (pcf)		140.61	107.87
Cell pressure	93.00	Void Ratio		0.09	0.42
Eff. Stress	3.00	Calculated Porosity, %		8.03	29.44

USCS	LL	PI
Permeant Used: WATER	Remarks	GRAY SANDSTONE

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST 			
Sample Number	S-5314				
Sample Location	LL113SB-245-0015 39.6'-41.1'				
Date	7/17/2012 Lab No. 5314				

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

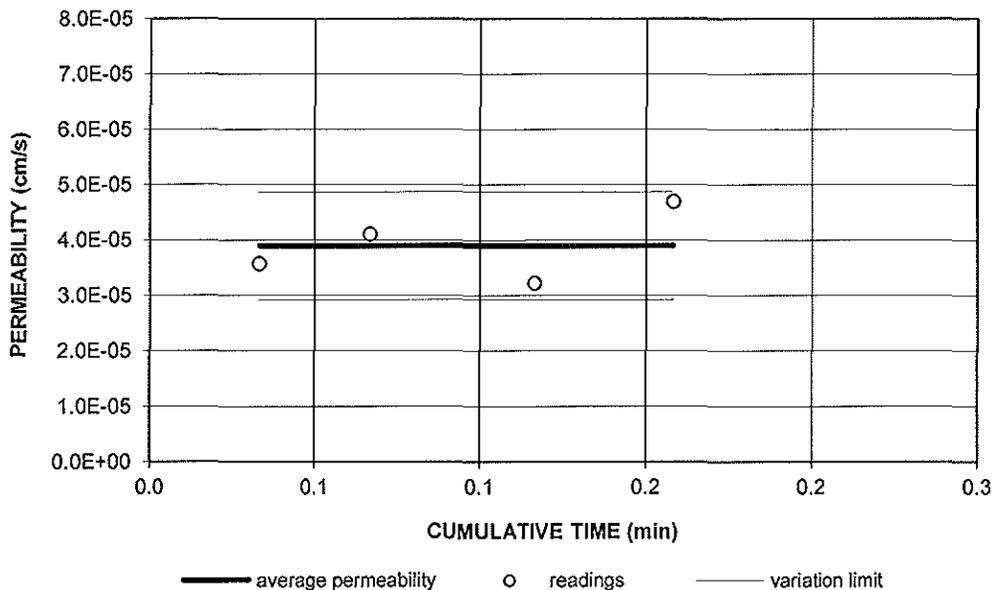
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.05	0.05	14.65	2.47E-05	2.6E-05
21.00	0.05	0.10	12.61	2.84E-05	
21.00	0.07	0.17	10.58	2.50E-05	
21.00	0.08	0.25	8.54	2.43E-05	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.73	2.76
Opti. M.C., (%)		Specimen Diameter, (inches)		2.38	2.38
Comp. Method		Moisture Content, (%)		0.59	5.19
% Recompct.		Percent Saturation (%)		13.23	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		138.56	143.32
Backpressure	90.00	Dry Mass Density (pcf)		137.74	136.24
Cell pressure	93.00	Void Ratio		0.11	0.13
Eff. Stress	3.00	Calculated Porosity, %		9.90	11.29

USCS	LL	PI
Permeant Used: WATER	Remarks: GRAY SANDSTONE	

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST 			
Sample Number	S-5315				
Sample Location	EBGsb-131-0008 65.5'-67.2'				
Date	7/17/2012 Lab No. 5315				

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

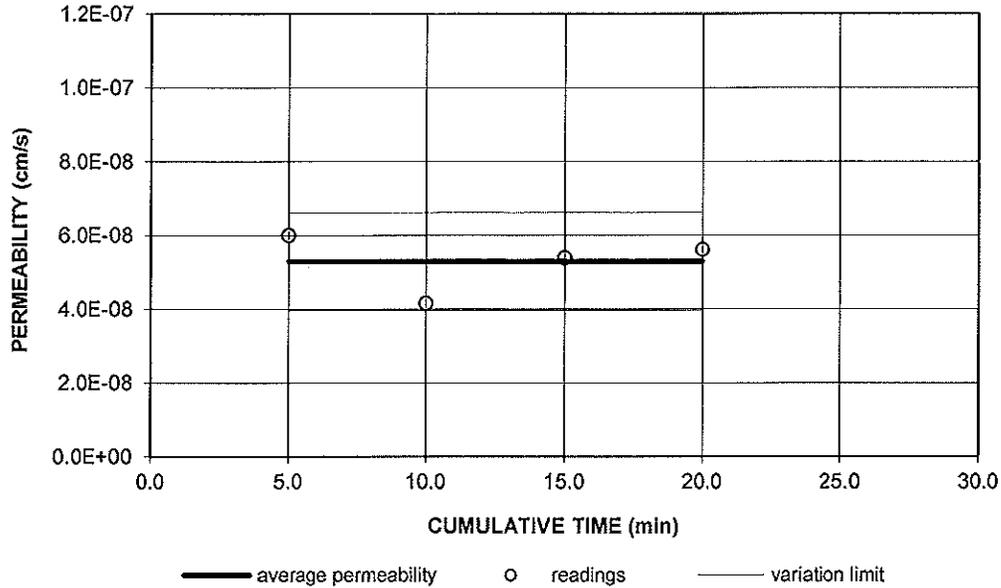
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.03	0.03	15.17	3.57E-05	3.9E-05
21.00	0.03	0.07	13.06	4.11E-05	
21.00	0.05	0.12	10.95	3.22E-05	
21.00	0.04	0.16	8.85	4.69E-05	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.64	2.38
Opti. M.C., (%)		Specimen Diameter, (inches)		2.38	2.38
Comp. Method		Moisture Content, (%)		0.43	5.62
% Recompct.		Percent Saturation (%)		5.16	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		131.84	153.62
Backpressure	90.00	Dry Mass Density (pcf)		131.28	145.45
Cell pressure	93.00	Void Ratio		0.21	0.14
Eff. Stress	3.00	Calculated Porosity, %		17.50	12.53

USCS	LL	PI	
Permeant Used: WATER	Remarks	TAN SANDSTONE	

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.#	N1125109			
Sample Number	S-5317	FLEXIBLE WALL PERMEABILITY TEST			
Sample Location	WBGsb-019-0013	41.5-42.6'	Terracon		
Date	7/17/2012	Lab No.	5317		

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

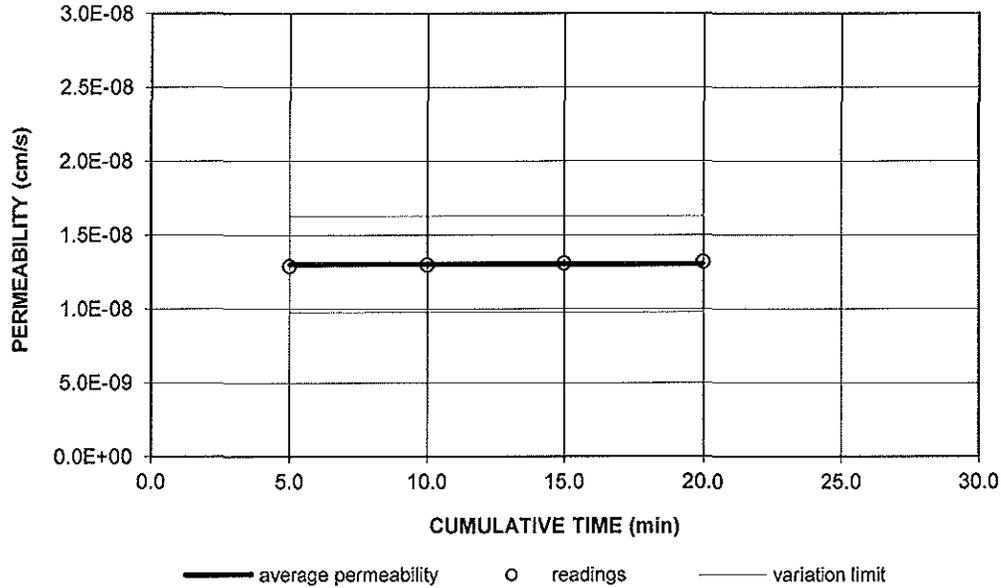
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	5.00	5.00	12.52	6.00E-08	5.3E-08
21.00	5.00	10.00	12.14	4.16E-08	
21.00	5.00	15.00	11.66	5.39E-08	
21.00	5.00	20.00	11.18	5.61E-08	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.88	2.85
Opti. M.C., (%)		Specimen Diameter, (inches)		2.92	2.88
Comp. Method		Moisture Content, (%)		10.64	10.77
% Recompt.		Percent Saturation (%)		99.24	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		138.25	143.38
Backpressure	90.00	Dry Mass Density (pcf)		124.96	129.44
Cell pressure	93.00	Void Ratio		0.27	0.27
Eff. Stress	3.00	Calculated Porosity, %		21.47	21.54

USCS	LL	PI
Permeant Used: WATER	Remarks	GRAY SANDY LEAN CLAY W/ GRAVEL

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST 			
Sample Number	S-5318				
Sample Location	WBGsb-020-0012 15-17'				
Date	7/17/2012 Lab No. 5318				

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

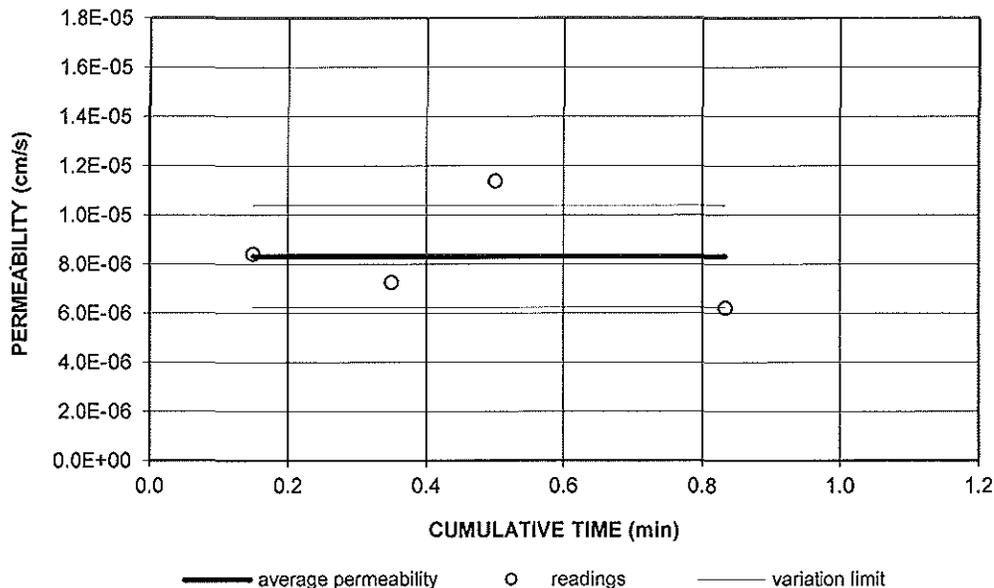
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	5.00	5.00	14.90	1.29E-08	1.3E-08
21.00	5.00	10.00	14.79	1.30E-08	
21.00	5.00	15.00	14.68	1.31E-08	
21.00	5.00	20.00	14.56	1.32E-08	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.48	2.48
Opti. M.C., (%)		Specimen Diameter, (inches)		2.38	2.37
Comp. Method		Moisture Content, (%)		2.39	3.38
% Recompct.		Percent Saturation (%)		99.47	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		153.52	156.19
Backpressure	90.00	Dry Mass Density (pcf)		149.94	151.08
Cell pressure	93.00	Void Ratio		0.06	0.09
Eff. Stress	3.00	Calculated Porosity, %		5.77	7.94

USCS: LL PI
 Permeant Used: WATER Remarks: GRAY SAHLE

Project Name	RVAAP-66 R1	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.#	N1125109	FLEXIBLE WALL PERMEABILITY TEST 		
Sample Number	S-5319				
Sample Location	DA2sb-114-0014	16.5-17.1'			
Date	7/17/2012	Lab No. 5319			

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

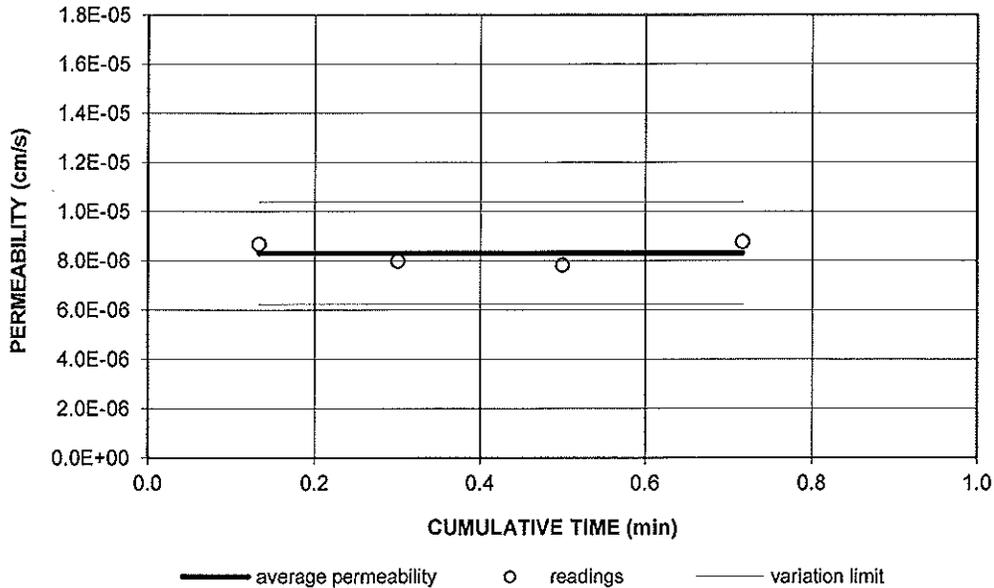
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.15	0.15	14.20	8.41E-06	8.3E-06
21.00	0.20	0.35	12.23	7.25E-06	
21.00	0.15	0.50	10.25	1.14E-05	
21.00	0.33	0.83	8.28	6.22E-06	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.82	2.82
Opti. M.C., (%)		Specimen Diameter, (inches)		2.39	2.39
Comp. Method		Moisture Content, (%)		0.56	5.50
% Recompact.		Percent Saturation (%)		10.62	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		136.05	142.72
Backpressure	90.00	Dry Mass Density (pcf)		135.28	135.28
Cell pressure	93.00	Void Ratio		0.13	0.13
Eff. Stress	3.00	Calculated Porosity, %		11.51	11.87

USCS LL PI
 Permeant Used: WATER Remarks GRAY SANDSTONE

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.#	N1125109			
Sample Number	S-5320	FLEXIBLE WALL PERMEABILITY TEST			
Sample Location	WBGsb-21-0003	Terracon			
Date	7/17/2012	Lab No.	5320		

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.13	0.13	15.51	8.68E-06	8.3E-06
21.00	0.17	0.30	13.36	7.98E-06	
21.00	0.20	0.50	11.20	7.82E-06	
21.00	0.22	0.72	9.05	8.77E-06	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.58	2.58
Opti. M.C., (%)		Specimen Diameter, (inches)		2.39	2.39
Comp. Method		Moisture Content, (%)		0.53	4.87
% Recompct.		Percent Saturation (%)		11.62	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		138.19	144.16
Backpressure	90.00	Dry Mass Density (pcf)		137.46	137.46
Cell pressure	93.00	Void Ratio		0.11	0.12
Eff. Stress	3.00	Calculated Porosity, %		10.09	10.67

USCS	LL	PI
Permeant Used: WATER	Remarks: GRAY SANDSTONE	

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST			
Sample Number	S-5321	Terracon			
Sample Location	WBGsb-020-0007 37.4-38.5'				
Date	7/17/2012 Lab No. 5321				



1800 Carillon Blvd
Cincinnati, OH 45240
(513) 825-7500

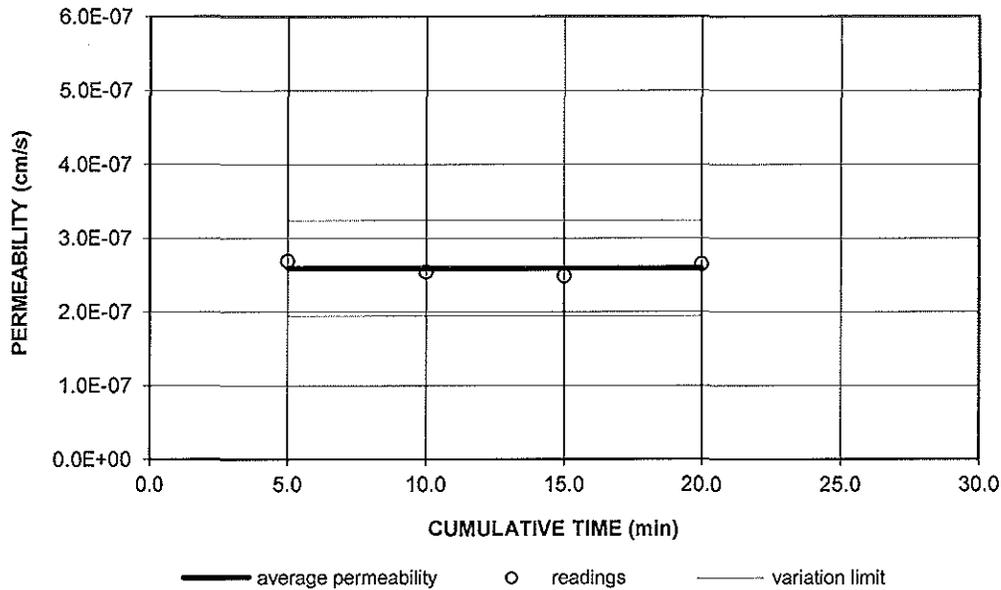
Environmental Quality Management, Inc. Chain of Custody Record

COC Tracking: **EQ- 20952**

Project No. <i>030174.0016.001.02</i>		Project Name <i>RVAAP-66 BT</i>				No. of Containers	TESTS												
Samplers/Affiliation: (Print Name and Sign) <i>Scott Spesshardt</i>				Lab P.O. No: <i>18468</i>			ASTM D-5084	TOC											
Sample ID:	Date	Time	Description/Matrix:	Sample Volume / Comments															
<i>FWG LLBsb-245-0015-GT</i>	<i>4/2/12</i>	<i>-</i>	<i>Rock core</i>	<i>39'7" - 41' 1/2"</i>		1	✓	✓											
<i>FWG EBGsb-131-0006-GT</i>	<i>6/12/12</i>	<i>1337</i>	<i>Rock core</i>	<i>65'6" - 67'2"</i>		1	✓	✓											
<i>FWG WBGsb-018-0002-GT</i>	<i>6/14/12</i>	<i>1430</i>	<i>Shelby Tube soil</i>	<i>18-20 ft</i>		1	✓	✓											
<i>FWG WBGsb-019-0013-GT</i>	<i>6/15/12</i>	<i>1159</i>	<i>Rock core</i>	<i>41'5" - 42'7"</i>		1	✓	✓											
<i>FWG WBGsb-020-0012-GT</i>	<i>6/19/12</i>	<i>1352</i>	<i>Shelby Tube soil</i>	<i>15-17 ft</i>		1	✓												
<i>FWG NA2sb-114-0014-GT</i>	<i>6/22/12</i>	<i>0946</i>	<i>Rock core</i>	<i>16.5-17 ft</i>		1	✓	✓											
<i>FWG WBGsb-021-0003-GT</i>	<i>6/25/12</i>	<i>1456</i>	<i>Rock core</i>	<i>40'8" - 42'</i>		1	✓												
<i>FWG WBGsb-020-0007-GT</i>	<i>6/26/12</i>	<i>1655</i>	<i>Rock core</i>	<i>37'4" - 38' 1/2"</i>		1	✓												
Relinquished by: (Signature) <i>Scott A. Spesshardt</i>		Date <i>7/3/12</i>	Time <i>1450</i>	Received by: (Signature) <i>Tom R. Stroh</i>		Date <i>7-3-12</i>	Time	Ship To:											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Airbill Number <i>Hand delivered</i>											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time												
Reporting/QA Requirements:		Turn Around Time (EXACT DUE DATE): <i>July 10, 2012</i>			Report To: <i>Scott Spesshardt</i>			Chain of Custody Seal Numbers											

Distribution: White - Accompanies Shipment Pink - Project Files Yellow - Laboratory File

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

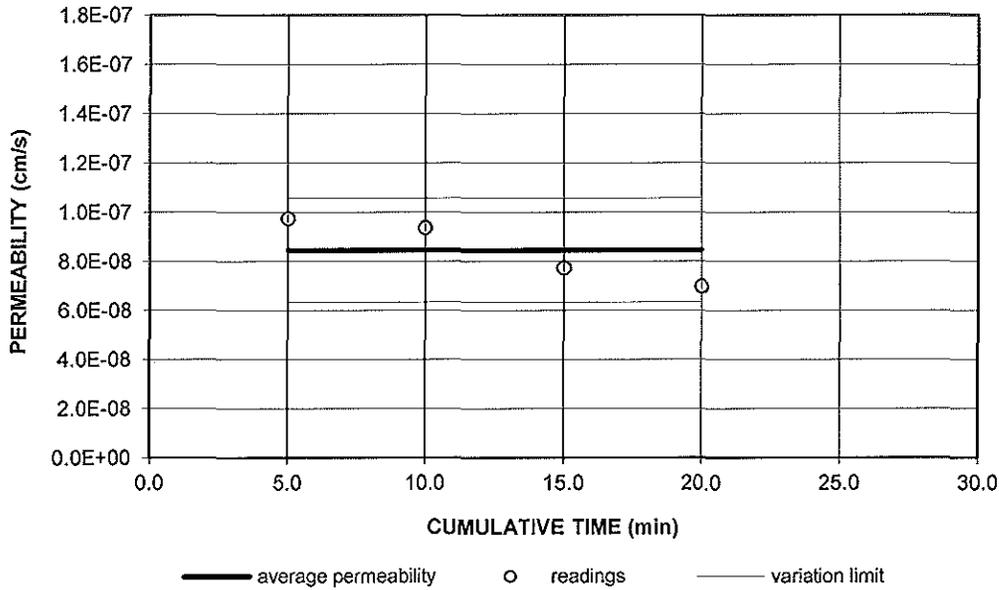
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	5.00	5.00	12.62	2.69E-07	2.6E-07
21.00	5.00	10.00	10.55	2.54E-07	
21.00	5.00	15.00	8.85	2.49E-07	
21.00	5.00	20.00	7.35	2.65E-07	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.95	2.74
Opti. M.C., (%)		Specimen Diameter, (inches)		2.86	2.84
Comp. Method		Moisture Content, (%)		13.46	12.15
% Recompct.		Percent Saturation (%)		99.04	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		139.84	150.81
Backpressure	90.00	Dry Mass Density (pcf)		123.25	134.48
Cell pressure	93.00	Void Ratio		0.37	0.33
Eff. Stress	3.00	Calculated Porosity, %		26.84	24.70

USCS	LL	PI
Permeant Used: WATER	Remarks	GRAY CLAYEY SANDY SILT

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST 			
Sample Number	S-4230				
Sample Location	LL12sb-247-0001 14-16'				
Date	6/1/2012 Lab No. 4230				

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: **ASTM D 5084**

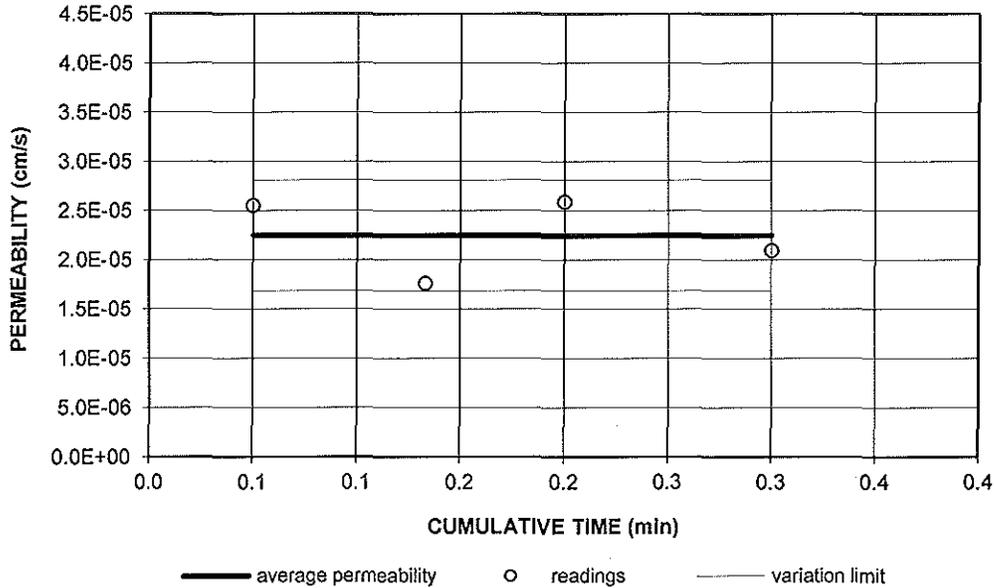
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	5.00	5.00	13.22	9.73E-08	8.5E-08
21.00	5.00	10.00	12.38	9.37E-08	
21.00	5.00	15.00	11.73	7.73E-08	
21.00	5.00	20.00	11.17	6.98E-08	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.99	2.92
Opti. M.C., (%)		Specimen Diameter, (inches)		2.87	2.84
Comp. Method		Moisture Content, (%)		15.05	13.74
% Recompct.		Percent Saturation (%)		98.99	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		139.22	143.03
Backpressure	90.00	Dry Mass Density (pcf)		121.01	125.75
Cell pressure	93.00	Void Ratio		0.42	0.38
Eff. Stress	3.00	Calculated Porosity, %		29.48	27.42

USCS	LL	PI
Permeant Used: WATER	Remarks	GRAY SANDY LEAN CLAY W/ TRACE GRAVEL

Project Name RVAAP-66 RI	Tested by FCE Reviewed by TGG
Client EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST
Sample Number S-4231	
Sample Location FWGsb-009-0004 8-10'	
Date 6/1/2012 Lab No. 4231	

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

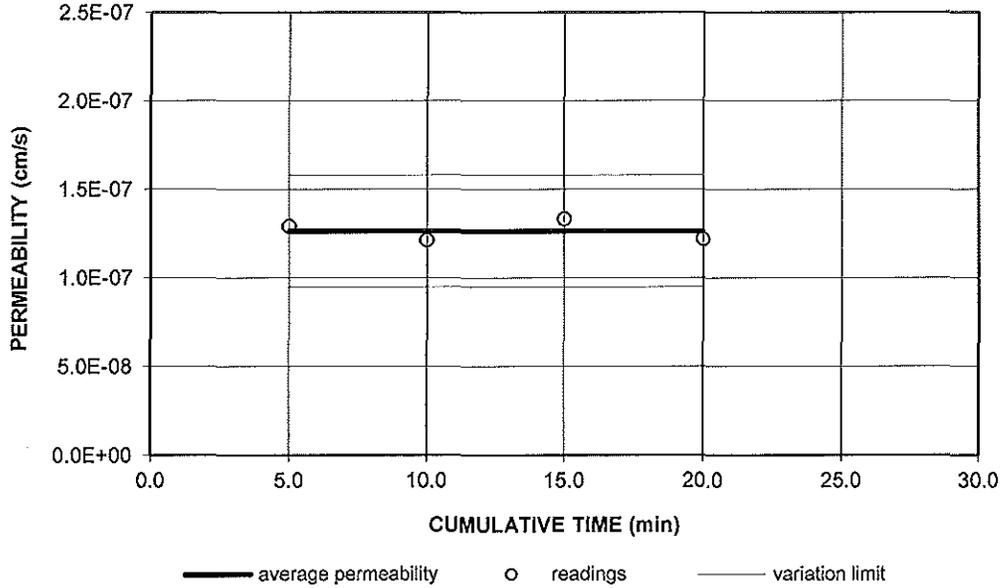
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.05	0.05	13.96	2.55E-05	2.2E-05
21.00	0.08	0.13	12.02	1.76E-05	
21.00	0.07	0.20	10.08	2.59E-05	
21.00	0.10	0.30	8.14	2.09E-05	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.87	2.87
Opti. M.C., (%)		Specimen Diameter, (inches)		2.40	2.40
Comp. Method		Moisture Content, (%)		0.57	6.28
% Reompct.		Percent Saturation (%)		17.20	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		134.17	141.79
Backpressure	90.00	Dry Mass Density (pcf)		133.42	133.42
Cell pressure	93.00	Void Ratio		0.08	0.14
Eff. Stress	3.00	Calculated Porosity, %		7.04	12.61

USCS	LL	PI	
Permeant Used: WATER	Remarks	GRAY SANDSTONE	

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST 			
Sample Number	S-4232				
Sample Location	LL3sb-244-0010 28.5-39.7'				
Date	6/13/2012 Lab No. 4232				

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: **ASTM D 5084**

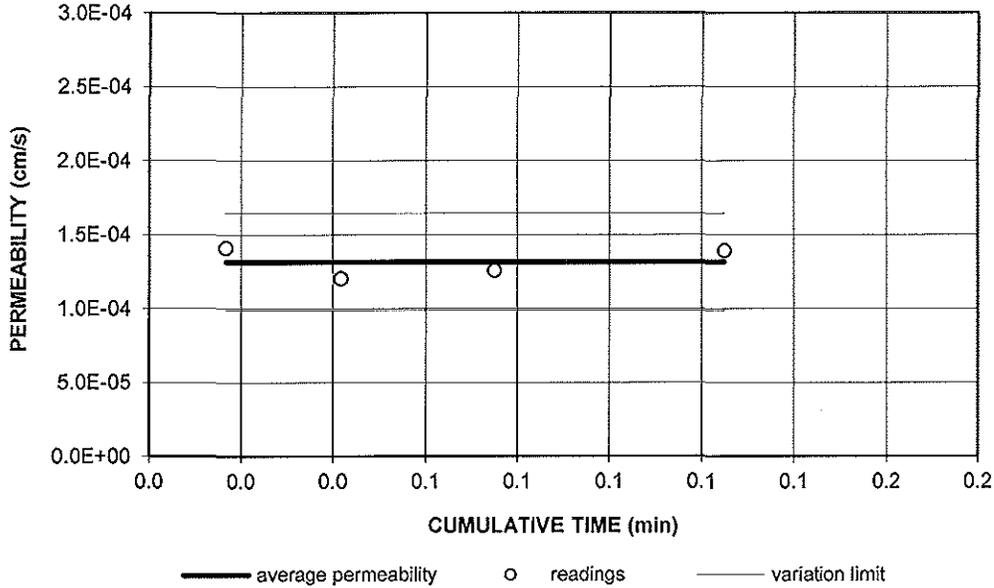
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	5.00	5.00	13.80	1.29E-07	1.3E-07
21.00	5.00	10.00	12.62	1.21E-07	
21.00	5.00	15.00	11.44	1.33E-07	
21.00	5.00	20.00	10.45	1.22E-07	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.82	2.82
Opti. M.C., (%)		Specimen Diameter, (inches)		2.86	2.86
Comp. Method		Moisture Content, (%)		16.85	17.54
% Recompt.		Percent Saturation (%)		99.60	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		136.85	137.47
Backpressure	90.00	Dry Mass Density (pcf)		117.12	116.96
Cell pressure	93.00	Void Ratio		0.47	0.48
Eff. Stress	3.00	Calculated Porosity, %		31.75	32.54

USCS	LL	PI
Permeant Used: WATER	Remarks	GRAY SANDY LEAN CLAY W/ TRACE GRAVEL

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST			
Sample Number	S-4233	Terracon			
Sample Location	FWGsb-015-0006 16-18'				
Date	6/1/2012 Lab No. 4233				

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: **ASTM D 5084**

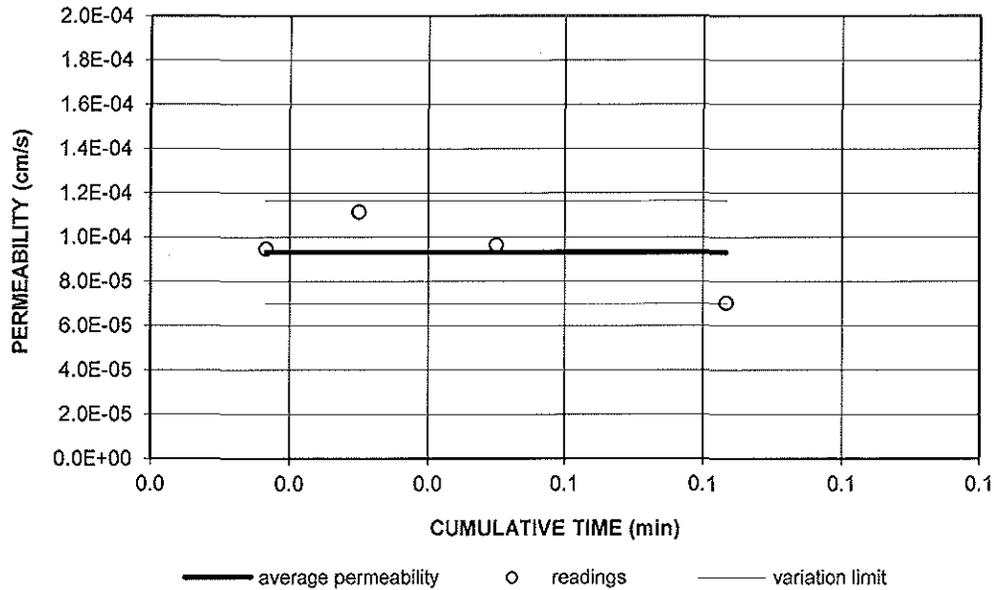
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.02	0.02	14.76	1.41E-04	1.3E-04
21.00	0.03	0.04	11.16	1.20E-04	
21.00	0.03	0.08	7.56	1.26E-04	
21.00	0.05	0.12	3.96	1.39E-04	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		3.09	3.09
Opti. M.C., (%)		Specimen Diameter, (inches)		2.38	2.38
Comp. Method		Moisture Content, (%)		0.11	6.85
% Recompt.		Percent Saturation (%)		2.34	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		129.12	137.80
Backpressure	90.00	Dry Mass Density (pcf)		128.97	128.97
Cell pressure	93.00	Void Ratio		0.11	0.16
Eff. Stress	3.00	Calculated Porosity, %		10.14	13.61

USCS	LL	PI
Permeant Used: WATER	Remarks	GRAY SANDSTONE

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST			
Sample Number	S-4234	Terracon			
Sample Location	FWGsb-012-0018 31.05-32.6'				
Date	6/4/2012 Lab No. 4234				

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

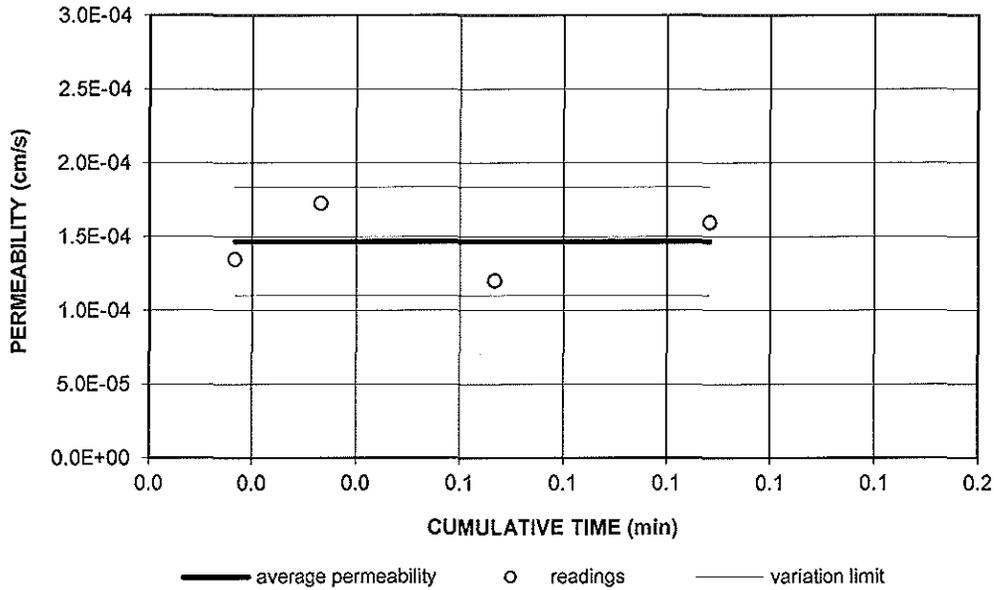
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.02	0.02	12.67	9.47E-05	9.3E-05
21.00	0.01	0.03	11.06	1.11E-04	
21.00	0.02	0.05	9.28	9.64E-05	
21.00	0.03	0.08	7.49	7.02E-05	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		3.12	3.12
Opti. M.C., (%)		Specimen Diameter, (inches)		2.36	2.36
Comp. Method		Moisture Content, (%)		4.34	7.02
% Recompct.		Percent Saturation (%)		58.87	95.23
Test Pressures (psi)		Wet Mass Density (pcf)		139.77	143.35
Backpressure	90.00	Dry Mass Density (pcf)		133.96	133.96
Cell pressure	93.00	Void Ratio		0.19	0.19
Eff. Stress	3.00	Calculated Porosity, %		15.81	15.81

USCS	LL	PI	
Permeant Used: WATER	Remarks	GRAY SANDSTONE	

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST			
Sample Number	S-4235	Terracon			
Sample Location	CBPsb-009-0011 61.7-63.2'				
Date	6/1/2012 Lab No. 4235				

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

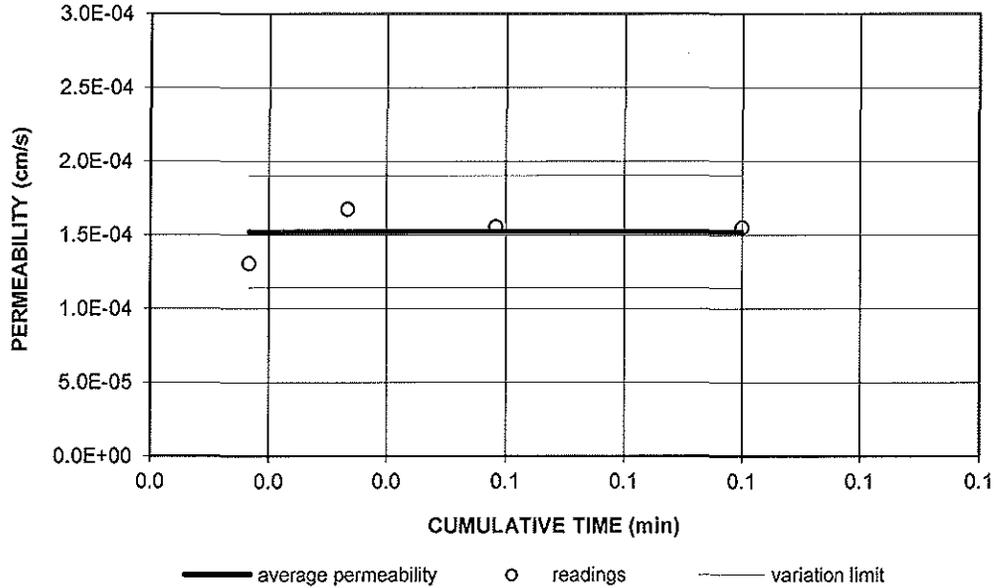
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.02	0.02	15.46	1.35E-04	1.5E-04
21.00	0.02	0.03	11.69	1.72E-04	
21.00	0.03	0.07	7.92	1.20E-04	
21.00	0.04	0.11	4.15	1.60E-04	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.95	2.95
Opti. M.C., (%)		Specimen Diameter, (inches)		2.37	2.37
Comp. Method		Moisture Content, (%)		0.04	6.29
% Recompct.		Percent Saturation (%)		0.98	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		132.26	140.53
Backpressure	90.00	Dry Mass Density (pcf)		132.21	132.21
Cell pressure	93.00	Void Ratio		0.09	0.14
Eff. Stress	3.00	Calculated Porosity, %		7.88	12.64

USCS	LL	PI	
Permeant Used: WATER	Remarks	GRAY SANDSTONE	

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST			
Sample Number	S-4236	Terracon			
Sample Location	LL4sb-201-009 57-67'				
Date	6/4/2012 Lab No. 4236				

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

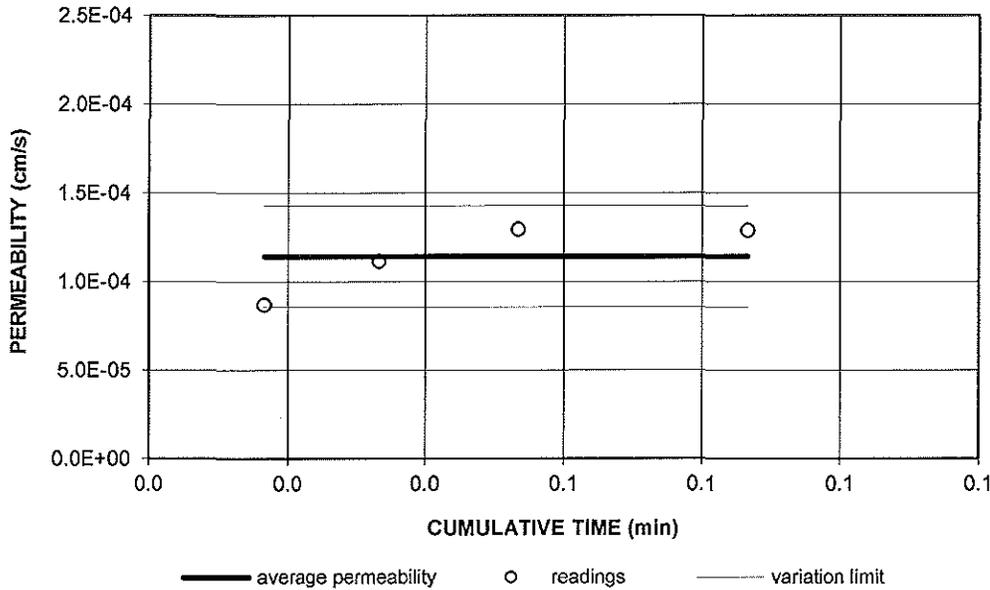
Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.02	0.02	15.78	1.31E-04	1.5E-04
21.00	0.02	0.03	11.93	1.68E-04	
21.00	0.02	0.06	8.08	1.56E-04	
21.00	0.04	0.10	4.23	1.55E-04	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		2.89	2.89
Opti. M.C., (%)		Specimen Diameter, (inches)		2.38	2.38
Comp. Method		Moisture Content, (%)		0.20	5.67
% Recompt.		Percent Saturation (%)		3.70	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		128.14	135.14
Backpressure	90.00	Dry Mass Density (pcf)		127.89	127.89
Cell pressure	93.00	Void Ratio		0.12	0.13
Eff. Stress	3.00	Calculated Porosity, %		10.89	11.54

USCS	LL	PI
Permeant Used: WATER	Remarks	GRAY SANDSTONE

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST 			
Sample Number	S-4239				
Sample Location	LL6sb-009-0016 27-28'				
Date	6/1/2012 Lab No. 4239				

FLEXIBLE WALL PERMEABILITY TEST



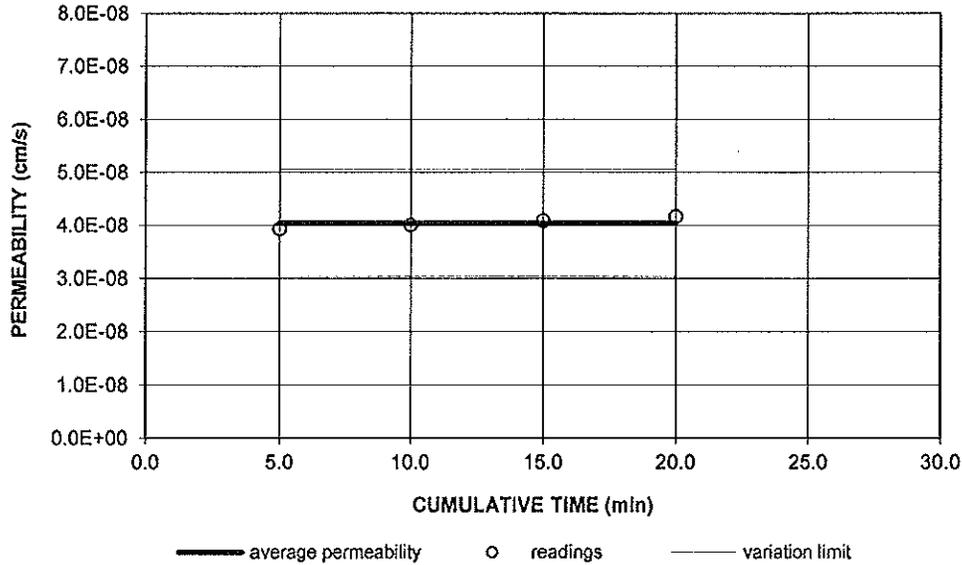
Test Specification: ASTM D 5084

Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	0.02	0.02	23.63	8.71E-05	1.1E-04
21.00	0.02	0.03	17.87	1.12E-04	
21.00	0.02	0.05	12.11	1.29E-04	
21.00	0.03	0.09	6.34	1.29E-04	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		1.93	1.93
Opti. M.C., (%)		Specimen Diameter, (inches)		2.39	2.39
Comp. Method		Moisture Content, (%)		0.13	17.73
% Recompt.		Percent Saturation (%)		1.45	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		119.08	140.01
Backpressure	90.00	Dry Mass Density (pcf)		118.93	118.93
Cell pressure	93.00	Void Ratio		0.21	0.41
Eff. Stress	3.00	Calculated Porosity, %		17.14	28.97

USCS		LL	PI	
Permeant Used:	WATER	Remarks	TAN SANDSTONE	
Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by TGG
Client	EQM, Inc. W.O.#	N1125109	FLEXIBLE WALL PERMEABILITY TEST 	
Sample Number	S-4240			
Sample Location	FWGsb-016-0020	60-61.8'		
Date	6/15/2012	Lab No. 4240		

FLEXIBLE WALL PERMEABILITY TEST



Test Specification: ASTM D 5084

Fluid Temp. (°C)	Elapsed Time (min.)	Cumulative Time (min.)	Gradient (cm-Hg)	Calculated Permeability (cm/sec)	Average Permeability (cm/sec)
21.00	5.00	5.00	19.47	3.93E-08	4.0E-08
21.00	5.00	10.00	19.11	4.01E-08	
21.00	5.00	15.00	18.74	4.09E-08	
21.00	5.00	20.00	18.37	4.17E-08	

Compaction Data		Sample Data		Initial	Final
Proctor (pcf)		Specimen Height, (inches)		3.03	3.03
Opti. M.C., (%)		Specimen Diameter, (inches)		2.38	2.38
Comp. Method		Moisture Content, (%)		2.03	2.48
% Recompct.		Percent Saturation (%)		100.14	100.00
Test Pressures (psi)		Wet Mass Density (pcf)		162.97	163.69
Backpressure	90.00	Dry Mass Density (pcf)		159.73	159.73
Cell pressure	93.00	Void Ratio		0.05	0.07
Eff. Stress	3.00	Calculated Porosity, %		5.20	6.28

USCS	LL	PI
Permeant Used: WATER	Remarks	GRAY SILTSTONE

Project Name	RVAAP-66 RI	Tested by	FCE	Reviewed by	TGG
Client	EQM, Inc. W.O.# N1125109	FLEXIBLE WALL PERMEABILITY TEST 			
Sample Number	S-4241				
Sample Location	LL11sb-012-0017 113.5-114.25				
Date	6/6/2012 Lab No. 4241				



1800 Carillon Blvd
Cincinnati, OH 45240
(513) 825-7500

Environmental Quality Management, Inc. Chain of Custody Record

COC Tracking: **EQ-20951**

Project No.		Project Name				No. of Containers	TESTS													
030174.0016.001.02		RVAAP-66 RI					ASTM D-5084													
Samplers/Affiliation: (Print Name and Sign) A. Trenton S. Spasshick				Lab P.O. No: 18468 2750-4005-10																
Sample ID:	Date	Time	Description/Matrix:	Sample Volume / Comments																
FWG LL 12 SB-247-0001-GT	3/1/12	1455	Soil: 14-16'	Shelby Tube		1	✓													
FWG FWG SB-009-0004-GT	3/7/12	1122	Soil: 8-10'	Shelby Tube		1	✓													
FWG LL 3 SB-244-0010-GT	3/8/12	1455	Rock: 22.5-29.7'	Rock Core		1	✓													
FWG FWG SB-015-0006-GT	3/13/12	1013	Soil: 16-18'	Shelby Tube		1	✓													
FWG FWG SB-012-0018-GT	3/19/12	1320	Rock: 31.05-32.6'	Rock Core		1	✓													
FWG CBP SB-009-0011-GT	3/28/12	1225	Rock: 61.7-62.2'	Rock Core		1	✓													
FWG LL 4 SB-201-0009-GT	4/4/12	-	Rock: 57-67'	Rock Core		1	✓													
FWG CBL SB-005-0019-GT	4/6/12	-	Rock: 23.1-25.3'	Rock Core		1	✓													
FWG LL 6 SB-009-0005-GT	4/11/12	1400	Soil: 12-12.75'	Shelby Tube		1	✓													
FWG LL 6 SB-008-0016-GT	4/12/12	1300	Rock: 27-28'	Rock Core		1	✓													
FWG FWG SB-016-0020-GT	4/16/12	1330	Rock: 60-61.8'	Rock Core		1	✓													
FWG LL 11 SB-012-0017-GT	4/17/12	-	Rock: 113.5-114.25'	Rock Core		1	✓													
Relinquished by: (Signature) <i>[Signature]</i>		Date	Time	Received by: (Signature) <i>[Signature]</i>		Date	Time	Ship To:												
		5/17/12	1420			5-17-12	2:40PM													
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time													
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Airbill Number <i>Hand delivered</i>												
Reporting/QA Requirements:		Turn Around Time (EXACT DUE DATE): June 1, 2012		Report To: <i>Scott Spasshick</i>			Chain of Custody Seal Numbers													



19-Jul-2012

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

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

Re: RVAAP-66 RI; N1125109

Work Order: **1207265**

Dear Tim,

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

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

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

The total number of pages in this report is 5.

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

Sincerely,

Jim Baxter

Electronically approved by: Chris Gibson

Jim Baxter
Director

Client: Terracon
Project: RVAAP-66 RI; N1125109
Work Order: 1207265

Work Order Sample Summary

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

ALS Environmental

Date: 19-Jul-12

Client: Terracon
Project: RVAAP-66 RI; N1125109

Work Order: 1207265

Lab ID: 1207265-01A Collection Date: 7/11/2012 10:00:00 AM
Client Sample ID: 5314 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TOTAL ORGANIC CARBON BY WALKLEY-BLACK						
Total Organic Carbon	0.14		0.025	%	1	Analyst: RDN 7/19/2012

Lab ID: 1207265-02A Collection Date: 7/11/2012 10:00:00 AM
Client Sample ID: 5315 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TOTAL ORGANIC CARBON BY WALKLEY-BLACK						
Total Organic Carbon	0.053		0.025	%	1	Analyst: RDN 7/19/2012

Lab ID: 1207265-03A Collection Date: 7/11/2012 10:00:00 AM
Client Sample ID: 5316 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TOTAL ORGANIC CARBON BY WALKLEY-BLACK						
Total Organic Carbon	0.11		0.025	%	1	Analyst: RDN 7/19/2012

Lab ID: 1207265-04A Collection Date: 7/11/2012 10:00:00 AM
Client Sample ID: 5317 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TOTAL ORGANIC CARBON BY WALKLEY-BLACK						
Total Organic Carbon	0.039		0.025	%	1	Analyst: RDN 7/19/2012

Lab ID: 1207265-05A Collection Date: 7/11/2012 10:00:00 AM
Client Sample ID: 5319 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TOTAL ORGANIC CARBON BY WALKLEY-BLACK						
Total Organic Carbon	0.36		0.025	%	1	Analyst: RDN 7/19/2012

Note:

Client: Terracon
Project: RVAAP-66 RI; N1125109
WorkOrder: 1207265

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit

<u>Units Reported</u>	<u>Description</u>
%	

Sample Receipt Checklist

Client Name: **TERRACON-CINCINNATI**

Date/Time Received: **12-Jul-12 10:15**

Work Order: **1207265**

Received by: **JNW**

Checklist completed by: Steve Wilcox
eSignature

13-Jul-12
Date

Reviewed by: Alexis Wilsey
eSignature

13-Jul-12
Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<input type="text" value="24.4"/> <input type="text"/>		
Cooler(s)/Kit(s):	<input type="text"/>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<input type="text"/>		

Login Notes:



Client Contacted: _____ Date Contacted: _____ Person Contacted: _____
Contacted By: _____ Regarding: _____

Comments:

CorrectiveAction:

APPENDIX C
WELL DEVELOPMENT LOGS

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: BUILDING 120 DATE: 4/18/2012 START TIME: 8:29
 WELL ID: B12mw-013
 WELL DEPTH: 24.09 INITIAL WATER LEVEL: 17
 WELL DIAMETER 2 in. SCREEN INTERVAL: 11.5 - 21.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 19.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 7.5 GAL. FINAL WL = 21.41, twd= 24.19 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001

LOCATION: C-BLOCK QUA DATE: 4/18/2012 START TIME: 13:49

WELL ID: CBLmw-005

WELL DEPTH: 32.3 INITIAL WATER LEVEL: 23.42

WELL DIAMETER 2 in. SCREEN INTERVAL: 22 - 30

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 28.0

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

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

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: DEMO.AREA 2 DATE: 6/27/2012 START TIME: 15:30
 WELL ID: DA2mw-114
 WELL DEPTH: 21.87 INITIAL WATER LEVEL: 5.95
 WELL DIAMETER 2 in. SCREEN INTERVAL: 9.16 - 19.16
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 17.2
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge dry @ 1600 recharge purge dry at 1614 wait then purge dry total 15 gal. twd= 21.87 Odor:

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

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

Field Personnel: CAL

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: DEMO.AREA 2 DATE: 6/28/2012 START TIME: 9:03
 WELL ID: DA2mw-115
 WELL DEPTH: 46.91 INITIAL WATER LEVEL: 6.5
 WELL DIAMETER 2 in. SCREEN INTERVAL: 33.75 - 43.75
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 41.8
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 33 gal. twd= 46.91 good for QC Odor:

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

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

Field Personnel: CAL

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: ERIE BURNIN DATE: 6/27/2012 START TIME: 14:06
 WELL ID: EBGmw-131
 WELL DEPTH: 73.15 INITIAL WATER LEVEL: 11
 WELL DIAMETER 2 in. SCREEN INTERVAL: 60.5 - 70.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 68.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 14
 COMMENTS surge overpurge 55 gal. twd= 73.15 clear Odor:

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
14:16	11.49	1	1	16	0.405	13.57	6.58	507	
14:19		1	3	14.9	0.404	13.9	7.06	354	
14:22	11.56	0.9	3	14.3	0.403	14.36	7.18	247	
14:26		1	4	13.8	0.398	14.98	7.21	197	
14:30		1	4	15.1	0.399	13.8	7.18	188	
14:33	11.88	1	3	13.5	0.4	13.76	7.24	230	
14:36		0.75	3	13.1	0.399	13.88	7.22	202	
14:40	11.80	1	4	13.5	0.403	13.94	7.24	212	
14:44	11.84	1	4	13.7	0.401	14.13	7.27	221	
14:47	11.80	1	0	13.5	0.403	14.19	7.33	99	
14:48	11.83	1	4	13.5	0.404	14.2	7.33	93	
14:52	11.82	1	4	13.4	0.402	14.4	7.25	98	
14:56	11.81	1	4	13	0.4	14.49	7.23	89	

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

Field Personnel: CAL

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 3/28/2012 START TIME: 10:20
 WELL ID: FWGmw-001
 WELL DEPTH: 20 INITIAL WATER LEVEL: 8.21
 WELL DIAMETER 2 in. SCREEN INTERVAL: 7 - 17
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 15.0
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 18 GAL, final WL = 10.29, twd=20 Odor:

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

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

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 3/29/2012 START TIME: 11:07
 WELL ID: FWGmw-002
 WELL DEPTH: 66.95 INITIAL WATER LEVEL: 22.16
 WELL DIAMETER 2 in. SCREEN INTERVAL: 57 - 67
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 65.0
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 50 gal, final WL = 23.83, lwd=68.59. Depth stabilized after 30 gallons. Light grey color. Odor:

TIME	WATER LEVEL (ftoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
11:18	22.16	0.7	0	11	0.45	16.52	7.95	999	
11:23		0.75	5	11.2	0.441		7.88	999	
11:28		0.7	5	11.2	0.44		7.93	999	
11:33		0.6	5	11.2	0.449		7.96	999	
11:38		0.75	5	10.7	0.462		8.02	999	
11:43		0.6	5	11.1	0.442		7.96	999	
11:48		0.75	5	11.1	0.426		8	380	
11:53		0.8	5	11.2	0.45		8.08	557	
11:58		0.75	5	10.9	0.457	14.69	8.54	999	
12:03	23.54	0.75	5	11.1	0.456		8.46	999	
12:08		0.75	5	11.4	0.545		8.91	474	
12:13		0.8	5	11.4	0.429		8.45	999	
12:18		0.75	5	11.3	0.444		8.37	999	
12:23		0.7	5	10.9	0.442		8.4	999	
12:28		0.7	5	11.1	0.449		8.32	999	
12:33		0.7	5	11.1	0.457		8.32	999	
12:38	23.83	0.7	5	11.1	0.459		8.39	999	

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 3/22/2012 START TIME: 11:00
 WELL ID: FWGmw-003
 WELL DEPTH: 20.8 INITIAL WATER LEVEL: 4.7
 WELL DIAMETER 2 in. SCREEN INTERVAL: 8.5 - 18.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 16.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS high suspended solids, surge and overpurge 18 gallon. Final WL = 18.84 twd=21.11 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 3/28/2012 START TIME: 8:33
 WELL ID: FWGmw-004
 WELL DEPTH: 22.45 INITIAL WATER LEVEL: 11.4
 WELL DIAMETER 2 in. SCREEN INTERVAL: 9.5 - 19.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 17.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 18 gal, final WL = 14.61 twd=22.58 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 4/18/2012 START TIME: 10:02
 WELL ID: FWGmw-005
 WELL DEPTH: 30.8 INITIAL WATER LEVEL: 20.05
 WELL DIAMETER 2 in. SCREEN INTERVAL: 19.25 - 29.25
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 27.3
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 22 GAL, final WL= 20.91 twd=30.90, good for QC Odor:

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

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

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 3/21/2012 START TIME: 14:42
 WELL ID: FWGmw-006
 WELL DEPTH: 18.68 INITIAL WATER LEVEL: 3.33
 WELL DIAMETER 2 in. SCREEN INTERVAL: 7.5 - 17.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 15.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS gray, surge overpurge twd=19.32 final water depth 14.89 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 3/21/2012 START TIME: 13:03
 WELL ID: FWGmw-007
 WELL DEPTH: 30.44 INITIAL WATER LEVEL: 22.43
 WELL DIAMETER 2 in. SCREEN INTERVAL: 19.5 - 29.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 27.5
 PUMP READINGS: Throttle: 0 Recharge: 2 Discharge: 2
 COMMENTS gray-tan, surge overpurge twd= 32.0, water level = 23.9 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 3/22/2012 START TIME: 8:55
 WELL ID: FWGmw-008
 WELL DEPTH: 22.05 INITIAL WATER LEVEL: 5.22
 WELL DIAMETER 2 in. SCREEN INTERVAL: 10 - 20
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 18.0
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS gray, surge overpurge 17 gal. Final WL = 5.45 twd=22.05 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 3/22/2012 START TIME: 12:20
 WELL ID: FWGmw-009
 WELL DEPTH: 20.4 INITIAL WATER LEVEL: 1
 WELL DIAMETER 2 in. SCREEN INTERVAL: 8 - 18
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 16.0
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS tan, surge overpurge 19 gal. Final WL = 2.60 twd=20.5 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001

LOCATION: FACILITYWID DATE: 3/23/2012 START TIME: 10:06

WELL ID: FWGmw-010

WELL DEPTH: 18.7 INITIAL WATER LEVEL: 8.72

WELL DIAMETER 2 in. SCREEN INTERVAL: 6 - 16

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 14.0

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

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

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 3/23/2012 START TIME: 8:55
 WELL ID: FWGmw-011
 WELL DEPTH: 18.1 INITIAL WATER LEVEL: 1.64
 WELL DIAMETER 2 in. SCREEN INTERVAL: 6 - 16
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 14.0
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 27.5 gal. twd= Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 3/29/2012 START TIME: 15:25
 WELL ID: FWGmw-012
 WELL DEPTH: 42.44 INITIAL WATER LEVEL: 0.1
 WELL DIAMETER 2 in. SCREEN INTERVAL: 29.5 - 39.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 37.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge36 gal, final WL = 0.4, twd=42.44 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 4/18/2012 START TIME: 12:50
 WELL ID: FWGmw-013
 WELL DEPTH: 36.75 INITIAL WATER LEVEL: 17.05
 WELL DIAMETER 2 in. SCREEN INTERVAL: 24 - 34
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 32.0
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 18 gal. Final wl = 26.41 twd= 36.77 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 4/18/2012 START TIME: 11:00
 WELL ID: FWGmw-014
 WELL DEPTH: 20.79 INITIAL WATER LEVEL: 3.29
 WELL DIAMETER 2 in. SCREEN INTERVAL: 8.25 - 18.25
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 16.3
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurg 26 gal. Final WL = 6.24, twd=21.25. Good for QC. Color = dark gray to a really lt brown. Odor:

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

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

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001

LOCATION: FACILITYWID DATE: 3/28/2012 START TIME: 11:20

WELL ID: FWGmw-015

WELL DEPTH: 26.3 INITIAL WATER LEVEL: 4.44

WELL DIAMETER 2 in. SCREEN INTERVAL: 13.5 - 23.5

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

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

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

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: FACILITYWID DATE: 4/19/2012 START TIME: 15:20
 WELL ID: FWGmw-016
 WELL DEPTH: 67.5 INITIAL WATER LEVEL: 16.5
 WELL DIAMETER 2 in. SCREEN INTERVAL: 54.5 - 64.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 62.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 44 gallons, final WL = 17.43, twd= 67.53 clear Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: LOADLINE 1 DATE: 3/27/2012 START TIME: 14:35
 WELL ID: LL1mw-086
 WELL DEPTH: 77.08 INITIAL WATER LEVEL: 6.01
 WELL DIAMETER 2 in. SCREEN INTERVAL: 64.5 - 74.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 72.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 59 gal. Final WL = 6.12 twd=77.89 gray Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: LOADLINE 1 DATE: 3/29/2012 START TIME: 14:01
 WELL ID: LL1mw-087
 WELL DEPTH: 18.34 INITIAL WATER LEVEL: 4.42
 WELL DIAMETER 2 in. SCREEN INTERVAL: 7 - 17
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 15.0
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge initial purge of 60 gal., then 5 well volumes. Final WL = 11.51, twd=18.8 gray Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: LOADLINE 3 DATE: 3/22/2012 START TIME: 15:20
 WELL ID: LL3mw-244
 WELL DEPTH: 46.9 INITIAL WATER LEVEL: 9.3
 WELL DIAMETER 2 in. SCREEN INTERVAL: 34.5 - 44.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 42.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 34 gal. Final WL = 9.31, twd= 47.5 clear Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: LOADLINE 3 DATE: 4/17/2012 START TIME: 13:58
 WELL ID: LL3mw-245
 WELL DEPTH: 48.9 INITIAL WATER LEVEL: 11.18
 WELL DIAMETER 2 in. SCREEN INTERVAL: 36.5 - 46.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 44.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 31 GALLONS, FINAL WL =12.66, twd=48.92. good for QC Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: LOADLINE 4 DATE: 4/17/2012 START TIME: 15:30
 WELL ID: LL4mw-201
 WELL DEPTH: 69.89 INITIAL WATER LEVEL: 8.8
 WELL DIAMETER 2 in. SCREEN INTERVAL: 56.5 - 66.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 64.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge final depth 69.89 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: LOADLINE 6 DATE: 3/28/2012 START TIME: 13:47
 WELL ID: LL6mw-008
 WELL DEPTH: 20.2 INITIAL WATER LEVEL: 12.21
 WELL DIAMETER 2 in. SCREEN INTERVAL: 7.2 - 17.2
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 15.2
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 14 gal, final WL = 15.22, twd= 20.2 Odor:

TIME	WATER LEVEL (ftoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
13:55	12.21	0.4	0	13.7	0.765	17.21	7.71	999	
13:58		0.45	3	13.5	0.76		7.27	999	
14:01		0.45	3	12.9	0.755	12.56	7.18	999	
14:04		0.5	3	12.5	0.771		7.05		
14:07		0.45	3	13	0.767		7		
14:10		0.4	3	12.6	0.766		6.95		
14:13		0.45	3	12.6	0.771		6.89	999	
14:16		0.5	3	12.6	0.772		6.82		
14:19		0.45	3	12.9	0.771		6.73		
14:22		0.45	3	12.5	0.771		6.74		
14:25		0.45	3	12.5	0.771		6.77		
14:30	15.22	0.4	5	12.9	0.771		6.71		

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001

LOCATION: LOADLINE 6 DATE: 4/18/2012 START TIME: 15:26

WELL ID: LL6mw-009

WELL DEPTH: 41.4 INITIAL WATER LEVEL: 14

WELL DIAMETER 2 in. SCREEN INTERVAL: 29 - 39

PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 37.0

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

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

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: LOADLINE 11 DATE: 3/29/2012 START TIME: 9:14
 WELL ID: LL11mw-011
 WELL DEPTH: 20.2 INITIAL WATER LEVEL: 7.25
 WELL DIAMETER 2 in. SCREEN INTERVAL: 7.8 - 17.8
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 15.8
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 21 gal, final WL =7.81,twd=20.44 Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: LOADLINE 11 DATE: 4/19/2012 START TIME: 12:46
 WELL ID: LL11mw-012
 WELL DEPTH: 117.35 INITIAL WATER LEVEL: 20.11
 WELL DIAMETER 2 in. SCREEN INTERVAL: 104.5 - 114.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 112.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 80 gal, Final WL = 20.4, twd= 117.41 QC worthy Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: LOADLINE 12 DATE: 3/23/2012 START TIME: 12:18
 WELL ID: LL12mw-182ss
 WELL DEPTH: 38.55 INITIAL WATER LEVEL: 8.05
 WELL DIAMETER 2 in. SCREEN INTERVAL: 25.25 - 35.25
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 33.3
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 31 gallon, final WL = 31.61, twd= 38.44 clear Odor:

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

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: LOADLINE 12 DATE: 3/22/2012 START TIME: 13:48
 WELL ID: LL12mw-247
 WELL DEPTH: 22.7 INITIAL WATER LEVEL: 4.4
 WELL DIAMETER 2 in. SCREEN INTERVAL: 10 - 20
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 18.0
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 21 gal twd= 22.73 final water level = 19.77 clear Odor:

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
13:54	4.40	0.5	0	15.1	0.833	16.47	6.81	543	
13:59		0.5	5	13.7	0.838		6.8		
14:03		0.4	4	12.7	0.841		6.82		
14:07		0.6	4	11.8	0.848		6.87	324	
14:11		0.45	4	12.7	0.87		6.86		
14:15		0.5	4	12.8	0.888		6.93		
14:24		0.5	9	13.5	0.831		6.95	74	
14:32		0.5	8	13.8	0.871		7.02	67	
14:45	22.73	0.5	13	14.3	0.856		7.03	50	

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

Field Personnel: AR

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: NACA TEST A DATE: 4/19/2012 START TIME: 10:00
 WELL ID: NTAmv-119
 WELL DEPTH: 103.3 INITIAL WATER LEVEL: 11.41
 WELL DIAMETER 2 in. SCREEN INTERVAL: 90 - 100
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 98.0
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge 150 initial removal +75 gal. Final WL = 11.72td= 103.6. Good for QC Odor:

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

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

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: WINKLEPECK DATE: 6/27/2012 START TIME: 11:33
 WELL ID: WBGmw-018
 WELL DEPTH: 24.78 INITIAL WATER LEVEL: 21.38
 WELL DIAMETER 2 in. SCREEN INTERVAL: 13.5 - 23.5
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 21.5
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge twd= 24.92, soft muck at start, 0.5 gal/min, brown, 12 gal. Odor:

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

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

Field Personnel: CAL

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: WINKLEPECK DATE: 6/27/2012 START TIME: 11:40
 WELL ID: WBGmw-019
 WELL DEPTH: 50.61 INITIAL WATER LEVEL: 17.9
 WELL DIAMETER 2 in. SCREEN INTERVAL: 39.55 - 49.55
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 47.6
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0
 COMMENTS surge overpurge twd=50.58, 28 gallons total, clear Odor:

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

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

Field Personnel: CAL

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001
 LOCATION: WINKLEPECK DATE: 7/17/2012 START TIME: 9:07
 WELL ID: WBGmw-020
 WELL DEPTH: 43.8 INITIAL WATER LEVEL: 14.02
 WELL DIAMETER 2 in. SCREEN INTERVAL: 32.9 - 42.9
 PUMP/PURGING DEVICE: BP - BLADDER PUMP PUMP INTAKE DEPTH: 40.9
 PUMP READINGS: Throttle: 0 Recharge: 0 Discharge: 0

COMMENTS surge overpurge 41 gal, twd=43.8 Odor:

TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
9:27	15.03	1	1	16.3	0.195	14.96	7.23	999	
9:31	14.53	1	4	16.8	0.189	15.22	6.91	999	
9:35	15.00	1	4	15.6	0.182	16.17	6.86	560	
9:39	15.17	1	4	15.4	0.187	16.61	6.87	999	
9:43	15.60	1	4	14.9	0.189	17.06	6.9	999	
9:47	15.69	1	4	14.9	0.189	16.97	6.91	778	
9:51	15.75	1	4	14.5	0.19	16.66	6.9	498	
9:55	15.72	1	4	15.6	0.189	15.28	6.92	330	
9:59	15.69	1	4	15.7	0.19	15.02	6.94	230	
10:03	15.67	1	4	15.5	0.191	15.2	6.94	213	
10:07	15.68	1	4	15.3	0.19	15.09	6.94	233	

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

Field Personnel: CAL

EQM MONITOR WELL PURGING FORM

PROJECT NAME: RVAAP PROJECT NUMBER: 030174.0016.001

LOCATION: WINKLEPECK DATE: 7/17/2012 START TIME: 8:04

WELL ID: WBGmw-021

WELL DEPTH: 43.08 INITIAL WATER LEVEL: 10.65

WELL DIAMETER 2 in. SCREEN INTERVAL: 32 - 42

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

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

COMMENTS surge over purge 35 gal., twd=43.08 Odor:

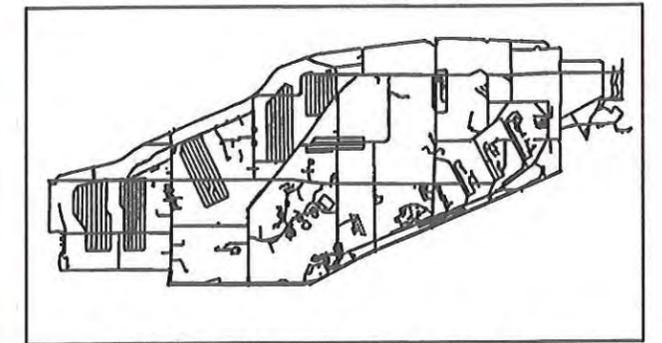
TIME	WATER LEVEL (btoc)	PURGE RATE (gal/min)	VOLUME PURGED (gal)	TEMP. (°C)	SPECIFIC CONDUCT. (mS/cm)	DO (mg/L)	pH	Turb (NTU)	ORP (mV)
8:18	10.94	1	5	15.1	0.404	13.9	7.6	330	
8:23	10.95	1	5	14.6	0.383	13.4	7.35	597	
8:28	10.94	1	5	13.9	0.385	13.73	7.29	114	
8:32	10.94	1	4	13.3	0.373	14.19	7.13	65	
8:36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

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

Field Personnel: CAL

APPENDIX D
SURVEY REPORT

**Ravenna Army Ammunition Plant
Ravenna, Ohio**



Portage County, Ravenna, Ohio (Camp Ravenna)



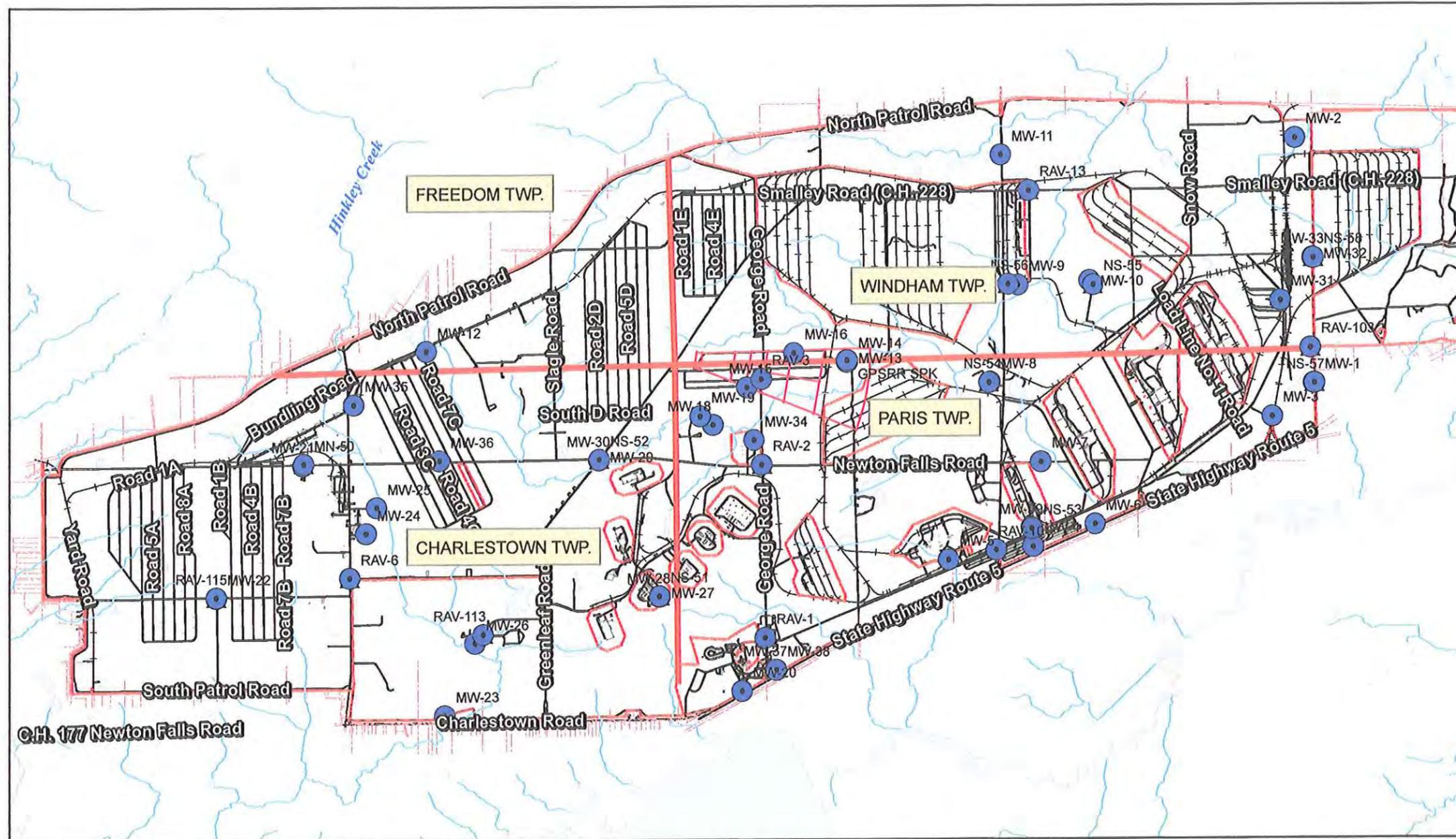
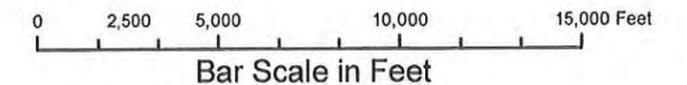
**US Army Corps of
Engineers**

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

Louisville District



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



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

Legend

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

Prepared August 6, 2012

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



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

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

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

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

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

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

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

MW=preliminary monitor well number assigned to wells

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

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

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

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

NS=12"nail spike used for nearby offset

MN=mag nail used for nearby offset

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

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

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

Well Survey Key

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

^a Survey description adapted from EIS Addendum map IDs.

APPENDIX E
FIELD CHANGE REQUESTS

John Miller

From: Deppisch, Vicki <Vicki.Deppisch@epa.state.oh.us>
Sent: Thursday, March 08, 2012 6:27 AM
To: JOHN MILLER
Cc: Nichter, Mark W LRL (Mark.W.Nichter@usace.army.mil); Mohr, Eileen; Mark Patterson; Fisher, Todd; Katie Tait (kathryn.s.tait@us.army.mil) (kathryn.s.tait@us.army.mil); Kinder, Derek S LRL (Derek.S.Kinder@usace.army.mil)
Subject: RE: Approval Form for Filter Pack
Importance: Low

John

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

From: John Miller [<mailto:jmiller@eqm.com>]
Sent: Wednesday, March 07, 2012 2:04 PM
To: Deppisch, Vicki
Cc: Nichter, Mark W LRL (Mark.W.Nichter@usace.army.mil); Mohr, Eileen; Mark Patterson; Fisher, Todd; Katie Tait (kathryn.s.tait@us.army.mil) (kathryn.s.tait@us.army.mil); Kinder, Derek S LRL (Derek.S.Kinder@usace.army.mil)
Subject: Approval Form for Filter Pack

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

Thanks, John

John M. Miller

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

Environmental Quality Management, Inc.

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

March 7, 2012

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

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

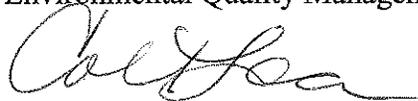
Dear Mr. Nichter:

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

Thank you for your consideration in this matter.

Sincerely,

Environmental Quality Management, Inc.



Colleen A. Lear, LG

cc: Ms. Vickie Deppisch, Ohio EPA

Attachments



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

GRANULAR FILTER PACK APPROVAL

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

Filter Material Brand Name: *Silica Dry (Industrial) Sand*

Lithology: *Silica Sand*

Grain Size Distribution: *99.7% SiO₂, No. 5 Sand (see attached)*

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

Manufacturer: *R.W. Sidley*

Manufacturer address: *7123 Madison Rd, Thompson, OH 44086*

Processing method: *washed, dried, and screened.*

Slot Size of Intended Screen: *0.010 inches*

SUBMITTED BY:

Company: *Environmental Quality Management*

Person: *Colleen A. Lear*

Telephone Number: *(513) 825-7500*

Date *3-7-2012*

FOR APPROVAL (A)/DISAPPROVAL (D)

(circle one)

Project Officer/Date:

A D

Project Geologist/Date:

A D

U.S. Army Project Manager/Date:

A D

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

R.W. SIDLEY, INC.
 LABORATORY SIEVE ANALYSIS
 SAMPLE# 600
 LOT #

DATE 27-Apr-09

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

494.8

F.M.

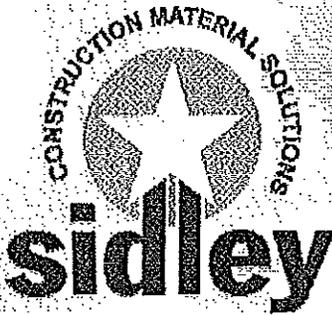
2.461

Quality Control Lab

Prepared B

JEFF

ALSO KNOWN AS # 5 WELL PACK.



PRODUCT INFORMATION

SILICA DRY INDUSTRIAL SAND
PLANT: THOMPSON, OH

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

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

LABORATORY SIEVE ANALYSIS									
Product	4000	2000	.45-.55	.55-.65	1030	1020	620	612	3/16 X 10
			#7 Well Pack		#5 Well Pack		#4 Well Pack		
Mesh Size	% Retained								
4									1.3%
6							22.5%		23.5%
8					0.8%	5.8%	63.3%	40.4%	62.7%
10					1.3%	12.9%	8.4%	19.0%	9.2%
12					6.4%	19.0%	3.6%	20.2%	2.2%
14					18.4%	24.1%	1.3%	13.1%	0.7%
16			0.2%	11.2%	19.8%	15.0%	3.0%	3.7%	0.2%
18					18.5%	11.1%	3.0%	1.7%	0.1%
20	1.1%	1.6%	19.6%	39.2%	15.0%	6.3%	1.0%	0.9%	
25			31.9%	24.8%	10.0%	3.6%			
30	13.1%	16.7%	24.1%	15.1%	5.0%	1.4%			
35			16.7%	7.5%	3.0%	0.6%			
40	29.0%	34.8%	4.9%	1.6%	0.9%	0.1%			
50	23.7%	22.5%	2.3%	0.6%					
70	20.7%	18.3%	0.2%						
100	9.4%	4.7%							
140	2.6%	1.1%							
200	0.4%	0.2%							
270	0.1%								
Pan	0.0%	0.1%	0.0%	0.0%	0.8%	0.1%	0.1%	0.9%	0.0%
E.S	.19 - .22	.21 - .24	.44 - .55	.55 - .65	.70 - .75	.8 - 1.2	1.7 - 2.2	1.3 - 1.5	1.8 - 2.2
U.C.	<2.5	<2.5	<1.5	<1.6	<1.8	<1.8	<1.5	<1.7	<1.5

CHEMICAL ANALYSIS		
Tests	Results/Units	Methods
Fe2O3	0.067%	ICP
Na2O	0.007%	DC ARC
SiO2	99.70%	By Difference after Imputities scan
TAO	<0.10%	DC ARC

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

Testing: Results are typical for the product.

Laboratory Sieve Analysis: Testing was conducted at R.W. Sidley, Inc., Thompson, OH. Tests performed in accordance with ASTM D-75, ASTM C-136, and AASHTO T-176.

Chemical Analysis: Testing conducted by NSL Analytical, Cleveland, OH.

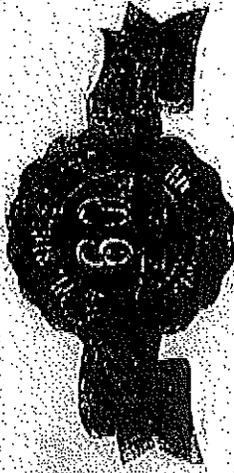
Physical Analysis: Testing conducted by Solar Testing Laboratories, Inc., Brooklyn Heights, OH.

Revised: 02.19.10

Typical Physical Properties

Specific Gravity	2.63
Absorption	.5%
Soundness Loss	1.0%
L.A. Abrasion Loss	16.0%
LBS./Cu. Foot	97-99 Lbs.
Deleterious Material	Less than .5%
Acid Solubility	Less than 1.0%
P.H.	6.5 - 7.0%

Hardness by MOHS Scale - 7
Shape - Round to Semi-Angular



Typical Elemental Analysis

SiO2	% By Difference	99+%
Na2O		48%
CaO		20%
Fe2O3		17%
Other Elements	Less Than	10%

R. W. Sidley, Inc.

P.O. Box 150

Painesville, Ohio 44077

440-352-9343

5.4.2.2.1 Casing/Screen

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

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

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

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

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

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

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

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

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

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

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

TECHNICAL CHANGE ORDER

Subject: Remedial Investigation Well Completion at Winklepeck Burning Grounds
Ravenna Army Ammunition Plant

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

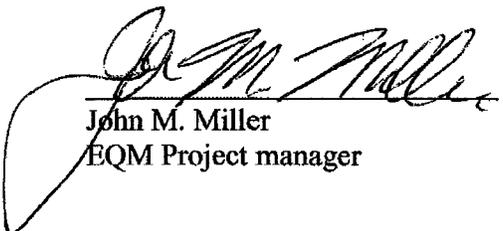
Date: February 24, 2012

Distribution List: V. Deppisch - OEPA K. Elgin - OHARNG
T. Fisher - OEPA M. Patterson - BRAC
M. Nichter - USACE E. Mohr - OEPA

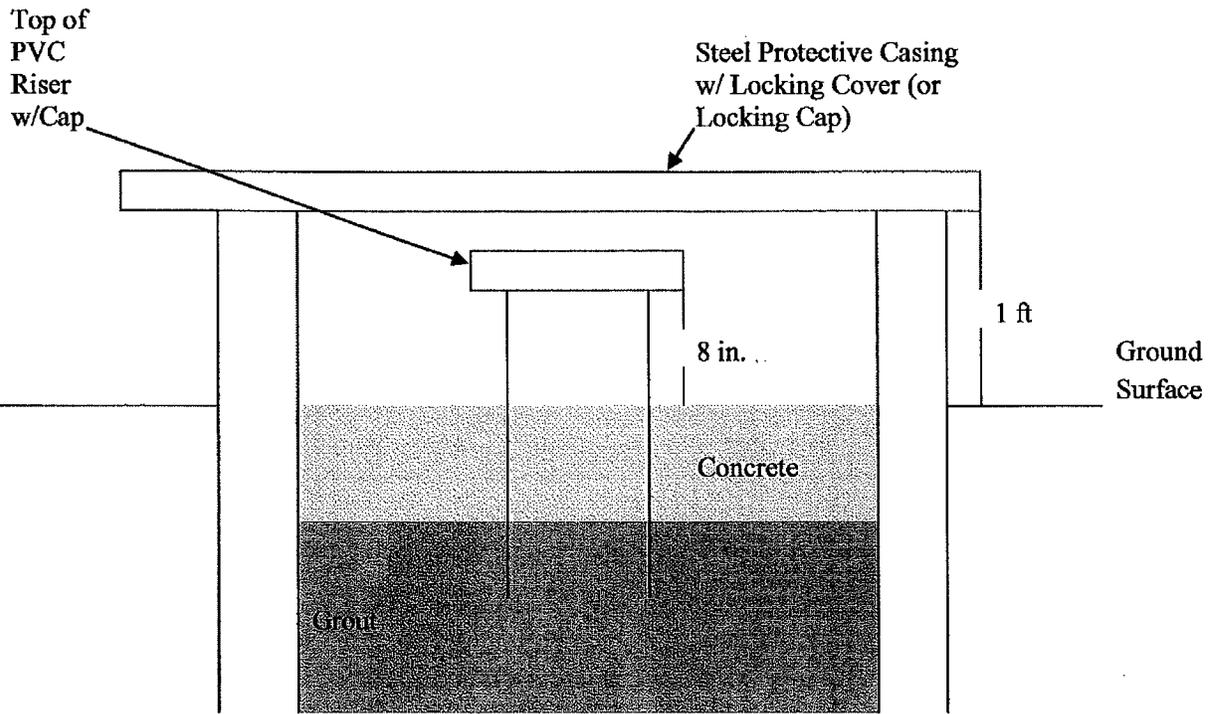
Pursuant to the *Final Sampling and Analysis Plan for Environmental Investigation Services Addendum* (EQM, January 2012), which is Part I of the *Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Addendum* (EQM, January 2012), Environmental Quality Management,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

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

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


John M. Miller
EQM Project manager


Mark Nichter
USACE Technical Manager



APPENDIX F
SOIL AND WASTEWATER IDW LETTER REPORTS

Environmental Quality Management, Inc.

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

April 11, 2012

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

Reference: Contract No. GS-10F-0293K
Delivery Order No. W912QR-1-F-0266

Subject: Facility-Wide Groundwater Monitoring Program Plan
RVAAP-66 Facility-Wide Groundwater
Soil IDW Letter Report – Draft

Dear Mr. Nichter:

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

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



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

Soil IDW Discussion

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

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

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

Summary of the IDW containers shown is as follows:

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

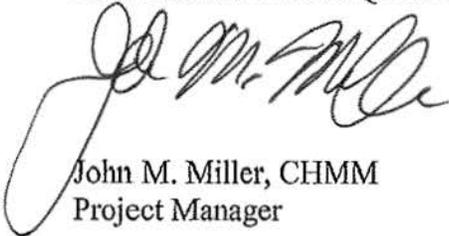


Recommended Disposal Pathways for IDW

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

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.



John M. Miller, CHMM
Project Manager

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



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

Table 1. IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-001s	55 gallon Steel	Soil Cuttings	02/27/12	LL3mw-244	6.9
EQM-002s	55 gallon Steel	Soil Cuttings	02/27/12	LL3mw-244	8.2
EQM-003s	55 gallon Steel	Soil Cuttings	02/27/12	LL3mw-244	7.5
EQM-004s	55 gallon Steel	Soil Cuttings	02/27/12	LL3mw-244	0.0
EQM-005s	55 gallon Steel	Soil Cuttings	02/28/12	LL1mw-086	8.4
EQM-006s	55 gallon Steel	Soil Cuttings	02/28/12	LL1mw-086	60.2
EQM-007s	55 gallon Steel	Soil Cuttings	02/29/12	LL1mw-087	0.0
EQM-008s	55 gallon Steel	Soil Cuttings	03/01/12	LL1mw-087	0.0
EQM-009s	55 gallon Steel	Soil Cuttings	03/01/12	LL12mw-247	0.0
EQM-010s	55 gallon Steel	Soil Cuttings	03/01/12	LL1mw-086	9.0
EQM-011s	55 gallon Steel	Soil Cuttings	03/05/12	FWGmw-006	9.3
EQM-012s	55 gallon Steel	Soil Cuttings	03/06/12	FWGmw-008	1.8
EQM-013s	55 gallon Steel	Soil Cuttings	03/06/12	LL1mw-087	10.5
EQM-014s	55 gallon Steel	Soil Cuttings	03/06/12	LL1mw-087	8.6
EQM-015s	55 gallon Steel	Soil Cuttings	03/06/12	LL1mw-087	10.1
EQM-016s	55 gallon Steel	Soil Cuttings	03/06/12	LL1mw-087	21.5
EQM-017s	55 gallon Steel	Soil Cuttings	03/06/12	LL1mw-087	0.0
EQM-018s	55 gallon Steel	Soil Cuttings	2/27-3/7/12	LL3mw-244	9.3
EQM-019s	55 gallon Steel	Soil Cuttings	03/02/12	FWGmw-010	41.7
EQM-020s	55 gallon Steel	Soil Cuttings	03/03/12	FWGmw-003	85.6
EQM-021s	55 gallon Steel	Soil Cuttings	03/08/12	FWGmw-003	8.4
EQM-022s	55 gallon Steel	Soil Cuttings	03/08/12	FWGmw-005	9.1
EQM-023s	55 gallon Steel	Soil Cuttings	03/12/12	UNKNOWN	3.4

Table 2. Summary of Analytical Suite of Chemicals

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

1 EPA Methods for Chemical Analysis of Water and Waste

Table 3. Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
VOCs	2-Butanone (MEK)	78-93-3	mg/Kg	0.054		28000	NA	NA
VOCs	2-Hexanone	591-78-6	mg/Kg	0.002	J, B	210	NA	NA
VOCs	Acetone	67-64-1	mg/Kg	0.24		61000	NA	NA
VOCs	Carbon disulfide	75-15-0	mg/Kg	0.00074	J	820	NA	NA
VOCs	Methylene Chloride	75-09-2	mg/Kg	0.0057	J, B	11	NA	NA
VOCs	m-Xylene & p-Xylene	179601-23-1	mg/Kg	0.0018	J	590	NA	NA
VOCs	o-Xylene	95-47-6	mg/Kg	0.001	J	690	NA	NA
VOCs	Toluene	108-88-3	mg/Kg	0.11		5000	NA	NA
VOCs	Xylenes, Total	1330-20-7	mg/Kg	0.0028	J	630	NA	NA
SVOCs	2-Methylnaphthalene	91-57-6	mg/Kg	0.026		310	NA	NA
SVOCs	Benzo[b]fluoranthene	205-99-2	mg/Kg	0.0099		0	NA	NA
SVOCs	Benzo[g,h,i]perylene	191-24-2	mg/Kg	0.019		NA	NA	NA
SVOCs	Bis(2-ethylhexyl) phthalate	117-81-7	mg/Kg	0.075		35	NA	NA
SVOCs	Chrysene	218-01-9	mg/Kg	0.01		15	NA	NA
SVOCs	Fluoranthene	206-44-0	mg/Kg	0.0091		2300	NA	NA
SVOCs	Naphthalene	91-20-3	mg/Kg	0.017		4	NA	NA
SVOCs	Phenanthrene	85-01-8	mg/Kg	0.018		NA	NA	NA
SVOCs	Pyrene	129-00-0	mg/Kg	0.011		1700	NA	NA
Total Metals	Aluminum	7429-90-5	mg/Kg	7600	B	77000	19500	NA
Total Metals	Antimony	7440-36-0	mg/Kg	0.086	J	31	0.96	NA
Total Metals	Arsenic	7440-38-2	mg/Kg	12		0.39	19.8	NA
Total Metals	Barium	7440-39-3	mg/Kg	47.0	B	15000	124	NA
Total Metals	Beryllium	7440-41-7	mg/Kg	0.49		160	0.88	NA
Total Metals	Cadmium	7440-43-9	mg/Kg	0.13	B	70	0	NA
Total Metals	Calcium	7440-70-2	mg/Kg	19000	B	NA	35500	NA
Total Metals	Chromium	7440-47-3	mg/Kg	12	B	120000	27.2	NA
Total Metals	Cobalt	7440-48-4	mg/Kg	7.2		23	23.2	NA
Total Metals	Copper	7440-50-8	mg/Kg	14		3100	32.2	NA
Total Metals	Iron	7439-89-6	mg/Kg	23000	B	55000	35200	NA
Total Metals	Lead	7439-92-1	mg/Kg	11		400	19.1	NA
Total Metals	Magnesium	7439-95-4	mg/Kg	3900	B	NA	8790	NA
Total Metals	Manganese	7439-96-5	mg/Kg	300	B	1800	3030	NA
Total Metals	Nickel	7440-02-0	mg/Kg	20		1500	60.7	NA
Total Metals	Potassium	7440-09-7	mg/Kg	1200	B	NA	3350	NA
Total Metals	Sodium	7440-23-5	mg/Kg	420	B	NA	145	NA
Total Metals	Thallium	7440-28-0	mg/Kg	0.24	B	0.78	0.91	NA
Total Metals	Vanadium	7440-62-2	mg/Kg	13		390	37.6	NA
Total Metals	Zinc	7440-66-6	mg/Kg	52	B	23000	93.3	NA

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

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

Note:
 Chloroform (0.26 ug/L J) was detected in the Trip blank.
 * The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1. Maximum Concentration of Contaminants for Toxicity Characteristic (40 *CFR* 261.24), and Table 8-2. Maximum Concentration of Hazardous Waste Characterization Analytes (40 *CFR* 261.21-23).
Bold concentrations exceed a regulatory limit.
 J = estimated result. Result is less than reporting limit.
 B = method blank contamination
 NA = not applicable

ATTACHMENT 1.
LABORATORY ANALYTICAL DATA SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 240-9236-1
Client Project/Site: RVAAP (OH) - IDW

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

Attn: Mr. Erik Corbin



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

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com

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

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

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Definitions/Glossary

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

TestAmerica Job ID: 240-9236-1

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

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

GC Semi VOA

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

HPLC

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

Metals

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

General Chemistry

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

Glossary

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

Definitions/Glossary

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

TestAmerica Job ID: 240-9236-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)

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Case Narrative

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

TestAmerica Job ID: 240-9236-1

Job ID: 240-9236-1

Laboratory: TestAmerica North Canton

Narrative

CASE NARRATIVE

Client: Environmental Quality Mgt., Inc.

Project: RVAAP (OH) - IDW

Report Number: 240-9236-1

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

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

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

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

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

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

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

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

RECEIPT

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

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

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

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

VOLATILE ORGANIC COMPOUNDS (GC-MS)

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

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

Case Narrative

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

TestAmerica Job ID: 240-9236-1

Job ID: 240-9236-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

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

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

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

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

VOLATILE ORGANIC COMPOUNDS (GC-MS)

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

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

FLASHPOINT

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

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

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

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

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

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

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

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

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

TCLP CHLORINATED PESTICIDES

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

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

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

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

Case Narrative

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

TestAmerica Job ID: 240-9236-1

Job ID: 240-9236-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

CHLORINATED PESTICIDES

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

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

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

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

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

POLYCHLORINATED BIPHENYLS (PCBS)

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

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

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

TCLP CHLORINATED HERBICIDES

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

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

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

TCLP METALS (ICP)

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

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

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

TOTAL METALS (ICP)

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

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

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

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

Case Narrative

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

TestAmerica Job ID: 240-9236-1

Job ID: 240-9236-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

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

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

TOTAL METALS (ICPMS)

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

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

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

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

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

TCLP MERCURY

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

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

TOTAL MERCURY

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

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

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

TOTAL AND AMENABLE CYANIDE

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

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

SULFIDE

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

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

PH

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

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

PERCENT SOLIDS

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

Case Narrative

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

TestAmerica Job ID: 240-9236-1

Job ID: 240-9236-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

were analyzed on 03/15/2012.

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

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Method Summary

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

TestAmerica Job ID: 240-9236-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
8081A	Organochlorine Pesticides (GC)	SW846	TAL NC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
8151A	Herbicides (GC)	SW846	TAL NC
8330 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
8330B	Nitroaromatics & Nitramines: Explosives (8330B)	SW846	TAL WSC
6010B	Metals (ICP)	SW846	TAL NC
6020	Metals (ICP/MS)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC
7471A	Mercury (CVAA)	SW846	TAL NC
1020B	Ignitability, Small Scale Closed-Cup Method	SW846	TAL PIT
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
9045C	pH	SW846	TAL NC
D 2216-90	Moisture, Percent (D2216-90) - AFCEE	ASTM	TAL WSC
Moisture	Percent Moisture	EPA	TAL NC
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL-SOP = TAL-SOP

Laboratory References:

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

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

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

Sample Summary

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

TestAmerica Job ID: 240-9236-1

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

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Detection Summary

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

TestAmerica Job ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Lab Sample ID: 240-9236-1

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

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-9236-2

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

Client Sample Results

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

TestAmerica Job ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Lab Sample ID: 240-9236-1

Date Collected: 03/13/12 14:30

Matrix: Solid

Date Received: 03/14/12 11:57

Percent Solids: 77.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	6.5	U	6.5	0.73	ug/Kg	☒		03/15/12 22:39	1
1,1,2,2-Tetrachloroethane	6.5	U	6.5	0.44	ug/Kg	☒		03/15/12 22:39	1
1,1,2-Trichloroethane	6.5	U	6.5	0.51	ug/Kg	☒		03/15/12 22:39	1
1,1-Dichloroethane	6.5	U	6.5	0.47	ug/Kg	☒		03/15/12 22:39	1
1,1-Dichloroethene	6.5	U	6.5	0.67	ug/Kg	☒		03/15/12 22:39	1
1,2-Dichloroethane	6.5	U	6.5	0.44	ug/Kg	☒		03/15/12 22:39	1
1,2-Dichloroethene, Total	13	U	13	1.0	ug/Kg	☒		03/15/12 22:39	1
1,2-Dichloropropane	6.5	U	6.5	0.89	ug/Kg	☒		03/15/12 22:39	1
2-Butanone (MEK)	54		26	1.8	ug/Kg	☒		03/15/12 22:39	1
2-Hexanone	2.0	J B	26	0.82	ug/Kg	☒		03/15/12 22:39	1
4-Methyl-2-pentanone (MIBK)	26	U	26	0.70	ug/Kg	☒		03/15/12 22:39	1
Acetone	240		26	8.2	ug/Kg	☒		03/15/12 22:39	1
Benzene	6.5	U	6.5	0.30	ug/Kg	☒		03/15/12 22:39	1
Bromoform	6.5	U	6.5	0.43	ug/Kg	☒		03/15/12 22:39	1
Bromomethane	6.5	U	6.5	0.70	ug/Kg	☒		03/15/12 22:39	1
Carbon disulfide	0.74	J	6.5	0.57	ug/Kg	☒		03/15/12 22:39	1
Carbon tetrachloride	6.5	U	6.5	0.48	ug/Kg	☒		03/15/12 22:39	1
Chlorobenzene	6.5	U	6.5	0.43	ug/Kg	☒		03/15/12 22:39	1
Chloromethane	6.5	U	6.5	0.53	ug/Kg	☒		03/15/12 22:39	1
cis-1,2-Dichloroethene	6.5	U	6.5	0.47	ug/Kg	☒		03/15/12 22:39	1
cis-1,3-Dichloropropene	6.5	U	6.5	0.44	ug/Kg	☒		03/15/12 22:39	1
Dibromochloromethane	6.5	U	6.5	0.71	ug/Kg	☒		03/15/12 22:39	1
Bromodichloromethane	6.5	U	6.5	0.36	ug/Kg	☒		03/15/12 22:39	1
Ethylbenzene	6.5	U	6.5	0.34	ug/Kg	☒		03/15/12 22:39	1
Methylene Chloride	5.7	J B	6.5	0.87	ug/Kg	☒		03/15/12 22:39	1
m-Xylene & p-Xylene	1.8	J	13	1.6	ug/Kg	☒		03/15/12 22:39	1
o-Xylene	1.0	J	6.5	0.45	ug/Kg	☒		03/15/12 22:39	1
Styrene	6.5	U	6.5	0.19	ug/Kg	☒		03/15/12 22:39	1
Tetrachloroethene	6.5	U	6.5	0.67	ug/Kg	☒		03/15/12 22:39	1
Toluene	110		6.5	0.35	ug/Kg	☒		03/15/12 22:39	1
trans-1,2-Dichloroethene	6.5	U	6.5	0.53	ug/Kg	☒		03/15/12 22:39	1
trans-1,3-Dichloropropene	6.5	U	6.5	0.70	ug/Kg	☒		03/15/12 22:39	1
Trichloroethene	6.5	U	6.5	0.54	ug/Kg	☒		03/15/12 22:39	1
Vinyl chloride	6.5	U	6.5	0.51	ug/Kg	☒		03/15/12 22:39	1
Xylenes, Total	2.8	J	13	0.87	ug/Kg	☒		03/15/12 22:39	1
Chloroform	6.5	U	6.5	0.38	ug/Kg	☒		03/15/12 22:39	1
Bromochloromethane	6.5	U	6.5	0.92	ug/Kg	☒		03/15/12 22:39	1
1,2-Dibromoethane	6.5	U	6.5	0.65	ug/Kg	☒		03/15/12 22:39	1
Chloroethane	6.5	U	6.5	1.1	ug/Kg	☒		03/15/12 22:39	1

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

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

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

Client Sample Results

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

TestAmerica Job ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Lab Sample ID: 240-9236-1

Date Collected: 03/13/12 14:30

Matrix: Solid

Date Received: 03/14/12 11:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0.025	0.0065	mg/L			03/23/12 21:41	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			03/23/12 21:41	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			03/23/12 21:41	1
Chloroform	0.025	U	0.025	0.0080	mg/L			03/23/12 21:41	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			03/23/12 21:41	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			03/23/12 21:41	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			03/23/12 21:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 121		03/23/12 21:41	1
4-Bromofluorobenzene (Surr)	96		70 - 124		03/23/12 21:41	1
Toluene-d8 (Surr)	107		90 - 115		03/23/12 21:41	1
Dibromofluoromethane (Surr)	111		84 - 128		03/23/12 21:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	8.6	U	8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Acenaphthylene	8.6	U	8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Anthracene	8.6	U	8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Benzo[a]anthracene	8.6	U	8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Benzoic acid	860	U	860	430	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Benzo[b]fluoranthene	9.9		8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Benzo[k]fluoranthene	8.6	U	8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Benzyl alcohol	430	U	430	27	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Bis(2-chloroethoxy)methane	130	U	130	29	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Bis(2-chloroethyl)ether	130	U	130	2.6	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
4-Bromophenyl phenyl ether	65	U	65	17	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Butyl benzyl phthalate	65	U	65	13	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2,4-Dimethylphenol	190	U	190	26	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Dimethyl phthalate	65	U	65	22	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
4,6-Dinitro-2-methylphenol	190	U	190	100	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2,4-Dinitrophenol	430	U	430	100	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2,4-Dinitrotoluene	260	U	260	35	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2,6-Dinitrotoluene	260	U	260	27	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Fluoranthene	9.1		8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Fluorene	8.6	U	8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Hexachlorobenzene	8.6	U	8.6	2.7	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Hexachlorobutadiene	65	U	65	35	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Hexachlorocyclopentadiene	430	U	430	35	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Hexachloroethane	65	U	65	12	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
N-Nitrosodiphenylamine	65	U	65	27	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
N-Nitrosodi-n-propylamine	65	U	65	35	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
1,4-Dichlorobenzene	65	U	65	26	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2-Chloronaphthalene	65	U	65	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2-Chlorophenol	65	U	65	35	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
4-Chlorophenyl phenyl ether	65	U	65	17	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Chrysene	10		8.6	1.4	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Dibenz(a,h)anthracene	8.6	U	8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Dibenzofuran	65	U	65	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Benzo[g,h,i]perylene	19		8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Benzo[a]pyrene	8.6	U	8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1

Client Sample Results

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

TestAmerica Job ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Lab Sample ID: 240-9236-1

Date Collected: 03/13/12 14:30

Matrix: Solid

Date Received: 03/14/12 11:57

Percent Solids: 77.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	65	U	65	19	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
1,2-Dichlorobenzene	65	U	65	13	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
1,3-Dichlorobenzene	65	U	65	14	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
3,3'-Dichlorobenzidine	130	U	130	23	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2,4-Dichlorophenol	190	U	190	26	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Diethyl phthalate	65	U	65	21	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Indeno[1,2,3-cd]pyrene	8.6	U	8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Isophorone	65	U	65	17	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2-Methylnaphthalene	26		8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2-Methylphenol	260	U	260	100	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Naphthalene	17		8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2-Nitroaniline	260	U	260	12	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
3-Nitroaniline	260	U	260	21	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
4-Nitroaniline	260	U	260	34	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Nitrobenzene	130	U	130	2.9	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2-Nitrophenol	65	U	65	35	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
4-Nitrophenol	430	U	430	100	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Pyrene	11		8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Pentachlorophenol	190	U	190	100	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Phenanthrene	18		8.6	4.3	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
1,2,4-Trichlorobenzene	65	U	65	35	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2,4,5-Trichlorophenol	190	U	190	32	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2,4,6-Trichlorophenol	190	U	190	100	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Phenol	65	U	65	35	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Carbazole	65	U	65	35	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
4-Chloroaniline	190	U	190	22	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
3 & 4 Methylphenol	520	U	520	26	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Bis(2-ethylhexyl) phthalate	75		65	25	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
Di-n-octyl phthalate	65	U	65	35	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
4-Chloro-3-methylphenol	190	U	190	27	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1
2,2'-oxybis[1-chloropropane]	130	U	130	12	ug/Kg	☼	03/20/12 08:42	03/22/12 15:03	1

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

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

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

Client Sample Results

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

TestAmerica Job ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Lab Sample ID: 240-9236-1

Date Collected: 03/13/12 14:30

Matrix: Solid

Date Received: 03/14/12 11:57

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

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

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	4.4	U	4.4	1.6	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
4,4'-DDE	4.4	U	4.4	1.0	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
4,4'-DDT	4.4	U	4.4	1.6	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Aldrin	4.4	U	4.4	3.1	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
alpha-BHC	4.4	U	4.4	1.9	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
alpha-Chlordane	4.4	U	4.4	2.4	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
beta-BHC	4.4	U	4.4	2.8	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
delta-BHC	4.4	U	4.4	3.1	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Dieldrin	4.4	U	4.4	1.2	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Endosulfan I	4.4	U	4.4	1.3	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Endosulfan II	4.4	U	4.4	2.1	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Endosulfan sulfate	4.4	U	4.4	2.2	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Endrin	4.4	U	4.4	1.3	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Endrin aldehyde	4.4	U	4.4	2.6	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Endrin ketone	4.4	U	4.4	1.6	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
gamma-BHC (Lindane)	4.4	U	4.4	1.9	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
gamma-Chlordane	4.4	U	4.4	1.1	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Heptachlor	4.4	U	4.4	2.8	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Heptachlor epoxide	4.4	U	4.4	2.1	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Methoxychlor	8.5	U	8.5	3.9	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Toxaphene	170	U	170	49	ug/Kg	*	03/20/12 08:58	03/23/12 21:27	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	111		32 - 175				03/20/12 08:58	03/23/12 21:27	2
DCB Decachlorobiphenyl	95		32 - 175				03/20/12 08:58	03/23/12 21:27	2
Tetrachloro-m-xylene	117		24 - 150				03/20/12 08:58	03/23/12 21:27	2
Tetrachloro-m-xylene	67		24 - 150				03/20/12 08:58	03/23/12 21:27	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		03/21/12 12:15	03/22/12 23:38	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		03/21/12 12:15	03/22/12 23:38	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		03/21/12 12:15	03/22/12 23:38	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		03/21/12 12:15	03/22/12 23:38	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		03/21/12 12:15	03/22/12 23:38	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		03/21/12 12:15	03/22/12 23:38	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		03/21/12 12:15	03/22/12 23:38	1

Client Sample Results

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

TestAmerica Job ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Lab Sample ID: 240-9236-1

Date Collected: 03/13/12 14:30

Matrix: Solid

Date Received: 03/14/12 11:57

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

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	43	U	43	27	ug/Kg	☒	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1221	43	U	43	21	ug/Kg	☒	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1232	43	U	43	18	ug/Kg	☒	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1242	43	U	43	17	ug/Kg	☒	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1248	43	U	43	22	ug/Kg	☒	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1254	43	U	43	22	ug/Kg	☒	03/20/12 08:48	03/22/12 14:35	1
Aroclor-1260	43	U	43	22	ug/Kg	☒	03/20/12 08:48	03/22/12 14:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		29 - 151	03/20/12 08:48	03/22/12 14:35	1
DCB Decachlorobiphenyl	94		14 - 163	03/20/12 08:48	03/22/12 14:35	1

Method: 8151A - Herbicides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		03/21/12 12:19	03/23/12 01:44	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		03/21/12 12:19	03/23/12 01:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	57		37 - 116	03/21/12 12:19	03/23/12 01:44	1
2,4-Dichlorophenylacetic acid	58		37 - 116	03/21/12 12:19	03/23/12 01:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	0.25	U	0.25	0.020	mg/kg		03/22/12 10:00	03/26/12 09:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.36	U	0.36	0.014	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
1,3-Dinitrobenzene	0.36	U	0.36	0.0061	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
2,4,6-Trinitrotoluene	0.36	U	0.36	0.028	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
2,4-Dinitrotoluene	0.36	U	0.36	0.0076	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
2,6-Dinitrotoluene	0.36	U	0.36	0.011	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
2-Amino-4,6-dinitrotoluene	0.36	U	0.36	0.018	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
2-Nitrotoluene	0.36	U	0.36	0.019	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
3-Nitrotoluene	0.36	U	0.36	0.022	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
4-Amino-2,6-dinitrotoluene	0.36	U	0.36	0.014	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
4-Nitrotoluene	0.36	U	0.36	0.026	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
HMX	0.36	U	0.36	0.017	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
Nitrobenzene	0.36	U	0.36	0.025	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
Nitroglycerin	0.72	U	0.72	0.022	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
PETN	0.72	U	0.72	0.036	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
RDX	0.36	U	0.36	0.017	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98
Tetryl	0.36	U	0.36	0.014	mg/kg	☒	03/22/12 10:00	03/26/12 18:35	0.98

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	103		75 - 115	03/22/12 10:00	03/26/12 18:35	0.98

Client Sample Results

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

TestAmerica Job ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Lab Sample ID: 240-9236-1

Date Collected: 03/13/12 14:30

Matrix: Solid

Date Received: 03/14/12 11:57

Percent Solids: 77.2

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		1.2	0.37	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Chromium	12	B	0.61	0.24	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Cobalt	7.2		6.1	0.20	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Lead	11		0.37	0.23	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Selenium	0.61	U	0.61	0.55	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Silver	0.61	U	0.61	0.12	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Vanadium	13		6.1	0.15	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Barium	47	B	24	0.087	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Calcium	19000	B	610	20	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Copper	14		3.1	0.90	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Magnesium	3900	B	610	6.2	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Manganese	300	B	1.8	0.090	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Nickel	20		4.9	0.33	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1
Potassium	1200	B	610	7.6	mg/Kg	☒	03/16/12 10:02	03/20/12 15:56	1

Method: 6010B - Metals (ICP) - TCLP

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

Method: 6020 - Metals (ICP/MS)

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

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		03/21/12 14:10	03/22/12 14:06	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.14	U	0.14	0.021	mg/Kg	☒	03/16/12 13:25	03/20/12 13:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	>140				Degrees F			03/26/12 13:50	1
Cyanide, Total	0.63	U	0.63	0.13	mg/Kg	☒	03/21/12 13:59	03/21/12 15:39	1
Sulfide	39	U	39	29	mg/Kg	☒	03/16/12 09:58	03/16/12 16:16	1
Corrosivity	11.9		0.100	0.100	SU			03/15/12 15:42	1
Nitrocellulose	7.4	U	7.4	1.1	mg/kg	☒	03/23/12 06:00	03/29/12 14:29	1

Client Sample Results

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

TestAmerica Job ID: 240-9236-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-9236-2

Date Collected: 03/13/12 14:30

Matrix: Water

Date Received: 03/14/12 11:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/19/12 18:58	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			03/19/12 18:58	1
Benzene	1.0	U	1.0	0.13	ug/L			03/19/12 18:58	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			03/19/12 18:58	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			03/19/12 18:58	1
Chloroform	0.26	J	1.0	0.16	ug/L			03/19/12 18:58	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			03/19/12 18:58	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			03/19/12 18:58	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			03/19/12 18:58	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			03/19/12 18:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		63 - 129					03/19/12 18:58	1
4-Bromofluorobenzene (Surr)	89		66 - 117					03/19/12 18:58	1
Toluene-d8 (Surr)	94		74 - 115					03/19/12 18:58	1
Dibromofluoromethane (Surr)	95		75 - 121					03/19/12 18:58	1

Surrogate Summary

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

TestAmerica Job ID: 240-9236-1

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

Matrix: Solid

Prep Type: Total/NA

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

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Solid

Prep Type: Total/NA

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

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Solid

Prep Type: TCLP

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

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: Total/NA

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

Surrogate Legend

Surrogate Summary

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

TestAmerica Job ID: 240-9236-1

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Solid

Prep Type: Total/NA

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

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
PHL = Phenol-d5 (Surr)

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

Matrix: Solid

Prep Type: Total/NA

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

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

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

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
240-9236-1	FWG-IDW-SBCOMP1-SO	68	65	67	72	63	81

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Surrogate Summary

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

TestAmerica Job ID: 240-9236-1

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (34-141)	DCB2 (34-141)	TCX1 (46-122)	TCX2 (46-122)
LCS 240-37503/8-A	Lab Control Sample	119	102	77	81
MB 240-37503/7-A	Method Blank	100	100	71	78

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

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

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: TCLP

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

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

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

Matrix: Solid

Prep Type: Total/NA

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

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Surrogate Summary

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

TestAmerica Job ID: 240-9236-1

Method: 8151A - Herbicides (GC)

Matrix: Solid

Prep Type: Total/NA

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

Surrogate Legend
 DCPA = 2,4-Dichlorophenylacetic acid

Method: 8151A - Herbicides (GC)

Matrix: Solid

Prep Type: TCLP

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

Surrogate Legend
 DCPA = 2,4-Dichlorophenylacetic acid

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

Matrix: Solid

Prep Type: Total

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

Surrogate Legend
 DNT = 3,4-Dinitrotoluene

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: MB 240-36992/6

Matrix: Solid

Analysis Batch: 36992

Client Sample ID: Method Blank

Prep Type: Total/NA

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

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: LCS 240-36992/5

Matrix: Solid

Analysis Batch: 36992

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1-Trichloroethane	50.0	49.4		ug/Kg		99	77 - 126	
1,1,2,2-Tetrachloroethane	50.0	54.2		ug/Kg		108	77 - 123	
1,1,2-Trichloroethane	50.0	53.1		ug/Kg		106	83 - 112	
1,1-Dichloroethane	50.0	48.6		ug/Kg		97	76 - 115	
1,1-Dichloroethene	50.0	50.6		ug/Kg		101	75 - 135	
1,2-Dichloroethane	50.0	44.9		ug/Kg		90	72 - 120	
1,2-Dichloroethene, Total	100	95.8		ug/Kg		96	78 - 115	
1,2-Dichloropropane	50.0	48.9		ug/Kg		98	87 - 113	
2-Butanone (MEK)	100	87.7		ug/Kg		88	52 - 131	
2-Hexanone	100	107		ug/Kg		107	64 - 136	
4-Methyl-2-pentanone (MIBK)	100	103		ug/Kg		103	67 - 135	
Acetone	100	90.1		ug/Kg		90	41 - 137	
Benzene	50.0	49.7		ug/Kg		99	79 - 112	
Bromoform	50.0	49.1		ug/Kg		98	62 - 133	
Bromomethane	50.0	54.3		ug/Kg		109	42 - 136	
Carbon disulfide	50.0	50.3		ug/Kg		101	62 - 146	
Carbon tetrachloride	50.0	52.2		ug/Kg		104	71 - 129	
Chlorobenzene	50.0	48.3		ug/Kg		97	78 - 110	
Chloromethane	50.0	41.2		ug/Kg		82	50 - 110	
cis-1,2-Dichloroethene	50.0	48.4		ug/Kg		97	76 - 113	
cis-1,3-Dichloropropene	50.0	50.5		ug/Kg		101	74 - 128	
Dibromochloromethane	50.0	52.0		ug/Kg		104	72 - 127	
Bromodichloromethane	50.0	50.8		ug/Kg		102	84 - 122	
Ethylbenzene	50.0	49.0		ug/Kg		98	79 - 117	
Methylene Chloride	50.0	45.1		ug/Kg		90	75 - 118	
m-Xylene & p-Xylene	100	99.6		ug/Kg		100	80 - 117	
o-Xylene	50.0	49.7		ug/Kg		99	80 - 120	
Styrene	50.0	49.4		ug/Kg		99	87 - 117	
Tetrachloroethene	50.0	51.3		ug/Kg		103	79 - 114	
Toluene	50.0	50.4		ug/Kg		101	75 - 111	
trans-1,2-Dichloroethene	50.0	47.4		ug/Kg		95	78 - 117	
trans-1,3-Dichloropropene	50.0	51.4		ug/Kg		103	73 - 131	
Trichloroethene	50.0	49.3		ug/Kg		99	79 - 113	
Vinyl chloride	50.0	45.9		ug/Kg		92	57 - 114	
Xylenes, Total	150	149		ug/Kg		100	80 - 118	
Chloroform	50.0	47.4		ug/Kg		95	77 - 114	
Bromochloromethane	50.0	46.8		ug/Kg		94	79 - 111	
1,2-Dibromoethane	50.0	50.2		ug/Kg		100	83 - 117	
Chloroethane	50.0	52.7		ug/Kg		105	58 - 117	

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: 240-9236-1 MS

Matrix: Solid

Analysis Batch: 36992

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				
1,1,1-Trichloroethane	6.5	U	64.8	71.9		ug/Kg	☼	111	51 - 128
1,1,2,2-Tetrachloroethane	6.5	U	64.8	6.5	U F	ug/Kg	☼	0	16 - 179
1,1,2-Trichloroethane	6.5	U	64.8	55.2		ug/Kg	☼	85	10 - 166
1,1-Dichloroethane	6.5	U	64.8	68.1		ug/Kg	☼	105	54 - 122
1,1-Dichloroethene	6.5	U	64.8	85.5		ug/Kg	☼	132	49 - 157
1,2-Dichloroethane	6.5	U	64.8	56.2		ug/Kg	☼	87	49 - 123
1,2-Dichloroethene, Total	13	U	130	135		ug/Kg	☼	104	51 - 120
1,2-Dichloropropane	6.5	U	64.8	66.0		ug/Kg	☼	102	61 - 117
2-Butanone (MEK)	54		130	138		ug/Kg	☼	65	30 - 143
2-Hexanone	2.0	J B	130	124		ug/Kg	☼	94	37 - 147
4-Methyl-2-pentanone (MIBK)	26	U	130	115		ug/Kg	☼	89	43 - 147
Acetone	240		130	283		ug/Kg	☼	29	24 - 140
Benzene	6.5	U	64.8	67.7		ug/Kg	☼	105	53 - 118
Bromoform	6.5	U	64.8	55.7		ug/Kg	☼	86	18 - 129
Bromomethane	6.5	U	64.8	73.8		ug/Kg	☼	114	33 - 130
Carbon disulfide	0.74	J	64.8	70.1		ug/Kg	☼	107	20 - 151
Carbon tetrachloride	6.5	U	64.8	75.2		ug/Kg	☼	116	32 - 137
Chlorobenzene	6.5	U	64.8	65.3		ug/Kg	☼	101	37 - 116
Chloromethane	6.5	U	64.8	58.7		ug/Kg	☼	91	34 - 117
cis-1,2-Dichloroethene	6.5	U	64.8	65.8		ug/Kg	☼	102	50 - 119
cis-1,3-Dichloropropene	6.5	U	64.8	62.7		ug/Kg	☼	97	27 - 133
Dibromochloromethane	6.5	U	64.8	63.2		ug/Kg	☼	98	29 - 135
Bromodichloromethane	6.5	U	64.8	64.5		ug/Kg	☼	100	35 - 132
Ethylbenzene	6.5	U	64.8	71.2		ug/Kg	☼	110	30 - 131
Methylene Chloride	5.7	J B	64.8	63.2		ug/Kg	☼	89	54 - 115
m-Xylene & p-Xylene	1.8	J	130	148		ug/Kg	☼	113	29 - 131
o-Xylene	1.0	J	64.8	72.1		ug/Kg	☼	110	29 - 134
Styrene	6.5	U	64.8	66.6		ug/Kg	☼	103	27 - 127
Tetrachloroethene	6.5	U	64.8	75.5		ug/Kg	☼	117	31 - 135
Toluene	110		64.8	315	E F	ug/Kg	☼	321	39 - 129
trans-1,2-Dichloroethene	6.5	U	64.8	69.2		ug/Kg	☼	107	50 - 123
trans-1,3-Dichloropropene	6.5	U	64.8	63.1		ug/Kg	☼	97	28 - 137
Trichloroethene	6.5	U	64.8	124	F	ug/Kg	☼	192	10 - 177
Vinyl chloride	6.5	U	64.8	64.4		ug/Kg	☼	99	42 - 117
Xylenes, Total	2.8	J	194	220		ug/Kg	☼	112	30 - 131
Chloroform	6.5	U	64.8	65.1		ug/Kg	☼	101	53 - 119
Bromochloromethane	6.5	U	64.8	60.9		ug/Kg	☼	94	53 - 116
1,2-Dibromoethane	6.5	U	64.8	60.5		ug/Kg	☼	93	45 - 127
Chloroethane	6.5	U	64.8	74.9		ug/Kg	☼	116	45 - 118

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: 240-9236-1 MSD

Matrix: Solid

Analysis Batch: 36992

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier		Added	Result							
1,1,1-Trichloroethane	6.5	U	64.8	67.6		ug/Kg	☉	104	51 - 128	6	30	
1,1,2,2-Tetrachloroethane	6.5	U	64.8	6.5	U F	ug/Kg	☉	0	16 - 179	NC	30	
1,1,2-Trichloroethane	6.5	U	64.8	54.0		ug/Kg	☉	83	10 - 166	2	30	
1,1-Dichloroethane	6.5	U	64.8	64.4		ug/Kg	☉	99	54 - 122	6	30	
1,1-Dichloroethene	6.5	U	64.8	82.2		ug/Kg	☉	127	49 - 157	4	30	
1,2-Dichloroethane	6.5	U	64.8	57.6		ug/Kg	☉	89	49 - 123	3	30	
1,2-Dichloroethene, Total	13	U	130	128		ug/Kg	☉	99	51 - 120	5	30	
1,2-Dichloropropane	6.5	U	64.8	63.7		ug/Kg	☉	98	61 - 117	4	30	
2-Butanone (MEK)	54		130	150		ug/Kg	☉	74	30 - 143	8	30	
2-Hexanone	2.0	J B	130	144		ug/Kg	☉	110	37 - 147	15	30	
4-Methyl-2-pentanone (MIBK)	26	U	130	134		ug/Kg	☉	103	43 - 147	15	30	
Acetone	240		130	285		ug/Kg	☉	31	24 - 140	1	30	
Benzene	6.5	U	64.8	65.8		ug/Kg	☉	102	53 - 118	3	30	
Bromoform	6.5	U	64.8	58.4		ug/Kg	☉	90	18 - 129	5	30	
Bromomethane	6.5	U	64.8	71.9		ug/Kg	☉	111	33 - 130	3	30	
Carbon disulfide	0.74	J	64.8	62.6		ug/Kg	☉	95	20 - 151	11	30	
Carbon tetrachloride	6.5	U	64.8	68.4		ug/Kg	☉	106	32 - 137	10	30	
Chlorobenzene	6.5	U	64.8	60.0		ug/Kg	☉	93	37 - 116	8	30	
Chloromethane	6.5	U	64.8	58.9		ug/Kg	☉	91	34 - 117	0	30	
cis-1,2-Dichloroethene	6.5	U	64.8	63.6		ug/Kg	☉	98	50 - 119	3	30	
cis-1,3-Dichloropropene	6.5	U	64.8	60.5		ug/Kg	☉	93	27 - 133	4	30	
Dibromochloromethane	6.5	U	64.8	62.4		ug/Kg	☉	96	29 - 135	1	30	
Bromodichloromethane	6.5	U	64.8	62.2		ug/Kg	☉	96	35 - 132	4	30	
Ethylbenzene	6.5	U	64.8	64.2		ug/Kg	☉	99	30 - 131	10	30	
Methylene Chloride	5.7	J B	64.8	62.6		ug/Kg	☉	88	54 - 115	1	30	
m-Xylene & p-Xylene	1.8	J	130	128		ug/Kg	☉	97	29 - 131	15	30	
o-Xylene	1.0	J	64.8	62.7		ug/Kg	☉	95	29 - 134	14	30	
Styrene	6.5	U	64.8	60.2		ug/Kg	☉	93	27 - 127	10	30	
Tetrachloroethene	6.5	U	64.8	67.6		ug/Kg	☉	104	31 - 135	11	30	
Toluene	110		64.8	166	F	ug/Kg	☉	91	39 - 129	62	30	
trans-1,2-Dichloroethene	6.5	U	64.8	64.4		ug/Kg	☉	99	50 - 123	7	30	
trans-1,3-Dichloropropene	6.5	U	64.8	62.6		ug/Kg	☉	97	28 - 137	1	30	
Trichloroethene	6.5	U	64.8	112		ug/Kg	☉	173	10 - 177	10	30	
Vinyl chloride	6.5	U	64.8	65.1		ug/Kg	☉	101	42 - 117	1	30	
Xylenes, Total	2.8	J	194	191		ug/Kg	☉	97	30 - 131	14	30	
Chloroform	6.5	U	64.8	62.6		ug/Kg	☉	97	53 - 119	4	30	
Bromochloromethane	6.5	U	64.8	59.7		ug/Kg	☉	92	53 - 116	2	30	
1,2-Dibromoethane	6.5	U	64.8	62.9		ug/Kg	☉	97	45 - 127	4	30	
Chloroethane	6.5	U	64.8	73.6		ug/Kg	☉	114	45 - 118	2	30	

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		58 - 123
Toluene-d8 (Surr)	103		67 - 125
4-Bromofluorobenzene (Surr)	82		52 - 136
Dibromofluoromethane (Surr)	29	X	37 - 132

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: MB 240-37166/5

Matrix: Water

Analysis Batch: 37166

Client Sample ID: Method Blank

Prep Type: Total/NA

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	93		63 - 129		03/19/12 11:25	1
Toluene-d8 (Surr)	94		74 - 115		03/19/12 11:25	1
4-Bromofluorobenzene (Surr)	100		66 - 117		03/19/12 11:25	1
Dibromofluoromethane (Surr)	95		75 - 121		03/19/12 11:25	1

Lab Sample ID: LCS 240-37166/4

Matrix: Water

Analysis Batch: 37166

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

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

Lab Sample ID: LCS 240-37853/4

Matrix: Solid

Analysis Batch: 37853

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1-Dichloroethene	1.00	1.19		mg/L		119	71 - 133
1,2-Dichloroethane	1.00	1.06		mg/L		106	81 - 114
2-Butanone (MEK)	2.00	1.98		mg/L		99	49 - 120
Benzene	1.00	0.945		mg/L		95	84 - 120
Carbon tetrachloride	1.00	1.19		mg/L		119	54 - 122

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: LCS 240-37853/4

Matrix: Solid

Analysis Batch: 37853

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	1.00	0.905		mg/L		91	86 - 111
Tetrachloroethene	1.00	0.930		mg/L		93	79 - 134
Trichloroethene	1.00	0.985		mg/L		99	78 - 130
Vinyl chloride	1.00	1.01		mg/L		101	56 - 111
Chloroform	1.00	0.960		mg/L		96	87 - 123

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

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

Matrix: Solid

Analysis Batch: 37853

Client Sample ID: Method Blank

Prep Type: TCLP

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

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

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

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

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37287

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

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

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37287

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bis(2-chloroethoxy)methane	100	U	100	22	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Bis(2-chloroethyl)ether	100	U	100	2.0	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4-Bromophenyl phenyl ether	50	U	50	13	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Butyl benzyl phthalate	50	U	50	10	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4-Dimethylphenol	150	U	150	20	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Dimethyl phthalate	50	U	50	17	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4,6-Dinitro-2-methylphenol	150	U	150	80	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4-Dinitrophenol	330	U	330	80	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4-Dinitrotoluene	200	U	200	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,6-Dinitrotoluene	200	U	200	21	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Fluoranthene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Fluorene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Hexachlorobenzene	6.7	U	6.7	2.1	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Hexachlorobutadiene	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Hexachlorocyclopentadiene	330	U	330	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Hexachloroethane	50	U	50	9.0	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
N-Nitrosodiphenylamine	50	U	50	21	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
N-Nitrosodi-n-propylamine	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
1,4-Dichlorobenzene	50	U	50	20	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2-Chloronaphthalene	50	U	50	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2-Chlorophenol	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4-Chlorophenyl phenyl ether	50	U	50	13	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Chrysene	6.7	U	6.7	1.1	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Dibenz(a,h)anthracene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Dibenzofuran	50	U	50	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Benzo[g,h,i]perylene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Benzo[a]pyrene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Di-n-butyl phthalate	50	U	50	15	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
1,2-Dichlorobenzene	50	U	50	9.7	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
1,3-Dichlorobenzene	50	U	50	11	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
3,3'-Dichlorobenzidine	100	U	100	18	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4-Dichlorophenol	150	U	150	20	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Diethyl phthalate	50	U	50	16	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Indeno[1,2,3-cd]pyrene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Isophorone	50	U	50	13	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2-Methylnaphthalene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2-Methylphenol	200	U	200	80	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Naphthalene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2-Nitroaniline	200	U	200	9.1	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
3-Nitroaniline	200	U	200	16	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4-Nitroaniline	200	U	200	26	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Nitrobenzene	100	U	100	2.2	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2-Nitrophenol	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
4-Nitrophenol	330	U	330	80	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Pyrene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Pentachlorophenol	150	U	150	80	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
Phenanthrene	6.7	U	6.7	3.3	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
1,2,4-Trichlorobenzene	50	U	50	27	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4,5-Trichlorophenol	150	U	150	25	ug/Kg		03/20/12 08:42	03/22/12 10:32	1
2,4,6-Trichlorophenol	150	U	150	80	ug/Kg		03/20/12 08:42	03/22/12 10:32	1

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

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

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37287

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

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

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

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37287

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

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

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37287

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

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

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

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37496

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

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

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

Matrix: Solid

Analysis Batch: 37595

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37496

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Pyridine	0.0800	0.0564		mg/L		71	10 - 110
2,4-Dinitrotoluene	0.0800	0.0677		mg/L		85	45 - 126
Hexachlorobenzene	0.0800	0.0574		mg/L		72	47 - 116
Hexachlorobutadiene	0.0800	0.0595		mg/L		74	10 - 110
Hexachloroethane	0.0800	0.0644		mg/L		81	10 - 110
2-Methylphenol	0.0800	0.0705		mg/L		88	24 - 110
Nitrobenzene	0.0800	0.0673		mg/L		84	35 - 117
Pentachlorophenol	0.0800	0.0548		mg/L		69	12 - 110
2,4,5-Trichlorophenol	0.0800	0.0611		mg/L		76	35 - 111
2,4,6-Trichlorophenol	0.0800	0.0598		mg/L		75	32 - 110
3 & 4 Methylphenol	0.160	0.130		mg/L		82	27 - 110

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

Method: 8081A - Organochlorine Pesticides (GC)

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

Matrix: Solid

Analysis Batch: 37819

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37302

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

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

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

Matrix: Solid

Analysis Batch: 37819

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37302

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	33.3	36.0		ug/Kg		108	38 - 160
4,4'-DDE	33.3	32.3		ug/Kg		97	41 - 137
4,4'-DDT	33.3	36.2		ug/Kg		109	34 - 139
Aldrin	33.3	29.8		ug/Kg		89	52 - 119
alpha-BHC	33.3	31.2		ug/Kg		94	50 - 129
alpha-Chlordane	33.3	31.1		ug/Kg		93	43 - 130
beta-BHC	33.3	32.1		ug/Kg		96	51 - 127
delta-BHC	33.3	34.8		ug/Kg		104	54 - 134
Dieldrin	33.3	33.3		ug/Kg		100	45 - 140
Endosulfan I	33.3	23.5		ug/Kg		71	13 - 110
Endosulfan II	33.3	26.0		ug/Kg		78	22 - 115
Endosulfan sulfate	33.3	35.5		ug/Kg		107	44 - 143
Endrin	33.3	33.5		ug/Kg		100	48 - 143
Endrin aldehyde	33.3	33.7		ug/Kg		101	31 - 126
Endrin ketone	33.3	33.2		ug/Kg		100	39 - 137
gamma-BHC (Lindane)	33.3	32.2		ug/Kg		97	41 - 137

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

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

Matrix: Solid

Analysis Batch: 37819

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37302

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

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

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

Matrix: Solid

Analysis Batch: 37721

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37503

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

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

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

Matrix: Solid

Analysis Batch: 37721

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37503

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

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: MB 240-37290/23-A
Matrix: Solid
Analysis Batch: 37663

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37290

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

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

Lab Sample ID: LCS 240-37290/24-A
Matrix: Solid
Analysis Batch: 37663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37290

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

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

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-37504/7-A
Matrix: Solid
Analysis Batch: 37669

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37504

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

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

Lab Sample ID: LCS 240-37504/8-A
Matrix: Solid
Analysis Batch: 37669

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37504

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

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: LCS 240-37504/8-A
Matrix: Solid
Analysis Batch: 37669

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37504

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4-Dichlorophenylacetic acid	63		37 - 116

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

Lab Sample ID: G2C220000047B
Matrix: Solid
Analysis Batch: 2082047

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2082047_P

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitroguanidine	0.25	U	0.25	0.020	mg/kg		03/22/12 10:00	03/26/12 09:07	1

Lab Sample ID: G2C220000047C
Matrix: Solid
Analysis Batch: 2082047

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 2082047_P

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Nitroguanidine	1.00	1.06		mg/kg		106	72 - 121

Lab Sample ID: 240-9236-1 MS
Matrix: Solid
Analysis Batch: 2082047

Client Sample ID: FWG-IDW-SBCOMP1-SO
Prep Type: Total
Prep Batch: 2082047_P

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Nitroguanidine	0.25	U	1.00	0.997		mg/kg		100	72 - 121

Lab Sample ID: 240-9236-1 MSD
Matrix: Solid
Analysis Batch: 2082047

Client Sample ID: FWG-IDW-SBCOMP1-SO
Prep Type: Total
Prep Batch: 2082047_P

Analyte	Sample Sample		Spike Added	MSD MSD		Unit	D	%Rec	%Rec. Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Nitroguanidine	0.25	U	1.00	0.995		mg/kg		100	72 - 121	0.21	20

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

Lab Sample ID: G2C220000046B
Matrix: Solid
Analysis Batch: 2082046

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2082046_P

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,3,5-Trinitrobenzene	0.25	U	0.25	0.010	mg/kg		03/22/12 10:00	03/26/12 17:15	1
1,3-Dinitrobenzene	0.25	U	0.25	0.0042	mg/kg		03/22/12 10:00	03/26/12 17:15	1
2,4,6-Trinitrotoluene	0.25	U	0.25	0.019	mg/kg		03/22/12 10:00	03/26/12 17:15	1
2,4-Dinitrotoluene	0.25	U	0.25	0.0053	mg/kg		03/22/12 10:00	03/26/12 17:15	1
2,6-Dinitrotoluene	0.25	U	0.25	0.0073	mg/kg		03/22/12 10:00	03/26/12 17:15	1
2-Amino-4,6-dinitrotoluene	0.25	U	0.25	0.012	mg/kg		03/22/12 10:00	03/26/12 17:15	1
2-Nitrotoluene	0.25	U	0.25	0.013	mg/kg		03/22/12 10:00	03/26/12 17:15	1
3-Nitrotoluene	0.25	U	0.25	0.016	mg/kg		03/22/12 10:00	03/26/12 17:15	1
4-Amino-2,6-dinitrotoluene	0.25	U	0.25	0.010	mg/kg		03/22/12 10:00	03/26/12 17:15	1
4-Nitrotoluene	0.25	U	0.25	0.018	mg/kg		03/22/12 10:00	03/26/12 17:15	1
HMX	0.25	U	0.25	0.012	mg/kg		03/22/12 10:00	03/26/12 17:15	1

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: G2C220000046B

Matrix: Solid

Analysis Batch: 2082046

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 2082046_P

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

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

Lab Sample ID: G2C220000046C

Matrix: Solid

Analysis Batch: 2082046

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 2082046_P

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
1,3,5-Trinitrobenzene	0.500	0.517		mg/kg		103	81 - 121	
1,3-Dinitrobenzene	0.500	0.524		mg/kg		105	81 - 121	
2,4,6-Trinitrotoluene	0.500	0.450		mg/kg		90	65 - 105	
2,4-Dinitrotoluene	0.500	0.510		mg/kg		102	79 - 119	
2,6-Dinitrotoluene	0.500	0.510		mg/kg		102	79 - 119	
2-Amino-4,6-dinitrotoluene	0.500	0.511		mg/kg		102	79 - 119	
2-Nitrotoluene	0.500	0.507		mg/kg		101	78 - 118	
3-Nitrotoluene	0.500	0.515		mg/kg		103	77 - 117	
4-Amino-2,6-dinitrotoluene	0.500	0.507		mg/kg		101	81 - 121	
4-Nitrotoluene	0.500	0.511		mg/kg		102	78 - 118	
HMX	0.500	0.509		mg/kg		102	80 - 120	
Nitrobenzene	0.500	0.530		mg/kg		106	80 - 120	
Nitroglycerin	1.00	1.05		mg/kg		105	76 - 116	
PETN	1.00	0.992		mg/kg		99	76 - 116	
RDX	0.500	0.494		mg/kg		99	82 - 122	
Tetryl	0.500	0.486		mg/kg		97	63 - 120	

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

Lab Sample ID: 240-9236-1 MS

Matrix: Solid

Analysis Batch: 2082046

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total

Prep Batch: 2082046_P

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: 240-9236-1 MS

Matrix: Solid

Analysis Batch: 2082046

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total

Prep Batch: 2082046_P

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
HMX	0.36	U	0.736	0.746		mg/kg	☼	101	80 - 120	
Nitrobenzene	0.36	U	0.736	0.790		mg/kg	☼	107	80 - 120	
Nitroglycerin	0.72	U	1.47	1.58		mg/kg	☼	107	76 - 116	
PETN	0.72	U	1.47	1.44		mg/kg	☼	98	76 - 116	
RDX	0.36	U	0.736	0.690		mg/kg	☼	94	82 - 122	
Tetryl	0.36	U	0.736	0.585		mg/kg	☼	80	63 - 120	
		MS	MS							
Surrogate	%Recovery	Qualifier	Limits							
3,4-Dinitrotoluene	108		75 - 115							

Lab Sample ID: 240-9236-1 MSD

Matrix: Solid

Analysis Batch: 2082046

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total

Prep Batch: 2082046_P

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier							
1,3,5-Trinitrobenzene	0.36	U	0.730	0.732		mg/kg	☼	100	81 - 121	1.7	20	
1,3-Dinitrobenzene	0.36	U	0.730	0.767		mg/kg	☼	105	81 - 121	1.6	20	
2,4,6-Trinitrotoluene	0.36	U	0.730	0.645		mg/kg	☼	88	65 - 105	2.5	20	
2,4-Dinitrotoluene	0.36	U	0.730	0.738		mg/kg	☼	101	79 - 119	2.4	20	
2,6-Dinitrotoluene	0.36	U	0.730	0.742		mg/kg	☼	102	79 - 119	2.4	20	
2-Amino-4,6-dinitrotoluene	0.36	U	0.730	0.740		mg/kg	☼	101	79 - 119	1.8	20	
2-Nitrotoluene	0.36	U	0.730	0.744		mg/kg	☼	102	78 - 118	2.4	20	
3-Nitrotoluene	0.36	U	0.730	0.739		mg/kg	☼	101	77 - 117	4.2	20	
4-Amino-2,6-dinitrotoluene	0.36	U	0.730	0.742		mg/kg	☼	102	81 - 121	1.6	20	
4-Nitrotoluene	0.36	U	0.730	0.737		mg/kg	☼	101	78 - 118	3.8	20	
HMX	0.36	U	0.730	0.728		mg/kg	☼	100	80 - 120	2.4	20	
Nitrobenzene	0.36	U	0.730	0.775		mg/kg	☼	106	80 - 120	1.9	20	
Nitroglycerin	0.72	U	1.46	1.55		mg/kg	☼	106	76 - 116	2.1	20	
PETN	0.72	U	1.46	1.43		mg/kg	☼	98	76 - 116	0.87	20	
RDX	0.36	U	0.730	0.679		mg/kg	☼	93	82 - 122	1.6	20	
Tetryl	0.36	U	0.730	0.578		mg/kg	☼	79	63 - 120	1.3	20	
		MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits									
3,4-Dinitrotoluene	106		75 - 115									

Method: 6010B - Metals (ICP)

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

Matrix: Solid

Analysis Batch: 37419

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37028

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

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

Matrix: Solid

Analysis Batch: 37419

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37028

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

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

Matrix: Solid

Analysis Batch: 37419

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37028

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

Lab Sample ID: 240-9236-1 MS

Matrix: Solid

Analysis Batch: 37419

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Prep Batch: 37028

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	
Arsenic	12		247	232		mg/Kg	☉	89	75 - 125	
Cobalt	7.2		61.7	63.0		mg/Kg	☉	90	75 - 125	
Chromium	12	B	24.7	35.2		mg/Kg	☉	92	75 - 125	
Lead	11		61.7	65.3		mg/Kg	☉	89	75 - 125	
Selenium	0.61	U	247	216		mg/Kg	☉	87	75 - 125	
Silver	0.61	U	6.17	5.70		mg/Kg	☉	92	75 - 125	
Vanadium	13		61.7	68.9		mg/Kg	☉	91	75 - 125	
Barium	47	B	247	282		mg/Kg	☉	95	75 - 125	
Calcium	19000	B	6170	26000		mg/Kg	☉	121	75 - 125	
Copper	14		30.8	42.7		mg/Kg	☉	92	75 - 125	
Magnesium	3900	B	6170	15100	F	mg/Kg	☉	182	75 - 125	
Manganese	300	B	61.7	375	4	mg/Kg	☉	120	75 - 125	
Nickel	20		61.7	74.2		mg/Kg	☉	88	75 - 125	
Potassium	1200	B	6170	7280		mg/Kg	☉	98	75 - 125	

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: 240-9236-1 MSD

Matrix: Solid

Analysis Batch: 37419

Client Sample ID: FWG-IDW-SBCOMP1-SO

Prep Type: Total/NA

Prep Batch: 37028

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits	RPD		
Arsenic	12		247	235		mg/Kg	☉	90	75 - 125	1	20	
Cobalt	7.2		61.7	65.0		mg/Kg	☉	94	75 - 125	3	20	
Chromium	12	B	24.7	37.5		mg/Kg	☉	102	75 - 125	6	20	
Lead	11		61.7	66.1		mg/Kg	☉	90	75 - 125	1	20	
Selenium	0.61	U	247	217		mg/Kg	☉	88	75 - 125	1	20	
Silver	0.61	U	6.17	5.74		mg/Kg	☉	93	75 - 125	1	20	
Vanadium	13		61.7	70.7		mg/Kg	☉	94	75 - 125	3	20	
Barium	47	B	247	289		mg/Kg	☉	98	75 - 125	2	20	
Calcium	19000	B	6170	20000	F	mg/Kg	☉	25	75 - 125	26	20	
Copper	14		30.8	47.4		mg/Kg	☉	107	75 - 125	10	20	
Magnesium	3900	B	6170	10100	F	mg/Kg	☉	100	75 - 125	40	20	
Manganese	300	B	61.7	436	4	mg/Kg	☉	218	75 - 125	15	20	
Nickel	20		61.7	77.2		mg/Kg	☉	93	75 - 125	4	20	
Potassium	1200	B	6170	7010		mg/Kg	☉	93	75 - 125	4	20	

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

Matrix: Solid

Analysis Batch: 37799

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37454

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

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

Matrix: Solid

Analysis Batch: 37799

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37454

Analyte	Spike	LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Arsenic	2.00	2.01		mg/L		100	50 - 150	
Cadmium	0.0500	0.0510	J	mg/L		102	50 - 150	
Chromium	0.200	0.203	J	mg/L		102	50 - 150	
Lead	0.500	0.502		mg/L		100	50 - 150	
Selenium	2.00	2.04		mg/L		102	50 - 150	
Silver	0.0500	0.0514	J	mg/L		103	50 - 150	
Barium	2.00	2.09	J	mg/L		105	50 - 150	

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

Matrix: Solid

Analysis Batch: 37799

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 37454

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

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

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

Lab Sample ID: LB 240-37404/1-D LB
Matrix: Solid
Analysis Batch: 37799

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 37454

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Selenium	0.25	U	0.25	0.0041	mg/L		03/21/12 08:58	03/22/12 12:40	1
Silver	0.50	U	0.50	0.0022	mg/L		03/21/12 08:58	03/22/12 12:40	1
Barium	0.00194	J	10	0.00067	mg/L		03/21/12 08:58	03/22/12 12:40	1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-37028/1-A
Matrix: Solid
Analysis Batch: 37588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37028

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	1.30	J	5.0	1.3	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Antimony	0.20	U	0.20	0.024	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Beryllium	0.10	U	0.10	0.047	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Cadmium	0.00780	J	0.10	0.0078	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Iron	7.53	J	10	1.0	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Sodium	7.52	J	100	2.4	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Thallium	0.0449	J	0.20	0.013	mg/Kg		03/16/12 10:02	03/21/12 10:41	1
Zinc	0.553	J	2.0	0.20	mg/Kg		03/16/12 10:02	03/21/12 10:41	1

Lab Sample ID: LCS 240-37028/3-A
Matrix: Solid
Analysis Batch: 37588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37028

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Aluminum	1000	980		mg/Kg		98	80 - 120
Antimony	10.0	9.17		mg/Kg		92	68 - 113
Beryllium	100	99.0		mg/Kg		99	79 - 110
Cadmium	100	94.8		mg/Kg		95	74 - 110
Iron	1000	1030		mg/Kg		103	80 - 120
Sodium	1000	978		mg/Kg		98	80 - 120
Thallium	25.0	23.6		mg/Kg		94	71 - 110
Zinc	100	94.1		mg/Kg		94	72 - 113

Lab Sample ID: 240-9236-1 MS
Matrix: Solid
Analysis Batch: 37588

Client Sample ID: FWG-IDW-SBCOMP1-SO
Prep Type: Total/NA
Prep Batch: 37028

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Aluminum	7600	B	1260	10400	4	mg/Kg	☼	226	70 - 130
Antimony	0.086	J	12.6	3.76	F	mg/Kg	☼	29	75 - 125
Beryllium	0.49		126	106		mg/Kg	☼	84	58 - 112
Cadmium	0.13	B	126	112		mg/Kg	☼	89	58 - 110
Iron	23000	B	1260	23300	4	mg/Kg	☼	38	70 - 130
Sodium	420	B	1260	1400		mg/Kg	☼	78	70 - 130
Thallium	0.24	B	31.4	28.6		mg/Kg	☼	90	62 - 110
Zinc	52	B	126	159		mg/Kg	☼	85	10 - 199

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-9236-1 MSD
Matrix: Solid
Analysis Batch: 37588

Client Sample ID: FWG-IDW-SBCOMP1-SO
Prep Type: Total/NA
Prep Batch: 37028

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Aluminum	7600	B	1260	10100	4	mg/Kg	☼	199	70 - 130	3	20	
Antimony	0.086	J	12.6	3.77	F	mg/Kg	☼	29	75 - 125	0	20	
Beryllium	0.49		126	101		mg/Kg	☼	80	58 - 112	4	20	
Cadmium	0.13	B	126	107		mg/Kg	☼	85	58 - 110	4	20	
Iron	23000	B	1260	23900	4	mg/Kg	☼	86	70 - 130	3	20	
Sodium	420	B	1260	1320		mg/Kg	☼	72	70 - 130	6	20	
Thallium	0.24	B	31.4	28.7		mg/Kg	☼	91	62 - 110	1	20	
Zinc	52	B	126	155		mg/Kg	☼	82	10 - 199	2	20	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-37467/2-A
Matrix: Solid
Analysis Batch: 37693

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37467

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.0020	U	0.0020	0.00012	mg/L		03/21/12 14:10	03/22/12 13:52	1

Lab Sample ID: LCS 240-37467/3-A
Matrix: Solid
Analysis Batch: 37693

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37467

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Mercury	0.00500	0.00474		mg/L		95	50 - 150	

Lab Sample ID: LB 240-37404/1-E LB
Matrix: Solid
Analysis Batch: 37693

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 37467

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.0020	U	0.0020	0.00012	mg/L		03/21/12 14:10	03/22/12 13:50	1

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 240-37046/1-A
Matrix: Solid
Analysis Batch: 37465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37046

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.10	U	0.10	0.015	mg/Kg		03/16/12 13:25	03/20/12 13:50	1

Lab Sample ID: LCS 240-37046/2-A
Matrix: Solid
Analysis Batch: 37465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37046

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Mercury	0.833	0.784		mg/Kg		94	73 - 121	

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-9236-1 MS
Matrix: Solid
Analysis Batch: 37465

Client Sample ID: FWG-IDW-SBCOMP1-SO
Prep Type: Total/NA
Prep Batch: 37046

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.14	U	0.212	0.234		mg/Kg	☼	110	11 - 192

Lab Sample ID: 240-9236-1 MSD
Matrix: Solid
Analysis Batch: 37465

Client Sample ID: FWG-IDW-SBCOMP1-SO
Prep Type: Total/NA
Prep Batch: 37046

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.14	U	0.212	0.188	F	mg/Kg	☼	89	11 - 192	22	20

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-37544/1-A
Matrix: Solid
Analysis Batch: 37571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37544

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.50	U	0.50	0.10	mg/Kg		03/21/12 13:59	03/21/12 15:39	1

Lab Sample ID: LCS 240-37544/2-A
Matrix: Solid
Analysis Batch: 37571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37544

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	2.25	2.22		mg/Kg		99	68 - 123

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 240-37027/1-A
Matrix: Solid
Analysis Batch: 37093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	30	U	30	22	mg/Kg		03/16/12 09:58	03/16/12 16:07	1

Lab Sample ID: LCS 240-37027/2-A
Matrix: Solid
Analysis Batch: 37093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Sulfide	95.4	92.1		mg/Kg		97	70 - 130

Method: 9045C - pH

Lab Sample ID: LCS 240-36972/5
Matrix: Solid
Analysis Batch: 36972

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Corrosivity	5.50	5.520		SU		100	97 - 103

QC Sample Results

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

TestAmerica Job ID: 240-9236-1

Method: 9045C - pH (Continued)

Lab Sample ID: 240-9236-1 DU
Matrix: Solid
Analysis Batch: 36972

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

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Corrosivity	11.9		12.02		SU		1	20

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G2C23000029B
Matrix: Solid
Analysis Batch: 2083029

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2083029_P

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitrocellulose	0.89	J	5.0	0.78	mg/kg		03/23/12 06:00	03/29/12 14:25	1

Lab Sample ID: G2C23000029C
Matrix: Solid
Analysis Batch: 2083029

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 2083029_P

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Nitrocellulose	50.7	34.7		mg/kg		68	34 - 115

Lab Sample ID: 240-9236-1 MS
Matrix: Solid
Analysis Batch: 2083029

Client Sample ID: FWG-IDW-SBCOMP1-SO
Prep Type: Total
Prep Batch: 2083029_P

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Nitrocellulose	7.4	U	71.8	8.38	N	mg/kg	☼	11	34 - 115

Lab Sample ID: 240-9236-1 MSD
Matrix: Solid
Analysis Batch: 2083029

Client Sample ID: FWG-IDW-SBCOMP1-SO
Prep Type: Total
Prep Batch: 2083029_P

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Nitrocellulose	7.4	U	75.4	10.2	N	mg/kg	☼	12	34 - 115	19	71

QC Association Summary

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

TestAmerica Job ID: 240-9236-1

GC/MS VOA

Analysis Batch: 36992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8260B	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8260B	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8260B	
LCS 240-36992/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-36992/6	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 37166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-2	TRIP BLANK	Total/NA	Water	8260B	
LCS 240-37166/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-37166/5	Method Blank	Total/NA	Water	8260B	

Leach Batch: 37401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	1311	
LB 240-37401/1-A LB	Method Blank	TCLP	Solid	1311	

Analysis Batch: 37853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	8260B	
LB 240-37401/1-A LB	Method Blank	TCLP	Solid	8260B	
LCS 240-37853/4	Lab Control Sample	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 37287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3540C	
LCS 240-37287/23-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-37287/22-A	Method Blank	Total/NA	Solid	3540C	

Leach Batch: 37404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	1311	

Prep Batch: 37496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	3510C	37404
LCS 240-37496/9-A	Lab Control Sample	Total/NA	Solid	3510C	
MB 240-37496/8-A	Method Blank	Total/NA	Solid	3510C	

Analysis Batch: 37595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	8270C	37496
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8270C	37287
LCS 240-37287/23-A	Lab Control Sample	Total/NA	Solid	8270C	37287
LCS 240-37496/9-A	Lab Control Sample	Total/NA	Solid	8270C	37496
MB 240-37287/22-A	Method Blank	Total/NA	Solid	8270C	37287
MB 240-37496/8-A	Method Blank	Total/NA	Solid	8270C	37496

QC Association Summary

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

TestAmerica Job ID: 240-9236-1

GC Semi VOA

Prep Batch: 37290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3540C	
LCS 240-37290/24-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-37290/23-A	Method Blank	Total/NA	Solid	3540C	

Prep Batch: 37302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3540C	
LCS 240-37302/8-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-37302/9-A	Method Blank	Total/NA	Solid	3540C	

Leach Batch: 37404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	1311	

Prep Batch: 37503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	3510C	37404
LCS 240-37503/8-A	Lab Control Sample	Total/NA	Solid	3510C	
MB 240-37503/7-A	Method Blank	Total/NA	Solid	3510C	

Prep Batch: 37504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	8151A	37404
LCS 240-37504/8-A	Lab Control Sample	Total/NA	Solid	8151A	
MB 240-37504/7-A	Method Blank	Total/NA	Solid	8151A	

Analysis Batch: 37663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8082	37290
LCS 240-37290/24-A	Lab Control Sample	Total/NA	Solid	8082	37290
MB 240-37290/23-A	Method Blank	Total/NA	Solid	8082	37290

Analysis Batch: 37669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	8151A	37504
LCS 240-37504/8-A	Lab Control Sample	Total/NA	Solid	8151A	37504
MB 240-37504/7-A	Method Blank	Total/NA	Solid	8151A	37504

Analysis Batch: 37721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	8081A	37503
LCS 240-37503/8-A	Lab Control Sample	Total/NA	Solid	8081A	37503
MB 240-37503/7-A	Method Blank	Total/NA	Solid	8081A	37503

Analysis Batch: 37819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	8081A	37302
LCS 240-37302/8-A	Lab Control Sample	Total/NA	Solid	8081A	37302
MB 240-37302/9-A	Method Blank	Total/NA	Solid	8081A	37302

QC Association Summary

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

TestAmerica Job ID: 240-9236-1

HPLC

Analysis Batch: 2082046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
G2C220000046B	Method Blank	Total	Solid	8330B	
G2C220000046C	Lab Control Sample	Total	Solid	8330B	

Analysis Batch: 2082047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	8330 (Modified)	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	8330 (Modified)	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	8330 (Modified)	
G2C2200000047B	Method Blank	Total	Solid	8330 (Modified)	
G2C2200000047C	Lab Control Sample	Total	Solid	8330 (Modified)	

Prep Batch: 2082046_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	8330B	
G2C2200000046B	Method Blank	Total	Solid	8330B	
G2C2200000046C	Lab Control Sample	Total	Solid	8330B	

Prep Batch: 2082047_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	3550A	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	3550A	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	3550A	
G2C2200000047B	Method Blank	Total	Solid	3550A	
G2C2200000047C	Lab Control Sample	Total	Solid	3550A	

Metals

Prep Batch: 37028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3050B	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3050B	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3050B	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3050B	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	3050B	
LCS 240-37028/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 240-37028/3-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 240-37028/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 37046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	
LCS 240-37046/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 240-37046/1-A	Method Blank	Total/NA	Solid	7471A	

QC Association Summary

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

TestAmerica Job ID: 240-9236-1

Metals (Continued)

Leach Batch: 37404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	1311	
LB 240-37404/1-D LB	Method Blank	TCLP	Solid	1311	
LB 240-37404/1-E LB	Method Blank	TCLP	Solid	1311	

Analysis Batch: 37419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	6010B	37028
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	6010B	37028
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	6010B	37028
LCS 240-37028/2-A	Lab Control Sample	Total/NA	Solid	6010B	37028
MB 240-37028/1-A	Method Blank	Total/NA	Solid	6010B	37028

Prep Batch: 37454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	3010A	37404
LB 240-37404/1-D LB	Method Blank	TCLP	Solid	3010A	37404
LCS 240-37454/3-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 240-37454/2-A	Method Blank	Total/NA	Solid	3010A	

Analysis Batch: 37465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	37046
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	37046
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	7471A	37046
LCS 240-37046/2-A	Lab Control Sample	Total/NA	Solid	7471A	37046
MB 240-37046/1-A	Method Blank	Total/NA	Solid	7471A	37046

Prep Batch: 37467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	7470A	37404
LB 240-37404/1-E LB	Method Blank	TCLP	Solid	7470A	37404
LCS 240-37467/3-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 240-37467/2-A	Method Blank	Total/NA	Solid	7470A	

Analysis Batch: 37588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	6020	37028
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	6020	37028
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	6020	37028
LCS 240-37028/3-A	Lab Control Sample	Total/NA	Solid	6020	37028
MB 240-37028/1-A	Method Blank	Total/NA	Solid	6020	37028

Analysis Batch: 37693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	7470A	37467
LB 240-37404/1-E LB	Method Blank	TCLP	Solid	7470A	37467
LCS 240-37467/3-A	Lab Control Sample	Total/NA	Solid	7470A	37467
MB 240-37467/2-A	Method Blank	Total/NA	Solid	7470A	37467

Analysis Batch: 37799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	TCLP	Solid	6010B	37454

QC Association Summary

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

TestAmerica Job ID: 240-9236-1

Metals (Continued)

Analysis Batch: 37799 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 240-37404/1-D LB	Method Blank	TCLP	Solid	6010B	37454
LCS 240-37454/3-A	Lab Control Sample	Total/NA	Solid	6010B	37454
MB 240-37454/2-A	Method Blank	Total/NA	Solid	6010B	37454

General Chemistry

Analysis Batch: 31612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	1020B	

Analysis Batch: 36934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	Moisture	

Analysis Batch: 36972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9045C	
240-9236-1 DU	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9045C	
LCS 240-36972/5	Lab Control Sample	Total/NA	Solid	9045C	

Prep Batch: 37027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9030B	
LCS 240-37027/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 240-37027/1-A	Method Blank	Total/NA	Solid	9030B	

Analysis Batch: 37093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9034	37027
LCS 240-37027/2-A	Lab Control Sample	Total/NA	Solid	9034	37027
MB 240-37027/1-A	Method Blank	Total/NA	Solid	9034	37027

Prep Batch: 37544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9012A	
LCS 240-37544/2-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 240-37544/1-A	Method Blank	Total/NA	Solid	9012A	

Analysis Batch: 37571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total/NA	Solid	9012A	37544
LCS 240-37544/2-A	Lab Control Sample	Total/NA	Solid	9012A	37544
MB 240-37544/1-A	Method Blank	Total/NA	Solid	9012A	37544

Analysis Batch: 2082089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	D 2216-90	
G2C160473001X	Duplicate	Total	Solid	D 2216-90	

Analysis Batch: 2083029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	WS-WC-0050	

QC Association Summary

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

TestAmerica Job ID: 240-9236-1

General Chemistry (Continued)

Analysis Batch: 2083029 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	WS-WC-0050	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	WS-WC-0050	
G2C230000029B	Method Blank	Total	Solid	WS-WC-0050	
G2C230000029C	Lab Control Sample	Total	Solid	WS-WC-0050	

Prep Batch: 2083029_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9236-1	FWG-IDW-SBCOMP1-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
240-9236-1 MS	FWG-IDW-SBCOMP1-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
240-9236-1 MSD	FWG-IDW-SBCOMP1-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G2C230000029B	Method Blank	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G2C230000029C	Lab Control Sample	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	

Lab Chronicle

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

TestAmerica Job ID: 240-9236-1

Client Sample ID: FWG-IDW-SBCOMP1-SO

Lab Sample ID: 240-9236-1

Date Collected: 03/13/12 14:30

Matrix: Solid

Date Received: 03/14/12 11:57

Percent Solids: 77.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	36992	03/15/12 22:39	TL	TAL NC
TCLP	Leach	1311			37401	03/20/12 18:20	BF	TAL NC
TCLP	Analysis	8260B		1	37853	03/23/12 21:41	RQ	TAL NC
TCLP	Leach	1311			37404	03/20/12 17:35	DJ	TAL NC
TCLP	Prep	3510C			37496	03/21/12 12:01	SE	TAL NC
TCLP	Analysis	8270C		1	37595	03/22/12 11:50	MU	TAL NC
Total/NA	Prep	3540C			37287	03/20/12 08:42	AK	TAL NC
Total/NA	Analysis	8270C		1	37595	03/22/12 15:03	MU	TAL NC
Total/NA	Prep	3540C			37290	03/20/12 08:48	AK	TAL NC
Total/NA	Analysis	8082		1	37663	03/22/12 14:35	LH	TAL NC
TCLP	Leach	1311			37404	03/20/12 17:35	DJ	TAL NC
TCLP	Prep	8151A			37504	03/21/12 12:19	SE	TAL NC
TCLP	Analysis	8151A		1	37669	03/23/12 01:44	AR	TAL NC
TCLP	Prep	3510C			37503	03/21/12 12:15	SE	TAL NC
TCLP	Analysis	8081A		1	37721	03/22/12 23:38	AR	TAL NC
Total/NA	Prep	3540C			37302	03/20/12 08:58	AK	TAL NC
Total/NA	Analysis	8081A		2	37819	03/23/12 21:27	AR	TAL NC
Total	Prep	8330B			2082046_P	03/22/12 10:00	TQP	TAL WSC
Total	Analysis	8330B		0.98	2082046	03/26/12 18:35	RN	TAL WSC
Total	Prep	3550A			2082047_P	03/22/12 10:00	TQP	TAL WSC
Total	Analysis	8330 (Modified)		1	2082047	03/26/12 09:36	RN	TAL WSC
Total/NA	Prep	3050B			37028	03/16/12 10:02	DE	TAL NC
Total/NA	Analysis	6010B		1	37419	03/20/12 15:56	BD	TAL NC
Total/NA	Prep	7471A			37046	03/16/12 13:25	DE	TAL NC
Total/NA	Analysis	7471A		1	37465	03/20/12 13:53	AS	TAL NC
Total/NA	Analysis	6020		1	37588	03/21/12 10:53	KC	TAL NC
TCLP	Leach	1311			37404	03/20/12 17:35	DJ	TAL NC
TCLP	Prep	7470A			37467	03/21/12 14:10	LM	TAL NC
TCLP	Analysis	7470A		1	37693	03/22/12 14:06	AS	TAL NC
TCLP	Prep	3010A			37454	03/21/12 08:58	LM	TAL NC
TCLP	Analysis	6010B		1	37799	03/22/12 13:47	BD	TAL NC
Total/NA	Analysis	1020B		1	31612	03/26/12 13:50	MW	TAL PIT
Total/NA	Analysis	Moisture		1	36934	03/15/12 11:30	CN	TAL NC
Total/NA	Analysis	9045C		1	36972	03/15/12 15:42	BW	TAL NC
Total/NA	Prep	9030B			37027	03/16/12 09:58	JB	TAL NC
Total/NA	Analysis	9034		1	37093	03/16/12 16:16	JB	TAL NC
Total/NA	Prep	9012A			37544	03/21/12 13:59	BR	TAL NC
Total/NA	Analysis	9012A		1	37571	03/21/12 15:39	BR	TAL NC
Total	Analysis	D 2216-90		1	2082089	03/23/12 11:51	AM	TAL WSC
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			2083029_P	03/23/12 06:00	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	2083029	03/29/12 14:29	JB	TAL WSC

Lab Chronicle

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

TestAmerica Job ID: 240-9236-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-9236-2

Date Collected: 03/13/12 14:30

Matrix: Water

Date Received: 03/14/12 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	37166	03/19/12 18:58	LE	TAL NC

Laboratory References:

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

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

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

Certification Summary

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

TestAmerica Job ID: 240-9236-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica North Canton	California	NELAC	9	01144CA
TestAmerica North Canton	Connecticut	State Program	1	PH-0590
TestAmerica North Canton	Florida	NELAC	4	E87225
TestAmerica North Canton	Georgia	State Program	4	N/A
TestAmerica North Canton	Illinois	NELAC	5	200004
TestAmerica North Canton	Kansas	NELAC	7	E-10336
TestAmerica North Canton	Kentucky	State Program	4	58
TestAmerica North Canton	L-A-B	DoD ELAP		L2315
TestAmerica North Canton	Minnesota	NELAC	5	039-999-348
TestAmerica North Canton	Nevada	State Program	9	OH-000482008A
TestAmerica North Canton	New Jersey	NELAC	2	OH001
TestAmerica North Canton	New York	NELAC	2	10975
TestAmerica North Canton	Ohio VAP	State Program	5	CL0024
TestAmerica North Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica North Canton	USDA	Federal		P330-11-00328
TestAmerica North Canton	Virginia	NELAC Secondary AB	3	460175
TestAmerica North Canton	Washington	State Program	10	C971
TestAmerica North Canton	West Virginia DEP	State Program	3	210
TestAmerica North Canton	Wisconsin	State Program	5	999518190
TestAmerica Pittsburgh	Arkansas DEQ	State Program	6	88-0690
TestAmerica Pittsburgh	Connecticut	State Program	1	PH-0688
TestAmerica Pittsburgh	Florida	NELAC	4	E871008
TestAmerica Pittsburgh	Illinois	NELAC	5	002602
TestAmerica Pittsburgh	Kansas	NELAC	7	E-10350
TestAmerica Pittsburgh	L-A-B	DoD ELAP		L2314
TestAmerica Pittsburgh	Louisiana	NELAC	6	04041
TestAmerica Pittsburgh	New Jersey	NELAC	2	PA005
TestAmerica Pittsburgh	North Carolina DENR	State Program	4	434
TestAmerica Pittsburgh	Pennsylvania	NELAC	3	02-00416
TestAmerica Pittsburgh	Pennsylvania	State Program	3	02-416
TestAmerica Pittsburgh	South Carolina	State Program	4	89014002
TestAmerica Pittsburgh	USDA	Federal		P330-10-00139
TestAmerica Pittsburgh	USDA	Federal		P-Soil-01
TestAmerica Pittsburgh	Utah	NELAC	8	STLP
TestAmerica Pittsburgh	Virginia	NELAC	3	460189
TestAmerica Pittsburgh	West Virginia DEP	State Program	3	142
TestAmerica Pittsburgh	Wisconsin	State Program	5	998027800
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas DEQ	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	California	NELAC Primary AB	9	MP0007
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947

Certification Summary

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

TestAmerica Job ID: 240-9236-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Northern Mariana Islands	State Program	9	MP0007
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	Federal		LE148388-0
TestAmerica West Sacramento	USDA	Federal		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	State Program	3	9930C
TestAmerica West Sacramento	West Virginia DEP	State Program	3	334
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica North Canton Sample Receipt Form/Narrative

Login # : 9236

Client EQM

Site Name RVAAN

By: Matthew Jones
(Signature)

Cooler Received on 14 MAR 2012 Opened on 14 MAR 2012

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # 2003447 Foam Box Client Cooler Multiple on Back Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1 (CF -2°C) Sample Temp _____ °C Corrected Temp _____ °C

IR GUN# 4G (CF -1°C) Sample Temp _____ °C Corrected Temp _____ °C

IR GUN# 5G (CF -1°C) Sample Temp 5.4 °C Corrected Temp 4.4 °C

IR GUN# 6Y (CF -2°C) Sample Temp _____ °C Corrected Temp _____ °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No

-Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA

-Were custody seals on the bottle(s)? Yes No

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Did all bottles arrive in good condition (Unbroken)? Yes No

7. Could all bottle labels be reconciled with the COC? Yes No

8. Were correct bottle(s) used for the test(s) indicated? Yes No

9. Sufficient quantity received to perform indicated analyses? Yes No

10. Were sample(s) at the correct pH upon receipt? Yes No NA

11. Were VOAs on the COC? Yes No

12. Were air bubbles >6 mm in any VOA vials? Yes No NA

13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Blank lines for Chain of Custody and Sample Discrepancies.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-9236-1

Login Number: 9236

List Source: TestAmerica North Canton

List Number: 1

Creator: Ferrel, Matthew

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	3.4
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-9236-1

Login Number: 9236
List Number: 1
Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh
List Creation: 03/15/12 10:48 AM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

May 30, 2012

Mr. Mark Patterson
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266

Reference: Contract No. GS-10F-0293K
Delivery Order No. W912QR-1-F-0266

**Subject: Facility-Wide Groundwater Monitoring Program Plan
RVAAP-66 Facility-Wide Groundwater
Soil IDW Letter Report – Draft**

Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI), installation of monitoring wells, approved per the *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum* (FWGWMP Addendum; EQM, January 2012) began on February 27, 2012. These activities resulted in the generation of IDW consisting of soil cuttings and rock chips from drilling operations. The purpose of this letter is to characterize and classify the second batch of drummed IDW comprising 98 drums of solids for disposal and to provide recommendations for disposing of the IDW.

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

Soil IDW Discussion

Accumulated IDW soil cuttings are containerized in Department of Transportation (DOT)-approved 55-gal drums on site pending transport and disposal to an offsite disposal facility. A summary of the drums of IDW generated and its origin are presented in Table 1. Composite sampling for disposal characterization was performed using a composite grab sampling technique. The composite sample was collected from 98 drums of soil. The drums were opened and screened with a photoionization detector (PID). Grab samples of the drums were collected using a decontaminated trier inserted through the bung to the bottom of each container. The retrieved sample was placed in a decontaminated stainless steel bowl for homogenization. Rocks and loose twigs were removed and discarded. Clumps of soil were broken down using a gloved hand and mixed in the bowl. The mixture was collected using a gloved hand and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis, a discrete grab sample was collected from the drum with the highest PID screening level (i.e., drum EQM-079s) and transferred directly from the IDW waste container into a separate 4-oz glass sample jar with minimum head space. The sample was immediately placed on ice for delivery to the laboratory.

All stainless steel bowls and triers were decontaminated in accordance with Section 2.13 of the FWGWMP Addendum after collection of each composite sample.

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

A summary of the IDW containers shown is as follows:

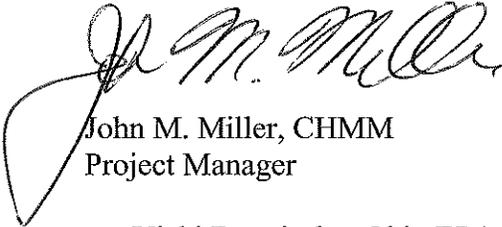
- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 180 degrees F.
- Arsenic was the only concentration to exceed the USEPA RSLs for the RVAAP full suite totals composite sample.
- Only sodium exceeded the background criteria for subsurface soil. There is no USEPA RSL for sodium.

Recommended Disposal Pathways for IDW

After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. It is recommended that the 98 drums containing soil be classified as contaminated, but non-hazardous, and that the drummed soils be sent offsite for disposal to a permitted facility in accordance with Section 8.0 of the FWSAP. Upon RVAAP and Ohio EPA concurrence with the preliminary characterization that no RCRA listings apply, we will proceed with the appropriate waste disposal. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.



John M. Miller, CHMM
Project Manager

cc: Vicki Deppisch – Ohio EPA
Mark Nichter – USACE
EQM PN – 030174.0016.001.02

Table 1. IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-024s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-012	0.0
EQM-025s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-012	0.0
EQM-026s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-012	0.0
EQM-027s	55-gallon Steel	Soil Cuttings	03/12/12	FWGmw-012	0.0
EQM-028s	55-gallon Steel	Soil Cuttings	03/09/12	FWGmw-007	0.0
EQM-029s	55-gallon Steel	Soil Cuttings	03/09/12	FWGmw-007	2.5
EQM-030s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-001	28.5
EQM-031s	55-gallon Steel	Grout	03/12/12	RVAAP-66	0.0
EQM-032s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-015	0.0
EQM-033s	55-gallon Steel	Soil Cuttings	03/13/12	FWGmw-015	0.0
EQM-034s	55-gallon Steel	Soil Cuttings	03/14/12	LL12mw-182ss	0.0
EQM-035s	55-gallon Steel	Soil Cuttings	03/12/12	FWGmw-004	0.0
EQM-036s	55-gallon Steel	Soil Cuttings	03/14/12	LL12mw-182ss	0.0
EQM-037s	55-gallon Steel	Soil Cuttings	03/12/12	FWGmw-004	1.5
EQM-038s	55-gallon Steel	Soil Cuttings	03/14/12	LL12mw-182ss	0.0
EQM-039s	55-gallon Steel	Soil Cuttings	03/15/12	LL3mw-245	1.1
EQM-040s	55-gallon Steel	Soil Cuttings	03/15/12	LL3mw-245	0.0
EQM-041s	55-gallon Steel	Grout	03/15/12	LL12mw-182ss	0.0
EQM-042s	55-gallon Steel	Soil Cuttings	03/16/12	CBPmw-009	0.0
EQM-043s	55-gallon Steel	Soil Cuttings	03/16/12	CBPmw-009	0.0
EQM-044s	55-gallon Steel	Soil Cuttings	3/13-20/12	FWGmw-002 FWGmw-012	0.0
EQM-045s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0
EQM-046s	55-gallon Steel	Soil Cuttings	03/22/12	FWGmw-002	0.0
EQM-047s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0

Table 1 (continued). IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-048s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0
EQM-049s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0
EQM-050s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0
EQM-051s	55-gallon Steel	Soil Cuttings	03/22/12	FWGmw-002	0.0
EQM-052s	55-gallon Steel	Soil Cuttings	03/22/12	FWGmw-002	0.0
EQM-053s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-002	0.0
EQM-054s	55-gallon Steel	Soil Cuttings	03/26/12	CBPmw-009	0.0
EQM-055s	55-gallon Steel	Soil Cuttings	03/27/12	CBPmw-009	0.0
EQM-056s	55-gallon Steel	Soil Cuttings	03/26/12	CBPmw-009	0.0
EQM-057s	55-gallon Steel	Soil Cuttings	03/26/12	CBPmw-009	0.0
EQM-058s	55-gallon Steel	Soil Cuttings	03/27/12	CBPmw-009	0.0
EQM-059s	55-gallon Steel	Soil Cuttings	03/30/12	LL3mw-245	0.0
EQM-060s	55-gallon Steel	Soil Cuttings	03/30/12	LL3mw-245	0.0
EQM-061s	55-gallon Steel	Soil Cuttings	03/30/12	LL3mw-245	0.0
EQM-062s	55-gallon Steel	Soil Cuttings	03/30/12	LL3mw-245	0.0
EQM-063s	55-gallon Steel	Grout	03/06/12	RVAAP-66	0.0
EQM-064s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-065s	55-gallon Steel	Soil Cuttings	04/04/12	LL4mw-201	0.0
EQM-066s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-067s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-068s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-069s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-070s	55-gallon Steel	Soil Cuttings	04/03/12	LL4mw-201	0.0
EQM-071s	55-gallon Steel	Soil Cuttings	03/27/12	CBLmw-005	0.0

Table 1 (continued). IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-072s	55-gallon Steel	Soil Cuttings	04/02/12	FWGmw-017	0.0
EQM-073s	55-gallon Steel	Soil Cuttings	04/02/12	FWGmw-017	1.4
EQM-074s	55-gallon Steel	Soil Cuttings	04/02/12	FWGmw-017	0.0
EQM-075s	55-gallon Steel	Soil Cuttings	03/27/12	CBLmw-005	0.0
EQM-076s	55-gallon Steel	Soil Cuttings	04/02/12	FWGmw-017	5.5
EQM-077s	55-gallon Steel	Soil Cuttings	04/04/12	CBLmw-005	0.0
EQM-078s	55-gallon Steel	Soil Cuttings	04/02/12	FWGmw-017	0.0
EQM-079s	55-gallon Steel	Soil Cuttings	04/03/12	FWGmw-014	30.7
EQM-080s	55-gallon Steel	Soil Cuttings	03/30/12	LL3mw-245	0.0
EQM-081s	55-gallon Steel	Soil Cuttings	04/05/12	B12mw-013	0.0
EQM-082s	55-gallon Steel	Soil Cuttings	3/21-22/12	LL11mw-012	0.0
EQM-083s	55-gallon Steel	Soil Cuttings	03/23/12	LL11mw-012	0.0
EQM-084s	55-gallon Steel	Soil Cuttings	03/21/12	LL11mw-012	0.0
EQM-085s	55-gallon Steel	Soil Cuttings	03/27/12	LL11mw-012	0.0
EQM-086s	55-gallon Steel	Soil Cuttings	03/27/12	LL11mw-012	0.0
EQM-087s	55-gallon Steel	Soil Cuttings	03/21/12	LL11mw-012	0.0
EQM-088s	55-gallon Steel	Soil Cuttings	04/04/12	CBLmw-005	0.0
EQM-089s	55-gallon Steel	Soil Cuttings	04/10/12	FWGmw-005	0.0
EQM-090s	55-gallon Steel	Soil Cuttings	04/10/12	FWGmw-005	0.0
EQM-091s	55-gallon Steel	Soil Cuttings	04/10/12	FWGmw-005	0.0
EQM-092s	55-gallon Steel	Soil Cuttings	04/10/12	FWGmw-005	0.0
EQM-093s	55-gallon Steel	Soil Cuttings	4/12-13/12	LL11mw-012	0.0
EQM-094s	55-gallon Steel	Soil Cuttings	04/12/12	LL11mw-012	1.4
EQM-095s	55-gallon Steel	Soil Cuttings	03/28/12	NTAmw-119	0.0
EQM-096s	55-gallon Steel	Soil Cuttings	03/29/12	NTAmw-119	0.0

Table 1 (continued). IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-097s	55-gallon Steel	Soil Cuttings	04/10/12	NTAmw-119	0.0
EQM-098s	55-gallon Steel	Soil Cuttings	04/09/12	NTAmw-119	0.0
EQM-099s	55-gallon Steel	Soil Cuttings	04/09/12	NTAmw-119	0.0
EQM-100s	55-gallon Steel	Soil Cuttings	04/12/12	FWGmw-016	0.0
EQM-101s	55-gallon Steel	Soil Cuttings	04/13/12	FWGmw-016	0.0
EQM-102s	55-gallon Steel	Soil Cuttings	04/12/12	FWGmw-016	0.0
EQM-103s	55-gallon Steel	Soil Cuttings	04/13/12	FWGmw-016	0.0
EQM-104s	55-gallon Steel	Soil Cuttings	04/13/12	FWGmw-016	0.0
EQM-105s	55-gallon Steel	Soil Cuttings	04/12/12	FWGmw-016	0.0
EQM-106s	55-gallon Steel	Soil Cuttings	04/13/12	FWGmw-016	0.0
EQM-107s	55-gallon Steel	Soil Cuttings	04/11/12	LL6mw-009	0.0
EQM-108s	55-gallon Steel	Soil Cuttings	04/11/12	LL6mw-009	0.0
EQM-109s	55-gallon Steel	Soil Cuttings	04/11/12	LL6mw-009	0.0
EQM-110s	55-gallon Steel	Soil Cuttings	04/12/12	LL6mw-009	0.0
EQM-111s	55-gallon Steel	Soil Cuttings	04/11/12	LL6mw-009	0.0
EQM-112s	55-gallon Steel	Soil Cuttings	03/20/12	LL6mw-008	0.0
EQM-113s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-013	0.0
EQM-114s	55-gallon Steel	Soil Cuttings	04/05/12	FWGmw-013	0.0
EQM-115s	55-gallon Steel	Soil Cuttings	03/20/12	FWGmw-013	0.0
EQM-116s	55-gallon Steel	Soil Cuttings	04/05/12	FWGmw-013	0.0
EQM-117s	55-gallon Steel	Soil Cuttings	04/05/12	FWGmw-013	0.0
EQM-118s	55-gallon Steel	Soil Cuttings	04/16/12	FWGmw-016	0.0
EQM-119s	55-gallon Steel	Soil Cuttings	04/13/12	FWGmw-016	1.3
EQM-120s	55-gallon Steel	Soil Cuttings	04/17/12	LL11mw-012	0.0
Hydraulic	55-gallon Steel	Soil Cuttings	2/28/12	LL1mw-086	0.0

Table 2. Summary of Analytical Suite of Chemicals

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

1 EPA Methods for Chemical Analysis of Water and Waste.

Table 3. Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	CAS #	Units	Lab Results	Lab Qualifier	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
VOCs	2-Butanone (MEK)	78-93-3	mg/Kg	0.035		28000	NA	NA
VOCs	Acetone	67-64-1	mg/Kg	0.034	B	61000	NA	NA
VOCs	Carbon disulfide	75-15-0	mg/Kg	0.0024	J	820	NA	NA
VOCs	Methylene chloride	75-09-2	mg/Kg	0.0020	J,B	11	NA	NA
VOCs	Toluene	108-88-3	mg/Kg	0.100		5000	NA	NA
SVOCs	Anthracene	120-12-7	mg/Kg	0.011		17000	NA	NA
SVOCs	Benzo(a)anthracene	56-55-3	mg/Kg	0.015		0.15	NA	NA
SVOCs	Benzo(b)fluoranthene	205-99-2	mg/Kg	0.018		0.15	NA	NA
SVOCs	Benzo(k)fluoranthene	207-08-9	mg/Kg	0.0072	J	1.5	NA	NA
SVOCs	Fluoranthene	206-44-0	mg/Kg	0.036		2300	NA	NA
SVOCs	Fluorene	86-73-7	mg/Kg	0.0085		2300	NA	NA
SVOCs	Chrysene	218-01-9	mg/Kg	0.018		15	NA	NA
SVOCs	Dibenzofuran	132-64-9	mg/Kg	0.0054	J	78	NA	NA
SVOCs	Benzo(g,h,i)perylene	191-24-2	mg/Kg	0.012		NA	NA	NA
SVOCs	Benzo(a)pyrene	50-32-8	mg/Kg	0.014		0.015	NA	NA
SVOCs	Indeno(1,2,3-cd)pyrene	193-39-5	mg/Kg	0.0083	J	0.15	NA	NA
SVOCs	2-Methylnaphthalene	91-57-6	mg/Kg	0.0087		310	NA	NA
SVOCs	Pyrene	129-00-0	mg/Kg	0.029		1700	NA	NA
SVOCs	Phenanthrene	85-01-8	mg/Kg	0.049		NA	NA	NA
SVOCs	Bis(2-ethylhexyl) phthalate	117-81-7	mg/Kg	0.042	J,B	35	NA	NA
Total Metals	Aluminum	7429-90-5	mg/Kg	7300		77000	19500	NA
Total Metals	Antimony	7440-36-0	mg/Kg	0.072	J	31	0.96	NA
Total Metals	Arsenic	7440-38-2	mg/Kg	12		0.39	19.8	NA
Total Metals	Barium	7440-39-3	mg/Kg	36		15000	124	NA
Total Metals	Beryllium	7440-41-7	mg/Kg	0.39		160	0.88	NA
Total Metals	Cadmium	7440-43-9	mg/Kg	0.062	J	70	0	NA
Total Metals	Calcium	7440-70-2	mg/Kg	8800		NA	35500	NA
Total Metals	Chromium	7440-47-3	mg/Kg	14		120000	27.2	NA
Total Metals	Cobalt	7440-48-4	mg/Kg	7.2		23	23.2	NA
Total Metals	Copper	7440-50-8	mg/Kg	15		3100	32.2	NA
Total Metals	Iron	7439-89-6	mg/Kg	19000	B	55000	35200	NA
Total Metals	Lead	7439-92-1	mg/Kg	9.7		400	19.1	NA
Total Metals	Magnesium	7439-95-4	mg/Kg	3600	B	NA	8790	NA
Total Metals	Manganese	7439-96-5	mg/Kg	290		1800	3030	NA
Total Metals	Mercury	7439-97-6	mg/Kg	0.023	J,B	10	0.044	NA
Total Metals	Nickel	7440-02-0	mg/Kg	18		1500	60.7	NA
Total Metals	Potassium	7440-09-7	mg/Kg	1400	B	NA	3350	NA
Total Metals	Sodium	7440-23-5	mg/Kg	260	B	NA	145	NA

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

Analyte Group	Analyte	CAS #	Units	Lab Results	Lab Qualifier	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
Total Metals	Thallium	7440-28-0	mg/Kg	0.10	J,B	0.78	0.91	NA
Total Metals	Vanadium	7440-62-2	mg/Kg	13		390	37.6	NA
Total Metals	Zinc	7440-66-6	mg/Kg	48	B	23000	93.3	NA
TCLP-Misc	Cyanide (total)	57-12-5	mg/Kg	0.14	J	47	0	0.66
TCLP-Misc.	Flashpoint	Q376	°F	>180		NA	NA	<180
TCLP- Metals	Barium	7440-39-3	mg/L	0.43	J,B	NA	NA	100
TCLP- Metals	Cadmium	7440-43-9	mg/L	0.00077	J	NA	NA	1.0
TCLP- Metals	Chromium	7440-47-3	mg/L	0.0023	J	NA	NA	5.0
TCLP- Metals	Lead	7439-92-1	mg/L	0.0023	J	NA	NA	5.0

Notes:
 * The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1 - Maximum Concentration of Contaminants for Toxicity Characteristic (40 *CFR* 261.24), and Table 8-2 - Maximum Concentration of Hazardous Waste Characterization Analytes (40 *CFR* 261.21-23).
Bold concentrations exceed a regulatory limit.
 J = estimated result. Result is less than reporting limit.
 B = method blank contamination.
 NA = not applicable.

ATTACHMENT 1.
LABORATORY ANALYTICAL DATA SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 240-10866-1
Client Project/Site: RVAAP (OH) - IDW

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

Attn: Mr. Erik Corbin



Authorized for release by:
5/30/2012 8:36:20 AM

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com

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

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





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Definitions/Glossary

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

TestAmerica Job ID: 240-10866-1

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
B	Compound was found in the blank and sample.

GC Semi VOA

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

HPLC

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

Metals

Qualifier	Qualifier Description
A	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

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

Glossary

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

Case Narrative

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

TestAmerica Job ID: 240-10866-1

Job ID: 240-10866-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Environmental Quality Mgt., Inc.

Project: RVAAP (OH) - IDW

Report Number: 240-10866-1

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

The 8330 Explosives, Nitrocellulose as N, and UV/HPLC-SOP Nitroguanidine analysis were performed at the TestAmerica West Sacramento Laboratory.

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

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

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

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

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

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

RECEIPT

The samples were received on 05/02/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.0 C.

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-3) was analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 05/09/2012 and analyzed on 05/10/2012.

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

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-3) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/04/2012.

Several analytes were detected in method blank MB 240-42797/7 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above

Case Narrative

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Laboratory: TestAmerica Canton (Continued)

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

Due to poor purging problems, there was no MS/MSD associated with QC Batch 42797.

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

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample TRIP BLANK (240-10866-2) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/09/2012.

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

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 05/07/2012, prepared on 05/08/2012 and analyzed on 05/10/2012.

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

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/03/2012 and analyzed on 05/07/2012.

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

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-42667/10-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Benzoic acid failed the recovery criteria low for LCS 240-42667/11-A. Benzoic Acid has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

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

TCLP CHLORINATED PESTICIDES

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/ 8081A. The samples were leached on 05/07/2012, prepared on 05/08/2012 and analyzed on 05/09/2012.

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

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

CHLORINATED PESTICIDES

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 05/08/2012 and analyzed on 05/11/2012.

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

Sample FWG-IDW-SBCOMP2-SO (240-10866-1)[2X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

Case Narrative

Client: Environmental Quality Mgt., Inc.
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Laboratory: TestAmerica Canton (Continued)

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

POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 05/08/2012 and analyzed on 05/10/2012.

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

The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur:
FWG-IDW-SBCOMP2-SO. Lot # S65830

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

TCLP METALS (ICP)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 05/07/2012, prepared on 05/08/2012 and analyzed on 05/09/2012.

Barium was detected in leach blank LB 240-43074/1-C and method blank MB 240-43166/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

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

TOTAL METALS (ICP)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 05/07/2012 and analyzed on 05/08/2012.

Magnesium and Potassium were detected in method blank MB 240-43033/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

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

TOTAL METALS (ICPMS)

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/07/2012 and analyzed on 05/09/2012.

Iron was detected in method blank MB 240-43033/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Sodium, Thallium and Zinc were detected in method blank MB 240-43033/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

The continuing calibration verification (CCV) for Antimony associated with batch 43264 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.
FWG-IDW-SBCOMP2-SO

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

TCLP MERCURY

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 05/07/2012, prepared on 05/08/2012 and analyzed on 05/09/2012.

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Client: Environmental Quality Mgt., Inc.
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Laboratory: TestAmerica Canton (Continued)

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

TOTAL MERCURY

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 05/08/2012 and analyzed on 05/09/2012.

Mercury was detected in method blank MB 240-43185/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

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

FLASHPOINT

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 05/08/2012.

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

TOTAL AND AMENABLE CYANIDE

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for total and amenable cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 05/03/2012.

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

SULFIDE

Sample FWG-IDW-SBCOMP2-SO (240-10866-1) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 05/03/2012.

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

PERCENT SOLIDS

Samples FWG-IDW-SBCOMP2-SO (240-10866-1) and FWG-IDW-SBCOMP2-SO (240-10866-3) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 05/03/2012.

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

Case Narrative

TestAmerica West Sacramento Project Number G2E040501

SOLID, Nitrocellulose

Sample(s): 1

There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

Sample(s): 1

The matrix spikes, which were performed on sample 1, have low recoveries due to possible matrix interferences. Since the laboratory control sample met acceptance criteria, no corrective action was performed.

There were no other anomalies associated with this project.

Method Summary

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

TestAmerica Job ID: 240-10866-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
8081A	Organochlorine Pesticides (GC)	SW846	TAL NC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
8330 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
8330B	Nitroaromatics & Nitramines: Explosives (8330B)	SW846	TAL WSC
6010B	Metals (ICP)	SW846	TAL NC
6020	Metals (ICP/MS)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC
7471A	Mercury (CVAA)	SW846	TAL NC
1010	Ignitability, Pinsky-Martens Closed-Cup Method	SW846	TAL NC
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
D 2216-90	Moisture, Percent (D2216-90) - AFCEE	ASTM	TAL WSC
Moisture	Percent Moisture	EPA	TAL NC
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

ASTM = ASTM international

EPA = US Environmental Protection Agency

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

TAL-SOP = TAL-SOP

Laboratory References:

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

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

Sample Summary

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

TestAmerica Job ID: 240-10866-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-10866-1	FWG-IDW-SBCOMP2-SO	Solid	05/01/12 15:00	05/02/12 07:00
240-10866-2	TRIP BLANK	Water	05/01/12 08:00	05/02/12 07:00
240-10866-3	FWG-IDW-SBCOMP2-SO	Solid	05/01/12 15:00	05/02/12 07:00

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Detection Summary

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Anthracene	11		8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Benzo[a]anthracene	15		8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Benzo[b]fluoranthene	18		8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Benzo[k]fluoranthene	7.2	J	8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Fluoranthene	36		8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Fluorene	8.5		8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Chrysene	18		8.5	1.4	ug/Kg	1	*	*	8270C	Total/NA
Dibenzofuran	5.4	J	63	4.2	ug/Kg	1	*	*	8270C	Total/NA
Benzo[g,h,i]perylene	12		8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Benzo[a]pyrene	14		8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	8.3	J	8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
2-Methylnaphthalene	8.7		8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Pyrene	29		8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Phenanthrene	49		8.5	4.2	ug/Kg	1	*	*	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	42	J B	63	24	ug/Kg	1	*	*	8270C	Total/NA
Arsenic	12		1.2	0.35	mg/Kg	1	*	*	6010B	Total/NA
Chromium	14		0.58	0.23	mg/Kg	1	*	*	6010B	Total/NA
Cobalt	7.2		5.8	0.18	mg/Kg	1	*	*	6010B	Total/NA
Lead	9.7		0.35	0.22	mg/Kg	1	*	*	6010B	Total/NA
Vanadium	13		5.8	0.14	mg/Kg	1	*	*	6010B	Total/NA
Barium	36		23	0.082	mg/Kg	1	*	*	6010B	Total/NA
Calcium	8800		580	18	mg/Kg	1	*	*	6010B	Total/NA
Copper	15		2.9	0.85	mg/Kg	1	*	*	6010B	Total/NA
Magnesium	3600	B	580	5.9	mg/Kg	1	*	*	6010B	Total/NA
Manganese	290		1.7	0.085	mg/Kg	1	*	*	6010B	Total/NA
Nickel	18		4.6	0.31	mg/Kg	1	*	*	6010B	Total/NA
Potassium	1400	B	580	7.1	mg/Kg	1	*	*	6010B	Total/NA
Barium	0.43	J B	10	0.00067	mg/L	1			6010B	TCLP
Cadmium	0.00077	J	0.10	0.00066	mg/L	1			6010B	TCLP
Chromium	0.0023	J	0.50	0.0022	mg/L	1			6010B	TCLP
Lead	0.0023	J	0.50	0.0019	mg/L	1			6010B	TCLP
Aluminum	7300		5.8	1.5	mg/Kg	1	*	*	6020	Total/NA
Antimony	0.072	J ^	0.23	0.028	mg/Kg	1	*	*	6020	Total/NA
Beryllium	0.39		0.12	0.054	mg/Kg	1	*	*	6020	Total/NA
Cadmium	0.062	J	0.12	0.0090	mg/Kg	1	*	*	6020	Total/NA
Iron	19000	B	12	1.2	mg/Kg	1	*	*	6020	Total/NA
Sodium	260	B	120	2.8	mg/Kg	1	*	*	6020	Total/NA
Thallium	0.10	J B	0.23	0.015	mg/Kg	1	*	*	6020	Total/NA
Zinc	48	B	2.3	0.23	mg/Kg	1	*	*	6020	Total/NA
Mercury	0.023	J B	0.11	0.017	mg/Kg	1	*	*	7471A	Total/NA
Flashpoint	>180		1.00	1.00	Degrees F	1			1010	Total/NA
Cyanide, Total	0.14	J	0.65	0.13	mg/Kg	1	*	*	9012A	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-10866-2

No Detections

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2-Butanone (MEK)	35		25	1.7	ug/Kg	1	*	*	8260B	Total/NA
Acetone	34	B	25	7.8	ug/Kg	1	*	*	8260B	Total/NA
Carbon disulfide	2.4	J	6.2	0.54	ug/Kg	1	*	*	8260B	Total/NA
Methylene Chloride	2.0	J B	6.2	0.83	ug/Kg	1	*	*	8260B	Total/NA

Detection Summary

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO (Continued)

Lab Sample ID: 240-10866-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	100		6.2	0.33	ug/Kg	1	*	8260B	Total/NA

Client Sample Results

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-1

Date Collected: 05/01/12 15:00

Matrix: Solid

Date Received: 05/02/12 07:00

Percent Solids: 78.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	8.5	U	8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Acenaphthylene	8.5	U	8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Anthracene	11		8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Benzo[a]anthracene	15		8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Benzoic acid	840	U *	840	420	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Benzo[b]fluoranthene	18		8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Benzo[k]fluoranthene	7.2	J	8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Benzyl alcohol	420	U	420	27	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Bis(2-chloroethoxy)methane	130	U	130	28	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Bis(2-chloroethyl)ether	130	U	130	2.5	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
4-Bromophenyl phenyl ether	63	U	63	17	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Butyl benzyl phthalate	63	U	63	13	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2,4-Dimethylphenol	190	U	190	25	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Dimethyl phthalate	63	U	63	22	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
4,6-Dinitro-2-methylphenol	190	U	190	100	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2,4-Dinitrophenol	420	U	420	100	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2,4-Dinitrotoluene	250	U	250	34	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2,6-Dinitrotoluene	250	U	250	27	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Fluoranthene	36		8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Fluorene	8.5		8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Hexachlorobenzene	8.5	U	8.5	2.7	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Hexachlorobutadiene	63	U	63	34	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Hexachlorocyclopentadiene	420	U	420	34	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Hexachloroethane	63	U	63	11	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
N-Nitrosodiphenylamine	63	U	63	27	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
N-Nitrosodi-n-propylamine	63	U	63	34	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
1,4-Dichlorobenzene	63	U	63	25	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2-Chloronaphthalene	63	U	63	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2-Chlorophenol	63	U	63	34	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
4-Chlorophenyl phenyl ether	63	U	63	17	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Chrysene	18		8.5	1.4	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Dibenz(a,h)anthracene	8.5	U	8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Dibenzofuran	5.4	J	63	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Benzo[g,h,i]perylene	12		8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Benzo[a]pyrene	14		8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Di-n-butyl phthalate	63	U	63	19	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
1,2-Dichlorobenzene	63	U	63	12	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
1,3-Dichlorobenzene	63	U	63	14	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
3,3'-Dichlorobenzidine	130	U	130	23	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2,4-Dichlorophenol	190	U	190	25	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Diethyl phthalate	63	U	63	20	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Indeno[1,2,3-cd]pyrene	8.3	J	8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Isophorone	63	U	63	17	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2-Methylnaphthalene	8.7		8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2-Methylphenol	250	U	250	100	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Naphthalene	8.5	U	8.5	4.2	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2-Nitroaniline	250	U	250	12	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
3-Nitroaniline	250	U	250	20	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
4-Nitroaniline	250	U	250	33	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
Nitrobenzene	130	U	130	2.8	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1
2-Nitrophenol	63	U	63	34	ug/Kg	*	05/03/12 12:12	05/07/12 20:07	1

Client Sample Results

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-1

Date Collected: 05/01/12 15:00

Matrix: Solid

Date Received: 05/02/12 07:00

Percent Solids: 78.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	420	U	420	100	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
Pyrene	29		8.5	4.2	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
Pentachlorophenol	190	U	190	100	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
Phenanthrene	49		8.5	4.2	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
1,2,4-Trichlorobenzene	63	U	63	34	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
2,4,5-Trichlorophenol	190	U	190	32	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
2,4,6-Trichlorophenol	190	U	190	100	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
Phenol	63	U	63	34	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
Carbazole	63	U	63	34	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
4-Chloroaniline	190	U	190	22	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
3 & 4 Methylphenol	510	U	510	25	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
Bis(2-ethylhexyl) phthalate	42	J B	63	24	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
Di-n-octyl phthalate	63	U	63	34	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
4-Chloro-3-methylphenol	190	U	190	27	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
2,2'-oxybis[1-chloropropane]	130	U	130	12	ug/Kg	☼	05/03/12 12:12	05/07/12 20:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	57		34 - 110				05/03/12 12:12	05/07/12 20:07	1
2-Fluorophenol (Surr)	62		26 - 110				05/03/12 12:12	05/07/12 20:07	1
Nitrobenzene-d5 (Surr)	52		24 - 112				05/03/12 12:12	05/07/12 20:07	1
Terphenyl-d14 (Surr)	69		41 - 119				05/03/12 12:12	05/07/12 20:07	1
2,4,6-Tribromophenol (Surr)	32		10 - 118				05/03/12 12:12	05/07/12 20:07	1
Phenol-d5 (Surr)	63		28 - 110				05/03/12 12:12	05/07/12 20:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		05/08/12 08:55	05/10/12 14:09	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		05/08/12 08:55	05/10/12 14:09	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		05/08/12 08:55	05/10/12 14:09	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		05/08/12 08:55	05/10/12 14:09	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		05/08/12 08:55	05/10/12 14:09	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		05/08/12 08:55	05/10/12 14:09	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		05/08/12 08:55	05/10/12 14:09	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		05/08/12 08:55	05/10/12 14:09	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		05/08/12 08:55	05/10/12 14:09	1
Nitrobenzene	0.0040	U	0.0040	0.00040	mg/L		05/08/12 08:55	05/10/12 14:09	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		05/08/12 08:55	05/10/12 14:09	1
Pyridine	0.020	U	0.020	0.00035	mg/L		05/08/12 08:55	05/10/12 14:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	70		22 - 110				05/08/12 08:55	05/10/12 14:09	1
2-Fluorophenol (Surr)	74		10 - 110				05/08/12 08:55	05/10/12 14:09	1
2,4,6-Tribromophenol (Surr)	69		17 - 117				05/08/12 08:55	05/10/12 14:09	1
Nitrobenzene-d5 (Surr)	81		29 - 111				05/08/12 08:55	05/10/12 14:09	1
Phenol-d5 (Surr)	66		10 - 110				05/08/12 08:55	05/10/12 14:09	1
Terphenyl-d14 (Surr)	80		40 - 119				05/08/12 08:55	05/10/12 14:09	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	4.3	U	4.3	1.6	ug/Kg	☼	05/08/12 09:33	05/11/12 04:39	2
4,4'-DDE	4.3	U	4.3	0.99	ug/Kg	☼	05/08/12 09:33	05/11/12 04:39	2
4,4'-DDT	4.3	U	4.3	1.6	ug/Kg	☼	05/08/12 09:33	05/11/12 04:39	2

Client Sample Results

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-1

Date Collected: 05/01/12 15:00

Matrix: Solid

Date Received: 05/02/12 07:00

Percent Solids: 78.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	4.3	U	4.3	3.0	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
alpha-BHC	4.3	U	4.3	1.9	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
alpha-Chlordane	4.3	U	4.3	2.4	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
beta-BHC	4.3	U	4.3	2.8	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
delta-BHC	4.3	U	4.3	3.0	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Dieidrin	4.3	U	4.3	1.2	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Endosulfan I	4.3	U	4.3	1.3	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Endosulfan II	4.3	U	4.3	2.1	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Endosulfan sulfate	4.3	U	4.3	2.2	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Endrin	4.3	U	4.3	1.3	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Endrin aldehyde	4.3	U	4.3	2.5	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Endrin ketone	4.3	U	4.3	1.6	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
gamma-BHC (Lindane)	4.3	U	4.3	1.9	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
gamma-Chlordane	4.3	U	4.3	1.1	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Heptachlor	4.3	U	4.3	2.8	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Heptachlor epoxide	4.3	U	4.3	2.0	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Methoxychlor	8.4	U	8.4	3.8	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Toxaphene	170	U	170	48	ug/Kg	*	05/08/12 09:33	05/11/12 04:39	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	94		32 - 175				05/08/12 09:33	05/11/12 04:39	2
DCB Decachlorobiphenyl	85		32 - 175				05/08/12 09:33	05/11/12 04:39	2
Tetrachloro-m-xylene	77		24 - 150				05/08/12 09:33	05/11/12 04:39	2
Tetrachloro-m-xylene	79		24 - 150				05/08/12 09:33	05/11/12 04:39	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		05/08/12 08:58	05/09/12 09:32	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		05/08/12 08:58	05/09/12 09:32	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		05/08/12 08:58	05/09/12 09:32	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		05/08/12 08:58	05/09/12 09:32	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		05/08/12 08:58	05/09/12 09:32	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		05/08/12 08:58	05/09/12 09:32	1
Toxaphene	0.048	U	0.048	0.000077	mg/L		05/08/12 08:58	05/09/12 09:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		46 - 122				05/08/12 08:58	05/09/12 09:32	1
Tetrachloro-m-xylene	82		46 - 122				05/08/12 08:58	05/09/12 09:32	1
DCB Decachlorobiphenyl	90		34 - 141				05/08/12 08:58	05/09/12 09:32	1
DCB Decachlorobiphenyl	92		34 - 141				05/08/12 08:58	05/09/12 09:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	42	U	42	27	ug/Kg	*	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1221	42	U	42	20	ug/Kg	*	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1232	42	U	42	18	ug/Kg	*	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1242	42	U	42	16	ug/Kg	*	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1248	42	U	42	22	ug/Kg	*	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1254	42	U	42	22	ug/Kg	*	05/08/12 09:22	05/10/12 04:29	1
Aroclor-1260	42	U	42	22	ug/Kg	*	05/08/12 09:22	05/10/12 04:29	1

Client Sample Results

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-1

Date Collected: 05/01/12 15:00

Matrix: Solid

Date Received: 05/02/12 07:00

Percent Solids: 78.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		29 - 151	05/08/12 09:22	05/10/12 04:29	1
DCB Decachlorobiphenyl	58		14 - 163	05/08/12 09:22	05/10/12 04:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	0.25	U	0.25	0.020	mg/kg		05/10/12 10:00	05/22/12 16:08	1.01

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.24	U	0.24	0.0096	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
1,3-Dinitrobenzene	0.24	U	0.24	0.0040	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
2,4,6-Trinitrotoluene	0.24	U	0.24	0.019	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
2,4-Dinitrotoluene	0.24	U	0.24	0.0051	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
2,6-Dinitrotoluene	0.24	U	0.24	0.0070	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
2-Amino-4,6-dinitrotoluene	0.24	U	0.24	0.012	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
2-Nitrotoluene	0.24	U	0.24	0.012	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
3-Nitrotoluene	0.24	U	0.24	0.015	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
4-Amino-2,6-dinitrotoluene	0.24	U	0.24	0.0096	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
4-Nitrotoluene	0.24	U	0.24	0.017	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
HMX	0.24	U	0.24	0.012	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
Nitrobenzene	0.24	U	0.24	0.017	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
Nitroglycerin	0.48	U	0.48	0.014	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
PETN	0.48	U	0.48	0.024	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
RDX	0.24	U	0.24	0.012	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96
Tetryl	0.24	U	0.24	0.0096	mg/kg		05/10/12 10:00	05/19/12 21:08	0.96

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	100		75 - 115	05/10/12 10:00	05/19/12 21:08	0.96

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		1.2	0.35	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Chromium	14		0.58	0.23	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Cobalt	7.2		5.8	0.18	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Lead	9.7		0.35	0.22	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Selenium	0.58	U	0.58	0.52	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Silver	0.58	U	0.58	0.12	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Vanadium	13		5.8	0.14	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Barium	36		23	0.082	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Calcium	8800		580	18	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Copper	15		2.9	0.85	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Magnesium	3600	B	580	5.9	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Manganese	290		1.7	0.085	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Nickel	18		4.6	0.31	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1
Potassium	1400	B	580	7.1	mg/Kg	*	05/07/12 11:28	05/08/12 22:06	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.0032	mg/L		05/08/12 10:18	05/09/12 16:01	1
Barium	0.43	J B	10	0.00067	mg/L		05/08/12 10:18	05/09/12 16:01	1
Cadmium	0.00077	J	0.10	0.00066	mg/L		05/08/12 10:18	05/09/12 16:01	1
Chromium	0.0023	J	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 16:01	1
Lead	0.0023	J	0.50	0.0019	mg/L		05/08/12 10:18	05/09/12 16:01	1

Client Sample Results

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-1

Date Collected: 05/01/12 15:00

Matrix: Solid

Date Received: 05/02/12 07:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.25	U	0.25	0.0041	mg/L		05/08/12 10:18	05/09/12 16:01	1
Silver	0.50	U	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 16:01	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7300		5.8	1.5	mg/Kg	*	05/07/12 11:28	05/09/12 01:43	1
Antimony	0.072	J ^	0.23	0.028	mg/Kg	*	05/07/12 11:28	05/09/12 01:43	1
Beryllium	0.39		0.12	0.054	mg/Kg	*	05/07/12 11:28	05/09/12 01:43	1
Cadmium	0.062	J	0.12	0.0090	mg/Kg	*	05/07/12 11:28	05/09/12 01:43	1
Iron	19000	B	12	1.2	mg/Kg	*	05/07/12 11:28	05/09/12 01:43	1
Sodium	260	B	120	2.8	mg/Kg	*	05/07/12 11:28	05/09/12 01:43	1
Thallium	0.10	J B	0.23	0.015	mg/Kg	*	05/07/12 11:28	05/09/12 01:43	1
Zinc	48	B	2.3	0.23	mg/Kg	*	05/07/12 11:28	05/09/12 01:43	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		05/08/12 14:30	05/09/12 11:35	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.023	J B	0.11	0.017	mg/Kg	*	05/08/12 13:55	05/09/12 11:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>180		1.00	1.00	Degrees F			05/08/12 12:28	1
Cyanide, Total	0.14	J	0.65	0.13	mg/Kg	*	05/03/12 13:00	05/03/12 13:36	1
Sulfide	38	U	38	28	mg/Kg	*	05/03/12 11:53	05/03/12 15:13	1
Nitrocellulose	6.8	U	6.8	1.1	mg/kg	*	05/10/12 06:00	05/15/12 14:39	1

Client Sample Results

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-10866-2

Date Collected: 05/01/12 08:00

Matrix: Water

Date Received: 05/02/12 07:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/09/12 23:37	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			05/09/12 23:37	1
Benzene	1.0	U	1.0	0.13	ug/L			05/09/12 23:37	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			05/09/12 23:37	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			05/09/12 23:37	1
Chloroform	1.0	U	1.0	0.16	ug/L			05/09/12 23:37	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			05/09/12 23:37	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			05/09/12 23:37	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			05/09/12 23:37	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			05/09/12 23:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		63 - 129					05/09/12 23:37	1
4-Bromofluorobenzene (Surr)	96		66 - 117					05/09/12 23:37	1
Toluene-d8 (Surr)	92		74 - 115					05/09/12 23:37	1
Dibromofluoromethane (Surr)	97		75 - 121					05/09/12 23:37	1

Client Sample Results

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-3

Date Collected: 05/01/12 15:00

Matrix: Solid

Date Received: 05/02/12 07:00

Percent Solids: 81.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	6.2	U	6.2	0.69	ug/Kg	*		05/04/12 22:01	1
1,1,2,2-Tetrachloroethane	6.2	U	6.2	0.42	ug/Kg	*		05/04/12 22:01	1
1,1,2-Trichloroethane	6.2	U	6.2	0.48	ug/Kg	*		05/04/12 22:01	1
1,1-Dichloroethane	6.2	U	6.2	0.44	ug/Kg	*		05/04/12 22:01	1
1,1-Dichloroethene	6.2	U	6.2	0.64	ug/Kg	*		05/04/12 22:01	1
1,2-Dichloroethane	6.2	U	6.2	0.42	ug/Kg	*		05/04/12 22:01	1
1,2-Dichloroethene, Total	12	U	12	0.95	ug/Kg	*		05/04/12 22:01	1
1,2-Dichloropropane	6.2	U	6.2	0.85	ug/Kg	*		05/04/12 22:01	1
2-Butanone (MEK)	35		25	1.7	ug/Kg	*		05/04/12 22:01	1
2-Hexanone	25	U	25	0.78	ug/Kg	*		05/04/12 22:01	1
4-Methyl-2-pentanone (MIBK)	25	U	25	0.67	ug/Kg	*		05/04/12 22:01	1
Acetone	34	B	25	7.8	ug/Kg	*		05/04/12 22:01	1
Benzene	6.2	U	6.2	0.28	ug/Kg	*		05/04/12 22:01	1
Bromoform	6.2	U	6.2	0.41	ug/Kg	*		05/04/12 22:01	1
Bromomethane	6.2	U	6.2	0.67	ug/Kg	*		05/04/12 22:01	1
Carbon disulfide	2.4	J	6.2	0.54	ug/Kg	*		05/04/12 22:01	1
Carbon tetrachloride	6.2	U	6.2	0.46	ug/Kg	*		05/04/12 22:01	1
Chlorobenzene	6.2	U	6.2	0.41	ug/Kg	*		05/04/12 22:01	1
Chloromethane	6.2	U	6.2	0.50	ug/Kg	*		05/04/12 22:01	1
cis-1,2-Dichloroethene	6.2	U	6.2	0.44	ug/Kg	*		05/04/12 22:01	1
cis-1,3-Dichloropropene	6.2	U	6.2	0.42	ug/Kg	*		05/04/12 22:01	1
Dibromochloromethane	6.2	U	6.2	0.68	ug/Kg	*		05/04/12 22:01	1
Bromodichloromethane	6.2	U	6.2	0.34	ug/Kg	*		05/04/12 22:01	1
Ethylbenzene	6.2	U	6.2	0.32	ug/Kg	*		05/04/12 22:01	1
Methylene Chloride	2.0	J B	6.2	0.83	ug/Kg	*		05/04/12 22:01	1
m-Xylene & p-Xylene	12	U	12	1.5	ug/Kg	*		05/04/12 22:01	1
o-Xylene	6.2	U	6.2	0.43	ug/Kg	*		05/04/12 22:01	1
Styrene	6.2	U	6.2	0.18	ug/Kg	*		05/04/12 22:01	1
Tetrachloroethene	6.2	U	6.2	0.64	ug/Kg	*		05/04/12 22:01	1
Toluene	100		6.2	0.33	ug/Kg	*		05/04/12 22:01	1
trans-1,2-Dichloroethene	6.2	U	6.2	0.50	ug/Kg	*		05/04/12 22:01	1
trans-1,3-Dichloropropene	6.2	U	6.2	0.67	ug/Kg	*		05/04/12 22:01	1
Trichloroethene	6.2	U	6.2	0.52	ug/Kg	*		05/04/12 22:01	1
Vinyl chloride	6.2	U	6.2	0.48	ug/Kg	*		05/04/12 22:01	1
Xylenes, Total	12	U	12	0.83	ug/Kg	*		05/04/12 22:01	1
Chloroform	6.2	U	6.2	0.36	ug/Kg	*		05/04/12 22:01	1
Bromochloromethane	6.2	U	6.2	0.87	ug/Kg	*		05/04/12 22:01	1
1,2-Dibromoethane	6.2	U	6.2	0.62	ug/Kg	*		05/04/12 22:01	1
Chloroethane	6.2	U	6.2	1.1	ug/Kg	*		05/04/12 22:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		67 - 125		05/04/12 22:01	1
1,2-Dichloroethane-d4 (Surr)	101		58 - 123		05/04/12 22:01	1
4-Bromofluorobenzene (Surr)	99		52 - 136		05/04/12 22:01	1
Dibromofluoromethane (Surr)	71		37 - 132		05/04/12 22:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			05/10/12 20:42	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			05/10/12 20:42	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			05/10/12 20:42	1

Client Sample Results

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-3

Date Collected: 05/01/12 15:00

Matrix: Solid

Date Received: 05/02/12 07:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0.025	0.0065	mg/L			05/10/12 20:42	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			05/10/12 20:42	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			05/10/12 20:42	1
Chloroform	0.025	U	0.025	0.0080	mg/L			05/10/12 20:42	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			05/10/12 20:42	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			05/10/12 20:42	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			05/10/12 20:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121					05/10/12 20:42	1
4-Bromofluorobenzene (Surr)	92		70 - 124					05/10/12 20:42	1
Toluene-d8 (Surr)	100		90 - 115					05/10/12 20:42	1
Dibromofluoromethane (Surr)	109		84 - 128					05/10/12 20:42	1

Surrogate Summary

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

TestAmerica Job ID: 240-10866-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (67-125)	12DCE (58-123)	BFB (52-136)	DBFM (37-132)
240-10866-3	FWG-IDW-SBCOMP2-SO	97	101	99	71
LCS 240-42797/5	Lab Control Sample	90	100	93	99
MB 240-42797/7	Method Blank	89	101	88	90

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	TOL (90-115)	BFB (70-124)	DBFM (84-128)
LCS 240-43615/4	Lab Control Sample	107	111	98	119

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (90-115)	DBFM (84-128)
240-10866-3	FWG-IDW-SBCOMP2-SO	98	92	100	109
240-10866-3 MS	FWG-IDW-SBCOMP2-SO	93	91	100	108
240-10866-3 MSD	FWG-IDW-SBCOMP2-SO	98	99	104	104
LB 240-43416/1-A MB	Method Blank	95	91	100	103

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (63-129)	BFB (66-117)	TOL (74-115)	DBFM (75-121)
240-10866-2	TRIP BLANK	91	96	92	97
LCS 240-43408/10	Lab Control Sample	97	99	93	101
MB 240-43408/11	Method Blank	98	98	100	92

Surrogate Legend

Surrogate Summary

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

TestAmerica Job ID: 240-10866-1

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (34-110)	2FP (26-110)	NBZ (24-112)	TPH (41-119)	TBP (10-118)	PHL (28-110)
240-10866-1	FWG-IDW-SBCOMP2-SO	57	62	52	69	32	63
LCS 240-42667/11-A	Lab Control Sample	60	66	60	80	62	66
MB 240-42667/10-A	Method Blank	52	59	53	69	37	58

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
PHL = Phenol-d5 (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
LCS 240-43139/12-A	Lab Control Sample	72	71	71	75	62	82
MB 240-43139/11-A	Method Blank	72	73	62	76	69	81

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

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

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
240-10866-1	FWG-IDW-SBCOMP2-SO	70	74	69	81	66	80

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Surrogate Summary

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

TestAmerica Job ID: 240-10866-1

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (32-175)	DCB2 (32-175)	TCX1 (24-150)	TCX2 (24-150)
240-10866-1	FWG-IDW-SBCOMP2-SO	94	85	77	79
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	132	102	117	87
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	124	102	76	83
LCS 240-43148/5-A	Lab Control Sample	103	84	75	101
MB 240-43148/4-A	Method Blank	97	98	78	82

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (34-141)	DCB2 (34-141)	TCX1 (46-122)	TCX2 (46-122)
LCS 240-43140/4-A	Lab Control Sample	104	95	78	86
MB 240-43140/3-A	Method Blank	98	101	77	88

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (46-122)	TCX2 (46-122)	DCB1 (34-141)	DCB2 (34-141)
240-10866-1	FWG-IDW-SBCOMP2-SO	73	82	90	92
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	79	85	99	100

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX2 (29-151)	DCB2 (14-163)
240-10866-1	FWG-IDW-SBCOMP2-SO	67	58
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	73	62
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	68	59
LCS 240-43146/23-A	Lab Control Sample	90	67
MB 240-43146/22-A	Method Blank	91	72

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Surrogate Summary

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

TestAmerica Job ID: 240-10866-1

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

Matrix: Solid

Prep Type: Total

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DNT (75-115)	
240-10866-1	FWG-IDW-SBCOMP2-SO	100	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	101	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	103	
G2E10000051B	Method Blank	100	
G2E10000051C	Lab Control Sample	103	

Surrogate Legend

DNT = 3,4-Dinitrotoluene

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: MB 240-427977

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 42797

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	5.0	U	5.0	0.56	ug/Kg			05/04/12 12:30	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.34	ug/Kg			05/04/12 12:30	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			05/04/12 12:30	1
1,1-Dichloroethane	5.0	U	5.0	0.36	ug/Kg			05/04/12 12:30	1
1,1-Dichloroethene	5.0	U	5.0	0.52	ug/Kg			05/04/12 12:30	1
1,2-Dichloroethane	5.0	U	5.0	0.34	ug/Kg			05/04/12 12:30	1
1,2-Dichloroethene, Total	10	U	10	0.77	ug/Kg			05/04/12 12:30	1
1,2-Dichloropropane	5.0	U	5.0	0.69	ug/Kg			05/04/12 12:30	1
2-Butanone (MEK)	20	U	20	1.4	ug/Kg			05/04/12 12:30	1
2-Hexanone	20	U	20	0.63	ug/Kg			05/04/12 12:30	1
4-Methyl-2-pentanone (MIBK)	0.567	J	20	0.54	ug/Kg			05/04/12 12:30	1
Acetone	9.68	J	20	6.3	ug/Kg			05/04/12 12:30	1
Benzene	5.0	U	5.0	0.23	ug/Kg			05/04/12 12:30	1
Bromoform	5.0	U	5.0	0.33	ug/Kg			05/04/12 12:30	1
Bromomethane	5.0	U	5.0	0.54	ug/Kg			05/04/12 12:30	1
Carbon disulfide	5.0	U	5.0	0.44	ug/Kg			05/04/12 12:30	1
Carbon tetrachloride	5.0	U	5.0	0.37	ug/Kg			05/04/12 12:30	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			05/04/12 12:30	1
Chloromethane	5.0	U	5.0	0.41	ug/Kg			05/04/12 12:30	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.36	ug/Kg			05/04/12 12:30	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.34	ug/Kg			05/04/12 12:30	1
Dibromochloromethane	5.0	U	5.0	0.55	ug/Kg			05/04/12 12:30	1
Bromodichloromethane	5.0	U	5.0	0.28	ug/Kg			05/04/12 12:30	1
Ethylbenzene	5.0	U	5.0	0.26	ug/Kg			05/04/12 12:30	1
Methylene Chloride	2.10	J	5.0	0.67	ug/Kg			05/04/12 12:30	1
m-Xylene & p-Xylene	10	U	10	1.2	ug/Kg			05/04/12 12:30	1
o-Xylene	5.0	U	5.0	0.35	ug/Kg			05/04/12 12:30	1
Styrene	0.171	J	5.0	0.15	ug/Kg			05/04/12 12:30	1
Tetrachloroethene	5.0	U	5.0	0.52	ug/Kg			05/04/12 12:30	1
Toluene	5.0	U	5.0	0.27	ug/Kg			05/04/12 12:30	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.41	ug/Kg			05/04/12 12:30	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.54	ug/Kg			05/04/12 12:30	1
Trichloroethene	5.0	U	5.0	0.42	ug/Kg			05/04/12 12:30	1
Vinyl chloride	5.0	U	5.0	0.39	ug/Kg			05/04/12 12:30	1
Xylenes, Total	10	U	10	0.67	ug/Kg			05/04/12 12:30	1
Chloroform	5.0	U	5.0	0.29	ug/Kg			05/04/12 12:30	1
Bromochloromethane	5.0	U	5.0	0.71	ug/Kg			05/04/12 12:30	1
1,2-Dibromoethane	5.0	U	5.0	0.50	ug/Kg			05/04/12 12:30	1
Chloroethane	5.0	U	5.0	0.86	ug/Kg			05/04/12 12:30	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	101		58 - 123		05/04/12 12:30	1
Toluene-d8 (Surr)	89		67 - 125		05/04/12 12:30	1
4-Bromofluorobenzene (Surr)	88		52 - 136		05/04/12 12:30	1
Dibromofluoromethane (Surr)	90		37 - 132		05/04/12 12:30	1

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: LCS 240-42797/5

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 42797

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1-Trichloroethane	50.0	49.7		ug/Kg		99	77 - 126	
1,1,2,2-Tetrachloroethane	50.0	49.5		ug/Kg		99	77 - 123	
1,1,2-Trichloroethane	50.0	50.3		ug/Kg		101	83 - 112	
1,1-Dichloroethane	50.0	52.7		ug/Kg		105	76 - 115	
1,1-Dichloroethene	50.0	57.9		ug/Kg		116	75 - 135	
1,2-Dichloroethane	50.0	52.4		ug/Kg		105	72 - 120	
1,2-Dichloroethene, Total	100	100		ug/Kg		100	78 - 115	
1,2-Dichloropropane	50.0	51.3		ug/Kg		103	87 - 113	
2-Butanone (MEK)	100	92.5		ug/Kg		93	52 - 131	
2-Hexanone	100	98.3		ug/Kg		98	64 - 136	
4-Methyl-2-pentanone (MIBK)	100	102		ug/Kg		102	67 - 135	
Acetone	100	107		ug/Kg		107	41 - 137	
Benzene	50.0	49.3		ug/Kg		99	79 - 112	
Bromoform	50.0	47.9		ug/Kg		96	62 - 133	
Bromomethane	50.0	53.1		ug/Kg		106	42 - 136	
Carbon disulfide	50.0	41.0		ug/Kg		82	62 - 146	
Carbon tetrachloride	50.0	50.3		ug/Kg		101	71 - 129	
Chlorobenzene	50.0	46.6		ug/Kg		93	78 - 110	
Chloromethane	50.0	42.5		ug/Kg		85	50 - 110	
cis-1,2-Dichloroethene	50.0	49.4		ug/Kg		99	76 - 113	
cis-1,3-Dichloropropene	50.0	44.5		ug/Kg		89	74 - 128	
Dibromochloromethane	50.0	48.0		ug/Kg		96	72 - 127	
Bromodichloromethane	50.0	48.2		ug/Kg		96	84 - 122	
Ethylbenzene	50.0	48.8		ug/Kg		98	79 - 117	
Methylene Chloride	50.0	49.7		ug/Kg		99	75 - 118	
m-Xylene & p-Xylene	100	96.0		ug/Kg		96	80 - 117	
o-Xylene	50.0	48.6		ug/Kg		97	80 - 120	
Styrene	50.0	49.9		ug/Kg		100	87 - 117	
Tetrachloroethene	50.0	49.9		ug/Kg		100	79 - 114	
Toluene	50.0	45.9		ug/Kg		92	75 - 111	
trans-1,2-Dichloroethene	50.0	50.9		ug/Kg		102	78 - 117	
trans-1,3-Dichloropropene	50.0	46.2		ug/Kg		92	73 - 131	
Trichloroethene	50.0	50.7		ug/Kg		101	79 - 113	
Vinyl chloride	50.0	47.5		ug/Kg		95	57 - 114	
Xylenes, Total	150	145		ug/Kg		96	80 - 118	
Chloroform	50.0	52.1		ug/Kg		104	77 - 114	
Bromochloromethane	50.0	50.2		ug/Kg		100	79 - 111	
1,2-Dibromoethane	50.0	52.2		ug/Kg		104	83 - 117	
Chloroethane	50.0	45.0		ug/Kg		90	58 - 117	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		58 - 123
Toluene-d8 (Surr)	90		67 - 125
4-Bromofluorobenzene (Surr)	93		52 - 136
Dibromofluoromethane (Surr)	99		37 - 132

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: MB 240-43408/11

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 43408

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethane	1.0	U	1.0	0.19	ug/L			05/09/12 20:14	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			05/09/12 20:14	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			05/09/12 20:14	1
Benzene	1.0	U	1.0	0.13	ug/L			05/09/12 20:14	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			05/09/12 20:14	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			05/09/12 20:14	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			05/09/12 20:14	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			05/09/12 20:14	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			05/09/12 20:14	1
Chloroform	1.0	U	1.0	0.16	ug/L			05/09/12 20:14	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	98		63 - 129		05/09/12 20:14	1
Toluene-d8 (Surr)	100		74 - 115		05/09/12 20:14	1
4-Bromofluorobenzene (Surr)	98		66 - 117		05/09/12 20:14	1
Dibromofluoromethane (Surr)	92		75 - 121		05/09/12 20:14	1

Lab Sample ID: LCS 240-43408/10

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 43408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	10.0	10.1		ug/L		101	71 - 127
2-Butanone (MEK)	20.0	18.0		ug/L		90	60 - 126
Benzene	10.0	10.1		ug/L		101	83 - 112
Carbon tetrachloride	10.0	9.49		ug/L		95	66 - 128
Chlorobenzene	10.0	9.64		ug/L		96	85 - 110
Tetrachloroethene	10.0	9.68		ug/L		97	79 - 114
Trichloroethene	10.0	10.1		ug/L		101	76 - 117
Vinyl chloride	10.0	9.63		ug/L		96	53 - 127
Chloroform	10.0	10.3		ug/L		103	79 - 117

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	97		63 - 129
Toluene-d8 (Surr)	93		74 - 115
4-Bromofluorobenzene (Surr)	99		66 - 117
Dibromofluoromethane (Surr)	101		75 - 121

Lab Sample ID: LCS 240-43615/4

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 43615

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	1.00	0.905		mg/L		91	81 - 114
2-Butanone (MEK)	2.00	2.02		mg/L		101	49 - 120
Benzene	1.00	0.965		mg/L		97	84 - 120
Carbon tetrachloride	1.00	1.11		mg/L		111	54 - 122

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: LCS 240-43615/4

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 43615

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Chlorobenzene	1.00	1.00		mg/L		100	86 - 111
Tetrachloroethene	1.00	0.970		mg/L		97	79 - 134
Trichloroethene	1.00	0.945		mg/L		95	78 - 130
Vinyl chloride	1.00	1.02		mg/L		102	56 - 111
Chloroform	1.00	0.930		mg/L		93	87 - 123

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	107		80 - 121
Toluene-d8 (Surr)	111		90 - 115
4-Bromofluorobenzene (Surr)	98		70 - 124
Dibromofluoromethane (Surr)	119		84 - 128

Lab Sample ID: LB 240-43416/1-A MB

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: TCLP

Analysis Batch: 43615

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			05/10/12 19:07	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			05/10/12 19:07	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			05/10/12 19:07	1
Benzene	0.025	U	0.025	0.0065	mg/L			05/10/12 19:07	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			05/10/12 19:07	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			05/10/12 19:07	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			05/10/12 19:07	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			05/10/12 19:07	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			05/10/12 19:07	1
Chloroform	0.025	U	0.025	0.0080	mg/L			05/10/12 19:07	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	95		80 - 121		05/10/12 19:07	1
Toluene-d8 (Surr)	100		90 - 115		05/10/12 19:07	1
4-Bromofluorobenzene (Surr)	91		70 - 124		05/10/12 19:07	1
Dibromofluoromethane (Surr)	103		84 - 128		05/10/12 19:07	1

Lab Sample ID: 240-10866-3 MS

Client Sample ID: FWG-IDW-SBCOMP2-SO

Matrix: Solid

Prep Type: TCLP

Analysis Batch: 43615

Analyte	Sample		Spike Added	MS		Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
1,1-Dichloroethene	0.025	U	1.00	1.07		mg/L		107	67 - 139
1,2-Dichloroethane	0.025	U	1.00	0.885		mg/L		89	80 - 115
2-Butanone (MEK)	0.25	U	2.00	1.83		mg/L		91	49 - 117
Benzene	0.025	U	1.00	0.925		mg/L		93	85 - 119
Carbon tetrachloride	0.025	U	1.00	1.01		mg/L		101	60 - 110
Chlorobenzene	0.025	U	1.00	0.910		mg/L		91	85 - 113
Tetrachloroethene	0.025	U	1.00	0.875		mg/L		88	74 - 138
Trichloroethene	0.025	U	1.00	0.960		mg/L		96	75 - 134
Vinyl chloride	0.025	U	1.00	0.960		mg/L		96	51 - 118
Chloroform	0.025	U	1.00	0.875		mg/L		88	86 - 124

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: 240-10866-3 MS
Matrix: Solid
Analysis Batch: 43615

Client Sample ID: FWG-IDW-SBCOMP2-SO
Prep Type: TCLP

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	93		80 - 121
Toluene-d8 (Surr)	100		90 - 115
4-Bromofluorobenzene (Surr)	91		70 - 124
Dibromofluoromethane (Surr)	108		84 - 128

Lab Sample ID: 240-10866-3 MSD
Matrix: Solid
Analysis Batch: 43615

Client Sample ID: FWG-IDW-SBCOMP2-SO
Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
				Result	Qualifier						
1,1-Dichloroethene	0.025	U	1.00	1.10		mg/L		110	67 - 139	2	30
1,2-Dichloroethane	0.025	U	1.00	0.910		mg/L		91	80 - 115	3	30
2-Butanone (MEK)	0.25	U	2.00	1.79		mg/L		89	49 - 117	2	30
Benzene	0.025	U	1.00	0.920		mg/L		92	85 - 119	1	30
Carbon tetrachloride	0.025	U	1.00	1.07		mg/L		107	60 - 110	6	30
Chlorobenzene	0.025	U	1.00	0.960		mg/L		96	85 - 113	5	30
Tetrachloroethene	0.025	U	1.00	0.965		mg/L		97	74 - 138	10	30
Trichloroethene	0.025	U	1.00	0.965		mg/L		97	75 - 134	1	30
Vinyl chloride	0.025	U	1.00	0.985		mg/L		99	51 - 118	3	30
Chloroform	0.025	U	1.00	0.925		mg/L		93	86 - 124	6	30

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
Toluene-d8 (Surr)	104		90 - 115
4-Bromofluorobenzene (Surr)	99		70 - 124
Dibromofluoromethane (Surr)	104		84 - 128

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

Lab Sample ID: MB 240-42667/10-A
Matrix: Solid
Analysis Batch: 42988

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42667

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Acenaphthylene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Anthracene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzo[a]anthracene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzoic acid	660	U	660	330	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzo[b]fluoranthene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzo[k]fluoranthene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzyl alcohol	330	U	330	21	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Bis(2-chloroethoxy)methane	100	U	100	22	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Bis(2-chloroethyl)ether	100	U	100	2.0	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
4-Bromophenyl phenyl ether	50	U	50	13	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Butyl benzyl phthalate	50	U	50	10	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2,4-Dimethylphenol	150	U	150	20	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Dimethyl phthalate	50	U	50	17	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
4,6-Dinitro-2-methylphenol	150	U	150	80	ug/Kg		05/03/12 12:12	05/07/12 11:29	1

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: MB 240-42667/10-A

Matrix: Solid

Analysis Batch: 42988

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42667

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4-Dinitrophenol	330	U	330	80	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2,4-Dinitrotoluene	200	U	200	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2,6-Dinitrotoluene	200	U	200	21	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Fluoranthene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Fluorene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Hexachlorobenzene	6.7	U	6.7	2.1	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Hexachlorobutadiene	50	U	50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Hexachlorocyclopentadiene	330	U	330	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Hexachloroethane	50	U	50	9.0	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
N-Nitrosodiphenylamine	50	U	50	21	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
N-Nitrosodi-n-propylamine	50	U	50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
1,4-Dichlorobenzene	50	U	50	20	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2-Chloronaphthalene	50	U	50	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2-Chlorophenol	50	U	50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
4-Chlorophenyl phenyl ether	50	U	50	13	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Chrysene	6.7	U	6.7	1.1	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Dibenz(a,h)anthracene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Dibenzofuran	50	U	50	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzo[g,h,i]perylene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Benzo[a]pyrene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Di-n-butyl phthalate	50	U	50	15	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
1,2-Dichlorobenzene	50	U	50	9.7	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
1,3-Dichlorobenzene	50	U	50	11	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
3,3'-Dichlorobenzidine	100	U	100	18	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2,4-Dichlorophenol	150	U	150	20	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Diethyl phthalate	50	U	50	16	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Indeno[1,2,3-cd]pyrene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Isophorone	50	U	50	13	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2-Methylnaphthalene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2-Methylphenol	200	U	200	80	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Naphthalene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2-Nitroaniline	200	U	200	9.1	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
3-Nitroaniline	200	U	200	16	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
4-Nitroaniline	200	U	200	26	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Nitrobenzene	100	U	100	2.2	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2-Nitrophenol	50	U	50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
4-Nitrophenol	330	U	330	80	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Pyrene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Pentachlorophenol	150	U	150	80	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Phenanthrene	6.7	U	6.7	3.3	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
1,2,4-Trichlorobenzene	50	U	50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2,4,5-Trichlorophenol	150	U	150	25	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
2,4,6-Trichlorophenol	150	U	150	80	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Phenol	50	U	50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Carbazole	50	U	50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
4-Chloroaniline	150	U	150	17	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
3 & 4 Methylphenol	400	U	400	20	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Bis(2-ethylhexyl) phthalate	20.3	J	50	19	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
Di-n-octyl phthalate	50	U	50	27	ug/Kg		05/03/12 12:12	05/07/12 11:29	1
4-Chloro-3-methylphenol	150	U	150	21	ug/Kg		05/03/12 12:12	05/07/12 11:29	1

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: MB 240-42667/10-A

Matrix: Solid

Analysis Batch: 42988

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42667

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2'-oxybis[1-chloropropane]	100	U	100	9.5	ug/Kg		05/03/12 12:12	05/07/12 11:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	52		34 - 110	05/03/12 12:12	05/07/12 11:29	1
2-Fluorophenol (Surr)	59		26 - 110	05/03/12 12:12	05/07/12 11:29	1
2,4,6-Tribromophenol (Surr)	37		10 - 118	05/03/12 12:12	05/07/12 11:29	1
Nitrobenzene-d5 (Surr)	53		24 - 112	05/03/12 12:12	05/07/12 11:29	1
Phenol-d5 (Surr)	58		28 - 110	05/03/12 12:12	05/07/12 11:29	1
Terphenyl-d14 (Surr)	69		41 - 119	05/03/12 12:12	05/07/12 11:29	1

Lab Sample ID: LCS 240-42667/11-A

Matrix: Solid

Analysis Batch: 42988

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42667

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acenaphthene	667	425		ug/Kg		64	46 - 110
Acenaphthylene	667	425		ug/Kg		64	47 - 110
Anthracene	667	461		ug/Kg		69	56 - 111
Benzo[a]anthracene	667	452		ug/Kg		68	58 - 111
Benzoic acid	667	660	U *	ug/Kg		9	10 - 124
Benzo[b]fluoranthene	667	458		ug/Kg		69	43 - 124
Benzo[k]fluoranthene	667	484		ug/Kg		73	38 - 122
Benzyl alcohol	667	443		ug/Kg		66	10 - 130
Bis(2-chloroethoxy)methane	667	422		ug/Kg		63	42 - 110
Bis(2-chloroethyl)ether	667	418		ug/Kg		63	41 - 110
4-Bromophenyl phenyl ether	667	454		ug/Kg		68	53 - 112
Butyl benzyl phthalate	667	511		ug/Kg		77	57 - 121
2,4-Dimethylphenol	667	336		ug/Kg		50	28 - 110
Dimethyl phthalate	667	477		ug/Kg		72	54 - 112
4,6-Dinitro-2-methylphenol	667	422		ug/Kg		63	21 - 110
2,4-Dinitrophenol	667	288	J	ug/Kg		43	10 - 110
2,4-Dinitrotoluene	667	487		ug/Kg		73	55 - 116
2,6-Dinitrotoluene	667	491		ug/Kg		74	54 - 115
Fluoranthene	667	478		ug/Kg		72	55 - 118
Fluorene	667	443		ug/Kg		66	51 - 110
Hexachlorobenzene	667	452		ug/Kg		68	51 - 110
Hexachlorobutadiene	667	430		ug/Kg		64	39 - 110
Hexachlorocyclopentadiene	667	389		ug/Kg		58	10 - 110
Hexachloroethane	667	403		ug/Kg		60	38 - 110
N-Nitrosodiphenylamine	667	461		ug/Kg		69	54 - 112
N-Nitrosodi-n-propylamine	667	449		ug/Kg		67	40 - 114
1,4-Dichlorobenzene	667	403		ug/Kg		60	38 - 110
2-Chloronaphthalene	667	426		ug/Kg		64	46 - 110
2-Chlorophenol	667	431		ug/Kg		65	39 - 110
4-Chlorophenyl phenyl ether	667	459		ug/Kg		69	53 - 110
Chrysene	667	474		ug/Kg		71	56 - 111
Dibenz(a,h)anthracene	667	503		ug/Kg		75	45 - 122
Dibenzofuran	667	424		ug/Kg		64	50 - 110
Benzo[g,h,i]perylene	667	503		ug/Kg		75	44 - 120

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: LCS 240-42667/11-A			Client Sample ID: Lab Control Sample						
Matrix: Solid			Prep Type: Total/NA						
Analysis Batch: 42988			Prep Batch: 42667						
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzo[a]pyrene	667	441		ug/Kg		66	44 - 115		
Di-n-butyl phthalate	667	519		ug/Kg		78	57 - 119		
1,2-Dichlorobenzene	667	411		ug/Kg		62	42 - 110		
1,3-Dichlorobenzene	667	403		ug/Kg		60	40 - 110		
3,3'-Dichlorobenzidine	667	285		ug/Kg		43	31 - 110		
2,4-Dichlorophenol	667	433		ug/Kg		65	40 - 110		
Diethyl phthalate	667	494		ug/Kg		74	55 - 114		
Indeno[1,2,3-cd]pyrene	667	496		ug/Kg		74	45 - 121		
Isophorone	667	421		ug/Kg		63	46 - 117		
2-Methylnaphthalene	667	412		ug/Kg		62	46 - 110		
2-Methylphenol	667	421		ug/Kg		63	36 - 110		
Naphthalene	667	405		ug/Kg		61	42 - 110		
2-Nitroaniline	667	481		ug/Kg		72	47 - 124		
3-Nitroaniline	667	442		ug/Kg		66	44 - 110		
4-Nitroaniline	667	495		ug/Kg		74	50 - 110		
Nitrobenzene	667	436		ug/Kg		65	40 - 110		
2-Nitrophenol	667	411		ug/Kg		62	35 - 110		
4-Nitrophenol	667	424		ug/Kg		64	24 - 117		
Pyrene	667	479		ug/Kg		72	58 - 113		
Pentachlorophenol	667	345		ug/Kg		52	10 - 110		
Phenanthrene	667	453		ug/Kg		68	54 - 110		
1,2,4-Trichlorobenzene	667	415		ug/Kg		62	43 - 110		
2,4,5-Trichlorophenol	667	486		ug/Kg		73	42 - 110		
2,4,6-Trichlorophenol	667	405		ug/Kg		61	37 - 110		
Phenol	667	439		ug/Kg		66	39 - 110		
Carbazole	667	485		ug/Kg		73	56 - 115		
4-Chloroaniline	667	347		ug/Kg		52	25 - 110		
3 & 4 Methylphenol	1330	913		ug/Kg		69	40 - 110		
Bis(2-ethylhexyl) phthalate	667	518		ug/Kg		78	56 - 123		
Di-n-octyl phthalate	667	500		ug/Kg		75	45 - 123		
4-Chloro-3-methylphenol	667	491		ug/Kg		74	42 - 110		
2,2'-oxybis[1-chloropropane]	667	419		ug/Kg		63	36 - 116		

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	60		34 - 110
2-Fluorophenol (Surr)	66		26 - 110
2,4,6-Tribromophenol (Surr)	62		10 - 118
Nitrobenzene-d5 (Surr)	60		24 - 112
Phenol-d5 (Surr)	66		28 - 110
Terphenyl-d14 (Surr)	80		41 - 119

Lab Sample ID: MB 240-43139/11-A			Client Sample ID: Method Blank						
Matrix: Solid			Prep Type: Total/NA						
Analysis Batch: 43457			Prep Batch: 43139						
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	0.020	U	0.020	0.00035	mg/L		05/08/12 08:55	05/10/12 10:10	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		05/08/12 08:55	05/10/12 10:10	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		05/08/12 08:55	05/10/12 10:10	1

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: MB 240-43139/11-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 43457						Prep Batch: 43139			
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		05/08/12 08:55	05/10/12 10:10	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		05/08/12 08:55	05/10/12 10:10	1
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		05/08/12 08:55	05/10/12 10:10	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		05/08/12 08:55	05/10/12 10:10	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		05/08/12 08:55	05/10/12 10:10	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		05/08/12 08:55	05/10/12 10:10	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		05/08/12 08:55	05/10/12 10:10	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		05/08/12 08:55	05/10/12 10:10	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		05/08/12 08:55	05/10/12 10:10	1
Surrogate	MB MB		Limits			D	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
2-Fluorobiphenyl (Surr)	72		22 - 110				05/08/12 08:55	05/10/12 10:10	1
2-Fluorophenol (Surr)	73		10 - 110				05/08/12 08:55	05/10/12 10:10	1
2,4,6-Tribromophenol (Surr)	62		17 - 117				05/08/12 08:55	05/10/12 10:10	1
Nitrobenzene-d5 (Surr)	76		29 - 111				05/08/12 08:55	05/10/12 10:10	1
Phenol-d5 (Surr)	69		10 - 110				05/08/12 08:55	05/10/12 10:10	1
Terphenyl-d14 (Surr)	81		40 - 119				05/08/12 08:55	05/10/12 10:10	1

Lab Sample ID: LCS 240-43139/12-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 43457						Prep Batch: 43139			
Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	Limits	
		Result	Qualifier						
Pyridine	0.0800	0.0454		mg/L		57		10 - 110	
2,4-Dinitrotoluene	0.0800	0.0651		mg/L		81		45 - 126	
Hexachlorobenzene	0.0800	0.0573		mg/L		72		47 - 116	
Hexachlorobutadiene	0.0800	0.0584		mg/L		73		10 - 110	
Hexachloroethane	0.0800	0.0618		mg/L		77		10 - 110	
2-Methylphenol	0.0800	0.0671		mg/L		84		24 - 110	
Nitrobenzene	0.0800	0.0656		mg/L		82		35 - 117	
Pentachlorophenol	0.0800	0.0325	J	mg/L		41		12 - 110	
2,4,5-Trichlorophenol	0.0800	0.0573		mg/L		72		35 - 111	
2,4,6-Trichlorophenol	0.0800	0.0581		mg/L		73		32 - 110	
3 & 4 Methylphenol	0.160	0.118		mg/L		74		27 - 110	
Surrogate	LCS LCS		Limits			D	%Rec	Limits	
	%Recovery	Qualifier							
2-Fluorobiphenyl (Surr)	72		22 - 110						
2-Fluorophenol (Surr)	71		10 - 110						
2,4,6-Tribromophenol (Surr)	71		17 - 117						
Nitrobenzene-d5 (Surr)	75		29 - 111						
Phenol-d5 (Surr)	62		10 - 110						
Terphenyl-d14 (Surr)	82		40 - 119						

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-43140/3-A

Matrix: Solid

Analysis Batch: 43194

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43140

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		05/08/12 08:58	05/09/12 10:21	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		05/08/12 08:58	05/09/12 10:21	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		05/08/12 08:58	05/09/12 10:21	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		05/08/12 08:58	05/09/12 10:21	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		05/08/12 08:58	05/09/12 10:21	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		05/08/12 08:58	05/09/12 10:21	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		05/08/12 08:58	05/09/12 10:21	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	98		34 - 141	05/08/12 08:58	05/09/12 10:21	1
DCB Decachlorobiphenyl	101		34 - 141	05/08/12 08:58	05/09/12 10:21	1
Tetrachloro-m-xylene	77		46 - 122	05/08/12 08:58	05/09/12 10:21	1
Tetrachloro-m-xylene	88		46 - 122	05/08/12 08:58	05/09/12 10:21	1

Lab Sample ID: LCS 240-43140/4-A

Matrix: Solid

Analysis Batch: 43194

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43140

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Endrin	0.00200	0.00192		mg/L		96	59 - 136
gamma-BHC (Lindane)	0.00200	0.00187		mg/L		93	59 - 137
Heptachlor	0.00200	0.00193		mg/L		96	63 - 123
Heptachlor epoxide	0.00200	0.00201		mg/L		101	59 - 141
Methoxychlor	0.00400	0.00369		mg/L		92	42 - 141

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	104		34 - 141
DCB Decachlorobiphenyl	95		34 - 141
Tetrachloro-m-xylene	78		46 - 122
Tetrachloro-m-xylene	86		46 - 122

Lab Sample ID: MB 240-43148/4-A

Matrix: Solid

Analysis Batch: 43566

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43148

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4,4'-DDD	1.7	U	1.7	0.62	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
4,4'-DDE	1.7	U	1.7	0.39	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
4,4'-DDT	1.7	U	1.7	0.63	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Aldrin	1.7	U	1.7	1.2	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
alpha-BHC	1.7	U	1.7	0.73	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
alpha-Chlordane	1.7	U	1.7	0.94	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
beta-BHC	1.7	U	1.7	1.1	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
delta-BHC	1.7	U	1.7	1.2	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Dieldrin	1.7	U	1.7	0.47	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Endosulfan I	1.7	U	1.7	0.52	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Endosulfan II	1.7	U	1.7	0.82	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Endosulfan sulfate	1.7	U	1.7	0.87	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Endrin	1.7	U	1.7	0.50	ug/Kg		05/08/12 09:33	05/11/12 05:50	1

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: MB 240-43148/4-A

Matrix: Solid

Analysis Batch: 43566

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43148

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Endrin aldehyde	1.7	U	1.7	1.0	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Endrin ketone	1.7	U	1.7	0.63	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
gamma-BHC (Lindane)	1.7	U	1.7	0.74	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
gamma-Chlordane	1.7	U	1.7	0.42	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Heptachlor	1.7	U	1.7	1.1	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Heptachlor epoxide	1.7	U	1.7	0.80	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Methoxychlor	3.3	U	3.3	1.5	ug/Kg		05/08/12 09:33	05/11/12 05:50	1
Toxaphene	67	U	67	19	ug/Kg		05/08/12 09:33	05/11/12 05:50	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	97		32 - 175	05/08/12 09:33	05/11/12 05:50	1
DCB Decachlorobiphenyl	98		32 - 175	05/08/12 09:33	05/11/12 05:50	1
Tetrachloro-m-xylene	78		24 - 150	05/08/12 09:33	05/11/12 05:50	1
Tetrachloro-m-xylene	82		24 - 150	05/08/12 09:33	05/11/12 05:50	1

Lab Sample ID: LCS 240-43148/5-A

Matrix: Solid

Analysis Batch: 43566

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43148

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
4,4'-DDE	33.3	32.3		ug/Kg		97	41 - 137	
4,4'-DDT	33.3	39.0		ug/Kg		117	34 - 139	
Aldrin	33.3	26.9		ug/Kg		81	52 - 119	
alpha-BHC	33.3	29.9		ug/Kg		90	50 - 129	
alpha-Chlordane	33.3	29.9		ug/Kg		90	43 - 130	
beta-BHC	33.3	30.3		ug/Kg		91	51 - 127	
delta-BHC	33.3	33.1		ug/Kg		99	54 - 134	
Dieldrin	33.3	32.9		ug/Kg		99	45 - 140	
Endosulfan I	33.3	20.7		ug/Kg		62	13 - 110	
Endosulfan II	33.3	24.0		ug/Kg		72	22 - 115	
Endosulfan sulfate	33.3	36.2		ug/Kg		109	44 - 143	
Endrin	33.3	33.9		ug/Kg		102	48 - 143	
Endrin aldehyde	33.3	34.7		ug/Kg		104	31 - 126	
Endrin ketone	33.3	32.5		ug/Kg		98	39 - 137	
gamma-BHC (Lindane)	33.3	31.2		ug/Kg		94	41 - 137	
gamma-Chlordane	33.3	31.7		ug/Kg		95	53 - 129	
Heptachlor	33.3	34.9		ug/Kg		105	37 - 127	
Heptachlor epoxide	33.3	32.1		ug/Kg		96	53 - 132	
Methoxychlor	33.3	38.9		ug/Kg		117	33 - 151	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	103		32 - 175
DCB Decachlorobiphenyl	84		32 - 175
Tetrachloro-m-xylene	75		24 - 150
Tetrachloro-m-xylene	101		24 - 150

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: 240-10866-1 MS				Client Sample ID: FWG-IDW-SBCOMP2-SO							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 43566				Prep Batch: 43148							
Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.		
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
4,4'-DDD	4.3	U	42.1	52.5		ug/Kg	*	125	27 - 177		
4,4'-DDE	4.3	U	42.1	44.3		ug/Kg	*	105	17 - 174		
4,4'-DDT	4.3	U	42.1	54.2		ug/Kg	*	129	24 - 161		
Aldrin	4.3	U	42.1	37.1		ug/Kg	*	88	33 - 139		
alpha-BHC	4.3	U	42.1	41.1		ug/Kg	*	98	27 - 152		
alpha-Chlordane	4.3	U	42.1	40.3		ug/Kg	*	96	15 - 168		
beta-BHC	4.3	U	42.1	40.6		ug/Kg	*	97	10 - 199		
delta-BHC	4.3	U	42.1	42.9		ug/Kg	*	102	14 - 174		
Dieldrin	4.3	U	42.1	45.2		ug/Kg	*	107	35 - 155		
Endosulfan I	4.3	U	42.1	27.0		ug/Kg	*	64	10 - 124		
Endosulfan II	4.3	U	42.1	31.6		ug/Kg	*	75	12 - 125		
Endosulfan sulfate	4.3	U	42.1	48.5		ug/Kg	*	115	12 - 188		
Endrin	4.3	U	42.1	41.7		ug/Kg	*	99	25 - 168		
Endrin aldehyde	4.3	U	42.1	47.5		ug/Kg	*	113	15 - 146		
Endrin ketone	4.3	U	42.1	44.4		ug/Kg	*	106	16 - 183		
gamma-BHC (Lindane)	4.3	U	42.1	42.7		ug/Kg	*	101	33 - 146		
gamma-Chlordane	4.3	U	42.1	42.8		ug/Kg	*	102	10 - 188		
Heptachlor	4.3	U	42.1	48.4		ug/Kg	*	115	24 - 153		
Heptachlor epoxide	4.3	U	42.1	44.0		ug/Kg	*	105	22 - 179		
Methoxychlor	8.4	U	42.1	53.3		ug/Kg	*	127	20 - 183		
Surrogate		MS	MS								
		%Recovery	Qualifier	Limits							
DCB Decachlorobiphenyl		132		32 - 175							
DCB Decachlorobiphenyl		102		32 - 175							
Tetrachloro-m-xylene		117		24 - 150							
Tetrachloro-m-xylene		87		24 - 150							

Lab Sample ID: 240-10866-1 MSD				Client Sample ID: FWG-IDW-SBCOMP2-SO								
Matrix: Solid				Prep Type: Total/NA								
Analysis Batch: 43566				Prep Batch: 43148								
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
4,4'-DDD	4.3	U	42.2	48.2		ug/Kg	*	114	27 - 177	8	30	
4,4'-DDE	4.3	U	42.2	40.7		ug/Kg	*	97	17 - 174	9	30	
4,4'-DDT	4.3	U	42.2	48.7		ug/Kg	*	115	24 - 161	11	30	
Aldrin	4.3	U	42.2	34.3		ug/Kg	*	81	33 - 139	8	30	
alpha-BHC	4.3	U	42.2	38.4		ug/Kg	*	91	27 - 152	7	30	
alpha-Chlordane	4.3	U	42.2	35.9		ug/Kg	*	85	15 - 168	12	30	
beta-BHC	4.3	U	42.2	38.4		ug/Kg	*	91	10 - 199	6	30	
delta-BHC	4.3	U	42.2	39.3		ug/Kg	*	93	14 - 174	9	30	
Dieldrin	4.3	U	42.2	42.1		ug/Kg	*	100	35 - 155	7	30	
Endosulfan I	4.3	U	42.2	24.4		ug/Kg	*	58	10 - 124	10	30	
Endosulfan II	4.3	U	42.2	28.7		ug/Kg	*	68	12 - 125	10	30	
Endosulfan sulfate	4.3	U	42.2	44.7		ug/Kg	*	106	12 - 188	8	30	
Endrin	4.3	U	42.2	39.2		ug/Kg	*	93	25 - 168	6	30	
Endrin aldehyde	4.3	U	42.2	44.2		ug/Kg	*	105	15 - 146	7	30	
Endrin ketone	4.3	U	42.2	41.2		ug/Kg	*	98	16 - 183	7	30	
gamma-BHC (Lindane)	4.3	U	42.2	40.2		ug/Kg	*	95	33 - 146	6	30	
gamma-Chlordane	4.3	U	42.2	40.0		ug/Kg	*	95	10 - 188	7	30	

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: 240-10866-1 MSD

Matrix: Solid

Analysis Batch: 43566

Client Sample ID: FWG-IDW-SBCOMP2-SO

Prep Type: Total/NA

Prep Batch: 43148

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Heptachlor	4.3	U	42.2	44.5		ug/Kg	*	106		24 - 153	8	30
Heptachlor epoxide	4.3	U	42.2	41.1		ug/Kg	*	97		22 - 179	7	30
Methoxychlor	8.4	U	42.2	48.5		ug/Kg	*	115		20 - 183	9	30
MSD MSD												
Surrogate	%Recovery	Qualifier	Limits									
DCB Decachlorobiphenyl	124		32 - 175									
DCB Decachlorobiphenyl	102		32 - 175									
Tetrachloro-m-xylene	76		24 - 150									
Tetrachloro-m-xylene	83		24 - 150									

Lab Sample ID: 240-10866-1 MS

Matrix: Solid

Analysis Batch: 43194

Client Sample ID: FWG-IDW-SBCOMP2-SO

Prep Type: TCLP

Prep Batch: 43140

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Endrin	0.0012	U	0.167	0.158	J	mg/L		94		50 - 150
gamma-BHC (Lindane)	0.0012	U	0.167	0.159	J	mg/L		95		50 - 150
Heptachlor	0.0012	U	0.167	0.161	J	mg/L		97		50 - 150
Heptachlor epoxide	0.0012	U	0.167	0.171	J	mg/L		102		50 - 150
Methoxychlor	0.0024	U	0.333	0.312	J	mg/L		93		50 - 150
MS MS										
Surrogate	%Recovery	Qualifier	Limits							
DCB Decachlorobiphenyl	99		34 - 141							
DCB Decachlorobiphenyl	100		34 - 141							
Tetrachloro-m-xylene	79		46 - 122							
Tetrachloro-m-xylene	85		46 - 122							

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

Lab Sample ID: MB 240-43146/22-A

Matrix: Solid

Analysis Batch: 43441

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43146

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	33	U	33	21	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Aroclor-1221	33	U	33	16	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Aroclor-1232	33	U	33	14	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Aroclor-1242	33	U	33	13	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Aroclor-1248	33	U	33	17	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Aroclor-1254	33	U	33	17	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
Aroclor-1260	33	U	33	17	ug/Kg		05/08/12 09:22	05/10/12 07:13	1
MB MB									
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
Tetrachloro-m-xylene	91		29 - 151	05/08/12 09:22	05/10/12 07:13	1			
DCB Decachlorobiphenyl	72		14 - 163	05/08/12 09:22	05/10/12 07:13	1			

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: LCS 240-43146/23-A				Client Sample ID: Lab Control Sample			
Matrix: Solid				Prep Type: Total/NA			
Analysis Batch: 43441				Prep Batch: 43146			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	333	298		ug/Kg		89	62 - 120
Aroclor-1260	333	234		ug/Kg		70	56 - 122
Surrogate		LCS %Recovery	LCS Qualifier	Limits			
Tetrachloro-m-xylene		90		29 - 151			
DCB Decachlorobiphenyl		67		14 - 163			

Lab Sample ID: 240-10866-1 MS				Client Sample ID: FWG-IDW-SBCOMP2-SO					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 43441				Prep Batch: 43146					
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	42	U	423	329		ug/Kg	☼	78	22 - 157
Aroclor-1260	42	U	423	271		ug/Kg	☼	64	13 - 161
Surrogate		MS %Recovery	MS Qualifier	Limits					
Tetrachloro-m-xylene		73		29 - 151					
DCB Decachlorobiphenyl		62		14 - 163					

Lab Sample ID: 240-10866-1 MSD				Client Sample ID: FWG-IDW-SBCOMP2-SO							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 43441				Prep Batch: 43146							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aroclor-1016	42	U	424	307		ug/Kg	☼	72	22 - 157	7	30
Aroclor-1260	42	U	424	265		ug/Kg	☼	62	13 - 161	2	30
Surrogate		MSD %Recovery	MSD Qualifier	Limits							
Tetrachloro-m-xylene		68		29 - 151							
DCB Decachlorobiphenyl		59		14 - 163							

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

Lab Sample ID: G2E10000053B				Client Sample ID: Method Blank					
Matrix: Solid				Prep Type: Total					
Analysis Batch: 2131053				Prep Batch: 2131053_P					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	0.25	U	0.25	0.020	mg/kg		05/10/12 10:00	05/22/12 15:40	1

Lab Sample ID: G2E10000053C				Client Sample ID: Lab Control Sample			
Matrix: Solid				Prep Type: Total			
Analysis Batch: 2131053				Prep Batch: 2131053_P			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Nitroguanidine	1.00	1.06		mg/kg		106	72 - 121

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: 240-10866-1 MS

Client Sample ID: FWG-IDW-SBCOMP2-SO

Matrix: Solid

Prep Type: Total

Analysis Batch: 2131053

Prep Batch: 2131053_P

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Nitroguanidine	0.25	U	1.02	0.974		mg/kg		96		72 - 121

Lab Sample ID: 240-10866-1 MSD

Client Sample ID: FWG-IDW-SBCOMP2-SO

Matrix: Solid

Prep Type: Total

Analysis Batch: 2131053

Prep Batch: 2131053_P

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier							
Nitroguanidine	0.25	U	1.03	0.981		mg/kg		95		72 - 121	0.65	20

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

Lab Sample ID: G2E10000051B

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total

Analysis Batch: 2131051

Prep Batch: 2131051_P

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,3,5-Trinitrobenzene	0.25	U	0.25	0.010	mg/kg		05/10/12 10:00	05/19/12 19:48	1
1,3-Dinitrobenzene	0.25	U	0.25	0.0042	mg/kg		05/10/12 10:00	05/19/12 19:48	1
2,4,6-Trinitrotoluene	0.25	U	0.25	0.019	mg/kg		05/10/12 10:00	05/19/12 19:48	1
2,4-Dinitrotoluene	0.25	U	0.25	0.0053	mg/kg		05/10/12 10:00	05/19/12 19:48	1
2,6-Dinitrotoluene	0.25	U	0.25	0.0073	mg/kg		05/10/12 10:00	05/19/12 19:48	1
2-Amino-4,6-dinitrotoluene	0.25	U	0.25	0.012	mg/kg		05/10/12 10:00	05/19/12 19:48	1
2-Nitrotoluene	0.25	U	0.25	0.013	mg/kg		05/10/12 10:00	05/19/12 19:48	1
3-Nitrotoluene	0.25	U	0.25	0.016	mg/kg		05/10/12 10:00	05/19/12 19:48	1
4-Amino-2,6-dinitrotoluene	0.25	U	0.25	0.010	mg/kg		05/10/12 10:00	05/19/12 19:48	1
4-Nitrotoluene	0.25	U	0.25	0.018	mg/kg		05/10/12 10:00	05/19/12 19:48	1
HMX	0.25	U	0.25	0.012	mg/kg		05/10/12 10:00	05/19/12 19:48	1
Nitrobenzene	0.25	U	0.25	0.018	mg/kg		05/10/12 10:00	05/19/12 19:48	1
Nitroglycerin	0.50	U	0.50	0.015	mg/kg		05/10/12 10:00	05/19/12 19:48	1
PETN	0.50	U	0.50	0.025	mg/kg		05/10/12 10:00	05/19/12 19:48	1
RDX	0.25	U	0.25	0.012	mg/kg		05/10/12 10:00	05/19/12 19:48	1
Tetryl	0.25	U	0.25	0.010	mg/kg		05/10/12 10:00	05/19/12 19:48	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
3,4-Dinitrotoluene	100		75 - 115	05/10/12 10:00	05/19/12 19:48	1

Lab Sample ID: G2E10000051C

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total

Analysis Batch: 2131051

Prep Batch: 2131051_P

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
1,3,5-Trinitrobenzene	0.500	0.514		mg/kg		103		81 - 121
1,3-Dinitrobenzene	0.500	0.522		mg/kg		104		81 - 121
2,4,6-Trinitrotoluene	0.500	0.436		mg/kg		87		65 - 105
2,4-Dinitrotoluene	0.500	0.504		mg/kg		101		79 - 119
2,6-Dinitrotoluene	0.500	0.508		mg/kg		102		79 - 119
2-Amino-4,6-dinitrotoluene	0.500	0.512		mg/kg		102		79 - 119
2-Nitrotoluene	0.500	0.507		mg/kg		101		78 - 118
3-Nitrotoluene	0.500	0.506		mg/kg		101		77 - 117

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: G2E10000051C				Client Sample ID: Lab Control Sample			
Matrix: Solid				Prep Type: Total			
Analysis Batch: 2131051				Prep Batch: 2131051_P			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
4-Amino-2,6-dinitrotoluene	0.500	0.516		mg/kg		103	81 - 121
4-Nitrotoluene	0.500	0.496		mg/kg		99	78 - 118
HMX	0.500	0.520		mg/kg		104	80 - 120
Nitrobenzene	0.500	0.525		mg/kg		105	80 - 120
Nitroglycerin	1.00	1.11		mg/kg		111	76 - 116
PETN	1.00	1.01		mg/kg		101	76 - 116
RDX	0.500	0.508		mg/kg		102	82 - 122
Tetryl	0.500	0.442		mg/kg		88	63 - 120
Surrogate							
	%Recovery	Qualifier	Limits				
3,4-Dinitrotoluene	103		75 - 115				

Lab Sample ID: 240-10866-1 MS				Client Sample ID: FWG-IDW-SBCOMP2-SO					
Matrix: Solid				Prep Type: Total					
Analysis Batch: 2131051				Prep Batch: 2131051_P					
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,3,5-Trinitrobenzene	0.24	U	0.502	0.503		mg/kg	☒	100	81 - 121
1,3-Dinitrobenzene	0.24	U	0.502	0.526		mg/kg	☒	105	81 - 121
2,4,6-Trinitrotoluene	0.24	U	0.502	0.434		mg/kg	☒	87	65 - 105
2,4-Dinitrotoluene	0.24	U	0.502	0.506		mg/kg	☒	101	79 - 119
2,6-Dinitrotoluene	0.24	U	0.502	0.508		mg/kg	☒	101	79 - 119
2-Amino-4,6-dinitrotoluene	0.24	U	0.502	0.507		mg/kg	☒	101	79 - 119
2-Nitrotoluene	0.24	U	0.502	0.506		mg/kg	☒	101	78 - 118
3-Nitrotoluene	0.24	U	0.502	0.504		mg/kg	☒	100	77 - 117
4-Amino-2,6-dinitrotoluene	0.24	U	0.502	0.514		mg/kg	☒	102	81 - 121
4-Nitrotoluene	0.24	U	0.502	0.499		mg/kg	☒	100	78 - 118
HMX	0.24	U	0.502	0.519		mg/kg	☒	103	80 - 120
Nitrobenzene	0.24	U	0.502	0.520		mg/kg	☒	104	80 - 120
Nitroglycerin	0.48	U	1.00	1.11		mg/kg	☒	111	76 - 116
PETN	0.48	U	1.00	1.01		mg/kg	☒	101	76 - 116
RDX	0.24	U	0.502	0.486		mg/kg	☒	97	82 - 122
Tetryl	0.24	U	0.502	0.397		mg/kg	☒	79	63 - 120
Surrogate									
	%Recovery	Qualifier	Limits						
3,4-Dinitrotoluene	101		75 - 115						

Lab Sample ID: 240-10866-1 MSD				Client Sample ID: FWG-IDW-SBCOMP2-SO							
Matrix: Solid				Prep Type: Total							
Analysis Batch: 2131051				Prep Batch: 2131051_P							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,3,5-Trinitrobenzene	0.24	U	0.499	0.501		mg/kg	☒	101	81 - 121	0.35	20
1,3-Dinitrobenzene	0.24	U	0.499	0.522		mg/kg	☒	105	81 - 121	0.78	20
2,4,6-Trinitrotoluene	0.24	U	0.499	0.432		mg/kg	☒	87	65 - 105	0.60	20
2,4-Dinitrotoluene	0.24	U	0.499	0.505		mg/kg	☒	101	79 - 119	0.15	20
2,6-Dinitrotoluene	0.24	U	0.499	0.506		mg/kg	☒	101	79 - 119	0.53	20
2-Amino-4,6-dinitrotoluene	0.24	U	0.499	0.505		mg/kg	☒	101	79 - 119	0.29	20
2-Nitrotoluene	0.24	U	0.499	0.499		mg/kg	☒	100	78 - 118	1.4	20

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: 240-10866-1 MSD				Client Sample ID: FWG-IDW-SBCOMP2-SO								
Matrix: Solid				Prep Type: Total								
Analysis Batch: 2131051				Prep Batch: 2131051_P								
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
3-Nitrotoluene	0.24	U	0.499	0.507		mg/kg	*	102	77 - 117	0.67	20	
4-Amino-2,6-dinitrotoluene	0.24	U	0.499	0.514		mg/kg	*	103	81 - 121	0.050	20	
4-Nitrotoluene	0.24	U	0.499	0.499		mg/kg	*	100	78 - 118	0.020	20	
HMX	0.24	U	0.499	0.508		mg/kg	*	102	80 - 120	2.1	20	
Nitrobenzene	0.24	U	0.499	0.524		mg/kg	*	105	80 - 120	0.92	20	
Nitroglycerin	0.48	U	0.997	1.09		mg/kg	*	109	76 - 116	1.6	20	
PETN	0.48	U	0.997	1.02		mg/kg	*	102	76 - 116	0.19	20	
RDX	0.24	U	0.499	0.479		mg/kg	*	96	82 - 122	1.5	20	
Tetryl	0.24	U	0.499	0.402		mg/kg	*	81	63 - 120	1.2	20	
MSD MSD												
Surrogate	%Recovery	Qualifier	Limits									
3,4-Dinitrotoluene	103		75 - 115									

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-43033/1-A				Client Sample ID: Method Blank						
Matrix: Solid				Prep Type: Total/NA						
Analysis Batch: 43270				Prep Batch: 43033						
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Arsenic	1.0	U	1.0	0.30	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Cobalt	5.0	U	5.0	0.16	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Chromium	0.50	U	0.50	0.20	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Lead	0.30	U	0.30	0.19	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Selenium	0.50	U	0.50	0.45	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Silver	0.50	U	0.50	0.10	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Vanadium	5.0	U	5.0	0.12	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Barium	20	U	20	0.071	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Calcium	500	U	500	16	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Copper	2.5	U	2.5	0.74	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Magnesium	17.8	J	500	5.1	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Manganese	1.5	U	1.5	0.074	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Nickel	4.0	U	4.0	0.27	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	
Potassium	22.7	J	500	6.2	mg/Kg		05/07/12 11:28	05/08/12 19:26	1	

Lab Sample ID: LCS 240-43033/2-A				Client Sample ID: Lab Control Sample						
Matrix: Solid				Prep Type: Total/NA						
Analysis Batch: 43270				Prep Batch: 43033						
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits			
Arsenic	200	196		mg/Kg		98	80 - 120			
Cobalt	50.0	48.7		mg/Kg		97	80 - 120			
Chromium	20.0	19.8		mg/Kg		99	80 - 120			
Lead	50.0	49.1		mg/Kg		98	80 - 120			
Selenium	200	194		mg/Kg		97	80 - 120			
Silver	5.00	5.05		mg/Kg		101	80 - 120			
Vanadium	50.0	48.8		mg/Kg		98	80 - 120			
Barium	200	208		mg/Kg		104	80 - 120			
Calcium	5000	5090		mg/Kg		102	80 - 120			

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

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

Lab Sample ID: LCS 240-43033/2-A

Matrix: Solid

Analysis Batch: 43270

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43033

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Copper	25.0	24.0		mg/Kg		96	80 - 120	
Magnesium	5000	4900		mg/Kg		98	80 - 120	
Manganese	50.0	49.7		mg/Kg		99	80 - 120	
Nickel	50.0	49.7		mg/Kg		99	80 - 120	
Potassium	5000	4890		mg/Kg		98	80 - 120	

Lab Sample ID: MB 240-43166/2-A

Matrix: Solid

Analysis Batch: 43447

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43166

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	0.50	U	0.50	0.0032	mg/L		05/08/12 10:18	05/09/12 14:41	1
Cadmium	0.10	U	0.10	0.00066	mg/L		05/08/12 10:18	05/09/12 14:41	1
Chromium	0.50	U	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 14:41	1
Lead	0.50	U	0.50	0.0019	mg/L		05/08/12 10:18	05/09/12 14:41	1
Selenium	0.25	U	0.25	0.0041	mg/L		05/08/12 10:18	05/09/12 14:41	1
Silver	0.50	U	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 14:41	1
Barium	0.000901	J	10	0.00067	mg/L		05/08/12 10:18	05/09/12 14:41	1

Lab Sample ID: LCS 240-43166/3-A

Matrix: Solid

Analysis Batch: 43447

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43166

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Arsenic	2.00	2.00		mg/L		100	50 - 150	
Cadmium	0.0500	0.0500	J	mg/L		100	50 - 150	
Chromium	0.200	0.194	J	mg/L		97	50 - 150	
Lead	0.500	0.495	J	mg/L		99	50 - 150	
Selenium	2.00	2.01		mg/L		101	50 - 150	
Silver	0.0500	0.0501	J	mg/L		100	50 - 150	
Barium	2.00	2.06	J	mg/L		103	50 - 150	

Lab Sample ID: LB 240-43074/1-C LB

Matrix: Solid

Analysis Batch: 43447

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 43166

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	0.50	U	0.50	0.0032	mg/L		05/08/12 10:18	05/09/12 14:35	1
Cadmium	0.10	U	0.10	0.00066	mg/L		05/08/12 10:18	05/09/12 14:35	1
Chromium	0.50	U	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 14:35	1
Lead	0.50	U	0.50	0.0019	mg/L		05/08/12 10:18	05/09/12 14:35	1
Selenium	0.25	U	0.25	0.0041	mg/L		05/08/12 10:18	05/09/12 14:35	1
Silver	0.50	U	0.50	0.0022	mg/L		05/08/12 10:18	05/09/12 14:35	1
Barium	0.00225	J	10	0.00067	mg/L		05/08/12 10:18	05/09/12 14:35	1

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-43033/1-A		Client Sample ID: Method Blank								
Matrix: Solid		Prep Type: Total/NA								
Analysis Batch: 43264		Prep Batch: 43033								
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
Aluminum	5.0	U	5.0	1.3	mg/Kg		05/07/12 11:28	05/09/12 00:02	1	
Antimony	0.20	U	0.20	0.024	mg/Kg		05/07/12 11:28	05/09/12 00:02	1	
Beryllium	0.10	U	0.10	0.047	mg/Kg		05/07/12 11:28	05/09/12 00:02	1	
Cadmium	0.10	U	0.10	0.0078	mg/Kg		05/07/12 11:28	05/09/12 00:02	1	
Iron	3.60	J	10	1.0	mg/Kg		05/07/12 11:28	05/09/12 00:02	1	
Sodium	7.66	J	100	2.4	mg/Kg		05/07/12 11:28	05/09/12 00:02	1	
Thallium	0.0171	J	0.20	0.013	mg/Kg		05/07/12 11:28	05/09/12 00:02	1	
Zinc	0.518	J	2.0	0.20	mg/Kg		05/07/12 11:28	05/09/12 00:02	1	

Lab Sample ID: LCS 240-43033/3-A		Client Sample ID: Lab Control Sample								
Matrix: Solid		Prep Type: Total/NA								
Analysis Batch: 43264		Prep Batch: 43033								
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.			
							Limits			
Aluminum	1000	941		mg/Kg		94	80 - 120			
Antimony	10.0	9.81		mg/Kg		98	68 - 113			
Beryllium	100	79.8		mg/Kg		80	79 - 110			
Cadmium	100	93.8		mg/Kg		94	74 - 110			
Iron	1000	988		mg/Kg		99	80 - 120			
Sodium	1000	1000		mg/Kg		100	80 - 120			
Thallium	25.0	23.3		mg/Kg		93	71 - 110			
Zinc	100	89.0		mg/Kg		89	72 - 113			

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-43168/2-A		Client Sample ID: Method Blank								
Matrix: Solid		Prep Type: Total/NA								
Analysis Batch: 43595		Prep Batch: 43168								
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
Mercury	0.0020	U	0.0020	0.00012	mg/L		05/08/12 14:30	05/09/12 11:10	1	

Lab Sample ID: LCS 240-43168/3-A		Client Sample ID: Lab Control Sample								
Matrix: Solid		Prep Type: Total/NA								
Analysis Batch: 43595		Prep Batch: 43168								
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.			
							Limits			
Mercury	0.00500	0.00471		mg/L		94	50 - 150			

Lab Sample ID: LB 240-43074/1-D LB		Client Sample ID: Method Blank								
Matrix: Solid		Prep Type: TCLP								
Analysis Batch: 43595		Prep Batch: 43168								
Analyte	LB	LB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
Mercury	0.0020	U	0.0020	0.00012	mg/L		05/08/12 14:30	05/09/12 11:09	1	

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 240-43185/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 43345						Prep Batch: 43185			
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0212	J	0.10	0.015	mg/Kg	-	05/08/12 13:55	05/09/12 10:29	1

Lab Sample ID: LCS 240-43185/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 43345						Prep Batch: 43185			
Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	%Rec.	
Mercury	0.833	0.750	Qualifier	mg/Kg	-	90	73 - 121		

Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 240-43142/1						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 43142									
Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	%Rec.	
Flashpoint	81.0	82.00	Qualifier	Degrees F	-	101	97 - 103		

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-42657/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 42701						Prep Batch: 42657			
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.50	U	0.50	0.10	mg/Kg	-	05/03/12 13:00	05/03/12 13:36	1

Lab Sample ID: LCS 240-42657/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 42701						Prep Batch: 42657			
Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	%Rec.	
Cyanide, Total	2.25	2.41	Qualifier	mg/Kg	-	107	68 - 123		

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 240-42660/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 42693						Prep Batch: 42660			
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	30	U	30	22	mg/Kg	-	05/03/12 11:53	05/03/12 15:13	1

Lab Sample ID: LCS 240-42660/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 42693						Prep Batch: 42660			
Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	%Rec.	
Sulfide	75.4	72.8	Qualifier	mg/Kg	-	97	70 - 130		

QC Sample Results

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

TestAmerica Job ID: 240-10866-1

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G2E10000020B							Client Sample ID: Method Blank					
Matrix: Solid							Prep Type: Total					
Analysis Batch: 2131020							Prep Batch: 2131020_P					
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac			
Nitrocellulose	5.0	U	5.0	0.78	mg/kg		05/10/12 06:00	05/15/12 14:35	1			
Lab Sample ID: G2E10000020C							Client Sample ID: Lab Control Sample					
Matrix: Solid							Prep Type: Total					
Analysis Batch: 2131020							Prep Batch: 2131020_P					
Analyte	Spike		LCS	LCS	Unit	D	%Rec	%Rec.		Limits		
Nitrocellulose	Added	Result	Result	Qualifier	mg/kg		72	34 - 115				
Lab Sample ID: 240-10866-1 MS							Client Sample ID: FWG-IDW-SBCOMP2-SO					
Matrix: Solid							Prep Type: Total					
Analysis Batch: 2131020							Prep Batch: 2131020_P					
Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.		Limits	
Nitrocellulose	Result	Qualifier	Added	Result	Qualifier	mg/kg	✱	9.4	34 - 115			
Lab Sample ID: 240-10866-1 MSD							Client Sample ID: FWG-IDW-SBCOMP2-SO					
Matrix: Solid							Prep Type: Total					
Analysis Batch: 2131020							Prep Batch: 2131020_P					
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	Limit
Nitrocellulose	Result	Qualifier	Added	Result	Qualifier	mg/kg	✱	11	34 - 115		17	71

QC Association Summary

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

TestAmerica Job ID: 240-10866-1

GC/MS VOA

Analysis Batch: 42797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-3	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8260B	
LCS 240-42797/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-42797/7	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 43408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-2	TRIP BLANK	Total/NA	Water	8260B	
LCS 240-43408/10	Lab Control Sample	Total/NA	Water	8260B	
MB 240-43408/11	Method Blank	Total/NA	Water	8260B	

Leach Batch: 43416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-3	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	
240-10866-3 MS	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	
240-10866-3 MSD	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	
LB 240-43416/1-A MB	Method Blank	TCLP	Solid	1311	

Analysis Batch: 43615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-3	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8260B	
240-10866-3 MS	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8260B	
240-10866-3 MSD	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8260B	
LB 240-43416/1-A MB	Method Blank	TCLP	Solid	8260B	
LCS 240-43615/4	Lab Control Sample	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 42667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
LCS 240-42667/11-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-42667/10-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 42988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8270C	42667
LCS 240-42667/11-A	Lab Control Sample	Total/NA	Solid	8270C	42667
MB 240-42667/10-A	Method Blank	Total/NA	Solid	8270C	42667

Leach Batch: 43074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	

Prep Batch: 43139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	3510C	43074
LCS 240-43139/12-A	Lab Control Sample	Total/NA	Solid	3510C	
MB 240-43139/11-A	Method Blank	Total/NA	Solid	3510C	

Analysis Batch: 43457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8270C	43139

QC Association Summary

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

TestAmerica Job ID: 240-10866-1

GC/MS Semi VOA (Continued)

Analysis Batch: 43457 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-43139/12-A	Lab Control Sample	Total/NA	Solid	8270C	43139
MB 240-43139/11-A	Method Blank	Total/NA	Solid	8270C	43139

GC Semi VOA

Leach Batch: 43074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	

Prep Batch: 43140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	3510C	43074
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	TCLP	Solid	3510C	43074
LCS 240-43140/4-A	Lab Control Sample	Total/NA	Solid	3510C	
MB 240-43140/3-A	Method Blank	Total/NA	Solid	3510C	

Prep Batch: 43146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
LCS 240-43146/23-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-43146/22-A	Method Blank	Total/NA	Solid	3540C	

Prep Batch: 43148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3540C	
LCS 240-43148/5-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-43148/4-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 43194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8081A	43140
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	TCLP	Solid	8081A	43140
LCS 240-43140/4-A	Lab Control Sample	Total/NA	Solid	8081A	43140
MB 240-43140/3-A	Method Blank	Total/NA	Solid	8081A	43140

Analysis Batch: 43441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8082	43146
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8082	43146
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8082	43146
LCS 240-43146/23-A	Lab Control Sample	Total/NA	Solid	8082	43146
MB 240-43146/22-A	Method Blank	Total/NA	Solid	8082	43146

Analysis Batch: 43566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8081A	43148
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8081A	43148

QC Association Summary

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

TestAmerica Job ID: 240-10866-1

GC Semi VOA (Continued)

Analysis Batch: 43566 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	8081A	43148
LCS 240-43148/5-A	Lab Control Sample	Total/NA	Solid	8081A	43148
MB 240-43148/4-A	Method Blank	Total/NA	Solid	8081A	43148

HPLC

Analysis Batch: 2131051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
G2E10000051B	Method Blank	Total	Solid	8330B	
G2E10000051C	Lab Control Sample	Total	Solid	8330B	

Analysis Batch: 2131053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	8330 (Modified)	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	8330 (Modified)	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	8330 (Modified)	
G2E10000053B	Method Blank	Total	Solid	8330 (Modified)	
G2E10000053C	Lab Control Sample	Total	Solid	8330 (Modified)	

Prep Batch: 2131051_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	8330B	
G2E10000051B	Method Blank	Total	Solid	8330B	
G2E10000051C	Lab Control Sample	Total	Solid	8330B	

Prep Batch: 2131053_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	3550A	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	3550A	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	3550A	
G2E10000053B	Method Blank	Total	Solid	3550A	
G2E10000053C	Lab Control Sample	Total	Solid	3550A	

Metals

Prep Batch: 43033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	3050B	
LCS 240-43033/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 240-43033/3-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 240-43033/1-A	Method Blank	Total/NA	Solid	3050B	

Leach Batch: 43074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	1311	
LB 240-43074/1-C LB	Method Blank	TCLP	Solid	1311	
LB 240-43074/1-D LB	Method Blank	TCLP	Solid	1311	

QC Association Summary

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

TestAmerica Job ID: 240-10866-1

Metals (Continued)

Prep Batch: 43166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	3010A	43074
LB 240-43074/1-C LB	Method Blank	TCLP	Solid	3010A	43074
LCS 240-43166/3-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 240-43166/2-A	Method Blank	Total/NA	Solid	3010A	

Prep Batch: 43168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	7470A	43074
LB 240-43074/1-D LB	Method Blank	TCLP	Solid	7470A	43074
LCS 240-43168/3-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 240-43168/2-A	Method Blank	Total/NA	Solid	7470A	

Prep Batch: 43185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	7471A	
LCS 240-43185/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 240-43185/1-A	Method Blank	Total/NA	Solid	7471A	

Analysis Batch: 43264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	6020	43033
LCS 240-43033/3-A	Lab Control Sample	Total/NA	Solid	6020	43033
MB 240-43033/1-A	Method Blank	Total/NA	Solid	6020	43033

Analysis Batch: 43270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	6010B	43033
LCS 240-43033/2-A	Lab Control Sample	Total/NA	Solid	6010B	43033
MB 240-43033/1-A	Method Blank	Total/NA	Solid	6010B	43033

Analysis Batch: 43345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	7471A	43185
LCS 240-43185/2-A	Lab Control Sample	Total/NA	Solid	7471A	43185
MB 240-43185/1-A	Method Blank	Total/NA	Solid	7471A	43185

Analysis Batch: 43447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	6010B	43166
LB 240-43074/1-C LB	Method Blank	TCLP	Solid	6010B	43166
LCS 240-43166/3-A	Lab Control Sample	Total/NA	Solid	6010B	43166
MB 240-43166/2-A	Method Blank	Total/NA	Solid	6010B	43166

Analysis Batch: 43595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	TCLP	Solid	7470A	43168
LB 240-43074/1-D LB	Method Blank	TCLP	Solid	7470A	43168
LCS 240-43168/3-A	Lab Control Sample	Total/NA	Solid	7470A	43168
MB 240-43168/2-A	Method Blank	Total/NA	Solid	7470A	43168

QC Association Summary

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

TestAmerica Job ID: 240-10866-1

General Chemistry

Prep Batch: 42657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	9012A	
LCS 240-42657/2-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 240-42657/1-A	Method Blank	Total/NA	Solid	9012A	

Prep Batch: 42660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	9030B	
LCS 240-42660/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 240-42660/1-A	Method Blank	Total/NA	Solid	9030B	

Analysis Batch: 42693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	9034	42660
LCS 240-42660/2-A	Lab Control Sample	Total/NA	Solid	9034	42660
MB 240-42660/1-A	Method Blank	Total/NA	Solid	9034	42660

Analysis Batch: 42701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	9012A	42657
LCS 240-42657/2-A	Lab Control Sample	Total/NA	Solid	9012A	42657
MB 240-42657/1-A	Method Blank	Total/NA	Solid	9012A	42657

Analysis Batch: 42702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	Moisture	
240-10866-3	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	Moisture	

Analysis Batch: 43142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total/NA	Solid	1010	
LCS 240-43142/1	Lab Control Sample	Total/NA	Solid	1010	

Analysis Batch: 2131020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	WS-WC-0050	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	WS-WC-0050	
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	WS-WC-0050	
G2E10000020B	Method Blank	Total	Solid	WS-WC-0050	
G2E10000020C	Lab Control Sample	Total	Solid	WS-WC-0050	

Analysis Batch: 2136095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	D 2216-90	
G2D300407013X	Duplicate	Total	Solid	D 2216-90	

Prep Batch: 2131020_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1	FWG-IDW-SBCOMP2-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
240-10866-1 MS	FWG-IDW-SBCOMP2-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	

QC Association Summary

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

TestAmerica Job ID: 240-10866-1

General Chemistry (Continued)

Prep Batch: 2131020_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10866-1 MSD	FWG-IDW-SBCOMP2-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G2E10000020B	Method Blank	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G2E10000020C	Lab Control Sample	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	

Lab Chronicle

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-1

Date Collected: 05/01/12 15:00

Matrix: Solid

Date Received: 05/02/12 07:00

Percent Solids: 78.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			42667	05/03/12 12:12	AK	TAL NC
Total/NA	Analysis	8270C		1	42988	05/07/12 20:07	JG	TAL NC
TCLP	Leach	1311			43074	05/07/12 16:06	DJ	TAL NC
TCLP	Prep	3510C			43139	05/08/12 08:55	SE	TAL NC
TCLP	Analysis	8270C		1	43457	05/10/12 14:09	MU	TAL NC
TCLP	Leach	1311			43074	05/07/12 16:06	DJ	TAL NC
TCLP	Prep	3510C			43140	05/08/12 08:58	SE	TAL NC
TCLP	Analysis	8081A		1	43194	05/09/12 09:32	AR	TAL NC
Total/NA	Prep	3540C			43146	05/08/12 09:22	BM	TAL NC
Total/NA	Analysis	8082		1	43441	05/10/12 04:29	LH	TAL NC
Total/NA	Prep	3540C			43148	05/08/12 09:33	BM	TAL NC
Total/NA	Analysis	8081A		2	43566	05/11/12 04:39	AR	TAL NC
Total	Prep	8330B			2131051_P	05/10/12 10:00	TQP	TAL WSC
Total	Analysis	8330B		0.96	2131051	05/19/12 21:08	VN	TAL WSC
Total	Prep	3550A			2131053_P	05/10/12 10:00	TQP	TAL WSC
Total	Analysis	8330 (Modified)		1.01	2131053	05/22/12 16:08	VN	TAL WSC
Total/NA	Prep	3050B			43033	05/07/12 11:28	DE	TAL NC
Total/NA	Analysis	6020		1	43264	05/09/12 01:43	KC	TAL NC
Total/NA	Analysis	6010B		1	43270	05/08/12 22:06	BD	TAL NC
Total/NA	Prep	7471A			43185	05/08/12 13:55	DE	TAL NC
Total/NA	Analysis	7471A		1	43345	05/09/12 11:43	AS	TAL NC
TCLP	Leach	1311			43074	05/07/12 16:06	DJ	TAL NC
TCLP	Prep	3010A			43166	05/08/12 10:18	AS	TAL NC
TCLP	Analysis	6010B		1	43447	05/09/12 16:01	BD	TAL NC
TCLP	Prep	7470A			43168	05/08/12 14:30	AS	TAL NC
TCLP	Analysis	7470A		1	43595	05/09/12 11:35	AS	TAL NC
Total/NA	Prep	9030B			42660	05/03/12 11:53	JB	TAL NC
Total/NA	Analysis	9034		1	42693	05/03/12 15:13	JB	TAL NC
Total/NA	Prep	9012A			42657	05/03/12 13:00	CN	TAL NC
Total/NA	Analysis	9012A		1	42701	05/03/12 13:36	BR	TAL NC
Total/NA	Analysis	Moisture		1	42702	05/03/12 15:48	CN	TAL NC
Total/NA	Analysis	1010		1	43142	05/08/12 12:28	TH	TAL NC
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			2131020_P	05/10/12 06:00	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	2131020	05/15/12 14:39	JB	TAL WSC
Total	Analysis	D 2216-90		1	2136095	05/17/12 09:19	JB	TAL WSC

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-10866-2

Date Collected: 05/01/12 08:00

Matrix: Water

Date Received: 05/02/12 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	43408	05/09/12 23:37	LW	TAL NC

Lab Chronicle

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

TestAmerica Job ID: 240-10866-1

Client Sample ID: FWG-IDW-SBCOMP2-SO

Lab Sample ID: 240-10866-3

Date Collected: 05/01/12 15:00

Matrix: Solid

Date Received: 05/02/12 07:00

Percent Solids: 81.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	42797	05/04/12 22:01	SM	TAL NC
TCLP	Leach	1311			43416	05/09/12 15:57	BF	TAL NC
TCLP	Analysis	8260B		1	43615	05/10/12 20:42	TL	TAL NC
Total/NA	Analysis	Moisture		1	42702	05/03/12 15:48	CN	TAL NC

Laboratory References:

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

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

Certification Summary

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

TestAmerica Job ID: 240-10866-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas DEQ	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Northern Mariana Islands	State Program	9	MP0007
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	Federal		LE148388-0
TestAmerica West Sacramento	USDA	Federal		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	State Program	3	9930C
TestAmerica West Sacramento	West Virginia DEP	State Program	3	334
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Certification Summary

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

TestAmerica Job ID: 240-10866-1

Laboratory	Authority	Program	EPA Region	Certification ID
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Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.





THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT TAL CANTON PM KD

LOT# (QUANTIMS ID) G2E040501 QUOTE# 89187 LOCATION W20B

DATE RECEIVED 5/4/12 TIME RECEIVED 9:10 Checked (v) [x]

DELIVERED BY [x] FEDEX [] ON TRAC [] OTHER
[] GOLDENSTATE [] UPS [] EZ PARCEL
[] TAL COURIER [] TAL SF [] CLIENT [x]

SHIPPING CONTAINER(S) [x] TAL [] CLIENT [] N/A
MULTI-COOLER(S) (if checked see multi-cooler form) []

SINGLE COOLER INFORMATION N/A
CUSTODY SEAL STATUS [x] INTACT [] BROKEN [] N/A [x]

CUSTODY SEAL #(S) 215745,215744

COC #(S) 240-5666.1 [x]

TEMPERATURE BLANK Observed: 1.1 Corrected: 0.3

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)
Observed: 1.6,1.4,2.7 Average 1.9 Corrected Average 1.5

LABORATORY THERMOMETER ID:
IR UNIT: #4 [x] #5 [] [] OTHER [] [x]

CH 5/4/12
Initials Date

pH MEASURED [] YES [] ANOMALY [x] N/A [x]

LABELLED BY CH [x]

LOGGED IN BY CH [x]

SHORT HOLD TEST NOTIFICATION SAMPLE RECEIVING [x]
WETCHEM [x] N/A [x]
VOA-ENCORES [x] N/A [x]

[] METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL [x] N/A [x]

[x] COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH [] N/A [x]
APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES

[] CLOUSEAU [] TEMPERATURE EXCEEDED (0 °C - 6 °C)*1 [x] N/A
[x] WET ICE [] BLUE ICE [] GEL PACK [] NO COOLING AGENTS USED

CH 5/4/12
Initials Date

Notes

*1 Acceptable temperature range for State of Wisconsin samples is <=4°C.

Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-10866-1

Login Number: 10866

List Source: TestAmerica Canton

List Number: 1

Creator: Sutek, Nick

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

July 18, 2012

Mr. Mark Patterson
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266

Reference: Contract No. GS-10F-0293K
Delivery Order No. W912QR-1-F-0266

Subject: Facility-Wide Groundwater Monitoring Program Plan
RVAAP-66 Facility-Wide Groundwater
Soil IDW Letter Report – Draft

Dear Mr. Patterson:

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

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

Soil IDW Discussion

Accumulated IDW soil cuttings were containerized in 55-gal drums on site pending characterization and transport and disposal to an offsite disposal facility. A summary of the drums of IDW generated and its origin are presented in Table 1. Composite sampling for disposal characterization was performed using a composite grab sampling technique. The composite sample was collected from 28 drums of soil. The drums were opened and screened with a photoionization detector (PID). Grab samples of the drums were collected using a decontaminated trier manually pushed to the bottom of each container. The retrieved sample was placed in a decontaminated stainless steel bowl for homogenization. Rocks and loose twigs were removed and discarded. Clumps of soil were broken down using a gloved hand and mixed in the bowl. The mixture was collected using a gloved hand and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the location of the highest screened PID level was collected and transferred directly from the IDW waste container into the sample container with minimum head space for laboratory analysis of VOCs.

All stainless steel bowls and triers were decontaminated in accordance with Section 2.13 of the Addendum after collection of each composite sample.

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

Summary of the IDW containers shown is as follows:

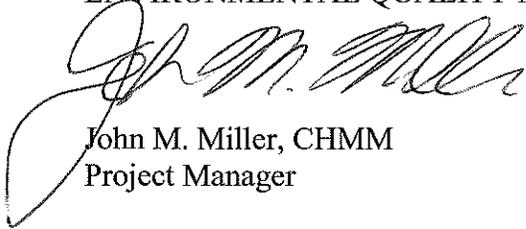
- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 180 degrees F. Reactive sulfide and reactive cyanide were not detected above the reporting limit.
- Arsenic was the only concentration to exceed the USEPA RSLs for the RVAAP full suite totals composite sample. However, the arsenic concentration did not exceed the background criterion for RVAAP.
- Only cadmium exceeded the RVAAP background criteria, but it was not identified at a concentration exceeding the USEPA RSL.

Recommended Disposal Pathways for IDW

After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. It is recommended that the 28 drums containing soil be classified as contaminated but non-hazardous, and that they be sent offsite for disposal to a permitted facility in accordance with Section 8.0 of the FWSAP. Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with the appropriate waste disposal. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.



John M. Miller, CHMM
Project Manager

cc: Vicki Deppisch – Ohio EPA
Mark Nichter – USACE
EQM PN – 030174.0016.001.02

Table 1. IDW Inventory of Drums

Drum ID	Type & Size	Contents	Date	Generation Location	Headspace (ppm)
EQM-121s	55 gallon Steel	Soil Cuttings	06/04/12	EBGmw-131	0.0
EQM-122s	55 gallon Steel	Soil Cuttings	06/07/12	EBGmw-131	4.5
EQM-123s	55 gallon Steel	Soil Cuttings	06/05/12	EBGmw-131	0.0
EQM-124s	55 gallon Steel	Soil Cuttings	06/1-4/12	EBGmw-131	0.0
EQM-125s	55 gallon Steel	Soil Cuttings	06/07/12	EBGmw-131	0.0
EQM-126s	55 gallon Steel	Soil Cuttings	06/13/12	WBGmw-019	0.0
EQM-127s	55 gallon Steel	Soil Cuttings	05/31/12	WBGmw-019	4.6
EQM-128s	55 gallon Steel	Soil Cuttings	06/14/12	WBGmw-019	1.8
EQM-129s	55 gallon Steel	Soil Cuttings	06/19/12	WBGmw-020	3.0
EQM-130s	55 gallon Steel	Soil Cuttings	06/13/12	EBGmw-131 & WBGmw-019	0.0
EQM-131s	55 gallon Steel	Soil Cuttings	06/19/12	WBGmw-020	0.0
EQM-132s	55 gallon Steel	Soil Cuttings	05/31/12-06/18/12	WBGmw-021	0.0
EQM-133s	55 gallon Steel	Soil Cuttings	06/18/12	WBGmw-021	0.0
EQM-134s	55 gallon Steel	Soil Cuttings	06/19/12	WBGmw-020	0.0
EQM-135s	55 gallon Steel	Soil Cuttings	06/18/12	WBGmw-021	9.6
EQM-136s	55 gallon Steel	Soil Cuttings	06/19/12	WBGmw-020	2.9
EQM-137s	55 gallon Steel	Soil Cuttings	06/14/12	WBGmw-019	0.0
EQM-138s	55 gallon Steel	Soil Cuttings	05/31/12	WBGmw-020	0.0
EQM-139s	55 gallon Steel	Soil Cuttings	06/14-18/12	WBGmw-018 & WBGmw-021	0.0
EQM-140s	55 gallon Steel	Soil Cuttings	06/19/12	WBGmw-021	0.0
EQM-141s	55 gallon Steel	Soil Cuttings	06/20/12	DA2mw-116	0.0
EQM-142s	55 gallon Steel	Soil Cuttings	06/20/12	DA2mw-116	0.0
EQM-143s	55 gallon Steel	Soil Cuttings	05/30/12	DA2mw-116	0.0
EQM-144s	55 gallon Steel	Soil Cuttings	06/18-25/12	WBGmw-021	0.0
EQM-145s	55 gallon Steel	Soil Cuttings	06/19-26/12	WBGmw-020	0.0
EQM-146s	55 gallon Steel	Soil Cuttings	05/30/12	DA2mw-114	0.0
EQM-147s	55 gallon Steel	Soil Cuttings	06/20/12	DA2mw-116	0.0
EQM-148s	55 gallon Steel	Sediment from Purge Water	06/27/12	Various	0.0

Table 2. Summary of Analytical Suite of Chemicals

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

1 EPA Methods for Chemical Analysis of Water and Waste

Table 3. Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
VOCs	Carbon disulfide	75-15-0	mg/Kg	0.0054	J, B	820	NA	NA
VOCs	Methylene chloride	75-09-2	mg/Kg	0.0012	J, B	11	NA	NA
VOCs	Toluene	108-88-3	mg/Kg	0.00043	J	5000	NA	NA
SVOCs	2-Methylnaphthalene	91-57-6	mg/Kg	0.0073	J	310	NA	NA
SVOCs	Benzo[g,h,i]perylene	191-24-2	mg/Kg	0.013		NA	NA	NA
SVOCs	Benzo(a)pyrene	50-32-8	mg/Kg	0.0063	J	0.015	NA	NA
SVOCs	Bis(2-ethylhexyl) phthalate	117-81-7	mg/Kg	0.140	B	35	NA	NA
SVOCs	Fluoranthene	206-44-0	mg/Kg	0.0074	J	2300	NA	NA
SVOCs	Naphthalene	91-20-3	mg/Kg	0.0045	J	4.0	NA	NA
SVOCs	Pyrene	129-00-0	mg/Kg	0.0088		1700	NA	NA
Total Metals	Aluminum	7429-90-5	mg/Kg	11000	B	77000	19500	NA
Total Metals	Antimony	7440-36-0	mg/Kg	0.13	J, B	31	0.96	NA
Total Metals	Arsenic	7440-38-2	mg/Kg	11		0.39	19.8	NA
Total Metals	Barium	7440-39-3	mg/Kg	120	B	15000	124	NA
Total Metals	Beryllium	7440-41-7	mg/Kg	0.57		160	0.88	NA
Total Metals	Cadmium	7440-43-9	mg/Kg	0.14		70	0.0	NA
Total Metals	Calcium	7440-70-2	mg/Kg	16000	B	NA	35500	NA
Total Metals	Chromium	7440-47-3	mg/Kg	15		120000	27.2	NA
Total Metals	Cobalt	7440-48-4	mg/Kg	10		23	23.2	NA
Total Metals	Copper	7440-50-8	mg/Kg	21		3100	32.2	NA
Total Metals	Iron	7439-89-6	mg/Kg	25000	B	55000	35200	NA
Total Metals	Lead	7439-92-1	mg/Kg	11		400	19.1	NA
Total Metals	Magnesium	7439-95-4	mg/Kg	4500		NA	8790	NA
Total Metals	Manganese	7439-96-5	mg/Kg	430		1800	3030	NA
Total Metals	Nickel	7440-02-0	mg/Kg	24	B	1500	60.7	NA
Total Metals	Potassium	7440-09-7	mg/Kg	1500	B	NA	3350	NA
Total Metals	Sodium	7440-23-5	mg/Kg	90	J, B	NA	145	NA
Total Metals	Thallium	7440-28-0	mg/Kg	0.17	J	0.78	0.91	NA
Total Metals	Vanadium	7440-62-2	mg/Kg	17	B	390	37.6	NA
Total Metals	Zinc	7440-66-6	mg/Kg	63	B	23000	93.3	NA
Total Metals	Mercury	7439-97-6	mg/Kg	0.027	J	10	0.044	NA
Explosives	Nitrocellulose	9004-70-0	mg/Kg	1.7	J, B	1.8E+08	NA	NA
TCLP-Misc.	Flashpoint	NA	°F	>180		NA	NA	<180
TCLP-Misc.	Corrosivity	NA	S.U.	10		NA	NA	NA
TCLP-Metals	Arsenic	7440-38-2	mg/L	0.0048	J	NA	NA	5.0
TCLP-Metals	Barium	7440-39-3	mg/L	0.88	J, B	NA	NA	100
TCLP-Metals	Cadmium	7440-43-9	mg/L	0.0024	J	NA	NA	1.0
TCLP-Metals	Chromium	7440-47-3	mg/L	0.0037	J	NA	NA	5.0
TCLP-Metals	Lead	7439-92-1	mg/L	0.0035	J	NA	NA	5.0

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

Note:

Acetone (1.4 ug/L J) was detected in the trip blank.

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

Bold concentrations exceed a regulatory limit.

Shaded result exceeds RVAAP background criteria.

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

B = method blank contamination.

NA = not applicable.

ATTACHMENT 1.
LABORATORY ANALYTICAL DATA SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 240-12752-1
Client Project/Site: RVAAP (OH) - IDW

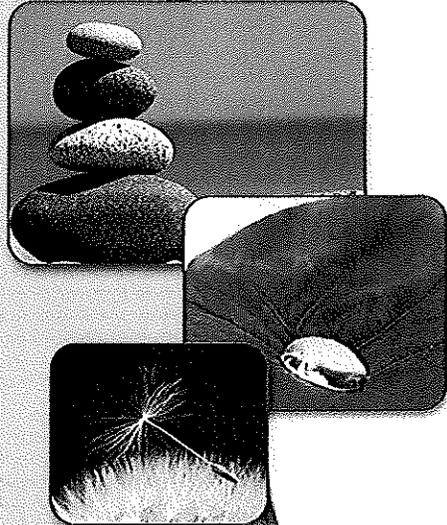
For:
Environmental Quality Mgt., Inc.
1800 Carillon Blvd
Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin



Authorized for release by:
7/16/2012 12:10:41 PM

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com



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

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



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Definitions/Glossary

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

TestAmerica Job ID: 240-12752-1

3

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits

GC Semi VOA

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

HPLC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Estimated result. Result is less than RL.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	RPD of the MS and MSD exceeds the control limits
A	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Estimated result. Result is less than RL.
B	Method blank contamination. Analyte detected at a reportable level in blank.
N	Spike sample recovery is outside control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Definitions/Glossary

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

TestAmerica Job ID: 240-12752-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

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

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Environmental Quality Mgt., Inc.

Project: RVAAP (OH) - IDW

Report Number: 240-12752-1

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

Analyses for Explosive and Propellants were performed by TestAmerica West Sacramento.

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

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

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

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

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

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

RECEIPT

The samples were received on 6/28/2012 12:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 5.6° C, 5.9° C, 6.0° C and 6.0° C.

Method(s) 9040B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe:
FWG-IDW-TANK3-GW

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 07/03/2012 and 07/05/2012 and analyzed on 07/04/2012 and 07/06/2012.

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

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846

Case Narrative

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

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Method 8260B. The samples were analyzed on 06/29/2012.

Acetone was detected in method blank MB 240-49421/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-49421/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Internal standard (ISTD) response for the following sample was outside control limits: FWG-IDW-SBCOMP3-SO. The sample was re-analyzed with concurring results. The original set of data has been reported.

No other analytical or quality issues were noted. All other quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TRIP BLANK (240-12752-1) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 07/10/2012.

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

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/06/2012.

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

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/03/2012 and analyzed on 07/06/2012.

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

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-49770/15-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/02/2012 and 07/10/2012 and analyzed on 07/09/2012 and 07/13/2012.

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

Bis(2-ethylhexyl) phthalate and Butyl benzyl phthalate were detected in method blank MB 240-50344/13-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl (Surr), Nitrobenzene-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for MB 240-49608/13-A. Refer to the QC report for details.

Case Narrative

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

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The associated Method Blank 49608 for sample FWG-IDW-TANK3-GW had surrogates out of control. Upon re-extraction and re-analysis all QC met acceptance criteria, however sample holding times had been exceeded. Both sets of data will be reported.

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

TCLP CHLORINATED PESTICIDES

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/ 8081A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012 and 07/06/2012.

Sample FWG-IDW-SBCOMP3-SO (240-12752-3)[5X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

The closing continuing calibration verification (CCV) associated with batch 50336 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-SBCOMP3-SO

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

CHLORINATED PESTICIDES

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 07/03/2012 and analyzed on 07/09/2012.

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

Sample FWG-IDW-SBCOMP3-SO (240-12752-3)[10X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

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

CHLORINATED PESTICIDES

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 07/02/2012 and analyzed on 07/04/2012.

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

The continuing calibration verification (CCV) for alpha, gamma, beta and delta-BHC, Heptachlor, Aldrin, Heptachlor epoxide, gamma and alpha-Chlordane, Endosulfan I and II, DDE, Dieldrin, Endrin, DDD, Endosulfan sulfate and Endrin ketone associated with batch 49739 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-TANK3-GW

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 49615.

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

POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 07/03/2012 and analyzed on 07/06/2012.

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

Case Narrative

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

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The opening continuing calibration verification (CCV) associated with this sample passed average. Since the samples were ND no corrective action is required. FWG-IDW-SBCOMP3-SO.

The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: FWG-IDW-SBCOMP3-SO. Lot # S65830

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

POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 07/02/2012 and analyzed on 07/03/2012.

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

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 49612.

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

TCLP CHLORINATED HERBICIDES

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/ 8151A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/07/2012.

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

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

TCLP METALS (ICP)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/ 6010B. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

Barium was detected in method blank LB 240-49653/1-D at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

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

TOTAL METALS (ICP)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012.

Several analytes were detected in method blank MB 240-49412/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Manganese failed the recovery criteria low for the MS of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-50003. Calcium failed the recovery criteria high.

Calcium and Manganese failed the recovery criteria high for the MSD of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-50003. Manganese exceeded the rpd limit. Refer to the QC report for details.

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

Case Narrative

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

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

TOTAL RECOVERABLE METALS (ICP)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/10/2012 and analyzed on 07/11/2012.

Several analytes were detected in method blank MB 240-50314/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

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

TOTAL METALS (ICPMS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012 and 07/09/2012.

Antimony failed the recovery criteria low for the MS and MSD of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-49993. Aluminum and Iron failed the recovery criteria high. Refer to the QC report for details.

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

TOTAL RECOVERABLE METALS (ICPMS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 07/10/2012 and analyzed on 07/11/2012.

Sodium was detected in method blank MB 240-50314/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Thallium and Zinc were detected in method blank MB 240-50314/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Sodium failed the recovery criteria low for the MS of sample FWG-IDW-TANK3-GW (240-12752-4) in batch 240-50556. Refer to the QC report for details.

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

TCLP MERCURY

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

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

TOTAL MERCURY

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/29/2012 and analyzed on 07/03/2012.

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

TOTAL MERCURY

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012.

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

Case Narrative

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

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

FLASHPOINT

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 06/29/2012.

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

FLASHPOINT

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 07/02/2012.

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

TOTAL AND AMENABLE CYANIDE

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total and amenable cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 07/09/2012.

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

TOTAL CYANIDE

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 07/02/2012.

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

SULFIDE

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 07/03/2012.

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

SULFIDE

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 07/03/2012.

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

PH

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for pH in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 06/28/2012.

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

PH

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for pH in accordance with EPA SW-846 Method 9045C. The samples were analyzed on 06/29/2012.

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

PERCENT SOLIDS

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/29/2012.

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

Case Narrative

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

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

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WEST SACRAMENTO

CASE NARRATIVE

General Comments

Please note that the percent solids analysis was performed by the TestAmerica Canton laboratory.

WATER, 8330, Explosives

Sample: FWG-IDW-TANK3-GW

There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

SOLID, Nitrocellulose

Sample: FWG-IDW-SBCOMP3-SO

The matrix spikes, which were performed on sample 2, have a low matrix spike duplicate recovery due to possible matrix interferences. Since the laboratory control sample met acceptance criteria, no corrective action was performed.

There are no other anomalies associated with this project.

Method Summary

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

TestAmerica Job ID: 240-12752-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
8081A	Organochlorine Pesticides (GC)	SW846	TAL NC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
8151A	Herbicides (GC)	SW846	TAL NC
8330 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
8330/8330A	Nitroaromatics & Nitramines: Explosives (8330/A)	SW846	TAL WSC
8330B	Nitroaromatics & Nitramines: Explosives (8330B)	SW846	TAL WSC
6010B	Metals (ICP)	SW846	TAL NC
6020	Metals (ICP/MS)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC
7471A	Mercury (CVAA)	SW846	TAL NC
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL NC
160.3 MOD	Solids, Percent (as TS - 160.3 MOD) - Solids	MCAWW	TAL NC
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and insoluble (Titrimetric)	SW846	TAL NC
9040B	pH	SW846	TAL NC
9045C	pH	SW848	TAL NC
Moisture	Percent Moisture	EPA	TAL NC
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

TAL-SOP = TAL-SOP

Laboratory References:

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

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

Sample Summary

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

TestAmerica Job ID: 240-12752-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-12752-1	TRIP BLANK	Water	06/28/12 08:00	06/28/12 12:45
240-12752-3	FWG-IDW-SBCOMP3-SO	Solid	06/28/12 10:15	06/28/12 12:45
240-12752-4	FWG-IDW-TANK3-GW	Water	06/28/12 11:00	06/28/12 12:45

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Detection Summary

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-12752-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.4	J	10	1.1	ug/L	1	*	8260B	Total/NA

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	5.4	J B	6.4	0.56	ug/Kg	1	*	8260B	Total/NA
Methylene Chloride	1.2	J B	6.4	0.86	ug/Kg	1	*	8260B	Total/NA
Toluene	0.43	J	6.4	0.34	ug/Kg	1	*	8260B	Total/NA
Fluoranthene	7.4	J	8.4	4.2	ug/Kg	1	*	8270C	Total/NA
Benzo[g,h,i]perylene	13		8.4	4.2	ug/Kg	1	*	8270C	Total/NA
Benzo[a]pyrene	6.3	J	8.4	4.2	ug/Kg	1	*	8270C	Total/NA
2-Methylnaphthalene	7.3	J	8.4	4.2	ug/Kg	1	*	8270C	Total/NA
Naphthalene	4.5	J	8.4	4.2	ug/Kg	1	*	8270C	Total/NA
Pyrene	8.8		8.4	4.2	ug/Kg	1	*	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	140	B	63	24	ug/Kg	1	*	8270C	Total/NA
Arsenic	11		1.2	0.37	mg/Kg	1	*	6010B	Total/NA
Chromium	15		0.61	0.25	mg/Kg	1	*	6010B	Total/NA
Cobalt	10		6.1	0.20	mg/Kg	1	*	6010B	Total/NA
Lead	11		0.37	0.23	mg/Kg	1	*	6010B	Total/NA
Vanadium	17	B	6.1	0.15	mg/Kg	1	*	6010B	Total/NA
Barium	120	B	25	0.087	mg/Kg	1	*	6010B	Total/NA
Calcium	16000	B	810	20	mg/Kg	1	*	6010B	Total/NA
Copper	21		3.1	0.91	mg/Kg	1	*	6010B	Total/NA
Magnesium	4500		810	6.3	mg/Kg	1	*	8010B	Total/NA
Manganese	430		1.8	0.091	mg/Kg	1	*	6010B	Total/NA
Nickel	24	B	4.9	0.33	mg/Kg	1	*	6010B	Total/NA
Potassium	1500	B	610	7.6	mg/Kg	1	*	6010B	Total/NA
Arsenic	0.0048	J	0.50	0.0032	mg/L	1		6010B	TCLP
Barium	0.88	J B	10	0.00087	mg/L	1		6010B	TCLP
Cadmium	0.0024	J	0.10	0.00066	mg/L	1		6010B	TCLP
Chromium	0.0037	J	0.50	0.0022	mg/L	1		6010B	TCLP
Lead	0.0035	J	0.50	0.0019	mg/L	1		6010B	TCLP
Aluminum	11000	B	6.1	1.6	mg/Kg	1	*	6020	Total/NA
Antimony	0.13	J B	0.25	0.029	mg/Kg	1	*	8020	Total/NA
Beryllium	0.57		0.12	0.058	mg/Kg	1	*	6020	Total/NA
Cadmium	0.14		0.12	0.0096	mg/Kg	1	*	6020	Total/NA
Iron	25000	B	12	1.2	mg/Kg	1	*	6020	Total/NA
Sodium	90	J B	120	2.9	mg/Kg	1	*	6020	Total/NA
Thallium	0.17	J	0.25	0.016	mg/Kg	1	*	6020	Total/NA
Zinc	63	B	2.5	0.25	mg/Kg	1	*	6020	Total/NA
Mercury	0.027	J	0.13	0.019	mg/Kg	1	*	7471A	Total/NA
Flashpoint	>180		1.00	1.00	Degrees F	1		1010	Total/NA
Corrosivity	10.0		0.100	0.100	SU	1		8045C	Total/NA
Nitrocellulose	1.7	J B	6.4	1.0	mg/kg	1	*	WS-WC-0050	Total

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	0.94	J	10	0.57	ug/L	1		8260B	Total/NA
Bis(2-ethylhexyl) phthalate - RE	2.2	H B	2.0	0.79	ug/L	1		8270C	Total/NA
alpha-BHC	0.0093	J	0.051	0.0071	ug/L	1		8081A	Total/NA
beta-BHC	0.012	J	0.051	0.0086	ug/L	1		8081A	Total/NA
3-Nitrotoluene	0.081	J	0.52	0.059	ug/L	1.03		8330/8330A	Total

Detection Summary

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW (Continued)

Lab Sample ID: 240-12752-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	8.3	J	10	3.2	ug/L	1		6010B	Total Recoverable
Chromium	3.7	J	5.0	2.2	ug/L	1		6010B	Total Recoverable
Vanadium	1.9	J	7.0	0.64	ug/L	1		6010B	Total Recoverable
Barium	56	J B	200	0.67	ug/L	1		6010B	Total Recoverable
Calcium	43000	B	5000	130	ug/l.	1		6010B	Total Recoverable
Magnesium	10000	B	5000	34	ug/L	1		6010B	Total Recoverable
Manganese	110	B	15	0.41	ug/L	1		6010B	Total Recoverable
Nickel	3.2	J	40	3.2	ug/L	1		6010B	Total Recoverable
Potassium	19000	B	5000	72	ug/L	1		6010B	Total Recoverable
Arsenic	0.0054	J	0.50	0.0032	mg/l.	1		6010B	TCLP
Barium	0.052	J B	10	0.00067	mg/L	1		6010B	TCLP
Chromium	0.0029	J	0.50	0.0022	mg/l.	1		6010B	TCLP
Aluminum	580		50	19	ug/L	1		6020	Total Recoverable
Antimony	2.3		2.0	0.13	ug/L	1		6020	Total Recoverable
Iron	1300	^	100	26	ug/l.	1		6020	Total Recoverable
Sodium	28000	B	1000	6.9	ug/L	1		6020	Total Recoverable
Thallium	0.58	J B	2.0	0.14	ug/L	1		6020	Total Recoverable
Zinc	11	J B	20	2.3	ug/L	1		6020	Total Recoverable
Flashpoint	>180		1.00	1.00	Degrees F	1		1010	Total/NA
pH	8.39		0.100	0.100	SU	1		9040B	Total/NA

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Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-12752-1

Date Collected: 06/28/12 08:00

Matrix: Water

Date Received: 06/28/12 12:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 12:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			07/10/12 12:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			07/10/12 12:54	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			07/10/12 12:54	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 12:54	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			07/10/12 12:54	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 12:54	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			07/10/12 12:54	1
2-Hexanone	10	U	10	0.41	ug/L			07/10/12 12:54	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 12:54	1
Acetone	1.4	J	10	1.1	ug/L			07/10/12 12:54	1
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
Bromoform	1.0	U	1.0	0.64	ug/L			07/10/12 12:54	1
Bromomethane	1.0	U	1.0	0.41	ug/L			07/10/12 12:54	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			07/10/12 12:54	1
Chloromethane	1.0	U	1.0	0.30	ug/L			07/10/12 12:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			07/10/12 12:54	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			07/10/12 12:54	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			07/10/12 12:54	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			07/10/12 12:54	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			07/10/12 12:54	1
o-Xylene	1.0	U	1.0	0.14	ug/L			07/10/12 12:54	1
Styrene	1.0	U	1.0	0.11	ug/L			07/10/12 12:54	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			07/10/12 12:54	1
Toluene	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			07/10/12 12:54	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			07/10/12 12:54	1
Chloroform	1.0	U	1.0	0.16	ug/L			07/10/12 12:54	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			07/10/12 12:54	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			07/10/12 12:54	1
Chloroethane	1.0	U	1.0	0.29	ug/L			07/10/12 12:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		74 - 116		07/10/12 12:54	1
1,2-Dichloroethane-d4 (Surr)	93		63 - 129		07/10/12 12:54	1
4-Bromofluorobenzene (Surr)	95		66 - 117		07/10/12 12:54	1
Dibromofluoromethane (Surr)	100		75 - 121		07/10/12 12:54	1

Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Percent Solids: 78.3

Method: 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	6.4	U	6.4	0.71	ug/Kg	*		06/29/12 19:38	1
1,1,2,2-Tetrachloroethane	6.4	U	6.4	0.43	ug/Kg	*		06/29/12 19:38	1
1,1,2-Trichloroethane	6.4	U	6.4	0.50	ug/Kg	*		06/29/12 19:38	1
1,1-Dichloroethane	6.4	U	6.4	0.46	ug/Kg	*		06/29/12 19:38	1
1,1-Dichloroethene	6.4	U	6.4	0.66	ug/Kg	*		06/29/12 19:38	1
1,2-Dichloroethane	6.4	U	6.4	0.43	ug/Kg	*		06/29/12 19:38	1
1,2-Dichloroethene, Total	13	U	13	0.98	ug/Kg	*		06/29/12 19:38	1
1,2-Dichloropropane	6.4	U	6.4	0.86	ug/Kg	*		06/29/12 19:38	1
2-Butanone (MEK)	26	U	26	1.8	ug/Kg	*		06/29/12 19:38	1
2-Hexanone	26	U	26	0.80	ug/Kg	*		06/29/12 19:38	1
4-Methyl-2-pentanone (MIBK)	26	U	26	0.69	ug/Kg	*		06/29/12 19:38	1
Acetone	26	U	26	8.0	ug/Kg	*		06/29/12 19:38	1
Benzene	6.4	U	6.4	0.29	ug/Kg	*		06/29/12 19:38	1
Bromoform	6.4	U	6.4	0.42	ug/Kg	*		06/29/12 19:38	1
Bromomethane	6.4	U	6.4	0.69	ug/Kg	*		06/29/12 19:38	1
Carbon disulfide	5.4	J B	6.4	0.56	ug/Kg	*		06/29/12 19:38	1
Carbon tetrachloride	6.4	U	6.4	0.47	ug/Kg	*		06/29/12 19:38	1
Chlorobenzene	6.4	U	6.4	0.42	ug/Kg	*		06/29/12 19:38	1
Chloromethane	6.4	U	6.4	0.52	ug/Kg	*		06/29/12 19:38	1
cis-1,2-Dichloroethene	6.4	U	6.4	0.46	ug/Kg	*		06/29/12 19:38	1
cis-1,3-Dichloropropene	6.4	U	6.4	0.43	ug/Kg	*		06/29/12 19:38	1
Dibromochloromethane	6.4	U	6.4	0.70	ug/Kg	*		06/29/12 19:38	1
Bromodichloromethane	6.4	U	6.4	0.36	ug/Kg	*		06/29/12 19:38	1
Ethylbenzene	6.4	U	6.4	0.33	ug/Kg	*		06/29/12 19:38	1
Methylene Chloride	1.2	J B	6.4	0.86	ug/Kg	*		06/29/12 19:38	1
m-Xylene & p-Xylene	13	U	13	1.5	ug/Kg	*		06/29/12 19:38	1
o-Xylene	6.4	U	6.4	0.45	ug/Kg	*		06/29/12 19:38	1
Styrene	6.4	U	6.4	0.19	ug/Kg	*		06/29/12 19:38	1
Tetrachloroethane	6.4	U	6.4	0.68	ug/Kg	*		06/29/12 19:38	1
Toluene	0.43	J	6.4	0.34	ug/Kg	*		06/29/12 19:38	1
trans-1,2-Dichloroethene	6.4	U	6.4	0.52	ug/Kg	*		06/29/12 19:38	1
trans-1,3-Dichloropropene	6.4	U	6.4	0.69	ug/Kg	*		06/29/12 19:38	1
Trichloroethene	6.4	U	6.4	0.54	ug/Kg	*		06/29/12 19:38	1
Vinyl chloride	6.4	U	6.4	0.50	ug/Kg	*		06/29/12 19:38	1
Xylenes, Total	13	U	13	0.86	ug/Kg	*		06/29/12 19:38	1
Chloroform	6.4	U	6.4	0.37	ug/Kg	*		06/29/12 19:38	1
Bromochloromethane	6.4	U	6.4	0.91	ug/Kg	*		06/29/12 19:38	1
1,2-Dibromoethane	6.4	U	6.4	0.64	ug/Kg	*		06/29/12 19:38	1
Chloroethane	6.4	U	6.4	1.1	ug/Kg	*		06/29/12 19:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	112		67 - 125					06/29/12 19:38	1
1,2-Dichloroethane-d4 (Surr)	96		58 - 123					06/29/12 19:38	1
4-Bromofluorobenzene (Surr)	121		52 - 136					06/29/12 19:38	1
Dibromofluoromethane (Surr)	89		37 - 132					06/29/12 19:38	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/06/12 21:42	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/06/12 21:42	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/06/12 21:42	1

Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0.025	0.0065	mg/L			07/06/12 21:42	1
Carbon tetrachloride	0.025	U	0.025	0.0085	mg/L			07/06/12 21:42	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/06/12 21:42	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/06/12 21:42	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/06/12 21:42	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/06/12 21:42	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/06/12 21:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121		07/06/12 21:42	1
4-Bromofluorobenzene (Surr)	94		70 - 124		07/06/12 21:42	1
Toluene-d8 (Surr)	107		90 - 115		07/06/12 21:42	1
Dibromofluoromethane (Surr)	117		84 - 128		07/06/12 21:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Acenaphthylene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Anthracene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzo[a]anthracene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzoic acid	830	U	830	420	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzo[b]fluoranthene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzo[k]fluoranthene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzyl alcohol	420	U	420	27	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Bis(2-chloroethoxy)methane	130	U	130	28	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Bis(2-chloroethyl)ether	130	U	130	2.5	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Bromophenyl phenyl ether	63	U	63	16	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Butyl benzyl phthalate	63	U	63	13	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4-Dimethylphenol	190	U	190	25	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Dimethyl phthalate	63	U	63	21	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4,6-Dinitro-2-methylphenol	190	U	190	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4-Dinitrophenol	420	U	420	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4-Dinitrotoluene	250	U	250	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,6-Dinitrotoluene	250	U	250	27	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Fluoranthene	7.4	J	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Fluorene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Hexachlorobenzene	8.4	U	8.4	2.7	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Hexachlorobutadiene	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Hexachlorocyclopentadiene	420	U	420	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Hexachloroethane	63	U	63	11	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
N-Nitrosodiphenylamine	63	U	63	27	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
N-Nitrosodi-n-propylamine	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
1,4-Dichlorobenzene	63	U	63	25	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Chloronaphthalene	63	U	63	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Chlorophenol	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Chlorophenyl phenyl ether	63	U	63	16	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Chrysene	8.4	U	8.4	1.4	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Dibenz(a,h)anthracene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Dibenzofuran	63	U	63	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzo[g,h,i]perylene	13		8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzo[a]pyrene	6.3	J	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1

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Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Percent Solids: 78.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	63	U	63	19	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
1,2-Dichlorobenzene	63	U	63	12	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
1,3-Dichlorobenzene	63	U	63	14	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
3,3'-Dichlorobenzidine	130	U	130	23	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4-Dichlorophenol	190	U	190	25	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Diethyl phthalate	63	U	63	20	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Indeno[1,2,3-cd]pyrene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Isophorone	63	U	63	16	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Methylnaphthalene	7.3	J	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Methylphenol	250	U	250	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Naphthalene	4.5	J	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Nitroaniline	250	U	250	12	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
3-Nitroaniline	250	U	250	20	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Nitroaniline	250	U	250	33	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Nitrobenzene	130	U	130	2.8	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Nitrophenol	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Nitrophenol	420	U	420	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Pyrene	8.8		8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Pentachlorophenol	190	U	190	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Phenanthrene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
1,2,4-Trichlorobenzene	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4,5-Trichlorophenol	190	U	190	32	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4,6-Trichlorophenol	190	U	190	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Phenol	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Carbazole	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Chloroaniline	190	U	190	21	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
3 & 4 Methylphenol	510	U	510	25	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Bis(2-ethylhexyl) phthalate	140	B	63	24	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Di-n-octyl phthalate	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Chloro-3-methylphenol	190	U	190	27	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,2'-oxybis[1-chloropropane]	130	U	130	12	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
2-Fluorobiphenyl (Surr)	53		34 - 110				07/03/12 13:56	07/06/12 19:27	1
2-Fluorophenol (Surr)	69		26 - 110				07/03/12 13:56	07/06/12 19:27	1
Nitrobenzene-d5 (Surr)	53		24 - 112				07/03/12 13:56	07/06/12 19:27	1
Terphenyl-d14 (Surr)	75		41 - 119				07/03/12 13:56	07/06/12 19:27	1
2,4,6-Tribromophenol (Surr)	46		10 - 118				07/03/12 13:56	07/06/12 19:27	1
Phenol-d5 (Surr)	71		28 - 110				07/03/12 13:56	07/06/12 19:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L	*	07/03/12 09:12	07/06/12 18:11	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L	*	07/03/12 09:12	07/06/12 18:11	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L	*	07/03/12 09:12	07/06/12 18:11	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L	*	07/03/12 09:12	07/06/12 18:11	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L	*	07/03/12 09:12	07/06/12 18:11	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L	*	07/03/12 09:12	07/06/12 18:11	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L	*	07/03/12 09:12	07/06/12 18:11	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L	*	07/03/12 09:12	07/06/12 18:11	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L	*	07/03/12 09:12	07/06/12 18:11	1

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Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:12	07/06/12 18:11	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:12	07/06/12 18:11	1
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:12	07/06/12 18:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	46		22 - 110				07/03/12 09:12	07/06/12 18:11	1
2-Fluorophenol (Surr)	13		10 - 110				07/03/12 09:12	07/06/12 18:11	1
2,4,6-Tribromophenol (Surr)	68		17 - 117				07/03/12 09:12	07/06/12 18:11	1
Nitrobenzene-d5 (Surr)	46		29 - 111				07/03/12 09:12	07/06/12 18:11	1
Phenol-d5 (Surr)	46		10 - 110				07/03/12 09:12	07/06/12 18:11	1
Terphenyl-d14 (Surr)	71		40 - 119				07/03/12 09:12	07/06/12 18:11	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	21	U	21	7.8	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
4,4'-DDE	21	U	21	4.9	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
4,4'-DDT	21	U	21	7.9	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Aldrin	21	U	21	15	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
alpha-BHC	21	U	21	9.2	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
alpha-Chlordane	21	U	21	12	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
beta-BHC	21	U	21	14	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
delta-BHC	21	U	21	15	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Dieldrin	21	U	21	5.9	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endosulfan I	21	U	21	6.6	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endosulfan II	21	U	21	10	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endosulfan sulfate	21	U	21	11	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endrin	21	U	21	6.3	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endrin aldehyde	21	U	21	13	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endrin ketone	21	U	21	7.9	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
gamma-BHC (Lindane)	21	U	21	9.3	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
gamma-Chlordane	21	U	21	5.3	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Heptachlor	21	U	21	14	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Heptachlor epoxide	21	U	21	10	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Methoxychlor	42	U	42	19	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Toxaphene	840	U	840	240	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	97		32 - 175				07/03/12 12:02	07/09/12 08:27	10
DCB Decachlorobiphenyl	110		32 - 175				07/03/12 12:02	07/09/12 08:27	10
Tetrachloro-m-xylene	95		24 - 150				07/03/12 12:02	07/09/12 08:27	10
Tetrachloro-m-xylene	91		24 - 150				07/03/12 12:02	07/09/12 08:27	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.060	U	0.060	0.00040	mg/L		07/03/12 09:15	07/06/12 14:52	5
Endrin	0.0060	U	0.0060	0.00013	mg/L		07/03/12 09:15	07/06/12 14:52	5
Heptachlor	0.0060	U	0.0080	0.000096	mg/L		07/03/12 09:15	07/06/12 14:52	5
Heptachlor epoxide	0.0060	U	0.0060	0.000085	mg/L		07/03/12 09:15	07/06/12 14:52	5
gamma-BHC (Lindane)	0.0060	U	0.0060	0.000077	mg/L		07/03/12 09:15	07/06/12 14:52	5
Methoxychlor	0.012	U	0.012	0.00038	mg/L		07/03/12 09:15	07/06/12 14:52	5
Toxaphene	0.24	U	0.24	0.0038	mg/L		07/03/12 09:15	07/06/12 14:52	5

Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		46 - 122	07/03/12 09:15	07/06/12 14:52	5
Tetrachloro-m-xylene	74		46 - 122	07/03/12 09:15	07/06/12 14:52	5
DCB Decachlorobiphenyl	102		34 - 141	07/03/12 09:15	07/06/12 14:52	5
DCB Decachlorobiphenyl	100		34 - 141	07/03/12 09:15	07/06/12 14:52	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	42	U	42	26	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1221	42	U	42	20	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1232	42	U	42	18	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1242	42	U	42	16	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1248	42	U	42	21	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1254	42	U	42	21	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1260	42	U	42	21	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	60		29 - 151	07/03/12 11:53	07/06/12 09:43	1
DCB Decachlorobiphenyl	58		14 - 163	07/03/12 11:53	07/06/12 09:43	1

Method: 8151A - Herbicides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 19:42	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 19:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	53		37 - 116	07/03/12 09:18	07/07/12 19:42	1
2,4-Dichlorophenylacetic acid	63		37 - 116	07/03/12 09:18	07/07/12 19:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	0.25	U	0.25	0.020	mg/kg		07/06/12 06:00	07/10/12 12:23	0.99

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.25	U	0.25	0.0099	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
1,3-Dinitrobenzene	0.25	U	0.25	0.0042	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2,4,6-Trinitrotoluene	0.25	U	0.25	0.019	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2,4-Dinitrotoluene	0.25	U	0.25	0.0052	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2,6-Dinitrotoluene	0.25	U	0.25	0.0072	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2-Amino-4,6-dinitrotoluene	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2-Nitrotoluene	0.25	U	0.25	0.013	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
3-Nitrotoluene	0.25	U	0.25	0.015	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
4-Amino-2,6-dinitrotoluene	0.25	U	0.25	0.0099	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
4-Nitrotoluene	0.25	U	0.25	0.025	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
HMX	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
Nitrobenzene	0.25	U	0.25	0.017	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
Nitroglycerin	0.50	U	0.50	0.015	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
PETN	0.50	U	0.50	0.025	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
RDX	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
Tetryl	0.25	U	0.25	0.0099	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	99		75 - 115	07/09/12 12:45	07/10/12 14:06	0.99

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Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Percent Solids: 78.3

Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		1.2	0.37	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Chromium	15		0.61	0.25	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Cobalt	10		6.1	0.20	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Lead	11		0.37	0.23	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Selenium	0.61	U	0.61	0.55	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Silver	0.61	U	0.61	0.12	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Vanadium	17	B	6.1	0.15	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Barium	120	B	25	0.087	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Calcium	16000	B	610	20	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Copper	21		3.1	0.91	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Magnesium	4500		610	6.3	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Manganese	430		1.8	0.091	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Nickel	24	B	4.9	0.33	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Potassium	1500	B	610	7.6	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1

Method: 6010B - Metals (ICP) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0048	J	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 20:59	1
Barium	0.88	J B	10	0.00067	mg/L		07/03/12 10:01	07/05/12 20:59	1
Cadmium	0.0024	J	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 20:59	1
Chromium	0.0037	J	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 20:59	1
Lead	0.0035	J	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 20:59	1
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 20:59	1
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 20:59	1

Method: 6020 - Metals (ICP/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	11000	B	6.1	1.6	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Antimony	0.13	J B	0.25	0.029	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Beryllium	0.57		0.12	0.058	mg/Kg	*	06/29/12 11:17	07/09/12 09:43	1
Cadmium	0.14		0.12	0.0096	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Iron	25000	B	12	1.2	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Sodium	90	J B	120	2.9	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Thallium	0.17	J	0.25	0.016	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Zinc	63	B	2.5	0.25	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1

Method: 7470A - Mercury (CVAA) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 13:58	1

Method: 7471A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	J	0.13	0.019	mg/Kg	*	06/29/12 14:00	07/05/12 16:29	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>180		1.00	1.00	Degrees F			06/29/12 14:17	1
Cyanide, Total	0.63	U	0.63	0.13	mg/Kg	*	07/09/12 08:07	07/09/12 10:24	1
Sulfide	39	U	39	26	mg/Kg	*	07/03/12 07:56	07/03/12 13:48	1
Corrosivity	10.0		0.100	0.100	SU			06/29/12 16:15	1
Nitrocellulose	1.7	J B	6.4	1.0	mg/kg	*	07/09/12 12:15	07/11/12 11:11	1

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Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 13:16	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			07/10/12 13:16	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			07/10/12 13:16	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			07/10/12 13:16	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 13:16	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 13:16	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			07/10/12 13:16	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 13:16	1
2-Butanone (MEK)	0.94	J	10	0.57	ug/L			07/10/12 13:16	1
2-Hexanone	10	U	10	0.41	ug/L			07/10/12 13:16	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 13:16	1
Acetone	10	U	10	1.1	ug/L			07/10/12 13:16	1
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
Bromoform	1.0	U	1.0	0.64	ug/L			07/10/12 13:16	1
Bromomethane	1.0	U	1.0	0.41	ug/L			07/10/12 13:16	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			07/10/12 13:16	1
Chloromethane	1.0	U	1.0	0.30	ug/L			07/10/12 13:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 13:16	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			07/10/12 13:16	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			07/10/12 13:16	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			07/10/12 13:16	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			07/10/12 13:16	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			07/10/12 13:16	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			07/10/12 13:16	1
o-Xylene	1.0	U	1.0	0.14	ug/L			07/10/12 13:16	1
Styrene	1.0	U	1.0	0.11	ug/L			07/10/12 13:16	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			07/10/12 13:16	1
Toluene	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 13:16	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			07/10/12 13:16	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 13:16	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			07/10/12 13:16	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			07/10/12 13:16	1
Chloroform	1.0	U	1.0	0.16	ug/L			07/10/12 13:16	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			07/10/12 13:16	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			07/10/12 13:16	1
Chloroethane	1.0	U	1.0	0.29	ug/L			07/10/12 13:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		74 - 115					07/10/12 13:16	1
1,2-Dichloroethane-d4 (Surr)	95		63 - 129					07/10/12 13:16	1
4-Bromofluorobenzene (Surr)	96		66 - 117					07/10/12 13:16	1
Dibromofluoromethane (Surr)	100		75 - 121					07/10/12 13:16	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/04/12 03:00	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/04/12 03:00	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/04/12 03:00	1

Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Benzene	0.025	U	0.025	0.0065	mg/L			07/04/12 03:00	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			07/04/12 03:00	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/04/12 03:00	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/04/12 03:00	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/04/12 03:00	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/04/12 03:00	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/04/12 03:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DII Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 121					07/04/12 03:00	1
4-Bromofluorobenzene (Surr)	91		70 - 124					07/04/12 03:00	1
Toluene-d8 (Surr)	108		90 - 115					07/04/12 03:00	1
Dibromofluoromethane (Surr)	110		84 - 128					07/04/12 03:00	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Acenaphthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Acenaphthylene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[a]anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzoic acid	25	U	25	10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Butyl benzyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dimethylphenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 11:21	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorobutadiene	1.0	U	1.0	0.27	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
N-Nitrosodiphenylamine	1.0	U	1.0	0.31	ug/L		07/02/12 11:43	07/09/12 11:21	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		07/02/12 11:43	07/09/12 11:21	1
Chrysene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[g,h,i]perylene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[a]pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1

Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	1.0	U	1.0	0.67	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,2-Dichlorobenzene	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,3-Dichlorobenzene	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dichlorophenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 11:21	1
Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Isophorone	1.0	U	1.0	0.27	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Naphthalene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Nitrobenzene	1.0	U	1.0	0.040	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
Pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4,6-Trichlorophenol	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Phenol	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 11:21	1
Carbazole	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chloroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		07/02/12 11:43	07/09/12 11:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	54		28 - 110	07/02/12 11:43	07/09/12 11:21	1
2-Fluorophenol (Surr)	64		10 - 110	07/02/12 11:43	07/09/12 11:21	1
Nitrobenzene-d5 (Surr)	51		27 - 111	07/02/12 11:43	07/09/12 11:21	1
Terphenyl-d14 (Surr)	72		37 - 119	07/02/12 11:43	07/09/12 11:21	1
2,4,6-Tribromophenol (Surr)	67		22 - 120	07/02/12 11:43	07/09/12 11:21	1
Phenol-d5 (Surr)	67		10 - 110	07/02/12 11:43	07/09/12 11:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Acenaphthylene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Anthracene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[a]anthracene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzoic acid	25	U H	25	9.9	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[b]fluoranthene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[k]fluoranthene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzyl alcohol	5.0	U H	5.0	0.38	ug/L		07/10/12 10:24	07/13/12 12:33	1
Bis(2-chloroethoxy)methane	0.99	U H	0.99	0.32	ug/L		07/10/12 10:24	07/13/12 12:33	1

Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	0.99	U H	0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Bromophenyl phenyl ether	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Butyl benzyl phthalate	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dimethylphenol	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Dimethyl phthalate	0.99	U H	0.99	0.29	ug/L		07/10/12 10:24	07/13/12 12:33	1
4,6-Dinitro-2-methylphenol	5.0	U H	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dinitrophenol	5.0	U H	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dinitrotoluene	5.0	U H	5.0	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,6-Dinitrotoluene	5.0	U H	5.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Fluoranthene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Fluorene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachlorobenzene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachlorobutadiene	0.99	U H	0.99	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachlorocyclopentadiene	9.9	U H	9.9	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachloroethane	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
N-Nitrosodiphenylamine	0.99	U H	0.99	0.31	ug/L		07/10/12 10:24	07/13/12 12:33	1
N-Nitrosodi-n-propylamine	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,4-Dichlorobenzene	0.99	U H	0.99	0.34	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Chloronaphthalene	0.99	U H	0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Chlorophenol	0.99	U H	0.99	0.29	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Chlorophenyl phenyl ether	2.0	U H	2.0	0.30	ug/L		07/10/12 10:24	07/13/12 12:33	1
Chrysene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Dibenz(a,h)anthracene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Dibenzofuran	0.99	U H	0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[g,h,i]perylene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[a]pyrene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Di-n-butyl phthalate	0.99	U H	0.99	0.66	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,2-Dichlorobenzene	0.99	U H	0.99	0.29	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,3-Dichlorobenzene	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
3,3'-Dichlorobenzidine	5.0	U H	5.0	0.37	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dichlorophenol	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Diethyl phthalate	0.99	U H	0.99	0.59	ug/L		07/10/12 10:24	07/13/12 12:33	1
Indeno[1,2,3-cd]pyrene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Isophorone	0.99	U H	0.99	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Methylnaphthalene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Methylphenol	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Naphthalene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Nitroaniline	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
3-Nitroaniline	2.0	U H	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Nitroaniline	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Nitrobenzene	0.99	U H	0.99	0.040	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Nitrophenol	2.0	U H	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Nitrophenol	5.0	U H	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
Pyrene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Pentachlorophenol	5.0	U H	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
Phenanthrene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,2,4-Trichlorobenzene	0.99	U H	0.99	0.28	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4,5-Trichlorophenol	5.0	U H	5.0	0.30	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4,6-Trichlorophenol	5.0	U H	5.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Phenol	0.99	U H	0.99	0.59	ug/L		07/10/12 10:24	07/13/12 12:33	1
Carbazole	0.99	U H	0.99	0.28	ug/L		07/10/12 10:24	07/13/12 12:33	1

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Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/26/12 12:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
3 & 4 Methylphenol	2.0	U H	2.0	0.74	ug/L		07/10/12 10:24	07/13/12 12:33	1
Bis(2-ethylhexyl) phthalate	2.2	H B	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Di-n-octyl phthalate	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Chloro-3-methylphenol	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,2'-oxybis[1-chloropropane]	0.99	U H	0.99	0.40	ug/L		07/10/12 10:24	07/13/12 12:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	53		28 - 110	07/10/12 10:24	07/13/12 12:33	1
2-Fluorophenol (Surr)	61		10 - 110	07/10/12 10:24	07/13/12 12:33	1
Nitrobenzene-d5 (Surr)	54		27 - 111	07/10/12 10:24	07/13/12 12:33	1
Terphenyl-d14 (Surr)	71		37 - 119	07/10/12 10:24	07/13/12 12:33	1
2,4,6-Tribromophenol (Surr)	64		22 - 120	07/10/12 10:24	07/13/12 12:33	1
Phenol-d5 (Surr)	66		10 - 110	07/10/12 10:24	07/13/12 12:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:12	07/06/12 18:30	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:12	07/06/12 18:30	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 18:30	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:30	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		07/03/12 09:12	07/06/12 18:30	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:30	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 18:30	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:12	07/06/12 18:30	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:12	07/06/12 18:30	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:12	07/06/12 18:30	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:12	07/06/12 18:30	1
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:12	07/06/12 18:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	43		22 - 110	07/03/12 09:12	07/06/12 18:30	1
2-Fluorophenol (Surr)	12		10 - 110	07/03/12 09:12	07/06/12 18:30	1
2,4,6-Tribromophenol (Surr)	71		17 - 117	07/03/12 09:12	07/06/12 18:30	1
Nitrobenzene-d5 (Surr)	45		29 - 111	07/03/12 09:12	07/06/12 18:30	1
Phenol-d5 (Surr)	42		10 - 110	07/03/12 09:12	07/06/12 18:30	1
Terphenyl-d14 (Surr)	75		40 - 119	07/03/12 09:12	07/06/12 18:30	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.051	U	0.051	0.0098	ug/L		07/02/12 11:57	07/04/12 07:55	1
4,4'-DDE	0.051	U	0.051	0.0099	ug/L		07/02/12 11:57	07/04/12 07:55	1
4,4'-DDT	0.051	U	0.051	0.016	ug/L		07/02/12 11:57	07/04/12 07:55	1
Aldrin	0.051	U	0.051	0.0084	ug/L		07/02/12 11:57	07/04/12 07:55	1
alpha-BHC	0.0093	J	0.051	0.0071	ug/L		07/02/12 11:57	07/04/12 07:55	1
alpha-Chlordane	0.051	U	0.051	0.014	ug/L		07/02/12 11:57	07/04/12 07:55	1
beta-BHC	0.012	J	0.051	0.0086	ug/L		07/02/12 11:57	07/04/12 07:55	1
delta-BHC	0.051	U	0.051	0.0089	ug/L		07/02/12 11:57	07/04/12 07:55	1
Dieldrin	0.051	U	0.051	0.0077	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endosulfan I	0.051	U	0.051	0.013	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endosulfan II	0.051	U	0.051	0.012	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endosulfan sulfate	0.051	U	0.051	0.011	ug/L		07/02/12 11:57	07/04/12 07:55	1

Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	0.051	U	0.051	0.011	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endrin aldehyde	0.051	U	0.051	0.011	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endrin ketone	0.051	U	0.051	0.0080	ug/L		07/02/12 11:57	07/04/12 07:55	1
gamma-BHC (Lindane)	0.051	U	0.051	0.0065	ug/L		07/02/12 11:57	07/04/12 07:55	1
gamma-Chlordane	0.051	U	0.051	0.012	ug/L		07/02/12 11:57	07/04/12 07:55	1
Heptachlor	0.051	U	0.051	0.0082	ug/L		07/02/12 11:57	07/04/12 07:55	1
Heptachlor epoxide	0.051	U	0.051	0.0072	ug/L		07/02/12 11:57	07/04/12 07:55	1
Methoxychlor	0.10	U	0.10	0.033	ug/L		07/02/12 11:57	07/04/12 07:55	1
Toxaphene	2.0	U	2.0	0.33	ug/L		07/02/12 11:57	07/04/12 07:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	79		10 - 145				07/02/12 11:57	07/04/12 07:55	1
DCB Decachlorobiphenyl	66		10 - 145				07/02/12 11:57	07/04/12 07:55	1
Tetrachloro-m-xylene	88		30 - 141				07/02/12 11:57	07/04/12 07:55	1
Tetrachloro-m-xylene	82		30 - 141				07/02/12 11:57	07/04/12 07:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		07/03/12 09:15	07/05/12 23:21	1
Endrin	0.0012	U	0.0012	0.000028	mg/L		07/03/12 09:15	07/05/12 23:21	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		07/03/12 09:15	07/05/12 23:21	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		07/03/12 09:15	07/05/12 23:21	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		07/03/12 09:15	07/05/12 23:21	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/05/12 23:21	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		07/03/12 09:15	07/05/12 23:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		46 - 122				07/03/12 09:15	07/05/12 23:21	1
Tetrachloro-m-xylene	68		46 - 122				07/03/12 09:15	07/05/12 23:21	1
DCB Decachlorobiphenyl	90		34 - 141				07/03/12 09:15	07/05/12 23:21	1
DCB Decachlorobiphenyl	88		34 - 141				07/03/12 09:15	07/05/12 23:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.51	U	0.51	0.17	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1221	0.51	U	0.51	0.13	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1232	0.51	U	0.51	0.16	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1242	0.51	U	0.51	0.22	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1248	0.51	U	0.51	0.10	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1254	0.51	U	0.51	0.16	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1260	0.51	U	0.51	0.17	ug/L		07/02/12 11:53	07/03/12 17:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		23 - 136				07/02/12 11:53	07/03/12 17:25	1
DCB Decachlorobiphenyl	62		10 - 130				07/02/12 11:53	07/03/12 17:25	1

Method: 8151A - Herbicides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 20:06	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 20:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	52		37 - 116				07/03/12 09:18	07/07/12 20:06	1

Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	58		37 - 116	07/03/12 09:18	07/07/12 20:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	20	U	20	2.4	ug/L		07/09/12 14:50	07/10/12 10:57	1

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroglycerin	0.67	U	0.67	0.34	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
PETN	0.67	U	0.67	0.31	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
2-Amino-4,8-dinitrotoluene	0.21	U	0.21	0.018	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
1,3-Dinitrobenzene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
2,4-Dinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
2,6-Dinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
HMX	0.10	U	0.10	0.037	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
Nitrobenzene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
2-Nitrotoluene	0.52	U	0.52	0.091	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
3-Nitrotoluene	0.081	J	0.52	0.059	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
4-Nitrotoluene	0.67	U	0.87	0.091	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
RDX	0.10	U	0.10	0.037	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
Tetryl	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
1,3,5-Trinitrobenzene	0.10	U	0.10	0.031	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
2,4,6-Trinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	101		79 - 111	07/03/12 06:00	07/06/12 19:24	1.03

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.3	J	10	3.2	ug/L		07/10/12 08:18	07/11/12 13:31	1
Chromium	3.7	J	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:31	1
Cobalt	7.0	U	7.0	1.7	ug/L		07/10/12 08:18	07/11/12 13:31	1
Lead	3.0	U	3.0	1.9	ug/L		07/10/12 08:18	07/11/12 13:31	1
Selenium	5.0	U	5.0	4.1	ug/L		07/10/12 08:18	07/11/12 13:31	1
Silver	5.0	U	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:31	1
Vanadium	1.9	J	7.0	0.64	ug/L		07/10/12 08:18	07/11/12 13:31	1
Barium	56	J B	200	0.67	ug/L		07/10/12 08:18	07/11/12 13:31	1
Calcium	43000	B	5000	130	ug/L		07/10/12 08:18	07/11/12 13:31	1
Copper	25	U	25	4.5	ug/L		07/10/12 08:18	07/11/12 13:31	1
Magnesium	10000	B	5000	34	ug/L		07/10/12 08:18	07/11/12 13:31	1
Manganese	110	B	15	0.41	ug/L		07/10/12 08:18	07/11/12 13:31	1
Nickel	3.2	J	40	3.2	ug/L		07/10/12 08:18	07/11/12 13:31	1
Potassium	19000	B	5000	72	ug/L		07/10/12 08:18	07/11/12 13:31	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0054	J	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 21:03	1
Barium	0.052	J B	10	0.00067	mg/L		07/03/12 10:01	07/05/12 21:03	1
Cadmium	0.10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 21:03	1
Chromium	0.0029	J	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 21:03	1
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 21:03	1

Client Sample Results

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

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 21:03	1
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 21:03	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Aluminum	580		50	19	ug/L		07/10/12 08:18	07/11/12 13:26	1
Antimony	2.3		2.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:26	1
Beryllium	1.0	U	1.0	0.20	ug/L		07/10/12 08:18	07/11/12 13:28	1
Cadmium	1.0	U	1.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:26	1
Iron	1300	^	100	26	ug/L		07/10/12 08:18	07/11/12 13:26	1
Sodium	28000	B	1000	6.9	ug/L		07/10/12 08:18	07/11/12 13:26	1
Thallium	0.58	J B	2.0	0.14	ug/L		07/10/12 08:18	07/11/12 13:26	1
Zinc	11	J B	20	2.3	ug/L		07/10/12 08:18	07/11/12 13:26	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Mercury	0.20	U	0.20	0.12	ug/L		06/28/12 15:10	07/03/12 13:40	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 14:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Flashpoint	>180		1.00	1.00	Degrees F			07/02/12 11:30	1
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		07/02/12 09:10	07/02/12 11:08	1
Sulfide	3.0	U	3.0	0.94	mg/L		07/03/12 07:56	07/03/12 13:48	1
pH	8.39		0.100	0.100	SU			06/28/12 16:18	1
Nitrocellulose	2.0	U	2.0	0.48	mg/L		07/11/12 06:00	07/11/12 13:05	1

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Surrogate Summary

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

TestAmerica Job ID: 240-12752-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (67-125)	12DCE (58-123)	BFB (62-138)	DBFM (37-132)
240-12752-3	FWG-IDW-SBCOMP3-SO	112	98	121	89
LCS 240-49421/5	Lab Control Sample	99	97	94	95
MB 240-49421/6	Method Blank	98	95	91	91

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	TOL (90-116)	BFB (70-124)	DBFM (84-128)
LCS 240-50127/12	Lab Control Sample	109	107	95	116

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (90-116)	DBFM (84-128)
240-12752-3	FWG-IDW-SBCOMP3-SO	104	94	107	117
LB 240-49973/1-A MB	Method Blank	102	97	106	116

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (74-116)	12DCE (83-120)	BFB (66-117)	DBFM (75-121)
240-12752-1	TRIP BLANK	99	93	95	100
240-12752-4	FWG-IDW-TANK3-GW	100	95	96	100
LCS 240-50324/4	Lab Control Sample	104	96	103	99
MB 240-50324/5	Method Blank	99	90	96	98

Surrogate Legend

TOL = Toluene-d8 (Surr)

Surrogate Summary

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

TestAmerica Job ID: 240-12752-1

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	TOL (90-115)	BFB (70-124)	DBFM (84-128)
LCS 240-49814/10	Lab Control Sample	110	107	93	119

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (90-115)	DBFM (84-128)
240-12752-4	FWG-IDW-TANK3-GW	108	91	108	110
240-12752-4 MS	FWG-IDW-TANK3-GW	113	98	108	116
240-12752-4 MSD	FWG-IDW-TANK3-GW	107	97	109	118
LB 240-49680/1-A MB	Method Blank	107	92	105	113

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (34-110)	2FP (26-110)	NBZ (24-112)	TPH (41-119)	TBP (10-118)	PHL (28-110)
240-12752-3	FWG-IDW-SBCOMP3-SO	53	69	53	75	46	71
LCS 240-49770/16-A	Lab Control Sample	55	73	61	79	50	77
MB 240-49770/15-A	Method Blank	46	60	51	63	39	64

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
PHL = Phenol-d5 (Surr)

Surrogate Summary

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

TestAmerica Job ID: 240-12752-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
LCS 240-49701/5-A	Lab Control Sample	48	51	71	52	42	74
MB 240-49701/4-A	Method Blank	47	52	59	52	46	79

Surrogate Legend

- FBP = 2-Fluorobiphenyl (Surr)
- 2FP = 2-Fluorophenol (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPH = Terphenyl-d14 (Surr)

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

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
240-12752-3	FWG-IDW-SBCOMP3-SO	46	13	68	46	46	71

Surrogate Legend

- FBP = 2-Fluorobiphenyl (Surr)
- 2FP = 2-Fluorophenol (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPH = Terphenyl-d14 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (28-110)	2FP (10-110)	NBZ (27-111)	TPH (37-119)	TBP (22-120)	PHL (10-110)
240-12752-4	FWG-IDW-TANK3-GW	54	64	51	72	67	67
240-12752-4 - RE	FWG-IDW-TANK3-GW	53	61	54	71	64	66
LCS 240-49608/14-A	Lab Control Sample	57	65	56	82	79	71
LCS 240-50344/14-A	Lab Control Sample	73	88	75	89	83	91
MB 240-49608/13-A	Method Blank	14 X	17	13 X	19 X	16 X	18
MB 240-50344/13-A	Method Blank	69	79	68	86	71	81

Surrogate Legend

- FBP = 2-Fluorobiphenyl (Surr)
- 2FP = 2-Fluorophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- TPH = Terphenyl-d14 (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- PHL = Phenol-d5 (Surr)

Surrogate Summary

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

TestAmerica Job ID: 240-12752-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (10-110)	PHL (10-110)	FBP (22-110)	TBP (17-117)	NBZ (29-111)	TPH (40-119)
LCS 240-49703/18-A	Lab Control Sample	23	62	56	97	60	95
MB 240-49703/15-A	Method Blank	31	56	49	77	51	81

Surrogate Legend

- 2FP = 2-Fluorophenol (Surr)
- PHL = Phenol-d5 (Surr)
- FBP = 2-Fluorobiphenyl (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- TPH = Terphenyl-d14 (Surr)

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

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
240-12752-4	FWG-IDW-TANK3-GW	43	12	71	45	42	75

Surrogate Legend

- FBP = 2-Fluorobiphenyl (Surr)
- 2FP = 2-Fluorophenol (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPH = Terphenyl-d14 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (32-175)	DCB2 (32-175)	TCX1 (24-150)	TCX2 (24-150)
240-12752-3	FWG-IDW-SBCOMP3-SO	97	110	95	91
LCS 240-49756/11-A	Lab Control Sample	98	82	110	113
MB 240-49756/10-A	Method Blank		93	104	180 X

Surrogate Legend

- DCB = DCB Decachlorobiphenyl
- TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (46-122)	TCX2 (46-122)	DCB1 (34-141)	DCB2 (34-141)
240-12752-3	FWG-IDW-SBCOMP3-SO	77	74	102	100

Surrogate Legend

- TCX = Tetrachloro-m-xylene
- DCB = DCB Decachlorobiphenyl

Surrogate Summary

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

TestAmerica Job ID: 240-12752-1

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (10-145)	DCB2 (10-145)	TCX1 (30-141)	TCX2 (30-141)
240-12752-4	FWG-IDW-TANK3-GW	79	66	88	82
LCS 240-49815/3-A	Lab Control Sample	56	48	96	90
MB 240-49615/2-A	Method Blank	94	86	63	76

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

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Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (34-141)	DCB2 (34-141)	TCX1 (46-122)	TCX2 (46-122)
LCS 240-49705/8-A	Lab Control Sample	89	93	70	65
MB 240-49705/7-A	Method Blank	93	92	65	61

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (46-122)	TCX2 (46-122)	DCB1 (34-141)	DCB2 (34-141)
240-12752-4	FWG-IDW-TANK3-GW	71	68	90	88

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (29-161)	DCB1 (14-163)
240-12752-3	FWG-IDW-SBCOMP3-SO	60	58
LCS 240-49755/20-A	Lab Control Sample	82	67
MB 240-49755/19-A	Method Blank	69	66

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Surrogate Summary

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

TestAmerica Job ID: 240-12752-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (23-136)	DCB1 (10-130)
240-12752-4	FWG-IDW-TANK3-GW	74	82
LCS 240-49812/12-A	Lab Control Sample	70	71
MB 240-49812/11-A	Method Blank	72	81

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Solid

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPA1 (37-116)	DCPA2 (37-116)
240-12752-3	FWG-IDW-SBCOMP3-SO	53	63

Surrogate Legend
DCPA = 2,4-Dichlorophenylacetic acid

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPA1 (37-118)	DCPA2 (37-116)
LCS 240-49707/8-A	Lab Control Sample	55	86
MB 240-49707/7-A	Method Blank	51	57

Surrogate Legend
DCPA = 2,4-Dichlorophenylacetic acid

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPA1 (37-116)	DCPA2 (37-116)
240-12752-4	FWG-IDW-TANK3-GW	52	58

Surrogate Legend
DCPA = 2,4-Dichlorophenylacetic acid

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Matrix: Water

Prep Type: Total

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DNT (79-111)
240-12752-4	FWG-IDW-TANK3-GW	101
G2G03000016B	Method Blank	101
G2G03000016C	Lab Control Sample	105

Surrogate Legend

Surrogate Summary

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

TestAmerica Job ID: 240-12752-1

DNT = 3,4-Dinitrotoluene

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

Matrix: Solid

Prep Type: Total

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DNT (75-116)
240-12752-3	FWG-IDW-SBCOMP3-SO	99
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	101
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	101
G2G090000108B	Method Blank	102
G2G090000108C	Lab Control Sample	100

Surrogate Legend

DNT = 3,4-Dinitrotoluene

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QC Sample Results

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

TestAmerica Job ID: 240-12752-1

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

Lab Sample ID: MB 240-49421/6

Matrix: Solid

Analysis Batch: 49421

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	5.0	U	5.0	0.56	ug/Kg			06/29/12 13:33	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.34	ug/Kg			06/29/12 13:33	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			06/29/12 13:33	1
1,1-Dichloroethane	5.0	U	5.0	0.36	ug/Kg			06/29/12 13:33	1
1,1-Dichloroethene	5.0	U	5.0	0.52	ug/Kg			06/29/12 13:33	1
1,2-Dichloroethane	5.0	U	5.0	0.34	ug/Kg			06/29/12 13:33	1
1,2-Dichloroethene, Total	10	U	10	0.77	ug/Kg			06/29/12 13:33	1
1,2-Dichloropropane	5.0	U	5.0	0.69	ug/Kg			06/29/12 13:33	1
2-Butanone (MEK)	20	U	20	1.4	ug/Kg			06/29/12 13:33	1
2-Hexanone	1.06	J	20	0.63	ug/Kg			06/29/12 13:33	1
4-Methyl-2-pentanone (MIBK)	20	U	20	0.54	ug/Kg			06/29/12 13:33	1
Acetone	25.2		20	6.3	ug/Kg			06/29/12 13:33	1
Benzene	5.0	U	5.0	0.23	ug/Kg			06/29/12 13:33	1
Bromoform	5.0	U	5.0	0.33	ug/Kg			06/29/12 13:33	1
Bromomethane	5.0	U	5.0	0.54	ug/Kg			06/29/12 13:33	1
Carbon disulfide	3.36	J	5.0	0.44	ug/Kg			06/29/12 13:33	1
Carbon tetrachloride	5.0	U	5.0	0.37	ug/Kg			06/29/12 13:33	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			06/29/12 13:33	1
Chloromethane	5.0	U	5.0	0.41	ug/Kg			06/29/12 13:33	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.36	ug/Kg			06/29/12 13:33	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.34	ug/Kg			06/29/12 13:33	1
Dibromochloromethane	5.0	U	5.0	0.55	ug/Kg			06/29/12 13:33	1
Bromodichloromethane	5.0	U	5.0	0.28	ug/Kg			06/29/12 13:33	1
Ethylbenzene	5.0	U	5.0	0.26	ug/Kg			06/29/12 13:33	1
Methylene Chloride	1.78	J	5.0	0.67	ug/Kg			06/29/12 13:33	1
m-Xylene & p-Xylene	10	U	10	1.2	ug/Kg			06/29/12 13:33	1
o-Xylene	5.0	U	5.0	0.35	ug/Kg			06/29/12 13:33	1
Styrene	0.192	J	5.0	0.15	ug/Kg			06/29/12 13:33	1
Tetrachloroethene	5.0	U	5.0	0.52	ug/Kg			06/29/12 13:33	1
Toluene	5.0	U	5.0	0.27	ug/Kg			06/29/12 13:33	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.41	ug/Kg			06/29/12 13:33	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.54	ug/Kg			06/29/12 13:33	1
Trichloroethene	5.0	U	5.0	0.42	ug/Kg			06/29/12 13:33	1
Vinyl chloride	5.0	U	5.0	0.39	ug/Kg			06/29/12 13:33	1
Xylenes, Total	10	U	10	0.67	ug/Kg			06/29/12 13:33	1
Chloroform	5.0	U	5.0	0.29	ug/Kg			06/29/12 13:33	1
Bromochloromethane	5.0	U	5.0	0.71	ug/Kg			06/29/12 13:33	1
1,2-Dibromoethane	5.0	U	5.0	0.50	ug/Kg			06/29/12 13:33	1
Chloroethane	5.0	U	5.0	0.86	ug/Kg			06/29/12 13:33	1
Surrogate	MB MB		Limits			Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier							
1,2-Dichloroethane-d4 (Surr)	95		58 - 123				06/29/12 13:33	1	
Toluene-d8 (Surr)	98		67 - 125				06/29/12 13:33	1	
4-Bromofluorobenzene (Surr)	91		52 - 136				06/29/12 13:33	1	
Dibromofluoromethane (Surr)	91		37 - 132				06/29/12 13:33	1	

QC Sample Results

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

TestAmerica Job ID: 240-12752-1

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

Lab Sample ID: LCS 240-49421/5			Client Sample ID: Lab Control Sample				
Matrix: Solid			Prep Type: Total/NA				
Analysis Batch: 49421							
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	50.7		ug/Kg		101	77 - 126
1,1,2,2-Tetrachloroethane	50.0	53.6		ug/Kg		107	77 - 123
1,1,2-Trichloroethane	50.0	55.3		ug/Kg		111	83 - 112
1,1-Dichloroethane	50.0	56.2		ug/Kg		112	76 - 115
1,1-Dichloroethene	50.0	59.6		ug/Kg		119	75 - 135
1,2-Dichloroethane	50.0	54.9		ug/Kg		110	72 - 120
1,2-Dichloroethene, Total	100	108		ug/Kg		108	78 - 115
1,2-Dichloropropane	50.0	55.1		ug/Kg		110	67 - 113
2-Butanone (MEK)	100	105		ug/Kg		105	52 - 131
2-Hexanone	100	106		ug/Kg		106	64 - 136
4-Methyl-2-pentanone (MIBK)	100	118		ug/Kg		118	67 - 135
Acetone	100	128		ug/Kg		128	41 - 137
Benzene	50.0	53.8		ug/Kg		108	79 - 112
Bromoform	50.0	46.8		ug/Kg		94	62 - 133
Bromomethane	50.0	49.0		ug/Kg		98	42 - 136
Carbon disulfide	50.0	45.8		ug/Kg		92	62 - 146
Carbon tetrachloride	50.0	51.2		ug/Kg		102	71 - 129
Chlorobenzene	50.0	52.5		ug/Kg		105	78 - 110
Chloromethane	50.0	53.0		ug/Kg		106	50 - 110
cis-1,2-Dichloroethene	50.0	53.0		ug/Kg		106	76 - 113
cis-1,3-Dichloropropene	50.0	46.9		ug/Kg		94	74 - 128
Dibromochloromethane	50.0	48.4		ug/Kg		97	72 - 127
Bromodichloromethane	50.0	49.4		ug/Kg		99	84 - 122
Ethylbenzene	50.0	53.8		ug/Kg		108	79 - 117
Methylene Chloride	50.0	53.7		ug/Kg		107	75 - 118
m-Xylene & p-Xylene	100	106		ug/Kg		106	80 - 117
o-Xylene	50.0	55.3		ug/Kg		111	80 - 120
Styrene	50.0	52.8		ug/Kg		106	87 - 117
Tetrachloroethene	50.0	54.2		ug/Kg		108	78 - 114
Toluene	50.0	50.8		ug/Kg		102	75 - 111
trans-1,2-Dichloroethene	50.0	55.3		ug/Kg		111	76 - 117
trans-1,3-Dichloropropene	50.0	50.6		ug/Kg		101	73 - 131
Trichloroethene	50.0	55.2		ug/Kg		110	79 - 113
Vinyl chloride	50.0	53.1		ug/Kg		106	57 - 114
Xylenes, Total	150	161		ug/Kg		108	80 - 118
Chloroform	50.0	54.2		ug/Kg		108	77 - 114
Bromochloromethane	50.0	53.0		ug/Kg		106	79 - 111
1,2-Dibromoethane	50.0	51.4		ug/Kg		103	83 - 117
Chloroethane	50.0	51.1		ug/Kg		102	58 - 117

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	97		58 - 123
Toluene-d8 (Surr)	99		67 - 125
4-Bromofluorobenzene (Surr)	94		52 - 136
Dibromofluoromethane (Surr)	95		37 - 132

QC Sample Results

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

TestAmerica Job ID: 240-12752-1

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

Lab Sample ID: LCS 240-49814/10				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total/NA			
Analysis Batch: 49814							
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
1,1-Dichloroethene	1.00	1.06		mg/L		106	71 - 133
1,2-Dichloroethane	1.00	0.970		mg/L		97	81 - 114
2-Butanone (MEK)	2.00	1.91		mg/L		95	49 - 120
Benzene	1.00	0.955		mg/L		98	84 - 120
Carbon tetrachloride	1.00	1.09		mg/L		109	54 - 122
Chlorobenzene	1.00	0.950		mg/L		95	86 - 111
Tetrachloroethene	1.00	1.04		mg/L		104	79 - 134
Trichloroethene	1.00	1.05		mg/L		105	78 - 130
Vinyl chloride	1.00	0.955		mg/L		96	56 - 111
Chloroform	1.00	0.980		mg/L		96	87 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		80 - 121
Toluene-d8 (Surr)	107		90 - 115
4-Bromofluorobenzene (Surr)	93		70 - 124
Dibromofluoromethane (Surr)	119		84 - 128

Lab Sample ID: LCS 240-50127/12				Client Sample ID: Lab Control Sample			
Matrix: Solid				Prep Type: Total/NA			
Analysis Batch: 50127							
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
1,1-Dichloroethene	1.00	1.04		mg/L		104	71 - 133
1,2-Dichloroethane	1.00	0.955		mg/L		98	81 - 114
2-Butanone (MEK)	2.00	1.53		mg/L		76	49 - 120
Benzene	1.00	0.920		mg/L		92	84 - 120
Carbon tetrachloride	1.00	1.08		mg/L		108	54 - 122
Chlorobenzene	1.00	0.940		mg/L		94	86 - 111
Tetrachloroethene	1.00	1.06		mg/L		106	79 - 134
Trichloroethene	1.00	1.05		mg/L		105	78 - 130
Vinyl chloride	1.00	0.970		mg/L		97	56 - 111
Chloroform	1.00	0.935		mg/L		94	87 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	109		80 - 121
Toluene-d8 (Surr)	107		90 - 115
4-Bromofluorobenzene (Surr)	95		70 - 124
Dibromofluoromethane (Surr)	116		84 - 128

Lab Sample ID: MB 240-50324/5				Client Sample ID: Method Blank					
Matrix: Water				Prep Type: Total/NA					
Analysis Batch: 50324									
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 10:57	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			07/10/12 10:57	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			07/10/12 10:57	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			07/10/12 10:57	1
1,1-Dichloroethane	1.0	U	1.0	0.19	ug/L			07/10/12 10:57	1

QC Sample Results

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

TestAmerica Job ID: 240-12752-1

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

Lab Sample ID: MB 240-50324/5		Client Sample ID: Method Blank							
Matrix: Water		Prep Type: Total/NA							
Analysis Batch: 50324									
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 10:57	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			07/10/12 10:57	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 10:57	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			07/10/12 10:57	1
2-Hexanone	10	U	10	0.41	ug/L			07/10/12 10:57	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 10:57	1
Acetone	10	U	10	1.1	ug/L			07/10/12 10:57	1
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
Bromoform	1.0	U	1.0	0.64	ug/L			07/10/12 10:57	1
Bromomethane	1.0	U	1.0	0.41	ug/L			07/10/12 10:57	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			07/10/12 10:57	1
Chloromethane	1.0	U	1.0	0.30	ug/L			07/10/12 10:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 10:57	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			07/10/12 10:57	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			07/10/12 10:57	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			07/10/12 10:57	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			07/10/12 10:57	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			07/10/12 10:57	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			07/10/12 10:57	1
o-Xylene	1.0	U	1.0	0.14	ug/L			07/10/12 10:57	1
Styrene	1.0	U	1.0	0.11	ug/L			07/10/12 10:57	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			07/10/12 10:57	1
Toluene	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 10:57	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			07/10/12 10:57	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 10:57	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			07/10/12 10:57	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			07/10/12 10:57	1
Chloroform	1.0	U	1.0	0.18	ug/L			07/10/12 10:57	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			07/10/12 10:57	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			07/10/12 10:57	1
Chloroethane	1.0	U	1.0	0.29	ug/L			07/10/12 10:57	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	90		63 - 129		07/10/12 10:57	1
Toluene-d8 (Surr)	99		74 - 116		07/10/12 10:57	1
4-Bromofluorobenzene (Surr)	96		66 - 117		07/10/12 10:57	1
Dibromofluoromethane (Surr)	96		75 - 121		07/10/12 10:57	1

Lab Sample ID: LCS 240-50324/4		Client Sample ID: Lab Control Sample							
Matrix: Water		Prep Type: Total/NA							
Analysis Batch: 50324									
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1,1,2-Tetrachloroethane	10.0	9.37		ug/L		94	68 - 118		
1,1,2-Trichloroethane	10.0	10.4		ug/L		104	80 - 112		

QC Sample Results

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

TestAmerica Job ID: 240-12752-1

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

Lab Sample ID: LCS 240-50324/4
Matrix: Water
Analysis Batch: 50324

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	10.0	10.0		ug/L		100	82 - 115
1,1-Dichloroethene	10.0	11.0		ug/L		110	78 - 131
1,2-Dichloroethane	10.0	9.62		ug/L		96	71 - 127
1,2-Dichloroethene, Total	20.0	20.3		ug/L		101	82 - 114
1,2-Dichloropropane	10.0	10.1		ug/L		101	81 - 115
2-Butanone (MEK)	20.0	17.8		ug/L		89	60 - 126
2-Hexanone	20.0	18.8		ug/L		94	55 - 133
4-Methyl-2-pentanone (MIBK)	20.0	17.9		ug/L		90	63 - 128
Acetone	20.0	20.5		ug/L		103	43 - 136
Benzene	10.0	9.92		ug/L		99	83 - 112
Bromoform	10.0	10.9		ug/L		109	40 - 131
Bromomethane	10.0	9.21		ug/L		92	11 - 185
Carbon disulfide	10.0	10.3		ug/L		103	62 - 142
Carbon tetrachloride	10.0	10.5		ug/L		105	66 - 128
Chlorobenzene	10.0	9.78		ug/L		98	85 - 110
Chloromethane	10.0	9.04		ug/L		90	44 - 128
cis-1,2-Dichloroethene	10.0	9.58		ug/L		96	80 - 113
cis-1,3-Dichloropropene	10.0	9.65		ug/L		97	61 - 115
Dibromochloromethane	10.0	10.7		ug/L		107	64 - 119
Bromodichloromethane	10.0	10.3		ug/L		103	72 - 121
Ethylbenzene	10.0	9.93		ug/L		99	83 - 112
Methylene Chloride	10.0	10.6		ug/L		106	66 - 131
m-Xylene & p-Xylene	20.0	20.0		ug/L		100	83 - 113
o-Xylene	10.0	9.96		ug/L		100	83 - 113
Styrene	10.0	10.2		ug/L		102	79 - 114
Tetrachloroethene	10.0	10.1		ug/L		101	79 - 114
Toluene	10.0	10.2		ug/L		102	84 - 111
trans-1,2-Dichloroethene	10.0	10.7		ug/L		107	83 - 117
trans-1,3-Dichloropropene	10.0	10.2		ug/L		102	58 - 117
Trichloroethene	10.0	9.78		ug/L		98	76 - 117
Vinyl chloride	10.0	9.16		ug/L		92	53 - 127
Xylenes, Total	30.0	30.0		ug/L		100	83 - 112
Chloroform	10.0	9.56		ug/L		96	79 - 117
Bromochloromethane	10.0	9.68		ug/L		97	77 - 120
1,2-Dibromoethane	10.0	9.84		ug/L		98	79 - 113
Chloroethane	10.0	9.75		ug/L		98	25 - 153

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	96		63 - 129
Toluene-d8 (Surr)	104		74 - 115
4-Bromofluorobenzene (Surr)	103		66 - 117
Dibromofluoromethane (Surr)	99		75 - 121

Lab Sample ID: LB 240-49660/1-A MB
Matrix: Water
Analysis Batch: 49814

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/03/12 21:21	1

QC Sample Results

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

TestAmerica Job ID: 240-12752-1

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

Lab Sample ID: LB 240-49660/1-A MB
Matrix: Water
Analysis Batch: 49814

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
	Result	Qualifier							
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/03/12 21:21	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/03/12 21:21	1
Benzene	0.025	U	0.025	0.0065	mg/L			07/03/12 21:21	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			07/03/12 21:21	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/03/12 21:21	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/03/12 21:21	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/03/12 21:21	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/03/12 21:21	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/03/12 21:21	1

Surrogate	MB MB		Limits	Prepared	Analyzed	DII Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	107		80 - 121		07/03/12 21:21	1
Toluene-d8 (Surr)	105		90 - 115		07/03/12 21:21	1
4-Bromofluorobenzene (Surr)	92		70 - 124		07/03/12 21:21	1
Dibromofluoromethane (Surr)	113		84 - 128		07/03/12 21:21	1

Lab Sample ID: 240-12752-4 MS
Matrix: Water
Analysis Batch: 49814

Client Sample ID: FWG-IDW-TANK3-GW
Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
1,1-Dichloroethene	0.025	U	1.00	1.02		mg/L		102	67 - 139
1,2-Dichloroethane	0.025	U	1.00	0.930		mg/L		93	80 - 115
2-Butanone (MEK)	0.25	U	2.00	1.80		mg/L		90	49 - 117
Benzene	0.025	U	1.00	0.910		mg/L		91	85 - 119
Carbon tetrachloride	0.025	U	1.00	0.975		mg/L		98	60 - 110
Chlorobenzene	0.025	U	1.00	0.915		mg/L		92	85 - 113
Tetrachloroethene	0.025	U	1.00	1.01		mg/L		101	74 - 138
Trichloroethene	0.025	U	1.00	1.03		mg/L		103	75 - 134
Vinyl chloride	0.025	U	1.00	0.925		mg/L		93	51 - 118
Chloroform	0.025	U	1.00	0.915		mg/L		92	86 - 124

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	113		80 - 121
Toluene-d8 (Surr)	108		90 - 115
4-Bromofluorobenzene (Surr)	98		70 - 124
Dibromofluoromethane (Surr)	116		84 - 128

Lab Sample ID: 240-12752-4 MSD
Matrix: Water
Analysis Batch: 49814

Client Sample ID: FWG-IDW-TANK3-GW
Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
				Result	Qualifier						
1,1-Dichloroethene	0.025	U	1.00	1.02		mg/L		102	67 - 139	0	30
1,2-Dichloroethane	0.025	U	1.00	0.905		mg/L		91	80 - 115	3	30
2-Butanone (MEK)	0.25	U	2.00	1.95		mg/L		98	49 - 117	8	30
Benzene	0.025	U	1.00	0.925		mg/L		93	85 - 119	2	30
Carbon tetrachloride	0.025	U	1.00	1.04		mg/L		104	60 - 110	6	30
Chlorobenzene	0.025	U	1.00	0.935		mg/L		94	85 - 113	2	30

QC Sample Results

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

TestAmerica Job ID: 240-12752-1

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

Lab Sample ID: 240-12752-4 MSD
Matrix: Water
Analysis Batch: 49814

Client Sample ID: FWG-IDW-TANK3-GW
Prep Type: TCLP

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier								
Tetrachloroethene	0.025	U	1.00	1.06		mg/L		106	74 - 138		5	30	
Trichloroethene	0.025	U	1.00	1.03		mg/L		103	75 - 134		0	30	
Vinyl chloride	0.025	U	1.00	0.915		mg/L		92	51 - 118		1	30	
Chloroform	0.025	U	1.00	0.945		mg/L		95	86 - 124		3	30	

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	107		80 - 121
Toluene-d8 (Surr)	109		90 - 115
4-Bromofluorobenzene (Surr)	97		70 - 124
Dibromofluoromethane (Surr)	118		84 - 128

Lab Sample ID: LB 240-49973/1-A MB
Matrix: Solid
Analysis Batch: 50127

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/06/12 20:29	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/06/12 20:29	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/06/12 20:29	1
Benzene	0.025	U	0.025	0.0065	mg/L			07/06/12 20:29	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			07/06/12 20:29	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/06/12 20:29	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/06/12 20:29	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/06/12 20:29	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/06/12 20:29	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/06/12 20:29	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	102		80 - 121		07/06/12 20:29	1
Toluene-d8 (Surr)	106		90 - 115		07/06/12 20:29	1
4-Bromofluorobenzene (Surr)	97		70 - 124		07/06/12 20:29	1
Dibromofluoromethane (Surr)	116		84 - 128		07/06/12 20:29	1

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

Lab Sample ID: MB 240-49608/13-A
Matrix: Water
Analysis Batch: 50188

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49608

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Acenaphthylene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzo[a]anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzoic acid	25	U	25	10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		07/02/12 11:43	07/09/12 10:05	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/02/12 11:43	07/09/12 10:05	1

QC Sample Results

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

TestAmerica Job ID: 240-12752-1

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

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49608

Lab Sample ID: MB 240-49608/13-A
Matrix: Water
Analysis Batch: 50188

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
	Result	Qualifier							
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Butyl benzyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dimethylphenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 10:05	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachlorobutadiene	1.0	U	1.0	0.27	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
N-Nitrosodiphenylamine	1.0	U	1.0	0.31	ug/L		07/02/12 11:43	07/09/12 10:05	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		07/02/12 11:43	07/09/12 10:05	1
Chrysene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzo[g,h,i]perylene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzo[a]pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Di-n-butyl phthalate	1.0	U	1.0	0.67	ug/L		07/02/12 11:43	07/09/12 10:05	1
1,2-Dichlorobenzene	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 10:05	1
1,3-Dichlorobenzene	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dichlorophenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 10:05	1
Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Isophorone	1.0	U	1.0	0.27	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Naphthalene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Nitrobenzene	1.0	U	1.0	0.040	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
Pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4,6-Trichlorophenol	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Phenol	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1

QC Sample Results

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

TestAmerica Job ID: 240-12752-1

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

Lab Sample ID: MB 240-49608/13-A				Client Sample ID: Method Blank					
Matrix: Water				Prep Type: Total/NA					
Analysis Batch: 50188				Prep Batch: 49608					
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Carbazole	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chloroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/02/12 11:43	07/09/12 10:05	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		07/02/12 11:43	07/09/12 10:05	1
Surrogate	MB MB		Limits			D	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
2-Fluorobiphenyl (Surr)	14	X	28 - 110				07/02/12 11:43	07/09/12 10:05	1
2-Fluorophenol (Surr)	17		10 - 110				07/02/12 11:43	07/09/12 10:05	1
2,4,6-Tribromophenol (Surr)	16	X	22 - 120				07/02/12 11:43	07/09/12 10:05	1
Nitrobenzene-d5 (Surr)	13	X	27 - 111				07/02/12 11:43	07/09/12 10:05	1
Phenol-d5 (Surr)	18		10 - 110				07/02/12 11:43	07/09/12 10:05	1
Terphenyl-d14 (Surr)	19	X	37 - 119				07/02/12 11:43	07/09/12 10:05	1

Lab Sample ID: LCS 240-49608/14-A				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total/NA			
Analysis Batch: 50188				Prep Batch: 49608			
Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Acenaphthene	20.0	14.1		ug/L		70	40 - 110
Acenaphthylene	20.0	14.2		ug/L		71	43 - 110
Anthracene	20.0	15.4		ug/L		77	54 - 114
Benzo[a]anthracene	20.0	14.6		ug/L		73	55 - 115
Benzoic acid	20.0	25	U	ug/L		35	10 - 129
Benzo[b]fluoranthene	20.0	14.6		ug/L		73	43 - 122
Benzo[k]fluoranthene	20.0	15.7		ug/L		78	43 - 124
Benzyl alcohol	20.0	12.9		ug/L		65	10 - 130
Bis(2-chloroethoxy)methane	20.0	11.7		ug/L		59	39 - 110
Bis(2-chloroethyl)ether	20.0	11.9		ug/L		59	34 - 113
4-Bromophenyl phenyl ether	20.0	13.6		ug/L		68	51 - 114
Butyl benzyl phthalate	20.0	15.7		ug/L		78	53 - 126
2,4-Dimethylphenol	20.0	10.8		ug/L		54	12 - 110
Dimethyl phthalate	20.0	16.0		ug/L		80	15 - 143
4,6-Dinitro-2-methylphenol	20.0	13.1		ug/L		66	28 - 112
2,4-Dinitrophenol	20.0	9.54		ug/L		48	17 - 112
2,4-Dinitrotoluene	20.0	14.5		ug/L		72	52 - 123
2,6-Dinitrotoluene	20.0	14.5		ug/L		73	52 - 119
Fluoranthene	20.0	16.1		ug/L		81	54 - 122
Fluorene	20.0	15.1		ug/L		75	47 - 112
Hexachlorobenzene	20.0	14.8		ug/L		74	51 - 112
Hexachlorobutadiene	20.0	10.2		ug/L		51	13 - 110
Hexachlorocyclopentadiene	20.0	5.24	J	ug/L		26	10 - 110
Hexachloroethane	20.0	11.0		ug/L		55	12 - 110
N-Nitrosodiphenylamine	20.0	14.9		ug/L		75	53 - 113
N-Nitrosodi-n-propylamine	20.0	13.2		ug/L		68	37 - 121
1,4-Dichlorobenzene	20.0	12.4		ug/L		62	19 - 110
2-Chloronaphthalene	20.0	12.0		ug/L		60	39 - 110

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49608/14-A			Client Sample ID: Lab Control Sample				
Matrix: Water			Prep Type: Total/NA				
Analysis Batch: 50188			Prep Batch: 49608				
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
2-Chlorophenol	20.0	13.1		ug/L		65	27 - 110
4-Chlorophenyl phenyl ether	20.0	13.3		ug/L		67	50 - 115
Chrysene	20.0	16.2		ug/L		81	55 - 115
Dibenz(a,h)anthracene	20.0	15.3		ug/L		77	46 - 122
Dibenzofuran	20.0	14.6		ug/L		73	46 - 111
Benzo[g,h,i]perylene	20.0	15.3		ug/L		77	45 - 120
Benzo[a]pyrene	20.0	13.2		ug/L		66	43 - 116
Di-n-butyl phthalate	20.0	16.5		ug/L		83	55 - 122
1,2-Dichlorobenzene	20.0	11.3		ug/L		56	23 - 110
1,3-Dichlorobenzene	20.0	10.9		ug/L		55	19 - 110
3,3'-Dichlorobenzidine	20.0	10.5		ug/L		53	19 - 110
2,4-Dichlorophenol	20.0	13.7		ug/L		69	33 - 110
Diethyl phthalate	20.0	18.2		ug/L		81	33 - 134
Indeno[1,2,3-cd]pyrene	20.0	14.6		ug/L		74	46 - 121
Isophorone	20.0	13.6		ug/L		68	44 - 128
2-Methylnaphthalene	20.0	13.2		ug/L		66	35 - 110
2-Methylphenol	20.0	13.3		ug/L		67	30 - 110
Naphthalene	20.0	13.3		ug/L		67	31 - 110
2-Nitroaniline	20.0	14.4		ug/L		72	43 - 130
3-Nitroaniline	20.0	15.9		ug/L		79	45 - 116
4-Nitroaniline	20.0	16.6		ug/L		83	45 - 120
Nitrobenzene	20.0	11.0		ug/L		55	37 - 115
2-Nitrophenol	20.0	13.4		ug/L		67	29 - 110
4-Nitrophenol	20.0	13.8		ug/L		69	12 - 130
Pyrene	20.0	15.0		ug/L		75	55 - 120
Pentachlorophenol	20.0	12.2		ug/L		61	26 - 110
Phenanthrene	20.0	15.7		ug/L		79	52 - 114
1,2,4-Trichlorobenzene	20.0	10.7		ug/L		54	25 - 110
2,4,5-Trichlorophenol	20.0	14.9		ug/L		75	39 - 110
2,4,6-Trichlorophenol	20.0	14.6		ug/L		73	35 - 110
Phenol	20.0	13.5		ug/L		68	14 - 112
Carbazole	20.0	18.1		ug/L		81	53 - 120
4-Chloroaniline	20.0	12.7		ug/L		63	10 - 110
3 & 4 Methylphenol	40.0	28.0		ug/L		70	32 - 110
Bis(2-ethylhexyl) phthalate	20.0	14.3		ug/L		72	38 - 163
Di-n-octyl phthalate	20.0	14.2		ug/L		71	44 - 128
4-Chloro-3-methylphenol	20.0	15.1		ug/L		76	39 - 110
2,2'-oxybis[1-chloropropane]	20.0	10.6		ug/L		53	25 - 128

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	57		28 - 110
2-Fluorophenol (Surr)	65		10 - 110
2,4,6-Tribromophenol (Surr)	79		22 - 120
Nitrobenzene-d5 (Surr)	56		27 - 111
Phenol-d5 (Surr)	71		10 - 110
Terphenyl-d14 (Surr)	82		37 - 119

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49701/4-A							Client Sample ID: Method Blank			
Matrix: Solid							Prep Type: Total/NA			
Analysis Batch: 49827							Prep Batch: 49701			
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:09	07/04/12 12:12	1	
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 12:12	1	
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		07/03/12 09:09	07/04/12 12:12	1	
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 12:12	1	
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1	
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:09	07/04/12 12:12	1	
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1	
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:09	07/04/12 12:12	1	
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:09	07/04/12 12:12	1	
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:09	07/04/12 12:12	1	
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1	
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:09	07/04/12 12:12	1	
Surrogate	MB MB		Limits				Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier								
2-Fluorobiphenyl (Surr)	47		22 - 110				07/03/12 09:09	07/04/12 12:12	1	
2-Fluorophenol (Surr)	52		10 - 110				07/03/12 09:09	07/04/12 12:12	1	
2,4,6-Tribromophenol (Surr)	59		17 - 117				07/03/12 09:09	07/04/12 12:12	1	
Nitrobenzene-d5 (Surr)	52		29 - 111				07/03/12 09:09	07/04/12 12:12	1	
Phenol-d5 (Surr)	46		10 - 110				07/03/12 09:09	07/04/12 12:12	1	
Terphenyl-d14 (Surr)	79		40 - 119				07/03/12 09:09	07/04/12 12:12	1	

Lab Sample ID: LCS 240-49701/5-A							Client Sample ID: Lab Control Sample			
Matrix: Solid							Prep Type: Total/NA			
Analysis Batch: 49827							Prep Batch: 49701			
Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.			
		Result	Qualifier				Limits			
Pyridine	0.0800	0.0444		mg/L		56	10 - 110			
2,4-Dinitrotoluene	0.0800	0.0599		mg/L		75	45 - 126			
Hexachlorobenzene	0.0800	0.0559		mg/L		70	47 - 116			
Hexachlorobutadiene	0.0800	0.0416		mg/L		52	10 - 110			
Hexachloroethane	0.0800	0.0452		mg/L		57	10 - 110			
2-Methylphenol	0.0800	0.0524		mg/L		66	24 - 110			
Nitrobenzene	0.0800	0.0434		mg/L		54	35 - 117			
Pentachlorophenol	0.0800	0.0429		mg/L		54	12 - 110			
2,4,5-Trichlorophenol	0.0800	0.0538		mg/L		67	35 - 111			
2,4,6-Trichlorophenol	0.0800	0.0505		mg/L		63	32 - 110			
3 & 4 Methylphenol	0.160	0.0936		mg/L		59	27 - 110			
Surrogate	LCS LCS		Limits							
	%Recovery	Qualifier								
2-Fluorobiphenyl (Surr)	48		22 - 110							
2-Fluorophenol (Surr)	51		10 - 110							
2,4,6-Tribromophenol (Surr)	71		17 - 117							
Nitrobenzene-d5 (Surr)	52		29 - 111							
Phenol-d5 (Surr)	42		10 - 110							
Terphenyl-d14 (Surr)	74		40 - 119							

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49703/15-A
Matrix: Water
Analysis Batch: 50054

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49703

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:12	07/06/12 12:30	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 12:30	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		07/03/12 09:12	07/06/12 12:30	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 12:30	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 12:30	1
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:12	07/06/12 12:30	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:12	07/06/12 12:30	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:12	07/06/12 12:30	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:12	07/06/12 12:30	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:12	07/06/12 12:30	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 12:30	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:12	07/06/12 12:30	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	49		22 - 110	07/03/12 09:12	07/06/12 12:30	1
2-Fluorophenol (Surr)	31		10 - 110	07/03/12 09:12	07/06/12 12:30	1
2,4,6-Tribromophenol (Surr)	77		17 - 117	07/03/12 09:12	07/06/12 12:30	1
Nitrobenzene-d5 (Surr)	51		29 - 111	07/03/12 09:12	07/06/12 12:30	1
Phenol-d5 (Surr)	56		10 - 110	07/03/12 09:12	07/06/12 12:30	1
Terphenyl-d14 (Surr)	81		40 - 119	07/03/12 09:12	07/06/12 12:30	1

Lab Sample ID: LCS 240-49703/16-A
Matrix: Water
Analysis Batch: 50054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49703

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Pyridine	0.0800	0.0529		mg/L		66	10 - 110
2,4-Dinitrotoluene	0.0800	0.0656		mg/L		82	45 - 126
Hexachlorobenzene	0.0800	0.0650		mg/L		81	47 - 116
Hexachlorobutadiene	0.0800	0.0362		mg/L		45	10 - 110
Hexachloroethane	0.0800	0.0378		mg/L		47	10 - 110
2-Methylphenol	0.0800	0.0570		mg/L		71	24 - 110
Nitrobenzene	0.0800	0.0497		mg/L		62	35 - 117
Pentachlorophenol	0.0800	0.0884		mg/L		108	12 - 110
2,4,5-Trichlorophenol	0.0800	0.0665		mg/L		83	35 - 111
2,4,6-Trichlorophenol	0.0800	0.0673		mg/L		84	32 - 110
3 & 4 Methylphenol	0.160	0.122		mg/L		77	27 - 110

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	56		22 - 110
2-Fluorophenol (Surr)	23		10 - 110
2,4,6-Tribromophenol (Surr)	97		17 - 117
Nitrobenzene-d5 (Surr)	60		29 - 111
Phenol-d5 (Surr)	62		10 - 110
Terphenyl-d14 (Surr)	95		40 - 119

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49770/15-A
Matrix: Solid
Analysis Batch: 50054

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49770

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Acenaphthylene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Anthracene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[a]anthracene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzoic acid	660	U	660	330	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[b]fluoranthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[k]fluoranthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzyl alcohol	330	U	330	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Bis(2-chloroethoxy)methane	100	U	100	22	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Bis(2-chloroethyl)ether	100	U	100	2.0	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Bromophenyl phenyl ether	50	U	50	13	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Butyl benzyl phthalate	50	U	50	10	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dimethylphenol	150	U	150	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Dimethyl phthalate	50	U	50	17	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4,6-Dinitro-2-methylphenol	150	U	150	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dinitrophenol	330	U	330	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dinitrotoluene	200	U	200	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,6-Dinitrotoluene	200	U	200	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Fluoranthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Fluorene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Hexachlorobenzene	6.7	U	6.7	2.1	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Hexachlorobutadiene	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Hexachlorocyclopentadiene	330	U	330	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Hexachloroethane	50	U	50	9.0	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
N-Nitrosodiphenylamine	50	U	50	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
N-Nitrosodi-n-propylamine	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,4-Dichlorobenzene	50	U	50	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Chloronaphthalene	50	U	50	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Chlorophenol	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chlorophenyl phenyl ether	50	U	50	13	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Chrysene	6.7	U	6.7	1.1	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Dibenz(a,h)anthracene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Dibenzofuran	50	U	50	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[g,h,i]perylene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[a]pyrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Di-n-butyl phthalate	50	U	50	15	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,2-Dichlorobenzene	50	U	50	9.7	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,3-Dichlorobenzene	50	U	50	11	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
3,3'-Dichlorobenzidine	100	U	100	18	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dichlorophenol	150	U	150	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Diethyl phthalate	50	U	50	16	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Indeno[1,2,3-cd]pyrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Isophorone	50	U	50	13	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Methylnaphthalene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Methylphenol	200	U	200	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Naphthalene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Nitroaniline	200	U	200	9.1	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
3-Nitroaniline	200	U	200	16	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Nitroaniline	200	U	200	26	ug/Kg		07/03/12 13:56	07/06/12 11:53	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49770/15-A				Client Sample ID: Method Blank					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 50054				Prep Batch: 49770					
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitrobenzene	100	U	100	2.2	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Nitrophenol	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Nitrophenol	330	U	330	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Pyrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Pentachlorophenol	150	U	150	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Phenanthrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,2,4-Trichlorobenzene	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4,5-Trichlorophenol	150	U	150	25	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4,6-Trichlorophenol	150	U	150	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Phenol	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Carbazole	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chloroaniline	150	U	150	17	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
3 & 4 Methylphenol	400	U	400	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Bis(2-ethylhexyl) phthalate	50.9		50	19	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Di-n-octyl phthalate	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chloro-3-methylphenol	150	U	150	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,2'-oxybis[1-chloropropane]	100	U	100	9.5	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
2-Fluorobiphenyl (Surr)	46		34 - 110	07/03/12 13:56	07/06/12 11:53	1			
2-Fluorophenol (Surr)	60		26 - 110	07/03/12 13:56	07/06/12 11:53	1			
2,4,6-Tribromophenol (Surr)	39		10 - 118	07/03/12 13:56	07/06/12 11:53	1			
Nitrobenzene-d5 (Surr)	51		24 - 112	07/03/12 13:56	07/06/12 11:53	1			
Phenol-d5 (Surr)	64		28 - 110	07/03/12 13:56	07/06/12 11:53	1			
Terphenyl-d14 (Surr)	83		41 - 119	07/03/12 13:56	07/06/12 11:53	1			

Lab Sample ID: LCS 240-49770/16-A				Client Sample ID: Lab Control Sample			
Matrix: Solid				Prep Type: Total/NA			
Analysis Batch: 50054				Prep Batch: 49770			
Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Acenaphthene	667	429		ug/Kg		64	46 - 110
Acenaphthylene	667	437		ug/Kg		66	47 - 110
Anthracene	667	476		ug/Kg		71	56 - 111
Benzo[a]anthracene	667	497		ug/Kg		74	58 - 111
Benzoic acid	667	403	J	ug/Kg		60	10 - 124
Benzo[b]fluoranthene	667	511		ug/Kg		77	43 - 124
Benzo[k]fluoranthene	667	490		ug/Kg		73	38 - 122
Benzyl alcohol	667	522		ug/Kg		78	10 - 130
Bis(2-chloroethoxy)methane	667	399		ug/Kg		60	42 - 110
Bis(2-chloroethyl)ether	667	403		ug/Kg		80	41 - 110
4-Bromophenyl phenyl ether	667	425		ug/Kg		64	53 - 112
Butyl benzyl phthalate	667	513		ug/Kg		77	57 - 121
2,4-Dimethylphenol	667	412		ug/Kg		62	28 - 110
Dimethyl phthalate	667	505		ug/Kg		76	54 - 112
4,6-Dinitro-2-methylphenol	667	560		ug/Kg		84	21 - 110
2,4-Dinitrophenol	667	621		ug/Kg		93	10 - 110
2,4-Dinitrotoluene	667	485		ug/Kg		73	55 - 118
2,6-Dinitrotoluene	667	445		ug/Kg		67	54 - 115

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49770/16-A
Matrix: Solid
Analysis Batch: 50054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49770

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
Fluoranthene	667	489		ug/Kg		73	55 - 118
Fluorene	667	474		ug/Kg		71	51 - 110
Hexachlorobenzene	667	455		ug/Kg		68	51 - 110
Hexachlorobutadiene	667	390		ug/Kg		58	39 - 110
Hexachlorocyclopentadiene	667	403		ug/Kg		60	10 - 110
Hexachloroethane	667	409		ug/Kg		61	38 - 110
N-Nitrosodiphenylamine	667	467		ug/Kg		70	54 - 112
N-Nitrosodi-n-propylamine	667	498		ug/Kg		74	40 - 114
1,4-Dichlorobenzene	667	446		ug/Kg		67	38 - 110
2-Chloronaphthalene	667	392		ug/Kg		59	46 - 110
2-Chlorophenol	667	487		ug/Kg		73	39 - 110
4-Chlorophenyl phenyl ether	667	419		ug/Kg		63	53 - 110
Chrysene	667	522		ug/Kg		78	56 - 111
Dibenz(a,h)anthracene	667	495		ug/Kg		74	45 - 122
Dibenzofuran	667	458		ug/Kg		69	50 - 110
Benzo[g,h,i]perylene	667	509		ug/Kg		76	44 - 120
Benzo[a]pyrene	667	452		ug/Kg		68	44 - 115
Di-n-butyl phthalate	667	532		ug/Kg		80	57 - 119
1,2-Dichlorobenzene	667	407		ug/Kg		61	42 - 110
1,3-Dichlorobenzene	667	383		ug/Kg		57	40 - 110
3,3'-Dichlorobenzidine	667	409		ug/Kg		61	31 - 110
2,4-Dichlorophenol	667	482		ug/Kg		72	40 - 110
Diethyl phthalate	667	529		ug/Kg		79	55 - 114
Indeno[1,2,3-cd]pyrene	667	507		ug/Kg		76	45 - 121
Isophorone	667	475		ug/Kg		71	48 - 117
2-Methylnaphthalene	667	430		ug/Kg		64	46 - 110
2-Methylphenol	667	479		ug/Kg		72	36 - 110
Naphthalene	667	453		ug/Kg		68	42 - 110
2-Nitroaniline	667	494		ug/Kg		74	47 - 124
3-Nitroaniline	667	485		ug/Kg		73	44 - 110
4-Nitroaniline	667	493		ug/Kg		74	50 - 110
Nitrobenzene	667	408		ug/Kg		61	40 - 110
2-Nitrophenol	667	465		ug/Kg		73	35 - 110
4-Nitrophenol	667	525		ug/Kg		79	24 - 117
Pyrene	667	512		ug/Kg		77	58 - 113
Pentachlorophenol	667	547		ug/Kg		82	10 - 110
Phenanthrene	667	493		ug/Kg		74	54 - 110
1,2,4-Trichlorobenzene	667	383		ug/Kg		57	43 - 110
2,4,5-Trichlorophenol	667	394		ug/Kg		59	42 - 110
2,4,6-Trichlorophenol	667	318		ug/Kg		48	37 - 110
Phenol	667	510		ug/Kg		76	39 - 110
Carbazole	667	502		ug/Kg		75	56 - 115
4-Chloroaniline	667	396		ug/Kg		59	25 - 110
3 & 4 Methylphenol	1330	1020		ug/Kg		77	40 - 110
Bis(2-ethylhexyl) phthalate	667	531		ug/Kg		80	56 - 123
Di-n-octyl phthalate	667	514		ug/Kg		77	45 - 123
4-Chloro-3-methylphenol	667	523		ug/Kg		78	42 - 110
2,2'-oxybis[1-chloropropane]	667	415		ug/Kg		62	36 - 116

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49770/16-A
Matrix: Solid
Analysis Batch: 50054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49770

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	55		34 - 110
2-Fluorophenol (Surr)	73		26 - 110
2,4,6-Tribromophenol (Surr)	50		10 - 118
Nitrobenzene-d5 (Surr)	61		24 - 112
Phenol-d5 (Surr)	77		28 - 110
Terphenyl-d14 (Surr)	79		41 - 119

Lab Sample ID: MB 240-50344/13-A
Matrix: Water
Analysis Batch: 50708

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50344

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Acenaphthylene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Anthracene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[a]anthracene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzoic acid	25	U	25	10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Butyl benzyl phthalate	0.902	J	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dimethylphenol	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorobutadiene	1.0	U	1.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
N-Nitrosodiphenylamine	1.0	U	1.0	0.31	ug/L		07/10/12 10:24	07/13/12 10:39	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		07/10/12 10:24	07/13/12 10:39	1
Chrysene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[g,h,i]perylene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[a]pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Di-n-butyl phthalate	1.0	U	1.0	0.67	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,2-Dichlorobenzene	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-50344/13-A
Matrix: Water
Analysis Batch: 50708

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50344

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,3-Dichlorobenzene	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dichlorophenol	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		07/10/12 10:24	07/13/12 10:39	1
Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Isophorone	1.0	U	1.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Naphthalene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Nitrobenzene	1.0	U	1.0	0.040	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
Pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4,6-Trichlorophenol	5.0	U	5.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Phenol	1.0	U	1.0	0.60	ug/L		07/10/12 10:24	07/13/12 10:39	1
Carbazole	1.0	U	1.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chloroaniline	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-ethylhexyl) phthalate	1.97	J	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		07/10/12 10:24	07/13/12 10:39	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	69		28 - 110	07/10/12 10:24	07/13/12 10:39	1
2-Fluorophenol (Surr)	79		10 - 110	07/10/12 10:24	07/13/12 10:39	1
2,4,6-Tribromophenol (Surr)	71		22 - 120	07/10/12 10:24	07/13/12 10:39	1
Nitrobenzene-d5 (Surr)	68		27 - 111	07/10/12 10:24	07/13/12 10:39	1
Phenol-d5 (Surr)	81		10 - 110	07/10/12 10:24	07/13/12 10:39	1
Terphenyl-d14 (Surr)	86		37 - 119	07/10/12 10:24	07/13/12 10:39	1

Lab Sample ID: LCS 240-50344/14-A
Matrix: Water
Analysis Batch: 50708

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50344

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	20.0	17.2		ug/L		86	43 - 110
Anthracene	20.0	17.2		ug/L		86	54 - 114
Benzo[a]anthracene	20.0	16.5		ug/L		82	55 - 115
Benzoic acid	20.0	17.2	J	ug/L		86	10 - 129
Benzo[b]fluoranthene	20.0	16.1		ug/L		81	43 - 122

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-50344/14-A		Client Sample ID: Lab Control Sample						
Matrix: Water		Prep Type: Total/NA						
Analysis Batch: 50708		Prep Batch: 50344						
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Benzo[k]fluoranthene	20.0	17.0		ug/L		85		43 - 124
Benzyl alcohol	20.0	18.8		ug/L		94		10 - 130
Bis(2-chloroethoxy)methane	20.0	15.7		ug/L		79		39 - 110
Bis(2-chloroethyl)ether	20.0	15.2		ug/L		76		34 - 113
4-Bromophenyl phenyl ether	20.0	15.2		ug/L		76		51 - 114
Butyl benzyl phthalate	20.0	18.3		ug/L		91		53 - 126
2,4-Dimethylphenol	20.0	14.2		ug/L		71		12 - 110
Dimethyl phthalate	20.0	18.0		ug/L		90		15 - 143
4,6-Dinitro-2-methylphenol	20.0	18.2		ug/L		91		28 - 112
2,4-Dinitrophenol	20.0	16.4		ug/L		82		17 - 112
2,4-Dinitrotoluene	20.0	16.1		ug/L		80		52 - 123
2,6-Dinitrotoluene	20.0	16.4		ug/L		82		52 - 119
Fluoranthene	20.0	17.5		ug/L		87		54 - 122
Fluorene	20.0	17.3		ug/L		87		47 - 112
Hexachlorobenzene	20.0	16.8		ug/L		84		51 - 112
Hexachlorobutadiene	20.0	15.1		ug/L		75		13 - 110
Hexachlorocyclopentadiene	20.0	8.56	J	ug/L		43		10 - 110
Hexachloroethane	20.0	16.4		ug/L		82		12 - 110
N-Nitrosodiphenylamine	20.0	16.1		ug/L		81		53 - 113
N-Nitrosodi-n-propylamine	20.0	17.7		ug/L		88		37 - 121
1,4-Dichlorobenzene	20.0	16.9		ug/L		85		19 - 110
2-Chloronaphthalene	20.0	15.2		ug/L		76		39 - 110
2-Chlorophenol	20.0	17.5		ug/L		88		27 - 110
4-Chlorophenyl phenyl ether	20.0	15.7		ug/L		78		50 - 115
Chrysene	20.0	17.6		ug/L		88		55 - 115
Dibenz(a,h)anthracene	20.0	16.2		ug/L		81		46 - 122
Dibenzofuran	20.0	17.4		ug/L		87		46 - 111
Benzo[g,h,i]perylene	20.0	16.9		ug/L		84		45 - 120
Benzo[a]pyrene	20.0	14.5		ug/L		72		43 - 118
Di-n-butyl phthalate	20.0	18.1		ug/L		91		55 - 122
1,2-Dichlorobenzene	20.0	15.8		ug/L		79		23 - 110
1,3-Dichlorobenzene	20.0	15.5		ug/L		78		19 - 110
3,3'-Dichlorobenzidine	20.0	10.3		ug/L		52		19 - 110
2,4-Dichlorophenol	20.0	17.6		ug/L		88		33 - 110
Diethyl phthalate	20.0	18.3		ug/L		92		33 - 134
Indeno[1,2,3-cd]pyrene	20.0	15.9		ug/L		80		46 - 121
Isophorone	20.0	17.9		ug/L		90		44 - 128
2-Methylnaphthalene	20.0	16.9		ug/L		85		35 - 110
2-Methylphenol	20.0	17.6		ug/L		88		30 - 110
Naphthalene	20.0	17.8		ug/L		89		31 - 110
2-Nitroaniline	20.0	17.4		ug/L		87		43 - 130
3-Nitroaniline	20.0	16.4		ug/L		82		45 - 116
4-Nitroaniline	20.0	17.7		ug/L		88		45 - 120
Nitrobenzene	20.0	16.0		ug/L		80		37 - 115
2-Nitrophenol	20.0	17.8		ug/L		89		29 - 110
4-Nitrophenol	20.0	17.8		ug/L		88		12 - 130
Pyrene	20.0	16.7		ug/L		84		55 - 120
Pentachlorophenol	20.0	18.1		ug/L		90		26 - 110
Phenanthrene	20.0	17.2		ug/L		86		52 - 114
1,2,4-Trichlorobenzene	20.0	14.6		ug/L		73		25 - 110

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-50344/14-A		Client Sample ID: Lab Control Sample					
Matrix: Water		Prep Type: Total/NA					
Analysis Batch: 50708		Prep Batch: 50344					
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	20.0	17.4		ug/L		87	39 - 110
2,4,6-Trichlorophenol	20.0	17.4		ug/L		87	35 - 110
Phenol	20.0	17.9		ug/L		89	14 - 112
Carbazole	20.0	17.4		ug/L		87	53 - 120
4-Chloroaniline	20.0	15.3		ug/L		76	10 - 110
3 & 4 Methylphenol	40.0	34.8		ug/L		87	32 - 110
Bis(2-ethylhexyl) phthalate	20.0	15.0		ug/L		75	36 - 163
Di-n-octyl phthalate	20.0	13.3		ug/L		66	44 - 128
4-Chloro-3-methylphenol	20.0	17.3		ug/L		87	39 - 110
2,2'-oxybis[1-chloropropane]	20.0	15.6		ug/L		78	25 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	73		28 - 110
2-Fluorophenol (Surr)	88		10 - 110
2,4,6-Tribromophenol (Surr)	83		22 - 120
Nitrobenzene-d5 (Surr)	75		27 - 111
Phenol-d5 (Surr)	91		10 - 110
Terphenyl-d14 (Surr)	89		37 - 119

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-49615/2-A		Client Sample ID: Method Blank							
Matrix: Water		Prep Type: Total/NA							
Analysis Batch: 49739		Prep Batch: 49615							
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.050	U	0.050	0.0096	ug/L		07/02/12 11:57	07/04/12 08:18	1
4,4'-DDE	0.050	U	0.050	0.0097	ug/L		07/02/12 11:57	07/04/12 08:18	1
4,4'-DDT	0.050	U	0.050	0.016	ug/L		07/02/12 11:57	07/04/12 08:18	1
Aldrin	0.050	U	0.050	0.0082	ug/L		07/02/12 11:57	07/04/12 08:18	1
alpha-BHC	0.050	U	0.050	0.0070	ug/L		07/02/12 11:57	07/04/12 08:18	1
alpha-Chlordane	0.050	U	0.050	0.014	ug/L		07/02/12 11:57	07/04/12 08:18	1
beta-BHC	0.050	U	0.050	0.0084	ug/L		07/02/12 11:57	07/04/12 08:18	1
delta-BHC	0.050	U	0.050	0.0087	ug/L		07/02/12 11:57	07/04/12 08:18	1
Dieldrin	0.050	U	0.050	0.0075	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan I	0.050	U	0.050	0.013	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan II	0.050	U	0.050	0.012	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan sulfate	0.050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin	0.050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin aldehyde	0.050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin ketone	0.050	U	0.050	0.0078	ug/L		07/02/12 11:57	07/04/12 08:18	1
gamma-BHC (Lindane)	0.050	U	0.050	0.0064	ug/L		07/02/12 11:57	07/04/12 08:18	1
gamma-Chlordane	0.050	U	0.050	0.012	ug/L		07/02/12 11:57	07/04/12 08:18	1
Heptachlor	0.050	U	0.050	0.0080	ug/L		07/02/12 11:57	07/04/12 08:18	1
Heptachlor epoxide	0.050	U	0.050	0.0071	ug/L		07/02/12 11:57	07/04/12 08:18	1
Methoxychlor	0.10	U	0.10	0.032	ug/L		07/02/12 11:57	07/04/12 08:18	1
Toxaphene	2.0	U	2.0	0.32	ug/L		07/02/12 11:57	07/04/12 08:18	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49615/2-A				Client Sample ID: Method Blank		
Matrix: Water				Prep Type: Total/NA		
Analysis Batch: 49739				Prep Batch: 49615		
Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	94		10 - 145	07/02/12 11:57	07/04/12 08:18	1
DCB Decachlorobiphenyl	86		10 - 145	07/02/12 11:57	07/04/12 08:18	1
Tetrachloro-m-xylene	83		30 - 141	07/02/12 11:57	07/04/12 08:18	1
Tetrachloro-m-xylene	76		30 - 141	07/02/12 11:57	07/04/12 08:18	1

Lab Sample ID: LCS 240-49615/3-A				Client Sample ID: Lab Control Sample				
Matrix: Water				Prep Type: Total/NA				
Analysis Batch: 49739				Prep Batch: 49615				
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.		
						%Rec	Limits	
4,4'-DDD	0.500	0.649		ug/L		130	53 - 168	
4,4'-DDE	0.500	0.574		ug/L		115	66 - 136	
4,4'-DDT	0.500	0.576		ug/L		115	42 - 140	
Aldrin	0.500	0.544		ug/L		109	61 - 127	
alpha-BHC	0.500	0.569		ug/L		114	65 - 132	
alpha-Chlordane	0.500	0.559		ug/L		112	60 - 134	
beta-BHC	0.500	0.579		ug/L		116	59 - 134	
delta-BHC	0.500	0.603		ug/L		121	45 - 143	
Dieldrin	0.500	0.598		ug/L		120	61 - 142	
Endosulfan I	0.500	0.416		ug/L		83	35 - 110	
Endosulfan II	0.500	0.449		ug/L		90	39 - 110	
Endosulfan sulfate	0.500	0.610		ug/L		122	54 - 143	
Endrin	0.500	0.588		ug/L		117	57 - 148	
Endrin aldehyde	0.500	0.553		ug/L		111	44 - 116	
Endrin ketone	0.500	0.604		ug/L		121	52 - 135	
gamma-BHC (Lindane)	0.500	0.812		ug/L		122	58 - 140	
gamma-Chlordane	0.500	0.588		ug/L		118	59 - 139	
Heptachlor	0.500	0.530		ug/L		106	60 - 132	
Heptachlor epoxide	0.500	0.593		ug/L		119	60 - 138	
Methoxychlor	0.500	0.541		ug/L		108	45 - 139	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	56		10 - 145
DCB Decachlorobiphenyl	48		10 - 145
Tetrachloro-m-xylene	96		30 - 141
Tetrachloro-m-xylene	90		30 - 141

Lab Sample ID: MB 240-49705/7-A				Client Sample ID: Method Blank					
Matrix: Water				Prep Type: Total/NA					
Analysis Batch: 49922				Prep Batch: 49705					
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		07/03/12 09:15	07/06/12 00:21	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		07/03/12 09:15	07/06/12 00:21	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		07/03/12 09:15	07/06/12 00:21	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		07/03/12 09:15	07/06/12 00:21	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		07/03/12 09:15	07/06/12 00:21	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/06/12 00:21	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		07/03/12 09:15	07/06/12 00:21	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49705/7-A				Client Sample ID: Method Blank		
Matrix: Water				Prep Type: Total/NA		
Analysis Batch: 49922				Prep Batch: 49705		
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	93		34 - 141	07/03/12 09:15	07/06/12 00:21	1
DCB Decachlorobiphenyl	92		34 - 141	07/03/12 09:15	07/06/12 00:21	1
Tetrachloro-m-xylene	65		46 - 122	07/03/12 09:15	07/06/12 00:21	1
Tetrachloro-m-xylene	61		46 - 122	07/03/12 09:15	07/06/12 00:21	1

Lab Sample ID: LCS 240-49705/8-A				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total/NA			
Analysis Batch: 49922				Prep Batch: 49705			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Endrin	0.00200	0.00193		mg/L		96	59 - 136
gamma-BHC (Lindane)	0.00200	0.00204		mg/L		102	59 - 137
Heptachlor	0.00200	0.00139		mg/L		69	63 - 123
Heptachlor epoxide	0.00200	0.00212		mg/L		106	59 - 141
Methoxychlor	0.00400	0.00366		mg/L		92	42 - 141

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	89		34 - 141
DCB Decachlorobiphenyl	93		34 - 141
Tetrachloro-m-xylene	70		46 - 122
Tetrachloro-m-xylene	65		46 - 122

Lab Sample ID: MB 240-49756/10-A				Client Sample ID: Method Blank					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 50336				Prep Batch: 49756					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	1.7	U	1.7	0.62	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
4,4'-DDE	1.7	U	1.7	0.39	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
4,4'-DDT	1.7	U	1.7	0.63	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Aldrin	1.7	U	1.7	1.2	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
alpha-BHC	1.7	U	1.7	0.73	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
alpha-Chlordane	1.7	U	1.7	0.94	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
beta-BHC	1.7	U	1.7	1.1	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
delta-BHC	1.7	U	1.7	1.2	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Dieldrin	1.7	U	1.7	0.47	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endosulfan I	1.7	U	1.7	0.52	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endosulfan II	1.7	U	1.7	0.82	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endosulfan sulfate	1.7	U	1.7	0.87	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endrin	1.7	U	1.7	0.50	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endrin aldehyde	1.7	U	1.7	1.0	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endrin ketone	1.7	U	1.7	0.63	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
gamma-BHC (Lindane)	1.7	U	1.7	0.74	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
gamma-Chlordane	1.7	U	1.7	0.42	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Heptachlor	1.7	U	1.7	1.1	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Heptachlor epoxide	1.7	U	1.7	0.80	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Methoxychlor	3.3	U	3.3	1.5	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Toxaphene	67	U	67	19	ug/Kg		07/03/12 12:02	07/09/12 11:12	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49756/10-A
Matrix: Solid
Analysis Batch: 50336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49756

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	93		32 - 175	07/03/12 12:02	07/09/12 11:12	1
Tetrachloro-m-xylene	104		24 - 150	07/03/12 12:02	07/09/12 11:12	1
Tetrachloro-m-xylene	180	X	24 - 150	07/03/12 12:02	07/09/12 11:12	1

Lab Sample ID: LCS 240-49756/11-A
Matrix: Solid
Analysis Batch: 50336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49756

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
4,4'-DDD	33.3	35.1		ug/Kg		105	38 - 180
4,4'-DDE	33.3	27.2		ug/Kg		82	41 - 137
4,4'-DDT	33.3	33.3		ug/Kg		100	34 - 139
Aldrin	33.3	25.2		ug/Kg		76	52 - 119
alpha-BHC	33.3	26.0		ug/Kg		78	50 - 129
alpha-Chlordane	33.3	26.0		ug/Kg		78	43 - 130
beta-BHC	33.3	26.0		ug/Kg		78	51 - 127
delta-BHC	33.3	29.1		ug/Kg		87	54 - 134
Dieldrin	33.3	29.0		ug/Kg		87	45 - 140
Endosulfan I	33.3	18.9		ug/Kg		57	13 - 110
Endosulfan II	33.3	20.6		ug/Kg		62	22 - 115
Endosulfan sulfate	33.3	32.0		ug/Kg		96	44 - 143
Endrin	33.3	30.5		ug/Kg		92	48 - 143
Endrin aldehyde	33.3	32.7		ug/Kg		98	31 - 126
Endrin ketone	33.3	29.5		ug/Kg		89	39 - 137
gamma-BHC (Lindane)	33.3	27.2		ug/Kg		82	41 - 137
gamma-Chlordane	33.3	25.4		ug/Kg		76	53 - 129
Heptachlor	33.3	29.8		ug/Kg		90	37 - 127
Heptachlor epoxide	33.3	26.0		ug/Kg		78	53 - 132
Methoxychlor	33.3	34.8		ug/Kg		104	33 - 151

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	98		32 - 175
DCB Decachlorobiphenyl	82		32 - 175
Tetrachloro-m-xylene	110		24 - 150
Tetrachloro-m-xylene	113		24 - 150

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-49812/11-A
Matrix: Water
Analysis Batch: 49764

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49612

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	0.50	U	0.50	0.17	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1221	0.50	U	0.50	0.13	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1232	0.50	U	0.50	0.16	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1242	0.50	U	0.50	0.22	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1248	0.50	U	0.50	0.10	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1254	0.50	U	0.50	0.16	ug/L		07/02/12 11:53	07/03/12 17:39	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-49612/11-A
Matrix: Water
Analysis Batch: 49764

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1260	0.50	U	0.50	0.17	ug/L		07/02/12 11:53	07/03/12 17:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		23 - 136	07/02/12 11:53	07/03/12 17:39	1
DCB Decachlorobiphenyl	81		10 - 130	07/02/12 11:53	07/03/12 17:39	1

Lab Sample ID: LCS 240-49612/12-A
Matrix: Water
Analysis Batch: 49852

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	5.00	5.95		ug/L		119	66 - 120
Aroclor-1260	5.00	4.18		ug/L		84	55 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	70		23 - 136
DCB Decachlorobiphenyl	71		10 - 130

Lab Sample ID: MB 240-49755/19-A
Matrix: Solid
Analysis Batch: 49992

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49755

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	33	U	33	21	ug/Kg		07/03/12 11:53	07/06/12 12:12	1
Aroclor-1221	33	U	33	16	ug/Kg		07/03/12 11:53	07/06/12 12:12	1
Aroclor-1232	33	U	33	14	ug/Kg		07/03/12 11:53	07/06/12 12:12	1
Aroclor-1242	33	U	33	13	ug/Kg		07/03/12 11:53	07/06/12 12:12	1
Aroclor-1248	33	U	33	17	ug/Kg		07/03/12 11:53	07/06/12 12:12	1
Aroclor-1254	33	U	33	17	ug/Kg		07/03/12 11:53	07/06/12 12:12	1
Aroclor-1260	33	U	33	17	ug/Kg		07/03/12 11:53	07/06/12 12:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		29 - 151	07/03/12 11:53	07/06/12 12:12	1
DCB Decachlorobiphenyl	66		14 - 163	07/03/12 11:53	07/06/12 12:12	1

Lab Sample ID: LCS 240-49755/20-A
Matrix: Solid
Analysis Batch: 49992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49755

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	333	225		ug/Kg		68	62 - 120
Aroclor-1260	333	228		ug/Kg		68	56 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	62		29 - 151
DCB Decachlorobiphenyl	67		14 - 163

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-49707/7-A							Client Sample ID: Method Blank			
Matrix: Water							Prep Type: Total/NA			
Analysis Batch: 50094							Prep Batch: 49707			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
2,4-D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 21:18	1	
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 21:18	1	
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac	
2,4-Dichlorophenylacetic acid	51		37 - 116				07/03/12 09:18	07/07/12 21:18	1	
2,4-Dichlorophenylacetic acid	57		37 - 116				07/03/12 09:18	07/07/12 21:18	1	

Lab Sample ID: LCS 240-49707/8-A							Client Sample ID: Lab Control Sample			
Matrix: Water							Prep Type: Total/NA			
Analysis Batch: 50094							Prep Batch: 49707			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
2,4-D			0.0200	0.0135		mg/L		67	35 - 136	
Silvex (2,4,5-TP)			0.00500	0.00325		mg/L		65	46 - 112	
Surrogate	LCS %Recovery	LCS Qualifier	Limits							
2,4-Dichlorophenylacetic acid	55		37 - 116							
2,4-Dichlorophenylacetic acid	66		37 - 116							

Method: 8330 (Modified) - Organic Compounds by UV/HPLC

Lab Sample ID: G2G06000020B							Client Sample ID: Method Blank			
Matrix: Solid							Prep Type: Total			
Analysis Batch: 2188020							Prep Batch: 2188020_P			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Nitroguanidine	0.25	U	0.25	0.020	mg/kg		07/06/12 06:00	07/10/12 11:54	1	

Lab Sample ID: G2G06000020C							Client Sample ID: Lab Control Sample			
Matrix: Solid							Prep Type: Total			
Analysis Batch: 2188020							Prep Batch: 2188020_P			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Nitroguanidine			1.00	0.973		mg/kg		97	72 - 121	

Lab Sample ID: G2F280490026D							Client Sample ID: Matrix Spike Duplicate				
Matrix: Solid							Prep Type: Total				
Analysis Batch: 2188020							Prep Batch: 2188020_P				
Analyte	Sample Result	Sample Qualifier	Spike Added	SD1 Result	SD1 Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitroguanidine	0.25	U	1.00	0.822		mg/kg		82	72 - 121	1.4	20

Lab Sample ID: G2F280490026S							Client Sample ID: Matrix Spike				
Matrix: Solid							Prep Type: Total				
Analysis Batch: 2188020							Prep Batch: 2188020_P				
Analyte	Sample Result	Sample Qualifier	Spike Added	MS1 Result	MS1 Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitroguanidine	0.25	U	1.00	0.833		mg/kg		83	72 - 121		

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8330 (Modified) - Organic Compounds by UV/HPLC (Continued)

Lab Sample ID: G2G090000129B Matrix: Water Analysis Batch: 2191129							Client Sample ID: Method Blank Prep Type: Dissolved Prep Batch: 2191129_P			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Nitroguanidine	20	U	20	2.4	ug/L		07/09/12 14:50	07/10/12 10:28	1	

Lab Sample ID: G2G090000129C Matrix: Water Analysis Batch: 2191129							Client Sample ID: Lab Control Sample Prep Type: Dissolved Prep Batch: 2191129_P			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.		
Nitroguanidine	250	240		ug/L		96	73 - 117			

Lab Sample ID: 240-12752-4 MS Matrix: Water Analysis Batch: 2191129							Client Sample ID: FWG-IDW-TANK3-GW Prep Type: Dissolved Prep Batch: 2191129_P			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	%Rec.
Nitroguanidine	20	U	250	244		ug/L		98	73 - 117	

Lab Sample ID: 240-12752-4 MSD Matrix: Water Analysis Batch: 2191129							Client Sample ID: FWG-IDW-TANK3-GW Prep Type: Dissolved Prep Batch: 2191129_P				
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nitroguanidine	20	U	250	244		ug/L		98	73 - 117	0.16	15

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Lab Sample ID: G2G030000016B Matrix: Water Analysis Batch: 2185016							Client Sample ID: Method Blank Prep Type: Total Prep Batch: 2185016_P			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Nitroglycerin	0.65	U	0.65	0.33	ug/L		07/03/12 06:00	07/06/12 17:23	1	
PETN	0.65	U	0.65	0.30	ug/L		07/03/12 06:00	07/06/12 17:23	1	
2-Amino-4,6-dinitrotoluene	0.20	U	0.20	0.017	ug/L		07/03/12 06:00	07/06/12 17:23	1	
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1	
1,3-Dinitrobenzene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1	
2,4-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1	
2,6-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1	
HMX	0.10	U	0.10	0.036	ug/L		07/03/12 06:00	07/06/12 17:23	1	
Nitrobenzene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1	
2-Nitrotoluene	0.50	U	0.50	0.088	ug/L		07/03/12 06:00	07/06/12 17:23	1	
3-Nitrotoluene	0.50	U	0.50	0.057	ug/L		07/03/12 06:00	07/06/12 17:23	1	
4-Nitrotoluene	0.65	U	0.65	0.088	ug/L		07/03/12 06:00	07/06/12 17:23	1	
RDX	0.10	U	0.10	0.038	ug/L		07/03/12 06:00	07/06/12 17:23	1	
Tetryl	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1	
1,3,5-Trinitrobenzene	0.10	U	0.10	0.030	ug/L		07/03/12 06:00	07/08/12 17:23	1	
2,4,6-Trinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1	
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac	
3,4-Dinitrotoluene	101		79 - 111				07/03/12 06:00	07/06/12 17:23	1	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A) (Continued)

Lab Sample ID: G2G030000016C		Client Sample ID: Lab Control Sample							
Matrix: Water		Prep Type: Total							
Analysis Batch: 2185016		Prep Batch: 2185016_P							
Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	%Rec.	
	Added	Result	Qualifier						
Nitroglycerin	5.00	5.69		ug/L		114	85 - 115		
PETN	5.00	4.97		ug/L		99	84 - 117		
2-Amino-4,6-dinitrotoluene	1.00	1.11		ug/L		111	50 - 155		
4-Amino-2,6-dinitrotoluene	1.00	1.10		ug/L		110	55 - 155		
1,3-Dinitrobenzene	1.00	1.17		ug/L		117	45 - 160		
2,4-Dinitrotoluene	1.00	1.09		ug/L		109	60 - 135		
2,6-Dinitrotoluene	1.00	1.09		ug/L		109	60 - 135		
HMX	1.00	1.11		ug/L		111	80 - 115		
Nitrobenzene	1.00	1.17		ug/L		117	50 - 140		
2-Nitrotoluene	1.00	1.06		ug/L		106	45 - 135		
3-Nitrotoluene	1.00	1.06		ug/L		106	50 - 130		
4-Nitrotoluene	1.00	1.07		ug/L		107	50 - 130		
RDX	1.00	1.18		ug/L		116	50 - 160		
Tetryl	1.00	0.974		ug/L		97	20 - 175		
1,3,5-Trinitrobenzene	1.00	1.13		ug/L		113	65 - 140		
2,4,6-Trinitrotoluene	1.00	0.986		ug/L		99	50 - 145		
		LCS	LCS						
Surrogate	%Recovery	Qualifier	Limits						
3,4-Dinitrotoluene	105		79 - 111						

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)

Lab Sample ID: G2G090000108B		Client Sample ID: Method Blank							
Matrix: Solid		Prep Type: Total							
Analysis Batch: 2191108		Prep Batch: 2191108_P							
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,3,5-Trinitrobenzene	0.25	U	0.25	0.010	mg/kg		07/09/12 12:45	07/10/12 16:06	1
1,3-Dinitrobenzene	0.25	U	0.25	0.0042	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2,4,6-Trinitrotoluene	0.25	U	0.25	0.019	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2,4-Dinitrotoluene	0.25	U	0.25	0.0053	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2,6-Dinitrotoluene	0.25	U	0.25	0.0073	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2-Amino-4,6-dinitrotoluene	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2-Nitrotoluene	0.25	U	0.25	0.013	mg/kg		07/09/12 12:45	07/10/12 16:06	1
3-Nitrotoluene	0.25	U	0.25	0.016	mg/kg		07/09/12 12:45	07/10/12 16:06	1
4-Amino-2,6-dinitrotoluene	0.25	U	0.25	0.010	mg/kg		07/09/12 12:45	07/10/12 16:06	1
4-Nitrotoluene	0.25	U	0.25	0.025	mg/kg		07/09/12 12:45	07/10/12 16:06	1
HMX	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:06	1
Nitrobenzene	0.25	U	0.25	0.016	mg/kg		07/09/12 12:45	07/10/12 16:06	1
Nitroglycerin	0.50	U	0.50	0.015	mg/kg		07/09/12 12:45	07/10/12 16:06	1
PETN	0.50	U	0.50	0.025	mg/kg		07/09/12 12:45	07/10/12 16:06	1
RDX	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:06	1
Tetryl	0.25	U	0.25	0.010	mg/kg		07/09/12 12:45	07/10/12 16:06	1
		MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
3,4-Dinitrotoluene	102		75 - 115			07/09/12 12:45	07/10/12 16:06	1	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

Lab Sample ID: G2G090000108C			Client Sample ID: Lab Control Sample						
Matrix: Solid			Prep Type: Total						
Analysis Batch: 2191108			Prep Batch: 2191108_P						
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene	0.500	0.507		mg/kg		101	81 - 121		
1,3-Dinitrobenzene	0.500	0.517		mg/kg		103	81 - 121		
2,4,6-Trinitrotoluene	0.500	0.445		mg/kg		89	65 - 105		
2,4-Dinitrotoluene	0.500	0.499		mg/kg		100	79 - 119		
2,6-Dinitrotoluene	0.500	0.496		mg/kg		99	79 - 119		
2-Amino-4,6-dinitrotoluene	0.500	0.502		mg/kg		100	79 - 119		
2-Nitrotoluene	0.500	0.495		mg/kg		99	78 - 118		
3-Nitrotoluene	0.500	0.500		mg/kg		100	77 - 117		
4-Amino-2,6-dinitrotoluene	0.500	0.510		mg/kg		102	81 - 121		
4-Nitrotoluene	0.500	0.497		mg/kg		99	78 - 118		
HMX	0.500	0.513		mg/kg		103	80 - 120		
Nitrobenzene	0.500	0.520		mg/kg		104	80 - 120		
Nitroglycerin	1.00	1.06		mg/kg		106	76 - 116		
PETN	1.00	1.02		mg/kg		102	76 - 116		
RDX	0.500	0.500		mg/kg		100	82 - 122		
Tetryl	0.500	0.437		mg/kg		87	63 - 120		
		LCS	LCS						
Surrogate	%Recovery	Qualifier	Limits						
3,4-Dinitrotoluene	100		75 - 115						

Lab Sample ID: 240-12752-3 MS			Client Sample ID: FWG-IDW-SBCOMP3-SO							
Matrix: Solid			Prep Type: Total							
Analysis Batch: 2191108			Prep Batch: 2191108_P							
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	
1,3,5-Trinitrobenzene	0.25	U	0.498	0.503		mg/kg		101	81 - 121	
1,3-Dinitrobenzene	0.25	U	0.498	0.523		mg/kg		105	81 - 121	
2,4,6-Trinitrotoluene	0.25	U	0.498	0.450		mg/kg		90	65 - 105	
2,4-Dinitrotoluene	0.25	U	0.498	0.501		mg/kg		101	79 - 119	
2,6-Dinitrotoluene	0.25	U	0.498	0.506		mg/kg		102	79 - 119	
2-Amino-4,6-dinitrotoluene	0.25	U	0.498	0.506		mg/kg		102	79 - 119	
2-Nitrotoluene	0.25	U	0.498	0.502		mg/kg		101	78 - 118	
3-Nitrotoluene	0.25	U	0.498	0.504		mg/kg		101	77 - 117	
4-Amino-2,6-dinitrotoluene	0.25	U	0.498	0.514		mg/kg		103	81 - 121	
4-Nitrotoluene	0.25	U	0.498	0.497		mg/kg		100	78 - 118	
HMX	0.25	U	0.498	0.522		mg/kg		105	80 - 120	
Nitrobenzene	0.25	U	0.498	0.520		mg/kg		104	80 - 120	
Nitroglycerin	0.50	U	0.998	1.07		mg/kg		107	76 - 116	
PETN	0.50	U	0.996	1.00		mg/kg		101	76 - 116	
RDX	0.25	U	0.498	0.486		mg/kg		98	82 - 122	
Tetryl	0.25	U	0.498	0.418		mg/kg		84	63 - 120	
		MS	MS							
Surrogate	%Recovery	Qualifier	Limits							
3,4-Dinitrotoluene	101		76 - 115							

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

Lab Sample ID: 240-12752-3 MSD				Client Sample ID: FWG-IDW-SBCOMP3-SO							
Matrix: Solid				Prep Type: Total							
Analysis Batch: 2191108				Prep Batch: 2191108_P							
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
1,3,5-Trinitrobenzene	0.25	U	0.500	0.498		mg/kg		100	81 - 121	1.0	20
1,3-Dinitrobenzene	0.25	U	0.500	0.522		mg/kg		104	81 - 121	0.24	20
2,4,6-Trinitrotoluene	0.25	U	0.500	0.446		mg/kg		89	65 - 105	0.80	20
2,4-Dinitrotoluene	0.25	U	0.500	0.500		mg/kg		100	79 - 119	0.22	20
2,6-Dinitrotoluene	0.25	U	0.500	0.502		mg/kg		100	79 - 119	0.71	20
2-Amino-4,6-dinitrotoluene	0.25	U	0.500	0.503		mg/kg		101	79 - 119	0.53	20
2-Nitrotoluene	0.25	U	0.500	0.493		mg/kg		99	78 - 118	1.7	20
3-Nitrotoluene	0.25	U	0.500	0.501		mg/kg		100	77 - 117	0.63	20
4-Amino-2,6-dinitrotoluene	0.25	U	0.500	0.513		mg/kg		103	81 - 121	0.090	20
4-Nitrotoluene	0.25	U	0.500	0.493		mg/kg		99	78 - 118	0.76	20
HMX	0.25	U	0.500	0.516		mg/kg		103	80 - 120	1.1	20
Nitrobenzene	0.25	U	0.500	0.524		mg/kg		105	80 - 120	0.63	20
Nitroglycerin	0.50	U	1.00	1.08		mg/kg		108	76 - 116	1.2	20
PETN	0.50	U	1.00	1.00		mg/kg		100	76 - 116	0.10	20
RDX	0.25	U	0.500	0.484		mg/kg		97	82 - 122	0.47	20
Tetryl	0.25	U	0.500	0.411		mg/kg		82	63 - 120	1.7	20
		MSD	MSD								
Surrogate	%Recovery	Qualifier	Limits								
3,4-Dinitrotoluene	101		75 - 115								

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-49412/1-A				Client Sample ID: Method Blank						
Matrix: Solid				Prep Type: Total/NA						
Analysis Batch: 49675				Prep Batch: 49412						
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
Arsenic	1.0	U	1.0	0.30	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Cobalt	5.0	U	5.0	0.16	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Chromium	0.50	U	0.50	0.20	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Lead	0.30	U	0.30	0.19	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Selenium	0.50	U	0.50	0.45	mg/Kg		08/29/12 11:17	07/02/12 17:37	1	
Silver	0.50	U	0.50	0.10	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Vanadium	0.212	J	5.0	0.12	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Barium	0.242	J	20	0.071	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Calcium	34.0	J	500	16	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Copper	2.5	U	2.5	0.74	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Magnesium	500	U	500	5.1	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Manganese	1.5	U	1.5	0.074	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Nickel	0.429	J	4.0	0.27	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	
Potassium	20.7	J	500	6.2	mg/Kg		06/29/12 11:17	07/02/12 17:37	1	

Lab Sample ID: LCS 240-49412/2-A				Client Sample ID: Lab Control Sample							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 49675				Prep Batch: 49412							
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.				
							Limits				
Arsenic	200	188		mg/Kg		94	80 - 120				
Cobalt	50.0	45.1		mg/Kg		90	80 - 120				

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-49412/2-A				Client Sample ID: Lab Control Sample			
Matrix: Solid				Prep Type: Total/NA			
Analysis Batch: 49675				Prep Batch: 49412			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Chromium	20.0	18.9		mg/Kg		95	80 - 120
Lead	50.0	46.2		mg/Kg		92	80 - 120
Selenium	200	187		mg/Kg		94	80 - 120
Silver	5.00	5.06		mg/Kg		101	80 - 120
Vanadium	50.0	49.8		mg/Kg		100	80 - 120
Barium	200	211		mg/Kg		105	80 - 120
Calcium	5000	5110		mg/Kg		102	80 - 120
Copper	25.0	23.4		mg/Kg		93	80 - 120
Magnesium	5000	4880		mg/Kg		98	80 - 120
Manganese	50.0	46.5		mg/Kg		93	80 - 120
Nickel	50.0	46.0		mg/Kg		92	80 - 120
Potassium	5000	4990		mg/Kg		100	80 - 120

Lab Sample ID: 240-12752-3 MS				Client Sample ID: FWG-IDW-SBCOMP3-SO					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 50003				Prep Batch: 49412					
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
									Limits
Arsenic	11		245	229		mg/Kg	*	89	75 - 125
Cobalt	10		61.4	72.0		mg/Kg	*	101	75 - 125
Chromium	15		24.5	40.0		mg/Kg	*	103	75 - 125
Lead	11		61.4	62.6		mg/Kg	*	84	75 - 125
Selenium	0.61	U	245	212		mg/Kg	*	86	75 - 125
Silver	0.61	U	6.14	5.61		mg/Kg	*	91	75 - 125
Vanadium	17	B	61.4	78.0		mg/Kg	*	99	75 - 125
Barium	120	B	245	367		mg/Kg	*	102	75 - 125
Calcium	16000	B	6140	25800	F	mg/Kg	*	162	75 - 125
Copper	21		30.7	50.3		mg/Kg	*	95	75 - 125
Magnesium	4500		6140	11000		mg/Kg	*	106	75 - 125
Manganese	430		61.4	472	4	mg/Kg	*	63	75 - 125
Nickel	24	B	61.4	67.9		mg/Kg	*	103	75 - 125
Potassium	1500	B	6140	7510		mg/Kg	*	98	75 - 125

Lab Sample ID: 240-12752-3 MSD				Client Sample ID: FWG-IDW-SBCOMP3-SO							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 50003				Prep Batch: 49412							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD	
									Limits	RPD	Limit
Arsenic	11		245	225		mg/Kg	*	87	75 - 125	2	20
Cobalt	10		61.4	70.2		mg/Kg	*	98	75 - 125	3	20
Chromium	15		24.5	39.5		mg/Kg	*	101	75 - 125	1	20
Lead	11		61.4	61.3		mg/Kg	*	81	75 - 125	2	20
Selenium	0.61	U	245	207		mg/Kg	*	84	75 - 125	2	20
Silver	0.61	U	6.14	5.48		mg/Kg	*	89	75 - 125	2	20
Vanadium	17	B	61.4	78.4		mg/Kg	*	100	75 - 125	0	20
Barium	120	B	245	360		mg/Kg	*	99	75 - 125	2	20
Calcium	16000	B	6140	29200	F	mg/Kg	*	217	75 - 125	12	20
Copper	21		30.7	48.3		mg/Kg	*	88	75 - 125	4	20
Magnesium	4500		6140	10700		mg/Kg	*	101	75 - 125	2	20
Manganese	430		61.4	672	4 F	mg/Kg	*	389	75 - 125	35	20

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-12752-3 MSD				Client Sample ID: FWG-IDW-SBCOMP3-SO							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 50003				Prep Batch: 49412							
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Nickel	24	B	61.4	84.7		mg/Kg	*	98	75 - 125	4	20
Potassium	1500	B	6140	7440		mg/Kg	*	97	75 - 125	1	20

Lab Sample ID: MB 240-49727/2-A				Client Sample ID: Method Blank						
Matrix: Water				Prep Type: Total/NA						
Analysis Batch: 50003				Prep Batch: 49727						
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac	
	Result	Qualifier								
Arsenic	0.50	U	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:20	1	
Cadmium	0.10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 17:20	1	
Chromium	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:20	1	
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:20	1	
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 17:20	1	
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:20	1	
Barium	10	U	10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:20	1	

Lab Sample ID: LCS 240-49727/3-A				Client Sample ID: Lab Control Sample						
Matrix: Water				Prep Type: Total/NA						
Analysis Batch: 50003				Prep Batch: 49727						
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits		
									Added	Result
Arsenic	2.00	2.16		mg/L		106	50 - 150			
Cadmium	0.0500	0.0524	J	mg/L		105	50 - 150			
Chromium	0.200	0.206	J	mg/L		103	50 - 150			
Lead	0.500	0.485	J	mg/L		97	50 - 150			
Selenium	2.00	2.16		mg/L		108	50 - 150			
Silver	0.0500	0.0551	J	mg/L		110	50 - 150			
Barium	2.00	2.22	J	mg/L		111	50 - 150			

Lab Sample ID: MB 240-50314/1-A				Client Sample ID: Method Blank						
Matrix: Water				Prep Type: Total Recoverable						
Analysis Batch: 50581				Prep Batch: 50314						
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac	
	Result	Qualifier								
Arsenic	10	U	10	3.2	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Cobalt	7.0	U	7.0	1.7	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Chromium	5.0	U	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Lead	3.0	U	3.0	1.9	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Selenium	5.0	U	5.0	4.1	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Silver	5.0	U	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Vanadium	7.0	U	7.0	0.64	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Barium	0.891	J	200	0.67	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Calcium	235	J	5000	130	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Copper	25	U	25	4.5	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Magnesium	47.4	J	5000	34	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Manganese	1.09	J	15	0.41	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Nickel	40	U	40	3.2	ug/L		07/10/12 08:18	07/11/12 13:20	1	
Potassium	191	J	5000	72	ug/L		07/10/12 08:18	07/11/12 13:20	1	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-50314/2-A			Client Sample ID: Lab Control Sample					
Matrix: Water			Prep Type: Total Recoverable					
Analysis Batch: 50581			Prep Batch: 50314					
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Arsenic	2000	2040		ug/L		102	80 - 120	
Cobalt	500	506		ug/L		101	80 - 120	
Chromium	200	205		ug/L		103	80 - 120	
Lead	500	509		ug/L		102	80 - 120	
Selenium	2000	2070		ug/L		103	80 - 120	
Silver	50.0	52.4		ug/L		105	80 - 120	
Vanadium	500	505		ug/L		101	80 - 120	
Barium	2000	2170		ug/L		108	80 - 120	
Calcium	50000	52400		ug/L		105	80 - 120	
Copper	250	254		ug/L		102	80 - 120	
Magnesium	50000	51800		ug/L		104	80 - 120	
Manganese	500	522		ug/L		104	80 - 120	
Nickel	500	476		ug/L		95	80 - 120	
Potassium	50000	52100		ug/L		104	80 - 120	

Lab Sample ID: 240-12752-4 MS			Client Sample ID: FWG-IDW-TANK3-GW						
Matrix: Water			Prep Type: Total Recoverable						
Analysis Batch: 50581			Prep Batch: 50314						
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
Arsenic	6.3	J	2000	2060		ug/L		103	75 - 125
Cobalt	7.0	U	500	506		ug/L		101	75 - 125
Chromium	3.7	J	200	208		ug/L		102	75 - 125
Lead	3.0	U	500	507		ug/L		101	75 - 125
Selenium	5.0	U	2000	2070		ug/L		103	75 - 125
Silver	5.0	U	50.0	52.1		ug/L		104	75 - 125
Vanadium	1.9	J	500	506		ug/L		101	75 - 125
Barium	56	J B	2000	2230		ug/L		109	75 - 125
Calcium	43000	B	50000	94600		ug/L		104	75 - 125
Copper	25	U	250	256		ug/L		103	75 - 125
Magnesium	10000	B	50000	62200		ug/L		104	75 - 125
Manganese	110	B	500	628		ug/L		104	75 - 125
Nickel	3.2	J	500	478		ug/L		96	75 - 125
Potassium	19000	B	50000	70900		ug/L		105	75 - 125

Lab Sample ID: 240-12752-4 MSD			Client Sample ID: FWG-IDW-TANK3-GW							
Matrix: Water			Prep Type: Total Recoverable							
Analysis Batch: 50581			Prep Batch: 50314							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD
										Limits
Arsenic	8.3	J	2000	1990		ug/L		99	75 - 125	3 20
Cobalt	7.0	U	500	487		ug/L		97	75 - 125	4 20
Chromium	3.7	J	200	200		ug/L		98	75 - 125	4 20
Lead	3.0	U	500	486		ug/L		97	75 - 125	4 20
Selenium	5.0	U	2000	1990		ug/L		100	75 - 125	4 20
Silver	5.0	U	50.0	50.4		ug/L		101	75 - 125	3 20
Vanadium	1.9	J	500	488		ug/L		97	75 - 125	4 20
Barium	56	J B	2000	2170		ug/L		106	75 - 125	3 20
Calcium	43000	B	50000	91300		ug/L		98	75 - 125	4 20
Copper	25	U	250	250		ug/L		100	75 - 125	3 20

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-12752-4 MSD Matrix: Water Analysis Batch: 50581						Client Sample ID: FWG-IDW-TANK3-GW Prep Type: Total Recoverable Prep Batch: 50314					
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Magnesium	10000	B	50000	60000		ug/L		100	75 - 125	4	20
Manganese	110	B	500	608		ug/L		100	75 - 125	3	20
Nickel	3.2	J	500	458		ug/L		92	75 - 125	4	20
Potassium	19000	B	50000	69400		ug/L		102	75 - 125	2	20

Lab Sample ID: LB 240-49653/1-D LB Matrix: Water Analysis Batch: 50003						Client Sample ID: Method Blank Prep Type: TCLP Prep Batch: 49727				
Analyte	LB	LB	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac	
	Result	Qualifier								
Arsenic	0.50	U	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:16	1	
Cadmium	0.10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 17:16	1	
Chromium	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:16	1	
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:16	1	
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 17:16	1	
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:16	1	
Barium	0.00405	J	10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:16	1	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-49412/1-A Matrix: Solid Analysis Batch: 50210						Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 49412				
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac	
	Result	Qualifier								
Beryllium	0.10	U	0.10	0.047	mg/Kg		06/29/12 11:17	07/09/12 09:37	1	

Lab Sample ID: LCS 240-49412/3-A Matrix: Solid Analysis Batch: 49993						Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49412				
Analyte	Spike	Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits	
								Qualifier		
Aluminum	1000		966		mg/Kg		97	80 - 120		
Antimony	10.0		9.29		mg/Kg		93	68 - 113		
Cadmium	100		88.4		mg/Kg		88	74 - 110		
Iron	1000		1010		mg/Kg		101	80 - 120		
Sodium	1000		933		mg/Kg		93	80 - 120		
Thallium	25.0		26.9		mg/Kg		108	71 - 110		
Zinc	100		88.4		mg/Kg		88	72 - 113		

Lab Sample ID: LCS 240-49412/3-A Matrix: Solid Analysis Batch: 50210						Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49412				
Analyte	Spike	Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits	
								Qualifier		
Beryllium	100		100		mg/Kg		100	79 - 110		

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-12752-3 MS Matrix: Solid Analysis Batch: 49993				Client Sample ID: FWG-IDW-SBCOMP3-SO Prep Type: Total/NA Prep Batch: 49412						
Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	Limits
Aluminum	11000	B	1180	14900	4	mg/Kg	*	365	70 - 130	
Antimony	0.13	J B	11.8	3.40	F	mg/Kg	*	28	75 - 125	
Cadmium	0.14		118	96.7		mg/Kg	*	82	58 - 110	
Iron	25000	B	1180	28500	4	mg/Kg	*	335	70 - 130	
Sodium	90	J B	1180	1100		mg/Kg	*	86	70 - 130	
Thallium	0.17	J	29.5	28.6		mg/Kg	*	98	62 - 110	
Zinc	63	B	118	154		mg/Kg	*	77	10 - 199	

Lab Sample ID: 240-12752-3 MS Matrix: Solid Analysis Batch: 50210				Client Sample ID: FWG-IDW-SBCOMP3-SO Prep Type: Total/NA Prep Batch: 49412						
Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	Limits
Beryllium	0.57		118	100		mg/Kg	*	84	58 - 112	

Lab Sample ID: 240-12752-3 MSD Matrix: Solid Analysis Batch: 49993				Client Sample ID: FWG-IDW-SBCOMP3-SO Prep Type: Total/NA Prep Batch: 49412								
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit	
Aluminum	11000	B	1180	13700	4	mg/Kg	*	262	70 - 130	9	20	
Antimony	0.13	J B	11.8	3.37	F	mg/Kg	*	27	75 - 125	1	20	
Cadmium	0.14		118	94.6		mg/Kg	*	80	58 - 110	2	20	
Iron	25000	B	1180	27100	4	mg/Kg	*	220	70 - 130	5	20	
Sodium	90	J B	1180	1100		mg/Kg	*	86	70 - 130	0	20	
Thallium	0.17	J	29.5	28.1		mg/Kg	*	95	62 - 110	2	20	
Zinc	63	B	118	152		mg/Kg	*	75	10 - 199	1	20	

Lab Sample ID: 240-12752-3 MSD Matrix: Solid Analysis Batch: 50210				Client Sample ID: FWG-IDW-SBCOMP3-SO Prep Type: Total/NA Prep Batch: 49412								
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit	
Beryllium	0.57		118	99.4		mg/Kg	*	84	58 - 112	1	20	

Lab Sample ID: MB 240-50314/1-A Matrix: Water Analysis Batch: 50556				Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 50314						
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
Aluminum	50	U	50	19	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Antimony	2.0	U	2.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Beryllium	1.0	U	1.0	0.20	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Cadmium	1.0	U	1.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Iron	100	U ^	100	28	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Sodium	55.2	J	1000	6.9	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Thallium	0.293	J	2.0	0.14	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Zinc	9.16	J	20	2.3	ug/L		07/10/12 08:18	07/11/12 13:13	1	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-50314/3-A Matrix: Water Analysis Batch: 50556				Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 50314					
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aluminum	10000	9340		ug/L		93	80 - 120		
Antimony	100	93.3		ug/L		93	80 - 120		
Beryllium	1000	938		ug/L		94	80 - 120		
Cadmium	1000	927		ug/L		93	80 - 120		
Iron	10000	9670	^	ug/L		97	80 - 120		
Sodium	10000	10100		ug/L		101	80 - 120		
Thallium	250	253		ug/L		101	80 - 120		
Zinc	1000	990		ug/L		99	80 - 120		

Lab Sample ID: 240-12752-4 MS Matrix: Water Analysis Batch: 50556				Client Sample ID: FWG-IDW-TANK3-GW Prep Type: Total Recoverable Prep Batch: 50314					
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	580		10000	9240		ug/L		87	63 - 128
Antimony	2.3		100	89.9		ug/L		88	44 - 153
Beryllium	1.0	U	1000	894		ug/L		89	77 - 124
Cadmium	1.0	U	1000	868		ug/L		87	78 - 117
Iron	1300	^	10000	10300	^	ug/L		90	22 - 169
Sodium	28000	B	10000	35200	F	ug/L		74	80 - 120
Thallium	0.58	J B	250	238		ug/L		95	69 - 117
Zinc	11	J B	1000	901		ug/L		89	49 - 156

Lab Sample ID: 240-12752-4 MSD Matrix: Water Analysis Batch: 50556				Client Sample ID: FWG-IDW-TANK3-GW Prep Type: Total Recoverable Prep Batch: 50314							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Aluminum	580		10000	9750		ug/L		92	63 - 128	5	20
Antimony	2.3		100	94.2		ug/L		92	44 - 153	5	20
Beryllium	1.0	U	1000	939		ug/L		94	77 - 124	5	20
Cadmium	1.0	U	1000	898		ug/L		90	78 - 117	4	20
Iron	1300	^	10000	10900	^	ug/L		97	22 - 169	6	20
Sodium	28000	B	10000	37600		ug/L		98	80 - 120	7	20
Thallium	0.58	J B	250	250		ug/L		100	69 - 117	5	20
Zinc	11	J B	1000	985		ug/L		95	49 - 156	7	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-49356/1-A Matrix: Water Analysis Batch: 49867				Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 49356					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Mercury	0.20	U	0.20	0.12	ug/L		06/29/12 15:10	07/03/12 12:55	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-49356/2-A Matrix: Water Analysis Batch: 49867						Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49356			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	5.00	4.47		ug/L		89	81 - 123		

Lab Sample ID: MB 240-49732/2-A Matrix: Water Analysis Batch: 49962						Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 49732			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 13:46	1

Lab Sample ID: LCS 240-49732/3-A Matrix: Water Analysis Batch: 49962						Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49732			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.00500	0.00452		mg/L		90	50 - 150		

Lab Sample ID: LB 240-49653/1-E LB Matrix: Water Analysis Batch: 49962						Client Sample ID: Method Blank Prep Type: TCLP Prep Batch: 49732			
Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 13:45	1

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 240-49425/1-A Matrix: Solid Analysis Batch: 50031						Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 49425			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10	U	0.10	0.015	mg/Kg		08/29/12 14:00	07/05/12 16:24	1

Lab Sample ID: LCS 240-49425/2-A Matrix: Solid Analysis Batch: 50031						Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49425			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.833	0.738		mg/Kg		88	73 - 121		

Lab Sample ID: 240-12752-3 MS Matrix: Solid Analysis Batch: 50031						Client Sample ID: FWG-IDW-SBCOMP3-SO Prep Type: Total/NA Prep Batch: 49425			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.027	J	0.198	0.187		mg/Kg	✱	82	11 - 192

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-12752-3 MSD						Client Sample ID: FWG-IDW-SBCOMP3-SO					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 50031						Prep Batch: 49425					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.027	J	0.196	0.189		mg/Kg	*	83	11 - 192	1	20

Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 240-49377/1						Client Sample ID: Lab Control Sample					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 49377											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Flashpoint			81.0	82.00		Degrees F		101	97 - 103		

Lab Sample ID: LCS 240-49569/1						Client Sample ID: Lab Control Sample					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49569											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Flashpoint			81.0	82.00		Degrees F		101	97 - 103		

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-49572/1-A						Client Sample ID: Method Blank					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49633						Prep Batch: 49572					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		07/02/12 09:10	07/02/12 13:00	1		

Lab Sample ID: LCS 240-49572/2-A						Client Sample ID: Lab Control Sample					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49633						Prep Batch: 49572					
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.0449	0.0465		mg/L		103	69 - 118		

Lab Sample ID: MRL 240-49633/12 MRL						Client Sample ID: Lab Control Sample					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49633											
Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.0100	0.0102		mg/L		102	70 - 130		

Lab Sample ID: MB 240-50183/1-A						Client Sample ID: Method Blank					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 50243						Prep Batch: 50183					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Cyanide, Total	0.49	U	0.49	0.098	mg/Kg		07/09/12 08:07	07/09/12 10:23	1		

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: LCS 240-50183/2-A Matrix: Solid Analysis Batch: 50243						Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 50183			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	2.22	2.20		mg/Kg		99	68 - 123		

Lab Sample ID: MRL 240-50243/6 MRL Matrix: Solid Analysis Batch: 50243						Client Sample ID: Lab Control Sample Prep Type: Total/NA			
Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	0.0100	0.00849	J	mg/L		85	70 - 130		

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 240-49677/14-A Matrix: Water Analysis Batch: 49769						Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 49677			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	3.0	U	3.0	0.94	mg/L		07/03/12 07:56	07/03/12 13:48	1

Lab Sample ID: MB 240-49677/1-A Matrix: Solid Analysis Batch: 49769						Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 49677			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	30	U	30	22	mg/Kg		07/03/12 07:56	07/03/12 13:48	1

Lab Sample ID: LCS 240-49677/15-A Matrix: Water Analysis Batch: 49769						Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49677			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide	8.27	8.67		mg/L		105	70 - 130		

Lab Sample ID: LCS 240-49677/2-A Matrix: Solid Analysis Batch: 49769						Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 49677			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide	83.2	79.1		mg/Kg		95	70 - 130		

Lab Sample ID: 240-12752-4 MS Matrix: Water Analysis Batch: 49769						Client Sample ID: FWG-IDW-TANK3-GW Prep Type: Total/NA Prep Batch: 49677			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	3.0	U	8.27	7.87		mg/L		95	27 - 124

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: 240-12752-4 MSD						Client Sample ID: FWG-IDW-TANK3-GW					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49769						Prep Batch: 49677					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Sulfide	3.0	U	8.27	7.87		mg/L		95	27 - 124	0	20

Method: 9040B - pH

Lab Sample ID: LCS 240-49216/2						Client Sample ID: Lab Control Sample					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49216											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.49	7.490		SU		100	97 - 103		

Lab Sample ID: 240-12752-4 DU						Client Sample ID: FWG-IDW-TANK3-GW					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49216											
Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	Limit
pH	8.39			8.390		SU				0	20

Method: 9045C - pH

Lab Sample ID: LCS 240-49470/2						Client Sample ID: Lab Control Sample					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 49470											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Corrosivity			7.49	7.470		SU		100	97 - 103		

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G2G090000104B						Client Sample ID: Method Blank					
Matrix: Solid						Prep Type: Total					
Analysis Batch: 2191104						Prep Batch: 2191104_P					
Analyte	MB Result	MB Qualifier		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Nitrocellulose	1.9	J		5.0	0.78	mg/kg		07/09/12 12:15	07/11/12 11:07		1

Lab Sample ID: G2G090000104C						Client Sample ID: Lab Control Sample					
Matrix: Solid						Prep Type: Total					
Analysis Batch: 2191104						Prep Batch: 2191104_P					
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrocellulose			50.7	42.2		mg/kg		83	34 - 115		

Lab Sample ID: 240-12752-3 MS						Client Sample ID: FWG-IDW-SBCOMP3-SO					
Matrix: Solid						Prep Type: Total					
Analysis Batch: 2191104						Prep Batch: 2191104_P					
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrocellulose	1.7	J B	64.3	23.2		mg/kg		34	34 - 115		

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050 (Continued)

Lab Sample ID: 240-12752-3 MSD			Client Sample ID: FWG-IDW-SBCOMP3-SO									
Matrix: Solid			Prep Type: Total									
Analysis Batch: 2191104			Prep Batch: 2191104_P									
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Nitrocellulose	1.7	J B	64.6	16.5	N	mg/kg	*	23	34 - 115	34	71	

Lab Sample ID: G2G110000012B			Client Sample ID: Method Blank									
Matrix: Water			Prep Type: Total									
Analysis Batch: 2193012			Prep Batch: 2193012_P									
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac			
Nitrocellulose	2.0	U	2.0	0.48	mg/L		07/11/12 08:00	07/11/12 13:01	1			

Lab Sample ID: G2G110000012C			Client Sample ID: Lab Control Sample									
Matrix: Water			Prep Type: Total									
Analysis Batch: 2193012			Prep Batch: 2193012_P									
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits			
Nitrocellulose			5.07	5.41		mg/L		107	26 - 144			

Lab Sample ID: 240-12752-4 MS			Client Sample ID: FWG-IDW-TANK3-GW									
Matrix: Water			Prep Type: Total									
Analysis Batch: 2193012			Prep Batch: 2193012_P									
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits			
Nitrocellulose	2.0	U	5.07	5.26		mg/L		100	26 - 144			

Lab Sample ID: 240-12752-4 MSD			Client Sample ID: FWG-IDW-TANK3-GW									
Matrix: Water			Prep Type: Total									
Analysis Batch: 2193012			Prep Batch: 2193012_P									
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Nitrocellulose	2.0	U	5.07	5.36		mg/L		102	26 - 144	1.9	45	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

GC/MS VOA

Analysis Batch: 49421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8260B	
LCS 240-49421/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-49421/6	Method Blank	Total/NA	Solid	8260B	

Leach Batch: 49660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	
240-12752-4 MS	FWG-IDW-TANK3-GW	TCLP	Water	1311	
240-12752-4 MSD	FWG-IDW-TANK3-GW	TCLP	Water	1311	
LB 240-49660/1-A MB	Method Blank	TCLP	Water	1311	

Analysis Batch: 49814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
240-12752-4 MS	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
240-12752-4 MSD	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
LB 240-49660/1-A MB	Method Blank	TCLP	Water	8260B	
LCS 240-49814/10	Lab Control Sample	Total/NA	Water	8260B	

Leach Batch: 49973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
LB 240-49973/1-A MB	Method Blank	TCLP	Solid	1311	

Analysis Batch: 50127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8260B	
LB 240-49973/1-A MB	Method Blank	TCLP	Solid	8260B	
LCS 240-50127/12	Lab Control Sample	Total/NA	Solid	8260B	

Analysis Batch: 50324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-1	TRIP BLANK	Total/NA	Water	8260B	
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8260B	
LCS 240-50324/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-50324/5	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 49608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49608/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49608/13-A	Method Blank	Total/NA	Water	3520C	

Leach Batch: 49653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

GC/MS Semi VOA (Continued)

Prep Batch: 49701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Solid	3520C	
MB 240-49701/4-A	Method Blank	Total/NA	Solid	3520C	

Prep Batch: 49703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3520C	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3520C	49653
LCS 240-49703/16-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49703/15-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 49770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49770/16-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-49770/15-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 49827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Solid	8270C	49701
MB 240-49701/4-A	Method Blank	Total/NA	Solid	8270C	49701

Analysis Batch: 50054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8270C	49703
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8270C	49770
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8270C	49703
LCS 240-49703/16-A	Lab Control Sample	Total/NA	Water	8270C	49703
LCS 240-49770/16-A	Lab Control Sample	Total/NA	Solid	8270C	49770
MB 240-49703/15-A	Method Blank	Total/NA	Water	8270C	49703
MB 240-49770/15-A	Method Blank	Total/NA	Solid	8270C	49770

Analysis Batch: 50188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8270C	49608
LCS 240-49608/14-A	Lab Control Sample	Total/NA	Water	8270C	49608
MB 240-49608/13-A	Method Blank	Total/NA	Water	8270C	49608

Prep Batch: 50344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4 - RE	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-50344/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-50344/13-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 50708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4 - RE	FWG-IDW-TANK3-GW	Total/NA	Water	8270C	50344
LCS 240-50344/14-A	Lab Control Sample	Total/NA	Water	8270C	50344
MB 240-50344/13-A	Method Blank	Total/NA	Water	8270C	50344

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

GC Semi VOA

Prep Batch: 49612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49612/12-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49612/11-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 49615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49615/3-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49615/2-A	Method Blank	Total/NA	Water	3520C	

Leach Batch: 49653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	

Prep Batch: 49705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3520C	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3520C	49653
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49705/7-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 49707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8151A	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8151A	49653
LCS 240-49707/8-A	Lab Control Sample	Total/NA	Water	8151A	
MB 240-49707/7-A	Method Blank	Total/NA	Water	8151A	

Analysis Batch: 49739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8081A	49615
LCS 240-49615/3-A	Lab Control Sample	Total/NA	Water	8081A	49615
MB 240-49615/2-A	Method Blank	Total/NA	Water	8081A	49615

Prep Batch: 49755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49755/20-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-49755/19-A	Method Blank	Total/NA	Solid	3540C	

Prep Batch: 49756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49756/11-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-49756/10-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 49764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8082	49612
MB 240-49612/11-A	Method Blank	Total/NA	Water	8082	49612

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

GC Semi VOA (Continued)

Analysis Batch: 49852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49612/12-A	Lab Control Sample	Total/NA	Water	8082	49612

Analysis Batch: 49922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8081A	49705
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	8081A	49705
MB 240-49705/7-A	Method Blank	Total/NA	Water	8081A	49705

Analysis Batch: 49992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8082	49755
LCS 240-49755/20-A	Lab Control Sample	Total/NA	Solid	8082	49755
MB 240-49755/19-A	Method Blank	Total/NA	Solid	8082	49755

Analysis Batch: 50084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8081A	49705

Analysis Batch: 50094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8151A	49707
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8151A	49707
LCS 240-49707/8-A	Lab Control Sample	Total/NA	Water	8151A	49707
MB 240-49707/7-A	Method Blank	Total/NA	Water	8151A	49707

Analysis Batch: 50336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8081A	49756
LCS 240-49756/11-A	Lab Control Sample	Total/NA	Solid	8081A	49756
MB 240-49756/10-A	Method Blank	Total/NA	Solid	8081A	49756

HPLC

Analysis Batch: 2185016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	8330/8330A	
G2G030000016B	Method Blank	Total	Water	8330/8330A	
G2G030000016C	Lab Control Sample	Total	Water	8330/8330A	

Analysis Batch: 2188020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	8330 (Modified)	
G2F280490026D	Matrix Spike Duplicate	Total	Solid	8330 (Modified)	
G2F280490026S	Matrix Spike	Total	Solid	8330 (Modified)	
G2G060000020B	Method Blank	Total	Solid	8330 (Modified)	
G2G060000020C	Lab Control Sample	Total	Solid	8330 (Modified)	

Analysis Batch: 2191108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

HPLC (Continued)

Analysis Batch: 2191108 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G2G090000108B	Method Blank	Total	Solid	8330B	
G2G090000108C	Lab Control Sample	Total	Solid	8330B	

Analysis Batch: 2191129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
240-12752-4 MS	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
G2G090000129B	Method Blank	Dissolved	Water	8330 (Modified)	
G2G090000129C	Lab Control Sample	Dissolved	Water	8330 (Modified)	

Prep Batch: 2185016_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	3535	
G2G030000016B	Method Blank	Total	Water	3535	
G2G030000016C	Lab Control Sample	Total	Water	3535	

Prep Batch: 2188020_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	3550A	
G2F280490028D	Matrix Spike Duplicate	Total	Solid	3550A	
G2F280490028S	Matrix Spike	Total	Solid	3550A	
G2G080000020B	Method Blank	Total	Solid	3550A	
G2G060000020C	Lab Control Sample	Total	Solid	3550A	

Prep Batch: 2191108_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
G2G090000108B	Method Blank	Total	Solid	8330B	
G2G090000108C	Lab Control Sample	Total	Solid	8330B	

Prep Batch: 2191129_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Dissolved	Water	FILTRATION (DISS)	
240-12752-4 MS	FWG-IDW-TANK3-GW	Dissolved	Water	FILTRATION (DISS)	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Dissolved	Water	FILTRATION (DISS)	
G2G090000129B	Method Blank	Dissolved	Water	FILTRATION (DISS)	
G2G090000129C	Lab Control Sample	Dissolved	Water	FILTRATION (DISS)	

Metals

Prep Batch: 49356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	7470A	
LCS 240-49356/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-49356/1-A	Method Blank	Total/NA	Water	7470A	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Metals (Continued)

Prep Batch: 49412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
LCS 240-49412/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 240-49412/3-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 240-49412/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 49425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	
LCS 240-49425/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 240-49425/1-A	Method Blank	Total/NA	Solid	7471A	

Leach Batch: 49653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	
LB 240-49653/1-D LB	Method Blank	TCLP	Water	1311	
LB 240-49653/1-E LB	Method Blank	TCLP	Water	1311	

Analysis Batch: 49675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49412/2-A	Lab Control Sample	Total/NA	Solid	6010B	49412
MB 240-49412/1-A	Method Blank	Total/NA	Solid	6010B	49412

Prep Batch: 49727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3010A	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3010A	49653
LB 240-49653/1-D LB	Method Blank	TCLP	Water	3010A	49653
LCS 240-49727/3-A	Lab Control Sample	Total/NA	Water	3010A	
MB 240-49727/2-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 49732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	7470A	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	7470A	49653
LB 240-49653/1-E LB	Method Blank	TCLP	Water	7470A	49653
LCS 240-49732/3-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-49732/2-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 49867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	7470A	49356
LCS 240-49356/2-A	Lab Control Sample	Total/NA	Water	7470A	49356
MB 240-49356/1-A	Method Blank	Total/NA	Water	7470A	49356

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Metals (Continued)

Analysis Batch: 49962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	7470A	49732
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	7470A	49732
LB 240-49653/1-E LB	Method Blank	TCLP	Water	7470A	49732
LCS 240-49732/3-A	Lab Control Sample	Total/NA	Water	7470A	49732
MB 240-49732/2-A	Method Blank	Total/NA	Water	7470A	49732

Analysis Batch: 49993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
LCS 240-49412/3-A	Lab Control Sample	Total/NA	Solid	6020	49412

Analysis Batch: 50003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	6010B	49727
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	6010B	49727
LB 240-49653/1-D LB	Method Blank	TCLP	Water	6010B	49727
LCS 240-49727/3-A	Lab Control Sample	Total/NA	Water	6010B	49727
MB 240-49727/2-A	Method Blank	Total/NA	Water	6010B	49727

Analysis Batch: 50031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
LCS 240-49425/2-A	Lab Control Sample	Total/NA	Solid	7471A	49425
MB 240-49425/1-A	Method Blank	Total/NA	Solid	7471A	49425

Analysis Batch: 50210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
LCS 240-49412/3-A	Lab Control Sample	Total/NA	Solid	6020	49412
MB 240-49412/1-A	Method Blank	Total/NA	Solid	6020	49412

Prep Batch: 50314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
LCS 240-50314/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-50314/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	3005A	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Metals (Continued)

Analysis Batch: 50556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
LCS 240-50314/3-A	Lab Control Sample	Total Recoverable	Water	6020	50314
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	6020	50314

Analysis Batch: 50581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
LCS 240-50314/2-A	Lab Control Sample	Total Recoverable	Water	6010B	50314
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	6010B	50314

General Chemistry

Analysis Batch: 49216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9040B	
240-12752-4 DU	FWG-IDW-TANK3-GW	Total/NA	Water	9040B	
LCS 240-49216/2	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 49377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	1010	
LCS 240-49377/1	Lab Control Sample	Total/NA	Solid	1010	

Analysis Batch: 49467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	Moisture	

Analysis Batch: 49470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9045C	
LCS 240-49470/2	Lab Control Sample	Total/NA	Solid	9045C	

Analysis Batch: 49569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	1010	
LCS 240-49569/1	Lab Control Sample	Total/NA	Water	1010	

Prep Batch: 49572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9012A	
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	

Analysis Batch: 49633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9012A	49572
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	49572
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	49572

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

General Chemistry (Continued)

Analysis Batch: 49633 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 240-49633/12 MRL	Lab Control Sample	Total/NA	Water	9012A	

Prep Batch: 49677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9030B	
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9030B	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total/NA	Water	9030B	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total/NA	Water	9030B	
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9030B	
LCS 240-49677/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 240-49677/14-A	Method Blank	Total/NA	Water	9030B	
MB 240-49677/1-A	Method Blank	Total/NA	Solid	9030B	

Analysis Batch: 49769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9034	49677
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
240-12752-4 MS	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9034	49677
LCS 240-49677/2-A	Lab Control Sample	Total/NA	Solid	9034	49677
MB 240-49677/14-A	Method Blank	Total/NA	Water	9034	49677
MB 240-49677/1-A	Method Blank	Total/NA	Solid	9034	49677

Prep Batch: 50183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9012A	
LCS 240-50183/2-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 240-50183/1-A	Method Blank	Total/NA	Solid	9012A	

Analysis Batch: 50243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9012A	50183
LCS 240-50183/2-A	Lab Control Sample	Total/NA	Solid	9012A	50183
MB 240-50183/1-A	Method Blank	Total/NA	Solid	9012A	50183
MRL 240-50243/6 MRL	Lab Control Sample	Total/NA	Solid	9012A	

Analysis Batch: 2191104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
G2G090000104B	Method Blank	Total	Solid	WS-WC-0050	
G2G090000104C	Lab Control Sample	Total	Solid	WS-WC-0050	

Analysis Batch: 2193012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
G2G110000012B	Method Blank	Total	Water	WS-WC-0050	
G2G110000012C	Lab Control Sample	Total	Water	WS-WC-0050	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

General Chemistry (Continued)

Analysis Batch: 2195066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	160.3 MOD	

Prep Batch: 2191104_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G2G090000104B	Method Blank	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G2G090000104C	Lab Control Sample	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	

Prep Batch: 2193012_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION, SOLID PHASE	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION, SOLID PHASE	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION, SOLID PHASE	
G2G110000012B	Method Blank	Total	Water	EXTRACTION, SOLID PHASE	
G2G110000012C	Lab Control Sample	Total	Water	EXTRACTION, SOLID PHASE	

Lab Chronicle

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-12752-1

Date Collected: 06/28/12 08:00

Matrix: Water

Date Received: 06/28/12 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50324	07/10/12 12:54	RQ	TAL NC

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Percent Solids: 78.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	49421	06/29/12 19:38	SM	TAL NC
TCLP	Leach	1311			49973	07/05/12 16:15	BF	TAL NC
TCLP	Analysis	8260B		1	50127	07/06/12 21:42	TL	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49703	07/03/12 09:12	BM	TAL NC
TCLP	Analysis	8270C		1	50054	07/06/12 18:11	JG	TAL NC
Total/NA	Prep	3540C			49770	07/03/12 13:56	BM	TAL NC
Total/NA	Analysis	8270C		1	50054	07/06/12 19:27	JG	TAL NC
Total/NA	Prep	3540C			49755	07/03/12 11:53	SE	TAL NC
Total/NA	Analysis	8082		1	49992	07/06/12 09:43	RK	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49705	07/03/12 09:15	BM	TAL NC
TCLP	Analysis	8081A		5	50084	07/06/12 14:52	AR	TAL NC
TCLP	Prep	8151A			49707	07/03/12 09:18	SE	TAL NC
TCLP	Analysis	8151A		1	50094	07/07/12 19:42	AR	TAL NC
Total/NA	Prep	3540C			49756	07/03/12 12:02	SE	TAL NC
Total/NA	Analysis	8081A		10	50336	07/09/12 08:27	AR	TAL NC
Total	Prep	3550A			2188020_P	07/08/12 08:00	TQP	TAL WSC
Total	Analysis	8330 (Modified)		0.99	2188020	07/10/12 12:23	RN	TAL WSC
Total	Prep	8330B			2191108_P	07/09/12 12:45	HJA	TAL WSC
Total	Analysis	8330B		0.99	2191108	07/10/12 14:06	RN	TAL WSC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	7470A			49732	07/03/12 14:30	AS	TAL NC
TCLP	Analysis	7470A		1	49962	07/05/12 13:58	SG	TAL NC
Total/NA	Prep	3050B			49412	06/29/12 11:17	DE	TAL NC
Total/NA	Analysis	6020		1	49993	07/05/12 21:15	BD	TAL NC
Total/NA	Analysis	6010B		1	50003	07/05/12 20:27	NJM	TAL NC
TCLP	Prep	3010A			49727	07/03/12 10:01	AS	TAL NC
TCLP	Analysis	6010B		1	50003	07/05/12 20:59	NJM	TAL NC
Total/NA	Prep	7471A			49425	06/29/12 14:00	DE	TAL NC
Total/NA	Analysis	7471A		1	50031	07/05/12 16:29	BD	TAL NC
Total/NA	Analysis	6020		1	50210	07/09/12 09:43	BD	TAL NC
Total/NA	Analysis	1010		1	49377	06/29/12 14:17	TH	TAL NC
Total/NA	Analysis	Moisture		1	49467	06/29/12 14:27	JB	TAL NC
Total/NA	Analysis	9045C		1	49470	06/29/12 16:15	LG	TAL NC
Total/NA	Prep	9030B			49677	07/03/12 07:56	BW	TAL NC
Total/NA	Analysis	9034		1	49769	07/03/12 13:48	BW	TAL NC

Lab Chronicle

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Percent Solids: 78.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012A			50183	07/09/12 08:07	MJC	TAL NC
Total/NA	Analysis	9012A		1	50243	07/09/12 10:24	BW	TAL NC
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			2191104_P	07/09/12 12:15	HJA	TAL WSC
Total	Analysis	WS-WC-0050		1	2191104	07/11/12 11:11	LW	TAL WSC
Total	Analysis	160.3 MOD		1	2195086	07/02/12 00:00	JS	TAL NC

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			49660	07/03/12 10:53	DJ	TAL NC
TCLP	Analysis	8260B		1	49814	07/04/12 03:00	TL	TAL NC
Total/NA	Analysis	8260B		1	50324	07/10/12 13:16	RQ	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49703	07/03/12 09:12	BM	TAL NC
TCLP	Analysis	8270C		1	50054	07/06/12 18:30	JG	TAL NC
Total/NA	Prep	3520C			49608	07/02/12 11:43	CC	TAL NC
Total/NA	Analysis	8270C		1	50188	07/09/12 11:21	JG	TAL NC
Total/NA	Prep	3520C	RE		50344	07/10/12 10:24	SE	TAL NC
Total/NA	Analysis	8270C	RE	1	50708	07/13/12 12:33	JG	TAL NC
Total/NA	Prep	3520C			49615	07/02/12 11:57	CC	TAL NC
Total/NA	Analysis	8081A		1	49739	07/04/12 07:55	AR	TAL NC
Total/NA	Prep	3520C			49612	07/02/12 11:53	CC	TAL NC
Total/NA	Analysis	8082		1	49784	07/03/12 17:25	CR	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49705	07/03/12 09:15	BM	TAL NC
TCLP	Analysis	8081A		1	49922	07/05/12 23:21	AR	TAL NC
TCLP	Prep	8151A			49707	07/03/12 09:18	SE	TAL NC
TCLP	Analysis	8151A		1	50094	07/07/12 20:06	AR	TAL NC
Total	Prep	3535			2185016_P	07/03/12 06:00	TQP	TAL WSC
Total	Analysis	8330/8330A		1.03	2185016	07/06/12 19:24	RN	TAL WSC
Dissolved	Prep	FILTRATION (DISS)			2191129_P	07/09/12 14:50	HJA	TAL WSC
Dissolved	Analysis	8330 (Modified)		1	2191129	07/10/12 10:57	RN	TAL WSC
Total/NA	Prep	7470A			49356	06/29/12 15:10	LM	TAL NC
Total/NA	Analysis	7470A		1	49867	07/03/12 13:40	RT	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	7470A			49732	07/03/12 14:30	AS	TAL NC
TCLP	Analysis	7470A		1	49962	07/05/12 14:02	SG	TAL NC
TCLP	Prep	3010A			49727	07/03/12 10:01	AS	TAL NC
TCLP	Analysis	6010B		1	50003	07/05/12 21:03	NJM	TAL NC
Total Recoverable	Prep	3005A			50314	07/10/12 08:18	LM	TAL NC
Total Recoverable	Analysis	6020		1	50556	07/11/12 13:26	BD	TAL NC

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Lab Chronicle

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6010B		1	50581	07/11/12 13:31	NJM	TAL NC
Total/NA	Analysis	9040B		1	49216	06/28/12 16:18	LG	TAL NC
Total/NA	Analysis	1010		1	49569	07/02/12 11:30	TH	TAL NC
Total/NA	Prep	9012A			49572	07/02/12 09:10	MJC	TAL NC
Total/NA	Analysis	9012A		1	49633	07/02/12 11:08	CN	TAL NC
Total/NA	Prep	9030B			49677	07/03/12 07:58	BW	TAL NC
Total/NA	Analysis	9034		1	49769	07/03/12 13:48	BW	TAL NC
Total	Prep	EXTRACTION, SOLID PHASE			2193012_P	07/11/12 06:00	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	2193012	07/11/12 13:05	LW	TAL WSC

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Certification Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	8947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Northern Mariana Islands	State Program	9	MP0007
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	Federal		LE148388-0
TestAmerica West Sacramento	USDA	Federal		P330-11-00436
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	State Program	3	9930C
TestAmerica West Sacramento	West Virginia DEP	State Program	3	334
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Chain of Custody Record

TestAmerica Laboratory location: DW NPDES RCRA Other

Client Contact: Company Name: <u>EOM</u> Address: <u>1800 Carman</u> City/State/Zip: <u>Urumachi OH 45240</u> Phone: <u>513 825 7500</u> Project Name: <u>RNAAP 66</u> Project Number: <u>030174.0016</u> P O F		Client Project Manager: Name: <u>J Miller</u> Telephone: <u>513 825 7500</u> Email:		Site Contact: Name: <u>Edorbin</u> Telephone: <u>513 825 7495 FAX</u>		Lab Contact: Name: <u>M. Loeb</u> Telephone:		CO# No: <u>046413</u> PO# <u>1 = 46412</u> 2 of 2 CO#	
Regulatory program:		Method of Shipment/Carrier:		Shipping/Tracking No:		TAT (if different from below): <input type="checkbox"/> 3 weeks <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day <u>3 days</u>		Analysis:	
Sample Identification:		Sample Date:		Sample Time:		Air		Total Metals (colloidal)	
FWG-1DW-Tankla-GW		6-28-12		1000		X		9012 Cyanide	
FWG-1DW-SBeomp3-SO		↓		1015		X		10208 Ignitables	
FWG-1DW-Tank3-GW		↓		1100		X		1010 Flusht	
								10308 Ignitables	
								9040 B PH	
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Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-12752-1

Login Number: 12752

List Source: TestAmerica Canton

List Number: 1

Creator: Livengood, Chris

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

May 22, 2012

Mr. Mark Patterson
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266

Reference: Contract No. GS-10F-0293K
Delivery Order No. W912QR-1-F-0266

**Subject: Facility-Wide Groundwater Monitoring Program Plan
RVAAP-66 Facility-Wide Groundwater
Tank #1 IDW Letter Report – Draft**

Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI) began on February 27, 2012, and was conducted pursuant to the approved *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum* (FWGWMP Addendum; EQM, January 2012). These activities resulted in the generation of decontamination fluids from well installation operations. The purpose of this letter is to characterize and classify IDW from Tank #1 for disposal and to provide recommendations for disposing of the IDW.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (EPA) regarding IDW disposition at RVAAP, including the IDW disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations* (FWSAP; SAIC, 2011), and the FWGWMP Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material pending waste characterization and classification based on analytical results. The FWSAP and the FWGWMP Addendum describe approved procedures used for containerizing and handling IDW.

Liquid IDW Discussion

Accumulated indigenous liquid IDW was containerized in a 2,450-gallon poly tank (Tank #1) on site pending transport and disposal to an offsite disposal facility. Tank #1 contained decontamination fluid generated during cleaning of downhole drilling equipment. This liquid was generated from February 27, 2012, through April 8, 2012. (Purge water was stored in a

different onsite tank that will be handled under a separate report). An unfiltered composite sample for disposal characterization was collected from Tank #1. The tank was opened and a composite sample was collected by gently lowering a new, disposable Teflon bailer attached to new polypropylene rope into the holding vessel. The bailer was lowered into the vessel several times, and to different depths, to collect a sufficient representative sample of the water to submit to the laboratory for waste characterization analysis. The retrieved sample was collected and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the sample container was sealed with minimum head space. New, disposable nitrile sample gloves were worn during sampling. The gloves, bailers, and rope were discarded appropriately in accordance with the FWGWMP Addendum after collection of each composite sample.

The indigenous IDW contained in Tank #1 was characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite totals analysis and Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 1. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1 – Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24) and Table 8-2 – Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23), as presented in the FWSAP, the Maximum Contaminant Levels (MCLs), and United States Environmental Protection Agency (USEPA) Risk Screening Levels (RSLs) for tap water and/or background criteria. Table 2 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP and RVAAP full suite totals analysis for Tank #1.

The following summarizes the IDW Tank #1 analyses:

- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 140 degrees F. Reactive sulfide and reactive cyanide were not detected above the reporting limit. The pH level was slightly elevated as a result of concrete and bentonite residue.
- Three volatile organic compounds and one semivolatile organic constituent were detected in the wastewater sample, although none exceeded their respective MCLs or RSLs.
- No explosives/propellants, pesticides, or polychlorinated biphenyl constituents were detected in the sample.
- Several metals were detected in the IDW sample. Two metals exceeded their USEPA RSL: arsenic (7.0 µg/L) and thallium (0.71 µg/L). The concentrations for both metals were estimated. No metals were identified at concentrations exceeding their corresponding MCLs. Antimony, chromium, nickel, potassium, sodium, thallium, and vanadium were identified at concentrations exceeding their corresponding RVAAP background criteria.

Recommended Disposal Pathways for IDW

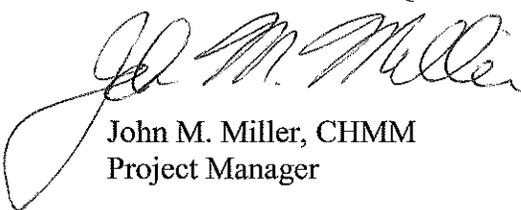
After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. Arsenic exceeded the USEPA RSL, but it was below the MCL (10 µg/L) and RVAAP background criteria (11.7 µg/L). Thallium slightly exceeded the USEPA RSL (0.16 µg/L) and background criteria (0.0 µg/L), but it was below the MCL of 2.0 µg/L. The concentrations for antimony, chromium (total), nickel, potassium, sodium, and vanadium exceeded the RVAAP background criteria, but these metals were below their respective MCLs and RSLs.

Given the observed analytical results, and the previous approval of land application based upon similar constituent levels from SAIC during the 2009 Well Installation into the Basal Sharon Conglomerate and Tank #2 from the current well installation, it is recommended that the liquid IDW from Tank #1 be classified as non-hazardous, non-contaminated. EQM understands that normally it is not Ohio EPA policy to land discharge decontamination water, however given the analytical results it is proposed to land apply the liquid IDW near Tank #1 (in the gravel parking area adjacent to, and immediately north of Building 1036) provided that RVAAP and Ohio EPA concur with the preliminary characterization and that no RCRA listings apply. The liquid IDW will be pumped from the tank through an in-line 100-µm bag filter and through a straw bale at the effluent end as a finishing filter and to prevent erosion before discharging to the ground surface in a well vegetated area. The IDW liquid will be released at a rate that will prevent ponding of water and/or runoff. The IDW will not be released directly to surface water features, such as creeks, ditches, or streams or to storm/sanitary sewer lines. Prior to initiating land application of the liquid IDW, the procedure and setup will be reviewed by the RVAAP Facility Manager or designee for final approval.

Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with the appropriate land application. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.



John M. Miller, CHMM
Project Manager

cc: Vicki Deppisch – Ohio EPA
Mark Nichter – USACE
EQM PN – 030174.0016.001.02

Table 1. Summary of Analytical Suite of Chemicals

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium, cadmium, chromium, lead, and selenium)	EPA Method SW-846 1311/6010B
TCLP semivolatile organic compounds (SVOCs)	EPA Method SW-846 1311/8270C
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
pH	EPA Method SW-846 9040B
Polychlorinated biphenyls (PCBs)	EPA Method SW-846 8082
Pesticides	EPA Method SW-846 8081A
Base/Neutrals and Acids (SVOCs)	EPA Method SW-846 8270C
Volatile Organic Compounds (VOCs)	EPA Method SW-846 8260B
Nitroguanidine (Propellant)	EPA Method SW-846 8330 modified
Nitroaromatics & Nitramines (Explosives)	EPA Method SW-846 8330
Nitrocellulose as N (Propellant)	General Chemistry (WS-WC-0050)
Nitrate/Nitrites	General Chemistry (353.2)1
Metals (Magnesium, Manganese, Barium, Nickel, Potassium, Silver, Sodium, Vanadium, Chromium, Calcium, Cobalt, Copper, Arsenic, Lead, Selenium)	EPA Method SW-846 6010B
Metals (Antimony, Iron, Beryllium, Thallium, Zinc, Cadmium, Aluminum)	EPA Method SW-846 6020
Mercury	EPA Method SW-846 7470A

1 EPA Methods for Chemical Analysis of Water and Waste

**Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels
Tank 1 Decontamination Fluids, RVAAP-66, Ravenna, Ohio**

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	MCL	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
Total Metals	Aluminum	7429-90-5	µg/L	64		200^	16000	0	NA
Total Metals	Antimony	7440-36-0	µg/L	2.0		6	6	0	NA
Total Metals	Arsenic	7440-38-2	µg/L	7.0	J	10	0.045	11.7	NA
Total Metals	Barium	7440-39-3	µg/L	42	J,B	2000	2900	82.1	NA
Total Metals	Calcium	7440-70-2	µg/L	53000	B	NS	NS	115000	NA
Total Metals	Chromium	7440-47-3	µg/L	9.5		100	16000**	7.3	NA
Total Metals	Iron	7439-89-6	µg/L	72	J	300^	11000	279	NA
Total Metals	Magnesium	7439-95-4	µg/L	14000	B	NS	NS	43300	NA
Total Metals	Manganese	7439-96-5	µg/L	2.1	J,B	50^	320	1020	NA
Total Metals	Nickel	7440-02-0	µg/L	5.2	J	NS	300	0	NA
Total Metals	Potassium	9/7/7440	µg/L	25000	B	NS	NS	2890	NA
Total Metals	Sodium	7440-23-5	µg/L	100000	B	NS	NS	45700	NA
Total Metals	Thallium	7440-28-0	µg/L	0.71	J	2.0	0.16	0	NA
Total Metals	Vanadium	7440-62-2	µg/L	25	J	NS	78	0	NA
VOCs	2-Butanone (MEK)	78-93-3	µg/L	1.5	J	NS	4900	NA	NA
VOCs	Acetone	67-64-1	µg/L	8.2	J	NS	12000	NA	NA
VOCs	Toluene	108-88-3	µg/L	0.16	J	1000	860	NA	NA
SVOCs	Diethyl phthalate	84-66-2	µg/L	1.0		NS	11000	NA	NA
TCLP-Metals	Arsenic	7440-38-2	mg/L	0.0071	J,B	NA	NA	NA	5.0
TCLP-Metals	Barium	7440-39-3	mg/L	0.037	J,B	NA	NA	NA	100
TCLP-Metals	Chromium	7440-47-3	mg/L	0.0039	J	NA	NA	NA	5.0
TCLP-Metals	Lead	7439-92-1	mg/L	0.0022	J,B	15	NA	NA	5.0

continued

**Table 2 (continued). Detected Analytical Results Compared to Regulatory Characteristic Levels
Tank 1 Decontamination Fluids, RVAAP-66, Ravenna, Ohio**

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	MCL	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
TCLP-Misc.	Corrosivity	N/A	S.U.	9.47		6.5-8.5^	NA	NA	NA
TCLP-Misc.	Flashpoint	N/A	F	>180		NA	NA	NA	<140

Note:

Methylene chloride (0.46 µg/L) was detected in the Trip Blank.

* The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1 - Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24) and Table 8-2 - Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23).

^ National Secondary Drinking Water standard.

** Chromium, insoluble salts.

Bold concentrations exceed Drinking Water Stand – Maximum Contaminant Levels (MCLs).

Italics concentrations exceed USEPA Risk Screening Levels (RSLs).

Shaded concentrations exceed the lowest criteria level for RVAAP unfiltered groundwater.

J = estimated result. Result is less than reporting limit.

B = method blank contamination

NA = not applicable

ATTACHMENT 1.
LABORATORY ANALYTICAL DATA SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-10547-1
Client Project/Site: RVAAP 66

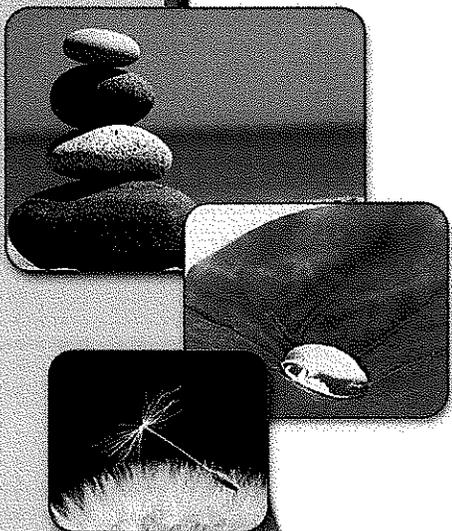
For:
Environmental Quality Mgt., Inc.
1800 Carillon Blvd
Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin



Authorized for release by:
5/21/2012 12:35:25 PM

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F	RPD of the MS and MSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☐	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Job ID: 240-10547-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Environmental Quality Mgt., Inc.

Project: RVAAP 66

Report Number: 240-10547-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 8330 Explosives, Nitrocellulose as N, and UV/HPLC-SOP Nitroguanidine analysis were performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/24/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.3 and 3.9 C.

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 04/26/2012 and analyzed on 04/30/2012.

The laboratory control sample (LCS) for batch 42231 exceeded control limits for the following analytes: 4-methyl-2-pentanone, and 2-hexanone. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42231.

No other difficulties were encountered during the VOCs analysis. All quality control parameters were within the acceptance limits.

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Job ID: 240-10547-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples FWG-IDW-TANK 1-TB (240-10547-1) and FWG-IDW-TANK 1-GW (240-10547-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/01/2012.

2-Hexanone and 4-Methyl-2-pentanone (MIBK) failed the recovery criteria high for LCS 240-42231/5. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42231.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 04/26/2012, prepared on 04/27/2012 and analyzed on 05/02/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 04/25/2012 and analyzed on 04/27/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

TCLP CHLORINATED PESTICIDES

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/ 8081A. The samples were leached on 04/26/2012, prepared on 04/27/2012 and 05/04/2012 and analyzed on 04/30/2012 and 05/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

The laboratory control sample (LCS) for batch 41948 exceeded control limits. The associated sample FWG-IDW-TANK 1-GW was re-prepared and re-analyzed outside holding time. Both sets of data have been reported.

The grand mean exception, as outlined in EPA Method 8000B, was applied to the continuing calibration verification (CCV) standard associated with batch. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to %D. The following compounds are affected.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42735.

No other difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

CHLORINATED PESTICIDES

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 04/25/2012 and analyzed on 04/27/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Job ID: 240-10547-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

DCB Decachlorobiphenyl failed the surrogate recovery criteria low for FWG-IDW-TANK 1-GW (240-10547-2). Refer to the QC report for details.

Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: FWG-IDW-TANK 1-GW. These results have been reported and qualified.

The opening and closing continuing calibration verifications (CCVs) associated with batch 41756 recovered some analytes above the upper control limits. The samples associated with these CCVs were non-detects for the affected analytes; therefore the data have been reported. FWG-IDW-TANK 1-GW.

No other difficulties were encountered during the pesticides analysis. All other quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 04/25/2012 and analyzed on 04/27/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the PCBs analysis. All quality control parameters were within the acceptance limits.

TCLP CHLORINATED HERBICIDES

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/ 8151A. The samples were leached on 04/26/2012, prepared on 04/27/2012 and analyzed on 04/28/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the herbicides analysis. All quality control parameters were within the acceptance limits.

TCLP METALS (ICP)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/ 6010B. The samples were leached on 04/26/2012, prepared on 04/27/2012 and analyzed on 04/28/2012.

Arsenic, Barium and Lead were detected in method blank LB 240-41791/1-C at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 04/26/2012 and analyzed on 04/27/2012.

Several analytes were detected in method blank MB 240-41806/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Job ID: 240-10547-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

6020. The samples were prepared on 04/26/2012 and analyzed on 04/27/2012.

Sodium was detected in method blank MB 240-41806/1-A at a level exceeding the reporting limit. Zinc was detected in method blank MB 240-41806/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Sodium failed the recovery criteria low for the MS/MSD of sample FWG-IDW-TANK 1-GWMS/MSD (240-10547-2) in batch 240-41991. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TCLP MERCURY

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 04/26/2012, prepared on 04/27/2012 and analyzed on 04/28/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

FLASHPOINT

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 05/01/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

TOTAL CYANIDE

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 04/26/2012.

Total Cyanide failed the recovery criteria low for the MSD of sample 240-10555-1 in batch 240-41804. Total Cyanide exceeded the rpd limit. Refer to the QC report for details.

No other difficulties were encountered during the cyanide analysis. All other quality control parameters were within the acceptance limits.

SULFIDE

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 04/25/2012.

Sulfide exceeded the rpd limit for the MSD of sample FWG-IDW-TANK 1-GWMSD (240-10547-2) in batch 240-41617. Refer to the QC report for details.

No other difficulties were encountered during the sulfide analysis. All other quality control parameters were within the acceptance limits.

PH

Sample FWG-IDW-TANK 1-GW (240-10547-2) was analyzed for pH in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 04/24/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

Method Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
8081A	Organochlorine Pesticides (GC)	SW846	TAL NC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
8151A	Herbicides (GC)	SW846	TAL NC
8330 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
8330/8330A	Nitroaromatics & Nitramines: Explosives (8330/A)	SW846	TAL WSC
6010B	Metals (ICP)	SW846	TAL NC
6020	Metals (ICP/MS)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC
1010	Ignitability, Pinsky-Martens Closed-Cup Method	SW846	TAL NC
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
9040B	pH	SW846	TAL NC
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-SOP = TAL-SOP

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396
TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-10547-1	FWG-IDW-TANK 1-TB	Water	04/24/12 11:30	04/24/12 14:35
240-10547-2	FWG-IDW-TANK 1-GW	Water	04/24/12 12:00	04/24/12 14:35



Detection Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-TB

Lab Sample ID: 240-10547-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.46	J	1.0	0.33	ug/L	1		8260B	Total/NA

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1.5	J	10	0.57	ug/L	1		8260B	Total/NA
Acetone	8.2	J	10	1.1	ug/L	1		8260B	Total/NA
Toluene	0.16	J	1.0	0.13	ug/L	1		8260B	Total/NA
Diethyl phthalate	1.0		1.0	0.62	ug/L	1		8270C	Total/NA
Arsenic	7.0	J	10	3.2	ug/L	1		6010B	Total Recoverable
Chromium	9.5		5.0	2.2	ug/L	1		6010B	Total Recoverable
Vanadium	25		7.0	0.64	ug/L	1		6010B	Total Recoverable
Barium	42	J B	200	0.67	ug/L	1		6010B	Total Recoverable
Calcium	53000	B	5000	130	ug/L	1		6010B	Total Recoverable
Magnesium	14000	B	5000	34	ug/L	1		6010B	Total Recoverable
Manganese	2.1	J B	15	0.41	ug/L	1		6010B	Total Recoverable
Nickel	5.2	J	40	3.2	ug/L	1		6010B	Total Recoverable
Potassium	25000	B	5000	72	ug/L	1		6010B	Total Recoverable
Arsenic	0.0071	J B	0.50	0.0032	mg/L	1		6010B	TCLP
Barium	0.037	J B	10	0.0067	mg/L	1		6010B	TCLP
Chromium	0.0039	J	0.50	0.0022	mg/L	1		6010B	TCLP
Lead	0.0022	J B	0.50	0.0019	mg/L	1		6010B	TCLP
Aluminum	64		50	19	ug/L	1		6020	Total Recoverable
Antimony	2.0		2.0	0.13	ug/L	1		6020	Total Recoverable
Iron	72	J	100	26	ug/L	1		6020	Total Recoverable
Sodium	100000	B	1000	6.9	ug/L	1		6020	Total Recoverable
Thallium	0.71	J	2.0	0.14	ug/L	1		6020	Total Recoverable
Flashpoint	>180		1.00	1.00	Degrees F	1		1010	Total/NA
pH	9.47		0.100	0.100	SU	1		9040B	Total/NA

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-TB

Lab Sample ID: 240-10547-1

Date Collected: 04/24/12 11:30

Matrix: Water

Date Received: 04/24/12 14:35

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			05/01/12 02:07	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/01/12 02:07	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			05/01/12 02:07	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			05/01/12 02:07	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/01/12 02:07	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			05/01/12 02:07	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			05/01/12 02:07	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			05/01/12 02:07	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			05/01/12 02:07	1
2-Hexanone	10	U *	10	0.41	ug/L			05/01/12 02:07	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.32	ug/L			05/01/12 02:07	1
Acetone	10	U	10	1.1	ug/L			05/01/12 02:07	1
Benzene	1.0	U	1.0	0.13	ug/L			05/01/12 02:07	1
Bromoform	1.0	U	1.0	0.64	ug/L			05/01/12 02:07	1
Bromomethane	1.0	U	1.0	0.41	ug/L			05/01/12 02:07	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			05/01/12 02:07	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			05/01/12 02:07	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			05/01/12 02:07	1
Chloromethane	1.0	U	1.0	0.30	ug/L			05/01/12 02:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			05/01/12 02:07	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			05/01/12 02:07	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			05/01/12 02:07	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			05/01/12 02:07	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			05/01/12 02:07	1
Methylene Chloride	0.46	J	1.0	0.33	ug/L			05/01/12 02:07	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			05/01/12 02:07	1
o-Xylene	1.0	U	1.0	0.14	ug/L			05/01/12 02:07	1
Styrene	1.0	U	1.0	0.11	ug/L			05/01/12 02:07	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			05/01/12 02:07	1
Toluene	1.0	U	1.0	0.13	ug/L			05/01/12 02:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/01/12 02:07	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			05/01/12 02:07	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			05/01/12 02:07	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			05/01/12 02:07	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			05/01/12 02:07	1
Chloroform	1.0	U	1.0	0.16	ug/L			05/01/12 02:07	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			05/01/12 02:07	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			05/01/12 02:07	1
Chloroethane	1.0	U	1.0	0.29	ug/L			05/01/12 02:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		74 - 115		05/01/12 02:07	1
1,2-Dichloroethane-d4 (Surr)	92		63 - 129		05/01/12 02:07	1
4-Bromofluorobenzene (Surr)	84		66 - 117		05/01/12 02:07	1
Dibromofluoromethane (Surr)	87		75 - 121		05/01/12 02:07	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

Date Collected: 04/24/12 12:00

Matrix: Water

Date Received: 04/24/12 14:35

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			05/01/12 02:31	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/01/12 02:31	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			05/01/12 02:31	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			05/01/12 02:31	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/01/12 02:31	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			05/01/12 02:31	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			05/01/12 02:31	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			05/01/12 02:31	1
2-Butanone (MEK)	1.5	J	10	0.57	ug/L			05/01/12 02:31	1
2-Hexanone	10	U *	10	0.41	ug/L			05/01/12 02:31	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.32	ug/L			05/01/12 02:31	1
Acetone	8.2	J	10	1.1	ug/L			05/01/12 02:31	1
Benzene	1.0	U	1.0	0.13	ug/L			05/01/12 02:31	1
Bromoform	1.0	U	1.0	0.64	ug/L			05/01/12 02:31	1
Bromomethane	1.0	U	1.0	0.41	ug/L			05/01/12 02:31	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			05/01/12 02:31	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			05/01/12 02:31	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			05/01/12 02:31	1
Chloromethane	1.0	U	1.0	0.30	ug/L			05/01/12 02:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			05/01/12 02:31	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			05/01/12 02:31	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			05/01/12 02:31	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			05/01/12 02:31	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			05/01/12 02:31	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			05/01/12 02:31	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			05/01/12 02:31	1
o-Xylene	1.0	U	1.0	0.14	ug/L			05/01/12 02:31	1
Styrene	1.0	U	1.0	0.11	ug/L			05/01/12 02:31	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			05/01/12 02:31	1
Toluene	0.16	J	1.0	0.13	ug/L			05/01/12 02:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/01/12 02:31	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			05/01/12 02:31	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			05/01/12 02:31	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			05/01/12 02:31	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			05/01/12 02:31	1
Chloroform	1.0	U	1.0	0.16	ug/L			05/01/12 02:31	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			05/01/12 02:31	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			05/01/12 02:31	1
Chloroethane	1.0	U	1.0	0.29	ug/L			05/01/12 02:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		74 - 115		05/01/12 02:31	1
1,2-Dichloroethane-d4 (Surr)	89		63 - 129		05/01/12 02:31	1
4-Bromofluorobenzene (Surr)	84		66 - 117		05/01/12 02:31	1
Dibromofluoromethane (Surr)	88		75 - 121		05/01/12 02:31	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			04/30/12 19:30	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			04/30/12 19:30	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			04/30/12 19:30	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

Date Collected: 04/24/12 12:00

Matrix: Water

Date Received: 04/24/12 14:35

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0.025	0.0065	mg/L			04/30/12 19:30	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			04/30/12 19:30	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			04/30/12 19:30	1
Chloroform	0.025	U	0.025	0.0080	mg/L			04/30/12 19:30	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			04/30/12 19:30	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			04/30/12 19:30	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			04/30/12 19:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 121		04/30/12 19:30	1
4-Bromofluorobenzene (Surr)	103		70 - 124		04/30/12 19:30	1
Toluene-d8 (Surr)	113		90 - 115		04/30/12 19:30	1
Dibromofluoromethane (Surr)	120		84 - 128		04/30/12 19:30	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Acenaphthylene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Anthracene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzo[a]anthracene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzoic acid	26	U	26	10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzo[b]fluoranthene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzo[k]fluoranthene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzyl alcohol	5.2	U	5.2	0.39	ug/L		04/25/12 08:09	04/27/12 16:47	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.33	ug/L		04/25/12 08:09	04/27/12 16:47	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
4-Bromophenyl phenyl ether	2.1	U	2.1	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Butyl benzyl phthalate	1.0	U	1.0	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,4-Dimethylphenol	2.1	U	2.1	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Dimethyl phthalate	1.0	U	1.0	0.30	ug/L		04/25/12 08:09	04/27/12 16:47	1
4,6-Dinitro-2-methylphenol	5.2	U	5.2	2.5	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,4-Dinitrophenol	5.2	U	5.2	2.5	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,4-Dinitrotoluene	5.2	U	5.2	0.28	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,6-Dinitrotoluene	5.2	U	5.2	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Fluoranthene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Fluorene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Hexachlorobenzene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Hexachlorobutadiene	1.0	U	1.0	0.28	ug/L		04/25/12 08:09	04/27/12 16:47	1
Hexachlorocyclopentadiene	10	U	10	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Hexachloroethane	1.0	U	1.0	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
N-Nitrosodiphenylamine	1.0	U	1.0	0.32	ug/L		04/25/12 08:09	04/27/12 16:47	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
1,4-Dichlorobenzene	1.0	U	1.0	0.35	ug/L		04/25/12 08:09	04/27/12 16:47	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
2-Chlorophenol	1.0	U	1.0	0.30	ug/L		04/25/12 08:09	04/27/12 16:47	1
4-Chlorophenyl phenyl ether	2.1	U	2.1	0.31	ug/L		04/25/12 08:09	04/27/12 16:47	1
Chrysene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Dibenz(a,h)anthracene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzo[g,h,i]perylene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Benzo[a]pyrene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

Date Collected: 04/24/12 12:00

Matrix: Water

Date Received: 04/24/12 14:35

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	1.0	U	1.0	0.69	ug/L		04/25/12 08:09	04/27/12 16:47	1
1,2-Dichlorobenzene	1.0	U	1.0	0.30	ug/L		04/25/12 08:09	04/27/12 16:47	1
1,3-Dichlorobenzene	1.0	U	1.0	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
3,3'-Dichlorobenzidine	5.2	U	5.2	0.38	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,4-Dichlorophenol	2.1	U	2.1	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Diethyl phthalate	1.0		1.0	0.62	ug/L		04/25/12 08:09	04/27/12 16:47	1
Indeno[1,2,3-cd]pyrene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Isophorone	1.0	U	1.0	0.28	ug/L		04/25/12 08:09	04/27/12 16:47	1
2-Methylnaphthalene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
2-Methylphenol	1.0	U	1.0	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Naphthalene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
2-Nitroaniline	2.1	U	2.1	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
3-Nitroaniline	2.1	U	2.1	0.29	ug/L		04/25/12 08:09	04/27/12 16:47	1
4-Nitroaniline	2.1	U	2.1	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Nitrobenzene	1.0	U	1.0	0.041	ug/L		04/25/12 08:09	04/27/12 16:47	1
2-Nitrophenol	2.1	U	2.1	0.29	ug/L		04/25/12 08:09	04/27/12 16:47	1
4-Nitrophenol	5.2	U	5.2	2.5	ug/L		04/25/12 08:09	04/27/12 16:47	1
Pyrene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
Pentachlorophenol	5.2	U	5.2	2.5	ug/L		04/25/12 08:09	04/27/12 16:47	1
Phenanthrene	0.21	U	0.21	0.10	ug/L		04/25/12 08:09	04/27/12 16:47	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.29	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,4,5-Trichlorophenol	5.2	U	5.2	0.31	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,4,6-Trichlorophenol	5.2	U	5.2	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Phenol	1.0	U	1.0	0.62	ug/L		04/25/12 08:09	04/27/12 16:47	1
Carbazole	1.0	U	1.0	0.29	ug/L		04/25/12 08:09	04/27/12 16:47	1
4-Chloroaniline	2.1	U	2.1	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
3 & 4 Methylphenol	2.1	U	2.1	0.77	ug/L		04/25/12 08:09	04/27/12 16:47	1
Bis(2-ethylhexyl) phthalate	2.1	U	2.1	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
Di-n-octyl phthalate	1.0	U	1.0	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
4-Chloro-3-methylphenol	2.1	U	2.1	0.82	ug/L		04/25/12 08:09	04/27/12 16:47	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.41	ug/L		04/25/12 08:09	04/27/12 16:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	59		28 - 110	04/25/12 08:09	04/27/12 16:47	1
2-Fluorophenol (Surr)	58		10 - 110	04/25/12 08:09	04/27/12 16:47	1
Nitrobenzene-d5 (Surr)	59		27 - 111	04/25/12 08:09	04/27/12 16:47	1
Terphenyl-d14 (Surr)	56		37 - 119	04/25/12 08:09	04/27/12 16:47	1
2,4,6-Tribromophenol (Surr)	71		22 - 120	04/25/12 08:09	04/27/12 16:47	1
Phenol-d5 (Surr)	63		10 - 110	04/25/12 08:09	04/27/12 16:47	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		04/27/12 13:11	05/02/12 16:53	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		04/27/12 13:11	05/02/12 16:53	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		04/27/12 13:11	05/02/12 16:53	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		04/27/12 13:11	05/02/12 16:53	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		04/27/12 13:11	05/02/12 16:53	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		04/27/12 13:11	05/02/12 16:53	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		04/27/12 13:11	05/02/12 16:53	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		04/27/12 13:11	05/02/12 16:53	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		04/27/12 13:11	05/02/12 16:53	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

Date Collected: 04/24/12 12:00

Matrix: Water

Date Received: 04/24/12 14:35

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		04/27/12 13:11	05/02/12 16:53	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		04/27/12 13:11	05/02/12 16:53	1
Pyridine	0.020	U	0.020	0.00035	mg/L		04/27/12 13:11	05/02/12 16:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	52		22 - 110				04/27/12 13:11	05/02/12 16:53	1
2-Fluorophenol (Surr)	45		10 - 110				04/27/12 13:11	05/02/12 16:53	1
2,4,6-Tribromophenol (Surr)	52		17 - 117				04/27/12 13:11	05/02/12 16:53	1
Nitrobenzene-d5 (Surr)	54		29 - 111				04/27/12 13:11	05/02/12 16:53	1
Phenol-d5 (Surr)	41		10 - 110				04/27/12 13:11	05/02/12 16:53	1
Terphenyl-d14 (Surr)	80		40 - 119				04/27/12 13:11	05/02/12 16:53	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.052	U	0.052	0.0099	ug/L		04/25/12 08:23	04/27/12 09:04	1
4,4'-DDE	0.052	U	0.052	0.010	ug/L		04/25/12 08:23	04/27/12 09:04	1
4,4'-DDT	0.052	U	0.052	0.016	ug/L		04/25/12 08:23	04/27/12 09:04	1
Aldrin	0.052	U	0.052	0.0085	ug/L		04/25/12 08:23	04/27/12 09:04	1
alpha-BHC	0.052	U	0.052	0.0072	ug/L		04/25/12 08:23	04/27/12 09:04	1
alpha-Chlordane	0.052	U	0.052	0.014	ug/L		04/25/12 08:23	04/27/12 09:04	1
beta-BHC	0.052	U	0.052	0.0087	ug/L		04/25/12 08:23	04/27/12 09:04	1
delta-BHC	0.052	U	0.052	0.0090	ug/L		04/25/12 08:23	04/27/12 09:04	1
Dieldrin	0.052	U	0.052	0.0077	ug/L		04/25/12 08:23	04/27/12 09:04	1
Endosulfan I	0.052	U	0.052	0.013	ug/L		04/25/12 08:23	04/27/12 09:04	1
Endosulfan II	0.052	U	0.052	0.012	ug/L		04/25/12 08:23	04/27/12 09:04	1
Endosulfan sulfate	0.052	U	0.052	0.011	ug/L		04/25/12 08:23	04/27/12 09:04	1
Endrin	0.052	U	0.052	0.011	ug/L		04/25/12 08:23	04/27/12 09:04	1
Endrin aldehyde	0.052	U	0.052	0.011	ug/L		04/25/12 08:23	04/27/12 09:04	1
Endrin ketone	0.052	U	0.052	0.0080	ug/L		04/25/12 08:23	04/27/12 09:04	1
gamma-BHC (Lindane)	0.052	U	0.052	0.0066	ug/L		04/25/12 08:23	04/27/12 09:04	1
gamma-Chlordane	0.052	U	0.052	0.012	ug/L		04/25/12 08:23	04/27/12 09:04	1
Heptachlor	0.052	U	0.052	0.0082	ug/L		04/25/12 08:23	04/27/12 09:04	1
Heptachlor epoxide	0.052	U	0.052	0.0073	ug/L		04/25/12 08:23	04/27/12 09:04	1
Methoxychlor	0.10	U	0.10	0.033	ug/L		04/25/12 08:23	04/27/12 09:04	1
Toxaphene	2.1	U	2.1	0.33	ug/L		04/25/12 08:23	04/27/12 09:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	9	X	10 - 145				04/25/12 08:23	04/27/12 09:04	1
DCB Decachlorobiphenyl	9	X	10 - 145				04/25/12 08:23	04/27/12 09:04	1
Tetrachloro-m-xylene	40		30 - 141				04/25/12 08:23	04/27/12 09:04	1
Tetrachloro-m-xylene	39		30 - 141				04/25/12 08:23	04/27/12 09:04	1

Method: 8081A - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		04/27/12 13:16	04/30/12 13:44	1
Endrin	0.0012	U *	0.0012	0.000026	mg/L		04/27/12 13:16	04/30/12 13:44	1
Heptachlor	0.0012	U *	0.0012	0.000019	mg/L		04/27/12 13:16	04/30/12 13:44	1
Heptachlor epoxide	0.0012	U *	0.0012	0.000017	mg/L		04/27/12 13:16	04/30/12 13:44	1
gamma-BHC (Lindane)	0.0012	U *	0.0012	0.000015	mg/L		04/27/12 13:16	04/30/12 13:44	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		04/27/12 13:16	04/30/12 13:44	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		04/27/12 13:16	04/30/12 13:44	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

Date Collected: 04/24/12 12:00

Matrix: Water

Date Received: 04/24/12 14:35

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		46 - 122	04/27/12 13:16	04/30/12 13:44	1
Tetrachloro-m-xylene	78		46 - 122	04/27/12 13:16	04/30/12 13:44	1
DCB Decachlorobiphenyl	47		34 - 141	04/27/12 13:16	04/30/12 13:44	1
DCB Decachlorobiphenyl	49		34 - 141	04/27/12 13:16	04/30/12 13:44	1

Method: 8081A - Organochlorine Pesticides (GC) - TCLP - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U H	0.012	0.000079	mg/L		05/04/12 06:43	05/04/12 20:08	1
Endrin	0.0012	U H	0.0012	0.000026	mg/L		05/04/12 06:43	05/04/12 20:08	1
Heptachlor	0.0012	U H	0.0012	0.000019	mg/L		05/04/12 06:43	05/04/12 20:08	1
Heptachlor epoxide	0.0012	U H	0.0012	0.000017	mg/L		05/04/12 06:43	05/04/12 20:08	1
gamma-BHC (Lindane)	0.0012	U H	0.0012	0.000015	mg/L		05/04/12 06:43	05/04/12 20:08	1
Methoxychlor	0.0024	U H	0.0024	0.000077	mg/L		05/04/12 06:43	05/04/12 20:08	1
Toxaphene	0.048	U H	0.048	0.00077	mg/L		05/04/12 06:43	05/04/12 20:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	63		46 - 122	05/04/12 06:43	05/04/12 20:08	1
Tetrachloro-m-xylene	65		46 - 122	05/04/12 06:43	05/04/12 20:08	1
DCB Decachlorobiphenyl	52		34 - 141	05/04/12 06:43	05/04/12 20:08	1
DCB Decachlorobiphenyl	50		34 - 141	05/04/12 06:43	05/04/12 20:08	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.52	U	0.52	0.18	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1221	0.52	U	0.52	0.13	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1232	0.52	U	0.52	0.16	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1242	0.52	U	0.52	0.23	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1248	0.52	U	0.52	0.10	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1254	0.52	U	0.52	0.16	ug/L		04/25/12 08:21	04/27/12 00:42	1
Aroclor-1260	0.52	U	0.52	0.18	ug/L		04/25/12 08:21	04/27/12 00:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	38		23 - 136	04/25/12 08:21	04/27/12 00:42	1
DCB Decachlorobiphenyl	11		10 - 130	04/25/12 08:21	04/27/12 00:42	1

Method: 8151A - Herbicides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		04/27/12 13:08	04/28/12 14:53	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		04/27/12 13:08	04/28/12 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	63		37 - 116	04/27/12 13:08	04/28/12 14:53	1
2,4-Dichlorophenylacetic acid	62		37 - 116	04/27/12 13:08	04/28/12 14:53	1

Method: 8330 (Modified) - Organic Compounds by UV/HPLC - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	20	U	20	2.4	ug/L		05/07/12 14:00	05/08/12 16:11	1

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroglycerin	0.66	U	0.66	0.34	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
PETN	0.66	U	0.66	0.31	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
2-Amino-4,6-dinitrotoluene	0.20	U	0.20	0.017	ug/L		05/01/12 09:00	05/10/12 15:48	1.02

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

Date Collected: 04/24/12 12:00

Matrix: Water

Date Received: 04/24/12 14:35

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
1,3-Dinitrobenzene	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
2,4-Dinitrotoluene	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
2,6-Dinitrotoluene	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
HMX	0.10	U	0.10	0.037	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
Nitrobenzene	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
2-Nitrotoluene	0.51	U	0.51	0.090	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
3-Nitrotoluene	0.51	U	0.51	0.058	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
4-Nitrotoluene	0.66	U	0.66	0.090	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
RDX	0.10	U	0.10	0.037	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
Tetryl	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
1,3,5-Trinitrobenzene	0.10	U	0.10	0.031	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
2,4,6-Trinitrotoluene	0.10	U	0.10	0.051	ug/L		05/01/12 09:00	05/10/12 15:48	1.02
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	101		79 - 111				05/01/12 09:00	05/10/12 15:48	1.02

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.0	J	10	3.2	ug/L		04/26/12 17:08	04/27/12 10:46	1
Chromium	9.5		5.0	2.2	ug/L		04/26/12 17:08	04/27/12 10:46	1
Cobalt	7.0	U	7.0	1.7	ug/L		04/26/12 17:08	04/27/12 10:46	1
Lead	3.0	U	3.0	1.9	ug/L		04/26/12 17:08	04/27/12 10:46	1
Selenium	5.0	U	5.0	4.1	ug/L		04/26/12 17:08	04/27/12 10:46	1
Silver	5.0	U	5.0	2.2	ug/L		04/26/12 17:08	04/27/12 10:46	1
Vanadium	25		7.0	0.64	ug/L		04/26/12 17:08	04/27/12 10:46	1
Barium	42	J B	200	0.67	ug/L		04/26/12 17:08	04/27/12 10:46	1
Calcium	53000	B	5000	130	ug/L		04/26/12 17:08	04/27/12 10:46	1
Copper	25	U	25	4.5	ug/L		04/26/12 17:08	04/27/12 10:46	1
Magnesium	14000	B	5000	34	ug/L		04/26/12 17:08	04/27/12 10:46	1
Manganese	2.1	J B	15	0.41	ug/L		04/26/12 17:08	04/27/12 10:46	1
Nickel	5.2	J	40	3.2	ug/L		04/26/12 17:08	04/27/12 10:46	1
Potassium	25000	B	5000	72	ug/L		04/26/12 17:08	04/27/12 10:46	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0071	J B	0.50	0.0032	mg/L		04/27/12 12:55	04/28/12 15:44	1
Barium	0.037	J B	10	0.00067	mg/L		04/27/12 12:55	04/28/12 15:44	1
Cadmium	0.10	U	0.10	0.00066	mg/L		04/27/12 12:55	04/28/12 15:44	1
Chromium	0.0039	J	0.50	0.0022	mg/L		04/27/12 12:55	04/28/12 15:44	1
Lead	0.0022	J B	0.50	0.0019	mg/L		04/27/12 12:55	04/28/12 15:44	1
Selenium	0.25	U	0.25	0.0041	mg/L		04/27/12 12:55	04/28/12 15:44	1
Silver	0.50	U	0.50	0.0022	mg/L		04/27/12 12:55	04/28/12 15:44	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	64		50	19	ug/L		04/26/12 17:08	04/27/12 20:15	1
Antimony	2.0		2.0	0.13	ug/L		04/26/12 17:08	04/27/12 20:15	1
Beryllium	1.0	U	1.0	0.20	ug/L		04/26/12 17:08	04/27/12 20:15	1
Cadmium	1.0	U	1.0	0.13	ug/L		04/26/12 17:08	04/27/12 20:15	1
Iron	72	J	100	26	ug/L		04/26/12 17:08	04/27/12 20:15	1
Sodium	100000	B	1000	6.9	ug/L		04/26/12 17:08	04/27/12 20:15	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

Date Collected: 04/24/12 12:00

Matrix: Water

Date Received: 04/24/12 14:35

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.71	J	2.0	0.14	ug/L		04/26/12 17:08	04/27/12 20:15	1
Zinc	20	U	20	2.3	ug/L		04/26/12 17:08	04/27/12 20:15	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.12	ug/L		04/27/12 16:25	04/28/12 10:40	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		04/27/12 16:25	04/28/12 11:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>180		1.00	1.00	Degrees F			05/01/12 09:28	1
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		04/26/12 10:40	04/26/12 17:01	1
Sulfide	3.0	U	3.0	0.94	mg/L		04/25/12 10:02	04/25/12 14:51	1
pH	9.47		0.100	0.100	SU			04/24/12 17:04	1
Nitrocellulose	2.0	U	2.0	0.48	mg/L		05/11/12 05:00	05/15/12 14:33	1

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Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)							
		TOL (74-115)	12DCE (63-129)	BFB (66-117)	DBFM (75-121)	DBFM (75-121)	BFB (70-124)	DBFM (75-121)	DBFM (84-128)
240-10547-1	FWG-IDW-TANK 1-TB	89	92	84	87	87		87	
240-10547-2	FWG-IDW-TANK 1-GW	90	89	84	88	88		88	
LCS 240-42231/5	Lab Control Sample	94	89	90	90	90		90	
MB 240-42231/4	Method Blank	91	90	82	90	90		90	

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	TOL (90-115)	BFB (70-124)	DBFM (84-128)
LCS 240-42229/5	Lab Control Sample	115	112	101	121

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (90-115)	DBFM (84-128)
240-10547-2	FWG-IDW-TANK 1-GW	107	103	113	120
LB 240-41793/1-A MB	Method Blank	108	100	110	115

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (28-110)	2FP (10-110)	NBZ (27-111)	TPH (37-119)	TBP (22-120)	PHL (10-110)
240-10547-2	FWG-IDW-TANK 1-GW	59	58	59	56	71	63
LCS 240-41464/16-A	Lab Control Sample	72	83	78	79	76	86
MB 240-41464/15-A	Method Blank	69	80	77	85	65	79

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
PHL = Phenol-d5 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (10-110)	PHL (10-110)	FBP (22-110)	TBP (17-117)	NBZ (29-111)	TPH (40-119)
LCS 240-41946/5-A	Lab Control Sample	64	54	68	85	67	89
MB 240-41946/4-A	Method Blank	71	62	74	84	74	99

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
FBP = 2-Fluorobiphenyl (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
240-10547-2	FWG-IDW-TANK 1-GW	52	45	52	54	41	80

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (10-145)	DCB2 (10-145)	TCX1 (30-141)	TCX2 (30-141)
240-10547-2	FWG-IDW-TANK 1-GW	9 X	9 X	40	39
LCS 240-41473/3-A	Lab Control Sample	34	30	82	80
MB 240-41473/2-A	Method Blank	85	84	88	81

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (34-141)	DCB2 (34-141)	TCX1 (46-122)	TCX2 (46-122)
LCS 240-41948/4-A	Lab Control Sample	106	97	127 X	86
LCS 240-42735/3-A	Lab Control Sample	117	103	82	88
MB 240-41948/3-A	Method Blank	91	94	81	85
MB 240-42735/2-A	Method Blank	97	99	76	81

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (46-122)	TCX2 (46-122)	DCB1 (34-141)	DCB2 (34-141)
240-10547-2	FWG-IDW-TANK 1-GW	75	78	47	49
240-10547-2 - RE	FWG-IDW-TANK 1-GW	63	65	52	50
240-10547-2 MS	FWG-IDW-TANK 1-GW	171	82	65	57

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX2 (23-136)	DCB2 (10-130)
240-10547-2	FWG-IDW-TANK 1-GW	38	11
LCS 240-41471/3-A	Lab Control Sample	73	82
MB 240-41471/2-A	Method Blank	74	84

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCPA1 (37-116)	DCPA2 (37-116)
LCS 240-41945/6-A	Lab Control Sample	72	71
MB 240-41945/5-A	Method Blank	67	68

Surrogate Legend
DCPA = 2,4-Dichlorophenylacetic acid

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCPA1 (37-116)	DCPA2 (37-116)
240-10547-2	FWG-IDW-TANK 1-GW	63	62

Surrogate Legend
DCPA = 2,4-Dichlorophenylacetic acid

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Matrix: Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DNT (79-111)
240-10547-2	FWG-IDW-TANK 1-GW	101
G2E01000063B	Method Blank	100
G2E01000063C	Lab Control Sample	101

Surrogate Legend
DNT = 3,4-Dinitrotoluene

9

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 240-42229/5

Matrix: Water

Analysis Batch: 42229

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1-Dichloroethene	1.00	1.19		mg/L		119	71 - 133
1,2-Dichloroethene	1.00	1.03		mg/L		103	81 - 114
2-Butanone (MEK)	2.00	2.37		mg/L		118	49 - 120
Benzene	1.00	1.00		mg/L		100	84 - 120
Carbon tetrachloride	1.00	1.19		mg/L		119	54 - 122
Chlorobenzene	1.00	0.985		mg/L		99	86 - 111
Tetrachloroethene	1.00	0.940		mg/L		94	79 - 134
Trichloroethene	1.00	1.07		mg/L		107	78 - 130
Vinyl chloride	1.00	1.05		mg/L		105	56 - 111
Chloroform	1.00	1.01		mg/L		101	87 - 123

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	115		80 - 121
Toluene-d8 (Surr)	112		90 - 115
4-Bromofluorobenzene (Surr)	101		70 - 124
Dibromofluoromethane (Surr)	121		84 - 128

Lab Sample ID: MB 240-42231/4

Matrix: Water

Analysis Batch: 42231

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			04/30/12 18:56	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			04/30/12 18:56	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			04/30/12 18:56	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			04/30/12 18:56	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/30/12 18:56	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			04/30/12 18:56	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			04/30/12 18:56	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			04/30/12 18:56	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			04/30/12 18:56	1
2-Hexanone	10	U	10	0.41	ug/L			04/30/12 18:56	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			04/30/12 18:56	1
Acetone	10	U	10	1.1	ug/L			04/30/12 18:56	1
Benzene	1.0	U	1.0	0.13	ug/L			04/30/12 18:56	1
Bromoform	1.0	U	1.0	0.64	ug/L			04/30/12 18:56	1
Bromomethane	1.0	U	1.0	0.41	ug/L			04/30/12 18:56	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			04/30/12 18:56	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			04/30/12 18:56	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			04/30/12 18:56	1
Chloromethane	1.0	U	1.0	0.30	ug/L			04/30/12 18:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			04/30/12 18:56	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			04/30/12 18:56	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			04/30/12 18:56	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			04/30/12 18:56	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			04/30/12 18:56	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			04/30/12 18:56	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			04/30/12 18:56	1
o-Xylene	1.0	U	1.0	0.14	ug/L			04/30/12 18:56	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-42231/4

Matrix: Water

Analysis Batch: 42231

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Styrene	1.0	U	1.0	0.11	ug/L			04/30/12 18:56	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			04/30/12 18:56	1
Toluene	1.0	U	1.0	0.13	ug/L			04/30/12 18:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			04/30/12 18:56	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			04/30/12 18:56	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			04/30/12 18:56	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			04/30/12 18:56	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			04/30/12 18:56	1
Chloroform	1.0	U	1.0	0.16	ug/L			04/30/12 18:56	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			04/30/12 18:56	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			04/30/12 18:56	1
Chloroethane	1.0	U	1.0	0.29	ug/L			04/30/12 18:56	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	90		63 - 129		04/30/12 18:56	1
Toluene-d8 (Surr)	91		74 - 115		04/30/12 18:56	1
4-Bromofluorobenzene (Surr)	82		66 - 117		04/30/12 18:56	1
Dibromofluoromethane (Surr)	90		75 - 121		04/30/12 18:56	1
Dibromofluoromethane (Surr)	90		75 - 121		04/30/12 18:56	1

Lab Sample ID: LCS 240-42231/5

Matrix: Water

Analysis Batch: 42231

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	20.0	23.0		ug/L		115	68 - 118
1,1,2-Trichloroethane	20.0	21.1		ug/L		106	80 - 112
1,1-Dichloroethane	20.0	20.6		ug/L		103	82 - 115
1,1-Dichloroethene	20.0	21.2		ug/L		106	78 - 131
1,2-Dichloroethane	20.0	20.1		ug/L		101	71 - 127
1,2-Dichloroethene, Total	40.0	40.5		ug/L		101	82 - 114
1,2-Dichloropropane	20.0	21.2		ug/L		106	81 - 115
2-Butanone (MEK)	40.0	46.4		ug/L		116	60 - 126
2-Hexanone	40.0	57.0 *		ug/L		143	55 - 133
4-Methyl-2-pentanone (MIBK)	40.0	51.5 *		ug/L		129	63 - 128
Acetone	40.0	49.5		ug/L		124	43 - 136
Benzene	20.0	20.9		ug/L		105	83 - 112
Bromoform	20.0	15.1		ug/L		76	40 - 131
Bromomethane	20.0	18.3		ug/L		92	11 - 185
Carbon disulfide	20.0	20.8		ug/L		104	62 - 142
Carbon tetrachloride	20.0	22.6		ug/L		113	66 - 128
Chlorobenzene	20.0	18.7		ug/L		94	85 - 110
Chloromethane	20.0	19.2		ug/L		96	44 - 126
cis-1,2-Dichloroethene	20.0	19.8		ug/L		99	80 - 113
cis-1,3-Dichloropropene	20.0	19.0		ug/L		95	61 - 115
Dibromochloromethane	20.0	17.6		ug/L		88	64 - 119
Bromodichloromethane	20.0	20.1		ug/L		101	72 - 121
Ethylbenzene	20.0	18.6		ug/L		93	83 - 112

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-42231/5

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 42231

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	20.0	19.3		ug/L		97	66 - 131
m-Xylene & p-Xylene	40.0	38.3		ug/L		96	83 - 113
o-Xylene	20.0	18.7		ug/L		94	83 - 113
Styrene	20.0	20.1		ug/L		101	79 - 114
Tetrachloroethene	20.0	18.9		ug/L		95	79 - 114
Toluene	20.0	19.7		ug/L		99	84 - 111
trans-1,2-Dichloroethene	20.0	20.7		ug/L		104	83 - 117
trans-1,3-Dichloropropene	20.0	19.2		ug/L		96	58 - 117
Trichloroethene	20.0	19.9		ug/L		100	76 - 117
Vinyl chloride	20.0	18.8		ug/L		94	53 - 127
Xylenes, Total	60.0	57.0		ug/L		95	83 - 112
Chloroform	20.0	18.7		ug/L		94	79 - 117
Bromochloromethane	20.0	20.9		ug/L		105	77 - 120
1,2-Dibromoethane	20.0	20.6		ug/L		103	79 - 113
Chloroethane	20.0	20.7		ug/L		104	25 - 153

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	89		63 - 129
Toluene-d8 (Surr)	94		74 - 115
4-Bromofluorobenzene (Surr)	90		66 - 117
Dibromofluoromethane (Surr)	90		75 - 121

Lab Sample ID: LB 240-41793/1-A MB

Client Sample ID: Method Blank

Matrix: Water

Prep Type: TCLP

Analysis Batch: 42229

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			04/30/12 18:28	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			04/30/12 18:28	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			04/30/12 18:28	1
Benzene	0.025	U	0.025	0.0065	mg/L			04/30/12 18:28	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			04/30/12 18:28	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			04/30/12 18:28	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			04/30/12 18:28	1
Trichloroethene	0.025	U	0.025	0.0065	mg/L			04/30/12 18:28	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			04/30/12 18:28	1
Chloroform	0.025	U	0.025	0.0080	mg/L			04/30/12 18:28	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	108		80 - 121		04/30/12 18:28	1
Toluene-d8 (Surr)	110		90 - 115		04/30/12 18:28	1
4-Bromofluorobenzene (Surr)	100		70 - 124		04/30/12 18:28	1
Dibromofluoromethane (Surr)	115		84 - 128		04/30/12 18:28	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-41464/15-A

Matrix: Water

Analysis Batch: 41841

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41464

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Acenaphthylene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Anthracene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzo[a]anthracene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzoic acid	25	U	25	10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		04/25/12 08:09	04/27/12 10:43	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		04/25/12 08:09	04/27/12 10:43	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Butyl benzyl phthalate	1.0	U	1.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4-Dimethylphenol	2.0	U	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		04/25/12 08:09	04/27/12 10:43	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Fluoranthene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Fluorene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Hexachlorobutadiene	1.0	U	1.0	0.27	ug/L		04/25/12 08:09	04/27/12 10:43	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
N-Nitrosodiphenylamine	1.0	U	1.0	0.31	ug/L		04/25/12 08:09	04/27/12 10:43	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		04/25/12 08:09	04/27/12 10:43	1
Chrysene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzo[g,h,i]perylene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Benzo[a]pyrene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Di-n-butyl phthalate	1.0	U	1.0	0.67	ug/L		04/25/12 08:09	04/27/12 10:43	1
1,2-Dichlorobenzene	1.0	U	1.0	0.29	ug/L		04/25/12 08:09	04/27/12 10:43	1
1,3-Dichlorobenzene	1.0	U	1.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4-Dichlorophenol	2.0	U	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		04/25/12 08:09	04/27/12 10:43	1
Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Isophorone	1.0	U	1.0	0.27	ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Naphthalene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-41464/15-A
Matrix: Water
Analysis Batch: 41841

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41464

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitrobenzene	1.0	U	1.0	0.040	ug/L		04/25/12 08:09	04/27/12 10:43	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		04/25/12 08:09	04/27/12 10:43	1
Pyrene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		04/25/12 08:09	04/27/12 10:43	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		04/25/12 08:09	04/27/12 10:43	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,4,6-Trichlorophenol	5.0	U	5.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Phenol	1.0	U	1.0	0.60	ug/L		04/25/12 08:09	04/27/12 10:43	1
Carbazole	1.0	U	1.0	0.28	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Chloroaniline	2.0	U	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		04/25/12 08:09	04/27/12 10:43	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		04/25/12 08:09	04/27/12 10:43	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		04/25/12 08:09	04/27/12 10:43	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	69		28 - 110	04/25/12 08:09	04/27/12 10:43	1
2-Fluorophenol (Surr)	80		10 - 110	04/25/12 08:09	04/27/12 10:43	1
2,4,6-Tribromophenol (Surr)	65		22 - 120	04/25/12 08:09	04/27/12 10:43	1
Nitrobenzene-d5 (Surr)	77		27 - 111	04/25/12 08:09	04/27/12 10:43	1
Phenol-d5 (Surr)	79		10 - 110	04/25/12 08:09	04/27/12 10:43	1
Terphenyl-d14 (Surr)	85		37 - 119	04/25/12 08:09	04/27/12 10:43	1

Lab Sample ID: LCS 240-41464/16-A
Matrix: Water
Analysis Batch: 41841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41464

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Acenaphthene	20.0	14.0		ug/L		70	40 - 110
Acenaphthylene	20.0	14.9		ug/L		75	43 - 110
Anthracene	20.0	14.5		ug/L		72	54 - 114
Benzo[a]anthracene	20.0	13.9		ug/L		70	55 - 115
Benzoic acid	40.0	19.6	J	ug/L		49	10 - 129
Benzo[b]fluoranthene	20.0	14.9		ug/L		75	43 - 122
Benzo[k]fluoranthene	20.0	14.1		ug/L		70	43 - 124
Benzyl alcohol	20.0	16.3		ug/L		82	10 - 130
Bis(2-chloroethoxy)methane	20.0	16.7		ug/L		84	39 - 110
Bis(2-chloroethyl)ether	20.0	17.4		ug/L		87	34 - 113
4-Bromophenyl phenyl ether	20.0	15.6		ug/L		78	51 - 114
Butyl benzyl phthalate	20.0	15.9		ug/L		79	53 - 126
2,4-Dimethylphenol	20.0	12.9		ug/L		64	12 - 110
Dimethyl phthalate	20.0	15.9		ug/L		79	15 - 143
4,6-Dinitro-2-methylphenol	20.0	13.7		ug/L		69	28 - 112
2,4-Dinitrophenol	40.0	24.8		ug/L		62	17 - 112
2,4-Dinitrotoluene	20.0	16.9		ug/L		85	52 - 123
2,6-Dinitrotoluene	20.0	16.4		ug/L		82	52 - 119

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-41464/16-A
Matrix: Water
Analysis Batch: 41841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41464

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Fluoranthene	20.0	15.1		ug/L		75	54 - 122	
Fluorene	20.0	15.1		ug/L		75	47 - 112	
Hexachlorobenzene	20.0	14.5		ug/L		73	51 - 112	
Hexachlorobutadiene	20.0	13.5		ug/L		67	13 - 110	
Hexachlorocyclopentadiene	20.0	7.62	J	ug/L		38	10 - 110	
Hexachloroethane	20.0	14.6		ug/L		73	12 - 110	
N-Nitrosodiphenylamine	20.0	14.2		ug/L		71	53 - 113	
N-Nitrosodi-n-propylamine	20.0	18.5		ug/L		93	37 - 121	
1,4-Dichlorobenzene	20.0	14.6		ug/L		73	19 - 110	
2-Chloronaphthalene	20.0	14.8		ug/L		74	39 - 110	
2-Chlorophenol	20.0	16.6		ug/L		83	27 - 110	
4-Chlorophenyl phenyl ether	20.0	15.5		ug/L		77	50 - 115	
Chrysene	20.0	14.7		ug/L		73	55 - 115	
Dibenz(a,h)anthracene	20.0	15.1		ug/L		75	46 - 122	
Dibenzofuran	20.0	14.5		ug/L		72	46 - 111	
Benzo[g,h,i]perylene	20.0	15.1		ug/L		76	45 - 120	
Benzo[a]pyrene	20.0	12.7		ug/L		64	43 - 116	
Di-n-butyl phthalate	20.0	16.4		ug/L		82	55 - 122	
1,2-Dichlorobenzene	20.0	15.1		ug/L		76	23 - 110	
1,3-Dichlorobenzene	20.0	14.5		ug/L		72	19 - 110	
3,3'-Dichlorobenzidine	20.0	8.92		ug/L		45	19 - 110	
2,4-Dichlorophenol	20.0	15.4		ug/L		77	33 - 110	
Diethyl phthalate	20.0	16.0		ug/L		80	33 - 134	
Indeno[1,2,3-cd]pyrene	20.0	14.8		ug/L		74	46 - 121	
Isophorone	20.0	16.2		ug/L		81	44 - 128	
2-Methylnaphthalene	20.0	14.4		ug/L		72	35 - 110	
2-Methylphenol	20.0	16.6		ug/L		83	30 - 110	
Naphthalene	20.0	14.8		ug/L		74	31 - 110	
2-Nitroaniline	20.0	16.6		ug/L		83	43 - 130	
3-Nitroaniline	20.0	14.9		ug/L		74	45 - 116	
4-Nitroaniline	20.0	15.1		ug/L		76	45 - 120	
Nitrobenzene	20.0	16.4		ug/L		82	37 - 115	
2-Nitrophenol	20.0	15.5		ug/L		78	29 - 110	
4-Nitrophenol	20.0	14.6		ug/L		73	12 - 130	
Pyrene	20.0	14.2		ug/L		71	55 - 120	
Pentachlorophenol	40.0	25.2		ug/L		63	26 - 110	
Phenanthrene	20.0	14.5		ug/L		72	52 - 114	
1,2,4-Trichlorobenzene	20.0	13.6		ug/L		68	25 - 110	
2,4,5-Trichlorophenol	20.0	15.3		ug/L		76	39 - 110	
2,4,6-Trichlorophenol	20.0	14.7		ug/L		73	35 - 110	
Phenol	20.0	17.3		ug/L		87	14 - 112	
Carbazole	20.0	15.1		ug/L		76	53 - 120	
4-Chloroaniline	20.0	14.3		ug/L		72	10 - 110	
3 & 4 Methylphenol	40.0	35.0		ug/L		88	32 - 110	
Bis(2-ethylhexyl) phthalate	20.0	13.1		ug/L		66	36 - 163	
Di-n-octyl phthalate	20.0	13.5		ug/L		67	44 - 128	
4-Chloro-3-methylphenol	20.0	16.2		ug/L		81	39 - 110	
2,2'-oxybis[1-chloropropane]	20.0	18.1		ug/L		90	25 - 128	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-41464/16-A
Matrix: Water
Analysis Batch: 41841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41464

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	72		28 - 110
2-Fluorophenol (Surr)	83		10 - 110
2,4,6-Tribromophenol (Surr)	76		22 - 120
Nitrobenzene-d5 (Surr)	78		27 - 111
Phenol-d5 (Surr)	86		10 - 110
Terphenyl-d14 (Surr)	79		37 - 119

Lab Sample ID: MB 240-41946/4-A
Matrix: Water
Analysis Batch: 42450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41946

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Pyridine	0.020	U	0.020	0.00035	mg/L		04/27/12 13:11	05/02/12 13:18	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		04/27/12 13:11	05/02/12 13:18	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		04/27/12 13:11	05/02/12 13:18	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		04/27/12 13:11	05/02/12 13:18	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		04/27/12 13:11	05/02/12 13:18	1
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		04/27/12 13:11	05/02/12 13:18	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		04/27/12 13:11	05/02/12 13:18	1
Nitrobenzene	0.0040	U	0.0040	0.00040	mg/L		04/27/12 13:11	05/02/12 13:18	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		04/27/12 13:11	05/02/12 13:18	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		04/27/12 13:11	05/02/12 13:18	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		04/27/12 13:11	05/02/12 13:18	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		04/27/12 13:11	05/02/12 13:18	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	74		22 - 110	04/27/12 13:11	05/02/12 13:18	1
2-Fluorophenol (Surr)	71		10 - 110	04/27/12 13:11	05/02/12 13:18	1
2,4,6-Tribromophenol (Surr)	84		17 - 117	04/27/12 13:11	05/02/12 13:18	1
Nitrobenzene-d5 (Surr)	74		29 - 111	04/27/12 13:11	05/02/12 13:18	1
Phenol-d5 (Surr)	62		10 - 110	04/27/12 13:11	05/02/12 13:18	1
Terphenyl-d14 (Surr)	99		40 - 119	04/27/12 13:11	05/02/12 13:18	1

Lab Sample ID: LCS 240-41946/5-A
Matrix: Water
Analysis Batch: 42450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41946

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Pyridine	0.0800	0.0480		mg/L		60	10 - 110
2,4-Dinitrotoluene	0.0800	0.0686		mg/L		86	45 - 126
Hexachlorobenzene	0.0800	0.0667		mg/L		83	47 - 116
Hexachlorobutadiene	0.0800	0.0546		mg/L		68	10 - 110
Hexachloroethane	0.0800	0.0502		mg/L		63	10 - 110
1,4-Dichlorobenzene	0.0800	0.0529		mg/L		66	16 - 110
2-Methylphenol	0.0800	0.0545		mg/L		68	24 - 110
Nitrobenzene	0.0800	0.0568		mg/L		71	35 - 117
Pentachlorophenol	0.0800	0.0522		mg/L		65	12 - 110
2,4,5-Trichlorophenol	0.0800	0.0610		mg/L		76	35 - 111
2,4,6-Trichlorophenol	0.0800	0.0563		mg/L		70	32 - 110

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-41946/5-A

Matrix: Water

Analysis Batch: 42450

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41946

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3 & 4 Methylphenol	0.160	0.114		mg/L		72	27 - 110

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	68		22 - 110
2-Fluorophenol (Surr)	64		10 - 110
2,4,6-Tribromophenol (Surr)	85		17 - 117
Nitrobenzene-d5 (Surr)	67		29 - 111
Phenol-d5 (Surr)	54		10 - 110
Terphenyl-d14 (Surr)	89		40 - 119

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-41473/2-A

Matrix: Water

Analysis Batch: 41756

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41473

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4,4'-DDD	0.050	U	0.050	0.0096	ug/L		04/25/12 08:23	04/27/12 09:28	1
4,4'-DDE	0.050	U	0.050	0.0097	ug/L		04/25/12 08:23	04/27/12 09:28	1
4,4'-DDT	0.050	U	0.050	0.016	ug/L		04/25/12 08:23	04/27/12 09:28	1
Aldrin	0.050	U	0.050	0.0082	ug/L		04/25/12 08:23	04/27/12 09:28	1
alpha-BHC	0.050	U	0.050	0.0070	ug/L		04/25/12 08:23	04/27/12 09:28	1
alpha-Chlordane	0.050	U	0.050	0.014	ug/L		04/25/12 08:23	04/27/12 09:28	1
beta-BHC	0.050	U	0.050	0.0084	ug/L		04/25/12 08:23	04/27/12 09:28	1
delta-BHC	0.050	U	0.050	0.0087	ug/L		04/25/12 08:23	04/27/12 09:28	1
Dieldrin	0.050	U	0.050	0.0075	ug/L		04/25/12 08:23	04/27/12 09:28	1
Endosulfan I	0.050	U	0.050	0.013	ug/L		04/25/12 08:23	04/27/12 09:28	1
Endosulfan II	0.050	U	0.050	0.012	ug/L		04/25/12 08:23	04/27/12 09:28	1
Endosulfan sulfate	0.050	U	0.050	0.011	ug/L		04/25/12 08:23	04/27/12 09:28	1
Endrin	0.050	U	0.050	0.011	ug/L		04/25/12 08:23	04/27/12 09:28	1
Endrin aldehyde	0.050	U	0.050	0.011	ug/L		04/25/12 08:23	04/27/12 09:28	1
Endrin ketone	0.050	U	0.050	0.0078	ug/L		04/25/12 08:23	04/27/12 09:28	1
gamma-BHC (Lindane)	0.050	U	0.050	0.0064	ug/L		04/25/12 08:23	04/27/12 09:28	1
gamma-Chlordane	0.050	U	0.050	0.012	ug/L		04/25/12 08:23	04/27/12 09:28	1
Heptachlor	0.050	U	0.050	0.0080	ug/L		04/25/12 08:23	04/27/12 09:28	1
Heptachlor epoxide	0.050	U	0.050	0.0071	ug/L		04/25/12 08:23	04/27/12 09:28	1
Methoxychlor	0.10	U	0.10	0.032	ug/L		04/25/12 08:23	04/27/12 09:28	1
Toxaphene	2.0	U	2.0	0.32	ug/L		04/25/12 08:23	04/27/12 09:28	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	85		10 - 145	04/25/12 08:23	04/27/12 09:28	1
DCB Decachlorobiphenyl	84		10 - 145	04/25/12 08:23	04/27/12 09:28	1
Tetrachloro-m-xylene	88		30 - 141	04/25/12 08:23	04/27/12 09:28	1
Tetrachloro-m-xylene	81		30 - 141	04/25/12 08:23	04/27/12 09:28	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 240-41473/3-A

Matrix: Water

Analysis Batch: 41756

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41473

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.500	0.526		ug/L		105	53 - 168
4,4'-DDE	0.500	0.461		ug/L		92	66 - 136
4,4'-DDT	0.500	0.590		ug/L		118	42 - 140
Aldrin	0.500	0.447		ug/L		89	61 - 127
alpha-BHC	0.500	0.486		ug/L		97	65 - 132
alpha-Chlordane	0.500	0.452		ug/L		90	60 - 134
beta-BHC	0.500	0.494		ug/L		99	59 - 134
delta-BHC	0.500	0.480		ug/L		96	45 - 143
Dieldrin	0.500	0.481		ug/L		96	61 - 142
Endosulfan I	0.500	0.347		ug/L		69	35 - 110
Endosulfan II	0.500	0.379		ug/L		76	39 - 110
Endosulfan sulfate	0.500	0.482		ug/L		96	54 - 143
Endrin	0.500	0.487		ug/L		97	57 - 148
Endrin aldehyde	0.500	0.476		ug/L		95	44 - 116
Endrin ketone	0.500	0.472		ug/L		94	52 - 135
gamma-BHC (Lindane)	0.500	0.506		ug/L		101	58 - 140
gamma-Chlordane	0.500	0.477		ug/L		95	59 - 139
Heptachlor	0.500	0.519		ug/L		104	60 - 132
Heptachlor epoxide	0.500	0.469		ug/L		94	60 - 138
Methoxychlor	0.500	0.616		ug/L		123	45 - 139

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	34		10 - 145
DCB Decachlorobiphenyl	30		10 - 145
Tetrachloro-m-xylene	82		30 - 141
Tetrachloro-m-xylene	80		30 - 141

Lab Sample ID: MB 240-41948/3-A

Matrix: Water

Analysis Batch: 42028

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		04/27/12 13:16	04/30/12 13:20	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		04/27/12 13:16	04/30/12 13:20	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		04/27/12 13:16	04/30/12 13:20	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		04/27/12 13:16	04/30/12 13:20	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		04/27/12 13:16	04/30/12 13:20	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		04/27/12 13:16	04/30/12 13:20	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		04/27/12 13:16	04/30/12 13:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	91		34 - 141	04/27/12 13:16	04/30/12 13:20	1
DCB Decachlorobiphenyl	94		34 - 141	04/27/12 13:16	04/30/12 13:20	1
Tetrachloro-m-xylene	81		46 - 122	04/27/12 13:16	04/30/12 13:20	1
Tetrachloro-m-xylene	85		46 - 122	04/27/12 13:16	04/30/12 13:20	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 240-41948/4-A

Matrix: Water

Analysis Batch: 42028

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41948

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Endrin	0.00400	0.00184	J*	mg/L		46	59 - 136
gamma-BHC (Lindane)	0.00400	0.00184	J*	mg/L		46	59 - 137
Heptachlor	0.00400	0.00182	J*	mg/L		45	63 - 123
Heptachlor epoxide	0.00400	0.00193	J*	mg/L		48	59 - 141
Methoxychlor	0.00400	0.00363	J	mg/L		91	42 - 141

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	106		34 - 141
DCB Decachlorobiphenyl	97		34 - 141
Tetrachloro-m-xylene	127	X	46 - 122
Tetrachloro-m-xylene	86		46 - 122

Lab Sample ID: MB 240-42735/2-A

Matrix: Water

Analysis Batch: 42869

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42735

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		05/04/12 06:43	05/04/12 20:33	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		05/04/12 06:43	05/04/12 20:33	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		05/04/12 06:43	05/04/12 20:33	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		05/04/12 06:43	05/04/12 20:33	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		05/04/12 06:43	05/04/12 20:33	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		05/04/12 06:43	05/04/12 20:33	1
Toxaphene	0.048	U	0.048	0.000077	mg/L		05/04/12 06:43	05/04/12 20:33	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	97		34 - 141	05/04/12 06:43	05/04/12 20:33	1
DCB Decachlorobiphenyl	99		34 - 141	05/04/12 06:43	05/04/12 20:33	1
Tetrachloro-m-xylene	76		46 - 122	05/04/12 06:43	05/04/12 20:33	1
Tetrachloro-m-xylene	81		46 - 122	05/04/12 06:43	05/04/12 20:33	1

Lab Sample ID: LCS 240-42735/3-A

Matrix: Water

Analysis Batch: 42869

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42735

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Endrin	0.00200	0.00180	J	mg/L		90	59 - 136
gamma-BHC (Lindane)	0.00200	0.00179	J	mg/L		89	59 - 137
Heptachlor	0.00200	0.00173	J	mg/L		87	63 - 123
Heptachlor epoxide	0.00200	0.00190	J	mg/L		95	59 - 141
Methoxychlor	0.00400	0.00364	J	mg/L		91	42 - 141

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	117		34 - 141
DCB Decachlorobiphenyl	103		34 - 141
Tetrachloro-m-xylene	82		46 - 122
Tetrachloro-m-xylene	88		46 - 122

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 240-10547-2 MS

Client Sample ID: FWG-IDW-TANK 1-GW

Matrix: Water

Prep Type: TCLP

Analysis Batch: 42028

Prep Batch: 41948

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Endrin	0.0012	U *	0.00400	0.00172	J	mg/L		NaN	50 - 150
gamma-BHC (Lindane)	0.0012	U *	0.00400	0.00174	J	mg/L		NaN	50 - 150
Heptachlor	0.0012	U *	0.00400	0.00177	J	mg/L		NaN	50 - 150
Heptachlor epoxide	0.0012	U *	0.00400	0.00181	J	mg/L		NaN	50 - 150
Methoxychlor	0.0024	U	0.00400	0.00354	J	mg/L		NaN	50 - 150
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
DCB Decachlorobiphenyl	65		34 - 141						
DCB Decachlorobiphenyl	57		34 - 141						
Tetrachloro-m-xylene	171		46 - 122						
Tetrachloro-m-xylene	82		46 - 122						

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-41471/2-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 41798

Prep Batch: 41471

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	0.50	U	0.50	0.17	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1221	0.50	U	0.50	0.13	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1232	0.50	U	0.50	0.16	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1242	0.50	U	0.50	0.22	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1248	0.50	U	0.50	0.10	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1254	0.50	U	0.50	0.16	ug/L		04/25/12 08:21	04/27/12 00:56	1
Aroclor-1260	0.50	U	0.50	0.17	ug/L		04/25/12 08:21	04/27/12 00:56	1
MB MB									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Tetrachloro-m-xylene	74		23 - 136			04/25/12 08:21	04/27/12 00:56	1	
DCB Decachlorobiphenyl	84		10 - 130			04/25/12 08:21	04/27/12 00:56	1	

Lab Sample ID: LCS 240-41471/3-A

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 41798

Prep Batch: 41471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1260	5.00	4.19		ug/L		84	55 - 120
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
Tetrachloro-m-xylene	73		23 - 136				
DCB Decachlorobiphenyl	82		10 - 130				

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-41945/5-A
Matrix: Water
Analysis Batch: 42031

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41945

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4-D	0.0020	U	0.0020	0.00021	mg/L		04/27/12 13:08	04/28/12 16:26	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		04/27/12 13:08	04/28/12 16:26	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4-Dichlorophenylacetic acid	67		37 - 116	04/27/12 13:08	04/28/12 16:26	1
2,4-Dichlorophenylacetic acid	68		37 - 116	04/27/12 13:08	04/28/12 16:26	1

Lab Sample ID: LCS 240-41945/6-A
Matrix: Water
Analysis Batch: 42031

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41945

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
2,4-D	0.0200	0.0144		mg/L		72	35 - 136
Silvex (2,4,5-TP)	0.00500	0.00370		mg/L		74	46 - 112

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4-Dichlorophenylacetic acid	72		37 - 116
2,4-Dichlorophenylacetic acid	71		37 - 116

Method: 8330 (Modified) - Organic Compounds by UV/HPLC

Lab Sample ID: G2E070000155B
Matrix: Water
Analysis Batch: 2128155

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 2128155_P

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitroguanidine	20	U	20	2.4	ug/L		05/07/12 14:00	05/08/12 15:41	1

Lab Sample ID: G2E070000155C
Matrix: Water
Analysis Batch: 2128155

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 2128155_P

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Nitroguanidine	250	265		ug/L		106	73 - 117

Lab Sample ID: G2E030407009D
Matrix: Water
Analysis Batch: 2128155

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 2128155_P

Analyte	Sample Sample		Spike Added	SD1 SD1		Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Nitroguanidine	20	U	250	266		ug/L		107	73 - 117	1.8	15

Lab Sample ID: G2E030407009S
Matrix: Water
Analysis Batch: 2128155

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 2128155_P

Analyte	Sample Sample		Spike Added	MS1 MS1		Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Nitroguanidine	20	U	250	262		ug/L		105	73 - 117

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Lab Sample ID: G2E01000063B

Matrix: Water

Analysis Batch: 2122063

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 2122063_P

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitroglycerin	0.65	U	0.65	0.33	ug/L		05/01/12 09:00	05/10/12 14:27	1
PETN	0.65	U	0.65	0.30	ug/L		05/01/12 09:00	05/10/12 14:27	1
2-Amino-4,6-dinitrotoluene	0.20	U	0.20	0.017	ug/L		05/01/12 09:00	05/10/12 14:27	1
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
1,3-Dinitrobenzene	0.10	U	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
2,4-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
2,6-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
HMX	0.10	U	0.10	0.036	ug/L		05/01/12 09:00	05/10/12 14:27	1
Nitrobenzene	0.10	U	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
2-Nitrotoluene	0.50	U	0.50	0.088	ug/L		05/01/12 09:00	05/10/12 14:27	1
3-Nitrotoluene	0.50	U	0.50	0.057	ug/L		05/01/12 09:00	05/10/12 14:27	1
4-Nitrotoluene	0.65	U	0.65	0.088	ug/L		05/01/12 09:00	05/10/12 14:27	1
RDX	0.10	U	0.10	0.036	ug/L		05/01/12 09:00	05/10/12 14:27	1
Tetryl	0.10	U	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1
1,3,5-Trinitrobenzene	0.10	U	0.10	0.030	ug/L		05/01/12 09:00	05/10/12 14:27	1
2,4,6-Trinitrotoluene	0.10	U	0.10	0.050	ug/L		05/01/12 09:00	05/10/12 14:27	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
3,4-Dinitrotoluene	100		79 - 111	05/01/12 09:00	05/10/12 14:27	1

Lab Sample ID: G2E01000063C

Matrix: Water

Analysis Batch: 2122063

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 2122063_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PETN	5.00	4.80		ug/L		96	84 - 117
2-Amino-4,6-dinitrotoluene	1.00	1.07		ug/L		107	50 - 155
4-Amino-2,6-dinitrotoluene	1.00	1.06		ug/L		106	55 - 155
1,3-Dinitrobenzene	1.00	1.13		ug/L		113	45 - 160
2,4-Dinitrotoluene	1.00	1.04		ug/L		104	60 - 135
2,6-Dinitrotoluene	1.00	1.05		ug/L		105	60 - 135
HMX	1.00	1.08		ug/L		108	80 - 115
Nitrobenzene	1.00	1.10		ug/L		110	50 - 140
2-Nitrotoluene	1.00	1.02		ug/L		102	45 - 135
3-Nitrotoluene	1.00	1.00		ug/L		100	50 - 130
4-Nitrotoluene	1.00	0.994		ug/L		99	50 - 130
RDX	1.00	1.12		ug/L		112	50 - 160
Tetryl	1.00	0.900		ug/L		90	20 - 175
1,3,5-Trinitrobenzene	1.00	1.10		ug/L		110	65 - 140
2,4,6-Trinitrotoluene	1.00	0.909		ug/L		91	50 - 145

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
3,4-Dinitrotoluene	101		79 - 111

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-41936/2-A
Matrix: Water
Analysis Batch: 42120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 41936

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	0.50	U	0.50	0.0032	mg/L		04/27/12 12:55	04/28/12 15:13	1
Cadmium	0.10	U	0.10	0.00066	mg/L		04/27/12 12:55	04/28/12 15:13	1
Chromium	0.50	U	0.50	0.0022	mg/L		04/27/12 12:55	04/28/12 15:13	1
Lead	0.50	U	0.50	0.0019	mg/L		04/27/12 12:55	04/28/12 15:13	1
Selenium	0.25	U	0.25	0.0041	mg/L		04/27/12 12:55	04/28/12 15:13	1
Silver	0.50	U	0.50	0.0022	mg/L		04/27/12 12:55	04/28/12 15:13	1
Barium	10	U	10	0.00067	mg/L		04/27/12 12:55	04/28/12 15:13	1

Lab Sample ID: LCS 240-41936/3-A
Matrix: Water
Analysis Batch: 42120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41936

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Cadmium	0.0500	0.0508	J	mg/L		102	50 - 150	
Chromium	0.200	0.207	J	mg/L		104	50 - 150	
Lead	0.500	0.496	J	mg/L		99	50 - 150	
Selenium	2.00	2.20		mg/L		110	50 - 150	
Silver	0.0500	0.0513	J	mg/L		103	50 - 150	

Lab Sample ID: LCS 240-41936/3-A
Matrix: Water
Analysis Batch: 42425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 41936

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits

Lab Sample ID: MB 240-41806/1-A
Matrix: Water
Analysis Batch: 42006

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 41806

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	10	U	10	3.2	ug/L		04/26/12 17:08	04/27/12 10:23	1
Cobalt	7.0	U	7.0	1.7	ug/L		04/26/12 17:08	04/27/12 10:23	1
Chromium	5.0	U	5.0	2.2	ug/L		04/26/12 17:08	04/27/12 10:23	1
Lead	3.0	U	3.0	1.9	ug/L		04/26/12 17:08	04/27/12 10:23	1
Selenium	5.0	U	5.0	4.1	ug/L		04/26/12 17:08	04/27/12 10:23	1
Silver	5.0	U	5.0	2.2	ug/L		04/26/12 17:08	04/27/12 10:23	1
Vanadium	7.0	U	7.0	0.64	ug/L		04/26/12 17:08	04/27/12 10:23	1
Barium	1.41	J	200	0.67	ug/L		04/26/12 17:08	04/27/12 10:23	1
Calcium	392	J	5000	130	ug/L		04/26/12 17:08	04/27/12 10:23	1
Copper	25	U	25	4.5	ug/L		04/26/12 17:08	04/27/12 10:23	1
Magnesium	92.2	J	5000	34	ug/L		04/26/12 17:08	04/27/12 10:23	1
Manganese	0.529	J	15	0.41	ug/L		04/26/12 17:08	04/27/12 10:23	1
Nickel	40	U	40	3.2	ug/L		04/26/12 17:08	04/27/12 10:23	1
Potassium	168	J	5000	72	ug/L		04/26/12 17:08	04/27/12 10:23	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-41806/2-A				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total Recoverable			
Analysis Batch: 42006				Prep Batch: 41806			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2000	2030		ug/L		101	80 - 120
Cobalt	500	519		ug/L		104	80 - 120
Chromium	200	207		ug/L		103	80 - 120
Lead	500	508		ug/L		102	80 - 120
Selenium	2000	2100		ug/L		105	80 - 120
Silver	50.0	49.7		ug/L		99	80 - 120
Vanadium	500	512		ug/L		102	80 - 120
Barium	2000	2130		ug/L		106	80 - 120
Calcium	50000	52100		ug/L		104	80 - 120
Copper	250	258		ug/L		103	80 - 120
Magnesium	50000	51300		ug/L		103	80 - 120
Manganese	500	530		ug/L		106	80 - 120
Nickel	500	511		ug/L		102	80 - 120
Potassium	50000	52100		ug/L		104	80 - 120

Lab Sample ID: 240-10547-2 MS				Client Sample ID: FWG-IDW-TANK 1-GW			
Matrix: Water				Prep Type: Total Recoverable			
Analysis Batch: 42006				Prep Batch: 41806			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	%Rec. Limits
Arsenic	7.0	J	2000	2160		ug/L	108 75 - 125
Cobalt	7.0	U	500	544		ug/L	109 75 - 125
Chromium	9.5		200	224		ug/L	107 75 - 125
Lead	3.0	U	500	531		ug/L	106 75 - 125
Selenium	5.0	U	2000	2200		ug/L	110 75 - 125
Silver	5.0	U	50.0	52.8		ug/L	106 75 - 125
Vanadium	25		500	561		ug/L	107 75 - 125
Barium	42	J B	2000	2300		ug/L	113 75 - 125
Calcium	53000	B	50000	106000		ug/L	105 75 - 125
Copper	25	U	250	280		ug/L	112 75 - 125
Magnesium	14000	B	50000	67200		ug/L	107 75 - 125
Manganese	2.1	J B	500	560		ug/L	112 75 - 125
Nickel	5.2	J	500	532		ug/L	105 75 - 125
Potassium	25000	B	50000	80300		ug/L	110 75 - 125

Lab Sample ID: 240-10547-2 MSD				Client Sample ID: FWG-IDW-TANK 1-GW					
Matrix: Water				Prep Type: Total Recoverable					
Analysis Batch: 42006				Prep Batch: 41806					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	%Rec. Limits	RPD	Limit
Arsenic	7.0	J	2000	2120		ug/L	106 75 - 125	2	20
Cobalt	7.0	U	500	533		ug/L	107 75 - 125	2	20
Chromium	9.5		200	221		ug/L	106 75 - 125	2	20
Lead	3.0	U	500	520		ug/L	104 75 - 125	2	20
Selenium	5.0	U	2000	2150		ug/L	108 75 - 125	2	20
Silver	5.0	U	50.0	51.3		ug/L	103 75 - 125	3	20
Vanadium	25		500	549		ug/L	105 75 - 125	2	20
Barium	42	J B	2000	2240		ug/L	110 75 - 125	3	20
Calcium	53000	B	50000	104000		ug/L	102 75 - 125	2	20
Copper	25	U	250	275		ug/L	110 75 - 125	2	20

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-10547-2 MSD

Matrix: Water

Analysis Batch: 42006

Client Sample ID: FWG-IDW-TANK 1-GW

Prep Type: Total Recoverable

Prep Batch: 41806

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Magnesium	14000	B	50000	66200		ug/L		105	75 - 125	1	20
Manganese	2.1	J B	500	548		ug/L		109	75 - 125	2	20
Nickel	5.2	J	500	522		ug/L		103	75 - 125	2	20
Potassium	25000	B	50000	78400		ug/L		107	75 - 125	2	20

Lab Sample ID: LB 240-41791/1-C LB

Matrix: Water

Analysis Batch: 42120

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 41936

Analyte	LB	LB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	0.00364	J	0.50	0.0032	mg/L		04/27/12 12:55	04/28/12 15:09	1
Cadmium	0.10	U	0.10	0.00066	mg/L		04/27/12 12:55	04/28/12 15:09	1
Chromium	0.50	U	0.50	0.0022	mg/L		04/27/12 12:55	04/28/12 15:09	1
Lead	0.00192	J	0.50	0.0019	mg/L		04/27/12 12:55	04/28/12 15:09	1
Selenium	0.25	U	0.25	0.0041	mg/L		04/27/12 12:55	04/28/12 15:09	1
Silver	0.50	U	0.50	0.0022	mg/L		04/27/12 12:55	04/28/12 15:09	1
Barium	0.00174	J	10	0.00067	mg/L		04/27/12 12:55	04/28/12 15:09	1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-41806/1-A

Matrix: Water

Analysis Batch: 41991

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 41806

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	50	U	50	19	ug/L		04/26/12 17:08	04/27/12 20:02	1
Antimony	2.0	U	2.0	0.13	ug/L		04/26/12 17:08	04/27/12 20:02	1
Beryllium	1.0	U	1.0	0.20	ug/L		04/26/12 17:08	04/27/12 20:02	1
Cadmium	1.0	U	1.0	0.13	ug/L		04/26/12 17:08	04/27/12 20:02	1
Iron	100	U	100	26	ug/L		04/26/12 17:08	04/27/12 20:02	1
Sodium	64.2	J	1000	6.9	ug/L		04/26/12 17:08	04/27/12 20:02	1
Thallium	2.0	U	2.0	0.14	ug/L		04/26/12 17:08	04/27/12 20:02	1
Zinc	13.2	J	20	2.3	ug/L		04/26/12 17:08	04/27/12 20:02	1

Lab Sample ID: LCS 240-41806/3-A

Matrix: Water

Analysis Batch: 41991

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 41806

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Aluminum	10000	9620		ug/L		96	80 - 120
Antimony	100	99.0		ug/L		99	80 - 120
Beryllium	1000	929		ug/L		93	80 - 120
Cadmium	1000	1000		ug/L		100	80 - 120
Iron	10000	10000		ug/L		100	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120
Thallium	250	242		ug/L		97	80 - 120
Zinc	1000	1000		ug/L		100	80 - 120

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-10547-2 MS			Client Sample ID: FWG-IDW-TANK 1-GW							
Matrix: Water			Prep Type: Total Recoverable							
Analysis Batch: 41991			Prep Batch: 41806							
Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Aluminum	64		10000	10000		ug/L		99		63 - 128
Antimony	2.0		100	104		ug/L		102		44 - 153
Beryllium	1.0	U	1000	973		ug/L		97		77 - 124
Cadmium	1.0	U	1000	1010		ug/L		101		78 - 117
Iron	72	J	10000	10500		ug/L		104		22 - 169
Sodium	100000	B	10000	105000	4	ug/L		37		80 - 120
Thallium	0.71	J	250	251		ug/L		100		69 - 117
Zinc	20	U	1000	988		ug/L		99		49 - 156

Lab Sample ID: 240-10547-2 MSD			Client Sample ID: FWG-IDW-TANK 1-GW									
Matrix: Water			Prep Type: Total Recoverable									
Analysis Batch: 41991			Prep Batch: 41806									
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Aluminum	64		10000	10000		ug/L		100		63 - 128	0	20
Antimony	2.0		100	104		ug/L		102		44 - 153	1	20
Beryllium	1.0	U	1000	951		ug/L		95		77 - 124	2	20
Cadmium	1.0	U	1000	1020		ug/L		102		78 - 117	1	20
Iron	72	J	10000	10600		ug/L		105		22 - 169	1	20
Sodium	100000	B	10000	107000	4	ug/L		59		80 - 120	2	20
Thallium	0.71	J	250	258		ug/L		103		69 - 117	3	20
Zinc	20	U	1000	993		ug/L		99		49 - 156	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-41939/2-A			Client Sample ID: Method Blank							
Matrix: Water			Prep Type: Total/NA							
Analysis Batch: 42155			Prep Batch: 41939							
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Mercury	0.0020	U	0.0020	0.00012	mg/L		04/27/12 16:25	04/28/12 11:37		1

Lab Sample ID: LCS 240-41939/3-A			Client Sample ID: Lab Control Sample							
Matrix: Water			Prep Type: Total/NA							
Analysis Batch: 42155			Prep Batch: 41939							
Analyte	Spike	Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits	
			Result	Qualifier						
Mercury	0.00500		0.00492		mg/L		98		50 - 150	

Lab Sample ID: MB 240-41958/1-A			Client Sample ID: Method Blank							
Matrix: Water			Prep Type: Total/NA							
Analysis Batch: 42155			Prep Batch: 41958							
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Mercury	0.20	U	0.20	0.12	ug/L		04/27/12 16:25	04/28/12 10:30		1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-41958/2-A				Client Sample ID: Lab Control Sample				
Matrix: Water				Prep Type: Total/NA				
Analysis Batch: 42155				Prep Batch: 41958				
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Mercury	5.00	4.56		ug/L		91	81 - 123	

Lab Sample ID: LB 240-41791/1-D LB				Client Sample ID: Method Blank					
Matrix: Water				Prep Type: TCLP					
Analysis Batch: 42155				Prep Batch: 41939					
Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		04/27/12 16:25	04/28/12 11:35	1

Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 240-42303/1				Client Sample ID: Lab Control Sample				
Matrix: Water				Prep Type: Total/NA				
Analysis Batch: 42303								
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Flashpoint	81.0	83.00		Degrees F		102	97 - 103	

Lab Sample ID: 240-10547-2 DU				Client Sample ID: FWG-IDW-TANK 1-GW				
Matrix: Water				Prep Type: Total/NA				
Analysis Batch: 42303								
Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Flashpoint	>180		>180		Degrees F		NC	20

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-41705/1-A				Client Sample ID: Method Blank					
Matrix: Water				Prep Type: Total/NA					
Analysis Batch: 41804				Prep Batch: 41705					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		04/26/12 10:40	04/26/12 17:01	1

Lab Sample ID: LCS 240-41705/2-A				Client Sample ID: Lab Control Sample				
Matrix: Water				Prep Type: Total/NA				
Analysis Batch: 41804				Prep Batch: 41705				
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Cyanide, Total	0.0449	0.0450		mg/L		100	69 - 118	

Lab Sample ID: MRL 240-41804/3 MRL				Client Sample ID: Lab Control Sample				
Matrix: Water				Prep Type: Total/NA				
Analysis Batch: 41804								
Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits	
Cyanide, Total	0.0100	0.00870	J	mg/L		87	70 - 130	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 240-41511/12-A						Client Sample ID: Method Blank			
Matrix: Water						Prep Type: Total/NA			
Analysis Batch: 41617						Prep Batch: 41511			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	3.0	U	3.0	0.94	mg/L		04/25/12 10:02	04/25/12 14:45	1

Lab Sample ID: LCS 240-41511/13-A						Client Sample ID: Lab Control Sample			
Matrix: Water						Prep Type: Total/NA			
Analysis Batch: 41617						Prep Batch: 41511			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide	8.80	6.40		mg/L		73	70 - 130		

Lab Sample ID: 240-10547-2 MS						Client Sample ID: FWG-IDW-TANK 1-GW			
Matrix: Water						Prep Type: Total/NA			
Analysis Batch: 41617						Prep Batch: 41511			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	3.0	U	8.80	4.80		mg/L		55	27 - 124

Lab Sample ID: 240-10547-2 MSD						Client Sample ID: FWG-IDW-TANK 1-GW					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 41617						Prep Batch: 41511					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Sulfide	3.0	U	8.80	6.40	F	mg/L		73	27 - 124	29	20

Method: 9040B - pH

Lab Sample ID: LCS 240-41411/5						Client Sample ID: Lab Control Sample			
Matrix: Water						Prep Type: Total/NA			
Analysis Batch: 41411									
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH	7.67	7.660		SU		100	97 - 103		

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G2E110000019B						Client Sample ID: Method Blank			
Matrix: Water						Prep Type: Total			
Analysis Batch: 2132019						Prep Batch: 2132019_P			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrocellulose	2.0	U	2.0	0.48	mg/L		05/11/12 05:00	05/15/12 14:01	1

Lab Sample ID: G2E110000019C						Client Sample ID: Lab Control Sample			
Matrix: Water						Prep Type: Total			
Analysis Batch: 2132019						Prep Batch: 2132019_P			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrocellulose	5.07	5.20		mg/L		103	26 - 144		

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050 (Continued)

Lab Sample ID: G2E030407009D

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total

Analysis Batch: 2132019

Prep Batch: 2132019_P

Analyte	Sample	Sample	Spike	SD1	SD1	Unit	D	%Rec	Limits		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				%Rec.	RPD		
Nitrocellulose	2.0	U	5.07	5.30		mg/L		103	26 - 144	0.75	45	

Lab Sample ID: G2E030407009S

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total

Analysis Batch: 2132019

Prep Batch: 2132019_P

Analyte	Sample	Sample	Spike	MS1	MS1	Unit	D	%Rec	Limits	
	Result	Qualifier	Added	Result	Qualifier				%Rec.	RPD
Nitrocellulose	2.0	U	5.07	5.26		mg/L		102	26 - 144	

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QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

GC/MS VOA

Leach Batch: 41793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	1311	
LB 240-41793/1-A MB	Method Blank	TCLP	Water	1311	

Analysis Batch: 42229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	8260B	
LB 240-41793/1-A MB	Method Blank	TCLP	Water	8260B	
LCS 240-42229/5	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 42231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-1	FWG-IDW-TANK 1-TB	Total/NA	Water	8260B	
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	8260B	
LCS 240-42231/5	Lab Control Sample	Total/NA	Water	8260B	
MB 240-42231/4	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 41464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	3520C	
LCS 240-41464/16-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-41464/15-A	Method Blank	Total/NA	Water	3520C	

Leach Batch: 41791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	1311	

Analysis Batch: 41841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	8270C	41464
LCS 240-41464/16-A	Lab Control Sample	Total/NA	Water	8270C	41464
MB 240-41464/15-A	Method Blank	Total/NA	Water	8270C	41464

Prep Batch: 41946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	3510C	41791
LCS 240-41946/5-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-41946/4-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 42450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	8270C	41946
LCS 240-41946/5-A	Lab Control Sample	Total/NA	Water	8270C	41946
MB 240-41946/4-A	Method Blank	Total/NA	Water	8270C	41946

GC Semi VOA

Prep Batch: 41471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	3520C	
LCS 240-41471/3-A	Lab Control Sample	Total/NA	Water	3520C	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

GC Semi VOA (Continued)

Prep Batch: 41471 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-41471/2-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 41473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	3520C	
LCS 240-41473/3-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-41473/2-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 41756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	8081A	41473
LCS 240-41473/3-A	Lab Control Sample	Total/NA	Water	8081A	41473
MB 240-41473/2-A	Method Blank	Total/NA	Water	8081A	41473

Leach Batch: 41791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	1311	
240-10547-2 - RE	FWG-IDW-TANK 1-GW	TCLP	Water	1311	
240-10547-2 MS	FWG-IDW-TANK 1-GW	TCLP	Water	1311	

Analysis Batch: 41798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	8082	41471
LCS 240-41471/3-A	Lab Control Sample	Total/NA	Water	8082	41471
MB 240-41471/2-A	Method Blank	Total/NA	Water	8082	41471

Prep Batch: 41945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	8151A	41791
LCS 240-41945/6-A	Lab Control Sample	Total/NA	Water	8151A	
MB 240-41945/5-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 41948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	3510C	41791
240-10547-2 MS	FWG-IDW-TANK 1-GW	TCLP	Water	3510C	41791
LCS 240-41948/4-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-41948/3-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 42028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	8081A	41948
240-10547-2 MS	FWG-IDW-TANK 1-GW	TCLP	Water	8081A	41948
LCS 240-41948/4-A	Lab Control Sample	Total/NA	Water	8081A	41948
MB 240-41948/3-A	Method Blank	Total/NA	Water	8081A	41948

Analysis Batch: 42031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	8151A	41945
LCS 240-41945/6-A	Lab Control Sample	Total/NA	Water	8151A	41945
MB 240-41945/5-A	Method Blank	Total/NA	Water	8151A	41945

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

GC Semi VOA (Continued)

Prep Batch: 42735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2 - RE	FWG-IDW-TANK 1-GW	TCLP	Water	3510C	41791
LCS 240-42735/3-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-42735/2-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 42869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2 - RE	FWG-IDW-TANK 1-GW	TCLP	Water	8081A	42735
LCS 240-42735/3-A	Lab Control Sample	Total/NA	Water	8081A	42735
MB 240-42735/2-A	Method Blank	Total/NA	Water	8081A	42735

HPLC

Analysis Batch: 2122063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total	Water	8330/8330A	
G2E01000063B	Method Blank	Total	Water	8330/8330A	
G2E01000063C	Lab Control Sample	Total	Water	8330/8330A	

Analysis Batch: 2128155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Dissolved	Water	8330 (Modified)	
G2E030407009D	Matrix Spike Duplicate	Dissolved	Water	8330 (Modified)	
G2E030407009S	Matrix Spike	Dissolved	Water	8330 (Modified)	
G2E070000155B	Method Blank	Dissolved	Water	8330 (Modified)	
G2E070000155C	Lab Control Sample	Dissolved	Water	8330 (Modified)	

Prep Batch: 2122063_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total	Water	3535	
G2E01000063B	Method Blank	Total	Water	3535	
G2E01000063C	Lab Control Sample	Total	Water	3535	

Prep Batch: 2128155_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Dissolved	Water	FILTRATION (DISS)	
G2E030407009D	Matrix Spike Duplicate	Dissolved	Water	FILTRATION (DISS)	
G2E030407009S	Matrix Spike	Dissolved	Water	FILTRATION (DISS)	
G2E070000155B	Method Blank	Dissolved	Water	FILTRATION (DISS)	
G2E070000155C	Lab Control Sample	Dissolved	Water	FILTRATION (DISS)	

Metals

Leach Batch: 41791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	1311	
LB 240-41791/1-C LB	Method Blank	TCLP	Water	1311	
LB 240-41791/1-D LB	Method Blank	TCLP	Water	1311	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Metals (Continued)

Prep Batch: 41806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total Recoverable	Water	3005A	
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total Recoverable	Water	3005A	
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total Recoverable	Water	3005A	
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total Recoverable	Water	3005A	
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total Recoverable	Water	3005A	
LCS 240-41806/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-41806/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-41806/1-A	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 41936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	3010A	41791
LB 240-41791/1-C LB	Method Blank	TCLP	Water	3010A	41791
LCS 240-41936/3-A	Lab Control Sample	Total/NA	Water	3010A	
MB 240-41936/2-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 41939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	7470A	41791
LB 240-41791/1-D LB	Method Blank	TCLP	Water	7470A	41791
LCS 240-41939/3-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-41939/2-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 41958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	7470A	
LCS 240-41958/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-41958/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 41991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6020	41806
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6020	41806
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6020	41806
LCS 240-41806/3-A	Lab Control Sample	Total Recoverable	Water	6020	41806
MB 240-41806/1-A	Method Blank	Total Recoverable	Water	6020	41806

Analysis Batch: 42006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6010B	41806
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6010B	41806
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total Recoverable	Water	6010B	41806
LCS 240-41806/2-A	Lab Control Sample	Total Recoverable	Water	6010B	41806
MB 240-41806/1-A	Method Blank	Total Recoverable	Water	6010B	41806

Analysis Batch: 42120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	6010B	41936
LB 240-41791/1-C LB	Method Blank	TCLP	Water	6010B	41936
LCS 240-41936/3-A	Lab Control Sample	Total/NA	Water	6010B	41936
MB 240-41936/2-A	Method Blank	Total/NA	Water	6010B	41936

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Metals (Continued)

Analysis Batch: 42155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	7470A	41958
240-10547-2	FWG-IDW-TANK 1-GW	TCLP	Water	7470A	41939
LB 240-41791/1-D LB	Method Blank	TCLP	Water	7470A	41939
LCS 240-41939/3-A	Lab Control Sample	Total/NA	Water	7470A	41939
LCS 240-41958/2-A	Lab Control Sample	Total/NA	Water	7470A	41958
MB 240-41939/2-A	Method Blank	Total/NA	Water	7470A	41939
MB 240-41958/1-A	Method Blank	Total/NA	Water	7470A	41958

Analysis Batch: 42425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-41936/3-A	Lab Control Sample	Total/NA	Water	6010B	41936

General Chemistry

Analysis Batch: 41411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	9040B	
LCS 240-41411/5	Lab Control Sample	Total/NA	Water	9040B	

Prep Batch: 41511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	9030B	
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total/NA	Water	9030B	
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total/NA	Water	9030B	
LCS 240-41511/13-A	Lab Control Sample	Total/NA	Water	9030B	
MB 240-41511/12-A	Method Blank	Total/NA	Water	9030B	

Analysis Batch: 41617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	9034	41511
240-10547-2 MS	FWG-IDW-TANK 1-GW	Total/NA	Water	9034	41511
240-10547-2 MSD	FWG-IDW-TANK 1-GW	Total/NA	Water	9034	41511
LCS 240-41511/13-A	Lab Control Sample	Total/NA	Water	9034	41511
MB 240-41511/12-A	Method Blank	Total/NA	Water	9034	41511

Prep Batch: 41705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	9012A	
LCS 240-41705/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-41705/1-A	Method Blank	Total/NA	Water	9012A	

Analysis Batch: 41804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	9012A	41705
LCS 240-41705/2-A	Lab Control Sample	Total/NA	Water	9012A	41705
MB 240-41705/1-A	Method Blank	Total/NA	Water	9012A	41705
MRL 240-41804/3 MRL	Lab Control Sample	Total/NA	Water	9012A	

Analysis Batch: 42303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total/NA	Water	1010	
240-10547-2 DU	FWG-IDW-TANK 1-GW	Total/NA	Water	1010	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

General Chemistry (Continued)

Analysis Batch: 42303 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-42303/1	Lab Control Sample	Total/NA	Water	1010	

Analysis Batch: 2132019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total	Water	WS-WC-0050	
G2E030407009D	Matrix Spike Duplicate	Total	Water	WS-WC-0050	
G2E030407009S	Matrix Spike	Total	Water	WS-WC-0050	
G2E110000019B	Method Blank	Total	Water	WS-WC-0050	
G2E110000019C	Lab Control Sample	Total	Water	WS-WC-0050	

Prep Batch: 2132019_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-10547-2	FWG-IDW-TANK 1-GW	Total	Water	EXTRACTION, SOLID PHASE	
G2E030407009D	Matrix Spike Duplicate	Total	Water	EXTRACTION, SOLID PHASE	
G2E030407009S	Matrix Spike	Total	Water	EXTRACTION, SOLID PHASE	
G2E110000019B	Method Blank	Total	Water	EXTRACTION, SOLID PHASE	
G2E110000019C	Lab Control Sample	Total	Water	EXTRACTION, SOLID PHASE	

Lab Chronicle

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-TB

Lab Sample ID: 240-10547-1

Date Collected: 04/24/12 11:30

Matrix: Water

Date Received: 04/24/12 14:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	42231	05/01/12 02:07	TL	TAL NC

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

Date Collected: 04/24/12 12:00

Matrix: Water

Date Received: 04/24/12 14:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			41793	04/26/12 15:10	BF	TAL NC
TCLP	Analysis	8260B		1	42229	04/30/12 19:30	TL	TAL NC
Total/NA	Analysis	8260B		1	42231	05/01/12 02:31	TL	TAL NC
Total/NA	Prep	3520C			41464	04/25/12 08:09	BM	TAL NC
Total/NA	Analysis	8270C		1	41841	04/27/12 16:47	MU	TAL NC
TCLP	Leach	1311			41791	04/26/12 15:10	BF	TAL NC
TCLP	Prep	3510C			41946	04/27/12 13:11	CC	TAL NC
TCLP	Analysis	8270C		1	42450	05/02/12 16:53	MU	TAL NC
Total/NA	Prep	3520C			41473	04/25/12 08:23	BM	TAL NC
Total/NA	Analysis	8081A		1	41756	04/27/12 09:04	AR	TAL NC
Total/NA	Prep	3520C			41471	04/25/12 08:21	BM	TAL NC
Total/NA	Analysis	8082		1	41798	04/27/12 00:42	LH	TAL NC
TCLP	Leach	1311			41791	04/26/12 15:10	BF	TAL NC
TCLP	Prep	3510C			41948	04/27/12 13:16	CC	TAL NC
TCLP	Analysis	8081A		1	42028	04/30/12 13:44	CV	TAL NC
TCLP	Prep	8151A			41945	04/27/12 13:08	AK	TAL NC
TCLP	Analysis	8151A		1	42031	04/28/12 14:53	AR	TAL NC
TCLP	Leach	1311	RE		41791	04/26/12 15:10	BF	TAL NC
TCLP	Prep	3510C	RE		42735	05/04/12 06:43	AK	TAL NC
TCLP	Analysis	8081A	RE	1	42869	05/04/12 20:08	AR	TAL NC
Total	Prep	3535			2122063_P	05/01/12 09:00	TQP	TAL WSC
Total	Analysis	8330/8330A		1.02	2122063	05/10/12 15:48	VN	TAL WSC
Dissolved	Prep	FILTRATIQN (DISS)			2128155_P	05/07/12 14:00	HJA	TAL WSC
Dissoived	Analysis	8330 (Modified)		1	2128155	05/08/12 16:11	VN	TAL WSC
Total Recoverable	Prep	3005A			41806	04/26/12 17:08	AS	TAL NC
Total Recoverable	Analysis	6020		1	41991	04/27/12 20:15	KC	TAL NC
Total Recoverable	Analysis	6010B		1	42006	04/27/12 10:46	NJM	TAL NC
TCLP	Leach	1311			41791	04/26/12 15:10	BF	TAL NC
TCLP	Prep	3010A			41936	04/27/12 12:55	AS	TAL NC
TCLP	Analysis	6010B		1	42120	04/28/12 15:44	BD	TAL NC
Total/NA	Prep	7470A			41958	04/27/12 16:25	AS	TAL NC
Total/NA	Analysis	7470A		1	42155	04/28/12 10:40	AS	TAL NC
TCLP	Prep	7470A			41939	04/27/12 16:25	AS	TAL NC
TCLP	Analysis	7470A		1	42155	04/28/12 11:48	AS	TAL NC
Total/NA	Analysis	9040B		1	41411	04/24/12 17:04	BR	TAL NC
Total/NA	Prep	9030B			41511	04/25/12 10:02	AM	TAL NC
Total/NA	Analysis	9034		1	41617	04/25/12 14:51	AM	TAL NC
Total/NA	Prep	9012A			41705	04/26/12 10:40	BR	TAL NC

Lab Chronicle

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Client Sample ID: FWG-IDW-TANK 1-GW

Lab Sample ID: 240-10547-2

Date Collected: 04/24/12 12:00

Matrix: Water

Date Received: 04/24/12 14:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9012A		1	41804	04/26/12 17:01	BR	TAL NC
Total/NA	Analysis	1010		1	42303	05/01/12 09:28	JM	TAL NC
Total	Prep	EXTRACTION, SOLID PHASE			2132019_P	05/11/12 05:00	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	2132019	05/15/12 14:33	JB	TAL WSC

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas DEQ	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Northern Mariana Islands	State Program	9	MP0007
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	Federal		LE148388-0
TestAmerica West Sacramento	USDA	Federal		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	State Program	3	9930C
TestAmerica West Sacramento	West Virginia DEP	State Program	3	334
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Certification Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66

TestAmerica Job ID: 240-10547-1

Laboratory	Authority	Program	EPA Region	Certification ID
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Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Chain of Custody Record

TestAmerica Laboratory location: N. Canton
Regulatory program: DW NPDES RCRA Other

Client Contact		Client Project Manager:		Site Contact:		Lab Contact:		TestAmerica Laboratories, Inc.	
Company Name:	<u>EQM</u>	Client Project Manager:	<u>John Miller</u>	Site Contact:	<u>E Corbin</u>	Lab Contact:	<u>M. Loeb</u>	COC No:	<u>TANK1-10WPAZ</u>
Address:	<u>1800 Canalton</u>	Telephone:	<u>513 825 7500 X330</u>	Telephone:	<u>513 825 7500 X249</u>	Telephone:	<u>330 497 9396</u>		<u>2 of 2</u> COCs
City/State/Zip:	<u>UNCANNAN OH 45240</u>	Email:	<u>ecorbin@eqm.com</u>	<input type="checkbox"/> 3 weeks <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day TAT in parenthesis from below: <u>10 DAY</u>		VOC 8260 VOC 8270 PEST 8081 PCB 8082 EXPO 8330 PROPELLANTS Metals 797d & 101620		Formal (see COC) Lab Picking Lab Submittal Job/SDS No.	
Phone:	<u>513 825 7500</u>	Method of Shipment/Carrier:		H2SO4 HNO3 HCl NaOH ZnAc NaOH Unpres Other:		VOC 8260 VOC 8270 PEST 8081 PCB 8082 EXPO 8330 PROPELLANTS Metals 797d & 101620		Sample Specific Notes / Special Instructions:	
Project Name:	<u>QUAPP-60</u>	Shipping/Tracking No:		Alk Aerosol Sediment Solid Other:		VOC 8260 VOC 8270 PEST 8081 PCB 8082 EXPO 8330 PROPELLANTS Metals 797d & 101620			
Project Number:	<u>20114.0016.001.2</u>	Sample Date	<u>4/24/12 1200</u>	Sample Time		VOC 8260 VOC 8270 PEST 8081 PCB 8082 EXPO 8330 PROPELLANTS Metals 797d & 101620			
P.O.#		Sample Identification	<u>FNG-TANK1-6W</u>	<u>13</u>	<u>9</u>	VOC 8260 VOC 8270 PEST 8081 PCB 8082 EXPO 8330 PROPELLANTS Metals 797d & 101620			
Residue Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown Special Instructions/QC Requirements & Comments:									
Relinquished by: <u>Steph Stange</u> Date/Time: <u>4-24-12 1435</u> Relinquished by: <u>Steph Stange</u> Date/Time: <u>4-24-12 1435</u> Relinquished by: <u>M. Loeb</u> Date/Time: <u>4/24/12 1435</u>									

Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-10547-1

Login Number: 10547

List Source: TestAmerica Canton

List Number: 1

Creator: Gambone, Mike

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

July 10, 2012

Mr. Mark Patterson
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266

Reference: Contract No. GS-10F-0293K
Delivery Order No. W912QR-1-F-0266

**Subject: Facility-Wide Groundwater Monitoring Program Plan
RVAAP-66 Facility-Wide Groundwater
Draft Tank #1 IDW Letter Report – TCLP Results**

Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI) began on February 27, 2012, and was conducted pursuant to the approved *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum* (FWGWMP Addendum; EQM, January 2012). These activities resulted in the generation of decontamination fluids from well installation operations. This letter supplements our previous Tank #1 IDW Letter Report dated May 22, 2012.

Based on the analytical results, the May 22 letter recommended land application of the decontamination fluid, which was subsequently approved by the Ohio Environmental Protection Agency (EPA). On June 6, 2012, Environmental Quality Management, Inc. (EQM) personnel began discharging the Tank #1 fluids to the land surface; however, during discharge, EQM personnel noted that soap suds were being produced from aeration of the effluent by the flow control valve at the discharge point. Consequently, the land application procedure was immediately halted. Additional decontamination fluids were generated and placed into Tank #1 during installation of the final seven RI wells in June 2012. At the completion of these activities, EQM resampled Tank #1 for Toxicity Characteristic Leaching Procedure (TCLP) analyses; the RVAAP full suite total analysis was previously performed in May, and little additional decontamination fluid was added to the tank in June 2012. The purpose of this letter is to characterize and classify IDW from Tank #1 for disposal and to provide recommendations for disposing of the IDW.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio EPA regarding IDW disposition at RVAAP, including the IDW

disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations* (FWSAP; SAIC, 2011), and the FWGWMP Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material pending waste characterization and classification based on analytical results. The FWSAP and the FWGWMP Addendum describe approved procedures used for containerizing and handling IDW.

Liquid IDW Discussion

Accumulated indigenous liquid IDW was containerized in a 2,450-gallon poly tank (Tank #1) on site pending transport and disposal to an offsite disposal facility. Tank #1 contained decontamination fluid generated during cleaning of downhole drilling equipment. This liquid was generated from February 27, 2012, through June 28, 2012. (Purge water was stored in a different onsite tank that will be handled under a separate report). An unfiltered composite sample for disposal characterization was collected from Tank #1. The tank was opened and a composite sample was collected by gently lowering a new, disposable Teflon bailer attached to new polypropylene rope into the holding vessel. The bailer was lowered into the vessel several times, and to different depths, to collect a sufficient representative sample of the water to submit to the laboratory for waste characterization analysis. The retrieved sample was collected and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the sample container was sealed with minimum head space. New, disposable nitrile sample gloves were worn during sampling. The gloves, bailers, and rope were discarded appropriately in accordance with the FWGWMP Addendum after collection of each composite sample.

The indigenous IDW contained in Tank #1 was characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 1. (As mentioned previously, full suite totals analysis was performed in May 2012, and the results are provided in our letter report dated May 22, 2012). In addition, the IDW sample was also analyzed for sulfide, cyanide, pH, and flashpoint. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1 – Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24) and Table 8-2 – Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23), as presented in the FWSAP and the Maximum Contaminant Levels (MCLs). Table 2 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP full suite analysis for Tank #1.

The following summarizes the IDW Tank #1 analyses:

- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 140 degrees F. Reactive sulfide and reactive cyanide were detected above the reporting limit; however, they were detected at concentrations insufficient to generate toxic gases, vapors, or fumes in a quantity that

would present a danger to human health or the environment (40 CFR 261.23). The pH level was slightly elevated as a result of concrete and bentonite residue.

Recommended Disposal Pathways for IDW

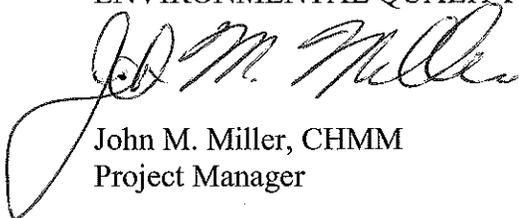
After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded.

Given the observed analytical results, it is recommended that the liquid IDW from Tank #1 be classified as non-hazardous, non-contaminated. EQM was previously permitted to land apply the liquid IDW from this tank, and the recent results indicate that this remains a viable alternative. However, in order to more effectively remove the residual sediment from the tank bottom and to prevent potential generation and release of soap suds to the receiving stream, we recommend that the liquid IDW in Tank #1 be removed by a licensed waste hauler for offsite treatment and disposal.

Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with contracting a waste disposal company to remove the liquid IDW and residual sediment from Tank #1. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.



John M. Miller, CHMM
Project Manager

cc: Vicki Deppisch – Ohio EPA
Mark Nichter – USACE
EQM PN – 030174.0016.001.02

Table 1. Summary of Analytical Suite of Chemicals

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium, cadmium, chromium, lead, and selenium)	EPA Method SW-846 1311/6010B
TCLP semivolatile organic compounds (SVOCs)	EPA Method SW-846 1311/8270C
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
pH	EPA Method SW-846 9040B

1 EPA Methods for Chemical Analysis of Water and Waste

**Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels
Tank 1 Decontamination Fluids, RVAAP-66, Ravenna, Ohio**

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	MCL	*Maximum Toxicity Concentration
TCLP-Metals	Arsenic	7440-38-2	mg/L	0.016	J	NA	5.0
TCLP-Metals	Barium	7440-39-3	mg/L	0.39	J,B	NA	100
TCLP-Metals	Chromium	7440-47-3	mg/L	0.0043	J	NA	5.0
TCLP-Misc.	Cyanide, total	57-12-5	mg/L	0.0055	J	NA	NA
TCLP-Misc.	Sulfide	18496-25-8	mg/L	1.1	J	NA	NA
TCLP-Misc.	Corrosivity (pH)	N/A	S.U.	9.44		6.5-8.5^	NA
TCLP-Misc.	Flashpoint	Q376	F	>180		NA	<140

Note:

* The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1 - Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24) and Table 8-2 - Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23).

^ National Secondary Drinking Water standard.

** Chromium, insoluble salts.

Bold concentrations exceed Drinking Water Stand – Maximum Contaminant Levels (MCLs).

J = estimated result. Result is less than reporting limit.

B = method blank contamination

NA = not applicable

ATTACHMENT 1.
LABORATORY ANALYTICAL DATA SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-12752-2
Client Project/Site: RVAAP (OH) - IDW

For:
Environmental Quality Mgt., Inc.
1800 Carillon Blvd
Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin



Authorized for release by:
7/9/2012 4:57:28 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

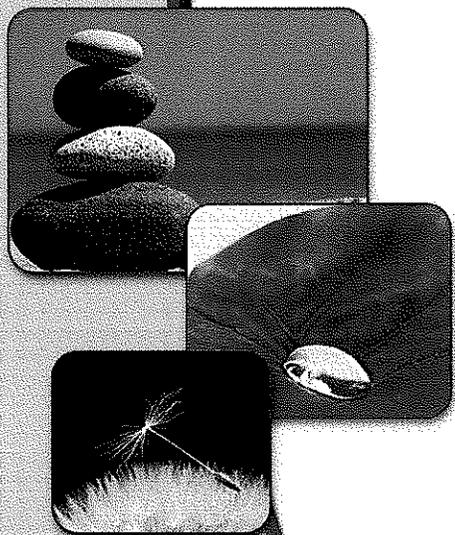




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Definitions/Glossary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
♣	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Job ID: 240-12752-2

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Environmental Quality Mgt., Inc.

Project: RVAAP (OH) - IDW

Report Number: 240-12752-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 06/28/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 5.6, 5.9, 6.0 and 6.0 C.

Method(s) 9040B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: FWG-IDW-TANK1A-GW.

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 07/02/2012 and analyzed on 07/03/2012.

No difficulties were encountered during the VOCs analysis. All quality control parameters were within the acceptance limits.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Job ID: 240-12752-2 (Continued)

Laboratory: TestAmerica Canton (Continued)

no corrective action is required.

Method 1311 TCLP Extraction: The reference method requires at least 100g of the solid portion of a multiphase sample be leached. Greater than 100g of total homogenized sample, including both solid and filterable portions, was used in the preparation of each multiphase sample. However, due to matrix and/or volume limitations, less than 100g of the solid portion was obtained during the multiphase preparation for the following sample(s): FWG-IDW-TANK1A-GW. The volume of leaching fluid used was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits are not affected.

No other difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

TCLP CHLORINATED PESTICIDES

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/ 8081A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

Method 1311 TCLP Extraction: The reference method requires at least 100g of the solid portion of a multiphase sample be leached. Greater than 100g of total homogenized sample, including both solid and filterable portions, was used in the preparation of each multiphase sample. However, due to matrix and/or volume limitations, less than 100g of the solid portion was obtained during the multiphase preparation for the following sample(s): FWG-IDW-TANK1A-GW. The volume of leaching fluid used was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits are not affected.

No other difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

TCLP CHLORINATED HERBICIDES

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/ 8151A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/07/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Method 1311 TCLP Extraction: The reference method requires at least 100g of the solid portion of a multiphase sample be leached. Greater than 100g of total homogenized sample, including both solid and filterable portions, was used in the preparation of each multiphase sample. However, due to matrix and/or volume limitations, less than 100g of the solid portion was obtained during the multiphase preparation for the following sample(s): FWG-IDW-TANK1A-GW. The volume of leaching fluid used was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits are not affected.

No other difficulties were encountered during the herbicides analysis. All quality control parameters were within the acceptance limits.

TCLP METALS (ICP)

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/ 6010B. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

Barium was detected in method blank LB 240-49653/1-D at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Method 1311 TCLP Extraction: The reference method requires at least 100g of the solid portion of a multiphase sample be leached. Greater than 100g of total homogenized sample, including both solid and filterable portions, was used in the preparation of each multiphase sample. However, due to matrix and/or volume limitations, less than 100g of the solid portion was obtained during the multiphase preparation for the following sample(s): FWG-IDW-TANK1A-GW. The volume of leaching fluid used was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits are not affected.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TCLP MERCURY

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A.

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Job ID: 240-12752-2 (Continued)

Laboratory: TestAmerica Canton (Continued)

The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

Method 1311 TCLP Extraction: The reference method requires at least 100g of the solid portion of a multiphase sample be leached. Greater than 100g of total homogenized sample, including both solid and filterable portions, was used in the preparation of each multiphase sample. However, due to matrix and/or volume limitations, less than 100g of the solid portion was obtained during the multiphase preparation for the following sample(s): FWG-IDW-TANK1A-GW. The volume of leaching fluid used was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits are not affected.

No other difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

FLASHPOINT

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 07/02/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

TOTAL CYANIDE

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 07/02/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

SULFIDE

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 07/03/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

PH

Sample FWG-IDW-TANK1A-GW (240-12752-2) was analyzed for pH in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 06/28/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

Method Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
8081A	Organochlorine Pesticides (GC)	SW846	TAL NC
8151A	Herbicides (GC)	SW846	TAL NC
6010B	Metals (ICP)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC
1010	Ignitability, Pinsky-Martens Closed-Cup Method	SW846	TAL NC
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
9040B	pH	SW846	TAL NC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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Sample Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-12752-2	FWG-IDW-TANK1A-GW	Water	06/28/12 10:00	06/28/12 12:45



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Detection Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Client Sample ID: FWG-IDW-TANK1A-GW

Lab Sample ID: 240-12752-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.016	J	0.50	0.0032	mg/L	1		6010B	TCLP
Barium	0.39	J B	10	0.00067	mg/L	1		6010B	TCLP
Chromium	0.0043	J	0.50	0.0022	mg/L	1		6010B	TCLP
Flashpoint	>180		1.00	1.00	Degrees F	1		1010	Total/NA
Cyanide, Total	0.0055	J	0.010	0.0050	mg/L	1		9012A	Total/NA
Sulfide	1.1	J	3.0	0.94	mg/L	1		9034	Total/NA
pH	9.44		0.100	0.100	SU	1		9040B	Total/NA

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Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Client Sample ID: FWG-IDW-TANK1A-GW

Lab Sample ID: 240-12752-2

Date Collected: 06/28/12 10:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/03/12 22:56	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/03/12 22:56	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/03/12 22:56	1
Benzene	0.025	U	0.025	0.0065	mg/L			07/03/12 22:56	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			07/03/12 22:56	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/03/12 22:56	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/03/12 22:56	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/03/12 22:56	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/03/12 22:56	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/03/12 22:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		80 - 121		07/03/12 22:56	1
4-Bromofluorobenzene (Surr)	93		70 - 124		07/03/12 22:56	1
Toluene-d8 (Surr)	106		90 - 115		07/03/12 22:56	1
Dibromofluoromethane (Surr)	115		84 - 128		07/03/12 22:56	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:09	07/04/12 14:27	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:09	07/04/12 14:27	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 14:27	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 14:27	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		07/03/12 09:09	07/04/12 14:27	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 14:27	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 14:27	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:09	07/04/12 14:27	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:09	07/04/12 14:27	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:09	07/04/12 14:27	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:09	07/04/12 14:27	1
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:09	07/04/12 14:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	46		22 - 110	07/03/12 09:09	07/04/12 14:27	1
2-Fluorophenol (Surr)	48		10 - 110	07/03/12 09:09	07/04/12 14:27	1
2,4,6-Tribromophenol (Surr)	61		17 - 117	07/03/12 09:09	07/04/12 14:27	1
Nitrobenzene-d5 (Surr)	52		29 - 111	07/03/12 09:09	07/04/12 14:27	1
Phenol-d5 (Surr)	39		10 - 110	07/03/12 09:09	07/04/12 14:27	1
Terphenyl-d14 (Surr)	77		40 - 119	07/03/12 09:09	07/04/12 14:27	1

Method: 8081A - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		07/03/12 09:15	07/05/12 22:40	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		07/03/12 09:15	07/05/12 22:40	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		07/03/12 09:15	07/05/12 22:40	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		07/03/12 09:15	07/05/12 22:40	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		07/03/12 09:15	07/05/12 22:40	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/05/12 22:40	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		07/03/12 09:15	07/05/12 22:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	59		46 - 122	07/03/12 09:15	07/05/12 22:40	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Client Sample ID: FWG-IDW-TANK1A-GW

Lab Sample ID: 240-12752-2

Date Collected: 06/28/12 10:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8081A - Organochlorine Pesticides (GC) - TCLP (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	54		46 - 122	07/03/12 09:15	07/05/12 22:40	1
DCB Decachlorobiphenyl	85		34 - 141	07/03/12 09:15	07/05/12 22:40	1
DCB Decachlorobiphenyl	83		34 - 141	07/03/12 09:15	07/05/12 22:40	1

Method: 8151A - Herbicides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 19:18	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 19:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	49		37 - 116	07/03/12 09:18	07/07/12 19:18	1
2,4-Dichlorophenylacetic acid	55		37 - 116	07/03/12 09:18	07/07/12 19:18	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.016	J	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:52	1
Barium	0.39	J B	10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:52	1
Cadmium	0.10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 17:52	1
Chromium	0.0043	J	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:52	1
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:52	1
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 17:52	1
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:52	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 13:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>180		1.00	1.00	Degrees F			07/02/12 11:07	1
Cyanide, Total	0.0055	J	0.010	0.0050	mg/L		07/02/12 09:10	07/02/12 11:06	1
Sulfide	1.1	J	3.0	0.94	mg/L		07/03/12 07:56	07/03/12 13:48	1
pH	9.44		0.100	0.100	SU			06/28/12 16:20	1

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Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (90-115)	DBFM (84-128)
LCS 240-49814/10	Lab Control Sample	110	93	107	119

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (90-115)	DBFM (84-128)
240-12752-2	FWG-IDW-TANK1A-GW	110	93	106	115
LB 240-49660/1-A MB	Method Blank	107	92	105	113

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
LCS 240-49701/5-A	Lab Control Sample	48	51	71	52	42	74
MB 240-49701/4-A	Method Blank	47	52	59	52	46	79

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
240-12752-2	FWG-IDW-TANK1A-GW	46	48	61	52	39	77

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Surrogate Summary

Client: Environmental Quality Mgt., Inc.

TestAmerica Job ID: 240-12752-2

Project/Site: RVAAP (OH) - IDW

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (46-122)	TCX2 (46-122)	DCB1 (34-141)	DCB2 (34-141)
LCS 240-49705/8-A	Lab Control Sample	70	65	89	93
MB 240-49705/7-A	Method Blank	65	61	93	92

Surrogate Legend
 TCX = Tetrachloro-m-xylene
 DCB = DCB Decachlorobiphenyl

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (46-122)	TCX2 (46-122)	DCB1 (34-141)	DCB2 (34-141)
240-12752-2	FWG-IDW-TANK1A-GW	59	54	85	83

Surrogate Legend
 TCX = Tetrachloro-m-xylene
 DCB = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCPA1 (37-116)	DCPA2 (37-116)
LCS 240-49707/8-A	Lab Control Sample	55	66
MB 240-49707/7-A	Method Blank	51	57

Surrogate Legend
 DCPA = 2,4-Dichlorophenylacetic acid

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCPA1 (37-116)	DCPA2 (37-116)
240-12752-2	FWG-IDW-TANK1A-GW	49	55

Surrogate Legend
 DCPA = 2,4-Dichlorophenylacetic acid

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 240-49814/10

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 49814

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1-Dichloroethene	1.00	1.06		mg/L		106	71 - 133
1,2-Dichloroethane	1.00	0.970		mg/L		97	81 - 114
2-Butanone (MEK)	2.00	1.91		mg/L		95	49 - 120
Benzene	1.00	0.955		mg/L		96	84 - 120
Carbon tetrachloride	1.00	1.09		mg/L		109	54 - 122
Chlorobenzene	1.00	0.950		mg/L		95	86 - 111
Chloroform	1.00	0.960		mg/L		96	87 - 123
Tetrachloroethene	1.00	1.04		mg/L		104	79 - 134
Trichloroethene	1.00	1.05		mg/L		105	78 - 130
Vinyl chloride	1.00	0.955		mg/L		96	56 - 111

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	110		80 - 121
4-Bromofluorobenzene (Surr)	93		70 - 124
Toluene-d8 (Surr)	107		90 - 115
Dibromofluoromethane (Surr)	119		84 - 128

Lab Sample ID: LB 240-49660/1-A MB

Client Sample ID: Method Blank

Matrix: Water

Prep Type: TCLP

Analysis Batch: 49814

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/03/12 21:21	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/03/12 21:21	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/03/12 21:21	1
Benzene	0.025	U	0.025	0.0065	mg/L			07/03/12 21:21	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			07/03/12 21:21	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/03/12 21:21	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/03/12 21:21	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/03/12 21:21	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/03/12 21:21	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/03/12 21:21	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	107		80 - 121		07/03/12 21:21	1
4-Bromofluorobenzene (Surr)	92		70 - 124		07/03/12 21:21	1
Toluene-d8 (Surr)	105		90 - 115		07/03/12 21:21	1
Dibromofluoromethane (Surr)	113		84 - 128		07/03/12 21:21	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-49701/4-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 49827

Prep Batch: 49701

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:09	07/04/12 12:12	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:09	07/04/12 12:12	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49701/4-A

Matrix: Water

Analysis Batch: 49827

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49701

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 12:12	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		07/03/12 09:09	07/04/12 12:12	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 12:12	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:09	07/04/12 12:12	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1
Nitrobenzene	0.0040	U	0.0040	0.00040	mg/L		07/03/12 09:09	07/04/12 12:12	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:09	07/04/12 12:12	1
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:09	07/04/12 12:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	47		22 - 110	07/03/12 09:09	07/04/12 12:12	1
2-Fluorophenol (Surr)	52		10 - 110	07/03/12 09:09	07/04/12 12:12	1
2,4,6-Tribromophenol (Surr)	59		17 - 117	07/03/12 09:09	07/04/12 12:12	1
Nitrobenzene-d5 (Surr)	52		29 - 111	07/03/12 09:09	07/04/12 12:12	1
Phenol-d5 (Surr)	46		10 - 110	07/03/12 09:09	07/04/12 12:12	1
Terphenyl-d14 (Surr)	79		40 - 119	07/03/12 09:09	07/04/12 12:12	1

Lab Sample ID: LCS 240-49701/5-A

Matrix: Water

Analysis Batch: 49827

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,4,5-Trichlorophenol	0.0800	0.0538		mg/L		67	35 - 111
2,4,6-Trichlorophenol	0.0800	0.0505		mg/L		63	32 - 110
2,4-Dinitrotoluene	0.0800	0.0599		mg/L		75	45 - 126
Hexachlorobenzene	0.0800	0.0559		mg/L		70	47 - 116
Hexachlorobutadiene	0.0800	0.0416		mg/L		52	10 - 110
Hexachloroethane	0.0800	0.0452		mg/L		57	10 - 110
3 & 4 Methylphenol	0.160	0.0936		mg/L		59	27 - 110
2-Methylphenol	0.0800	0.0524		mg/L		66	24 - 110
Nitrobenzene	0.0800	0.0434		mg/L		54	35 - 117
Pentachlorophenol	0.0800	0.0429		mg/L		54	12 - 110
Pyridine	0.0800	0.0444		mg/L		56	10 - 110

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	48		22 - 110
2-Fluorophenol (Surr)	51		10 - 110
2,4,6-Tribromophenol (Surr)	71		17 - 117
Nitrobenzene-d5 (Surr)	52		29 - 111
Phenol-d5 (Surr)	42		10 - 110
Terphenyl-d14 (Surr)	74		40 - 119

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-49705/7-A

Matrix: Water

Analysis Batch: 49922

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49705

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		07/03/12 09:15	07/06/12 00:21	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		07/03/12 09:15	07/06/12 00:21	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		07/03/12 09:15	07/06/12 00:21	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		07/03/12 09:15	07/06/12 00:21	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		07/03/12 09:15	07/06/12 00:21	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/06/12 00:21	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		07/03/12 09:15	07/06/12 00:21	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	65		46 - 122	07/03/12 09:15	07/06/12 00:21	1
Tetrachloro-m-xylene	61		46 - 122	07/03/12 09:15	07/06/12 00:21	1
DCB Decachlorobiphenyl	93		34 - 141	07/03/12 09:15	07/06/12 00:21	1
DCB Decachlorobiphenyl	92		34 - 141	07/03/12 09:15	07/06/12 00:21	1

Lab Sample ID: LCS 240-49705/8-A

Matrix: Water

Analysis Batch: 49922

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49705

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Endrin	0.00200	0.00193		mg/L		96	59 - 136	
Heptachlor	0.00200	0.00139		mg/L		69	63 - 123	
Heptachlor epoxide	0.00200	0.00212		mg/L		106	59 - 141	
gamma-BHC (Lindane)	0.00200	0.00204		mg/L		102	59 - 137	
Methoxychlor	0.00400	0.00366		mg/L		92	42 - 141	

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	70		46 - 122
Tetrachloro-m-xylene	65		46 - 122
DCB Decachlorobiphenyl	89		34 - 141
DCB Decachlorobiphenyl	93		34 - 141

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-49707/7-A

Matrix: Water

Analysis Batch: 50094

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49707

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4-D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 21:18	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 21:18	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4-Dichlorophenylacetic acid	51		37 - 116	07/03/12 09:18	07/07/12 21:18	1
2,4-Dichlorophenylacetic acid	57		37 - 116	07/03/12 09:18	07/07/12 21:18	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 240-49707/8-A
Matrix: Water
Analysis Batch: 50094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49707

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
2,4-D	0.0200	0.0135		mg/L		67	35 - 136
Silvex (2,4,5-TP)	0.00500	0.00325		mg/L		65	46 - 112

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4-Dichlorophenylacetic acid	55		37 - 116
2,4-Dichlorophenylacetic acid	66		37 - 116

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-49727/2-A
Matrix: Water
Analysis Batch: 50003

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49727

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	0.50	U	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:20	1
Barium	10	U	10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:20	1
Cadmium	0.10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 17:20	1
Chromium	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:20	1
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:20	1
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 17:20	1
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:20	1

Lab Sample ID: LCS 240-49727/3-A
Matrix: Water
Analysis Batch: 50003

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49727

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Arsenic	2.00	2.16		mg/L		108	50 - 150
Barium	2.00	2.22	J	mg/L		111	50 - 150
Cadmium	0.0500	0.0524	J	mg/L		105	50 - 150
Chromium	0.200	0.206	J	mg/L		103	50 - 150
Lead	0.500	0.485	J	mg/L		97	50 - 150
Selenium	2.00	2.16		mg/L		108	50 - 150
Silver	0.0500	0.0551	J	mg/L		110	50 - 150

Lab Sample ID: LB 240-49653/1-D LB
Matrix: Water
Analysis Batch: 50003

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 49727

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	0.50	U	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:16	1
Barium	0.00405	J	10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:16	1
Cadmium	0.10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 17:16	1
Chromium	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:16	1
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:16	1
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 17:16	1
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:16	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-49732/2-A
Matrix: Water
Analysis Batch: 49962

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49732

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 13:46	1

Lab Sample ID: LCS 240-49732/3-A
Matrix: Water
Analysis Batch: 49962

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49732

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Mercury	0.00500	0.00452		mg/L		90	50 - 150	

Lab Sample ID: LB 240-49653/1-E LB
Matrix: Water
Analysis Batch: 49962

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 49732

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 13:45	1

Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 240-49569/1
Matrix: Water
Analysis Batch: 49569

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Flashpoint	81.0	82.00		Degrees F		101	97 - 103	

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-49572/1-A
Matrix: Water
Analysis Batch: 49633

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49572

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		07/02/12 09:10	07/02/12 13:00	1

Lab Sample ID: LCS 240-49572/2-A
Matrix: Water
Analysis Batch: 49633

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49572

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Cyanide, Total	0.0449	0.0465		mg/L		103	89 - 118	

Lab Sample ID: MRL 240-49633/12 MRL
Matrix: Water
Analysis Batch: 49633

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Cyanide, Total	0.0100	0.0102		mg/L		102	70 - 130	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 240-49677/14-A
Matrix: Water
Analysis Batch: 49769

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49677

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfide	3.0	U	3.0	0.94	mg/L		07/03/12 07:56	07/03/12 13:48	1

Lab Sample ID: LCS 240-49677/15-A
Matrix: Water
Analysis Batch: 49769

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Method: 9040B - pH

Lab Sample ID: LCS 240-49216/2
Matrix: Water
Analysis Batch: 49216

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

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QC Association Summary

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

GC/MS VOA

Leach Batch: 49660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	1311	
LB 240-49660/1-A MB	Method Blank	TCLP	Water	1311	

Analysis Batch: 49814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	8260B	
LB 240-49660/1-A MB	Method Blank	TCLP	Water	8260B	
LCS 240-49814/10	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Leach Batch: 49653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	1311	

Prep Batch: 49701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	3510C	49653
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-49701/4-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 49827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	8270C	49701
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Water	8270C	49701
MB 240-49701/4-A	Method Blank	Total/NA	Water	8270C	49701

GC Semi VOA

Leach Batch: 49653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	1311	

Prep Batch: 49705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	3520C	49653
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49705/7-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 49707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	8151A	49653
LCS 240-49707/8-A	Lab Control Sample	Total/NA	Water	8151A	
MB 240-49707/7-A	Method Blank	Total/NA	Water	8151A	

Analysis Batch: 49922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	8081A	49705
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	8081A	49705
MB 240-49705/7-A	Method Blank	Total/NA	Water	8081A	49705

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

GC Semi VOA (Continued)

Analysis Batch: 50094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	8151A	49707
LCS 240-49707/8-A	Lab Control Sample	Total/NA	Water	8151A	49707
MB 240-49707/7-A	Method Blank	Total/NA	Water	8151A	49707

Metals

Leach Batch: 49653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	1311	
LB 240-49653/1-D LB	Method Blank	TCLP	Water	1311	
LB 240-49653/1-E LB	Method Blank	TCLP	Water	1311	

Prep Batch: 49727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	3010A	49653
LB 240-49653/1-D LB	Method Blank	TCLP	Water	3010A	49653
LCS 240-49727/3-A	Lab Control Sample	Total/NA	Water	3010A	
MB 240-49727/2-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 49732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	7470A	49653
LB 240-49653/1-E LB	Method Blank	TCLP	Water	7470A	49653
LCS 240-49732/3-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-49732/2-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 49962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	7470A	49732
LB 240-49653/1-E LB	Method Blank	TCLP	Water	7470A	49732
LCS 240-49732/3-A	Lab Control Sample	Total/NA	Water	7470A	49732
MB 240-49732/2-A	Method Blank	Total/NA	Water	7470A	49732

Analysis Batch: 50003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	TCLP	Water	6010B	49727
LB 240-49653/1-D LB	Method Blank	TCLP	Water	6010B	49727
LCS 240-49727/3-A	Lab Control Sample	Total/NA	Water	6010B	49727
MB 240-49727/2-A	Method Blank	Total/NA	Water	6010B	49727

General Chemistry

Analysis Batch: 49216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	Total/NA	Water	9040B	
LCS 240-49216/2	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 49569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	Total/NA	Water	1010	
LCS 240-49569/1	Lab Control Sample	Total/NA	Water	1010	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

General Chemistry (Continued)

Prep Batch: 49572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	Total/NA	Water	9012A	
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	

Analysis Batch: 49633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	Total/NA	Water	9012A	49572
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	49572
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	49572
MRL 240-49633/12 MRL	Lab Control Sample	Total/NA	Water	9012A	

Prep Batch: 49677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	Total/NA	Water	9030B	
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9030B	
MB 240-49677/14-A	Method Blank	Total/NA	Water	9030B	

Analysis Batch: 49769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-2	FWG-IDW-TANK1A-GW	Total/NA	Water	9034	49677
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9034	49677
MB 240-49677/14-A	Method Blank	Total/NA	Water	9034	49677

Lab Chronicle

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Client Sample ID: FWG-IDW-TANK1A-GW

Lab Sample ID: 240-12752-2

Date Collected: 06/28/12 10:00

Matrix: Water

Date Received: 06/28/12 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			49660	07/02/12 15:35	DJ	TAL NC
TCLP	Analysis	8260B		1	49814	07/03/12 22:56	TL	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3510C			49701	07/03/12 09:09	CC	TAL NC
TCLP	Analysis	8270C		1	49827	07/04/12 14:27	MU	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49705	07/03/12 09:15	BM	TAL NC
TCLP	Analysis	8081A		1	49922	07/05/12 22:40	AR	TAL NC
TCLP	Prep	8151A			49707	07/03/12 09:18	SE	TAL NC
TCLP	Analysis	8151A		1	50094	07/07/12 19:18	AR	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	7470A			49732	07/03/12 14:30	AS	TAL NC
TCLP	Analysis	7470A		1	49962	07/05/12 13:57	SG	TAL NC
TCLP	Prep	3010A			49727	07/03/12 10:01	AS	TAL NC
TCLP	Analysis	6010B		1	50003	07/05/12 17:52	NJM	TAL NC
Total/NA	Analysis	9040B		1	49216	06/28/12 16:20	LG	TAL NC
Total/NA	Analysis	1010		1	49569	07/02/12 11:07	TH	TAL NC
Total/NA	Prep	9012A			49572	07/02/12 09:10	MJC	TAL NC
Total/NA	Analysis	9012A		1	49633	07/02/12 11:06	CN	TAL NC
Total/NA	Prep	9030B			49677	07/03/12 07:56	BW	TAL NC
Total/NA	Analysis	9034		1	49769	07/03/12 13:48	BW	TAL NC

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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Certification Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-2

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518190

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-12752-2

Login Number: 12752

List Source: TestAmerica Canton

List Number: 1

Creator: Livengood, Chris

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

April 20, 2012

Mr. Mark Patterson
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266

Reference: Contract No. GS-10F-0293K
Delivery Order No. W912QR-1-F-0266

Subject: Facility-Wide Groundwater Monitoring Program Plan
RVAAP-66 Facility-Wide Groundwater
Tank #2 IDW Letter Report – Draft

Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI), installation of monitoring wells, approved per the *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum, EQM, Jan 2012* (Addendum) began on February 27, 2012. These activities resulted in the generation of liquid (groundwater) from well installation operations. The purpose of this letter is to characterize and classify IDW from Tank #2 for disposal and to propose methods for disposing the IDW. This report includes a summary of IDW generated and its origin, a summary of the analysis and methods (Table 1), a summary of detected analytical results compared to regulatory characteristic levels (Table 2) and recommendations for disposal. The laboratory data sheets are included in Attachment 1.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (EPA) regarding IDW disposition at RVAAP, including the IDW disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations, SAIC 2011* (FWSAP), and the Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material pending waste characterization and classification based on analytical results. The FWSAP and the Addendum describe approved procedures used for containerizing and handling IDW.

Liquid IDW Discussion

Accumulated indigenous liquid IDW was containerized in a 10,000-gallon frac tank (Tank #2) on site pending transport and disposal to an offsite disposal facility. Tank #2 contained liquid

IDW generated during field activities consisting of recovered water from drilling operations, and purged groundwater from well development. This liquid was generated from February 27, 2012 through March 21, 2012. (Decontamination water is stored in a different onsite tank that will be handled under a separate report). An unfiltered composite sample for disposal characterization was collected from Tank #2. The tank was opened and a composite sample was collected by gently lowering a new, disposable Teflon bailer attached to new polypropylene rope into the holding vessel. The bailer was lowered into the vessel several times, and to different depths, to collect a sufficient representative sample of the water to submit to the laboratory for waste characterization analysis. The retrieved sample was collected using a gloved hand and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the sample container was sealed with minimum head space.

New, disposable nitrile gloves Teflon bailers, and rope was used and discarded appropriately in accordance the Addendum after collection of each composite sample.

The indigenous IDW contained Tank #2 was characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite totals analysis and Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 1. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1. Maximum Concentration of Contaminants for Toxicity Characteristic (40 *CFR* 261.24), and Table 8-2. Maximum Concentration of Hazardous Waste Characterization Analytes (40 *CFR* 261.21-23), as presented in the FWSAP; and against Maximum Contaminant Levels (MCLs), USEPA Risk Screening Levels (RSLs) for tap water and/ or background criteria. Table 2 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP and RVAAP full suite totals analysis for Tank #2.

The following summarizes the IDW Tank #2 analyses:

- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 140 degrees F. Reactive sulfide and reactive cyanide were not detected above the reporting limit.
- Several organic concentrations were detected for the RVAAP full suite totals sample, although they did not exceed the MCLs, or the USEPA RSLs.
- Several explosives concentrations were detected for the RVAAP full suite totals sample, although they did not exceed the MCLs, or the USEPA RSLs.
- Several metals were detected for the RVAAP full suite totals sample. The metals that exceeded the MCL, and/or the USEPA RSL are: aluminum (2000 ug/L), antimony (11 ug/L), arsenic (4.9 ug/L), iron (2300 ug/L), and thallium (0.26 ug/L). However, iron is considered an essential nutrient and not indicative of contamination.

Recommended Disposal Pathways for IDW

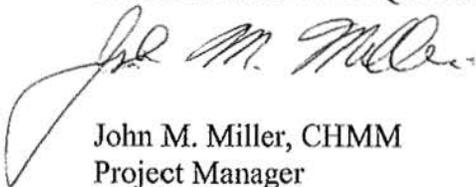
After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. Although arsenic and thallium exceeded USEPA RSLs it did not exceed the MCL. Arsenic exceeds the USEPA RSL but was below the RVAAP background criteria (11.7 ug/L). The thallium concentration was below the MCL and only slightly exceeded the USEPA RSL (0.16 ug/L) and background criteria. Although aluminum exceeded the MCL it was significantly below the USEPA RSL (16000 ug/L). The concentration for antimony exceeded the MCL, RSL, and background criteria, however the detected concentration in the unfiltered IDW sample only slightly exceeded the MCL and RSL.

Given the observed analytical results, and the previous approval of land application based upon similar constituent levels from SAIC during the 2009 Well Installation into the Basal Sharon Conglomerate, it is recommended that the liquid IDW from Tank #2 be classified as non-hazardous, non-contaminated. It is proposed to land apply the liquid IDW near Tank #2 (in the gravel parking area adjacent to, and immediately north of Building 1036) provided that RVAAP and Ohio EPA concur with the preliminary characterization and that no Resource Conservation and Recovery Act (RCRA) listings apply. The liquid IDW will be pumped from the Frac tank through a bag filter and through a straw bale before being discharged to a well vegetated area. Liquid IDW will pass through a 100 µm bag filter before the end of the outlet hose inserted into the straw as a further filtering mechanism and to prevent erosion. The IDW liquid will be released at a rate that will prevent ponding of water and/or runoff and will not be released directly to surface water features, such as creeks, ditches, or streams, or to storm/sanitary sewer lines. Prior to initiating land application of the liquid IDW, the procedure and setup will be reviewed by the RVAAP Facility Manager or designee for final approval.

Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with the appropriate land application. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.



John M. Miller, CHMM
Project Manager

cc: Vicki Deppisch – Ohio EPA
Mark Nichter – USACE
EQM PN – 030174.0016.001.02

Table 1. Summary of Analytical Suite of Chemicals

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium, cadmium, chromium, lead, and selenium)	EPA Method SW-846 1311/6010B
TCLP semivolatile organic compounds (SVOCs)	EPA Method SW-846 1311/8270C
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
pH	EPA Method SW-846 9040B
Polychlorinated biphenyls (PCBs)	EPA Method SW-846 8082
Pesticides	EPA Method SW-846 8081A
Base/Neutrals and Acids (SVOCs)	EPA Method SW-846 8270C
Volatile Organic Compounds (VOCs)	EPA Method SW-846 8260B
Nitroguanidine (Propellant)	EPA Method SW-846 8330 modified
Nitroaromatics & Nitramines (Explosives)	EPA Method SW-846 8330
Nitrocellulose as N (Propellant)	General Chemistry (WS-WC-0050)
Nitrate/Nitrites	General Chemistry (353.2)1
Metals (Magnesium, Manganese, Barium, Nickel, Potassium, Silver, Sodium, Vanadium, Chromium, Calcium, Cobalt, Copper, Arsenic, Lead, Selenium)	EPA Method SW-846 6010B
Metals (Antimony, Iron, Beryllium, Thallium, Zinc, Cadmium, Aluminum)	EPA Method SW-846 6020
Mercury	EPA Method SW-846 7470A

1 EPA Methods for Chemical Analysis of Water and Waste

Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	MCL	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
Total Metals	Aluminum	7429-90-5	ug/L	2000		200	16000	0	NA
Total Metals	Antimony	7440-36-0	ug/L	11		6	6	0	NA
Total Metals	Arsenic	7440-38-2	ug/L	4.9	J	10	0.045	11.7	NA
Total Metals	Barium	7440-39-3	ug/L	38	J B	2000	2900	82.1	NA
Total Metals	Calcium	7440-70-2	ug/L	30000	B	NS	NS	115000	NA
Total Metals	Chromium	7440-47-3	ug/L	6.3		100	16000	7.3	NA
Total Metals	Iron	7439-89-6	ug/L	2300		300	11000	279	NA
Total Metals	Lead	7439-92-1	ug/L	3.5		15	NS	0	NA
Total Metals	Magnesium	7439-95-4	ug/L	10000	B	NS	NS	43300	NA
Total Metals	Manganese	7439-96-5	ug/L	48		50	320	1020	NA
Total Metals	Nickel	7440-02-0	ug/L	3.9	J	NS	760	0	NA
Total Metals	Potassium	9/7/7440	ug/L	7400		NS	NS	2890	NA
Total Metals	Sodium	7440-23-5	ug/L	11000	B	NS	NS	45700	NA
Total Metals	Thallium	7440-28-0	ug/L	0.26	J	2	0.16	0	NA
Total Metals	Vanadium	7440-62-2	ug/L	4.6	J	NS	78	0	NA
Total Metals	Zinc	7440-66-6	ug/L	21	B	5000	4700	60.9	NA
VOCs	2-Butanone (MEK)	78-93-3	ug/L	26		NS	4900	NA	NA
VOCs	4-Methyl-2-pentanone (MIBK)	108-10-1	ug/L	0.42	J	NS	1000	NA	NA
VOCs	Acetone	67-64-1		5.6	J	NS	12000	NA	NA
VOCs	Ethylbenzene	100-41-4	ug/L	0.19	J	700	1.3	NA	NA
VOCs	m-Xylene & p-Xylene	179601-23-1	ug/L	0.84	J	NS	190	NA	NA
VOCs	o-Xylene	95-47-6	ug/L	0.52	J	NS	190	NA	NA
VOCs	Toluene	108-88-3	ug/L	5.6		1000	860	NA	NA
VOCs	Xylenes, Total	1330-20-7	ug/L	1.4	J	10000	190	NA	NA
SVOCs	Benzoic acid	65-85-0	ug/L	20	J	NS	58000	NA	NA
SVOCs	Benzyl alcohol	100-51-6	ug/L	71		NS	1500	NA	NA

**Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels
(continued)**

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	MCL	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
Explosives	2-Amino-4,6-dinitrotoluene	35572-78-2	ug/L	0.36	PG	NS	30	NA	NA
Explosives	4-Amino-4,6-dinitrotoluene	19406-51-0	ug/L	0.24		NS	30	NA	NA
Explosives	RDX	121-82-4	ug/L	0.19	PG CON	NS	0.61	NA	NA
Explosives	Tetryl	479-45-8	ug/L	0.51	PG	NS	63	NA	NA
TCLP-Metals	Arsenic	7440-38-2	mg/L	0.0043	J	NA	NA	NA	5
TCLP-Metals	Barium	7440-39-3	mg/L	0.017	J B	NA	NA	NA	100
TCLP-Metals	Chromium	7440-47-3	mg/L	0.0036	J	NA	NA	NA	5
TCLP-Misc.	Corrosivity	N/A	SU	9.67		NA	NA	NA	NA
TCLP-Misc.	Flashpoint	N/A	F	>176.0		NA	NA	NA	<140
TCLP-SVOCs	2-Methylphenol	95-48-7	mg/L	0.0019	J	NA	NA	NA	200
TCLP-VOCs	2-Butanone (MEK)	78-93-3	mg/L	0.033	J	NA	NA	NA	200

Note:

Chloroform (0.17 ug/L J) and Acetone (12 ug/L) was detected in the Trip blank.

* The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1. Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24), and Table 8-2. Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23).

Bold concentrations exceed Drinking Water Stand – Maximum Contaminate Levels (MCLs).

Italics concentrations exceed USEPA Risk Screening Levels (RSLs).

Shaded concentrations exceed the lowest criteria level for RVAAP unfiltered groundwater.

J = estimated result. Result is less than reporting limit.

B = method blank contamination

PG = The percent difference between the original and confirmation analyses is greater than 40%.

CON = Confirmation analysis.

NA = not applicable

ATTACHMENT 1.
LABORATORY ANALYTICAL DATA SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica North Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-9429-1
Client Project/Site: RVAAP 66 RAVENNA OHIO

For:
Environmental Quality Mgt., Inc.
1800 Carillon Blvd
Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin



Authorized for release by:
4/16/2012 5:39:24 PM

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

- 1
- 2
- 3
- 4
- 5
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Definitions/Glossary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC

Qualifier	Qualifier Description
PG	The percent difference between the original and confirmation analyses is greater than 40%.
U	Indicates the analyte was analyzed for but not detected.
CON	Confirmation analysis.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Job ID: 240-9429-1

Laboratory: TestAmerica North Canton

Narrative

CASE NARRATIVE

Client: Environmental Quality Mgt., Inc.

Project: RVAAP 66 RAVENNA OHIO

Report Number: 240-9429-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

Receipt

The samples were received on 3/21/2012 3:17 PM; the samples arrived in good conditions, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.40 C and 4.80 C.

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 03/26/2012 and analyzed on 03/28/2012.

The continuing calibration verification (CCV) for vinyl chloride associated with batch 38205 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No other difficulties were encountered during the VOCs analysis. All other quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples FWG-IDW-TANK 2 TB (240-9429-1) and FWG-IDW-TANK 2 GW (240-9429-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/30/2012.

No difficulties were encountered during the VOCs analyses. All quality control parameters were within the acceptance limits.

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Job ID: 240-9429-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 03/26/2012, prepared on 03/27/2012 and analyzed on 03/28/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 03/22/2012 and analyzed on 03/30/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for FWG-IDW-TANK 2 GW (240-9429-2). Refer to the QC report for details.

Sample FWG-IDW-TANK 2 GW (240-9429-2)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

TCLP CHLORINATED PESTICIDES

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/ 8081A. The samples were leached on 03/26/2012, prepared on 03/27/2012 and analyzed on 03/29/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

CHLORINATED PESTICIDES

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 03/22/2012 and analyzed on 03/25/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 03/22/2012 and analyzed on 03/23/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the PCBs analysis. All other quality control parameters were within the acceptance limits.

TCLP CHLORINATED HERBICIDES

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/ 8151A. The samples were leached on 03/26/2012, prepared on 03/27/2012 and analyzed on 03/29/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Job ID: 240-9429-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

diluted out and no corrective action is required.

No difficulties were encountered during the herbicides analysis. All quality control parameters were within the acceptance limits.

TCLP METALS (ICP)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/ 6010B. The samples were leached on 03/26/2012, prepared on 03/27/2012 and analyzed on 03/29/2012.

Barium and Selenium were detected in method blank LB 240-38031/1-D at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Barium was detected in method blank MB 240-38070/2-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 03/26/2012 and analyzed on 03/29/2012.

Barium, Calcium and Magnesium were detected in method blank MB 240-38006/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

The continuing calibration verification (CCV) for Beryllium associated with batch 38210 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-TANK 2 GW

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 03/26/2012 and analyzed on 03/27/2012.

Sodium was detected in method blank MB 240-38006/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Zinc was detected in method blank MB 240-38006/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TCLP MERCURY

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 03/26/2012, prepared on 03/27/2012 and analyzed on 03/28/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Job ID: 240-9429-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

TOTAL MERCURY

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 03/26/2012 and analyzed on 03/27/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

FLASHPOINT

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 03/29/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

TOTAL CYANIDE

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 03/22/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

SULFIDE

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 03/27/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

PH

Sample FWG-IDW-TANK 2 GW (240-9429-2) was analyzed for pH in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 03/21/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

Method Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
8081A	Organochlorine Pesticides (GC)	SW846	TAL NC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
8151A	Herbicides (GC)	SW846	TAL NC
8330 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
8330/8330A	Nitroaromatics & Nitramines: Explosives (8330/A)	SW846	TAL WSC
6010B	Metals (ICP)	SW846	TAL NC
6020	Metals (ICP/MS)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL BUF
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
9040B	pH	SW846	TAL NC
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-SOP = TAL-SOP

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL NC = TestAmerica North Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-9429-1	FWG-IDW-TANK 2 TB	Water	03/21/12 00:00	03/21/12 15:17
240-9429-2	FWG-IDW-TANK 2 GW	Water	03/21/12 11:15	03/21/12 15:17

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Detection Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 TB

Lab Sample ID: 240-9429-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	12		10	1.1	ug/L	1		8260B	Total/NA
Chloroform	0.17	J	1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: FWG-IDW-TANK 2 GW

Lab Sample ID: 240-9429-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	26		10	0.57	ug/L	1		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	0.42	J	10	0.32	ug/L	1		8260B	Total/NA
Acetone	5.6	J	10	1.1	ug/L	1		8260B	Total/NA
Ethylbenzene	0.19	J	1.0	0.17	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	0.84	J	2.0	0.24	ug/L	1		8260B	Total/NA
o-Xylene	0.52	J	1.0	0.14	ug/L	1		8260B	Total/NA
Toluene	5.6		1.0	0.13	ug/L	1		8260B	Total/NA
Xylenes, Total	1.4	J	2.0	0.28	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	0.033	J	0.25	0.029	mg/L	1		8260B	TCLP
Benzoic acid	20	J	50	20	ug/L	2		8270C	Total/NA
Benzyl alcohol	71		9.9	0.75	ug/L	2		8270C	Total/NA
2-Methylphenol	0.0019	J	0.0040	0.00080	mg/L	1		8270C	TCLP
2-Amino-4,6-dinitrotoluene	0.39	PG	0.20	0.10	ug/L	1		8330/8330A	Total
4-Amino-2,6-dinitrotoluene	0.24		0.10	0.050	ug/L	1		8330/8330A	Total
RDX	0.19	PG CON	0.10	0.036	ug/L	1		8330/8330A	Total
Tetryl	0.51	PG	0.10	0.050	ug/L	1		8330/8330A	Total
Arsenic	4.9	J	10	3.2	ug/L	1		6010B	Total Recovera
Chromium	6.3		5.0	2.2	ug/L	1		6010B	Total Recovera
Lead	3.5		3.0	1.9	ug/L	1		6010B	Total Recovera
Vanadium	4.6	J	7.0	0.64	ug/L	1		6010B	Total Recovera
Barium	38	J B	200	0.67	ug/L	1		6010B	Total Recovera
Calcium	30000	B	5000	130	ug/L	1		6010B	Total Recovera
Magnesium	10000	B	5000	34	ug/L	1		6010B	Total Recovera
Manganese	48		15	0.41	ug/L	1		6010B	Total Recovera
Nickel	3.9	J	40	3.2	ug/L	1		6010B	Total Recovera
Potassium	7400		5000	72	ug/L	1		6010B	Total Recovera
Arsenic	0.0043	J	0.50	0.0032	mg/L	1		6010B	TCLP
Barium	0.017	J B	10	0.00067	mg/L	1		6010B	TCLP
Chromium	0.0036	J	0.50	0.0022	mg/L	1		6010B	TCLP
Aluminum	2000		50	19	ug/L	1		6020	Total Recovera
Antimony	11		2.0	0.13	ug/L	1		6020	Total Recovera
Iron	2300		100	26	ug/L	1		6020	Total Recovera
Sodium	11000	B	1000	6.9	ug/L	1		6020	Total Recovera
Thallium	0.26	J	2.0	0.14	ug/L	1		6020	Total Recovera
Zinc	21	B	20	2.3	ug/L	1		6020	Total Recovera
Flashpoint	>176.0		50.0	50.0	Degrees F	1		1010	Total/NA
pH	9.67		0.100	0.100	SU	1		9040B	Total/NA

Client Sample Results

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 TB

Lab Sample ID: 240-9429-1

Date Collected: 03/21/12 00:00

Matrix: Water

Date Received: 03/21/12 15:17

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			03/30/12 17:25	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			03/30/12 17:25	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			03/30/12 17:25	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			03/30/12 17:25	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/30/12 17:25	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			03/30/12 17:25	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			03/30/12 17:25	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			03/30/12 17:25	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			03/30/12 17:25	1
2-Hexanone	10	U	10	0.41	ug/L			03/30/12 17:25	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			03/30/12 17:25	1
Acetone	12		10	1.1	ug/L			03/30/12 17:25	1
Benzene	1.0	U	1.0	0.13	ug/L			03/30/12 17:25	1
Bromoform	1.0	U	1.0	0.64	ug/L			03/30/12 17:25	1
Bromomethane	1.0	U	1.0	0.41	ug/L			03/30/12 17:25	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			03/30/12 17:25	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			03/30/12 17:25	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			03/30/12 17:25	1
Chloromethane	1.0	U	1.0	0.30	ug/L			03/30/12 17:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/30/12 17:25	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			03/30/12 17:25	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			03/30/12 17:25	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			03/30/12 17:25	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			03/30/12 17:25	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			03/30/12 17:25	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			03/30/12 17:25	1
o-Xylene	1.0	U	1.0	0.14	ug/L			03/30/12 17:25	1
Styrene	1.0	U	1.0	0.11	ug/L			03/30/12 17:25	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			03/30/12 17:25	1
Toluene	1.0	U	1.0	0.13	ug/L			03/30/12 17:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/30/12 17:25	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/30/12 17:25	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			03/30/12 17:25	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			03/30/12 17:25	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			03/30/12 17:25	1
Chloroform	0.17	J	1.0	0.16	ug/L			03/30/12 17:25	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			03/30/12 17:25	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			03/30/12 17:25	1
Chloroethane	1.0	U	1.0	0.29	ug/L			03/30/12 17:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		74 - 115		03/30/12 17:25	1
1,2-Dichloroethane-d4 (Surr)	104		63 - 129		03/30/12 17:25	1
4-Bromofluorobenzene (Surr)	94		66 - 117		03/30/12 17:25	1
Dibromofluoromethane (Surr)	99		75 - 121		03/30/12 17:25	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 GW

Lab Sample ID: 240-9429-2

Date Collected: 03/21/12 11:15

Matrix: Water

Date Received: 03/21/12 15:17

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			03/30/12 17:48	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			03/30/12 17:48	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			03/30/12 17:48	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			03/30/12 17:48	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/30/12 17:48	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			03/30/12 17:48	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			03/30/12 17:48	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			03/30/12 17:48	1
2-Butanone (MEK)	26		10	0.57	ug/L			03/30/12 17:48	1
2-Hexanone	10	U	10	0.41	ug/L			03/30/12 17:48	1
4-Methyl-2-pentanone (MIBK)	0.42	J	10	0.32	ug/L			03/30/12 17:48	1
Acetone	5.6	J	10	1.1	ug/L			03/30/12 17:48	1
Benzene	1.0	U	1.0	0.13	ug/L			03/30/12 17:48	1
Bromoform	1.0	U	1.0	0.64	ug/L			03/30/12 17:48	1
Bromomethane	1.0	U	1.0	0.41	ug/L			03/30/12 17:48	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			03/30/12 17:48	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			03/30/12 17:48	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			03/30/12 17:48	1
Chloromethane	1.0	U	1.0	0.30	ug/L			03/30/12 17:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/30/12 17:48	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			03/30/12 17:48	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			03/30/12 17:48	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			03/30/12 17:48	1
Ethylbenzene	0.19	J	1.0	0.17	ug/L			03/30/12 17:48	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			03/30/12 17:48	1
m-Xylene & p-Xylene	0.84	J	2.0	0.24	ug/L			03/30/12 17:48	1
o-Xylene	0.52	J	1.0	0.14	ug/L			03/30/12 17:48	1
Styrene	1.0	U	1.0	0.11	ug/L			03/30/12 17:48	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			03/30/12 17:48	1
Toluene	5.6		1.0	0.13	ug/L			03/30/12 17:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/30/12 17:48	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/30/12 17:48	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			03/30/12 17:48	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			03/30/12 17:48	1
Xylenes, Total	1.4	J	2.0	0.28	ug/L			03/30/12 17:48	1
Chloroform	1.0	U	1.0	0.16	ug/L			03/30/12 17:48	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			03/30/12 17:48	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			03/30/12 17:48	1
Chloroethane	1.0	U	1.0	0.29	ug/L			03/30/12 17:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		74 - 115		03/30/12 17:48	1
1,2-Dichloroethane-d4 (Surr)	106		63 - 129		03/30/12 17:48	1
4-Bromofluorobenzene (Surr)	97		66 - 117		03/30/12 17:48	1
Dibromofluoromethane (Surr)	101		75 - 121		03/30/12 17:48	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			03/28/12 00:57	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			03/28/12 00:57	1
2-Butanone (MEK)	0.033	J	0.25	0.029	mg/L			03/28/12 00:57	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 GW

Lab Sample ID: 240-9429-2

Date Collected: 03/21/12 11:15

Matrix: Water

Date Received: 03/21/12 15:17

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0.025	0.0065	mg/L			03/28/12 00:57	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			03/28/12 00:57	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			03/28/12 00:57	1
Chloroform	0.025	U	0.025	0.0080	mg/L			03/28/12 00:57	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			03/28/12 00:57	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			03/28/12 00:57	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			03/28/12 00:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 121		03/28/12 00:57	1
4-Bromofluorobenzene (Surr)	97		70 - 124		03/28/12 00:57	1
Toluene-d8 (Surr)	104		90 - 115		03/28/12 00:57	1
Dibromofluoromethane (Surr)	116		84 - 128		03/28/12 00:57	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Acenaphthylene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Anthracene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzo[a]anthracene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzoic acid	20	J	50	20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzo[b]fluoranthene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzo[k]fluoranthene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzyl alcohol	71		9.9	0.75	ug/L		03/22/12 08:59	03/30/12 20:29	2
Bis(2-chloroethoxy)methane	2.0	U	2.0	0.63	ug/L		03/22/12 08:59	03/30/12 20:29	2
Bis(2-chloroethyl)ether	2.0	U	2.0	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Bromophenyl phenyl ether	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Butyl benzyl phthalate	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4-Dimethylphenol	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Dimethyl phthalate	2.0	U	2.0	0.57	ug/L		03/22/12 08:59	03/30/12 20:29	2
4,6-Dinitro-2-methylphenol	9.9	U	9.9	4.8	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4-Dinitrophenol	9.9	U	9.9	4.8	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4-Dinitrotoluene	9.9	U	9.9	0.53	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,6-Dinitrotoluene	9.9	U	9.9	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Fluoranthene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Fluorene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Hexachlorobenzene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Hexachlorobutadiene	2.0	U	2.0	0.53	ug/L		03/22/12 08:59	03/30/12 20:29	2
Hexachlorocyclopentadiene	20	U	20	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Hexachloroethane	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
N-Nitrosodiphenylamine	2.0	U	2.0	0.61	ug/L		03/22/12 08:59	03/30/12 20:29	2
N-Nitrosodi-n-propylamine	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
1,4-Dichlorobenzene	2.0	U	2.0	0.67	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Chloronaphthalene	2.0	U	2.0	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Chlorophenol	2.0	U	2.0	0.57	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Chlorophenyl phenyl ether	4.0	U	4.0	0.59	ug/L		03/22/12 08:59	03/30/12 20:29	2
Chrysene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Dibenz(a,h)anthracene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Dibenzofuran	2.0	U	2.0	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzo[g,h,i]perylene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Benzo[a]pyrene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2

Client Sample Results

Client: Environmental Quality Mgt., Inc.
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TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 GW

Lab Sample ID: 240-9429-2

Date Collected: 03/21/12 11:15

Matrix: Water

Date Received: 03/21/12 15:17

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	2.0	U	2.0	1.3	ug/L		03/22/12 08:59	03/30/12 20:29	2
1,2-Dichlorobenzene	2.0	U	2.0	0.57	ug/L		03/22/12 08:59	03/30/12 20:29	2
1,3-Dichlorobenzene	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
3,3'-Dichlorobenzidine	9.9	U	9.9	0.73	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4-Dichlorophenol	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Diethyl phthalate	2.0	U	2.0	1.2	ug/L		03/22/12 08:59	03/30/12 20:29	2
Indeno[1,2,3-cd]pyrene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Isophorone	2.0	U	2.0	0.53	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Methylnaphthalene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Methylphenol	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Naphthalene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Nitroaniline	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
3-Nitroaniline	4.0	U	4.0	0.55	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Nitroaniline	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Nitrobenzene	2.0	U	2.0	0.079	ug/L		03/22/12 08:59	03/30/12 20:29	2
2-Nitrophenol	4.0	U	4.0	0.55	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Nitrophenol	9.9	U	9.9	4.8	ug/L		03/22/12 08:59	03/30/12 20:29	2
Pyrene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
Pentachlorophenol	9.9	U	9.9	4.8	ug/L		03/22/12 08:59	03/30/12 20:29	2
Phenanthrene	0.40	U	0.40	0.20	ug/L		03/22/12 08:59	03/30/12 20:29	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.55	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4,5-Trichlorophenol	9.9	U	9.9	0.59	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,4,6-Trichlorophenol	9.9	U	9.9	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Phenol	2.0	U	2.0	1.2	ug/L		03/22/12 08:59	03/30/12 20:29	2
Carbazole	2.0	U	2.0	0.55	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Chloroaniline	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
3 & 4 Methylphenol	4.0	U	4.0	1.5	ug/L		03/22/12 08:59	03/30/12 20:29	2
Bis(2-ethylhexyl) phthalate	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
Di-n-octyl phthalate	2.0	U	2.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
4-Chloro-3-methylphenol	4.0	U	4.0	1.6	ug/L		03/22/12 08:59	03/30/12 20:29	2
2,2'-oxybis[1-chloropropane]	2.0	U	2.0	0.79	ug/L		03/22/12 08:59	03/30/12 20:29	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	46		28 - 110	03/22/12 08:59	03/30/12 20:29	2
2-Fluorophenol (Surr)	59		10 - 110	03/22/12 08:59	03/30/12 20:29	2
Nitrobenzene-d5 (Surr)	49		27 - 111	03/22/12 08:59	03/30/12 20:29	2
Terphenyl-d14 (Surr)	36	X	37 - 119	03/22/12 08:59	03/30/12 20:29	2
2,4,6-Tribromophenol (Surr)	49		22 - 120	03/22/12 08:59	03/30/12 20:29	2
Phenol-d5 (Surr)	59		10 - 110	03/22/12 08:59	03/30/12 20:29	2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		03/27/12 08:40	03/28/12 14:18	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		03/27/12 08:40	03/28/12 14:18	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		03/27/12 08:40	03/28/12 14:18	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		03/27/12 08:40	03/28/12 14:18	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		03/27/12 08:40	03/28/12 14:18	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		03/27/12 08:40	03/28/12 14:18	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		03/27/12 08:40	03/28/12 14:18	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		03/27/12 08:40	03/28/12 14:18	1
2-Methylphenol	0.0019	J	0.0040	0.00080	mg/L		03/27/12 08:40	03/28/12 14:18	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 GW

Lab Sample ID: 240-9429-2

Date Collected: 03/21/12 11:15

Matrix: Water

Date Received: 03/21/12 15:17

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		03/27/12 08:40	03/28/12 14:18	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		03/27/12 08:40	03/28/12 14:18	1
Pyridine	0.020	U	0.020	0.00035	mg/L		03/27/12 08:40	03/28/12 14:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	72		22 - 110				03/27/12 08:40	03/28/12 14:18	1
2-Fluorophenol (Surr)	64		10 - 110				03/27/12 08:40	03/28/12 14:18	1
2,4,6-Tribromophenol (Surr)	80		17 - 117				03/27/12 08:40	03/28/12 14:18	1
Nitrobenzene-d5 (Surr)	72		29 - 111				03/27/12 08:40	03/28/12 14:18	1
Phenol-d5 (Surr)	55		10 - 110				03/27/12 08:40	03/28/12 14:18	1
Terphenyl-d14 (Surr)	86		40 - 119				03/27/12 08:40	03/28/12 14:18	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.051	U	0.051	0.0098	ug/L		03/22/12 09:10	03/25/12 10:35	1
4,4'-DDE	0.051	U	0.051	0.0099	ug/L		03/22/12 09:10	03/25/12 10:35	1
4,4'-DDT	0.051	U	0.051	0.016	ug/L		03/22/12 09:10	03/25/12 10:35	1
Aldrin	0.051	U	0.051	0.0084	ug/L		03/22/12 09:10	03/25/12 10:35	1
alpha-BHC	0.051	U	0.051	0.0071	ug/L		03/22/12 09:10	03/25/12 10:35	1
alpha-Chlordane	0.051	U	0.051	0.014	ug/L		03/22/12 09:10	03/25/12 10:35	1
beta-BHC	0.051	U	0.051	0.0086	ug/L		03/22/12 09:10	03/25/12 10:35	1
delta-BHC	0.051	U	0.051	0.0089	ug/L		03/22/12 09:10	03/25/12 10:35	1
Dieldrin	0.051	U	0.051	0.0077	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endosulfan I	0.051	U	0.051	0.013	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endosulfan II	0.051	U	0.051	0.012	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endosulfan sulfate	0.051	U	0.051	0.011	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endrin	0.051	U	0.051	0.011	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endrin aldehyde	0.051	U	0.051	0.011	ug/L		03/22/12 09:10	03/25/12 10:35	1
Endrin ketone	0.051	U	0.051	0.0080	ug/L		03/22/12 09:10	03/25/12 10:35	1
gamma-BHC (Lindane)	0.051	U	0.051	0.0065	ug/L		03/22/12 09:10	03/25/12 10:35	1
gamma-Chlordane	0.051	U	0.051	0.012	ug/L		03/22/12 09:10	03/25/12 10:35	1
Heptachlor	0.051	U	0.051	0.0082	ug/L		03/22/12 09:10	03/25/12 10:35	1
Heptachlor epoxide	0.051	U	0.051	0.0072	ug/L		03/22/12 09:10	03/25/12 10:35	1
Methoxychlor	0.10	U	0.10	0.033	ug/L		03/22/12 09:10	03/25/12 10:35	1
Toxaphene	2.0	U	2.0	0.33	ug/L		03/22/12 09:10	03/25/12 10:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	13		10 - 145				03/22/12 09:10	03/25/12 10:35	1
DCB Decachlorobiphenyl	13		10 - 145				03/22/12 09:10	03/25/12 10:35	1
Tetrachloro-m-xylene	75		30 - 141				03/22/12 09:10	03/25/12 10:35	1
Tetrachloro-m-xylene	48		30 - 141				03/22/12 09:10	03/25/12 10:35	1

Method: 8081A - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		03/27/12 08:42	03/29/12 22:08	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		03/27/12 08:42	03/29/12 22:08	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		03/27/12 08:42	03/29/12 22:08	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		03/27/12 08:42	03/29/12 22:08	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		03/27/12 08:42	03/29/12 22:08	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		03/27/12 08:42	03/29/12 22:08	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		03/27/12 08:42	03/29/12 22:08	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 GW

Lab Sample ID: 240-9429-2

Date Collected: 03/21/12 11:15

Matrix: Water

Date Received: 03/21/12 15:17

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		46 - 122	03/27/12 08:42	03/29/12 22:08	1
Tetrachloro-m-xylene	81		46 - 122	03/27/12 08:42	03/29/12 22:08	1
DCB Decachlorobiphenyl	61		34 - 141	03/27/12 08:42	03/29/12 22:08	1
DCB Decachlorobiphenyl	64		34 - 141	03/27/12 08:42	03/29/12 22:08	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.51	U	0.51	0.17	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1221	0.51	U	0.51	0.13	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1232	0.51	U	0.51	0.16	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1242	0.51	U	0.51	0.22	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1248	0.51	U	0.51	0.10	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1254	0.51	U	0.51	0.16	ug/L		03/22/12 09:16	03/23/12 17:36	1
Aroclor-1260	0.51	U	0.51	0.17	ug/L		03/22/12 09:16	03/23/12 17:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	56		23 - 136	03/22/12 09:16	03/23/12 17:36	1
DCB Decachlorobiphenyl	13		10 - 130	03/22/12 09:16	03/23/12 17:36	1

Method: 8151A - Herbicides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		03/27/12 08:46	03/29/12 23:32	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		03/27/12 08:46	03/29/12 23:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	74		37 - 116	03/27/12 08:46	03/29/12 23:32	1
2,4-Dichlorophenylacetic acid	70		37 - 116	03/27/12 08:46	03/29/12 23:32	1

Method: 8330 (Modified) - Organic Compounds by UV/HPLC - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	20	U	20	2.4	ug/L		03/28/12 09:45	03/29/12 11:43	1

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroglycerin	0.65	U	0.65	0.33	ug/L		03/27/12 07:00	03/31/12 01:42	1
PETN	0.65	U	0.65	0.30	ug/L		03/27/12 07:00	03/31/12 01:42	1
2-Amino-4,6-dinitrotoluene	0.39	PG	0.20	0.10	ug/L		03/27/12 07:00	03/31/12 01:42	1
4-Amino-2,6-dinitrotoluene	0.24		0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
1,3-Dinitrobenzene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
2,4-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
2,6-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
HMX	0.10	U	0.10	0.036	ug/L		03/27/12 07:00	03/31/12 01:42	1
Nitrobenzene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
2-Nitrotoluene	0.50	U	0.50	0.088	ug/L		03/27/12 07:00	03/31/12 01:42	1
3-Nitrotoluene	0.50	U	0.50	0.057	ug/L		03/27/12 07:00	03/31/12 01:42	1
4-Nitrotoluene	0.65	U	0.65	0.088	ug/L		03/27/12 07:00	03/31/12 01:42	1
RDX	0.19	PG CON	0.10	0.036	ug/L		03/27/12 07:00	03/31/12 01:42	1
Tetryl	0.51	PG	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1
1,3,5-Trinitrobenzene	0.10	U	0.10	0.030	ug/L		03/27/12 07:00	03/31/12 01:42	1
2,4,6-Trinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 01:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	98		79 - 111	03/27/12 07:00	03/31/12 01:42	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 GW

Lab Sample ID: 240-9429-2

Date Collected: 03/21/12 11:15

Matrix: Water

Date Received: 03/21/12 15:17

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.9	J	10	3.2	ug/L		03/26/12 10:29	03/29/12 11:37	1
Chromium	6.3		5.0	2.2	ug/L		03/26/12 10:29	03/29/12 11:37	1
Cobalt	7.0	U	7.0	1.7	ug/L		03/26/12 10:29	03/29/12 11:37	1
Lead	3.5		3.0	1.9	ug/L		03/26/12 10:29	03/29/12 11:37	1
Selenium	5.0	U	5.0	4.1	ug/L		03/26/12 10:29	03/29/12 11:37	1
Silver	5.0	U	5.0	2.2	ug/L		03/26/12 10:29	03/29/12 11:37	1
Vanadium	4.6	J	7.0	0.64	ug/L		03/26/12 10:29	03/29/12 11:37	1
Barium	38	J B	200	0.67	ug/L		03/26/12 10:29	03/29/12 11:37	1
Calcium	30000	B	5000	130	ug/L		03/26/12 10:29	03/29/12 11:37	1
Copper	25	U	25	4.5	ug/L		03/26/12 10:29	03/29/12 11:37	1
Magnesium	10000	B	5000	34	ug/L		03/26/12 10:29	03/29/12 11:37	1
Manganese	48		15	0.41	ug/L		03/26/12 10:29	03/29/12 11:37	1
Nickel	3.9	J	40	3.2	ug/L		03/26/12 10:29	03/29/12 11:37	1
Potassium	7400		5000	72	ug/L		03/26/12 10:29	03/29/12 11:37	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0043	J	0.50	0.0032	mg/L		03/27/12 05:58	03/29/12 17:10	1
Barium	0.017	J B	10	0.00067	mg/L		03/27/12 05:58	03/29/12 17:10	1
Cadmium	0.10	U	0.10	0.00066	mg/L		03/27/12 05:58	03/29/12 17:10	1
Chromium	0.0036	J	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 17:10	1
Lead	0.50	U	0.50	0.0019	mg/L		03/27/12 05:58	03/29/12 17:10	1
Selenium	0.25	U	0.25	0.0041	mg/L		03/27/12 05:58	03/29/12 17:10	1
Silver	0.50	U	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 17:10	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2000		50	19	ug/L		03/26/12 10:29	03/27/12 20:13	1
Antimony	11		2.0	0.13	ug/L		03/26/12 10:29	03/27/12 20:13	1
Beryllium	1.0	U ^	1.0	0.20	ug/L		03/26/12 10:29	03/27/12 20:13	1
Cadmium	1.0	U	1.0	0.13	ug/L		03/26/12 10:29	03/27/12 20:13	1
Iron	2300		100	26	ug/L		03/26/12 10:29	03/27/12 20:13	1
Sodium	11000	B	1000	6.9	ug/L		03/26/12 10:29	03/27/12 20:13	1
Thallium	0.26	J	2.0	0.14	ug/L		03/26/12 10:29	03/27/12 20:13	1
Zinc	21	B	20	2.3	ug/L		03/26/12 10:29	03/27/12 20:13	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.12	ug/L		03/26/12 14:30	03/27/12 14:48	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		03/27/12 15:20	03/28/12 14:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>176.0		50.0	50.0	Degrees F			03/29/12 13:44	1
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		03/22/12 11:15	03/22/12 15:26	1
Sulfide	3.0	U	3.0	0.94	mg/L		03/27/12 09:29	03/27/12 14:28	1
pH	9.67		0.100	0.100	SU			03/21/12 16:12	1
Nitrocellulose	2.0	U	2.0	0.48	mg/L		03/28/12 06:00	03/29/12 14:45	1

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (74-115)	12DCE (63-129)	BFB (66-117)	DBFM (75-121)
240-9429-1	FWG-IDW-TANK 2 TB	100	104	94	99
240-9429-2	FWG-IDW-TANK 2 GW	100	106	97	101
LCS 240-38578/4	Lab Control Sample	96	100	102	103
MB 240-38578/5	Method Blank	97	106	94	102

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	TOL (90-115)	BFB (70-124)	DBFM (84-128)
LCS 240-38205/5	Lab Control Sample	106	107	102	115

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (90-115)	DBFM (84-128)
240-9429-2	FWG-IDW-TANK 2 GW	107	97	104	116
LB 240-38052/1-A MB	Method Blank	100	97	104	108

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (28-110)	2FP (10-110)	NBZ (27-111)	TPH (37-119)	TBP (22-120)	PHL (10-110)
240-9429-2	FWG-IDW-TANK 2 GW	46	59	49	36 X	49	59
LCS 240-37618/23-A	Lab Control Sample	69	72	74	77	71	73
MB 240-37618/24-A	Method Blank	57	60	62	73	48	59

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
PHL = Phenol-d5 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (10-110)	PHL (10-110)	FBP (22-110)	TBP (17-117)	NBZ (29-111)	TPH (40-119)
LCS 240-38099/2-A	Lab Control Sample	67	60	69	76	67	72
MB 240-38099/1-A	Method Blank	66	60	63	69	63	67

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
FBP = 2-Fluorobiphenyl (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
240-9429-2	FWG-IDW-TANK 2 GW	72	64	80	72	55	86
240-9429-2 MS	FWG-IDW-TANK 2 GW	74	70	83	73	63	85

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (10-145)	DCB2 (10-145)	TCX1 (30-141)	TCX2 (30-141)
240-9429-2	FWG-IDW-TANK 2 GW	13	13	75	48
LCS 240-37621/11-A	Lab Control Sample	72	69	61	64
MB 240-37621/12-A	Method Blank	71	73	59	60

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (34-141)	DCB2 (34-141)	TCX1 (46-122)	TCX2 (46-122)
LCS 240-38100/2-A	Lab Control Sample	95	80	99	69
MB 240-38100/1-A	Method Blank	82	84	76	84

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (46-122)	TCX2 (46-122)	DCB1 (34-141)	DCB2 (34-141)
240-9429-2	FWG-IDW-TANK 2 GW	75	81	61	64
240-9429-2 MS	FWG-IDW-TANK 2 GW	120	86	100	83

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX2 (23-136)	DCB2 (10-130)
240-9429-2	FWG-IDW-TANK 2 GW	56	13
LCS 240-37623/5-A	Lab Control Sample	81	77
MB 240-37623/6-A	Method Blank	80	76

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCPA1 (37-116)	DCPA2 (37-116)
LCS 240-38102/2-A	Lab Control Sample	75	73
MB 240-38102/1-A	Method Blank	71	67

Surrogate Legend
DCPA = 2,4-Dichlorophenylacetic acid

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPA1 (37-116)	DCPA2 (37-116)
240-9429-2	FWG-IDW-TANK 2 GW	74	70
Surrogate Legend			
DCPA = 2,4-Dichlorophenylacetic acid			

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Matrix: Water

Prep Type: Total

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DNT (79-111)
240-9429-2	FWG-IDW-TANK 2 GW	98
G2C270000022B	Method Blank	102
G2C270000022C	Lab Control Sample	105
Surrogate Legend		
DNT = 3,4-Dinitrotoluene		

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 240-38205/5

Matrix: Water

Analysis Batch: 38205

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	1.00	1.06		mg/L		106	71 - 133
1,2-Dichloroethane	1.00	0.910		mg/L		91	81 - 114
2-Butanone (MEK)	2.00	1.74		mg/L		87	49 - 120
Benzene	1.00	0.890		mg/L		89	84 - 120
Carbon tetrachloride	1.00	1.05		mg/L		105	54 - 122
Chlorobenzene	1.00	0.925		mg/L		93	86 - 111
Tetrachloroethene	1.00	0.905		mg/L		91	79 - 134
Trichloroethene	1.00	0.945		mg/L		95	78 - 130
Vinyl chloride	1.00	1.01		mg/L		101	56 - 111
Chloroform	1.00	0.885		mg/L		89	87 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		80 - 121
Toluene-d8 (Surr)	107		90 - 115
4-Bromofluorobenzene (Surr)	102		70 - 124
Dibromofluoromethane (Surr)	115		84 - 128

Lab Sample ID: MB 240-38578/5

Matrix: Water

Analysis Batch: 38578

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			03/30/12 11:27	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			03/30/12 11:27	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			03/30/12 11:27	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			03/30/12 11:27	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/30/12 11:27	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			03/30/12 11:27	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			03/30/12 11:27	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			03/30/12 11:27	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			03/30/12 11:27	1
2-Hexanone	10	U	10	0.41	ug/L			03/30/12 11:27	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			03/30/12 11:27	1
Acetone	10	U	10	1.1	ug/L			03/30/12 11:27	1
Benzene	1.0	U	1.0	0.13	ug/L			03/30/12 11:27	1
Bromoform	1.0	U	1.0	0.64	ug/L			03/30/12 11:27	1
Bromomethane	1.0	U	1.0	0.41	ug/L			03/30/12 11:27	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			03/30/12 11:27	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			03/30/12 11:27	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			03/30/12 11:27	1
Chloromethane	1.0	U	1.0	0.30	ug/L			03/30/12 11:27	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/30/12 11:27	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			03/30/12 11:27	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			03/30/12 11:27	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			03/30/12 11:27	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			03/30/12 11:27	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			03/30/12 11:27	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			03/30/12 11:27	1
o-Xylene	1.0	U	1.0	0.14	ug/L			03/30/12 11:27	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-38578/5

Matrix: Water

Analysis Batch: 38578

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Styrene	1.0	U	1.0	0.11	ug/L			03/30/12 11:27	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			03/30/12 11:27	1
Toluene	1.0	U	1.0	0.13	ug/L			03/30/12 11:27	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/30/12 11:27	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/30/12 11:27	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			03/30/12 11:27	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			03/30/12 11:27	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			03/30/12 11:27	1
Chloroform	1.0	U	1.0	0.16	ug/L			03/30/12 11:27	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			03/30/12 11:27	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			03/30/12 11:27	1
Chloroethane	1.0	U	1.0	0.29	ug/L			03/30/12 11:27	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	106		63 - 129		03/30/12 11:27	1
Toluene-d8 (Surr)	97		74 - 115		03/30/12 11:27	1
4-Bromofluorobenzene (Surr)	94		66 - 117		03/30/12 11:27	1
Dibromofluoromethane (Surr)	102		75 - 121		03/30/12 11:27	1

Lab Sample ID: LCS 240-38578/4

Matrix: Water

Analysis Batch: 38578

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1,1-Trichloroethane	10.0	9.89		ug/L		99	74 - 118
1,1,2,2-Tetrachloroethane	10.0	8.96		ug/L		90	68 - 118
1,1,2-Trichloroethane	10.0	9.15		ug/L		92	80 - 112
1,1-Dichloroethane	10.0	10.6		ug/L		106	82 - 115
1,1-Dichloroethene	10.0	10.7		ug/L		107	78 - 131
1,2-Dichloroethane	10.0	10.3		ug/L		103	71 - 127
1,2-Dichloroethene, Total	20.0	21.1		ug/L		106	82 - 114
1,2-Dichloropropane	10.0	9.76		ug/L		98	81 - 115
2-Butanone (MEK)	20.0	19.6		ug/L		98	60 - 126
2-Hexanone	20.0	16.0		ug/L		80	55 - 133
4-Methyl-2-pentanone (MIBK)	20.0	18.7		ug/L		94	63 - 128
Acetone	20.0	25.2		ug/L		126	43 - 136
Benzene	10.0	10.1		ug/L		101	83 - 112
Bromoform	10.0	7.01		ug/L		70	40 - 131
Bromomethane	10.0	10.4		ug/L		104	11 - 185
Carbon disulfide	10.0	10.2		ug/L		102	62 - 142
Carbon tetrachloride	10.0	9.50		ug/L		95	66 - 128
Chlorobenzene	10.0	9.51		ug/L		95	85 - 110
Chloromethane	10.0	8.20		ug/L		82	44 - 126
cis-1,2-Dichloroethene	10.0	10.5		ug/L		105	80 - 113
cis-1,3-Dichloropropene	10.0	8.37		ug/L		84	61 - 115
Dibromochloromethane	10.0	7.65		ug/L		77	64 - 119
Bromodichloromethane	10.0	9.81		ug/L		98	72 - 121
Ethylbenzene	10.0	9.36		ug/L		94	83 - 112
Methylene Chloride	10.0	10.5		ug/L		105	66 - 131

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-38578/4

Matrix: Water

Analysis Batch: 38578

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	20.0	19.1		ug/L		96	83 - 113
o-Xylene	10.0	9.76		ug/L		98	83 - 113
Styrene	10.0	9.92		ug/L		99	79 - 114
Tetrachloroethene	10.0	9.59		ug/L		96	79 - 114
Toluene	10.0	9.31		ug/L		93	84 - 111
trans-1,2-Dichloroethene	10.0	10.6		ug/L		106	83 - 117
trans-1,3-Dichloropropene	10.0	6.99		ug/L		70	58 - 117
Trichloroethene	10.0	10.1		ug/L		101	76 - 117
Vinyl chloride	10.0	8.65		ug/L		87	53 - 127
Xylenes, Total	30.0	28.9		ug/L		96	83 - 112
Chloroform	10.0	10.4		ug/L		104	79 - 117
Bromochloromethane	10.0	10.4		ug/L		104	77 - 120
1,2-Dibromoethane	10.0	8.96		ug/L		90	79 - 113
Chloroethane	10.0	9.02		ug/L		90	25 - 153

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		63 - 129
Toluene-d8 (Surr)	96		74 - 115
4-Bromofluorobenzene (Surr)	102		66 - 117
Dibromofluoromethane (Surr)	103		75 - 121

Lab Sample ID: LB 240-38052/1-A MB

Matrix: Water

Analysis Batch: 38205

Client Sample ID: Method Blank

Prep Type: TCLP

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			03/27/12 18:35	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			03/27/12 18:35	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			03/27/12 18:35	1
Benzene	0.025	U	0.025	0.0065	mg/L			03/27/12 18:35	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			03/27/12 18:35	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			03/27/12 18:35	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			03/27/12 18:35	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			03/27/12 18:35	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			03/27/12 18:35	1
Chloroform	0.025	U	0.025	0.0080	mg/L			03/27/12 18:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121		03/27/12 18:35	1
Toluene-d8 (Surr)	104		90 - 115		03/27/12 18:35	1
4-Bromofluorobenzene (Surr)	97		70 - 124		03/27/12 18:35	1
Dibromofluoromethane (Surr)	108		84 - 128		03/27/12 18:35	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-37618/24-A

Matrix: Water

Analysis Batch: 38105

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37618

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Acenaphthylene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Anthracene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzo[a]anthracene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzoic acid	25	U	25	10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		03/22/12 08:59	03/27/12 12:56	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		03/22/12 08:59	03/27/12 12:56	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Butyl benzyl phthalate	1.0	U	1.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4-Dimethylphenol	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		03/22/12 08:59	03/27/12 12:56	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Fluoranthene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Fluorene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Hexachlorobutadiene	1.0	U	1.0	0.27	ug/L		03/22/12 08:59	03/27/12 12:56	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
N-Nitrosodiphenylamine	1.0	U	1.0	0.31	ug/L		03/22/12 08:59	03/27/12 12:56	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		03/22/12 08:59	03/27/12 12:56	1
Chrysene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzo[g,h,i]perylene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Benzo[a]pyrene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Di-n-butyl phthalate	1.0	U	1.0	0.67	ug/L		03/22/12 08:59	03/27/12 12:56	1
1,2-Dichlorobenzene	1.0	U	1.0	0.29	ug/L		03/22/12 08:59	03/27/12 12:56	1
1,3-Dichlorobenzene	1.0	U	1.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4-Dichlorophenol	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		03/22/12 08:59	03/27/12 12:56	1
Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Isophorone	1.0	U	1.0	0.27	ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Naphthalene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-37618/24-A

Matrix: Water

Analysis Batch: 38105

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37618

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitrobenzene	1.0	U	1.0	0.040	ug/L		03/22/12 08:59	03/27/12 12:56	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		03/22/12 08:59	03/27/12 12:56	1
Pyrene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		03/22/12 08:59	03/27/12 12:56	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		03/22/12 08:59	03/27/12 12:56	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,4,6-Trichlorophenol	5.0	U	5.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Phenol	1.0	U	1.0	0.60	ug/L		03/22/12 08:59	03/27/12 12:56	1
Carbazole	1.0	U	1.0	0.28	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Chloroaniline	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		03/22/12 08:59	03/27/12 12:56	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		03/22/12 08:59	03/27/12 12:56	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		03/22/12 08:59	03/27/12 12:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	57		28 - 110	03/22/12 08:59	03/27/12 12:56	1
2-Fluorophenol (Surr)	60		10 - 110	03/22/12 08:59	03/27/12 12:56	1
2,4,6-Tribromophenol (Surr)	48		22 - 120	03/22/12 08:59	03/27/12 12:56	1
Nitrobenzene-d5 (Surr)	62		27 - 111	03/22/12 08:59	03/27/12 12:56	1
Phenol-d5 (Surr)	59		10 - 110	03/22/12 08:59	03/27/12 12:56	1
Terphenyl-d14 (Surr)	73		37 - 119	03/22/12 08:59	03/27/12 12:56	1

Lab Sample ID: LCS 240-37618/23-A

Matrix: Water

Analysis Batch: 38105

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37618

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Acenaphthene	20.0	12.6		ug/L		63	40 - 110
Acenaphthylene	20.0	14.1		ug/L		71	43 - 110
Anthracene	20.0	14.2		ug/L		71	54 - 114
Benzo[a]anthracene	20.0	13.3		ug/L		67	55 - 115
Benzoic acid	20.0	25	U	ug/L		44	10 - 129
Benzo[b]fluoranthene	20.0	12.3		ug/L		62	43 - 122
Benzo[k]fluoranthene	20.0	12.6		ug/L		63	43 - 124
Benzyl alcohol	20.0	11.4		ug/L		57	10 - 130
Bis(2-chloroethoxy)methane	20.0	14.0		ug/L		70	39 - 110
Bis(2-chloroethyl)ether	20.0	15.0		ug/L		75	34 - 113
4-Bromophenyl phenyl ether	20.0	14.3		ug/L		72	51 - 114
Butyl benzyl phthalate	20.0	14.9		ug/L		74	53 - 126
2,4-Dimethylphenol	20.0	11.7		ug/L		58	12 - 110
Dimethyl phthalate	20.0	14.5		ug/L		72	15 - 143
4,6-Dinitro-2-methylphenol	20.0	12.1		ug/L		61	28 - 112
2,4-Dinitrophenol	20.0	9.06		ug/L		45	17 - 112
2,4-Dinitrotoluene	20.0	15.9		ug/L		80	52 - 123
2,6-Dinitrotoluene	20.0	16.3		ug/L		81	52 - 119

QC Sample Results

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-37618/23-A

Matrix: Water

Analysis Batch: 38105

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37618

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoranthene	20.0	14.7		ug/L		73	54 - 122
Fluorene	20.0	13.6		ug/L		68	47 - 112
Hexachlorobenzene	20.0	15.0		ug/L		75	51 - 112
Hexachlorobutadiene	20.0	13.1		ug/L		65	13 - 110
Hexachlorocyclopentadiene	20.0	6.42	J	ug/L		32	10 - 110
Hexachloroethane	20.0	11.9		ug/L		60	12 - 110
N-Nitrosodiphenylamine	20.0	12.4		ug/L		62	53 - 113
N-Nitrosodi-n-propylamine	20.0	14.0		ug/L		70	37 - 121
1,4-Dichlorobenzene	20.0	12.3		ug/L		62	19 - 110
2-Chloronaphthalene	20.0	13.6		ug/L		68	39 - 110
2-Chlorophenol	20.0	14.1		ug/L		71	27 - 110
4-Chlorophenyl phenyl ether	20.0	14.5		ug/L		73	50 - 115
Chrysene	20.0	15.1		ug/L		76	55 - 115
Dibenz(a,h)anthracene	20.0	11.9		ug/L		60	46 - 122
Dibenzofuran	20.0	14.4		ug/L		72	46 - 111
Benzo[g,h,i]perylene	20.0	12.6		ug/L		63	45 - 120
Benzo[a]pyrene	20.0	10.9		ug/L		55	43 - 116
Di-n-butyl phthalate	20.0	16.3		ug/L		82	55 - 122
1,2-Dichlorobenzene	20.0	12.5		ug/L		63	23 - 110
1,3-Dichlorobenzene	20.0	12.2		ug/L		61	19 - 110
3,3'-Dichlorobenzidine	20.0	8.12		ug/L		41	19 - 110
2,4-Dichlorophenol	20.0	14.9		ug/L		75	33 - 110
Diethyl phthalate	20.0	14.8		ug/L		74	33 - 134
Indeno[1,2,3-cd]pyrene	20.0	11.7		ug/L		58	46 - 121
Isophorone	20.0	14.0		ug/L		70	44 - 128
2-Methylnaphthalene	20.0	13.8		ug/L		69	35 - 110
2-Methylphenol	20.0	13.6		ug/L		68	30 - 110
Naphthalene	20.0	14.7		ug/L		74	31 - 110
2-Nitroaniline	20.0	14.5		ug/L		73	43 - 130
3-Nitroaniline	20.0	14.6		ug/L		73	45 - 116
4-Nitroaniline	20.0	12.9		ug/L		65	45 - 120
Nitrobenzene	20.0	14.4		ug/L		72	37 - 115
2-Nitrophenol	20.0	13.6		ug/L		68	29 - 110
4-Nitrophenol	20.0	14.1		ug/L		71	12 - 130
Pyrene	20.0	15.0		ug/L		75	55 - 120
Pentachlorophenol	20.0	5.62		ug/L		28	26 - 110
Phenanthrene	20.0	14.2		ug/L		71	52 - 114
1,2,4-Trichlorobenzene	20.0	12.3		ug/L		62	25 - 110
2,4,5-Trichlorophenol	20.0	14.5		ug/L		73	39 - 110
2,4,6-Trichlorophenol	20.0	13.6		ug/L		68	35 - 110
Phenol	20.0	14.2		ug/L		71	14 - 112
Carbazole	20.0	14.1		ug/L		71	53 - 120
4-Chloroaniline	20.0	12.7		ug/L		64	10 - 110
3 & 4 Methylphenol	40.0	30.2		ug/L		76	32 - 110
Bis(2-ethylhexyl) phthalate	20.0	10.1		ug/L		51	36 - 163
Di-n-octyl phthalate	20.0	10.2		ug/L		51	44 - 128
4-Chloro-3-methylphenol	20.0	16.0		ug/L		80	39 - 110
2,2'-oxybis[1-chloropropane]	20.0	12.8		ug/L		64	25 - 128

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-37618/23-A
Matrix: Water
Analysis Batch: 38105

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37618

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	69		28 - 110
2-Fluorophenol (Surr)	72		10 - 110
2,4,6-Tribromophenol (Surr)	71		22 - 120
Nitrobenzene-d5 (Surr)	74		27 - 111
Phenol-d5 (Surr)	73		10 - 110
Terphenyl-d14 (Surr)	77		37 - 119

Lab Sample ID: MB 240-38099/1-A
Matrix: Water
Analysis Batch: 38218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38099

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Pyridine	0.020	U	0.020	0.00035	mg/L		03/27/12 08:40	03/28/12 09:45	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		03/27/12 08:40	03/28/12 09:45	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		03/27/12 08:40	03/28/12 09:45	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		03/27/12 08:40	03/28/12 09:45	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		03/27/12 08:40	03/28/12 09:45	1
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		03/27/12 08:40	03/28/12 09:45	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		03/27/12 08:40	03/28/12 09:45	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		03/27/12 08:40	03/28/12 09:45	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		03/27/12 08:40	03/28/12 09:45	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		03/27/12 08:40	03/28/12 09:45	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		03/27/12 08:40	03/28/12 09:45	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		03/27/12 08:40	03/28/12 09:45	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	63		22 - 110	03/27/12 08:40	03/28/12 09:45	1
2-Fluorophenol (Surr)	66		10 - 110	03/27/12 08:40	03/28/12 09:45	1
2,4,6-Tribromophenol (Surr)	69		17 - 117	03/27/12 08:40	03/28/12 09:45	1
Nitrobenzene-d5 (Surr)	63		29 - 111	03/27/12 08:40	03/28/12 09:45	1
Phenol-d5 (Surr)	60		10 - 110	03/27/12 08:40	03/28/12 09:45	1
Terphenyl-d14 (Surr)	67		40 - 119	03/27/12 08:40	03/28/12 09:45	1

Lab Sample ID: LCS 240-38099/2-A
Matrix: Water
Analysis Batch: 38218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38099

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Pyridine	0.0800	0.0582		mg/L		73	10 - 110
2,4-Dinitrotoluene	0.0800	0.0608		mg/L		76	45 - 126
Hexachlorobenzene	0.0800	0.0576		mg/L		72	47 - 116
Hexachlorobutadiene	0.0800	0.0608		mg/L		76	10 - 110
Hexachloroethane	0.0800	0.0572		mg/L		72	10 - 110
2-Methylphenol	0.0800	0.0630		mg/L		79	24 - 110
Nitrobenzene	0.0800	0.0550		mg/L		69	35 - 117
Pentachlorophenol	0.0800	0.0533		mg/L		67	12 - 110
2,4,5-Trichlorophenol	0.0800	0.0578		mg/L		72	35 - 111
2,4,6-Trichlorophenol	0.0800	0.0554		mg/L		69	32 - 110
3 & 4 Methylphenol	0.160	0.124		mg/L		78	27 - 110

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-38099/2-A
Matrix: Water
Analysis Batch: 38218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38099

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	69		22 - 110
2-Fluorophenol (Surr)	67		10 - 110
2,4,6-Tribromophenol (Surr)	76		17 - 117
Nitrobenzene-d5 (Surr)	67		29 - 111
Phenol-d5 (Surr)	60		10 - 110
Terphenyl-d14 (Surr)	72		40 - 119

Lab Sample ID: 240-9429-2 MS
Matrix: Water
Analysis Batch: 38218

Client Sample ID: FWG-IDW-TANK 2 GW
Prep Type: TCLP
Prep Batch: 38099

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Pyridine	0.020	U	0.0800	0.0528		mg/L		66	10 - 148
2,4-Dinitrotoluene	0.020	U	0.0800	0.0666		mg/L		83	31 - 131
Hexachlorobenzene	0.020	U	0.0800	0.0650		mg/L		81	36 - 132
Hexachlorobutadiene	0.020	U	0.0800	0.0645		mg/L		81	18 - 116
Hexachloroethane	0.020	U	0.0800	0.0498		mg/L		62	18 - 110
2-Methylphenol	0.0019	J	0.0800	0.0633		mg/L		77	33 - 115
Nitrobenzene	0.0040	U	0.0800	0.0596		mg/L		75	19 - 199
Pentachlorophenol	0.040	U	0.0800	0.0262	J	mg/L		33	10 - 140
2,4,5-Trichlorophenol	0.020	U	0.0800	0.0614		mg/L		77	24 - 143
2,4,6-Trichlorophenol	0.020	U	0.0800	0.0621		mg/L		78	36 - 135
3 & 4 Methylphenol	0.040	U	0.160	0.122		mg/L		77	46 - 110

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	74		22 - 110
2-Fluorophenol (Surr)	70		10 - 110
2,4,6-Tribromophenol (Surr)	83		17 - 117
Nitrobenzene-d5 (Surr)	73		29 - 111
Phenol-d5 (Surr)	63		10 - 110
Terphenyl-d14 (Surr)	85		40 - 119

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-37621/12-A
Matrix: Water
Analysis Batch: 37892

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37621

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4,4'-DDD	0.050	U	0.050	0.0096	ug/L		03/22/12 09:10	03/25/12 10:58	1
4,4'-DDE	0.050	U	0.050	0.0097	ug/L		03/22/12 09:10	03/25/12 10:58	1
4,4'-DDT	0.050	U	0.050	0.016	ug/L		03/22/12 09:10	03/25/12 10:58	1
Aldrin	0.050	U	0.050	0.0082	ug/L		03/22/12 09:10	03/25/12 10:58	1
alpha-BHC	0.050	U	0.050	0.0070	ug/L		03/22/12 09:10	03/25/12 10:58	1
alpha-Chlordane	0.050	U	0.050	0.014	ug/L		03/22/12 09:10	03/25/12 10:58	1
beta-BHC	0.050	U	0.050	0.0084	ug/L		03/22/12 09:10	03/25/12 10:58	1
delta-BHC	0.050	U	0.050	0.0087	ug/L		03/22/12 09:10	03/25/12 10:58	1
Dieldrin	0.050	U	0.050	0.0075	ug/L		03/22/12 09:10	03/25/12 10:58	1
Endosulfan I	0.050	U	0.050	0.013	ug/L		03/22/12 09:10	03/25/12 10:58	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-37621/12-A

Matrix: Water

Analysis Batch: 37892

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37621

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Endosulfan II	0.050	U	0.050	0.012	ug/L		03/22/12 09:10	03/25/12 10:58	1
Endosulfan sulfate	0.050	U	0.050	0.011	ug/L		03/22/12 09:10	03/25/12 10:58	1
Endrin	0.050	U	0.050	0.011	ug/L		03/22/12 09:10	03/25/12 10:58	1
Endrin aldehyde	0.050	U	0.050	0.011	ug/L		03/22/12 09:10	03/25/12 10:58	1
Endrin ketone	0.050	U	0.050	0.0078	ug/L		03/22/12 09:10	03/25/12 10:58	1
gamma-BHC (Lindane)	0.050	U	0.050	0.0064	ug/L		03/22/12 09:10	03/25/12 10:58	1
gamma-Chlordane	0.050	U	0.050	0.012	ug/L		03/22/12 09:10	03/25/12 10:58	1
Heptachlor	0.050	U	0.050	0.0080	ug/L		03/22/12 09:10	03/25/12 10:58	1
Heptachlor epoxide	0.050	U	0.050	0.0071	ug/L		03/22/12 09:10	03/25/12 10:58	1
Methoxychlor	0.10	U	0.10	0.032	ug/L		03/22/12 09:10	03/25/12 10:58	1
Toxaphene	2.0	U	2.0	0.32	ug/L		03/22/12 09:10	03/25/12 10:58	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	71		10 - 145	03/22/12 09:10	03/25/12 10:58	1
DCB Decachlorobiphenyl	73		10 - 145	03/22/12 09:10	03/25/12 10:58	1
Tetrachloro-m-xylene	59		30 - 141	03/22/12 09:10	03/25/12 10:58	1
Tetrachloro-m-xylene	60		30 - 141	03/22/12 09:10	03/25/12 10:58	1

Lab Sample ID: LCS 240-37621/11-A

Matrix: Water

Analysis Batch: 37892

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37621

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
4,4'-DDD	0.500	0.447		ug/L		89	53 - 168
4,4'-DDE	0.500	0.411		ug/L		82	66 - 136
4,4'-DDT	0.500	0.428		ug/L		86	42 - 140
Aldrin	0.500	0.381		ug/L		76	61 - 127
alpha-BHC	0.500	0.395		ug/L		79	65 - 132
alpha-Chlordane	0.500	0.388		ug/L		78	60 - 134
beta-BHC	0.500	0.397		ug/L		79	59 - 134
delta-BHC	0.500	0.440		ug/L		88	45 - 143
Dieldrin	0.500	0.411		ug/L		82	61 - 142
Endosulfan I	0.500	0.284		ug/L		57	35 - 110
Endosulfan II	0.500	0.323		ug/L		65	39 - 110
Endosulfan sulfate	0.500	0.421		ug/L		84	54 - 143
Endrin	0.500	0.406		ug/L		81	57 - 148
Endrin aldehyde	0.500	0.399		ug/L		80	44 - 116
Endrin ketone	0.500	0.395		ug/L		79	52 - 135
gamma-BHC (Lindane)	0.500	0.401		ug/L		80	58 - 140
gamma-Chlordane	0.500	0.405		ug/L		81	59 - 139
Heptachlor	0.500	0.352		ug/L		70	60 - 132
Heptachlor epoxide	0.500	0.395		ug/L		79	60 - 138
Methoxychlor	0.500	0.469		ug/L		94	45 - 139

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	72		10 - 145
DCB Decachlorobiphenyl	69		10 - 145
Tetrachloro-m-xylene	61		30 - 141
Tetrachloro-m-xylene	64		30 - 141

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-38100/1-A

Matrix: Water

Analysis Batch: 38405

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38100

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		03/27/12 08:42	03/29/12 22:55	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		03/27/12 08:42	03/29/12 22:55	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		03/27/12 08:42	03/29/12 22:55	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		03/27/12 08:42	03/29/12 22:55	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		03/27/12 08:42	03/29/12 22:55	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		03/27/12 08:42	03/29/12 22:55	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		03/27/12 08:42	03/29/12 22:55	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	82		34 - 141	03/27/12 08:42	03/29/12 22:55	1
DCB Decachlorobiphenyl	84		34 - 141	03/27/12 08:42	03/29/12 22:55	1
Tetrachloro-m-xylene	76		46 - 122	03/27/12 08:42	03/29/12 22:55	1
Tetrachloro-m-xylene	84		46 - 122	03/27/12 08:42	03/29/12 22:55	1

Lab Sample ID: LCS 240-38100/2-A

Matrix: Water

Analysis Batch: 38405

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38100

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Endrin	0.00200	0.00163	J	mg/L		81	59 - 136
gamma-BHC (Lindane)	0.00200	0.00165	J	mg/L		83	59 - 137
Heptachlor	0.00200	0.00151	J	mg/L		75	63 - 123
Heptachlor epoxide	0.00200	0.00172	J	mg/L		86	59 - 141
Methoxychlor	0.00400	0.00319	J	mg/L		80	42 - 141

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	95		34 - 141
DCB Decachlorobiphenyl	80		34 - 141
Tetrachloro-m-xylene	99		46 - 122
Tetrachloro-m-xylene	69		46 - 122

Lab Sample ID: 240-9429-2 MS

Matrix: Water

Analysis Batch: 38405

Client Sample ID: FWG-IDW-TANK 2 GW

Prep Type: TCLP

Prep Batch: 38100

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Endrin	0.0012	U	0.00200	0.00187	J	mg/L		94	50 - 150
gamma-BHC (Lindane)	0.0012	U	0.00200	0.00199	J	mg/L		99	50 - 150
Heptachlor	0.0012	U	0.00200	0.00179	J	mg/L		89	50 - 150
Heptachlor epoxide	0.0012	U	0.00200	0.00199	J	mg/L		100	50 - 150
Methoxychlor	0.0024	U	0.00400	0.00368	J	mg/L		92	50 - 150

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	100		34 - 141
DCB Decachlorobiphenyl	83		34 - 141
Tetrachloro-m-xylene	120		46 - 122
Tetrachloro-m-xylene	86		46 - 122

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-37623/6-A
Matrix: Water
Analysis Batch: 37884

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37623

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	0.50	U	0.50	0.17	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1221	0.50	U	0.50	0.13	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1232	0.50	U	0.50	0.16	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1242	0.50	U	0.50	0.22	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1248	0.50	U	0.50	0.10	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1254	0.50	U	0.50	0.16	ug/L		03/22/12 09:16	03/23/12 17:51	1
Aroclor-1260	0.50	U	0.50	0.17	ug/L		03/22/12 09:16	03/23/12 17:51	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	80		23 - 136	03/22/12 09:16	03/23/12 17:51	1
DCB Decachlorobiphenyl	76		10 - 130	03/22/12 09:16	03/23/12 17:51	1

Lab Sample ID: LCS 240-37623/5-A
Matrix: Water
Analysis Batch: 37884

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37623

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Aroclor-1016	5.00	4.80		ug/L		96	66 - 120
Aroclor-1260	5.00	4.39		ug/L		88	55 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	81		23 - 136
DCB Decachlorobiphenyl	77		10 - 130

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-38102/1-A
Matrix: Water
Analysis Batch: 38454

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38102

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4-D	0.0020	U	0.0020	0.00021	mg/L		03/27/12 08:46	03/29/12 21:58	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		03/27/12 08:46	03/29/12 21:58	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4-Dichlorophenylacetic acid	71		37 - 116	03/27/12 08:46	03/29/12 21:58	1
2,4-Dichlorophenylacetic acid	67		37 - 116	03/27/12 08:46	03/29/12 21:58	1

Lab Sample ID: LCS 240-38102/2-A
Matrix: Water
Analysis Batch: 38454

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38102

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
2,4-D	0.0200	0.0157		mg/L		78	35 - 136
Silvex (2,4,5-TP)	0.00500	0.00378		mg/L		76	46 - 112

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4-Dichlorophenylacetic acid	75		37 - 116

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 240-38102/2-A
Matrix: Water
Analysis Batch: 38454

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38102

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4-Dichlorophenylacetic acid	73		37 - 116

Method: 8330 (Modified) - Organic Compounds by UV/HPLC

Lab Sample ID: G2C280000056B
Matrix: Water
Analysis Batch: 2088056

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 2088056_P

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitroguanidine	20	U	20	2.4	ug/L		03/28/12 09:45	03/29/12 11:14	1

Lab Sample ID: G2C280000056C
Matrix: Water
Analysis Batch: 2088056

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 2088056_P

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Nitroguanidine	250	263		ug/L		105		73 - 117

Lab Sample ID: 240-9429-2 MS
Matrix: Water
Analysis Batch: 2088056

Client Sample ID: FWG-IDW-TANK 2 GW
Prep Type: Dissolved
Prep Batch: 2088056_P

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Nitroguanidine	20	U	250	265		ug/L		106		73 - 117

Lab Sample ID: G2C230472001D
Matrix: Water
Analysis Batch: 2088056

Client Sample ID: FWG-IDW-TANK 2 GW
Prep Type: Dissolved
Prep Batch: 2088056_P

Analyte	Sample Sample		Spike Added	SD1 SD1		Unit	D	%Rec	%Rec.	Limits	RPD	RPD	Limit
	Result	Qualifier		Result	Qualifier								
Nitroguanidine	20	U	250	267		ug/L		107		73 - 117	0.72		15

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Lab Sample ID: G2C270000022B
Matrix: Water
Analysis Batch: 2087022

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2087022_P

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitroglycerin	0.65	U	0.65	0.33	ug/L		03/27/12 07:00	03/31/12 00:22	1
PETN	0.65	U	0.65	0.30	ug/L		03/27/12 07:00	03/31/12 00:22	1
2-Amino-4,6-dinitrotoluene	0.20	U	0.20	0.10	ug/L		03/27/12 07:00	03/31/12 00:22	1
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1
1,3-Dinitrobenzene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1
2,4-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1
2,6-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1
HMX	0.10	U	0.10	0.036	ug/L		03/27/12 07:00	03/31/12 00:22	1
Nitrobenzene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1
2-Nitrotoluene	0.50	U	0.50	0.088	ug/L		03/27/12 07:00	03/31/12 00:22	1
3-Nitrotoluene	0.50	U	0.50	0.057	ug/L		03/27/12 07:00	03/31/12 00:22	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A) (Continued)

Lab Sample ID: G2C270000022B

Matrix: Water

Analysis Batch: 2087022

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 2087022_P

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4-Nitrotoluene	0.65	U	0.65	0.088	ug/L		03/27/12 07:00	03/31/12 00:22	1
RDX	0.10	U	0.10	0.036	ug/L		03/27/12 07:00	03/31/12 00:22	1
Tetryl	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1
1,3,5-Trinitrobenzene	0.10	U	0.10	0.030	ug/L		03/27/12 07:00	03/31/12 00:22	1
2,4,6-Trinitrotoluene	0.10	U	0.10	0.050	ug/L		03/27/12 07:00	03/31/12 00:22	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
3,4-Dinitrotoluene	102		79 - 111	03/27/12 07:00	03/31/12 00:22	1

Lab Sample ID: G2C270000022C

Matrix: Water

Analysis Batch: 2087022

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 2087022_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PETN	5.00	5.06		ug/L		101	84 - 117
2-Amino-4,6-dinitrotoluene	1.00	1.07		ug/L		107	50 - 155
4-Amino-2,6-dinitrotoluene	1.00	1.05		ug/L		105	55 - 155
1,3-Dinitrobenzene	1.00	1.14		ug/L		114	45 - 160
2,4-Dinitrotoluene	1.00	1.06		ug/L		106	60 - 135
2,6-Dinitrotoluene	1.00	1.07		ug/L		107	60 - 135
HMX	1.00	1.05		ug/L		105	80 - 115
Nitrobenzene	1.00	1.13		ug/L		113	50 - 140
2-Nitrotoluene	1.00	1.05		ug/L		105	45 - 135
3-Nitrotoluene	1.00	1.06		ug/L		106	50 - 130
4-Nitrotoluene	1.00	1.05		ug/L		105	50 - 130
RDX	1.00	1.08		ug/L		108	50 - 160
Tetryl	1.00	1.00		ug/L		100	20 - 175
1,3,5-Trinitrobenzene	1.00	1.10		ug/L		110	65 - 140
2,4,6-Trinitrotoluene	1.00	0.931		ug/L		93	50 - 145

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
3,4-Dinitrotoluene	105		79 - 111

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-38070/2-A

Matrix: Water

Analysis Batch: 38521

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38070

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	0.50	U	0.50	0.0032	mg/L		03/27/12 05:58	03/29/12 15:03	1
Cadmium	0.10	U	0.10	0.00066	mg/L		03/27/12 05:58	03/29/12 15:03	1
Chromium	0.50	U	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 15:03	1
Lead	0.50	U	0.50	0.0019	mg/L		03/27/12 05:58	03/29/12 15:03	1
Selenium	0.25	U	0.25	0.0041	mg/L		03/27/12 05:58	03/29/12 15:03	1
Silver	0.50	U	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 15:03	1
Barium	0.00126	J	10	0.00067	mg/L		03/27/12 05:58	03/29/12 15:03	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-38070/3-A

Matrix: Water

Analysis Batch: 38521

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38070

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	2.03		mg/L		102	50 - 150
Cadmium	0.0500	0.0517	J	mg/L		103	50 - 150
Chromium	0.200	0.205	J	mg/L		103	50 - 150
Lead	0.500	0.507		mg/L		101	50 - 150
Selenium	2.00	2.06		mg/L		103	50 - 150
Silver	0.0500	0.0524	J	mg/L		105	50 - 150
Barium	2.00	2.08	J	mg/L		104	50 - 150

Lab Sample ID: MB 240-38006/1-A

Matrix: Water

Analysis Batch: 38353

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 38006

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10	3.2	ug/L		03/26/12 10:29	03/28/12 14:31	1
Cobalt	7.0	U	7.0	1.7	ug/L		03/26/12 10:29	03/28/12 14:31	1
Chromium	5.0	U	5.0	2.2	ug/L		03/26/12 10:29	03/28/12 14:31	1
Lead	3.0	U	3.0	1.9	ug/L		03/26/12 10:29	03/28/12 14:31	1
Selenium	5.0	U	5.0	4.1	ug/L		03/26/12 10:29	03/28/12 14:31	1
Silver	5.0	U	5.0	2.2	ug/L		03/26/12 10:29	03/28/12 14:31	1
Vanadium	7.0	U	7.0	0.64	ug/L		03/26/12 10:29	03/28/12 14:31	1
Barium	10.3	J	200	0.67	ug/L		03/26/12 10:29	03/28/12 14:31	1
Calcium	238	J	5000	130	ug/L		03/26/12 10:29	03/28/12 14:31	1
Copper	25	U	25	4.5	ug/L		03/26/12 10:29	03/28/12 14:31	1
Magnesium	43.1	J	5000	34	ug/L		03/26/12 10:29	03/28/12 14:31	1
Manganese	15	U	15	0.41	ug/L		03/26/12 10:29	03/28/12 14:31	1
Nickel	40	U	40	3.2	ug/L		03/26/12 10:29	03/28/12 14:31	1
Potassium	5000	U	5000	72	ug/L		03/26/12 10:29	03/28/12 14:31	1

Lab Sample ID: LCS 240-38006/2-A

Matrix: Water

Analysis Batch: 38353

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 38006

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2000	1880		ug/L		94	80 - 120
Cobalt	500	464		ug/L		93	80 - 120
Chromium	200	184		ug/L		92	80 - 120
Lead	500	452		ug/L		90	80 - 120
Selenium	2000	1890		ug/L		95	80 - 120
Silver	50.0	47.4		ug/L		95	80 - 120
Vanadium	500	445		ug/L		89	80 - 120
Barium	2000	1840		ug/L		92	80 - 120
Calcium	50000	45300		ug/L		91	80 - 120
Copper	250	222		ug/L		89	80 - 120
Magnesium	50000	44700		ug/L		89	80 - 120
Manganese	500	468		ug/L		94	80 - 120
Nickel	500	463		ug/L		93	80 - 120
Potassium	50000	46900		ug/L		94	80 - 120

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LB 240-38031/1-D LB
Matrix: Water
Analysis Batch: 38521

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 38070

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	0.50	U	0.50	0.0032	mg/L		03/27/12 05:58	03/29/12 14:58	1
Cadmium	0.10	U	0.10	0.00066	mg/L		03/27/12 05:58	03/29/12 14:58	1
Chromium	0.50	U	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 14:58	1
Lead	0.50	U	0.50	0.0019	mg/L		03/27/12 05:58	03/29/12 14:58	1
Selenium	0.00490	J	0.25	0.0041	mg/L		03/27/12 05:58	03/29/12 14:58	1
Silver	0.50	U	0.50	0.0022	mg/L		03/27/12 05:58	03/29/12 14:58	1
Barium	0.00180	J	10	0.00067	mg/L		03/27/12 05:58	03/29/12 14:58	1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-38006/1-A
Matrix: Water
Analysis Batch: 38210

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 38006

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	50	U	50	19	ug/L		03/26/12 10:29	03/27/12 16:51	1
Antimony	2.0	U	2.0	0.13	ug/L		03/26/12 10:29	03/27/12 16:51	1
Beryllium	1.0	U	1.0	0.20	ug/L		03/26/12 10:29	03/27/12 16:51	1
Cadmium	1.0	U	1.0	0.13	ug/L		03/26/12 10:29	03/27/12 16:51	1
Iron	100	U	100	26	ug/L		03/26/12 10:29	03/27/12 16:51	1
Sodium	139	J	1000	6.9	ug/L		03/26/12 10:29	03/27/12 16:51	1
Thallium	2.0	U	2.0	0.14	ug/L		03/26/12 10:29	03/27/12 16:51	1
Zinc	5.25	J	20	2.3	ug/L		03/26/12 10:29	03/27/12 16:51	1

Lab Sample ID: LCS 240-38006/3-A
Matrix: Water
Analysis Batch: 38210

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 38006

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Aluminum	10000	9530		ug/L		95	80 - 120
Antimony	100	97.3		ug/L		97	80 - 120
Beryllium	1000	987		ug/L		99	80 - 120
Cadmium	1000	997		ug/L		100	80 - 120
Iron	10000	9260		ug/L		93	80 - 120
Sodium	10000	9240		ug/L		92	80 - 120
Thallium	250	271		ug/L		108	80 - 120
Zinc	1000	1010		ug/L		101	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-38002/1-A
Matrix: Water
Analysis Batch: 38264

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38002

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.20	U	0.20	0.12	ug/L		03/26/12 14:30	03/27/12 14:11	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-38002/2-A
Matrix: Water
Analysis Batch: 38264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.91		ug/L		98	81 - 123

Lab Sample ID: MB 240-38071/2-A
Matrix: Water
Analysis Batch: 38403

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38071

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		03/27/12 15:20	03/28/12 14:00	1

Lab Sample ID: LCS 240-38071/3-A
Matrix: Water
Analysis Batch: 38403

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38071

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00481		mg/L		96	50 - 150

Lab Sample ID: LB 240-38031/1-E LB
Matrix: Water
Analysis Batch: 38403

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 38071

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		03/27/12 15:20	03/28/12 13:58	1

Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 480-57354/1
Matrix: Water
Analysis Batch: 57354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Flashpoint	81.0	80.00		Degrees F		99	97.5 - 102.5

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-37671/1-A
Matrix: Water
Analysis Batch: 37738

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37671

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		03/22/12 11:15	03/22/12 16:57	1

Lab Sample ID: LCS 240-37671/2-A
Matrix: Water
Analysis Batch: 37738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37671

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0449	0.0354		mg/L		79	69 - 118

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: MRL 240-37738/6 MRL
Matrix: Water
Analysis Batch: 37738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0100	0.00923	J	mg/L		92	70 - 130

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 240-38115/1-A
Matrix: Water
Analysis Batch: 38168

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38115

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	3.0	U	3.0	0.94	mg/L		03/27/12 09:29	03/27/12 14:00	1

Lab Sample ID: LCS 240-38115/2-A
Matrix: Water
Analysis Batch: 38168

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38115

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	7.87	7.86		mg/L		100	70 - 130

Method: 9040B - pH

Lab Sample ID: LCS 240-37567/5
Matrix: Water
Analysis Batch: 37567

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	5.50	5.530		SU		101	97 - 103

Lab Sample ID: 240-9429-2 DU
Matrix: Water
Analysis Batch: 37567

Client Sample ID: FWG-IDW-TANK 2 GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	9.67		9.670		SU		0	20

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G2C280000040B
Matrix: Water
Analysis Batch: 2088040

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2088040_P

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrocellulose	2.0	U	2.0	0.48	mg/L		03/28/12 06:00	03/29/12 14:41	1

Lab Sample ID: G2C280000040C
Matrix: Water
Analysis Batch: 2088040

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 2088040_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrocellulose	5.07	4.96		mg/L		98	26 - 144

QC Sample Results

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050 (Continued)

Lab Sample ID: 240-9429-2 MS

Matrix: Water

Analysis Batch: 2088040

Client Sample ID: FWG-IDW-TANK 2 GW

Prep Type: Total

Prep Batch: 2088040_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Nitrocellulose	2.0	U	5.07	4.06		mg/L		79	26 - 144

Lab Sample ID: G2C230472001D

Matrix: Water

Analysis Batch: 2088040

Client Sample ID: FWG-IDW-TANK 2 GW

Prep Type: Total

Prep Batch: 2088040_P

Analyte	Sample Result	Sample Qualifier	Spike Added	SD1 Result	SD1 Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nitrocellulose	2.0	U	5.07	4.96		mg/L		96	26 - 144	20	45

QC Association Summary

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

GC/MS VOA

Leach Batch: 38052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	1311	
LB 240-38052/1-A MB	Method Blank	TCLP	Water	1311	

Analysis Batch: 38205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	8260B	
LB 240-38052/1-A MB	Method Blank	TCLP	Water	8260B	
LCS 240-38205/5	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 38578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429 1	FWG-IDW-TANK 2 TB	Total/NA	Water	8260B	
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	8260B	
LCS 240-38578/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-38578/5	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 37618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	3520C	
LCS 240-37618/23-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-37618/24-A	Method Blank	Total/NA	Water	3520C	

Leach Batch: 38031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	1311	
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	1311	

Prep Batch: 38099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	3510C	38031
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	3510C	38031
LCS 240-38099/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-38099/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 38105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-37618/23-A	Lab Control Sample	Total/NA	Water	8270C	37618
MB 240-37618/24-A	Method Blank	Total/NA	Water	8270C	37618

Analysis Batch: 38218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	8270C	38099
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	8270C	38099
LCS 240-38099/2-A	Lab Control Sample	Total/NA	Water	8270C	38099
MB 240-38099/1-A	Method Blank	Total/NA	Water	8270C	38099

Analysis Batch: 38531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	8270C	37618

QC Association Summary

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

GC Semi VOA

Prep Batch: 37621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	3520C	
LCS 240-37621/11-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-37621/12-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 37623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	3520C	
LCS 240-37623/5-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-37623/6-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 37884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	8082	37623
LCS 240-37623/5-A	Lab Control Sample	Total/NA	Water	8082	37623
MB 240-37623/6-A	Method Blank	Total/NA	Water	8082	37623

Analysis Batch: 37892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	8081A	37621
LCS 240-37621/11-A	Lab Control Sample	Total/NA	Water	8081A	37621
MB 240-37621/12-A	Method Blank	Total/NA	Water	8081A	37621

Leach Batch: 38031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	1311	
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	1311	

Prep Batch: 38100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	3510C	38031
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	3510C	38031
LCS 240-38100/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-38100/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 38102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	8151A	38031
LCS 240-38102/2-A	Lab Control Sample	Total/NA	Water	8151A	
MB 240-38102/1-A	Method Blank	Total/NA	Water	8151A	

Analysis Batch: 38405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	8081A	38100
240-9429-2 MS	FWG-IDW-TANK 2 GW	TCLP	Water	8081A	38100
LCS 240-38100/2-A	Lab Control Sample	Total/NA	Water	8081A	38100
MB 240-38100/1-A	Method Blank	Total/NA	Water	8081A	38100

Analysis Batch: 38454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	8151A	38102
LCS 240-38102/2-A	Lab Control Sample	Total/NA	Water	8151A	38102
MB 240-38102/1-A	Method Blank	Total/NA	Water	8151A	38102

QC Association Summary

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

HPLC

Analysis Batch: 2087022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total	Water	8330/8330A	
G2C270000022B	Method Blank	Total	Water	8330/8330A	
G2C270000022C	Lab Control Sample	Total	Water	8330/8330A	

Analysis Batch: 2088056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Dissolved	Water	8330 (Modified)	
240-9429-2 MS	FWG-IDW-TANK 2 GW	Dissolved	Water	8330 (Modified)	
G2C230472001D	FWG-IDW-TANK 2 GW	Dissolved	Water	8330 (Modified)	
G2C280000056B	Method Blank	Dissolved	Water	8330 (Modified)	
G2C280000056C	Lab Control Sample	Dissolved	Water	8330 (Modified)	

Prep Batch: 2087022_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total	Water	3535	
G2C270000022B	Method Blank	Total	Water	3535	
G2C270000022C	Lab Control Sample	Total	Water	3535	

Prep Batch: 2088056_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Dissolved	Water	FILTRATION (DISS)	
240-9429-2 MS	FWG-IDW-TANK 2 GW	Dissolved	Water	FILTRATION (DISS)	
G2C230472001D	FWG-IDW-TANK 2 GW	Dissolved	Water	FILTRATION (DISS)	
G2C280000056B	Method Blank	Dissolved	Water	FILTRATION (DISS)	
G2C280000056C	Lab Control Sample	Dissolved	Water	FILTRATION (DISS)	

Metals

Prep Batch: 38002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	7470A	
LCS 240-38002/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-38002/1-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 38006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total Recoverable	Water	3005A	
LCS 240-38006/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-38006/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-38006/1-A	Method Blank	Total Recoverable	Water	3005A	

Leach Batch: 38031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	1311	
LB 240-38031/1-D LB	Method Blank	TCLP	Water	1311	
LB 240-38031/1-E LB	Method Blank	TCLP	Water	1311	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Metals (Continued)

Prep Batch: 38070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	3010A	38031
LB 240-38031/1-D LB	Method Blank	TCLP	Water	3010A	38031
LCS 240-38070/3-A	Lab Control Sample	Total/NA	Water	3010A	
MB 240-38070/2-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 38071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	7470A	38031
LB 240-38031/1-E LB	Method Blank	TCLP	Water	7470A	38031
LCS 240-38071/3-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-38071/2-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 38210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total Recoverable	Water	6020	38006
LCS 240-38006/3-A	Lab Control Sample	Total Recoverable	Water	6020	38006
MB 240-38006/1-A	Method Blank	Total Recoverable	Water	6020	38006

Analysis Batch: 38264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	7470A	38002
LCS 240-38002/2-A	Lab Control Sample	Total/NA	Water	7470A	38002
MB 240-38002/1-A	Method Blank	Total/NA	Water	7470A	38002

Analysis Batch: 38353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-38006/2-A	Lab Control Sample	Total Recoverable	Water	6010B	38006
MB 240-38006/1-A	Method Blank	Total Recoverable	Water	6010B	38006

Analysis Batch: 38403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	7470A	38071
LB 240-38031/1-E LB	Method Blank	TCLP	Water	7470A	38071
LCS 240-38071/3-A	Lab Control Sample	Total/NA	Water	7470A	38071
MB 240-38071/2-A	Method Blank	Total/NA	Water	7470A	38071

Analysis Batch: 38470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total Recoverable	Water	6010B	38006

Analysis Batch: 38521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	TCLP	Water	6010B	38070
LB 240-38031/1-D LB	Method Blank	TCLP	Water	6010B	38070
LCS 240-38070/3-A	Lab Control Sample	Total/NA	Water	6010B	38070
MB 240-38070/2-A	Method Blank	Total/NA	Water	6010B	38070

General Chemistry

Analysis Batch: 37567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	9040B	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

General Chemistry (Continued)

Analysis Batch: 37567 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2 DU	FWG-IDW-TANK 2 GW	Total/NA	Water	9040B	
LCS 240-37567/5	Lab Control Sample	Total/NA	Water	9040B	

Prep Batch: 37671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	9012A	
LCS 240-37671/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-37671/1-A	Method Blank	Total/NA	Water	9012A	

Analysis Batch: 37738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	9012A	37671
LCS 240-37671/2-A	Lab Control Sample	Total/NA	Water	9012A	37671
MB 240-37671/1-A	Method Blank	Total/NA	Water	9012A	37671
MRL 240-37738/6 MRL	Lab Control Sample	Total/NA	Water	9012A	

Prep Batch: 38115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	9030B	
LCS 240-38115/2-A	Lab Control Sample	Total/NA	Water	9030B	
MB 240-38115/1-A	Method Blank	Total/NA	Water	9030B	

Analysis Batch: 38168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	9034	38115
LCS 240-38115/2-A	Lab Control Sample	Total/NA	Water	9034	38115
MB 240-38115/1-A	Method Blank	Total/NA	Water	9034	38115

Analysis Batch: 57354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total/NA	Water	1010	
LCS 480-57354/1	Lab Control Sample	Total/NA	Water	1010	

Analysis Batch: 2088040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total	Water	WS-WC-0050	
240-9429-2 MS	FWG-IDW-TANK 2 GW	Total	Water	WS-WC-0050	
G2C230472001D	FWG-IDW-TANK 2 GW	Total	Water	WS-WC-0050	
G2C280000040B	Method Blank	Total	Water	WS-WC-0050	
G2C280000040C	Lab Control Sample	Total	Water	WS-WC-0050	

Prep Batch: 2088040_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-9429-2	FWG-IDW-TANK 2 GW	Total	Water	EXTRACTION, SOLID PHASE	
240-9429-2 MS	FWG-IDW-TANK 2 GW	Total	Water	EXTRACTION, SOLID PHASE	
G2C230472001D	FWG-IDW-TANK 2 GW	Total	Water	EXTRACTION, SOLID PHASE	
G2C280000040B	Method Blank	Total	Water	EXTRACTION, SOLID PHASE	
G2C280000040C	Lab Control Sample	Total	Water	EXTRACTION, SOLID PHASE	

Lab Chronicle

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 TB

Lab Sample ID: 240-9429-1

Date Collected: 03/21/12 00:00

Matrix: Water

Date Received: 03/21/12 15:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	38578	03/30/12 17:25	LE	TAL NC

Client Sample ID: FWG-IDW-TANK 2 GW

Lab Sample ID: 240-9429-2

Date Collected: 03/21/12 11:15

Matrix: Water

Date Received: 03/21/12 15:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			38052	03/26/12 15:11	BF	TAL NC
TCLP	Analysis	8260B		1	38205	03/28/12 00:57	TL	TAL NC
Total/NA	Analysis	8260B		1	38578	03/30/12 17:48	LE	TAL NC
TCLP	Leach	1311			38031	03/26/12 12:05	BF	TAL NC
TCLP	Prep	3510C			38099	03/27/12 08:40	EM	TAL NC
TCLP	Analysis	8270C		1	38218	03/28/12 14:18	MU	TAL NC
Total/NA	Prep	3520C			37618	03/22/12 08:59	BM	TAL NC
Total/NA	Analysis	8270C		2	38531	03/30/12 20:29	TH	TAL NC
Total/NA	Prep	3520C			37623	03/22/12 09:16	BM	TAL NC
Total/NA	Analysis	8082		1	37884	03/23/12 17:36	RK	TAL NC
Total/NA	Prep	3520C			37621	03/22/12 09:10	BM	TAL NC
Total/NA	Analysis	8081A		1	37892	03/25/12 10:35	CV	TAL NC
TCLP	Leach	1311			38031	03/26/12 12:05	BF	TAL NC
TCLP	Prep	3510C			38100	03/27/12 08:42	EM	TAL NC
TCLP	Analysis	8081A		1	38405	03/29/12 22:08	AR	TAL NC
TCLP	Prep	8151A			38102	03/27/12 08:46	EM	TAL NC
TCLP	Analysis	8151A		1	38454	03/29/12 23:32	AR	TAL NC
Total	Prep	3535			2087022_P	03/27/12 07:00	TQP	TAL WSC
Total	Analysis	8330/8330A		1	2087022	03/31/12 01:42	RN	TAL WSC
Dissolved	Prep	FILTRATION (DISS)			2088056_P	03/28/12 09:45	TQP	TAL WSC
Dissolved	Analysis	8330 (Modified)		1	2088056	03/29/12 11:43	RN	TAL WSC
Total Recoverable	Prep	3005A			38006	03/26/12 10:29	LM	TAL NC
Total Recoverable	Analysis	6020		1	38210	03/27/12 20:13	KC	TAL NC
Total/NA	Prep	7470A			38002	03/26/12 14:30	LM	TAL NC
Total/NA	Analysis	7470A		1	38264	03/27/12 14:48	AS	TAL NC
TCLP	Leach	1311			38031	03/26/12 12:05	BF	TAL NC
TCLP	Prep	7470A			38071	03/27/12 15:20	LM	TAL NC
TCLP	Analysis	7470A		1	38403	03/28/12 14:45	AS	TAL NC
Total Recoverable	Analysis	6010B		1	38470	03/29/12 11:37	BD	TAL NC
TCLP	Prep	3010A			38070	03/27/12 05:58	LM	TAL NC
TCLP	Analysis	6010B		1	38521	03/29/12 17:10	NJM	TAL NC
Total/NA	Analysis	9040B		1	37567	03/21/12 16:12	JM	TAL NC
Total/NA	Prep	9012A			37671	03/22/12 11:15	KH	TAL NC
Total/NA	Analysis	9012A		1	37738	03/22/12 15:26	KH	TAL NC
Total/NA	Prep	9030B			38115	03/27/12 09:29	AM	TAL NC
Total/NA	Analysis	9034		1	38168	03/27/12 14:28	AM	TAL NC
Total/NA	Analysis	1010		1	57354	03/29/12 13:44	KS	TAL BUF

Lab Chronicle

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Client Sample ID: FWG-IDW-TANK 2 GW

Lab Sample ID: 240-9429-2

Date Collected: 03/21/12 11:15

Matrix: Water

Date Received: 03/21/12 15:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	EXTRACTION, SOLID PHASE			2088040_P	03/28/12 06:00	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	2088040	03/29/12 14:45	JB	TAL WSC

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL NC = TestAmerica North Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica North Canton	California	NELAC	9	01144CA
TestAmerica North Canton	Connecticut	State Program	1	PH-0590
TestAmerica North Canton	Florida	NELAC	4	E87225
TestAmerica North Canton	Georgia	State Program	4	N/A
TestAmerica North Canton	Illinois	NELAC	5	200004
TestAmerica North Canton	Kansas	NELAC	7	E-10336
TestAmerica North Canton	Kentucky	State Program	4	58
TestAmerica North Canton	L-A-B	DoD ELAP		L2315
TestAmerica North Canton	Minnesota	NELAC	5	039-999-348
TestAmerica North Canton	Nevada	State Program	9	OH-000482008A
TestAmerica North Canton	New Jersey	NELAC	2	OH001
TestAmerica North Canton	New York	NELAC	2	10975
TestAmerica North Canton	Ohio VAP	State Program	5	CL0024
TestAmerica North Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica North Canton	USDA	Federal		P330-11-00328
TestAmerica North Canton	Virginia	NELAC	3	460175
TestAmerica North Canton	Washington	State Program	10	C971
TestAmerica North Canton	West Virginia DEP	State Program	3	210
TestAmerica North Canton	Wisconsin	State Program	5	999518190
TestAmerica Buffalo	Arkansas DEQ	State Program	6	88-0686
TestAmerica Buffalo	California	NELAC	9	1169CA
TestAmerica Buffalo	Connecticut	State Program	1	PH-0568
TestAmerica Buffalo	Florida	NELAC	4	E87672
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Georgia	State Program	4	N/A
TestAmerica Buffalo	Illinois	NELAC	5	100325 / 200003
TestAmerica Buffalo	Iowa	State Program	7	374
TestAmerica Buffalo	Kansas	NELAC	7	E-10187
TestAmerica Buffalo	Kentucky	State Program	4	90029
TestAmerica Buffalo	Louisiana	NELAC	6	02031
TestAmerica Buffalo	Maine	State Program	1	NY0044
TestAmerica Buffalo	Maryland	State Program	3	294
TestAmerica Buffalo	Massachusetts	State Program	1	M-NY044
TestAmerica Buffalo	Michigan	State Program	5	9937
TestAmerica Buffalo	Minnesota	NELAC	5	036-999-337
TestAmerica Buffalo	New Hampshire	NELAC	1	2337
TestAmerica Buffalo	New Hampshire	NELAC	1	68-00281
TestAmerica Buffalo	New Jersey	NELAC	2	NY455
TestAmerica Buffalo	New York	NELAC	2	10026
TestAmerica Buffalo	North Dakota	State Program	8	R-176
TestAmerica Buffalo	Oklahoma	State Program	6	9421
TestAmerica Buffalo	Oregon	NELAC	10	NY200003
TestAmerica Buffalo	Pennsylvania	NELAC	3	68-00281
TestAmerica Buffalo	Tennessee	State Program	4	TN02970
TestAmerica Buffalo	Texas	NELAC	6	T104704412-08-TX
TestAmerica Buffalo	USDA	Federal		P330-08-00242
TestAmerica Buffalo	Virginia	NELAC	3	460185
TestAmerica Buffalo	Virginia	State Program	3	278
TestAmerica Buffalo	Washington	State Program	10	C1677
TestAmerica Buffalo	West Virginia DEP	State Program	3	252
TestAmerica Buffalo	Wisconsin	State Program	5	998310390
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055

Certification Summary

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP 66 RAVENNA OHIO

TestAmerica Job ID: 240-9429-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas DEQ	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Northern Mariana Islands	State Program	9	MP0007
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	Federal		LE148388-0
TestAmerica West Sacramento	USDA	Federal		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	State Program	3	9930C
TestAmerica West Sacramento	West Virginia DEP	State Program	3	334
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

TAL-4142 (0405)

Client: **EQM** Project Manager: **John Miller** Date: **02/21/12**
 Address: **1800 Canilon Blvd** Telephone Number (Area Code)/Fax Number: **513 825 7500 (fax 1495)** Chain of Custody Number: **000414**
 City: **Cincinnati** State: **OH** Zip Code: **45240** Lab Number: **330-497-9396** Page **1** of **2**
 Project Name and Location (State): **RAAF-66 RAVENNA OHIO** Lab Contact: **M. Web**
 Contract/Purchase Order/Quote No.: **PA30714.0016.01** Carrier/Waybill Number: **F. CORBIN**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Air	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH			ZnAc
FWG-IDW-TANK-2IB-BE			X										
FWG-IDW-TANK-2-GW			X										
<i>Continue on Page 2</i>													

Possible Hazard Identification:
 Non-Hazard Flammable Skin Irritant Poison B Unknown Other
 Turn Around Time Required:
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other
 1. Relinquished By: *[Signature]* Date: **3/21/12** Time: **1517**
 2. Relinquished By: *[Signature]* Date: **3/21/12** Time: **1517**
 3. Relinquished By: _____ Date: _____ Time: _____

Sample Disposal:
 Return To Client Unknown Poison B Skin Irritant 7 Days 14 Days 21 Days Other
 Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)
 OC Requirements (Specify): **level 11 no EDD pka. 10 Day Turn**
 1. Received By: *[Signature]* Date: **3/21/12** Time: **1517**
 2. Received By: _____ Date: _____ Time: _____
 3. Received By: _____ Date: _____ Time: _____

Comments: _____

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy



TestAmerica North Canton Sample Receipt Form/Narrative

Login # : 9429

Client EQM

Site Name _____

By: [Signature]
(Signature)

Cooler Received on 3/21/12 Opened on 3/21/12

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Multiple on Back Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1 (CF -2°C) Sample Temp _____ °C Corrected Temp _____ °C
 IR GUN# 4G (CF -1°C) Sample Temp _____ °C Corrected Temp _____ °C
 IR GUN# 5G (CF -1°C) Sample Temp _____ °C Corrected Temp _____ °C
 IR GUN# 6Y (CF -2°C) Sample Temp _____ °C Corrected Temp _____ °C

- 2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
- Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
- Were custody seals on the bottle(s)? Yes No
- 3. Shippers' packing slip attached to the cooler(s)? Yes No
- 4. Did custody papers accompany the sample(s)? Yes No
- 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
- 6. Did all bottles arrive in good condition (Unbroken)? Yes No
- 7. Could all bottle labels be reconciled with the COC? Yes No
- 8. Were correct bottle(s) used for the test(s) indicated? Yes No
- 9. Sufficient quantity received to perform indicated analyses? Yes No
- 10. Were sample(s) at the correct pH upon receipt? Yes No NA
- 11. Were VOAs on the COC? Yes No
- 12. Were air bubbles >6 mm in any VOA vials? Yes No NA
- 13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM MSL Date 3/21/12 by AM via Verbal Voice Mail Other _____
 Concerning #14

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

No dates or times (sampled) documented on COC - will log as
2 different samples per per times documented on bottle labels.
Will log per bottles 9.5 3/21/12 @ 11:15 AM.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-9429-1

Login Number: 9429

List Source: TestAmerica North Canton

List Number: 1

Creator: Maddux, Ann

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.8,4.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-9429-1

Login Number: 9429

List Source: TestAmerica Buffalo

List Number: 1

List Creation: 03/23/12 03:26 PM

Creator: Robitaille, Zach L

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

July 18, 2012

Mr. Mark Patterson
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266

Reference: Contract No. GS-10F-0293K
Delivery Order No. W912QR-1-F-0266

Subject: Facility-Wide Groundwater Monitoring Program Plan
RVAAP-66 Facility-Wide Groundwater
Tank #3 IDW Letter Report – Draft

Dear Mr. Patterson:

Drilling activities were conducted for the Facility-Wide Groundwater Monitoring Program at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulting in the generation of investigation-derived wastes (IDW). The RVAAP-66 Remedial Investigation (RI), installation of monitoring wells, approved per the *Facility-wide Groundwater Monitoring Program Plan RVAAP-66 Facility-wide Groundwater Addendum, EQM, Jan 2012* (Addendum) began on February 27, 2012. These activities resulted in the generation of liquid (groundwater) from well installation operations. The purpose of this letter is to characterize and classify IDW from Tank #3 for disposal and to propose methods for disposing of the IDW. This report includes a summary of IDW generated and its origin, a summary of the analysis and methods (Table 1), a summary of detected analytical results compared to regulatory characteristic levels (Table 2), and recommendations for disposal. The laboratory data sheets are included in Attachment 1.

This document follows guidance established by the United States Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (EPA) regarding IDW disposition at RVAAP, including the IDW disposition sections of the *Facility-Wide Sampling and Analysis Plan For Environmental Investigations, SAIC 2011* (FWSAP), and the Addendum. All environmental media were managed in a manner that minimized potential risk to human health and the environment. Investigation-derived waste was handled as nonhazardous material pending waste characterization and classification based on analytical results. The FWSAP and the Addendum describe approved procedures used for containerizing and handling IDW.

Liquid IDW Discussion

Accumulated indigenous liquid IDW was containerized in a 21,000-gallon fractionation (frac) tank (Tank #3) on site pending characterization and disposal. Tank #3 was brought on site on

March 14, 2012, and was used to containerize liquid IDW generated during field activities, including recovered water from drilling operations and purged groundwater from well development. Liquid placed in Tank #3 was generated from March 14, 2012, through June 27, 2012. (Decontamination water was stored in a different onsite tank, which will be handled under a separate report.) An unfiltered composite sample for disposal characterization was collected from Tank #3. The tank was opened and a composite sample was collected by gently lowering a new, disposable Teflon bailer attached to new polypropylene rope into the holding vessel. The bailer was lowered into the vessel several times, and to different depths, to collect a sufficient representative sample of the water to submit to the laboratory for waste characterization analysis. The retrieved sample was collected using a gloved hand and placed directly into the laboratory pre-cleaned container. The composite sample was sealed, labeled, and placed in a cooler with ice. For the volatile organic compound (VOC) analysis the sample container was sealed with minimum head space.

New, disposable nitrile gloves Teflon bailers, and rope was used and discarded appropriately in accordance the Addendum after collection of each composite sample.

The indigenous IDW contained in Tank #3 was characterized for disposal on the basis of composite samples collected and submitted for the RVAAP full suite totals analysis and Toxicity Characteristic Leaching Procedure (TCLP) analysis as presented in Table 1. A trip blank was submitted with the samples and analyzed for VOCs. Upon receipt from the laboratory, the analytical results were compared to the TCLP criteria presented in Table 8-1 “Maximum Concentration of Contaminants for Toxicity Characteristic” (40 CFR 261.24) and Table 8-2 “Maximum Concentration of Hazardous Waste Characterization Analytes” (40 CFR 261.21-23) as presented in the FWSAP; and against Maximum Contaminant Levels (MCLs) and USEPA Risk Screening Levels (RSLs) for tap water and/ or background criteria. Table 2 presents the detected results compared to the regulatory characteristics for hazardous wastes as per the FWSAP. Attachment 1 presents the analytical laboratory data for TCLP and RVAAP full suite totals analysis for Tank #3.

The following summarizes the IDW Tank #3 analyses:

- None of the concentrations exceeded the TCLP regulatory levels for characteristically hazardous wastes. The flashpoint was greater than 140 degrees F. Reactive sulfide and reactive cyanide were not detected above the reporting limit.
- Two volatile organic compounds and two pesticides were identified above laboratory method detection limits in the RVAAP full suite totals sample, but they did not exceed their respective MCLs or USEPA RSLs.
- One explosive compound was detected in the RVAAP full suite totals sample, although it did not exceed its MCL or USEPA RSL.
- Several metals were detected in the RVAAP full suite totals sample. The metals that exceeded their MCL and/or USEPA RSL were: aluminum (580 µg/L), arsenic

(8.3 µg/L), iron (1300 µg/L), manganese (110 µg/L), and thallium (0.58 µg/L). Note that iron is considered an essential nutrient and not indicative of contamination.

Recommended Disposal Pathways for IDW

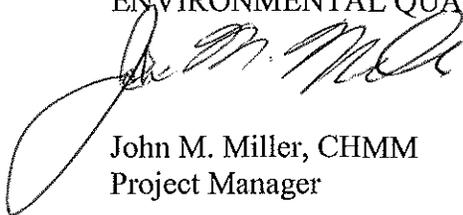
After comparing the analytical data results generated from field activities to contaminants and their regulatory levels, the data indicated that no regulatory criteria for Resource Conservation and Recovery Act (RCRA) hazardous waste determinations were exceeded. Although arsenic and thallium exceeded their respective USEPA RSLs, they did not exceed their MCLs. Moreover, arsenic was below the RVAAP background criteria (11.7 µg/L). Aluminum, iron, and manganese exceeded their respective MCLs, but they were all below their USEPA RSLs.

Given the observed analytical results, and the previous approval of land application based upon similar constituent levels from SAIC during the 2009 Well Installation into the Basal Sharon Conglomerate, it is recommended that the liquid IDW from Tank #3 be classified as non-hazardous, non-contaminated. It is proposed to land apply the liquid IDW near Tank #3, which is located in the gravel parking area adjacent to and immediately north of Building 1036, provided that RVAAP and Ohio EPA concur with the preliminary characterization and that no Resource Conservation and Recovery Act (RCRA) listings apply. The liquid IDW will be pumped from the frac tank through a bag filter and through a straw bale before being discharged to a well vegetated area. Liquid IDW will pass through a 100-µm bag filter before the end of the outlet hose inserted into the straw as a further filtering mechanism and to prevent erosion. The IDW liquid will be released at a rate that will prevent ponding of water and/or runoff and will not be released directly to surface water features, such as creeks, ditches, or streams, or to storm/sanitary sewer lines. Prior to initiating land application of the liquid IDW, the procedure and setup will be reviewed by the RVAAP Facility Manager or designee for final approval.

Upon RVAAP and Ohio EPA concurrence with the preliminary characterization and that no RCRA listings apply, we will proceed with the appropriate land application. If you have any questions, please call me at (513) 825-7500 (email - jmiller@eqm.com).

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.



John M. Miller, CHMM
Project Manager

cc: Vicki Deppisch – Ohio EPA
Mark Nichter – USACE
EQM PN – 030174.0016.001.02

Table 1. Summary of Analytical Suite of Chemicals

Constituents	Methods
TCLP mercury	EPA Method SW-846 1311/7470A
TCLP metals (silver, arsenic, barium, cadmium, chromium, lead, and selenium)	EPA Method SW-846 1311/6010B
TCLP semivolatile organic compounds (SVOCs)	EPA Method SW-846 1311/8270C
TCLP volatile organic compounds (VOCs)	EPA Method SW-846 1311/8260B
TCLP pesticides	EPA Method SW-846 1311/8081A
TCLP herbicides	EPA Method SW-846 1311/8151A
Total cyanide	EPA Method SW-846 9012A
Sulfide	EPA Method SW-846 9034
Flashpoint	EPA Method SW-846 1010
pH	EPA Method SW-846 9040B
Polychlorinated biphenyls (PCBs)	EPA Method SW-846 8082
Pesticides	EPA Method SW-846 8081A
Base/Neutrals and Acids (SVOCs)	EPA Method SW-846 8270C
Volatile Organic Compounds (VOCs)	EPA Method SW-846 8260B
Nitroguanidine (Propellant)	EPA Method SW-846 8330 modified
Nitroaromatics & Nitramines (Explosives)	EPA Method SW-846 8330
Nitrocellulose as N (Propellant)	General Chemistry (WS-WC-0050)
Metals (Magnesium, Manganese, Barium, Nickel, Potassium, Silver, Sodium, Vanadium, Chromium, Calcium, Cobalt, Copper, Arsenic, Lead, Selenium)	EPA Method SW-846 6010B
Metals (Antimony, Iron, Beryllium, Thallium, Zinc, Cadmium, Aluminum)	EPA Method SW-846 6020
Mercury	EPA Method SW-846 7470A

1 EPA Methods for Chemical Analysis of Water and Waste

Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels

Analyte Group	Analyte	Cas #	Units	Lab Results	Lab Qualifier	MCL	USEPA RSL	Background Criteria	*Maximum Toxicity Concentration
Total Metals	Aluminum	7429-90-5	µg/L	580		200	16000	0	NA
Total Metals	Antimony	7440-36-0	µg/L	2.3		6.0	6.0	0	NA
Total Metals	Arsenic	7440-38-2	µg/L	8.3	J	10	0.045	11.7	NA
Total Metals	Barium	7440-39-3	µg/L	56	J,B	2000	2900	82.1	NA
Total Metals	Calcium	7440-70-2	µg/L	43000	B	NS	NS	115000	NA
Total Metals	Chromium	7440-47-3	µg/L	3.7	J	100	16000	7.3	NA
Total Metals	Iron	7439-89-6	µg/L	1300	^	300	11000	279	NA
Total Metals	Magnesium	7439-95-4	µg/L	10000	B	NS	NS	43300	NA
Total Metals	Manganese	7439-96-5	µg/L	110	B	50	320	1020	NA
Total Metals	Nickel	7440-02-0	µg/L	3.2	J	NS	760	0	NA
Total Metals	Potassium	9/7/7440	µg/L	19000	B	NS	NS	2890	NA
Total Metals	Sodium	7440-23-5	µg/L	28000	B	NS	NS	45700	NA
Total Metals	Thallium	7440-28-0	µg/L	0.58	J,B	2.0	0.16	0	NA
Total Metals	Vanadium	7440-62-2	µg/L	1.9	J	NS	78	0	NA
Total Metals	Zinc	7440-66-6	µg/L	11	J,B	5000	4700	60.9	NA
VOCs	2-Butanone (MEK)	78-93-3	µg/L	0.94	J	NS	4900	NA	NA
VOCs	Bis(2-ethylhexyl) phthalate - RE	117-81-7	µg/L	2.2	H,B	6.0	0.071	NA	NA
Pesticide	alpha-BHC	319-84-6	µg/L	0.0093	J	NS	0.0062	NA	NA
Pesticide	beta-BHC	319-85-7	µg/L	0.012	J	NS	0.022	NA	NA
Explosive	3-Nitrotoluene	99-08-1	µg/L	0.081	J	NS	1.3	NA	NA
TCLP-Metals	Arsenic	7440-38-2	mg/L	0.0054	J	NA	NA	NA	5.0
TCLP-Metals	Barium	7440-39-3	mg/L	0.052	J,B	NA	NA	NA	100
TCLP-Metals	Chromium	7440-47-3	mg/L	0.0029	J	NA	NA	NA	5.0
TCLP-Misc.	Corrosivity	NA	SU	8.39		NA	NA	NA	NA
TCLP-Misc.	Flashpoint	Q376	F	>180.0		NA	NA	NA	<140

**Table 2. Detected Analytical Results Compared to Regulatory Characteristic Levels
(continued)**

Note:

Acetone (1.4 µg/L J) was detected in the Trip blank.

* The Maximum Toxicity Concentration is the TCLP criteria presented in Table 8-1. Maximum Concentration of Contaminants for Toxicity Characteristic (40 CFR 261.24), and Table 8-2. Maximum Concentration of Hazardous Waste Characterization Analytes (40 CFR 261.21-23).

Bold concentrations exceed Drinking Water Standard – Maximum Contaminate Levels (MCLs).

Italics concentrations exceed USEPA Risk Screening Levels (RSLs).

Shaded concentrations exceed the lowest criteria level for RVAAP unfiltered groundwater.

J = estimated result. Result is less than reporting limit.

B = method blank contamination

H = sample was prepped or analyzed beyond the specified holding time.

RE = re-extraction.

^ = Instrument related QC exceeds the control limits.

NS = no standard.

NA = not applicable

ATTACHMENT 1.
LABORATORY ANALYTICAL DATA SHEETS

TestAmerica

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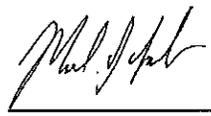
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-12752-1
Client Project/Site: RVAAP (OH) - IDW

For:
Environmental Quality Mgt., Inc.
1800 Carillon Blvd
Cincinnati, Ohio 45240

Attn: Mr. Erik Corbin



Authorized for release by:
7/16/2012 12:10:41 PM

Mark Loeb
Project Manager II
mark.loeb@testamericainc.com

LINKS

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Ask The Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

HPLC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Estimated result. Result is less than RL.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	RPD of the MS and MSD exceeds the control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Estimated result. Result is less than RL.
B	Method blank contamination. Analyte detected at a reportable level in blank.
N	Spike sample recovery is outside control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit

Definitions/Glossary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Environmental Quality Mgt., Inc.

Project: RVAAP (OH) - IDW

Report Number: 240-12752-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Analyses for Explosive and Propellants were performed by TestAmerica West Sacramento.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/28/2012 12:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 5.6° C, 5.9° C, 6.0° C and 6.0° C.

Method(s) 9040B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe:
FWG-IDW-TANK3-GW

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 07/03/2012 and 07/05/2012 and analyzed on 07/04/2012 and 07/06/2012.

No difficulties were encountered during the VOCs analyses. All quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Method 8260B. The samples were analyzed on 06/29/2012.

Acetone was detected in method blank MB 240-49421/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-49421/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Internal standard (ISTD) response for the following sample was outside control limits: FWG-IDW-SBCOMP3-SO. The sample was re-analyzed with concurring results. The original set of data has been reported.

No other analytical or quality issues were noted. All other quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TRIP BLANK (240-12752-1) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 07/10/2012.

No difficulties were encountered during the VOCs analyses. All quality control parameters were within the acceptance limits.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/06/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/03/2012 and analyzed on 07/06/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-49770/15-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/02/2012 and 07/10/2012 and analyzed on 07/09/2012 and 07/13/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate and Butyl benzyl phthalate were detected in method blank MB 240-50344/13-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl (Surr), Nitrobenzene-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for MB 240-49608/13-A. Refer to the QC report for details.

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The associated Method Blank 49608 for sample FWG-IDW-TANK3-GW had surrogates out of control. Upon re-extraction and re-analysis all QC met acceptance criteria, however sample holding times had been exceeded. Both sets of data will be reported.

No other difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

TCLP CHLORINATED PESTICIDES

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/ 8081A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012 and 07/06/2012.

Sample FWG-IDW-SBCOMP3-SO (240-12752-3)[5X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

The closing continuing calibration verification (CCV) associated with batch 50336 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-SBCOMP3-SO

No other difficulties were encountered during the pesticides analyses. All other quality control parameters were within the acceptance limits.

CHLORINATED PESTICIDES

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 07/03/2012 and analyzed on 07/09/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Sample FWG-IDW-SBCOMP3-SO (240-12752-3)[10X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

CHLORINATED PESTICIDES

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081A. The samples were prepared on 07/02/2012 and analyzed on 07/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

The continuing calibration verification (CCV) for alpha, gamma, beta and delta-BHC, Heptachlor, Aldrin, Heptachlor epoxide, gamma and alpha-Chlordane, Endosulfan I and II, DDE, Dieldrin, Endrin, DDD, Endosulfan sulfate and Endrin ketone associated with batch 49739 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. FWG-IDW-TANK3-GW

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 49615.

No difficulties were encountered during the pesticides analysis. All quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 07/03/2012 and analyzed on 07/06/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The opening continuing calibration verification (CCV) associated with this sample passed average. Since the samples were ND no corrective action is required. FWG-IDW-SBCOMP3-SO.

The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: FWG-IDW-SBCOMP3-SO. Lot # S65830

No difficulties were encountered during the PCBs analysis. All quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 07/02/2012 and analyzed on 07/03/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 49612.

No other difficulties were encountered during the PCBs analysis. All other quality control parameters were within the acceptance limits.

TCLP CHLORINATED HERBICIDES

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/ 8151A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/07/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the herbicides analyses. All quality control parameters were within the acceptance limits.

TCLP METALS (ICP)

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/ 6010B. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

Barium was detected in method blank LB 240-49653/1-D at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012.

Several analytes were detected in method blank MB 240-49412/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Manganese failed the recovery criteria low for the MS of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-50003. Calcium failed the recovery criteria high.

Calcium and Manganese failed the recovery criteria high for the MSD of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-50003. Manganese exceeded the rpd limit. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

TOTAL RECOVERABLE METALS (ICP)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/10/2012 and analyzed on 07/11/2012.

Several analytes were detected in method blank MB 240-50314/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL METALS (ICPMS)

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012 and 07/09/2012.

Antimony failed the recovery criteria low for the MS and MSD of sample FWG-IDW-SBCOMP3-SO (240-12752-3) in batch 240-49993. Aluminum and Iron failed the recovery criteria high. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 07/10/2012 and analyzed on 07/11/2012.

Sodium was detected in method blank MB 240-50314/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Thallium and Zinc were detected in method blank MB 240-50314/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Sodium failed the recovery criteria low for the MS of sample FWG-IDW-TANK3-GW (240-12752-4) in batch 240-50556. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TCLP MERCURY

Samples FWG-IDW-SBCOMP3-SO (240-12752-3) and FWG-IDW-TANK3-GW (240-12752-4) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 07/02/2012, prepared on 07/03/2012 and analyzed on 07/05/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/29/2012 and analyzed on 07/03/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/29/2012 and analyzed on 07/05/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

FLASHPOINT

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 06/29/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

FLASHPOINT

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 07/02/2012.

No difficulties were encountered during the flashpoint analysis. All quality control parameters were within the acceptance limits.

TOTAL AND AMENABLE CYANIDE

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for total and amenable cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 07/09/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

TOTAL CYANIDE

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 07/02/2012.

No difficulties were encountered during the cyanide analysis. All quality control parameters were within the acceptance limits.

SULFIDE

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 07/03/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

SULFIDE

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 07/03/2012.

No difficulties were encountered during the sulfide analysis. All quality control parameters were within the acceptance limits.

PH

Sample FWG-IDW-TANK3-GW (240-12752-4) was analyzed for pH in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 06/28/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

PH

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for pH in accordance with EPA SW-846 Method 9045C. The samples were analyzed on 06/29/2012.

No difficulties were encountered during the pH analysis. All quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Sample FWG-IDW-SBCOMP3-SO (240-12752-3) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/29/2012.

No difficulties were encountered during the % solids analysis. All quality control parameters were within the acceptance limits.

Case Narrative

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Job ID: 240-12752-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

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WEST SACRAMENTO

CASE NARRATIVE

General Comments

Please note that the percent solids analysis was performed by the TestAmerica Canton laboratory.

WATER, 8330, Explosives

Sample: FWG-IDW-TANK3-GW

There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

SOLID, Nitrocellulose

Sample: FWG-IDW-SBCOMP3-SO

The matrix spikes, which were performed on sample 2, have a low matrix spike duplicate recovery due to possible matrix interferences. Since the laboratory control sample met acceptance criteria, no corrective action was performed.

There are no other anomalies associated with this project.

Method Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NC
8081A	Organochlorine Pesticides (GC)	SW846	TAL NC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NC
8151A	Herbicides (GC)	SW846	TAL NC
8330 (Modified)	Organic Compounds by UV/HPLC	SW846	TAL WSC
8330/8330A	Nitroaromatics & Nitramines: Explosives (8330/A)	SW846	TAL WSC
8330B	Nitroaromatics & Nitramines: Explosives (8330B)	SW846	TAL WSC
6010B	Metals (ICP)	SW846	TAL NC
6020	Metals (ICP/MS)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC
7471A	Mercury (CVAA)	SW846	TAL NC
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL NC
160.3 MOD	Solids, Percent (as TS - 160.3 MOD) - Solids	MCAWW	TAL NC
9012A	Cyanide, Total and/or Amenable	SW846	TAL NC
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL NC
9040B	pH	SW846	TAL NC
9045C	pH	SW846	TAL NC
Moisture	Percent Moisture	EPA	TAL NC
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-SOP = TAL-SOP

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95805, TEL (916)373-5600

Sample Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-12752-1	TRIP BLANK	Water	06/28/12 08:00	06/28/12 12:45
240-12752-3	FWG-IDW-SBCOMP3-SO	Solid	06/28/12 10:15	06/28/12 12:45
240-12752-4	FWG-IDW-TANK3-GW	Water	06/28/12 11:00	06/28/12 12:45

Detection Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-12752-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	1.4	J	10	1.1	ug/L	1			8260B	Total/NA

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Carbon disulfide	5.4	J B	6.4	0.56	ug/Kg	1		*	8260B	Total/NA
Methylene Chloride	1.2	J B	6.4	0.86	ug/Kg	1		*	8260B	Total/NA
Toluene	0.43	J	6.4	0.34	ug/Kg	1		*	8260B	Total/NA
Fluoranthene	7.4	J	8.4	4.2	ug/Kg	1		*	8270C	Total/NA
Benzo[g,h,i]perylene	13		8.4	4.2	ug/Kg	1		*	8270C	Total/NA
Benzo[a]pyrene	6.3	J	8.4	4.2	ug/Kg	1		*	8270C	Total/NA
2-Methylnaphthalene	7.3	J	8.4	4.2	ug/Kg	1		*	8270C	Total/NA
Naphthalene	4.5	J	8.4	4.2	ug/Kg	1		*	8270C	Total/NA
Pyrene	8.8		8.4	4.2	ug/Kg	1		*	8270C	Total/NA
Bis(2-ethylhexyl) phthalate	140	B	63	24	ug/Kg	1		*	8270C	Total/NA
Arsenic	11		1.2	0.37	mg/Kg	1		*	6010B	Total/NA
Chromium	15		0.61	0.25	mg/Kg	1		*	6010B	Total/NA
Cobalt	10		6.1	0.20	mg/Kg	1		*	6010B	Total/NA
Lead	11		0.37	0.23	mg/Kg	1		*	6010B	Total/NA
Vanadium	17	B	6.1	0.15	mg/Kg	1		*	6010B	Total/NA
Barium	120	B	25	0.087	mg/Kg	1		*	6010B	Total/NA
Calcium	16000	B	610	20	mg/Kg	1		*	6010B	Total/NA
Copper	21		3.1	0.91	mg/Kg	1		*	6010B	Total/NA
Magnesium	4500		610	6.3	mg/Kg	1		*	6010B	Total/NA
Manganese	430		1.8	0.091	mg/Kg	1		*	6010B	Total/NA
Nickel	24	B	4.9	0.33	mg/Kg	1		*	6010B	Total/NA
Potassium	1500	B	610	7.6	mg/Kg	1		*	6010B	Total/NA
Arsenic	0.0048	J	0.50	0.0032	mg/L	1			6010B	TCLP
Barium	0.88	J B	10	0.00067	mg/L	1			6010B	TCLP
Cadmium	0.0024	J	0.10	0.00066	mg/L	1			6010B	TCLP
Chromium	0.0037	J	0.50	0.0022	mg/L	1			6010B	TCLP
Lead	0.0035	J	0.50	0.0019	mg/L	1			6010B	TCLP
Aluminum	11000	B	6.1	1.6	mg/Kg	1		*	6020	Total/NA
Antimony	0.13	J B	0.25	0.029	mg/Kg	1		*	6020	Total/NA
Beryllium	0.57		0.12	0.058	mg/Kg	1		*	6020	Total/NA
Cadmium	0.14		0.12	0.0096	mg/Kg	1		*	6020	Total/NA
Iron	25000	B	12	1.2	mg/Kg	1		*	6020	Total/NA
Sodium	90	J B	120	2.9	mg/Kg	1		*	6020	Total/NA
Thallium	0.17	J	0.25	0.016	mg/Kg	1		*	6020	Total/NA
Zinc	63	B	2.5	0.25	mg/Kg	1		*	6020	Total/NA
Mercury	0.027	J	0.13	0.019	mg/Kg	1		*	7471A	Total/NA
Flashpoint	>180		1.00	1.00	Degrees F	1			1010	Total/NA
Corrosivity	10.0		0.100	0.100	SU	1			9045C	Total/NA
Nitrocellulose	1.7	J B	6.4	1.0	mg/kg	1		*	WS-WC-0050	Total

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2-Butanone (MEK)	0.94	J	10	0.57	ug/L	1			8260B	Total/NA
Bis(2-ethylhexyl) phthalate - RE	2.2	H B	2.0	0.79	ug/L	1			8270C	Total/NA
alpha-BHC	0.0093	J	0.051	0.0071	ug/L	1			8081A	Total/NA
beta-BHC	0.012	J	0.051	0.0086	ug/L	1			8081A	Total/NA
3-Nitrotoluene	0.081	J	0.52	0.059	ug/L	1.03			8330/8330A	Total

Detection Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW (Continued)

Lab Sample ID: 240-12752-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	8.3	J	10	3.2	ug/L	1		6010B	Total
									Recoverable
Chromium	3.7	J	5.0	2.2	ug/L	1		6010B	Total
									Recoverable
Vanadium	1.9	J	7.0	0.64	ug/L	1		6010B	Total
									Recoverable
Barium	56	J B	200	0.67	ug/L	1		6010B	Total
									Recoverable
Calcium	43000	B	5000	130	ug/L	1		6010B	Total
									Recoverable
Magnesium	10000	B	5000	34	ug/L	1		6010B	Total
									Recoverable
Manganese	110	B	15	0.41	ug/L	1		6010B	Total
									Recoverable
Nickel	3.2	J	40	3.2	ug/L	1		6010B	Total
									Recoverable
Potassium	19000	B	5000	72	ug/L	1		6010B	Total
									Recoverable
Arsenic	0.0054	J	0.50	0.0032	mg/L	1		6010B	TCLP
Barium	0.052	J B	10	0.00067	mg/L	1		6010B	TCLP
Chromium	0.0029	J	0.50	0.0022	mg/L	1		6010B	TCLP
Aluminum	580		50	19	ug/L	1		6020	Total
									Recoverable
Antimony	2.3		2.0	0.13	ug/L	1		6020	Total
									Recoverable
Iron	1300	^	100	26	ug/L	1		6020	Total
									Recoverable
Sodium	28000	B	1000	6.9	ug/L	1		6020	Total
									Recoverable
Thallium	0.58	J B	2.0	0.14	ug/L	1		6020	Total
									Recoverable
Zinc	11	J B	20	2.3	ug/L	1		6020	Total
									Recoverable
Flashpoint	>180		1.00	1.00	Degrees F	1		1010	Total/NA
pH	8.39		0.100	0.100	SU	1		9040B	Total/NA

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-12752-1

Date Collected: 06/28/12 08:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 12:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			07/10/12 12:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			07/10/12 12:54	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			07/10/12 12:54	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 12:54	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			07/10/12 12:54	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 12:54	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			07/10/12 12:54	1
2-Hexanone	10	U	10	0.41	ug/L			07/10/12 12:54	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 12:54	1
Acetone	1.4	J	10	1.1	ug/L			07/10/12 12:54	1
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
Bromoform	1.0	U	1.0	0.64	ug/L			07/10/12 12:54	1
Bromomethane	1.0	U	1.0	0.41	ug/L			07/10/12 12:54	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			07/10/12 12:54	1
Chloromethane	1.0	U	1.0	0.30	ug/L			07/10/12 12:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			07/10/12 12:54	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			07/10/12 12:54	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			07/10/12 12:54	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			07/10/12 12:54	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			07/10/12 12:54	1
o-Xylene	1.0	U	1.0	0.14	ug/L			07/10/12 12:54	1
Styrene	1.0	U	1.0	0.11	ug/L			07/10/12 12:54	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			07/10/12 12:54	1
Toluene	1.0	U	1.0	0.13	ug/L			07/10/12 12:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			07/10/12 12:54	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 12:54	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			07/10/12 12:54	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			07/10/12 12:54	1
Chloroform	1.0	U	1.0	0.16	ug/L			07/10/12 12:54	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			07/10/12 12:54	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			07/10/12 12:54	1
Chloroethane	1.0	U	1.0	0.29	ug/L			07/10/12 12:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		74 - 115		07/10/12 12:54	1
1,2-Dichloroethane-d4 (Surr)	93		63 - 129		07/10/12 12:54	1
4-Bromofluorobenzene (Surr)	95		66 - 117		07/10/12 12:54	1
Dibromofluoromethane (Surr)	100		75 - 121		07/10/12 12:54	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Percent Solids: 78.3

Method: 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	6.4	U	6.4	0.71	ug/Kg	*		06/29/12 19:38	1
1,1,2,2-Tetrachloroethane	6.4	U	6.4	0.43	ug/Kg	*		06/29/12 19:38	1
1,1,2-Trichloroethane	6.4	U	6.4	0.50	ug/Kg	*		06/29/12 19:38	1
1,1-Dichloroethane	6.4	U	6.4	0.46	ug/Kg	*		06/29/12 19:38	1
1,1-Dichloroethene	6.4	U	6.4	0.66	ug/Kg	*		06/29/12 19:38	1
1,2-Dichloroethane	6.4	U	6.4	0.43	ug/Kg	*		06/29/12 19:38	1
1,2-Dichloroethene, Total	13	U	13	0.98	ug/Kg	*		06/29/12 19:38	1
1,2-Dichloropropane	6.4	U	6.4	0.88	ug/Kg	*		06/29/12 19:38	1
2-Butanone (MEK)	28	U	26	1.8	ug/Kg	*		06/29/12 19:38	1
2-Hexanone	26	U	26	0.80	ug/Kg	*		06/29/12 19:38	1
4-Methyl-2-pentanone (MIBK)	26	U	26	0.69	ug/Kg	*		06/29/12 19:38	1
Acetone	28	U	26	8.0	ug/Kg	*		06/29/12 19:38	1
Benzene	6.4	U	6.4	0.29	ug/Kg	*		06/29/12 19:38	1
Bromoform	6.4	U	6.4	0.42	ug/Kg	*		06/29/12 19:38	1
Bromomethane	6.4	U	6.4	0.69	ug/Kg	*		06/29/12 19:38	1
Carbon disulfide	5.4	J B	6.4	0.56	ug/Kg	*		06/29/12 19:38	1
Carbon tetrachloride	6.4	U	6.4	0.47	ug/Kg	*		06/29/12 19:38	1
Chlorobenzene	6.4	U	6.4	0.42	ug/Kg	*		06/29/12 19:38	1
Chloromethane	8.4	U	6.4	0.52	ug/Kg	*		06/29/12 19:38	1
cis-1,2-Dichloroethene	6.4	U	6.4	0.46	ug/Kg	*		06/29/12 19:38	1
cis-1,3-Dichloropropene	6.4	U	6.4	0.43	ug/Kg	*		06/29/12 19:38	1
Dibromochloromethane	6.4	U	6.4	0.70	ug/Kg	*		06/29/12 19:38	1
Bromodichloromethane	6.4	U	6.4	0.38	ug/Kg	*		06/29/12 19:38	1
Ethylbenzene	8.4	U	6.4	0.33	ug/Kg	*		06/29/12 19:38	1
Methylene Chloride	1.2	J B	6.4	0.86	ug/Kg	*		06/29/12 19:38	1
m-Xylene & p-Xylene	13	U	13	1.5	ug/Kg	*		06/29/12 19:38	1
o-Xylene	6.4	U	6.4	0.45	ug/Kg	*		06/29/12 19:38	1
Styrene	6.4	U	6.4	0.19	ug/Kg	*		06/29/12 19:38	1
Tetrachloroethene	6.4	U	6.4	0.66	ug/Kg	*		06/29/12 19:38	1
Toluene	0.43	J	6.4	0.34	ug/Kg	*		06/29/12 19:38	1
trans-1,2-Dichloroethene	6.4	U	6.4	0.52	ug/Kg	*		06/29/12 19:38	1
trans-1,3-Dichloropropene	6.4	U	6.4	0.69	ug/Kg	*		06/29/12 19:38	1
Trichloroethene	6.4	U	6.4	0.54	ug/Kg	*		06/29/12 19:38	1
Vinyl chloride	6.4	U	6.4	0.50	ug/Kg	*		06/29/12 19:38	1
Xylenes, Total	13	U	13	0.86	ug/Kg	*		06/29/12 19:38	1
Chloroform	6.4	U	6.4	0.37	ug/Kg	*		06/29/12 19:38	1
Bromochloromethane	6.4	U	6.4	0.91	ug/Kg	*		06/29/12 19:38	1
1,2-Dibromoethane	6.4	U	6.4	0.64	ug/Kg	*		06/29/12 19:38	1
Chloroethane	6.4	U	6.4	1.1	ug/Kg	*		06/29/12 19:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	112		67 - 125					06/29/12 19:38	1
1,2-Dichloroethane-d4 (Surr)	96		58 - 123					06/29/12 19:38	1
4-Bromofluorobenzene (Surr)	121		52 - 136					06/29/12 19:38	1
Dibromofluoromethane (Surr)	89		37 - 132					06/29/12 19:38	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/06/12 21:42	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/06/12 21:42	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/06/12 21:42	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0.025	0.0065	mg/L			07/08/12 21:42	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			07/08/12 21:42	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/06/12 21:42	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/06/12 21:42	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/06/12 21:42	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/06/12 21:42	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/06/12 21:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121					07/06/12 21:42	1
4-Bromofluorobenzene (Surr)	94		70 - 124					07/06/12 21:42	1
Toluene-d8 (Surr)	107		90 - 115					07/06/12 21:42	1
Dibromofluoromethane (Surr)	117		84 - 128					07/06/12 21:42	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/08/12 19:27	1
Acenaphthylene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Anthracene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzo[a]anthracene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzoic acid	830	U	830	420	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzo[b]fluoranthene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzo[k]fluoranthene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzyl alcohol	420	U	420	27	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Bis(2-chloroethoxy)methane	130	U	130	28	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Bis(2-chloroethyl)ether	130	U	130	2.5	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Bromophenyl phenyl ether	63	U	63	16	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Butyl benzyl phthalate	83	U	63	13	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4-Dimethylphenol	190	U	190	25	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Dimethyl phthalate	83	U	63	21	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4,6-Dinitro-2-methylphenol	190	U	190	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4-Dinitrophenol	420	U	420	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4-Dinitrotoluene	250	U	250	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,6-Dinitrotoluene	250	U	250	27	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Fluoranthene	7.4	J	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Fluorene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Hexachlorobenzene	8.4	U	8.4	2.7	ug/Kg	*	07/03/12 13:56	07/08/12 19:27	1
Hexachlorobutadiene	83	U	83	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Hexachlorocyclopentadiene	420	U	420	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Hexachloroethane	63	U	63	11	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
N-Nitrosodiphenylamine	63	U	63	27	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
N-Nitrosodi-n-propylamine	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
1,4-Dichlorobenzene	63	U	63	25	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Chloronaphthalene	63	U	63	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Chlorophenol	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Chlorophenyl phenyl ether	63	U	63	16	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Chrysene	8.4	U	8.4	1.4	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Dibenz(a,h)anthracene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Dibenzofuran	63	U	63	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzo[g,h,i]perylene	13		8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Benzo[a]pyrene	6.3	J	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 08/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Percent Solids: 78.3

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	63	U	63	19	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
1,2-Dichlorobenzene	63	U	63	12	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
1,3-Dichlorobenzene	63	U	63	14	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
3,3'-Dichlorobenzidine	130	U	130	23	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4-Dichlorophenol	190	U	190	25	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Diethyl phthalate	63	U	63	20	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Indeno[1,2,3-cd]pyrene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Isophorone	63	U	63	16	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Methylnaphthalene	7.3	J	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Methylphenol	250	U	250	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Naphthalene	4.5	J	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Nitroaniline	250	U	250	12	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
3-Nitroaniline	250	U	250	20	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Nitroaniline	250	U	250	33	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Nitrobenzene	130	U	130	2.8	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2-Nitrophenol	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Nitrophenol	420	U	420	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Pyrene	8.8		8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Pentachlorophenol	190	U	190	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Phenanthrene	8.4	U	8.4	4.2	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
1,2,4-Trichlorobenzene	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4,5-Trichlorophenol	190	U	190	32	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,4,6-Trichlorophenol	190	U	190	100	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Phenol	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Carbazole	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Chloroaniline	190	U	190	21	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
3 & 4 Methylphenol	510	U	510	25	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Bis(2-ethylhexyl) phthalate	140	B	63	24	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
Di-n-octyl phthalate	63	U	63	34	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
4-Chloro-3-methylphenol	190	U	190	27	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1
2,2'-oxybis[1-chloropropane]	130	U	130	12	ug/Kg	*	07/03/12 13:56	07/06/12 19:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	53		34 - 110	07/03/12 13:56	07/06/12 19:27	1
2-Fluorophenol (Surr)	69		26 - 110	07/03/12 13:56	07/06/12 19:27	1
Nitrobenzene-d5 (Surr)	53		24 - 112	07/03/12 13:56	07/06/12 19:27	1
Terphenyl-d14 (Surr)	75		41 - 119	07/03/12 13:56	07/06/12 19:27	1
2,4,6-Tribromophenol (Surr)	46		10 - 118	07/03/12 13:56	07/06/12 19:27	1
Phenol-d5 (Surr)	71		28 - 110	07/03/12 13:56	07/06/12 19:27	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:12	07/06/12 18:11	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:12	07/06/12 18:11	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 18:11	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:11	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		07/03/12 09:12	07/06/12 18:11	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:11	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 18:11	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:12	07/06/12 18:11	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:12	07/06/12 18:11	1

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Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:12	07/08/12 18:11	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:12	07/06/12 18:11	1
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:12	07/06/12 18:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	46		22 - 110				07/03/12 09:12	07/06/12 18:11	1
2-Fluorophenol (Surr)	13		10 - 110				07/03/12 09:12	07/06/12 18:11	1
2,4,6-Tribromophenol (Surr)	68		17 - 117				07/03/12 09:12	07/06/12 18:11	1
Nitrobenzene-d5 (Surr)	46		29 - 111				07/03/12 09:12	07/06/12 18:11	1
Phenol-d5 (Surr)	46		10 - 110				07/03/12 09:12	07/06/12 18:11	1
Terphenyl-d14 (Surr)	71		40 - 119				07/03/12 09:12	07/06/12 18:11	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	21	U	21	7.8	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
4,4'-DDE	21	U	21	4.9	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
4,4'-DDT	21	U	21	7.9	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Aldrin	21	U	21	15	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
alpha-BHC	21	U	21	9.2	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
alpha-Chlordane	21	U	21	12	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
beta-BHC	21	U	21	14	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
delta-BHC	21	U	21	15	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Dieldrin	21	U	21	5.9	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endosulfan I	21	U	21	6.6	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endosulfan II	21	U	21	10	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endosulfan sulfate	21	U	21	11	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endrin	21	U	21	6.3	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endrin aldehyde	21	U	21	13	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Endrin ketone	21	U	21	7.9	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
gamma-BHC (Lindane)	21	U	21	9.3	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
gamma-Chlordane	21	U	21	5.3	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Heptachlor	21	U	21	14	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Heptachlor epoxide	21	U	21	10	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Methoxychlor	42	U	42	19	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Toxaphene	840	U	840	240	ug/Kg	*	07/03/12 12:02	07/09/12 08:27	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	97		32 - 175				07/03/12 12:02	07/09/12 08:27	10
DCB Decachlorobiphenyl	110		32 - 175				07/03/12 12:02	07/09/12 08:27	10
Tetrachloro-m-xylene	95		24 - 150				07/03/12 12:02	07/09/12 08:27	10
Tetrachloro-m-xylene	91		24 - 150				07/03/12 12:02	07/09/12 08:27	10

Method: 8081A - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.060	U	0.060	0.00040	mg/L		07/03/12 09:15	07/08/12 14:52	5
Endrin	0.0080	U	0.0060	0.00013	mg/L		07/03/12 09:15	07/06/12 14:52	5
Heptachlor	0.0060	U	0.0060	0.000096	mg/L		07/03/12 09:15	07/06/12 14:52	5
Heptachlor epoxide	0.0080	U	0.0060	0.000085	mg/L		07/03/12 09:15	07/06/12 14:52	5
gamma-BHC (Lindane)	0.0060	U	0.0060	0.000077	mg/L		07/03/12 09:15	07/06/12 14:52	5
Methoxychlor	0.012	U	0.012	0.00038	mg/L		07/03/12 09:15	07/06/12 14:52	5
Toxaphene	0.24	U	0.24	0.0038	mg/L		07/03/12 09:15	07/08/12 14:52	5

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		46 - 122	07/03/12 09:15	07/06/12 14:52	5
Tetrachloro-m-xylene	74		46 - 122	07/03/12 09:15	07/06/12 14:52	5
DCB Decachlorobiphenyl	102		34 - 141	07/03/12 09:15	07/06/12 14:52	5
DCB Decachlorobiphenyl	100		34 - 141	07/03/12 09:15	07/06/12 14:52	5

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1018	42	U	42	26	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1221	42	U	42	20	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1232	42	U	42	18	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1242	42	U	42	16	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1248	42	U	42	21	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1254	42	U	42	21	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1
Aroclor-1260	42	U	42	21	ug/Kg	*	07/03/12 11:53	07/06/12 09:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	60		29 - 151	07/03/12 11:53	07/06/12 09:43	1
DCB Decachlorobiphenyl	58		14 - 163	07/03/12 11:53	07/06/12 09:43	1

Method: 8151A - Herbicides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 19:42	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 19:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	53		37 - 116	07/03/12 09:18	07/07/12 19:42	1
2,4-Dichlorophenylacetic acid	63		37 - 116	07/03/12 09:18	07/07/12 19:42	1

Method: 8330 (Modified) - Organic Compounds by UV/HPLC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	0.25	U	0.25	0.020	mg/kg		07/06/12 06:00	07/10/12 12:23	0.99

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.25	U	0.25	0.0099	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
1,3-Dinitrobenzene	0.25	U	0.25	0.0042	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2,4,6-Trinitrotoluene	0.25	U	0.25	0.019	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2,4-Dinitrotoluene	0.25	U	0.25	0.0052	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2,6-Dinitrotoluene	0.25	U	0.25	0.0072	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2-Amino-4,6-dinitrotoluene	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
2-Nitrotoluene	0.25	U	0.25	0.013	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
3-Nitrotoluene	0.25	U	0.25	0.015	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
4-Amino-2,6-dinitrotoluene	0.25	U	0.25	0.0099	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
4-Nitrotoluene	0.25	U	0.25	0.025	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
HMX	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
Nitrobenzene	0.25	U	0.25	0.017	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
Nitroglycerin	0.50	U	0.50	0.015	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
PETN	0.50	U	0.50	0.025	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
RDX	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99
Tetryl	0.25	U	0.25	0.0099	mg/kg		07/09/12 12:45	07/10/12 14:06	0.99

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	99		75 - 115	07/09/12 12:45	07/10/12 14:06	0.99

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Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Percent Solids: 78.3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		1.2	0.37	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Chromium	15		0.61	0.25	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Cobalt	10		6.1	0.20	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Lead	11		0.37	0.23	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Selenium	0.61	U	0.61	0.55	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Silver	0.61	U	0.61	0.12	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Vanadium	17	B	6.1	0.15	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Barium	120	B	25	0.087	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Calcium	16000	B	810	20	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Copper	21		3.1	0.91	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Magnesium	4500		810	6.3	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Manganese	430		1.8	0.091	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Nickel	24	B	4.9	0.33	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1
Potassium	1500	B	610	7.6	mg/Kg	*	06/29/12 11:17	07/05/12 20:27	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0048	J	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 20:59	1
Barium	0.88	J B	10	0.00067	mg/L		07/03/12 10:01	07/05/12 20:59	1
Cadmium	0.0024	J	0.10	0.00068	mg/L		07/03/12 10:01	07/05/12 20:59	1
Chromium	0.0037	J	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 20:59	1
Lead	0.0035	J	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 20:59	1
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 20:59	1
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 20:59	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	11000	B	6.1	1.6	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Antimony	0.13	J B	0.25	0.029	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Beryllium	0.57		0.12	0.058	mg/Kg	*	06/29/12 11:17	07/09/12 09:43	1
Cadmium	0.14		0.12	0.0096	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Iron	25000	B	12	1.2	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Sodium	90	J B	120	2.9	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Thallium	0.17	J	0.25	0.016	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1
Zinc	63	B	2.5	0.25	mg/Kg	*	06/29/12 11:17	07/05/12 21:15	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 13:58	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	J	0.13	0.019	mg/Kg	*	06/29/12 14:00	07/05/12 16:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>180		1.00	1.00	Degrees F			06/29/12 14:17	1
Cyanide, Total	0.63	U	0.63	0.13	mg/Kg	*	07/09/12 08:07	07/09/12 10:24	1
Sulfide	39	U	39	28	mg/Kg	*	07/03/12 07:56	07/03/12 13:48	1
Corrosivity	10.0		0.100	0.100	SU			06/29/12 16:15	1
Nitrocellulose	1.7	J B	6.4	1.0	mg/kg	*	07/09/12 12:15	07/11/12 11:11	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 13:16	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			07/10/12 13:16	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			07/10/12 13:16	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			07/10/12 13:16	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 13:16	1
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 13:16	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			07/10/12 13:16	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 13:16	1
2-Butanone (MEK)	0.94	J	10	0.57	ug/L			07/10/12 13:16	1
2-Hexanone	10	U	10	0.41	ug/L			07/10/12 13:16	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 13:16	1
Acetone	10	U	10	1.1	ug/L			07/10/12 13:16	1
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
Bromoform	1.0	U	1.0	0.64	ug/L			07/10/12 13:16	1
Bromomethane	1.0	U	1.0	0.41	ug/L			07/10/12 13:16	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			07/10/12 13:16	1
Chloromethane	1.0	U	1.0	0.30	ug/L			07/10/12 13:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 13:16	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			07/10/12 13:16	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			07/10/12 13:16	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			07/10/12 13:16	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			07/10/12 13:16	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			07/10/12 13:16	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			07/10/12 13:16	1
o-Xylene	1.0	U	1.0	0.14	ug/L			07/10/12 13:16	1
Styrene	1.0	U	1.0	0.11	ug/L			07/10/12 13:16	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			07/10/12 13:16	1
Toluene	1.0	U	1.0	0.13	ug/L			07/10/12 13:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 13:16	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			07/10/12 13:16	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 13:16	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			07/10/12 13:16	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			07/10/12 13:16	1
Chloroform	1.0	U	1.0	0.16	ug/L			07/10/12 13:16	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			07/10/12 13:16	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			07/10/12 13:16	1
Chloroethane	1.0	U	1.0	0.29	ug/L			07/10/12 13:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		74 - 115		07/10/12 13:16	1
1,2-Dichloroethane-d4 (Surr)	95		63 - 129		07/10/12 13:16	1
4-Bromofluorobenzene (Surr)	96		66 - 117		07/10/12 13:16	1
Dibromofluoromethane (Surr)	100		75 - 121		07/10/12 13:16	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/04/12 03:00	1
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/04/12 03:00	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/04/12 03:00	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025	U	0.025	0.0065	mg/L			07/04/12 03:00	1
Carbon tetrachloride	0.025	U	0.025	0.0065	mg/L			07/04/12 03:00	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/04/12 03:00	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/04/12 03:00	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/04/12 03:00	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/04/12 03:00	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/04/12 03:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 121					07/04/12 03:00	1
4-Bromofluorobenzene (Surr)	91		70 - 124					07/04/12 03:00	1
Toluene-d8 (Surr)	108		90 - 115					07/04/12 03:00	1
Dibromofluoromethane (Surr)	110		84 - 128					07/04/12 03:00	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Acenaphthylene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[a]anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzoic acid	25	U	25	10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Butyl benzyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dimethylphenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 11:21	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorobutadiene	1.0	U	1.0	0.27	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
N-Nitrosodiphenylamine	1.0	U	1.0	0.31	ug/L		07/02/12 11:43	07/09/12 11:21	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		07/02/12 11:43	07/09/12 11:21	1
Chrysene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[g,h,i]perylene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Benzo[a]pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	1.0	U	1.0	0.67	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,2-Dichlorobenzene	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,3-Dichlorobenzene	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4-Dichlorophenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 11:21	1
Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Isophorone	1.0	U	1.0	0.27	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Naphthalene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Nitrobenzene	1.0	U	1.0	0.040	ug/L		07/02/12 11:43	07/09/12 11:21	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
Pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 11:21	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 11:21	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,4,6-Trichlorophenol	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Phenol	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 11:21	1
Cerbazole	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chloroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/02/12 11:43	07/09/12 11:21	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 11:21	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.60	ug/L		07/02/12 11:43	07/09/12 11:21	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		07/02/12 11:43	07/09/12 11:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	54		28 - 110	07/02/12 11:43	07/09/12 11:21	1
2-Fluorophenol (Surr)	64		10 - 110	07/02/12 11:43	07/09/12 11:21	1
Nitrobenzene-d5 (Surr)	51		27 - 111	07/02/12 11:43	07/09/12 11:21	1
Terphenyl-d14 (Surr)	72		37 - 119	07/02/12 11:43	07/09/12 11:21	1
2,4,6-Tribromophenol (Surr)	67		22 - 120	07/02/12 11:43	07/09/12 11:21	1
Phenol-d5 (Surr)	67		10 - 110	07/02/12 11:43	07/09/12 11:21	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Acenaphthylene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Anthracene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[a]anthracene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzoic acid	25	U H	25	9.9	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[b]fluoranthene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo[k]fluoranthene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzyl alcohol	5.0	U H	5.0	0.38	ug/L		07/10/12 10:24	07/13/12 12:33	1
Bis(2-chloroethoxy)methane	0.99	U H	0.99	0.32	ug/L		07/10/12 10:24	07/13/12 12:33	1

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Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - RE (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	0.99	U H	0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Bromophenyl phenyl ether	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Butyl benzyl phthalate	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dimethylphenol	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Dimethyl phthalate	0.99	U H	0.99	0.29	ug/L		07/10/12 10:24	07/13/12 12:33	1
4,6-Dinitro-2-methylphenol	5.0	U H	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dinitrophenol	5.0	U H	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dinitrotoluene	5.0	U H	5.0	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,6-Dinitrotoluene	5.0	U H	5.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Fluoranthene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Fluorene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachlorobenzene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachlorobutadiene	0.99	U H	0.99	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachlorocyclopentadiene	9.9	U H	9.9	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Hexachloroethane	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
N-Nitrosodiphenylamine	0.99	U H	0.99	0.31	ug/L		07/10/12 10:24	07/13/12 12:33	1
N-Nitrosodi-n-propylamine	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,4-Dichlorobenzene	0.99	U H	0.99	0.34	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Chloronaphthalene	0.99	U H	0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Chlorophenol	0.99	U H	0.99	0.29	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Chlorophenyl phenyl ether	2.0	U H	2.0	0.30	ug/L		07/10/12 10:24	07/13/12 12:33	1
Chrysene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Dibenz(a,h)anthracene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Dibenzofuran	0.99	U H	0.99	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo(g,h,i)perylene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Benzo(a)pyrene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Di-n-butyl phthalate	0.99	U H	0.99	0.66	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,2-Dichlorobenzene	0.99	U H	0.99	0.29	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,3-Dichlorobenzene	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
3,3'-Dichlorobenzidine	5.0	U H	5.0	0.37	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4-Dichlorophenol	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Diethyl phthalate	0.99	U H	0.99	0.59	ug/L		07/10/12 10:24	07/13/12 12:33	1
Indeno[1,2,3-cd]pyrene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Isophorone	0.99	U H	0.99	0.27	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Methylnaphthalene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Methylphenol	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Naphthalene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Nitroaniline	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
3-Nitroaniline	2.0	U H	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Nitroaniline	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Nitrobenzene	0.99	U H	0.99	0.040	ug/L		07/10/12 10:24	07/13/12 12:33	1
2-Nitrophenol	2.0	U H	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Nitrophenol	5.0	U H	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
Pyrene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
Pentachlorophenol	5.0	U H	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 12:33	1
Phenanthrene	0.20	U H	0.20	0.099	ug/L		07/10/12 10:24	07/13/12 12:33	1
1,2,4-Trichlorobenzene	0.99	U H	0.99	0.26	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4,5-Trichlorophenol	5.0	U H	5.0	0.30	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,4,6-Trichlorophenol	5.0	U H	5.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Phenol	0.99	U H	0.99	0.59	ug/L		07/10/12 10:24	07/13/12 12:33	1
Carbazole	0.99	U H	0.99	0.28	ug/L		07/10/12 10:24	07/13/12 12:33	1

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Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
3 & 4 Methylphenol	2.0	U H	2.0	0.74	ug/L		07/10/12 10:24	07/13/12 12:33	1
Bis(2-ethylhexyl) phthalate	2.2	H B	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
Di-n-octyl phthalate	0.99	U H	0.99	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
4-Chloro-3-methylphenol	2.0	U H	2.0	0.79	ug/L		07/10/12 10:24	07/13/12 12:33	1
2,2'-oxybis[1-chloropropane]	0.99	U H	0.99	0.40	ug/L		07/10/12 10:24	07/13/12 12:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	53		28 - 110	07/10/12 10:24	07/13/12 12:33	1
2-Fluorophenol (Surr)	61		10 - 110	07/10/12 10:24	07/13/12 12:33	1
Nitrobenzene-d5 (Surr)	54		27 - 111	07/10/12 10:24	07/13/12 12:33	1
Terphenyl-d14 (Surr)	71		37 - 119	07/10/12 10:24	07/13/12 12:33	1
2,4,6-Tribromophenol (Surr)	64		22 - 120	07/10/12 10:24	07/13/12 12:33	1
Phenol-d5 (Surr)	66		10 - 110	07/10/12 10:24	07/13/12 12:33	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:12	07/06/12 18:30	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:12	07/06/12 18:30	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 18:30	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:30	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		07/03/12 09:12	07/06/12 18:30	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 18:30	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 18:30	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:12	07/06/12 18:30	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:12	07/06/12 18:30	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:12	07/06/12 18:30	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:12	07/06/12 18:30	1
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:12	07/06/12 18:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	43		22 - 110	07/03/12 09:12	07/06/12 18:30	1
2-Fluorophenol (Surr)	12		10 - 110	07/03/12 09:12	07/06/12 18:30	1
2,4,6-Tribromophenol (Surr)	71		17 - 117	07/03/12 09:12	07/06/12 18:30	1
Nitrobenzene-d5 (Surr)	45		29 - 111	07/03/12 09:12	07/06/12 18:30	1
Phenol-d5 (Surr)	42		10 - 110	07/03/12 09:12	07/06/12 18:30	1
Terphenyl-d14 (Surr)	75		40 - 119	07/03/12 09:12	07/06/12 18:30	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.051	U	0.051	0.0098	ug/L		07/02/12 11:57	07/04/12 07:55	1
4,4'-DDE	0.051	U	0.051	0.0099	ug/L		07/02/12 11:57	07/04/12 07:55	1
4,4'-DDT	0.051	U	0.051	0.016	ug/L		07/02/12 11:57	07/04/12 07:55	1
Aldrin	0.051	U	0.051	0.0084	ug/L		07/02/12 11:57	07/04/12 07:55	1
alpha-BHC	0.0093	J	0.051	0.0071	ug/L		07/02/12 11:57	07/04/12 07:55	1
alpha-Chlordane	0.051	U	0.051	0.014	ug/L		07/02/12 11:57	07/04/12 07:55	1
beta-BHC	0.012	J	0.051	0.0086	ug/L		07/02/12 11:57	07/04/12 07:55	1
delta-BHC	0.051	U	0.051	0.0089	ug/L		07/02/12 11:57	07/04/12 07:55	1
Dieldrin	0.051	U	0.051	0.0077	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endosulfan I	0.051	U	0.051	0.013	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endosulfan II	0.051	U	0.051	0.012	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endosulfan sulfate	0.051	U	0.051	0.011	ug/L		07/02/12 11:57	07/04/12 07:55	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	0.051	U	0.051	0.011	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endrin aldehyde	0.051	U	0.051	0.011	ug/L		07/02/12 11:57	07/04/12 07:55	1
Endrin ketone	0.051	U	0.051	0.0080	ug/L		07/02/12 11:57	07/04/12 07:55	1
gamma-BHC (Lindane)	0.051	U	0.051	0.0065	ug/L		07/02/12 11:57	07/04/12 07:55	1
gamma-Chlordane	0.051	U	0.051	0.012	ug/L		07/02/12 11:57	07/04/12 07:55	1
Heptachlor	0.051	U	0.051	0.0082	ug/L		07/02/12 11:57	07/04/12 07:55	1
Heptachlor epoxide	0.051	U	0.051	0.0072	ug/L		07/02/12 11:57	07/04/12 07:55	1
Methoxychlor	0.10	U	0.10	0.033	ug/L		07/02/12 11:57	07/04/12 07:55	1
Toxaphene	2.0	U	2.0	0.33	ug/L		07/02/12 11:57	07/04/12 07:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	79		10 - 145				07/02/12 11:57	07/04/12 07:55	1
DCB Decachlorobiphenyl	66		10 - 145				07/02/12 11:57	07/04/12 07:55	1
Tetrachloro-m-xylene	88		30 - 141				07/02/12 11:57	07/04/12 07:55	1
Tetrachloro-m-xylene	82		30 - 141				07/02/12 11:57	07/04/12 07:55	1

Method: 8081A - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		07/03/12 09:15	07/05/12 23:21	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		07/03/12 09:15	07/05/12 23:21	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		07/03/12 09:15	07/05/12 23:21	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		07/03/12 09:15	07/05/12 23:21	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		07/03/12 09:15	07/05/12 23:21	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/05/12 23:21	1
Toxaphene	0.048	U	0.048	0.00077	mg/L		07/03/12 09:15	07/05/12 23:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		46 - 122				07/03/12 09:15	07/05/12 23:21	1
Tetrachloro-m-xylene	68		46 - 122				07/03/12 09:15	07/05/12 23:21	1
DCB Decachlorobiphenyl	90		34 - 141				07/03/12 09:15	07/05/12 23:21	1
DCB Decachlorobiphenyl	88		34 - 141				07/03/12 09:15	07/05/12 23:21	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1018	0.51	U	0.51	0.17	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1221	0.51	U	0.51	0.13	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1232	0.51	U	0.51	0.16	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1242	0.51	U	0.51	0.22	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1248	0.51	U	0.51	0.10	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1254	0.51	U	0.51	0.16	ug/L		07/02/12 11:53	07/03/12 17:25	1
Aroclor-1260	0.51	U	0.51	0.17	ug/L		07/02/12 11:53	07/03/12 17:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		23 - 136				07/02/12 11:53	07/03/12 17:25	1
DCB Decachlorobiphenyl	62		10 - 130				07/02/12 11:53	07/03/12 17:25	1

Method: 8151A - Herbicides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 20:06	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 20:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	62		37 - 116				07/03/12 09:18	07/07/12 20:06	1

Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 8151A - Herbicides (GC) - TCLP (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	58		37 - 116	07/03/12 09:18	07/07/12 20:06	1

Method: 8330 (Modified) - Organic Compounds by UV/HPLC - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroguanidine	20	U	20	2.4	ug/L		07/09/12 14:50	07/10/12 10:57	1

Method: 8330/8330A - Nitroaromatics & Nitramines; Explosives (8330/A)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroglycerin	0.67	U	0.67	0.34	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
PETN	0.67	U	0.67	0.31	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
2-Amino-4,6-dinitrotoluene	0.21	U	0.21	0.018	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
1,3-Dinitrobenzene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
2,4-Dinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
2,6-Dinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
HMX	0.10	U	0.10	0.037	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
Nitrobenzene	0.10	U	0.10	0.052	ug/L		07/03/12 08:00	07/06/12 19:24	1.03
2-Nitrotoluene	0.52	U	0.52	0.091	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
3-Nitrotoluene	0.081	J	0.52	0.059	ug/L		07/03/12 08:00	07/06/12 19:24	1.03
4-Nitrotoluene	0.67	U	0.67	0.091	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
RDX	0.10	U	0.10	0.037	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
Tetryl	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
1,3,5-Trinitrobenzene	0.10	U	0.10	0.031	ug/L		07/03/12 06:00	07/06/12 19:24	1.03
2,4,6-Trinitrotoluene	0.10	U	0.10	0.052	ug/L		07/03/12 06:00	07/06/12 19:24	1.03

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	101		79 - 111	07/03/12 06:00	07/06/12 19:24	1.03

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.3	J	10	3.2	ug/L		07/10/12 08:18	07/11/12 13:31	1
Chromium	3.7	J	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:31	1
Cobalt	7.0	U	7.0	1.7	ug/L		07/10/12 08:18	07/11/12 13:31	1
Lead	3.0	U	3.0	1.9	ug/L		07/10/12 08:18	07/11/12 13:31	1
Selenium	5.0	U	5.0	4.1	ug/L		07/10/12 08:18	07/11/12 13:31	1
Silver	5.0	U	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:31	1
Vanadium	1.9	J	7.0	0.64	ug/L		07/10/12 08:18	07/11/12 13:31	1
Barium	56	J B	200	0.67	ug/L		07/10/12 08:18	07/11/12 13:31	1
Calcium	43000	B	5000	130	ug/L		07/10/12 08:18	07/11/12 13:31	1
Copper	25	U	25	4.5	ug/L		07/10/12 08:18	07/11/12 13:31	1
Magnesium	10000	B	5000	34	ug/L		07/10/12 08:18	07/11/12 13:31	1
Manganese	110	B	15	0.41	ug/L		07/10/12 08:18	07/11/12 13:31	1
Nickel	3.2	J	40	3.2	ug/L		07/10/12 08:18	07/11/12 13:31	1
Potassium	19000	B	5000	72	ug/L		07/10/12 08:18	07/11/12 13:31	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0054	J	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 21:03	1
Barium	0.052	J B	10	0.00067	mg/L		07/03/12 10:01	07/05/12 21:03	1
Cadmium	0.10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 21:03	1
Chromium	0.0029	J	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 21:03	1
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 21:03	1

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Client Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Method: 6010B - Metals (ICP) - TCLP (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 21:03	1
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 21:03	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	580		50	19	ug/L		07/10/12 08:18	07/11/12 13:26	1
Antimony	2.3		2.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:26	1
Beryllium	1.0	U	1.0	0.20	ug/L		07/10/12 08:18	07/11/12 13:26	1
Cadmium	1.0	U	1.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:26	1
Iron	1300	^	100	26	ug/L		07/10/12 08:18	07/11/12 13:26	1
Sodium	28000	B	1000	6.9	ug/L		07/10/12 08:18	07/11/12 13:26	1
Thallium	0.58	J B	2.0	0.14	ug/L		07/10/12 08:18	07/11/12 13:26	1
Zinc	11	J B	20	2.3	ug/L		07/10/12 08:18	07/11/12 13:26	1

Method: 7470A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.12	ug/L		06/29/12 15:10	07/03/12 13:40	1

Method: 7470A - Mercury (CVAA) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 14:02	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>180		1.00	1.00	Degrees F			07/02/12 11:30	1
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		07/02/12 09:10	07/02/12 11:06	1
Sulfide	3.0	U	3.0	0.94	mg/L		07/03/12 07:56	07/03/12 13:48	1
pH	8.39		0.100	0.100	SU			06/28/12 16:18	1
Nitrocellulose	2.0	U	2.0	0.48	mg/L		07/11/12 06:00	07/11/12 13:05	1

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Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (87-125)	12DCE (68-123)	BFB (52-136)	DBFM (37-132)
240-12752-3	FWG-IDW-SBCOMP3-SO	112	96	121	89
LCS 240-49421/5	Lab Control Sample	98	97	94	95
MB 240-49421/6	Method Blank	98	95	91	91

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	TOL (90-115)	BFB (70-124)	DBFM (84-128)
LCS 240-50127/12	Lab Control Sample	109	107	95	116

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (90-115)	DBFM (84-128)
240-12752-3	FWG-IDW-SBCOMP3-SO	104	94	107	117
LB 240-49973/1-A MB	Method Blank	102	97	106	116

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (74-115)	12DCE (63-129)	BFB (66-117)	DBFM (75-121)
240-12752-1	TRIP BLANK	99	93	95	100
240-12752-4	FWG-IDW-TANK3-GW	100	95	96	100
LCS 240-50324/4	Lab Control Sample	104	98	103	99
MB 240-50324/5	Method Blank	99	90	96	96

Surrogate Legend

TOL = Toluene-d8 (Surr)

Surrogate Summary

TestAmerica Job ID: 240-12752-1

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	TOL (90-115)	BFB (70-124)	DBFM (84-128)
LCS 240-49814/10	Lab Control Sample	110	107	93	119

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (90-115)	DBFM (84-128)
240-12752-4	FWG-IDW-TANK3-GW	108	91	108	110
240-12752-4 MS	FWG-IDW-TANK3-GW	113	98	108	116
240-12752-4 MSD	FWG-IDW-TANK3-GW	107	97	109	118
LB 240-49660/1-A MB	Method Blank	107	92	105	113

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (34-110)	2FP (26-110)	NBZ (24-112)	TPH (41-119)	TBP (10-118)	PHL (28-110)
240-12752-3	FWG-IDW-SBCOMP3-SO	53	69	53	75	46	71
LCS 240-49770/16-A	Lab Control Sample	55	73	61	79	50	77
MB 240-49770/16-A	Method Blank	46	60	51	83	39	64

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
PHL = Phenol-d5 (Surr)

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
LCS 240-49701/5-A	Lab Control Sample	48	51	71	52	42	74
MB 240-49701/4-A	Method Blank	47	52	59	52	46	79

Surrogate Legend

- FBP = 2-Fluorobiphenyl (Surr)
- 2FP = 2-Fluorophenol (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPH = Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
240-12752-3	FWG-IDW-SBCOMP3-SO	48	13	68	46	46	71

Surrogate Legend

- FBP = 2-Fluorobiphenyl (Surr)
- 2FP = 2-Fluorophenol (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPH = Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (28-110)	2FP (10-110)	NBZ (27-111)	TPH (37-119)	TBP (22-120)	PHL (10-110)
240-12752-4	FWG-IDW-TANK3-GW	54	64	51	72	67	67
240-12752-4 - RE	FWG-IDW-TANK3-GW	53	61	54	71	64	66
LCS 240-49608/14-A	Lab Control Sample	57	85	56	82	79	71
LCS 240-50344/14-A	Lab Control Sample	73	88	75	89	83	91
MB 240-49608/13-A	Method Blank	14 X	17	13 X	19 X	16 X	18
MB 240-50344/13-A	Method Blank	69	79	68	66	71	81

Surrogate Legend

- FBP = 2-Fluorobiphenyl (Surr)
- 2FP = 2-Fluorophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- TPH = Terphenyl-d14 (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- PHL = Phenol-d5 (Surr)

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (10-110)	PHL (10-110)	FBP (22-110)	TBP (17-117)	NBZ (29-111)	TPH (40-119)
LCS 240-49703/16-A	Lab Control Sample	23	62	56	97	60	95
MB 240-49703/15-A	Method Blank	31	56	49	77	51	81

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
FBP = 2-Fluorobiphenyl (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (22-110)	2FP (10-110)	TBP (17-117)	NBZ (29-111)	PHL (10-110)	TPH (40-119)
240-12752-4	FWG-IDW-TANK3-GW	43	12	71	45	42	75

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (32-176)	DCB2 (32-176)	TCX1 (24-160)	TCX2 (24-160)
240-12752-3	FWG-IDW-SBCOMP3-SO	97	110	95	91
LCS 240-49756/11-A	Lab Control Sample	98	82	110	113
MB 240-49756/10-A	Method Blank		93	104	160 X

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (46-122)	TCX2 (46-122)	DCB1 (34-141)	DCB2 (34-141)
240-12752-3	FWG-IDW-SBCOMP3-SO	77	74	102	100

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (10-145)	DCB2 (10-145)	TCX1 (30-141)	TCX2 (30-141)
240-12752-4	FWG-IDW-TANK3-GW	79	66	88	82
LCS 240-49815/3-A	Lab Control Sample	56	48	96	90
MB 240-49815/2-A	Method Blank	94	86	83	76

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (34-141)	DCB2 (34-141)	TCX1 (46-122)	TCX2 (46-122)
LCS 240-49705/8-A	Lab Control Sample	89	93	70	65
MB 240-49705/7-A	Method Blank	93	92	65	61

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (46-122)	TCX2 (46-122)	DCB1 (34-141)	DCB2 (34-141)
240-12752-4	FWG-IDW-TANK3-GW	71	68	90	88

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (29-151)	DCB1 (14-163)
240-12752-3	FWG-IDW-SBCOMP3-SO	60	58
LCS 240-49755/20-A	Lab Control Sample	62	67
MB 240-49755/19-A	Method Blank	69	66

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (23-136)	DCB1 (10-130)
240-12752-4	FWG-IDW-TANK3-GW	74	62
LCS 240-49612/12-A	Lab Control Sample	70	71
MB 240-49612/11-A	Method Blank	72	81

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Solid

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPA1 (37-116)	DCPA2 (37-116)
240-12752-3	FWG-IDW-SBCOMP3-SO	53	63

Surrogate Legend
DCPA = 2,4-Dichlorophenylacetic acid

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPA1 (37-116)	DCPA2 (37-116)
LCS 240-49707/6-A	Lab Control Sample	55	66
MB 240-49707/7-A	Method Blank	51	57

Surrogate Legend
DCPA = 2,4-Dichlorophenylacetic acid

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPA1 (37-116)	DCPA2 (37-116)
240-12752-4	FWG-IDW-TANK3-GW	52	58

Surrogate Legend
DCPA = 2,4-Dichlorophenylacetic acid

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Matrix: Water

Prep Type: Total

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DNT (79-111)
240-12752-4	FWG-IDW-TANK3-GW	101
G2G030000016B	Method Blank	101
G2G030000016C	Lab Control Sample	105

Surrogate Legend

Surrogate Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

DNT = 3,4-Dinitrotoluene

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)

Matrix: Solid

Prep Type: Total

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DNT (75-115)
240-12752-3	FWG-IDW-SBCOMP3-SO	99
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	101
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	101
G2G090000108B	Method Blank	102
G2G090000108C	Lab Control Sample	100

Surrogate Legend

DNT = 3,4-Dinitrotoluene

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QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-49421/6		Client Sample ID: Method Blank							
Matrix: Solid		Prep Type: Total/NA							
Analysis Batch: 49421									
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	5.0	U	5.0	0.56	ug/Kg			06/29/12 13:33	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.34	ug/Kg			06/29/12 13:33	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			06/29/12 13:33	1
1,1-Dichloroethane	5.0	U	5.0	0.36	ug/Kg			06/29/12 13:33	1
1,1-Dichloroethene	5.0	U	5.0	0.52	ug/Kg			06/29/12 13:33	1
1,2-Dichloroethane	5.0	U	5.0	0.34	ug/Kg			06/29/12 13:33	1
1,2-Dichloroethene, Total	10	U	10	0.77	ug/Kg			06/29/12 13:33	1
1,2-Dichloropropane	5.0	U	5.0	0.69	ug/Kg			06/29/12 13:33	1
2-Butanone (MEK)	20	U	20	1.4	ug/Kg			06/29/12 13:33	1
2-Hexanone	1.06	J	20	0.63	ug/Kg			06/29/12 13:33	1
4-Methyl-2-pentanone (MIBK)	20	U	20	0.54	ug/Kg			06/29/12 13:33	1
Acetone	25.2		20	6.3	ug/Kg			06/29/12 13:33	1
Benzene	5.0	U	5.0	0.23	ug/Kg			06/29/12 13:33	1
Bromoform	5.0	U	5.0	0.33	ug/Kg			06/29/12 13:33	1
Bromomethane	5.0	U	5.0	0.54	ug/Kg			06/29/12 13:33	1
Carbon disulfide	3.36	J	5.0	0.44	ug/Kg			06/29/12 13:33	1
Carbon tetrachloride	5.0	U	5.0	0.37	ug/Kg			06/29/12 13:33	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			06/29/12 13:33	1
Chloromethane	5.0	U	5.0	0.41	ug/Kg			06/29/12 13:33	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.36	ug/Kg			06/29/12 13:33	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.34	ug/Kg			06/29/12 13:33	1
Dibromochloromethane	5.0	U	5.0	0.56	ug/Kg			06/29/12 13:33	1
Bromodichloromethane	5.0	U	5.0	0.28	ug/Kg			06/29/12 13:33	1
Ethylbenzene	5.0	U	5.0	0.26	ug/Kg			06/29/12 13:33	1
Methylene Chloride	1.76	J	5.0	0.67	ug/Kg			06/29/12 13:33	1
m-Xylene & p-Xylene	10	U	10	1.2	ug/Kg			06/29/12 13:33	1
o-Xylene	5.0	U	5.0	0.36	ug/Kg			06/29/12 13:33	1
Styrene	0.192	J	5.0	0.15	ug/Kg			06/29/12 13:33	1
Tetrachloroethane	5.0	U	5.0	0.52	ug/Kg			06/29/12 13:33	1
Toluene	5.0	U	5.0	0.27	ug/Kg			06/29/12 13:33	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.41	ug/Kg			06/29/12 13:33	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.54	ug/Kg			06/29/12 13:33	1
Trichloroethene	5.0	U	5.0	0.42	ug/Kg			06/29/12 13:33	1
Vinyl chloride	5.0	U	5.0	0.39	ug/Kg			06/29/12 13:33	1
Xylenes, Total	10	U	10	0.67	ug/Kg			06/29/12 13:33	1
Chloroform	5.0	U	5.0	0.29	ug/Kg			06/29/12 13:33	1
Bromochloromethane	5.0	U	5.0	0.71	ug/Kg			06/29/12 13:33	1
1,2-Dibromoethane	5.0	U	5.0	0.50	ug/Kg			06/29/12 13:33	1
Chloroethane	5.0	U	5.0	0.86	ug/Kg			06/29/12 13:33	1
Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
1,2-Dichloroethane-d4 (Surr)	95		58 - 123		06/29/12 13:33	1			
Toluene-d8 (Surr)	98		67 - 125		06/29/12 13:33	1			
4-Bromofluorobenzene (Surr)	91		52 - 136		06/29/12 13:33	1			
Dibromofluoromethane (Surr)	91		37 - 132		06/29/12 13:33	1			

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49421/5
Matrix: Solid
Analysis Batch: 49421

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	50.7		ug/Kg		101	77 - 128
1,1,2,2-Tetrachloroethane	50.0	53.6		ug/Kg		107	77 - 123
1,1,2-Trichloroethane	50.0	55.3		ug/Kg		111	83 - 112
1,1-Dichloroethane	50.0	56.2		ug/Kg		112	76 - 115
1,1-Dichloroethene	50.0	59.6		ug/Kg		119	75 - 135
1,2-Dichloroethane	50.0	54.9		ug/Kg		110	72 - 120
1,2-Dichloroethene, Total	100	108		ug/Kg		108	78 - 115
1,2-Dichloropropane	50.0	55.1		ug/Kg		110	87 - 113
2-Butanone (MEK)	100	105		ug/Kg		105	52 - 131
2-Hexanone	100	106		ug/Kg		106	64 - 136
4-Methyl-2-pentanone (MIBK)	100	118		ug/Kg		118	67 - 135
Acetone	100	128		ug/Kg		128	41 - 137
Benzene	50.0	53.8		ug/Kg		108	79 - 112
Bromoform	50.0	46.8		ug/Kg		94	62 - 133
Bromomethane	50.0	49.0		ug/Kg		98	42 - 136
Carbon disulfide	50.0	45.8		ug/Kg		92	62 - 146
Carbon tetrachloride	50.0	51.2		ug/Kg		102	71 - 129
Chlorobenzene	50.0	52.5		ug/Kg		105	78 - 110
Chloromethane	50.0	53.0		ug/Kg		106	50 - 110
cis-1,2-Dichloroethene	50.0	53.0		ug/Kg		106	76 - 113
cis-1,3-Dichloropropene	50.0	46.9		ug/Kg		94	74 - 128
Dibromochloromethane	50.0	48.4		ug/Kg		97	72 - 127
Bromodichloromethane	50.0	49.4		ug/Kg		99	84 - 122
Ethylbenzene	50.0	53.8		ug/Kg		108	79 - 117
Methylene Chloride	50.0	53.7		ug/Kg		107	75 - 118
m-Xylene & p-Xylene	100	108		ug/Kg		106	80 - 117
o-Xylene	50.0	55.3		ug/Kg		111	80 - 120
Styrene	50.0	52.8		ug/Kg		106	87 - 117
Tetrachloroethene	50.0	54.2		ug/Kg		108	79 - 114
Toluene	50.0	50.8		ug/Kg		102	75 - 111
trans-1,2-Dichloroethene	50.0	55.3		ug/Kg		111	78 - 117
trans-1,3-Dichloropropene	50.0	50.6		ug/Kg		101	73 - 131
Trichloroethene	50.0	55.2		ug/Kg		110	79 - 113
Vinyl chloride	50.0	53.1		ug/Kg		106	57 - 114
Xylenes, Total	150	161		ug/Kg		108	80 - 118
Chloroform	50.0	54.2		ug/Kg		108	77 - 114
Bromochloromethane	50.0	53.0		ug/Kg		106	79 - 111
1,2-Dibromoethane	50.0	51.4		ug/Kg		103	83 - 117
Chloroethane	50.0	51.1		ug/Kg		102	58 - 117

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	97		58 - 123
Toluene-d8 (Surr)	99		67 - 125
4-Bromofluorobenzene (Surr)	94		52 - 136
Dibromofluoromethane (Surr)	95		37 - 132

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49814/10				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total/NA			
Analysis Batch: 49814							
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	1.00	1.06		mg/L		106	71 - 133
1,2-Dichloroethane	1.00	0.970		mg/L		97	81 - 114
2-Butanone (MEK)	2.00	1.91		mg/L		95	49 - 120
Benzene	1.00	0.955		mg/L		96	84 - 120
Carbon tetrachloride	1.00	1.08		mg/L		109	54 - 122
Chlorobenzene	1.00	0.950		mg/L		95	86 - 111
Tetrachloroethene	1.00	1.04		mg/L		104	79 - 134
Trichloroethene	1.00	1.05		mg/L		105	78 - 130
Vinyl chloride	1.00	0.955		mg/L		96	56 - 111
Chloroform	1.00	0.980		mg/L		96	87 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		80 - 121
Toluene-d8 (Surr)	107		90 - 115
4-Bromofluorobenzene (Surr)	93		70 - 124
Dibromofluoromethane (Surr)	119		84 - 128

Lab Sample ID: LCS 240-50127/12				Client Sample ID: Lab Control Sample			
Matrix: Solid				Prep Type: Total/NA			
Analysis Batch: 50127							
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	1.00	1.04		mg/L		104	71 - 133
1,2-Dichloroethane	1.00	0.955		mg/L		96	81 - 114
2-Butanone (MEK)	2.00	1.53		mg/L		76	49 - 120
Benzene	1.00	0.920		mg/L		92	84 - 120
Carbon tetrachloride	1.00	1.06		mg/L		108	54 - 122
Chlorobenzene	1.00	0.940		mg/L		94	86 - 111
Tetrachloroethene	1.00	1.06		mg/L		106	79 - 134
Trichloroethene	1.00	1.05		mg/L		105	78 - 130
Vinyl chloride	1.00	0.970		mg/L		97	56 - 111
Chloroform	1.00	0.935		mg/L		94	87 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	109		80 - 121
Toluene-d8 (Surr)	107		90 - 115
4-Bromofluorobenzene (Surr)	95		70 - 124
Dibromofluoromethane (Surr)	116		84 - 128

Lab Sample ID: MB 240-50324/5				Client Sample ID: Method Blank					
Matrix: Water				Prep Type: Total/NA					
Analysis Batch: 50324									
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 10:57	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			07/10/12 10:57	1
1,1,2-Trichloroethane	1.0	U	1.0	0.27	ug/L			07/10/12 10:57	1
1,1-Dichloroethane	1.0	U	1.0	0.15	ug/L			07/10/12 10:57	1
1,1-Dichloroethane	1.0	U	1.0	0.19	ug/L			07/10/12 10:57	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-50324/5 Client Sample ID: Method Blank
Matrix: Water Prep Type: Total/NA
Analysis Batch: 50324

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Dichloroethane	1.0	U	1.0	0.22	ug/L			07/10/12 10:57	1
1,2-Dichloroethene, Total	2.0	U	2.0	0.34	ug/L			07/10/12 10:57	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			07/10/12 10:57	1
2-Butanone (MEK)	10	U	10	0.57	ug/L			07/10/12 10:57	1
2-Hexanone	10	U	10	0.41	ug/L			07/10/12 10:57	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.32	ug/L			07/10/12 10:57	1
Acetone	10	U	10	1.1	ug/L			07/10/12 10:57	1
Benzene	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
Bromoform	1.0	U	1.0	0.64	ug/L			07/10/12 10:57	1
Bromomethane	1.0	U	1.0	0.41	ug/L			07/10/12 10:57	1
Carbon disulfide	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
Carbon tetrachloride	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			07/10/12 10:57	1
Chloromethane	1.0	U	1.0	0.30	ug/L			07/10/12 10:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 10:57	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.14	ug/L			07/10/12 10:57	1
Dibromochloromethane	1.0	U	1.0	0.18	ug/L			07/10/12 10:57	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			07/10/12 10:57	1
Ethylbenzene	1.0	U	1.0	0.17	ug/L			07/10/12 10:57	1
Methylene Chloride	1.0	U	1.0	0.33	ug/L			07/10/12 10:57	1
m-Xylene & p-Xylene	2.0	U	2.0	0.24	ug/L			07/10/12 10:57	1
o-Xylene	1.0	U	1.0	0.14	ug/L			07/10/12 10:57	1
Styrene	1.0	U	1.0	0.11	ug/L			07/10/12 10:57	1
Tetrachloroethene	1.0	U	1.0	0.29	ug/L			07/10/12 10:57	1
Toluene	1.0	U	1.0	0.13	ug/L			07/10/12 10:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			07/10/12 10:57	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			07/10/12 10:57	1
Trichloroethene	1.0	U	1.0	0.17	ug/L			07/10/12 10:57	1
Vinyl chloride	1.0	U	1.0	0.22	ug/L			07/10/12 10:57	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			07/10/12 10:57	1
Chloroform	1.0	U	1.0	0.16	ug/L			07/10/12 10:57	1
Bromochloromethane	1.0	U	1.0	0.29	ug/L			07/10/12 10:57	1
1,2-Dibromoethane	1.0	U	1.0	0.24	ug/L			07/10/12 10:57	1
Chloroethane	1.0	U	1.0	0.29	ug/L			07/10/12 10:57	1
Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
1,2-Dichloroethane-d4 (Surr)	90		63 - 129		07/10/12 10:57	1			
Toluene-d8 (Surr)	99		74 - 115		07/10/12 10:57	1			
4-Bromofluorobenzene (Surr)	96		66 - 117		07/10/12 10:57	1			
Dibromofluoromethane (Surr)	96		75 - 121		07/10/12 10:57	1			

Lab Sample ID: LCS 240-50324/4 Client Sample ID: Lab Control Sample
Matrix: Water Prep Type: Total/NA
Analysis Batch: 50324

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	10.0	9.37		ug/L		94	68 - 118
1,1,2-Trichloroethane	10.0	10.4		ug/L		104	80 - 112

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-50324/4
Matrix: Water
Analysis Batch: 50324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	10.0	10.0		ug/L		100	82 - 115
1,1-Dichloroethene	10.0	11.0		ug/L		110	78 - 131
1,2-Dichloroethane	10.0	9.62		ug/L		96	71 - 127
1,2-Dichloroethene, Total	20.0	20.3		ug/L		101	82 - 114
1,2-Dichloropropane	10.0	10.1		ug/L		101	81 - 115
2-Butanone (MEK)	20.0	17.8		ug/L		89	60 - 126
2-Hexanone	20.0	18.8		ug/L		94	55 - 133
4-Methyl-2-pentanone (MIBK)	20.0	17.9		ug/L		90	63 - 128
Acetone	20.0	20.5		ug/L		103	43 - 138
Benzene	10.0	9.92		ug/L		99	83 - 112
Bromoform	10.0	10.9		ug/L		109	40 - 131
Bromomethane	10.0	9.21		ug/L		92	11 - 185
Carbon disulfide	10.0	10.3		ug/L		103	62 - 142
Carbon tetrachloride	10.0	10.5		ug/L		105	66 - 126
Chlorobenzene	10.0	9.78		ug/L		98	85 - 110
Chloromethane	10.0	9.04		ug/L		90	44 - 126
cis-1,2-Dichloroethene	10.0	9.58		ug/L		96	80 - 113
cis-1,3-Dichloropropene	10.0	9.85		ug/L		97	61 - 115
Dibromochloromethane	10.0	10.7		ug/L		107	64 - 119
Bromodichloromethane	10.0	10.3		ug/L		103	72 - 121
Ethylbenzene	10.0	9.93		ug/L		99	83 - 112
Methylene Chloride	10.0	10.6		ug/L		106	66 - 131
m-Xylene & p-Xylene	20.0	20.0		ug/L		100	83 - 113
o-Xylene	10.0	9.96		ug/L		100	83 - 113
Styrene	10.0	10.2		ug/L		102	79 - 114
Tetrachloroethene	10.0	10.1		ug/L		101	79 - 114
Toluene	10.0	10.2		ug/L		102	84 - 111
trans-1,2-Dichloroethene	10.0	10.7		ug/L		107	83 - 117
trans-1,3-Dichloropropene	10.0	10.2		ug/L		102	58 - 117
Trichloroethene	10.0	9.78		ug/L		98	76 - 117
Vinyl chloride	10.0	9.16		ug/L		92	53 - 127
Xylenes, Total	30.0	30.0		ug/L		100	83 - 112
Chloroform	10.0	9.56		ug/L		96	79 - 117
Bromochloromethane	10.0	9.68		ug/L		97	77 - 120
1,2-Dibromoethane	10.0	9.84		ug/L		98	79 - 113
Chloroethane	10.0	9.75		ug/L		98	25 - 153

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	96		63 - 129
Toluene-d8 (Surr)	104		74 - 115
4-Bromofluorobenzene (Surr)	103		66 - 117
Dibromofluoromethane (Surr)	99		75 - 121

Lab Sample ID: LB 240-49660/1-A MB
Matrix: Water
Analysis Batch: 49814

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
	Result	Qualifier							
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/03/12 21:21	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 240-49660/1-A MB
Matrix: Water
Analysis Batch: 49814

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/03/12 21:21	1
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/03/12 21:21	1
Benzene	0.025	U	0.025	0.0065	mg/L			07/03/12 21:21	1
Carbon tetrachloride	0.025	U	0.025	0.0085	mg/L			07/03/12 21:21	1
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/03/12 21:21	1
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/03/12 21:21	1
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/03/12 21:21	1
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/03/12 21:21	1
Chloroform	0.025	U	0.025	0.0080	mg/L			07/03/12 21:21	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	107		80 - 121		07/03/12 21:21	1
Toluene-d8 (Sum)	105		90 - 115		07/03/12 21:21	1
4-Bromofluorobenzene (Surr)	92		70 - 124		07/03/12 21:21	1
Dibromofluoromethane (Surr)	113		84 - 128		07/03/12 21:21	1

Lab Sample ID: 240-12752-4 MS
Matrix: Water
Analysis Batch: 49814

Client Sample ID: FWG-IDW-TANK3-GW
Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
1,1-Dichloroethene	0.025	U	1.00	1.02		mg/L		102	67 - 139
1,2-Dichloroethane	0.025	U	1.00	0.930		mg/L		93	80 - 115
2-Butanone (MEK)	0.25	U	2.00	1.80		mg/L		90	49 - 117
Benzene	0.025	U	1.00	0.910		mg/L		91	85 - 119
Carbon tetrachloride	0.025	U	1.00	0.975		mg/L		98	60 - 110
Chlorobenzene	0.025	U	1.00	0.915		mg/L		92	85 - 113
Tetrachloroethene	0.025	U	1.00	1.01		mg/L		101	74 - 138
Trichloroethene	0.025	U	1.00	1.03		mg/L		103	75 - 134
Vinyl chloride	0.025	U	1.00	0.925		mg/L		93	51 - 118
Chloroform	0.025	U	1.00	0.915		mg/L		92	86 - 124

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	113		80 - 121
Toluene-d8 (Sum)	108		90 - 115
4-Bromofluorobenzene (Surr)	98		70 - 124
Dibromofluoromethane (Surr)	116		84 - 128

Lab Sample ID: 240-12752-4 MSD
Matrix: Water
Analysis Batch: 49814

Client Sample ID: FWG-IDW-TANK3-GW
Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec. Limits	RPD	
				Result	Qualifier					RPD	Limit
1,1-Dichloroethene	0.025	U	1.00	1.02		mg/L		102	67 - 139	0	30
1,2-Dichloroethane	0.025	U	1.00	0.905		mg/L		91	80 - 115	3	30
2-Butanone (MEK)	0.25	U	2.00	1.95		mg/L		98	49 - 117	8	30
Benzene	0.025	U	1.00	0.925		mg/L		93	85 - 119	2	30
Carbon tetrachloride	0.025	U	1.00	1.04		mg/L		104	60 - 110	6	30
Chlorobenzene	0.025	U	1.00	0.935		mg/L		94	85 - 113	2	30

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-12752-4 MSD		Client Sample ID: FWG-IDW-TANK3-GW									
Matrix: Water		Prep Type: TCLP									
Analysis Batch: 49814											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	0.025	U	1.00	1.06		mg/L		106	74 - 138	5	30
Trichloroethene	0.025	U	1.00	1.03		mg/L		103	75 - 134	0	30
Vinyl chloride	0.025	U	1.00	0.915		mg/L		92	51 - 118	1	30
Chloroform	0.025	U	1.00	0.945		mg/L		95	86 - 124	3	30
Surrogate		MSD %Recovery	MSD Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)		107		80 - 121							
Toluene-d8 (Surr)		109		90 - 115							
4-Bromofluorobenzene (Surr)		97		70 - 124							
Dibromofluoromethane (Surr)		118		84 - 128							

Lab Sample ID: LB 240-49973/1-A MB		Client Sample ID: Method Blank									
Matrix: Solid		Prep Type: TCLP									
Analysis Batch: 50127											
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
1,1-Dichloroethene	0.025	U	0.025	0.0095	mg/L			07/06/12 20:29	1		
1,2-Dichloroethane	0.025	U	0.025	0.011	mg/L			07/06/12 20:29	1		
2-Butanone (MEK)	0.25	U	0.25	0.029	mg/L			07/06/12 20:29	1		
Benzene	0.025	U	0.025	0.0065	mg/L			07/06/12 20:29	1		
Carbon tetrachloride	0.025	U	0.025	0.0066	mg/L			07/06/12 20:29	1		
Chlorobenzene	0.025	U	0.025	0.0075	mg/L			07/06/12 20:29	1		
Tetrachloroethene	0.025	U	0.025	0.015	mg/L			07/06/12 20:29	1		
Trichloroethene	0.025	U	0.025	0.0085	mg/L			07/06/12 20:29	1		
Vinyl chloride	0.025	U	0.025	0.011	mg/L			07/06/12 20:29	1		
Chloroform	0.025	U	0.025	0.0080	mg/L			07/06/12 20:29	1		
Surrogate		MB %Recovery	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)		102		80 - 121			07/06/12 20:29	1			
Toluene-d8 (Surr)		106		90 - 115			07/06/12 20:29	1			
4-Bromofluorobenzene (Surr)		97		70 - 124			07/06/12 20:29	1			
Dibromofluoromethane (Surr)		116		84 - 128			07/06/12 20:29	1			

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-49608/13-A		Client Sample ID: Method Blank									
Matrix: Water		Prep Type: Total/NA									
Analysis Batch: 50188		Prep Batch: 49608									
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Acenaphthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1		
Acenaphthylene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1		
Anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1		
Benzo[a]anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1		
Benzoic acid	25	U	25	10	ug/L		07/02/12 11:43	07/09/12 10:05	1		
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1		
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1		
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		07/02/12 11:43	07/09/12 10:05	1		
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/02/12 11:43	07/09/12 10:05	1		

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.60	ug/L		07/02/12 11:43	07/09/12 10:05	1
Butyl benzyl phthalate	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dimethylphenol	2.0	U	2.0	0.60	ug/L		07/02/12 11:43	07/09/12 10:05	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 10:05	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,6-Dinitrotoluene	5.0	U	5.0	0.60	ug/L		07/02/12 11:43	07/09/12 10:05	1
Fluoranthene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachlorobutadiene	1.0	U	1.0	0.27	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
N-Nitrosodiphenylamine	1.0	U	1.0	0.31	ug/L		07/02/12 11:43	07/09/12 10:05	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		07/02/12 11:43	07/09/12 10:05	1
Chrysene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzo(g,h,i)perylene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Benzo(a)pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Di-n-butyl phthalate	1.0	U	1.0	0.67	ug/L		07/02/12 11:43	07/09/12 10:05	1
1,2-Dichlorobenzene	1.0	U	1.0	0.29	ug/L		07/02/12 11:43	07/09/12 10:05	1
1,3-Dichlorobenzene	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4-Dichlorophenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 10:05	1
Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Isophorone	1.0	U	1.0	0.27	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Naphthalene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Nitrobenzene	1.0	U	1.0	0.040	ug/L		07/02/12 11:43	07/09/12 10:05	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
Pyrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		07/02/12 11:43	07/09/12 10:05	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		07/02/12 11:43	07/09/12 10:05	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,4,6-Trichlorophenol	5.0	U	5.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Phenol	1.0	U	1.0	0.60	ug/L		07/02/12 11:43	07/09/12 10:05	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49608/13-A						Client Sample ID: Method Blank			
Matrix: Water						Prep Type: Total/NA			
Analysis Batch: 50188						Prep Batch: 49608			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	1.0	U	1.0	0.28	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chloroaniline	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/02/12 11:43	07/09/12 10:05	1
Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		07/02/12 11:43	07/09/12 10:05	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		07/02/12 11:43	07/09/12 10:05	1
Surrogate	%Recovery	MB Qualifier	MB Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	14	X	28 - 110				07/02/12 11:43	07/09/12 10:05	1
2-Fluorophenol (Surr)	17		10 - 110				07/02/12 11:43	07/09/12 10:05	1
2,4,6-Tribromophenol (Surr)	16	X	22 - 120				07/02/12 11:43	07/09/12 10:05	1
Nitrobenzene-d5 (Surr)	13	X	27 - 111				07/02/12 11:43	07/09/12 10:05	1
Phenol-d5 (Surr)	18		10 - 110				07/02/12 11:43	07/09/12 10:05	1
Terphenyl-d14 (Surr)	19	X	37 - 119				07/02/12 11:43	07/09/12 10:05	1

Lab Sample ID: LCS 240-49608/14-A						Client Sample ID: Lab Control Sample			
Matrix: Water						Prep Type: Total/NA			
Analysis Batch: 50188						Prep Batch: 49608			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acenaphthene	20.0	14.1		ug/L		70	40 - 110		
Acenaphthylene	20.0	14.2		ug/L		71	43 - 110		
Anthracene	20.0	15.4		ug/L		77	54 - 114		
Benzo[a]anthracene	20.0	14.6		ug/L		73	55 - 115		
Benzoic acid	20.0	25	U	ug/L		35	10 - 129		
Benzo[b]fluoranthene	20.0	14.8		ug/L		73	43 - 122		
Benzo[k]fluoranthene	20.0	15.7		ug/L		78	43 - 124		
Benzyl alcohol	20.0	12.9		ug/L		65	10 - 130		
Bis(2-chloroethoxy)methane	20.0	11.7		ug/L		59	39 - 110		
Bis(2-chloroethyl)ether	20.0	11.9		ug/L		59	34 - 113		
4-Bromophenyl phenyl ether	20.0	13.6		ug/L		68	51 - 114		
Butyl benzyl phthalate	20.0	15.7		ug/L		78	53 - 126		
2,4-Dimethylphenol	20.0	10.8		ug/L		54	12 - 110		
Dimethyl phthalate	20.0	16.0		ug/L		80	15 - 143		
4,6-Dinitro-2-methylphenol	20.0	13.1		ug/L		66	28 - 112		
2,4-Dinitrophenol	20.0	9.54		ug/L		48	17 - 112		
2,4-Dinitrotoluene	20.0	14.5		ug/L		72	52 - 123		
2,6-Dinitrotoluene	20.0	14.5		ug/L		73	52 - 119		
Fluoranthene	20.0	16.1		ug/L		81	54 - 122		
Fluorene	20.0	15.1		ug/L		75	47 - 112		
Hexachlorobenzene	20.0	14.8		ug/L		74	51 - 112		
Hexachlorobutadiene	20.0	10.2		ug/L		51	13 - 110		
Hexachlorocyclopentadiene	20.0	5.24	J	ug/L		26	10 - 110		
Hexachloroethane	20.0	11.0		ug/L		55	12 - 110		
N-Nitrosodiphenylamine	20.0	14.9		ug/L		75	53 - 113		
N-Nitrosodi-n-propylamine	20.0	13.2		ug/L		66	37 - 121		
1,4-Dichlorobenzene	20.0	12.4		ug/L		62	19 - 110		
2-Chloronaphthalene	20.0	12.0		ug/L		60	39 - 110		

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49608/14-A
Matrix: Water
Analysis Batch: 50188

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49608

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorophenol	20.0	13.1		ug/L		65	27 - 110
4-Chlorophenyl phenyl ether	20.0	13.3		ug/L		67	50 - 115
Chrysene	20.0	16.2		ug/L		81	55 - 115
Dibenz(a,h)anthracene	20.0	15.3		ug/L		77	46 - 122
Dibenzofuran	20.0	14.6		ug/L		73	46 - 111
Benzo(g,h,i)perylene	20.0	15.3		ug/L		77	45 - 120
Benzo(a)pyrene	20.0	13.2		ug/L		66	43 - 116
Di-n-butyl phthalate	20.0	16.5		ug/L		83	55 - 122
1,2-Dichlorobenzene	20.0	11.3		ug/L		56	23 - 110
1,3-Dichlorobenzene	20.0	10.9		ug/L		55	19 - 110
3,3'-Dichlorobenzidine	20.0	10.5		ug/L		53	19 - 110
2,4-Dichlorophenol	20.0	13.7		ug/L		69	33 - 110
Diethyl phthalate	20.0	16.2		ug/L		81	33 - 134
Indeno[1,2,3-cd]pyrene	20.0	14.8		ug/L		74	46 - 121
Isophorone	20.0	13.6		ug/L		68	44 - 128
2-Methylnaphthalene	20.0	13.2		ug/L		68	35 - 110
2-Methylphenol	20.0	13.3		ug/L		67	30 - 110
Naphthalene	20.0	13.3		ug/L		67	31 - 110
2-Nitroaniline	20.0	14.4		ug/L		72	43 - 130
3-Nitroaniline	20.0	15.9		ug/L		79	45 - 116
4-Nitroaniline	20.0	16.6		ug/L		83	45 - 120
Nitrobenzene	20.0	11.0		ug/L		55	37 - 115
2-Nitrophenol	20.0	13.4		ug/L		67	29 - 110
4-Nitrophenol	20.0	13.8		ug/L		69	12 - 130
Pyrene	20.0	15.0		ug/L		75	55 - 120
Pentachlorophenol	20.0	12.2		ug/L		61	26 - 110
Phenanthrene	20.0	15.7		ug/L		79	52 - 114
1,2,4-Trichlorobenzene	20.0	10.7		ug/L		54	25 - 110
2,4,5-Trichlorophenol	20.0	14.9		ug/L		75	39 - 110
2,4,6-Trichlorophenol	20.0	14.6		ug/L		73	35 - 110
Phenol	20.0	13.5		ug/L		68	14 - 112
Carbazole	20.0	16.1		ug/L		81	53 - 120
4-Chloroaniline	20.0	12.7		ug/L		63	10 - 110
3 & 4 Methylphenol	40.0	28.0		ug/L		70	32 - 110
Bis(2-ethylhexyl) phthalate	20.0	14.3		ug/L		72	36 - 163
Di-n-octyl phthalate	20.0	14.2		ug/L		71	44 - 128
4-Chloro-3-methylphenol	20.0	15.1		ug/L		76	39 - 110
2,2'-oxybis[1-chloropropane]	20.0	10.6		ug/L		53	25 - 128

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	57		28 - 110
2-Fluorophenol (Surr)	65		10 - 110
2,4,6-Tribromophenol (Surr)	79		22 - 120
Nitrobenzene-d5 (Surr)	56		27 - 111
Phenol-d5 (Surr)	71		10 - 110
Terphenyl-d14 (Surr)	82		37 - 119

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49701/4-A
Matrix: Solid
Analysis Batch: 49827

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49701

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:09	07/04/12 12:12	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 12:12	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		07/03/12 09:09	07/04/12 12:12	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:09	07/04/12 12:12	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:09	07/04/12 12:12	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:09	07/04/12 12:12	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:09	07/04/12 12:12	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:09	07/04/12 12:12	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:09	07/04/12 12:12	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:09	07/04/12 12:12	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	47		22 - 110	07/03/12 09:09	07/04/12 12:12	1
2-Fluorophenol (Surr)	52		10 - 110	07/03/12 09:09	07/04/12 12:12	1
2,4,6-Tribromophenol (Surr)	59		17 - 117	07/03/12 09:09	07/04/12 12:12	1
Nitrobenzene-d5 (Surr)	52		29 - 111	07/03/12 09:09	07/04/12 12:12	1
Phenol-d5 (Surr)	46		10 - 110	07/03/12 09:09	07/04/12 12:12	1
Terphenyl-d14 (Surr)	79		40 - 119	07/03/12 09:09	07/04/12 12:12	1

Lab Sample ID: LCS 240-49701/5-A
Matrix: Solid
Analysis Batch: 49827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrotoluene	0.0800	0.0599		mg/L		75	45 - 126
Hexachlorobenzene	0.0800	0.0559		mg/L		70	47 - 118
Hexachlorobutadiene	0.0800	0.0416		mg/L		52	10 - 110
Hexachloroethane	0.0800	0.0452		mg/L		57	10 - 110
2-Methylphenol	0.0800	0.0524		mg/L		66	24 - 110
Nitrobenzene	0.0800	0.0434		mg/L		54	35 - 117
Pentachlorophenol	0.0800	0.0429		mg/L		54	12 - 110
2,4,5-Trichlorophenol	0.0800	0.0538		mg/L		67	35 - 111
2,4,6-Trichlorophenol	0.0800	0.0505		mg/L		63	32 - 110
3 & 4 Methylphenol	0.160	0.0938		mg/L		59	27 - 110

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	48		22 - 110
2-Fluorophenol (Surr)	51		10 - 110
2,4,6-Tribromophenol (Surr)	71		17 - 117
Nitrobenzene-d5 (Surr)	52		29 - 111
Phenol-d5 (Surr)	42		10 - 110
Terphenyl-d14 (Surr)	74		40 - 119

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49703/15-A
Matrix: Water
Analysis Batch: 50054

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49703

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Pyridine	0.020	U	0.020	0.00035	mg/L		07/03/12 09:12	07/06/12 12:30	1
2,4-Dinitrotoluene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 12:30	1
Hexachlorobenzene	0.020	U	0.020	0.00010	mg/L		07/03/12 09:12	07/06/12 12:30	1
Hexachlorobutadiene	0.020	U	0.020	0.00027	mg/L		07/03/12 09:12	07/06/12 12:30	1
Hexachloroethane	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 12:30	1
1,4-Dichlorobenzene	0.0040	U	0.0040	0.00034	mg/L		07/03/12 09:12	07/06/12 12:30	1
2-Methylphenol	0.0040	U	0.0040	0.00080	mg/L		07/03/12 09:12	07/06/12 12:30	1
Nitrobenzene	0.0040	U	0.0040	0.000040	mg/L		07/03/12 09:12	07/06/12 12:30	1
Pentachlorophenol	0.040	U	0.040	0.0024	mg/L		07/03/12 09:12	07/06/12 12:30	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.00030	mg/L		07/03/12 09:12	07/06/12 12:30	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.00080	mg/L		07/03/12 09:12	07/06/12 12:30	1
3 & 4 Methylphenol	0.040	U	0.040	0.00075	mg/L		07/03/12 09:12	07/06/12 12:30	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	49		22 - 110	07/03/12 09:12	07/06/12 12:30	1
2-Fluorophenol (Surr)	31		10 - 110	07/03/12 09:12	07/06/12 12:30	1
2,4,6-Tribromophenol (Surr)	77		17 - 117	07/03/12 09:12	07/06/12 12:30	1
Nitrobenzene-d5 (Surr)	51		29 - 111	07/03/12 09:12	07/06/12 12:30	1
Phenol-d5 (Surr)	56		10 - 110	07/03/12 09:12	07/06/12 12:30	1
Terphenyl-d14 (Surr)	81		40 - 119	07/03/12 09:12	07/06/12 12:30	1

Lab Sample ID: LCS 240-49703/16-A
Matrix: Water
Analysis Batch: 50054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49703

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrotoluene	0.0800	0.0656		mg/L		82	45 - 126
Hexachlorobenzene	0.0800	0.0650		mg/L		81	47 - 116
Hexachlorobutadiene	0.0800	0.0362		mg/L		45	10 - 110
Hexachloroethane	0.0800	0.0378		mg/L		47	10 - 110
2-Methylphenol	0.0800	0.0570		mg/L		71	24 - 110
Nitrobenzene	0.0800	0.0497		mg/L		62	35 - 117
Pentachlorophenol	0.0800	0.0884		mg/L		108	12 - 110
2,4,5-Trichlorophenol	0.0800	0.0665		mg/L		83	35 - 111
2,4,6-Trichlorophenol	0.0800	0.0673		mg/L		84	32 - 110
3 & 4 Methylphenol	0.160	0.122		mg/L		77	27 - 110

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	56		22 - 110
2-Fluorophenol (Surr)	23		10 - 110
2,4,6-Tribromophenol (Surr)	97		17 - 117
Nitrobenzene-d5 (Surr)	60		29 - 111
Phenol-d5 (Surr)	62		10 - 110
Terphenyl-d14 (Surr)	95		40 - 119

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49770

Lab Sample ID: MB 240-49770/15-A
Matrix: Solid
Analysis Batch: 50054

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Acenaphthylene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Anthracene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[a]anthracene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzoic acid	660	U	660	330	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[b]fluoranthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[k]fluoranthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzyl alcohol	330	U	330	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Bis(2-chloroethoxy)methane	100	U	100	22	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Bis(2-chloroethyl)ether	100	U	100	2.0	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Bromophenyl phenyl ether	50	U	50	13	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Butyl benzyl phthalate	50	U	50	10	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dimethylphenol	150	U	150	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Dimethyl phthalate	50	U	50	17	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4,6-Dinitro-2-methylphenol	150	U	150	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dinitrophenol	330	U	330	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dinitrotoluene	200	U	200	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,6-Dinitrotoluene	200	U	200	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Fluoranthene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Fluorene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Hexachlorobenzene	6.7	U	6.7	2.1	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Hexachlorobutadiene	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Hexachlorocyclopentadiene	330	U	330	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Hexachloroethane	50	U	50	9.0	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
N-Nitrosodiphenylamine	50	U	50	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
N-Nitrosodi-n-propylamine	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,4-Dichlorobenzene	50	U	50	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Chloronaphthalene	50	U	50	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Chlorophenol	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chlorophenyl phenyl ether	50	U	50	13	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Chrysene	6.7	U	6.7	1.1	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Dibenz[a,h]anthracene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Dibenzofuran	50	U	50	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[g,h,i]perylene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Benzo[a]pyrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Di-n-butyl phthalate	50	U	50	15	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,2-Dichlorobenzene	50	U	50	9.7	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,3-Dichlorobenzene	50	U	50	11	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
3,3'-Dichlorobenzidine	100	U	100	16	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4-Dichlorophenol	150	U	150	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Diethyl phthalate	50	U	50	16	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Indeno[1,2,3-cd]pyrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Isophorone	50	U	50	13	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Methylnaphthalene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Methylphenol	200	U	200	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Naphthalene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Nitroaniline	200	U	200	9.1	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
3-Nitroaniline	200	U	200	16	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Nitroaniline	200	U	200	26	ug/Kg		07/03/12 13:56	07/06/12 11:53	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-49770/15-A
Matrix: Solid
Analysis Batch: 50054

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49770

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitrobenzene	100	U	100	2.2	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2-Nitrophenol	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Nitrophenol	330	U	330	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Pyrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Pentachlorophenol	150	U	150	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Phenanthrene	6.7	U	6.7	3.3	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
1,2,4-Trichlorobenzene	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4,5-Trichlorophenol	150	U	150	25	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,4,6-Trichlorophenol	150	U	150	80	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Phenol	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Carbazole	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chloroaniline	150	U	150	17	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
3 & 4 Methylphenol	400	U	400	20	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Bis(2-ethylhexyl) phthalate	50.9		50	19	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
Di-n-octyl phthalate	50	U	50	27	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
4-Chloro-3-methylphenol	150	U	150	21	ug/Kg		07/03/12 13:56	07/06/12 11:53	1
2,2'-oxybis[1-chloropropane]	100	U	100	9.5	ug/Kg		07/03/12 13:56	07/06/12 11:53	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	46		34 - 110	07/03/12 13:56	07/06/12 11:53	1
2-Fluorophenol (Surr)	60		26 - 110	07/03/12 13:56	07/06/12 11:53	1
2,4,6-Tribromophenol (Surr)	39		10 - 118	07/03/12 13:56	07/06/12 11:53	1
Nitrobenzene-d5 (Surr)	51		24 - 112	07/03/12 13:56	07/06/12 11:53	1
Phenol-d5 (Surr)	64		28 - 110	07/03/12 13:56	07/06/12 11:53	1
Terphenyl-d14 (Surr)	83		41 - 119	07/03/12 13:56	07/06/12 11:53	1

Lab Sample ID: LCS 240-49770/16-A
Matrix: Solid
Analysis Batch: 50054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	667	437		ug/Kg		66	47 - 110
Anthracene	667	476		ug/Kg		71	56 - 111
Benzo[a]anthracene	667	497		ug/Kg		74	58 - 111
Benzoic acid	667	403	J	ug/Kg		60	10 - 124
Benzo[b]fluoranthene	667	511		ug/Kg		77	43 - 124
Benzo[k]fluoranthene	667	490		ug/Kg		73	36 - 122
Benzyl alcohol	667	522		ug/Kg		78	10 - 130
Bis(2-chloroethoxy)methane	667	399		ug/Kg		60	42 - 110
Bis(2-chloroethyl)ether	667	403		ug/Kg		60	41 - 110
4-Bromophenyl phenyl ether	667	425		ug/Kg		64	53 - 112
Butyl benzyl phthalate	667	513		ug/Kg		77	57 - 121
2,4-Dimethylphenol	667	412		ug/Kg		62	28 - 110
Dimethyl phthalate	667	505		ug/Kg		76	54 - 112
4,6-Dinitro-2-methylphenol	667	560		ug/Kg		84	21 - 110
2,4-Dinitrophenol	667	621		ug/Kg		93	10 - 110
2,4-Dinitrotoluene	667	485		ug/Kg		73	55 - 116
2,6-Dinitrotoluene	667	445		ug/Kg		67	54 - 115

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49770/16-A
Matrix: Solid
Analysis Batch: 50054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49770

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
Fluoranthene	667	489		ug/Kg		73	55 - 118
Fluorene	667	474		ug/Kg		71	51 - 110
Hexachlorobenzene	667	455		ug/Kg		68	51 - 110
Hexachlorobutadiene	667	390		ug/Kg		58	39 - 110
Hexachlorocyclopentadiene	667	403		ug/Kg		60	10 - 110
Hexachloroethane	667	409		ug/Kg		61	38 - 110
N-Nitrosodiphenylamine	667	467		ug/Kg		70	54 - 112
N-Nitrosodi-n-propylamine	667	496		ug/Kg		74	40 - 114
1,4-Dichlorobenzene	667	446		ug/Kg		67	38 - 110
2-Chloronaphthalene	667	392		ug/Kg		59	46 - 110
2-Chlorophenol	667	487		ug/Kg		73	39 - 110
4-Chlorophenyl phenyl ether	667	419		ug/Kg		63	53 - 110
Chrysene	667	522		ug/Kg		78	56 - 111
Dibenz(a,h)anthracene	667	495		ug/Kg		74	45 - 122
Dibenzofuran	667	458		ug/Kg		69	50 - 110
Benzo(g,h,i)perylene	667	509		ug/Kg		76	44 - 120
Benzo(a)pyrene	667	452		ug/Kg		68	44 - 115
Di-n-butyl phthalate	667	532		ug/Kg		80	57 - 119
1,2-Dichlorobenzene	667	407		ug/Kg		61	42 - 110
1,3-Dichlorobenzene	667	383		ug/Kg		57	40 - 110
3,3'-Dichlorobenzidine	667	409		ug/Kg		61	31 - 110
2,4-Dichlorophenol	667	482		ug/Kg		72	40 - 110
Diethyl phthalate	667	529		ug/Kg		79	55 - 114
Indeno[1,2,3-cd]pyrene	667	507		ug/Kg		76	45 - 121
Isophorone	667	475		ug/Kg		71	46 - 117
2-Methylnaphthalene	667	430		ug/Kg		64	48 - 110
2-Methylphenol	667	479		ug/Kg		72	36 - 110
Naphthalene	667	453		ug/Kg		68	42 - 110
2-Nitroaniline	667	494		ug/Kg		74	47 - 124
3-Nitroaniline	667	485		ug/Kg		73	44 - 110
4-Nitroaniline	667	493		ug/Kg		74	50 - 110
Nitrobenzene	667	408		ug/Kg		61	40 - 110
2-Nitrophenol	667	465		ug/Kg		73	35 - 110
4-Nitrophenol	667	525		ug/Kg		79	24 - 117
Pyrene	667	512		ug/Kg		77	58 - 113
Pentachlorophenol	667	547		ug/Kg		82	10 - 110
Phenanthrene	667	493		ug/Kg		74	54 - 110
1,2,4-Trichlorobenzene	667	383		ug/Kg		57	43 - 110
2,4,5-Trichlorophenol	667	394		ug/Kg		59	42 - 110
2,4,6-Trichlorophenol	667	318		ug/Kg		48	37 - 110
Phenol	667	510		ug/Kg		76	39 - 110
Carbazole	667	502		ug/Kg		75	56 - 115
4-Chloroaniline	667	396		ug/Kg		59	25 - 110
3 & 4 Methylphenol	1330	1020		ug/Kg		77	40 - 110
Bis(2-ethylhexyl) phthalate	667	531		ug/Kg		80	56 - 123
Di-n-octyl phthalate	667	514		ug/Kg		77	45 - 123
4-Chloro-3-methylphenol	667	523		ug/Kg		78	42 - 110
2,2'-oxybis[1-chloropropane]	667	415		ug/Kg		62	36 - 118

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-49770/16-A
Matrix: Solid
Analysis Batch: 50054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49770

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	55		34 - 110
2-Fluorophenol (Surr)	73		26 - 110
2,4,6-Tribromophenol (Surr)	50		10 - 118
Nitrobenzene-d5 (Surr)	61		24 - 112
Phenol-d5 (Surr)	77		28 - 110
Terphenyl-d14 (Surr)	79		41 - 119

Lab Sample ID: MB 240-50344/13-A
Matrix: Water
Analysis Batch: 50708

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50344

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Acenaphthylene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Anthracene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[a]anthracene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzoic acid	25	U	25	10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[b]fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[k]fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzyl alcohol	5.0	U	5.0	0.38	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Bromophenyl phenyl ether	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Butyl benzyl phthalate	0.902	J	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dimethylphenol	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dimethyl phthalate	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1
4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dinitrophenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dinitrotoluene	5.0	U	5.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,6-Dinitrotoluene	5.0	U	5.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Fluoranthene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Fluorene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorobenzene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorobutadiene	1.0	U	1.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachlorocyclopentadiene	10	U	10	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Hexachloroethane	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
N-Nitrosodiphenylamine	1.0	U	1.0	0.31	ug/L		07/10/12 10:24	07/13/12 10:39	1
N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,4-Dichlorobenzene	1.0	U	1.0	0.34	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Chloronaphthalene	1.0	U	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Chlorophenol	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30	ug/L		07/10/12 10:24	07/13/12 10:39	1
Chrysene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Dibenzofuran	1.0	U	1.0	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[g,h,i]perylene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Benzo[a]pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Di-n-butyl phthalate	1.0	U	1.0	0.67	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,2-Dichlorobenzene	1.0	U	1.0	0.29	ug/L		07/10/12 10:24	07/13/12 10:39	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-50344/13-A
Matrix: Water
Analysis Batch: 50708

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50344

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,3-Dichlorobenzene	1.0	U	1.0	0.60	ug/L		07/10/12 10:24	07/13/12 10:39	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.37	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4-Dichlorophenol	2.0	U	2.0	0.60	ug/L		07/10/12 10:24	07/13/12 10:39	1
Diethyl phthalate	1.0	U	1.0	0.60	ug/L		07/10/12 10:24	07/13/12 10:39	1
Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Isophorone	1.0	U	1.0	0.27	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Methylnaphthalene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Methylphenol	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Naphthalene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
3-Nitroaniline	2.0	U	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Nitroaniline	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Nitrobenzene	1.0	U	1.0	0.040	ug/L		07/10/12 10:24	07/13/12 10:39	1
2-Nitrophenol	2.0	U	2.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Nitrophenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
Pyrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
Pentachlorophenol	5.0	U	5.0	2.4	ug/L		07/10/12 10:24	07/13/12 10:39	1
Phenanthrene	0.20	U	0.20	0.10	ug/L		07/10/12 10:24	07/13/12 10:39	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.30	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,4,6-Trichlorophenol	5.0	U	5.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Phenol	1.0	U	1.0	0.60	ug/L		07/10/12 10:24	07/13/12 10:39	1
Carbazole	1.0	U	1.0	0.28	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chloroaniline	2.0	U	2.0	0.60	ug/L		07/10/12 10:24	07/13/12 10:39	1
3 & 4 Methylphenol	2.0	U	2.0	0.75	ug/L		07/10/12 10:24	07/13/12 10:39	1
Bis(2-ethylhexyl) phthalate	1.97	J	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
Di-n-octyl phthalate	1.0	U	1.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
4-Chloro-3-methylphenol	2.0	U	2.0	0.80	ug/L		07/10/12 10:24	07/13/12 10:39	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40	ug/L		07/10/12 10:24	07/13/12 10:39	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	69		28 - 110	07/10/12 10:24	07/13/12 10:39	1
2-Fluorophenol (Surr)	79		10 - 110	07/10/12 10:24	07/13/12 10:39	1
2,4,6-Tribromophenol (Surr)	71		22 - 120	07/10/12 10:24	07/13/12 10:39	1
Nitrobenzene-d5 (Surr)	68		27 - 111	07/10/12 10:24	07/13/12 10:39	1
Phenol-d5 (Surr)	81		10 - 110	07/10/12 10:24	07/13/12 10:39	1
Terphenyl-d14 (Surr)	86		37 - 119	07/10/12 10:24	07/13/12 10:39	1

Lab Sample ID: LCS 240-50344/14-A
Matrix: Water
Analysis Batch: 50708

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50344

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Acenaphthylene	20.0	17.2		ug/L		86	43 - 110	
Anthracene	20.0	17.2		ug/L		86	54 - 114	
Benzo[a]anthracene	20.0	16.5		ug/L		82	55 - 115	
Benzoic acid	20.0	17.2	J	ug/L		86	10 - 129	
Benzo[b]fluoranthene	20.0	16.1		ug/L		81	43 - 122	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-50344/14-A
Matrix: Water
Analysis Batch: 50708

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50344

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[k]fluoranthene	20.0	17.0		ug/L		85	43 - 124
Benzyl alcohol	20.0	18.8		ug/L		94	10 - 130
Bis(2-chloroethoxy)methane	20.0	15.7		ug/L		79	39 - 110
Bis(2-chloroethyl)ether	20.0	15.2		ug/L		76	34 - 113
4-Bromophenyl phenyl ether	20.0	15.2		ug/L		76	51 - 114
Butyl benzyl phthalate	20.0	18.3		ug/L		91	53 - 126
2,4-Dimethylphenol	20.0	14.2		ug/L		71	12 - 110
Dimethyl phthalate	20.0	18.0		ug/L		90	15 - 143
4,6-Dinitro-2-methylphenol	20.0	18.2		ug/L		91	28 - 112
2,4-Dinitrophenol	20.0	16.4		ug/L		82	17 - 112
2,4-Dinitrotoluene	20.0	16.1		ug/L		80	52 - 123
2,6-Dinitrotoluene	20.0	16.4		ug/L		82	52 - 119
Fluoranthene	20.0	17.5		ug/L		87	54 - 122
Fluorene	20.0	17.3		ug/L		87	47 - 112
Hexachlorobenzene	20.0	18.8		ug/L		84	51 - 112
Hexachlorobutadiene	20.0	15.1		ug/L		75	13 - 110
Hexachlorocyclopentadiene	20.0	8.56	J	ug/L		43	10 - 110
Hexachloroethane	20.0	16.4		ug/L		82	12 - 110
N-Nitrosodiphenylamine	20.0	16.1		ug/L		81	53 - 113
N-Nitrosodi-n-propylamine	20.0	17.7		ug/L		88	37 - 121
1,4-Dichlorobenzene	20.0	16.9		ug/L		85	19 - 110
2-Chloronaphthalene	20.0	15.2		ug/L		76	39 - 110
2-Chlorophenol	20.0	17.5		ug/L		88	27 - 110
4-Chlorophenyl phenyl ether	20.0	15.7		ug/L		78	50 - 115
Chrysene	20.0	17.6		ug/L		88	55 - 115
Dibenz(a,h)anthracene	20.0	16.2		ug/L		81	46 - 122
Dibenzofuran	20.0	17.4		ug/L		87	46 - 111
Benzo[g,h,i]perylene	20.0	16.9		ug/L		84	45 - 120
Benzo[a]pyrene	20.0	14.5		ug/L		72	43 - 116
Di-n-butyl phthalate	20.0	18.1		ug/L		91	55 - 122
1,2-Dichlorobenzene	20.0	15.8		ug/L		79	23 - 110
1,3-Dichlorobenzene	20.0	15.5		ug/L		78	19 - 110
3,3'-Dichlorobenzidine	20.0	10.3		ug/L		52	19 - 110
2,4-Dichlorophenol	20.0	17.6		ug/L		88	33 - 110
Diethyl phthalate	20.0	18.3		ug/L		92	33 - 134
Indeno[1,2,3-cd]pyrene	20.0	15.9		ug/L		80	46 - 121
Isophorone	20.0	17.9		ug/L		90	44 - 128
2-Methylnaphthalene	20.0	16.9		ug/L		85	35 - 110
2-Methylphenol	20.0	17.6		ug/L		88	30 - 110
Naphthalene	20.0	17.8		ug/L		89	31 - 110
2-Nitroaniline	20.0	17.4		ug/L		87	43 - 130
3-Nitroaniline	20.0	16.4		ug/L		82	45 - 116
4-Nitroaniline	20.0	17.7		ug/L		88	45 - 120
Nitrobenzene	20.0	16.0		ug/L		80	37 - 115
2-Nitrophenol	20.0	17.8		ug/L		89	29 - 110
4-Nitrophenol	20.0	17.6		ug/L		88	12 - 130
Pyrene	20.0	16.7		ug/L		84	55 - 120
Pentachlorophenol	20.0	18.1		ug/L		90	26 - 110
Phenanthrene	20.0	17.2		ug/L		86	52 - 114
1,2,4-Trichlorobenzene	20.0	14.6		ug/L		73	25 - 110

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-50344/14-A			Client Sample ID: Lab Control Sample						
Matrix: Water			Prep Type: Total/NA						
Analysis Batch: 50708			Prep Batch: 50344						
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-Trichlorophenol	20.0	17.4		ug/L		87	39 - 110		
2,4,6-Trichlorophenol	20.0	17.4		ug/L		87	35 - 110		
Phenol	20.0	17.9		ug/L		89	14 - 112		
Carbazole	20.0	17.4		ug/L		87	53 - 120		
4-Chloroaniline	20.0	15.3		ug/L		76	10 - 110		
3 & 4 Methylphenol	40.0	34.8		ug/L		87	32 - 110		
Bis(2-ethylhexyl) phthalate	20.0	15.0		ug/L		75	36 - 163		
Di-n-octyl phthalate	20.0	13.3		ug/L		66	44 - 128		
4-Chloro-3-methylphenol	20.0	17.3		ug/L		87	39 - 110		
2,2'-oxybis[1-chloropropane]	20.0	15.6		ug/L		78	25 - 128		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	73		28 - 110
2-Fluorophenol (Surr)	88		10 - 110
2,4,6-Tribromophenol (Surr)	83		22 - 120
Nitrobenzene-d5 (Surr)	75		27 - 111
Phenol-d5 (Surr)	91		10 - 110
Terphenyl-d14 (Surr)	89		37 - 119

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-49615/2-A			Client Sample ID: Method Blank						
Matrix: Water			Prep Type: Total/NA						
Analysis Batch: 49739			Prep Batch: 49615						
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.050	U	0.050	0.0096	ug/L		07/02/12 11:57	07/04/12 08:18	1
4,4'-DDE	0.050	U	0.050	0.0097	ug/L		07/02/12 11:57	07/04/12 08:18	1
4,4'-DDT	0.050	U	0.050	0.016	ug/L		07/02/12 11:57	07/04/12 08:18	1
Aldrin	0.050	U	0.050	0.0082	ug/L		07/02/12 11:57	07/04/12 08:18	1
alpha-BHC	0.050	U	0.050	0.0070	ug/L		07/02/12 11:57	07/04/12 08:18	1
alpha-Chlordane	0.050	U	0.050	0.014	ug/L		07/02/12 11:57	07/04/12 08:18	1
beta-BHC	0.050	U	0.050	0.0084	ug/L		07/02/12 11:57	07/04/12 08:18	1
delta-BHC	0.050	U	0.050	0.0087	ug/L		07/02/12 11:57	07/04/12 08:18	1
Dieldrin	0.050	U	0.050	0.0075	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan I	0.050	U	0.050	0.013	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan II	0.050	U	0.050	0.012	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endosulfan sulfate	0.050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin	0.050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin aldehyde	0.050	U	0.050	0.011	ug/L		07/02/12 11:57	07/04/12 08:18	1
Endrin ketone	0.050	U	0.050	0.0078	ug/L		07/02/12 11:57	07/04/12 08:18	1
gamma-BHC (Lindane)	0.050	U	0.050	0.0064	ug/L		07/02/12 11:57	07/04/12 08:18	1
gamma-Chlordane	0.050	U	0.050	0.012	ug/L		07/02/12 11:57	07/04/12 08:18	1
Heptachlor	0.050	U	0.050	0.0080	ug/L		07/02/12 11:57	07/04/12 08:18	1
Heptachlor epoxide	0.050	U	0.050	0.0071	ug/L		07/02/12 11:57	07/04/12 08:18	1
Methoxychlor	0.10	U	0.10	0.032	ug/L		07/02/12 11:57	07/04/12 08:18	1
Toxaphene	2.0	U	2.0	0.32	ug/L		07/02/12 11:57	07/04/12 08:18	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49615/2-A
Matrix: Water
Analysis Batch: 49739

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49615

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	94		10 - 145	07/02/12 11:57	07/04/12 08:18	1
DCB Decachlorobiphenyl	86		10 - 145	07/02/12 11:57	07/04/12 08:18	1
Tetrachloro-m-xylene	83		30 - 141	07/02/12 11:57	07/04/12 08:18	1
Tetrachloro-m-xylene	76		30 - 141	07/02/12 11:57	07/04/12 08:18	1

Lab Sample ID: LCS 240-49615/3-A
Matrix: Water
Analysis Batch: 49739

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49615

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDE	0.500	0.574		ug/L		115	66 - 136
4,4'-DDT	0.500	0.576		ug/L		115	42 - 140
Aldrin	0.500	0.544		ug/L		109	61 - 127
alpha-BHC	0.500	0.569		ug/L		114	65 - 132
alpha-Chlordane	0.500	0.559		ug/L		112	60 - 134
beta-BHC	0.500	0.579		ug/L		116	59 - 134
delta-BHC	0.500	0.603		ug/L		121	45 - 143
Dieldrin	0.500	0.598		ug/L		120	61 - 142
Endosulfan I	0.500	0.416		ug/L		83	35 - 110
Endosulfan II	0.500	0.449		ug/L		90	39 - 110
Endosulfan sulfate	0.500	0.610		ug/L		122	54 - 143
Endrin	0.500	0.586		ug/L		117	57 - 148
Endrin aldehyde	0.500	0.553		ug/L		111	44 - 116
Endrin ketone	0.500	0.604		ug/L		121	52 - 135
gamma-BHC (Lindane)	0.500	0.612		ug/L		122	58 - 140
gamma-Chlordane	0.500	0.588		ug/L		118	59 - 139
Heptachlor	0.500	0.530		ug/L		106	60 - 132
Heptachlor epoxide	0.500	0.593		ug/L		119	60 - 138
Methoxychlor	0.500	0.541		ug/L		108	45 - 139

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	56		10 - 145
DCB Decachlorobiphenyl	48		10 - 145
Tetrachloro-m-xylene	96		30 - 141
Tetrachloro-m-xylene	90		30 - 141

Lab Sample ID: MB 240-49705/7-A
Matrix: Water
Analysis Batch: 49922

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49705

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chlordane (technical)	0.012	U	0.012	0.000079	mg/L		07/03/12 09:15	07/06/12 00:21	1
Endrin	0.0012	U	0.0012	0.000026	mg/L		07/03/12 09:15	07/06/12 00:21	1
gamma-BHC (Lindane)	0.0012	U	0.0012	0.000015	mg/L		07/03/12 09:15	07/06/12 00:21	1
Heptachlor	0.0012	U	0.0012	0.000019	mg/L		07/03/12 09:15	07/06/12 00:21	1
Heptachlor epoxide	0.0012	U	0.0012	0.000017	mg/L		07/03/12 09:15	07/06/12 00:21	1
Methoxychlor	0.0024	U	0.0024	0.000077	mg/L		07/03/12 09:15	07/06/12 00:21	1
Toxaphene	0.048	U	0.048	0.000077	mg/L		07/03/12 09:15	07/06/12 00:21	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49705/7-A				Client Sample ID: Method Blank		
Matrix: Water				Prep Type: Total/NA		
Analysis Batch: 49922				Prep Batch: 49705		
Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	93		34 - 141	07/03/12 09:15	07/06/12 00:21	1
DCB Decachlorobiphenyl	92		34 - 141	07/03/12 09:15	07/06/12 00:21	1
Tetrachloro-m-xylene	65		46 - 122	07/03/12 09:15	07/06/12 00:21	1
Tetrachloro-m-xylene	61		46 - 122	07/03/12 09:15	07/06/12 00:21	1

Lab Sample ID: LCS 240-49705/8-A				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total/NA			
Analysis Batch: 49922				Prep Batch: 49705			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
gamma-BHC (Lindane)	0.00200	0.00204		mg/L		102	59 - 137
Heptachlor	0.00200	0.00139		mg/L		69	63 - 123
Heptachlor epoxide	0.00200	0.00212		mg/L		106	59 - 141
Methoxychlor	0.00400	0.00366		mg/L		92	42 - 141

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	89		34 - 141
DCB Decachlorobiphenyl	93		34 - 141
Tetrachloro-m-xylene	70		46 - 122
Tetrachloro-m-xylene	65		46 - 122

Lab Sample ID: MB 240-49756/10-A				Client Sample ID: Method Blank					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 50336				Prep Batch: 49756					
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4,4'-DDD	1.7	U	1.7	0.62	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
4,4'-DDE	1.7	U	1.7	0.39	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
4,4'-DDT	1.7	U	1.7	0.63	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Aldrin	1.7	U	1.7	1.2	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
alpha-BHC	1.7	U	1.7	0.73	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
alpha-Chlordane	1.7	U	1.7	0.94	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
beta-BHC	1.7	U	1.7	1.1	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
delta-BHC	1.7	U	1.7	1.2	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Dieldrin	1.7	U	1.7	0.47	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endosulfan I	1.7	U	1.7	0.52	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endosulfan II	1.7	U	1.7	0.82	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endosulfan sulfate	1.7	U	1.7	0.87	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endrin	1.7	U	1.7	0.50	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endrin aldehyde	1.7	U	1.7	1.0	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Endrin ketone	1.7	U	1.7	0.63	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
gamma-BHC (Lindane)	1.7	U	1.7	0.74	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
gamma-Chlordane	1.7	U	1.7	0.42	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Heptachlor	1.7	U	1.7	1.1	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Heptachlor epoxide	1.7	U	1.7	0.80	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Methoxychlor	3.3	U	3.3	1.5	ug/Kg		07/03/12 12:02	07/09/12 11:12	1
Toxaphene	67	U	67	19	ug/Kg		07/03/12 12:02	07/09/12 11:12	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-49756/10-A
Matrix: Solid
Analysis Batch: 50336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49756

Surrogate	MB MB		Limits	Prepared	Analyzed	DII Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	93		32 - 175	07/03/12 12:02	07/09/12 11:12	1
Tetrachloro-m-xylene	104		24 - 150	07/03/12 12:02	07/09/12 11:12	1
Tetrachloro-m-xylene	180	X	24 - 150	07/03/12 12:02	07/09/12 11:12	1

Lab Sample ID: LCS 240-49756/11-A
Matrix: Solid
Analysis Batch: 50336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49756

Analyte	Splke Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
4,4'-DDD	33.3	35.1		ug/Kg		105	38 - 160	
4,4'-DDE	33.3	27.2		ug/Kg		82	41 - 137	
4,4'-DDT	33.3	33.3		ug/Kg		100	34 - 139	
Aldrin	33.3	25.2		ug/Kg		76	52 - 118	
alpha-BHC	33.3	26.0		ug/Kg		78	50 - 129	
alpha-Chlordane	33.3	26.0		ug/Kg		78	43 - 130	
beta-BHC	33.3	26.0		ug/Kg		78	51 - 127	
delta-BHC	33.3	29.1		ug/Kg		87	54 - 134	
Dieldrin	33.3	29.0		ug/Kg		87	45 - 140	
Endosulfan I	33.3	18.9		ug/Kg		57	13 - 110	
Endosulfan II	33.3	20.6		ug/Kg		62	22 - 115	
Endosulfan sulfate	33.3	32.0		ug/Kg		96	44 - 143	
Endrin	33.3	30.5		ug/Kg		92	48 - 143	
Endrin aldehyde	33.3	32.7		ug/Kg		98	31 - 126	
Endrin ketone	33.3	29.5		ug/Kg		89	39 - 137	
gamma-BHC (Lindane)	33.3	27.2		ug/Kg		82	41 - 137	
gamma-Chlordane	33.3	25.4		ug/Kg		78	53 - 129	
Heptachlor	33.3	29.9		ug/Kg		90	37 - 127	
Heptachlor epoxide	33.3	26.0		ug/Kg		78	53 - 132	
Methoxychlor	33.3	34.8		ug/Kg		104	33 - 151	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	98		32 - 175
DCB Decachlorobiphenyl	82		32 - 175
Tetrachloro-m-xylene	110		24 - 150
Tetrachloro-m-xylene	113		24 - 150

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-49612/11-A
Matrix: Water
Analysis Batch: 49764

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49612

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
	Result	Qualifier							
Aroclor-1016	0.50	U	0.50	0.17	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1221	0.50	U	0.50	0.13	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1232	0.50	U	0.50	0.16	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1242	0.50	U	0.50	0.22	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1248	0.50	U	0.50	0.10	ug/L		07/02/12 11:53	07/03/12 17:39	1
Aroclor-1254	0.50	U	0.50	0.16	ug/L		07/02/12 11:53	07/03/12 17:39	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-49612/11-A							Client Sample ID: Method Blank			
Matrix: Water							Prep Type: Total/NA			
Analysis Batch: 49764							Prep Batch: 49612			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Aroclor-1260	0.50	U	0.50	0.17	ug/L		07/02/12 11:53	07/03/12 17:39	1	
Surrogate							%Rec.			
	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac	
Tetrachloro-m-xylene	72		23 - 136				07/02/12 11:53	07/03/12 17:39	1	
DCB Decachlorobiphenyl	81		10 - 130				07/02/12 11:53	07/03/12 17:39	1	

Lab Sample ID: LCS 240-49612/12-A							Client Sample ID: Lab Control Sample			
Matrix: Water							Prep Type: Total/NA			
Analysis Batch: 49852							Prep Batch: 49612			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits			
Aroclor-1016	5.00	5.95		ug/L		119	66 - 120			
Aroclor-1260	5.00	4.18		ug/L		84	55 - 120			
Surrogate							%Rec.			
	LCS %Recovery	LCS Qualifier	Limits				%Rec. Limits			
Tetrachloro-m-xylene	70		23 - 136							
DCB Decachlorobiphenyl	71		10 - 130							

Lab Sample ID: MB 240-49755/19-A							Client Sample ID: Method Blank			
Matrix: Solid							Prep Type: Total/NA			
Analysis Batch: 49992							Prep Batch: 49755			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Aroclor-1016	33	U	33	21	ug/Kg		07/03/12 11:53	07/06/12 12:12	1	
Aroclor-1221	33	U	33	16	ug/Kg		07/03/12 11:53	07/06/12 12:12	1	
Aroclor-1232	33	U	33	14	ug/Kg		07/03/12 11:53	07/06/12 12:12	1	
Aroclor-1242	33	U	33	13	ug/Kg		07/03/12 11:53	07/06/12 12:12	1	
Aroclor-1248	33	U	33	17	ug/Kg		07/03/12 11:53	07/06/12 12:12	1	
Aroclor-1254	33	U	33	17	ug/Kg		07/03/12 11:53	07/06/12 12:12	1	
Aroclor-1260	33	U	33	17	ug/Kg		07/03/12 11:53	07/06/12 12:12	1	
Surrogate							%Rec.			
	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac	
Tetrachloro-m-xylene	69		29 - 151				07/03/12 11:53	07/06/12 12:12	1	
DCB Decachlorobiphenyl	66		14 - 163				07/03/12 11:53	07/06/12 12:12	1	

Lab Sample ID: LCS 240-49755/20-A							Client Sample ID: Lab Control Sample			
Matrix: Solid							Prep Type: Total/NA			
Analysis Batch: 49992							Prep Batch: 49755			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits			
Aroclor-1016	333	225		ug/Kg		68	62 - 120			
Aroclor-1260	333	228		ug/Kg		68	56 - 122			
Surrogate							%Rec.			
	LCS %Recovery	LCS Qualifier	Limits				%Rec. Limits			
Tetrachloro-m-xylene	62		29 - 151							
DCB Decachlorobiphenyl	67		14 - 163							

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-497077-A							Client Sample ID: Method Blank			
Matrix: Water							Prep Type: Total/NA			
Analysis Batch: 50094							Prep Batch: 49707			
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
2,4-D	0.0020	U	0.0020	0.00021	mg/L		07/03/12 09:18	07/07/12 21:18	1	
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.00010	mg/L		07/03/12 09:18	07/07/12 21:18	1	
Surrogate	MB MB		Limits			D	Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier								
2,4-Dichlorophenylacetic acid	51		37 - 116				07/03/12 09:18	07/07/12 21:18	1	
2,4-Dichlorophenylacetic acid	57		37 - 116				07/03/12 09:18	07/07/12 21:18	1	

Lab Sample ID: LCS 240-4970778-A							Client Sample ID: Lab Control Sample			
Matrix: Water							Prep Type: Total/NA			
Analysis Batch: 50094							Prep Batch: 49707			
Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
2,4-D	0.0200		0.0200	0.0135		mg/L		67	35 - 136	
Silvex (2,4,5-TP)	0.00500		0.00500	0.00325		mg/L		65	48 - 112	
Surrogate	LCS LCS		Limits			D	Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier								
2,4-Dichlorophenylacetic acid	55		37 - 116				07/03/12 09:18	07/07/12 21:18	1	
2,4-Dichlorophenylacetic acid	66		37 - 116				07/03/12 09:18	07/07/12 21:18	1	

Method: 8330 (Modified) - Organic Compounds by UV/HPLC

Lab Sample ID: G2G060000020B							Client Sample ID: Method Blank			
Matrix: Solid							Prep Type: Total			
Analysis Batch: 2188020							Prep Batch: 2188020_P			
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
Nitroguanidine	0.25	U	0.25	0.020	mg/kg		07/06/12 08:00	07/10/12 11:54	1	

Lab Sample ID: G2G060000020C							Client Sample ID: Lab Control Sample			
Matrix: Solid							Prep Type: Total			
Analysis Batch: 2188020							Prep Batch: 2188020_P			
Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Nitroguanidine	1.00		1.00	0.973		mg/kg		97	72 - 121	

Lab Sample ID: G2F280490026D							Client Sample ID: Matrix Spike Duplicate			
Matrix: Solid							Prep Type: Total			
Analysis Batch: 2188020							Prep Batch: 2188020_P			
Analyte	Sample	Sample	Spike	SD1	SD1	Unit	D	%Rec	%Rec.	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD
Nitroguanidine	0.25	U	1.00	0.822		mg/kg		82	72 - 121	1.4

Lab Sample ID: G2F280490026S							Client Sample ID: Matrix Spike			
Matrix: Solid							Prep Type: Total			
Analysis Batch: 2188020							Prep Batch: 2188020_P			
Analyte	Sample	Sample	Spike	MS1	MS1	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Nitroguanidine	0.25	U	1.00	0.833		mg/kg		83	72 - 121	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8330 (Modified) - Organic Compounds by UV/HPLC (Continued)

Lab Sample ID: G2G090000129B						Client Sample ID: Method Blank			
Matrix: Water						Prep Type: Dissolved			
Analysis Batch: 2191129						Prep Batch: 2191129_P			
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitroguanidine	20	U	20	2.4	ug/L		07/09/12 14:50	07/10/12 10:28	1

Lab Sample ID: G2G090000129C						Client Sample ID: Lab Control Sample			
Matrix: Water						Prep Type: Dissolved			
Analysis Batch: 2191129						Prep Batch: 2191129_P			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.	
Nitroguanidine	250	240		ug/L		96	73 - 117		

Lab Sample ID: 240-12752-4 MS						Client Sample ID: FWG-IDW-TANK3-GW			
Matrix: Water						Prep Type: Dissolved			
Analysis Batch: 2191129						Prep Batch: 2191129_P			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Nitroguanidine	20	U	250	244		ug/L		98	73 - 117

Lab Sample ID: 240-12752-4 MSD						Client Sample ID: FWG-IDW-TANK3-GW					
Matrix: Water						Prep Type: Dissolved					
Analysis Batch: 2191129						Prep Batch: 2191129_P					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nitroguanidine	20	U	250	244		ug/L		98	73 - 117	0.16	15

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A)

Lab Sample ID: G2G030000016B						Client Sample ID: Method Blank			
Matrix: Water						Prep Type: Total			
Analysis Batch: 2185016						Prep Batch: 2185016_P			
Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitroglycerin	0.65	U	0.65	0.33	ug/L		07/03/12 06:00	07/06/12 17:23	1
PETN	0.65	U	0.65	0.30	ug/L		07/03/12 06:00	07/06/12 17:23	1
2-Amino-4,6-dinitrotoluene	0.20	U	0.20	0.017	ug/L		07/03/12 06:00	07/06/12 17:23	1
4-Amino-2,6-dinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
1,3-Dinitrobenzene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
2,4-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
2,6-Dinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
HMX	0.10	U	0.10	0.036	ug/L		07/03/12 06:00	07/06/12 17:23	1
Nitrobenzene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
2-Nitrotoluene	0.50	U	0.50	0.088	ug/L		07/03/12 06:00	07/06/12 17:23	1
3-Nitrotoluene	0.50	U	0.50	0.057	ug/L		07/03/12 06:00	07/06/12 17:23	1
4-Nitrotoluene	0.65	U	0.65	0.088	ug/L		07/03/12 06:00	07/06/12 17:23	1
RDX	0.10	U	0.10	0.036	ug/L		07/03/12 06:00	07/06/12 17:23	1
Tetryl	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
1,3,5-Trinitrobenzene	0.10	U	0.10	0.030	ug/L		07/03/12 06:00	07/06/12 17:23	1
2,4,6-Trinitrotoluene	0.10	U	0.10	0.050	ug/L		07/03/12 06:00	07/06/12 17:23	1
Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac			
%Recovery	Qualifier								
3,4-Dinitrotoluene	101		79 - 111	07/03/12 06:00	07/06/12 17:23	1			

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8330/8330A - Nitroaromatics & Nitramines: Explosives (8330/A) (Continued)

Lab Sample ID: G2G030000016C		Client Sample ID: Lab Control Sample						
Matrix: Water		Prep Type: Total						
Analysis Batch: 2185016		Prep Batch: 2185016_P						
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
Nitroglycerin	5.00	5.69		ug/L		114	85 - 115	
PETN	5.00	4.97		ug/L		99	84 - 117	
2-Amino-4,6-dinitrotoluene	1.00	1.11		ug/L		111	50 - 155	
4-Amino-2,6-dinitrotoluene	1.00	1.10		ug/L		110	55 - 155	
1,3-Dinitrobenzene	1.00	1.17		ug/L		117	45 - 160	
2,4-Dinitrotoluene	1.00	1.09		ug/L		109	60 - 135	
2,6-Dinitrotoluene	1.00	1.09		ug/L		109	60 - 135	
HMX	1.00	1.11		ug/L		111	80 - 115	
Nitrobenzene	1.00	1.17		ug/L		117	50 - 140	
2-Nitrotoluene	1.00	1.08		ug/L		108	45 - 135	
3-Nitrotoluene	1.00	1.08		ug/L		106	50 - 130	
4-Nitrotoluene	1.00	1.07		ug/L		107	50 - 130	
RDX	1.00	1.18		ug/L		118	50 - 160	
Tetryl	1.00	0.974		ug/L		97	20 - 175	
1,3,5-Trinitrobenzene	1.00	1.13		ug/L		113	65 - 140	
2,4,6-Trinitrotoluene	1.00	0.988		ug/L		99	50 - 145	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
3,4-Dinitrotoluene	105		79 - 111

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B)

Lab Sample ID: G2G090000108B		Client Sample ID: Method Blank							
Matrix: Solid		Prep Type: Total							
Analysis Batch: 2191108		Prep Batch: 2191108_P							
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.25	U	0.25	0.010	mg/kg		07/09/12 12:45	07/10/12 18:08	1
1,3-Dinitrobenzene	0.25	U	0.25	0.0042	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2,4,6-Trinitrotoluene	0.25	U	0.25	0.019	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2,4-Dinitrotoluene	0.25	U	0.25	0.0053	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2,6-Dinitrotoluene	0.25	U	0.25	0.0073	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2-Amino-4,6-dinitrotoluene	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:06	1
2-Nitrotoluene	0.25	U	0.25	0.013	mg/kg		07/09/12 12:45	07/10/12 16:06	1
3-Nitrotoluene	0.25	U	0.25	0.016	mg/kg		07/09/12 12:45	07/10/12 16:06	1
4-Amino-2,6-dinitrotoluene	0.25	U	0.25	0.010	mg/kg		07/09/12 12:45	07/10/12 16:06	1
4-Nitrotoluene	0.25	U	0.25	0.025	mg/kg		07/09/12 12:45	07/10/12 16:06	1
HMX	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:06	1
Nitrobenzene	0.25	U	0.25	0.018	mg/kg		07/09/12 12:45	07/10/12 16:06	1
Nitroglycerin	0.50	U	0.50	0.015	mg/kg		07/09/12 12:45	07/10/12 16:06	1
PETN	0.50	U	0.50	0.025	mg/kg		07/09/12 12:45	07/10/12 16:06	1
RDX	0.25	U	0.25	0.012	mg/kg		07/09/12 12:45	07/10/12 16:06	1
Tetryl	0.25	U	0.25	0.010	mg/kg		07/09/12 12:45	07/10/12 16:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	102		75 - 115	07/09/12 12:45	07/10/12 16:06	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

Lab Sample ID: G2G090000108C			Client Sample ID: Lab Control Sample					
Matrix: Solid			Prep Type: Total					
Analysis Batch: 2191108			Prep Batch: 2191108_P					
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
1,3,5-Trinitrobenzene	0.500	0.507		mg/kg		101	81 - 121	
1,3-Dinitrobenzene	0.500	0.517		mg/kg		103	81 - 121	
2,4,6-Trinitrotoluene	0.500	0.445		mg/kg		89	65 - 105	
2,4-Dinitrotoluene	0.500	0.499		mg/kg		100	79 - 119	
2,6-Dinitrotoluene	0.500	0.496		mg/kg		99	79 - 119	
2-Amino-4,6-dinitrotoluene	0.500	0.502		mg/kg		100	79 - 119	
2-Nitrotoluene	0.500	0.495		mg/kg		99	78 - 118	
3-Nitrotoluene	0.500	0.500		mg/kg		100	77 - 117	
4-Amino-2,6-dinitrotoluene	0.500	0.510		mg/kg		102	81 - 121	
4-Nitrotoluene	0.500	0.497		mg/kg		99	78 - 118	
HMX	0.500	0.513		mg/kg		103	80 - 120	
Nitrobenzene	0.500	0.520		mg/kg		104	80 - 120	
Nitroglycerin	1.00	1.06		mg/kg		106	76 - 116	
PETN	1.00	1.02		mg/kg		102	76 - 116	
RDX	0.500	0.500		mg/kg		100	82 - 122	
Tetryl	0.500	0.437		mg/kg		87	83 - 120	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
3,4-Dinitrotoluene	100		75 - 115

Lab Sample ID: 240-12752-3 MS			Client Sample ID: FWG-IDW-SBCOMP3-SO						
Matrix: Solid			Prep Type: Total						
Analysis Batch: 2191108			Prep Batch: 2191108_P						
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,3,5-Trinitrobenzene	0.25	U	0.498	0.503		mg/kg		101	81 - 121
1,3-Dinitrobenzene	0.25	U	0.498	0.523		mg/kg		105	81 - 121
2,4,6-Trinitrotoluene	0.25	U	0.498	0.450		mg/kg		90	65 - 105
2,4-Dinitrotoluene	0.25	U	0.498	0.501		mg/kg		101	79 - 119
2,6-Dinitrotoluene	0.25	U	0.498	0.506		mg/kg		102	79 - 119
2-Amino-4,6-dinitrotoluene	0.25	U	0.498	0.506		mg/kg		102	79 - 119
2-Nitrotoluene	0.25	U	0.498	0.502		mg/kg		101	78 - 118
3-Nitrotoluene	0.25	U	0.498	0.504		mg/kg		101	77 - 117
4-Amino-2,6-dinitrotoluene	0.25	U	0.498	0.514		mg/kg		103	81 - 121
4-Nitrotoluene	0.25	U	0.498	0.497		mg/kg		100	78 - 118
HMX	0.25	U	0.498	0.522		mg/kg		105	80 - 120
Nitrobenzene	0.25	U	0.498	0.520		mg/kg		104	80 - 120
Nitroglycerin	0.50	U	0.996	1.07		mg/kg		107	76 - 116
PETN	0.50	U	0.998	1.00		mg/kg		101	76 - 116
RDX	0.25	U	0.498	0.488		mg/kg		98	82 - 122
Tetryl	0.25	U	0.498	0.418		mg/kg		84	63 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
3,4-Dinitrotoluene	101		75 - 115

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 8330B - Nitroaromatics & Nitramines: Explosives (8330B) (Continued)

Lab Sample ID: 240-12752-3 MSD				Client Sample ID: FWG-IDW-SBCOMP3-SO							
Matrix: Solid				Prep Type: Total							
Analysis Batch: 2191108				Prep Batch: 2191108_P							
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
1,3,5-Trinitrobenzene	0.25	U	0.500	0.498		mg/kg		100	81 - 121	1.0	20
1,3-Dinitrobenzene	0.25	U	0.500	0.522		mg/kg		104	81 - 121	0.24	20
2,4,6-Trinitrotoluene	0.25	U	0.500	0.448		mg/kg		89	65 - 105	0.80	20
2,4-Dinitrotoluene	0.25	U	0.500	0.500		mg/kg		100	79 - 119	0.22	20
2,6-Dinitrotoluene	0.25	U	0.500	0.502		mg/kg		100	79 - 119	0.71	20
2-Amino-4,6-dinitrotoluene	0.25	U	0.500	0.503		mg/kg		101	79 - 119	0.53	20
2-Nitrotoluene	0.25	U	0.500	0.493		mg/kg		99	78 - 118	1.7	20
3-Nitrotoluene	0.25	U	0.500	0.501		mg/kg		100	77 - 117	0.63	20
4-Amino-2,6-dinitrotoluene	0.25	U	0.500	0.513		mg/kg		103	81 - 121	0.090	20
4-Nitrotoluene	0.25	U	0.500	0.493		mg/kg		99	78 - 118	0.76	20
HMX	0.25	U	0.500	0.516		mg/kg		103	80 - 120	1.1	20
Nitrobenzene	0.25	U	0.500	0.524		mg/kg		105	80 - 120	0.63	20
Nitroglycerin	0.50	U	1.00	1.08		mg/kg		108	76 - 116	1.2	20
PETN	0.50	U	1.00	1.00		mg/kg		100	76 - 116	0.10	20
RDX	0.25	U	0.500	0.484		mg/kg		97	82 - 122	0.47	20
Tetryl	0.25	U	0.500	0.411		mg/kg		82	63 - 120	1.7	20
		MSD	MSD								
Surrogate	%Recovery	Qualifier	Limits								
3,4-Dinitrotoluene	101		75 - 115								

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-49412/1-A				Client Sample ID: Method Blank							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 49675				Prep Batch: 49412							
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
	Result	Qualifier									
Arsenic	1.0	U	1.0	0.30	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Cobalt	5.0	U	5.0	0.16	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Chromium	0.50	U	0.50	0.20	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Lead	0.30	U	0.30	0.19	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Selenium	0.50	U	0.50	0.45	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Silver	0.50	U	0.50	0.10	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Vanadium	0.212	J	5.0	0.12	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Barium	0.242	J	20	0.071	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Calcium	34.0	J	500	16	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Copper	2.5	U	2.5	0.74	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Magnesium	500	U	500	5.1	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Manganese	1.5	U	1.5	0.074	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Nickel	0.429	J	4.0	0.27	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		
Potassium	20.7	J	500	6.2	mg/Kg		06/29/12 11:17	07/02/12 17:37	1		

Lab Sample ID: LCS 240-49412/2-A				Client Sample ID: Lab Control Sample							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 49675				Prep Batch: 49412							
Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits				
								Result	Qualifier		
Arsenic	200	188		mg/Kg		94	80 - 120				
Cobalt	50.0	45.1		mg/Kg		90	80 - 120				

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-49412/2-A			Client Sample ID: Lab Control Sample						
Matrix: Solid			Prep Type: Total/NA						
Analysis Batch: 49675			Prep Batch: 49412						
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chromium	20.0	18.9		mg/Kg		95	80 - 120		
Lead	50.0	46.2		mg/Kg		92	80 - 120		
Selenium	200	187		mg/Kg		94	80 - 120		
Silver	5.00	5.06		mg/Kg		101	80 - 120		
Vanadium	50.0	49.8		mg/Kg		100	80 - 120		
Barium	200	211		mg/Kg		105	80 - 120		
Calcium	5000	5110		mg/Kg		102	80 - 120		
Copper	25.0	23.4		mg/Kg		93	80 - 120		
Magnesium	5000	4880		mg/Kg		98	80 - 120		
Manganese	50.0	46.5		mg/Kg		93	80 - 120		
Nickel	50.0	46.0		mg/Kg		92	80 - 120		
Potassium	5000	4990		mg/Kg		100	80 - 120		

Lab Sample ID: 240-12752-3 MS			Client Sample ID: FWG-IDW-SBCOMP3-SO							
Matrix: Solid			Prep Type: Total/NA							
Analysis Batch: 50003			Prep Batch: 49412							
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	
Arsenic	11		245	229		mg/Kg	*	89	75 - 125	
Cobalt	10		61.4	72.0		mg/Kg	*	101	75 - 125	
Chromium	15		24.5	40.0		mg/Kg	*	103	75 - 125	
Lead	11		61.4	62.6		mg/Kg	*	84	75 - 125	
Selenium	0.61	U	245	212		mg/Kg	*	86	75 - 125	
Silver	0.61	U	6.14	5.61		mg/Kg	*	91	75 - 125	
Vanadium	17	B	61.4	78.0		mg/Kg	*	99	75 - 125	
Barium	120	B	245	367		mg/Kg	*	102	75 - 125	
Calcium	16000	B	6140	25800	F	mg/Kg	*	162	75 - 125	
Copper	21		30.7	50.3		mg/Kg	*	95	75 - 125	
Magnesium	4500		6140	11000		mg/Kg	*	106	75 - 125	
Manganese	430		61.4	472	4	mg/Kg	*	63	75 - 125	
Nickel	24	B	61.4	67.9		mg/Kg	*	103	75 - 125	
Potassium	1500	B	6140	7510		mg/Kg	*	98	75 - 125	

Lab Sample ID: 240-12752-3 MSD			Client Sample ID: FWG-IDW-SBCOMP3-SO									
Matrix: Solid			Prep Type: Total/NA									
Analysis Batch: 50003			Prep Batch: 49412									
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	Limit
Arsenic	11		245	225		mg/Kg	*	87	75 - 125		2	20
Cobalt	10		61.4	70.2		mg/Kg	*	98	75 - 125		3	20
Chromium	15		24.5	39.5		mg/Kg	*	101	75 - 125		1	20
Lead	11		61.4	61.3		mg/Kg	*	81	75 - 125		2	20
Selenium	0.61	U	245	207		mg/Kg	*	84	75 - 125		2	20
Silver	0.61	U	6.14	5.48		mg/Kg	*	89	75 - 125		2	20
Vanadium	17	B	61.4	78.4		mg/Kg	*	100	75 - 125		0	20
Barium	120	B	245	360		mg/Kg	*	99	75 - 125		2	20
Calcium	16000	B	6140	29200	F	mg/Kg	*	217	75 - 125		12	20
Copper	21		30.7	48.3		mg/Kg	*	88	75 - 125		4	20
Magnesium	4500		6140	10700		mg/Kg	*	101	75 - 125		2	20
Manganese	430		61.4	672	4 F	mg/Kg	*	389	75 - 125		35	20

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-12752-3 MSD				Client Sample ID: FWG-IDW-SBCOMP3-SO							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 50003				Prep Batch: 49412							
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Nickel	24	B	61.4	84.7		mg/Kg	*	98	75 - 125	4	20
Potassium	1500	B	6140	7440		mg/Kg	*	97	75 - 125	1	20

Lab Sample ID: MB 240-49727/2-A				Client Sample ID: Method Blank							
Matrix: Water				Prep Type: Total/NA							
Analysis Batch: 50003				Prep Batch: 49727							
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac	
	Result	Qualifier									
Arsenic	0.50	U	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:20		1	
Cadmium	0.10	U	0.10	0.00066	mg/L		07/03/12 10:01	07/05/12 17:20		1	
Chromium	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:20		1	
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:20		1	
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 17:20		1	
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:20		1	
Barium	10	U	10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:20		1	

Lab Sample ID: LCS 240-49727/3-A				Client Sample ID: Lab Control Sample							
Matrix: Water				Prep Type: Total/NA							
Analysis Batch: 50003				Prep Batch: 49727							
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.				
							Result	Qualifier	Limits		
Arsenic	2.00		2.16	mg/L		108	50 - 150				
Cadmium	0.0500		0.0524	J		105	50 - 150				
Chromium	0.200		0.206	J		103	50 - 150				
Lead	0.500		0.485	J		97	50 - 150				
Selenium	2.00		2.16	mg/L		108	50 - 150				
Silver	0.0500		0.0551	J		110	50 - 150				
Barium	2.00		2.22	J		111	50 - 150				

Lab Sample ID: MB 240-50314/1-A				Client Sample ID: Method Blank							
Matrix: Water				Prep Type: Total Recoverable							
Analysis Batch: 50581				Prep Batch: 50314							
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac	
	Result	Qualifier									
Arsenic	10	U	10	3.2	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Cobalt	7.0	U	7.0	1.7	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Chromium	5.0	U	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Lead	3.0	U	3.0	1.9	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Selenium	5.0	U	5.0	4.1	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Silver	5.0	U	5.0	2.2	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Vanadium	7.0	U	7.0	0.64	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Barium	0.891	J	200	0.67	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Calcium	235	J	5000	130	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Copper	25	U	25	4.5	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Magnesium	47.4	J	5000	34	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Manganese	1.09	J	15	0.41	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Nickel	40	U	40	3.2	ug/L		07/10/12 08:18	07/11/12 13:20		1	
Potassium	191	J	5000	72	ug/L		07/10/12 08:18	07/11/12 13:20		1	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-50314/2-A				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total Recoverable			
Analysis Batch: 50581				Prep Batch: 50314			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Arsenic	2000	2040		ug/L		102	80 - 120
Cobalt	500	506		ug/L		101	80 - 120
Chromium	200	205		ug/L		103	80 - 120
Lead	500	509		ug/L		102	80 - 120
Selenium	2000	2070		ug/L		103	80 - 120
Silver	50.0	52.4		ug/L		105	80 - 120
Vanadium	500	505		ug/L		101	80 - 120
Barium	2000	2170		ug/L		108	80 - 120
Calcium	50000	52400		ug/L		105	80 - 120
Copper	250	254		ug/L		102	80 - 120
Magnesium	50000	51800		ug/L		104	80 - 120
Manganese	500	522		ug/L		104	80 - 120
Nickel	500	476		ug/L		95	80 - 120
Potassium	50000	52100		ug/L		104	80 - 120

Lab Sample ID: 240-12752-4 MS				Client Sample ID: FWG-IDW-TANK3-GW					
Matrix: Water				Prep Type: Total Recoverable					
Analysis Batch: 50581				Prep Batch: 50314					
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
									Limits
Arsenic	8.3	J	2000	2060		ug/L		103	75 - 125
Cobalt	7.0	U	500	506		ug/L		101	75 - 125
Chromium	3.7	J	200	208		ug/L		102	75 - 125
Lead	3.0	U	500	507		ug/L		101	75 - 125
Selenium	5.0	U	2000	2070		ug/L		103	75 - 125
Silver	5.0	U	50.0	52.1		ug/L		104	75 - 125
Vanadium	1.9	J	500	506		ug/L		101	75 - 125
Barium	56	J B	2000	2230		ug/L		109	75 - 125
Calcium	43000	B	50000	94600		ug/L		104	75 - 125
Copper	25	U	250	256		ug/L		103	75 - 125
Magnesium	10000	B	50000	62200		ug/L		104	75 - 125
Manganese	110	B	500	628		ug/L		104	75 - 125
Nickel	3.2	J	500	478		ug/L		96	75 - 125
Potassium	19000	B	50000	70900		ug/L		105	75 - 125

Lab Sample ID: 240-12752-4 MSD				Client Sample ID: FWG-IDW-TANK3-GW							
Matrix: Water				Prep Type: Total Recoverable							
Analysis Batch: 50581				Prep Batch: 50314							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD	
									Limits	RPD	Limit
Arsenic	8.3	J	2000	1990		ug/L		99	75 - 125	3	20
Cobalt	7.0	U	500	487		ug/L		97	75 - 125	4	20
Chromium	3.7	J	200	200		ug/L		98	75 - 125	4	20
Lead	3.0	U	500	488		ug/L		97	75 - 125	4	20
Selenium	5.0	U	2000	1990		ug/L		100	75 - 125	4	20
Silver	5.0	U	50.0	50.4		ug/L		101	75 - 125	3	20
Vanadium	1.9	J	500	488		ug/L		97	75 - 125	4	20
Barium	56	J B	2000	2170		ug/L		106	75 - 125	3	20
Calcium	43000	B	50000	91300		ug/L		98	75 - 125	4	20
Copper	25	U	250	250		ug/L		100	75 - 125	3	20

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-12752-4 MSD
Matrix: Water
Analysis Batch: 50581

Client Sample ID: FWG-IDW-TANK3-GW
Prep Type: Total Recoverable
Prep Batch: 50314

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Magnesium	10000	B	50000	60000		ug/L		100	75 - 125	4	20
Manganese	110	B	500	608		ug/L		100	75 - 125	3	20
Nickel	3.2	J	500	458		ug/L		92	75 - 125	4	20
Potassium	19000	B	50000	69400		ug/L		102	75 - 125	2	20

Lab Sample ID: LB 240-49653/1-D LB
Matrix: Water
Analysis Batch: 50003

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 49727

Analyte	LB	LB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	0.50	U	0.50	0.0032	mg/L		07/03/12 10:01	07/05/12 17:16	1
Cadmium	0.10	U	0.10	0.00086	mg/L		07/03/12 10:01	07/05/12 17:16	1
Chromium	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:16	1
Lead	0.50	U	0.50	0.0019	mg/L		07/03/12 10:01	07/05/12 17:16	1
Selenium	0.25	U	0.25	0.0041	mg/L		07/03/12 10:01	07/05/12 17:16	1
Silver	0.50	U	0.50	0.0022	mg/L		07/03/12 10:01	07/05/12 17:16	1
Barium	0.00405	J	10	0.00067	mg/L		07/03/12 10:01	07/05/12 17:16	1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-49412/1-A
Matrix: Solid
Analysis Batch: 50210

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49412

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Beryllium	0.10	U	0.10	0.047	mg/Kg		06/29/12 11:17	07/09/12 09:37	1

Lab Sample ID: LCS 240-49412/3-A
Matrix: Solid
Analysis Batch: 49993

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49412

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier				Limits	
Aluminum	1000	968		mg/Kg		97	80 - 120	
Antimony	10.0	9.29		mg/Kg		93	68 - 113	
Cadmium	100	88.4		mg/Kg		88	74 - 110	
Iron	1000	1010		mg/Kg		101	80 - 120	
Sodium	1000	933		mg/Kg		93	80 - 120	
Thallium	25.0	26.9		mg/Kg		108	71 - 110	
Zinc	100	88.4		mg/Kg		88	72 - 113	

Lab Sample ID: LCS 240-49412/3-A
Matrix: Solid
Analysis Batch: 50210

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49412

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier				Limits	
Beryllium	100	100		mg/Kg		100	79 - 110	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-12752-3 MS				Client Sample ID: FWG-IDW-SBCOMP3-SO						
Matrix: Solid				Prep Type: Total/NA						
Analysis Batch: 49993				Prep Batch: 49412						
Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Aluminum	11000	B	1180	14900	4	mg/Kg	☼	365	70 - 130	
Antimony	0.13	J B	11.8	3.40	F	mg/Kg	☼	28	75 - 125	
Cadmium	0.14		118	96.7		mg/Kg	☼	82	58 - 110	
Iron	25000	B	1180	28500	4	mg/Kg	☼	335	70 - 130	
Sodium	90	J B	1180	1100		mg/Kg	☼	86	70 - 130	
Thallium	0.17	J	29.5	28.6		mg/Kg	☼	96	62 - 110	
Zinc	63	B	118	154		mg/Kg	☼	77	10 - 199	

Lab Sample ID: 240-12752-3 MS				Client Sample ID: FWG-IDW-SBCOMP3-SO						
Matrix: Solid				Prep Type: Total/NA						
Analysis Batch: 50210				Prep Batch: 49412						
Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Beryllium	0.57		118	100		mg/Kg	☼	84	58 - 112	

Lab Sample ID: 240-12752-3 MSD				Client Sample ID: FWG-IDW-SBCOMP3-SO								
Matrix: Solid				Prep Type: Total/NA								
Analysis Batch: 49993				Prep Batch: 49412								
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Aluminum	11000	B	1180	13700	4	mg/Kg	☼	262	70 - 130	9	20	
Antimony	0.13	J B	11.8	3.37	F	mg/Kg	☼	27	75 - 125	1	20	
Cadmium	0.14		118	94.6		mg/Kg	☼	80	58 - 110	2	20	
Iron	25000	B	1180	27100	4	mg/Kg	☼	220	70 - 130	5	20	
Sodium	90	J B	1180	1100		mg/Kg	☼	86	70 - 130	0	20	
Thallium	0.17	J	29.5	28.1		mg/Kg	☼	95	62 - 110	2	20	
Zinc	63	B	118	152		mg/Kg	☼	75	10 - 199	1	20	

Lab Sample ID: 240-12752-3 MSD				Client Sample ID: FWG-IDW-SBCOMP3-SO								
Matrix: Solid				Prep Type: Total/NA								
Analysis Batch: 50210				Prep Batch: 49412								
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Beryllium	0.57		118	99.4		mg/Kg	☼	84	58 - 112	1	20	

Lab Sample ID: MB 240-50314/1-A				Client Sample ID: Method Blank						
Matrix: Water				Prep Type: Total Recoverable						
Analysis Batch: 50556				Prep Batch: 50314						
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
Aluminum	50	U	50	19	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Antimony	2.0	U	2.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Beryllium	1.0	U	1.0	0.20	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Cadmium	1.0	U	1.0	0.13	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Iron	100	U ^	100	26	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Sodium	55.2	J	1000	6.9	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Thallium	0.293	J	2.0	0.14	ug/L		07/10/12 08:18	07/11/12 13:13	1	
Zinc	9.18	J	20	2.3	ug/L		07/10/12 08:18	07/11/12 13:13	1	

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-50314/3-A				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total Recoverable			
Analysis Batch: 50556				Prep Batch: 50314			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10000	9340		ug/L		93	80 - 120
Antimony	100	93.3		ug/L		93	80 - 120
Beryllium	1000	938		ug/L		94	80 - 120
Cadmium	1000	927		ug/L		93	80 - 120
Iron	10000	9670	^	ug/L		97	80 - 120
Sodium	10000	10100		ug/L		101	80 - 120
Thallium	250	253		ug/L		101	80 - 120
Zinc	1000	990		ug/L		99	80 - 120

Lab Sample ID: 240-12752-4 MS				Client Sample ID: FWG-IDW-TANK3-GW					
Matrix: Water				Prep Type: Total Recoverable					
Analysis Batch: 50556				Prep Batch: 50314					
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	580		10000	9240		ug/L		87	63 - 128
Antimony	2.3		100	89.9		ug/L		88	44 - 153
Beryllium	1.0	U	1000	894		ug/L		89	77 - 124
Cadmium	1.0	U	1000	866		ug/L		87	78 - 117
Iron	1300	^	10000	10300	^	ug/L		90	22 - 169
Sodium	28000	B	10000	35200	F	ug/L		74	80 - 120
Thallium	0.58	J B	250	238		ug/L		95	69 - 117
Zinc	11	J B	1000	901		ug/L		89	49 - 156

Lab Sample ID: 240-12752-4 MSD				Client Sample ID: FWG-IDW-TANK3-GW							
Matrix: Water				Prep Type: Total Recoverable							
Analysis Batch: 50556				Prep Batch: 50314							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	580		10000	9750		ug/L		92	63 - 128	5	20
Antimony	2.3		100	94.2		ug/L		92	44 - 153	5	20
Beryllium	1.0	U	1000	938		ug/L		94	77 - 124	5	20
Cadmium	1.0	U	1000	898		ug/L		90	78 - 117	4	20
Iron	1300	^	10000	10800	^	ug/L		97	22 - 169	6	20
Sodium	28000	B	10000	37600		ug/L		98	80 - 120	7	20
Thallium	0.58	J B	250	250		ug/L		100	69 - 117	5	20
Zinc	11	J B	1000	965		ug/L		95	49 - 156	7	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-49356/1-A				Client Sample ID: Method Blank					
Matrix: Water				Prep Type: Total/NA					
Analysis Batch: 49867				Prep Batch: 49356					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Mercury	0.20	U	0.20	0.12	ug/L		06/29/12 15:10	07/03/12 12:55	1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-49356/2-A			Client Sample ID: Lab Control Sample					
Matrix: Water			Prep Type: Total/NA					
Analysis Batch: 49867			Prep Batch: 49356					
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Mercury	5.00	4.47		ug/L		89	81 - 123	

Lab Sample ID: MB 240-49732/2-A			Client Sample ID: Method Blank						
Matrix: Water			Prep Type: Total/NA						
Analysis Batch: 49962			Prep Batch: 49732						
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 13:46	1

Lab Sample ID: LCS 240-49732/3-A			Client Sample ID: Lab Control Sample					
Matrix: Water			Prep Type: Total/NA					
Analysis Batch: 49962			Prep Batch: 49732					
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Mercury	0.00500	0.00452		mg/L		90	50 - 150	

Lab Sample ID: LB 240-49653/1-E LB			Client Sample ID: Method Blank						
Matrix: Water			Prep Type: TCLP						
Analysis Batch: 49962			Prep Batch: 49732						
Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		07/03/12 14:30	07/05/12 13:45	1

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 240-49425/1-A			Client Sample ID: Method Blank						
Matrix: Solid			Prep Type: Total/NA						
Analysis Batch: 50031			Prep Batch: 49425						
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10	U	0.10	0.015	mg/Kg		06/29/12 14:00	07/05/12 16:24	1

Lab Sample ID: LCS 240-49425/2-A			Client Sample ID: Lab Control Sample					
Matrix: Solid			Prep Type: Total/NA					
Analysis Batch: 50031			Prep Batch: 49425					
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Mercury	0.833	0.736		mg/Kg		88	73 - 121	

Lab Sample ID: 240-12752-3 MS			Client Sample ID: FWG-IDW-SBCOMP3-SO						
Matrix: Solid			Prep Type: Total/NA						
Analysis Batch: 50031			Prep Batch: 49425						
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.027	J	0.198	0.187		mg/Kg	⊛	82	11 - 192

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-12752-3 MSD						Client Sample ID: FWG-IDW-SBCOMP3-SO					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 50031						Prep Batch: 49425					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	0.027	J	0.196	0.189		mg/Kg	☒	83	11 - 192	1	20

Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 240-49377/1						Client Sample ID: Lab Control Sample					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 49377											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Flashpoint			81.0	82.00		Degrees F		101	97 - 103		

Lab Sample ID: LCS 240-49569/1						Client Sample ID: Lab Control Sample					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49569											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Flashpoint			81.0	82.00		Degrees F		101	97 - 103		

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-49572/1-A						Client Sample ID: Method Blank					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49633						Prep Batch: 49572					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		07/02/12 09:10	07/02/12 13:00			1

Lab Sample ID: LCS 240-49572/2-A						Client Sample ID: Lab Control Sample					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49633						Prep Batch: 49572					
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.0449	0.0465		mg/L		103	69 - 118		

Lab Sample ID: MRL 240-49633/12 MRL						Client Sample ID: Lab Control Sample					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49633											
Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.0100	0.0102		mg/L		102	70 - 130		

Lab Sample ID: MB 240-50183/1-A						Client Sample ID: Method Blank					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 50243						Prep Batch: 50183					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Cyanide, Total	0.49	U	0.49	0.098	mg/Kg		07/09/12 08:07	07/09/12 10:23			1

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: LCS 240-50183/2-A				Client Sample ID: Lab Control Sample				
Matrix: Solid				Prep Type: Total/NA				
Analysis Batch: 50243				Prep Batch: 50183				
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Cyanide, Total	2.22	2.20		mg/Kg		99	68 - 123	

Lab Sample ID: MRL 240-50243/6 MRL				Client Sample ID: Lab Control Sample				
Matrix: Solid				Prep Type: Total/NA				
Analysis Batch: 50243				Prep Batch: 50183				
Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits	
Cyanide, Total	0.0100	0.00849	J	mg/L		85	70 - 130	

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 240-49677/14-A				Client Sample ID: Method Blank					
Matrix: Water				Prep Type: Total/NA					
Analysis Batch: 49769				Prep Batch: 49677					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	3.0	U	3.0	0.94	mg/L		07/03/12 07:56	07/03/12 13:48	1

Lab Sample ID: MB 240-49677/1-A				Client Sample ID: Method Blank					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 49769				Prep Batch: 49677					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	30	U	30	22	mg/Kg		07/03/12 07:56	07/03/12 13:48	1

Lab Sample ID: LCS 240-49677/15-A				Client Sample ID: Lab Control Sample				
Matrix: Water				Prep Type: Total/NA				
Analysis Batch: 49769				Prep Batch: 49677				
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Sulfide	8.27	8.67		mg/L		105	70 - 130	

Lab Sample ID: LCS 240-49677/2-A				Client Sample ID: Lab Control Sample				
Matrix: Solid				Prep Type: Total/NA				
Analysis Batch: 49769				Prep Batch: 49677				
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Sulfide	83.2	79.1		mg/Kg		95	70 - 130	

Lab Sample ID: 240-12752-4 MS				Client Sample ID: FWG-IDW-TANK3-GW					
Matrix: Water				Prep Type: Total/NA					
Analysis Batch: 49769				Prep Batch: 49677					
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	3.0	U	8.27	7.87		mg/L		95	27 - 124

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: 240-12752-4 MSD						Client Sample ID: FWG-IDW-TANK3-GW					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49769						Prep Batch: 49677					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Sulfide	3.0	U	8.27	7.87		mg/L		95	27 - 124	0	20

Method: 9040B - pH

Lab Sample ID: LCS 240-49216/2						Client Sample ID: Lab Control Sample					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49216											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.49	7.490		SU		100	97 - 103		

Lab Sample ID: 240-12752-4 DU						Client Sample ID: FWG-IDW-TANK3-GW					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 49216											
Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	Limit
pH	8.39			8.390		SU				0	20

Method: 9045C - pH

Lab Sample ID: LCS 240-49470/2						Client Sample ID: Lab Control Sample					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 49470											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Corrosivity			7.49	7.470		SU		100	97 - 103		

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G2G090000104B						Client Sample ID: Method Blank					
Matrix: Solid						Prep Type: Total					
Analysis Batch: 2191104						Prep Batch: 2191104_P					
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Nitrocellulose	1.9	J	5.0	0.78	mg/kg		07/09/12 12:15	07/11/12 11:07	1		

Lab Sample ID: G2G090000104C						Client Sample ID: Lab Control Sample					
Matrix: Solid						Prep Type: Total					
Analysis Batch: 2191104						Prep Batch: 2191104_P					
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrocellulose			50.7	42.2		mg/kg		83	34 - 115		

Lab Sample ID: 240-12752-3 MS						Client Sample ID: FWG-IDW-SBCOMP3-SO					
Matrix: Solid						Prep Type: Total					
Analysis Batch: 2191104						Prep Batch: 2191104_P					
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrocellulose	1.7	J B	64.3	23.2		mg/kg	*	34	34 - 115		

QC Sample Results

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050 (Continued)

Lab Sample ID: 240-12752-3 MSD							Client Sample ID: FWG-IDW-SBCOMP3-SO					
Matrix: Solid							Prep Type: Total					
Analysis Batch: 2191104							Prep Batch: 2191104_P					
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
Nitrocellulose	1.7	J B	64.6	16.5	N	mg/kg	*	23	34 - 115	34	71	

Lab Sample ID: G2G110000012B							Client Sample ID: Method Blank					
Matrix: Water							Prep Type: Total					
Analysis Batch: 2193012							Prep Batch: 2193012_P					
Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	DII	Fac		
	Result	Qualifier										
Nitrocellulose	2.0	U	2.0	0.48	mg/L		07/11/12 06:00	07/11/12 13:01		1		

Lab Sample ID: G2G110000012C							Client Sample ID: Lab Control Sample					
Matrix: Water							Prep Type: Total					
Analysis Batch: 2193012							Prep Batch: 2193012_P					
Analyte	Spike	Added	LCS	LCS	Unit	D	%Rec	%Rec.				
								Result	Qualifier	Limits		
Nitrocellulose	5.07		5.41		mg/L		107	26 - 144				

Lab Sample ID: 240-12752-4 MS							Client Sample ID: FWG-IDW-TANK3-GW					
Matrix: Water							Prep Type: Total					
Analysis Batch: 2193012							Prep Batch: 2193012_P					
Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.			
	Result	Qualifier	Added	Result	Qualifier				Limits			
Nitrocellulose	2.0	U	5.07	5.26		mg/L		100	26 - 144			

Lab Sample ID: 240-12752-4 MSD							Client Sample ID: FWG-IDW-TANK3-GW					
Matrix: Water							Prep Type: Total					
Analysis Batch: 2193012							Prep Batch: 2193012_P					
Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
Nitrocellulose	2.0	U	5.07	5.36		mg/L		102	28 - 144	1.9	45	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

GC/MS VOA

Analysis Batch: 49421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8260B	
LCS 240-49421/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 240-49421/6	Method Blank	Total/NA	Solid	8260B	

Leach Batch: 49660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	
240-12752-4 MS	FWG-IDW-TANK3-GW	TCLP	Water	1311	
240-12752-4 MSD	FWG-IDW-TANK3-GW	TCLP	Water	1311	
LB 240-49660/1-A MB	Method Blank	TCLP	Water	1311	

Analysis Batch: 49814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
240-12752-4 MS	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
240-12752-4 MSD	FWG-IDW-TANK3-GW	TCLP	Water	8260B	
LB 240-49660/1-A MB	Method Blank	TCLP	Water	8260B	
LCS 240-49814/10	Lab Control Sample	Total/NA	Water	8260B	

Leach Batch: 49973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
LB 240-49973/1-A MB	Method Blank	TCLP	Solid	1311	

Analysis Batch: 50127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8260B	
LB 240-49973/1-A MB	Method Blank	TCLP	Solid	8260B	
LCS 240-50127/12	Lab Control Sample	Total/NA	Solid	8260B	

Analysis Batch: 50324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-1	TRIP BLANK	Total/NA	Water	8260B	
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8260B	
LCS 240-50324/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-50324/5	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 49608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49608/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49808/13-A	Method Blank	Total/NA	Water	3520C	

Leach Batch: 49653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

GC/MS Semi VOA (Continued)

Prep Batch: 49701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Solid	3520C	
MB 240-49701/4-A	Method Blank	Total/NA	Solid	3520C	

Prep Batch: 49703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3520C	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3520C	49653
LCS 240-49703/16-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49703/15-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 49770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49770/16-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-49770/15-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 49827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49701/5-A	Lab Control Sample	Total/NA	Solid	8270C	49701
MB 240-49701/4-A	Method Blank	Total/NA	Solid	8270C	49701

Analysis Batch: 50054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8270C	49703
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8270C	49770
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8270C	49703
LCS 240-49703/16-A	Lab Control Sample	Total/NA	Water	8270C	49703
LCS 240-49770/16-A	Lab Control Sample	Total/NA	Solid	8270C	49770
MB 240-49703/15-A	Method Blank	Total/NA	Water	8270C	49703
MB 240-49770/15-A	Method Blank	Total/NA	Solid	8270C	49770

Analysis Batch: 50188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8270C	49608
LCS 240-49608/14-A	Lab Control Sample	Total/NA	Water	8270C	49608
MB 240-49608/13-A	Method Blank	Total/NA	Water	8270C	49608

Prep Batch: 50344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4 - RE	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-50344/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-50344/13-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 50708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4 - RE	FWG-IDW-TANK3-GW	Total/NA	Water	8270C	50344
LCS 240-50344/14-A	Lab Control Sample	Total/NA	Water	8270C	50344
MB 240-50344/13-A	Method Blank	Total/NA	Water	8270C	50344

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

GC Semi VOA

Prep Batch: 49612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49612/12-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49612/11-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 49615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	3520C	
LCS 240-49615/3-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49615/2-A	Method Blank	Total/NA	Water	3520C	

Leach Batch: 49653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	

Prep Batch: 49705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3520C	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3520C	49653
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-49705/7-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 49707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8151A	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8151A	49653
LCS 240-49707/8-A	Lab Control Sample	Total/NA	Water	8151A	
MB 240-49707/7-A	Method Blank	Total/NA	Water	8151A	

Analysis Batch: 49739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8081A	49615
LCS 240-49615/3-A	Lab Control Sample	Total/NA	Water	8081A	49615
MB 240-49615/2-A	Method Blank	Total/NA	Water	8081A	49615

Prep Batch: 49755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49755/20-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-49755/19-A	Method Blank	Total/NA	Solid	3540C	

Prep Batch: 49756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3540C	
LCS 240-49756/11-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-49756/10-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 49764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	8082	49612
MB 240-49612/11-A	Method Blank	Total/NA	Water	8082	49612

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

GC Semi VOA (Continued)

Analysis Batch: 49852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49612/12-A	Lab Control Sample	Total/NA	Water	8082	49612

Analysis Batch: 49922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8081A	49705
LCS 240-49705/8-A	Lab Control Sample	Total/NA	Water	8081A	49705
MB 240-49705/7-A	Method Blank	Total/NA	Water	8081A	49705

Analysis Batch: 49992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8082	49755
LCS 240-49755/20-A	Lab Control Sample	Total/NA	Solid	8082	49755
MB 240-49755/19-A	Method Blank	Total/NA	Solid	8082	49755

Analysis Batch: 50084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8081A	49705

Analysis Batch: 50094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	8151A	49707
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	8151A	49707
LCS 240-49707/8-A	Lab Control Sample	Total/NA	Water	8151A	49707
MB 240-49707/7-A	Method Blank	Total/NA	Water	8151A	49707

Analysis Batch: 50336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	8081A	49756
LCS 240-49756/11-A	Lab Control Sample	Total/NA	Solid	8081A	49756
MB 240-49756/10-A	Method Blank	Total/NA	Solid	8081A	49756

HPLC

Analysis Batch: 2185016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	8330/8330A	
G2G030000016B	Method Blank	Total	Water	8330/8330A	
G2G030000016C	Lab Control Sample	Total	Water	8330/8330A	

Analysis Batch: 2188020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	8330 (Modified)	
G2F280490026D	Matrix Spike Duplicate	Total	Solid	8330 (Modified)	
G2F280490026S	Matrix Spike	Total	Solid	8330 (Modified)	
G2G060000020B	Method Blank	Total	Solid	8330 (Modified)	
G2G060000020C	Lab Control Sample	Total	Solid	8330 (Modified)	

Analysis Batch: 2191108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

HPLC (Continued)

Analysis Batch: 2191108 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G2G090000108B	Method Blank	Total	Solid	8330B	
G2G090000108C	Lab Control Sample	Total	Solid	8330B	

Analysis Batch: 2191129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
240-12752-4 MS	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Dissolved	Water	8330 (Modified)	
G2G090000129B	Method Blank	Dissolved	Water	8330 (Modified)	
G2G090000129C	Lab Control Sample	Dissolved	Water	8330 (Modified)	

Prep Batch: 2185016_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	3535	
G2G030000016B	Method Blank	Total	Water	3535	
G2G030000016C	Lab Control Sample	Total	Water	3535	

Prep Batch: 2188020_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	3550A	
G2F280490026D	Matrix Spike Duplicate	Total	Solid	3550A	
G2F280490026S	Matrix Spike	Total	Solid	3550A	
G2G060000020B	Method Blank	Total	Solid	3550A	
G2G060000020C	Lab Control Sample	Total	Solid	3550A	

Prep Batch: 2191108_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	8330B	
G2G090000108B	Method Blank	Total	Solid	8330B	
G2G090000108C	Lab Control Sample	Total	Solid	8330B	

Prep Batch: 2191129_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Dissolved	Water	FILTRATION (DISS)	
240-12752-4 MS	FWG-IDW-TANK3-GW	Dissolved	Water	FILTRATION (DISS)	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Dissolved	Water	FILTRATION (DISS)	
G2G090000129B	Method Blank	Dissolved	Water	FILTRATION (DISS)	
G2G090000129C	Lab Control Sample	Dissolved	Water	FILTRATION (DISS)	

Metals

Prep Batch: 49356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	7470A	
LCS 240-49356/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-49356/1-A	Method Blank	Total/NA	Water	7470A	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Metals (Continued)

Prep Batch: 49412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	3050B	
LCS 240-49412/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 240-49412/3-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 240-49412/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 49425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	
LCS 240-49425/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 240-49425/1-A	Method Blank	Total/NA	Solid	7471A	

Leach Batch: 49653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	1311	
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	1311	
LB 240-49653/1-D LB	Method Blank	TCLP	Water	1311	
LB 240-49653/1-E LB	Method Blank	TCLP	Water	1311	

Analysis Batch: 49675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-49412/2-A	Lab Control Sample	Total/NA	Solid	6010B	49412
MB 240-49412/1-A	Method Blank	Total/NA	Solid	6010B	49412

Prep Batch: 49727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	3010A	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	3010A	49653
LB 240-49653/1-D LB	Method Blank	TCLP	Water	3010A	49653
LCS 240-49727/3-A	Lab Control Sample	Total/NA	Water	3010A	
MB 240-49727/2-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 49732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	7470A	49653
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	7470A	49653
LB 240-49653/1-E LB	Method Blank	TCLP	Water	7470A	49653
LCS 240-49732/3-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-49732/2-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 49867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	7470A	49356
LCS 240-49356/2-A	Lab Control Sample	Total/NA	Water	7470A	49356
MB 240-49356/1-A	Method Blank	Total/NA	Water	7470A	49356

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Metals (Continued)

Analysis Batch: 49962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	7470A	49732
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	7470A	49732
LB 240-49853/1-E LB	Method Blank	TCLP	Water	7470A	49732
LCS 240-49732/3-A	Lab Control Sample	Total/NA	Water	7470A	49732
MB 240-49732/2-A	Method Blank	Total/NA	Water	7470A	49732

Analysis Batch: 49993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
LCS 240-49412/3-A	Lab Control Sample	Total/NA	Solid	6020	49412

Analysis Batch: 50003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-3	FWG-IDW-SBCOMP3-SO	TCLP	Solid	6010B	49727
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6010B	49412
240-12752-4	FWG-IDW-TANK3-GW	TCLP	Water	6010B	49727
LB 240-49853/1-D LB	Method Blank	TCLP	Water	6010B	49727
LCS 240-49727/3-A	Lab Control Sample	Total/NA	Water	6010B	49727
MB 240-49727/2-A	Method Blank	Total/NA	Water	6010B	49727

Analysis Batch: 50031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	7471A	49425
LCS 240-49425/2-A	Lab Control Sample	Total/NA	Solid	7471A	49425
MB 240-49425/1-A	Method Blank	Total/NA	Solid	7471A	49425

Analysis Batch: 50210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	6020	49412
LCS 240-49412/3-A	Lab Control Sample	Total/NA	Solid	6020	49412
MB 240-49412/1-A	Method Blank	Total/NA	Solid	6020	49412

Prep Batch: 50314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	3005A	
LCS 240-50314/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-50314/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	3005A	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Metals (Continued)

Analysis Batch: 50556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	6020	50314
LCS 240-50314/3-A	Lab Control Sample	Total Recoverable	Water	6020	50314
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	6020	50314

Analysis Batch: 50581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
240-12752-4 MS	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total Recoverable	Water	6010B	50314
LCS 240-50314/2-A	Lab Control Sample	Total Recoverable	Water	6010B	50314
MB 240-50314/1-A	Method Blank	Total Recoverable	Water	6010B	50314

General Chemistry

Analysis Batch: 49216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9040B	
240-12752-4 DU	FWG-IDW-TANK3-GW	Total/NA	Water	9040B	
LCS 240-49216/2	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 49377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	1010	
LCS 240-49377/1	Lab Control Sample	Total/NA	Solid	1010	

Analysis Batch: 49467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	Moisture	

Analysis Batch: 49470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9045C	
LCS 240-49470/2	Lab Control Sample	Total/NA	Solid	9045C	

Analysis Batch: 49569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	1010	
LCS 240-49569/1	Lab Control Sample	Total/NA	Water	1010	

Prep Batch: 49572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9012A	
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	

Analysis Batch: 49633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9012A	49572
LCS 240-49572/2-A	Lab Control Sample	Total/NA	Water	9012A	49572
MB 240-49572/1-A	Method Blank	Total/NA	Water	9012A	49572

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

General Chemistry (Continued)

Analysis Batch: 49633 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 240-49633/12 MRL	Lab Control Sample	Total/NA	Water	9012A	

Prep Batch: 49677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9030B	
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9030B	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total/NA	Water	9030B	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total/NA	Water	9030B	
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9030B	
LCS 240-49677/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 240-49677/14-A	Method Blank	Total/NA	Water	9030B	
MB 240-49677/1-A	Method Blank	Total/NA	Solid	9030B	

Analysis Batch: 49769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9034	49677
240-12752-4	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
240-12752-4 MS	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total/NA	Water	9034	49677
LCS 240-49677/15-A	Lab Control Sample	Total/NA	Water	9034	49677
LCS 240-49677/2-A	Lab Control Sample	Total/NA	Solid	9034	49677
MB 240-49677/14-A	Method Blank	Total/NA	Water	9034	49677
MB 240-49677/1-A	Method Blank	Total/NA	Solid	9034	49677

Prep Batch: 50183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9012A	
LCS 240-50183/2-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 240-50183/1-A	Method Blank	Total/NA	Solid	9012A	

Analysis Batch: 50243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total/NA	Solid	9012A	50183
LCS 240-50183/2-A	Lab Control Sample	Total/NA	Solid	9012A	50183
MB 240-50183/1-A	Method Blank	Total/NA	Solid	9012A	50183
MRL 240-50243/6 MRL	Lab Control Sample	Total/NA	Solid	9012A	

Analysis Batch: 2191104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	WS-WC-0050	
G2G090000104B	Method Blank	Total	Solid	WS-WC-0050	
G2G090000104C	Lab Control Sample	Total	Solid	WS-WC-0050	

Analysis Batch: 2193012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total	Water	WS-WC-0050	
G2G110000012B	Method Blank	Total	Water	WS-WC-0050	
G2G110000012C	Lab Control Sample	Total	Water	WS-WC-0050	

QC Association Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

General Chemistry (Continued)

Analysis Batch: 2195066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	160.3 MOD	

Prep Batch: 2191104_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-3	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
240-12752-3 MS	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
240-12752-3 MSD	FWG-IDW-SBCOMP3-SO	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G2G090000104B	Method Blank	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G2G090000104C	Lab Control Sample	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	

Prep Batch: 2193012_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-12752-4	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION, SOLID PHASE	
240-12752-4 MS	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION, SOLID PHASE	
240-12752-4 MSD	FWG-IDW-TANK3-GW	Total	Water	EXTRACTION, SOLID PHASE	
G2G110000012B	Method Blank	Total	Water	EXTRACTION, SOLID PHASE	
G2G110000012C	Lab Control Sample	Total	Water	EXTRACTION, SOLID PHASE	

Lab Chronicle

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-12752-1

Date Collected: 06/28/12 08:00

Matrix: Water

Date Received: 06/28/12 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50324	07/10/12 12:54	RQ	TAL NC

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Percent Solids: 78.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	49421	06/29/12 19:38	SM	TAL NC
TCLP	Leach	1311			49973	07/05/12 16:15	BF	TAL NC
TCLP	Analysis	8260B		1	50127	07/06/12 21:42	TL	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49703	07/03/12 09:12	BM	TAL NC
TCLP	Analysis	8270C		1	50054	07/06/12 16:11	JG	TAL NC
Total/NA	Prep	3540C			49770	07/03/12 13:56	BM	TAL NC
Total/NA	Analysis	8270C		1	50054	07/06/12 19:27	JG	TAL NC
Total/NA	Prep	3540C			49755	07/03/12 11:53	SE	TAL NC
Total/NA	Analysis	8082		1	49992	07/06/12 09:43	RK	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49705	07/03/12 09:15	BM	TAL NC
TCLP	Analysis	8081A		5	50084	07/06/12 14:52	AR	TAL NC
TCLP	Prep	8151A			49707	07/03/12 09:18	SE	TAL NC
TCLP	Analysis	8151A		1	50094	07/07/12 19:42	AR	TAL NC
Total/NA	Prep	3540C			49756	07/03/12 12:02	SE	TAL NC
Total/NA	Analysis	8081A		10	50336	07/09/12 08:27	AR	TAL NC
Total	Prep	3550A			2188020_P	07/06/12 06:00	TQP	TAL WSC
Total	Analysis	8330 (Modified)		0.99	2188020	07/10/12 12:23	RN	TAL WSC
Total	Prep	8330B			2191108_P	07/09/12 12:45	HJA	TAL WSC
Total	Analysis	8330B		0.99	2191108	07/10/12 14:08	RN	TAL WSC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	7470A			49732	07/03/12 14:30	AS	TAL NC
TCLP	Analysis	7470A		1	49962	07/05/12 13:58	SG	TAL NC
Total/NA	Prep	3050B			49412	06/29/12 11:17	DE	TAL NC
Total/NA	Analysis	6020		1	49993	07/05/12 21:15	BD	TAL NC
Total/NA	Analysis	6010B		1	50003	07/05/12 20:27	NJM	TAL NC
TCLP	Prep	3010A			49727	07/03/12 10:01	AS	TAL NC
TCLP	Analysis	6010B		1	50003	07/05/12 20:59	NJM	TAL NC
Total/NA	Prep	7471A			49425	06/29/12 14:00	DE	TAL NC
Total/NA	Analysis	7471A		1	50031	07/05/12 16:29	BD	TAL NC
Total/NA	Analysis	6020		1	50210	07/09/12 09:43	BD	TAL NC
Total/NA	Analysis	1010		1	49377	06/29/12 14:17	TH	TAL NC
Total/NA	Analysis	Moisture		1	49467	06/29/12 14:27	JB	TAL NC
Total/NA	Analysis	9045C		1	49470	06/29/12 16:15	LG	TAL NC
Total/NA	Prep	9030B			49677	07/03/12 07:56	BW	TAL NC
Total/NA	Analysis	9034		1	49769	07/03/12 13:48	BW	TAL NC

Lab Chronicle

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-SBCOMP3-SO

Lab Sample ID: 240-12752-3

Date Collected: 06/28/12 10:15

Matrix: Solid

Date Received: 06/28/12 12:45

Percent Solids: 78.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012A			50183	07/09/12 08:07	MJC	TAL NC
Total/NA	Analysis	9012A		1	50243	07/09/12 10:24	BW	TAL NC
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			2191104_P	07/09/12 12:15	HJA	TAL WSC
Total	Analysis	WS-WC-0050		1	2191104	07/11/12 11:11	LW	TAL WSC
Total	Analysis	160.3 MOD		1	2195066	07/02/12 00:00	JS	TAL NC

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			49660	07/03/12 10:53	DJ	TAL NC
TCLP	Analysis	8260B		1	49814	07/04/12 03:00	TL	TAL NC
Total/NA	Analysis	8260B		1	50324	07/10/12 13:16	RQ	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49703	07/03/12 09:12	BM	TAL NC
TCLP	Analysis	8270C		1	50054	07/06/12 18:30	JG	TAL NC
Total/NA	Prep	3520C			49608	07/02/12 11:43	CC	TAL NC
Total/NA	Analysis	8270C		1	50188	07/09/12 11:21	JG	TAL NC
Total/NA	Prep	3520C	RE		50344	07/10/12 10:24	SE	TAL NC
Total/NA	Analysis	8270C	RE	1	50708	07/13/12 12:33	JG	TAL NC
Total/NA	Prep	3520C			49615	07/02/12 11:57	CC	TAL NC
Total/NA	Analysis	8081A		1	49739	07/04/12 07:55	AR	TAL NC
Total/NA	Prep	3520C			49612	07/02/12 11:53	CC	TAL NC
Total/NA	Analysis	8082		1	49764	07/03/12 17:25	CR	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	3520C			49705	07/03/12 09:15	BM	TAL NC
TCLP	Analysis	8081A		1	49922	07/05/12 23:21	AR	TAL NC
TCLP	Prep	8151A			49707	07/03/12 09:18	SE	TAL NC
TCLP	Analysis	8151A		1	50094	07/07/12 20:08	AR	TAL NC
Total	Prep	3535			2185016_P	07/03/12 06:00	TQP	TAL WSC
Total	Analysis	8330/8330A		1.03	2185016	07/06/12 19:24	RN	TAL WSC
Dissolved	Prep	FILTRATION (DISS)			2191129_P	07/09/12 14:50	HJA	TAL WSC
Dissolved	Analysis	8330 (Modified)		1	2191129	07/10/12 10:57	RN	TAL WSC
Total/NA	Prep	7470A			49356	06/29/12 15:10	LM	TAL NC
Total/NA	Analysis	7470A		1	49867	07/03/12 13:40	RT	TAL NC
TCLP	Leach	1311			49653	07/02/12 15:35	DJ	TAL NC
TCLP	Prep	7470A			49732	07/03/12 14:30	AS	TAL NC
TCLP	Analysis	7470A		1	49962	07/05/12 14:02	SG	TAL NC
TCLP	Prep	3010A			49727	07/03/12 10:01	AS	TAL NC
TCLP	Analysis	6010B		1	50003	07/05/12 21:03	NJM	TAL NC
Total Recoverable	Prep	3005A			50314	07/10/12 08:18	LM	TAL NC
Total Recoverable	Analysis	6020		1	50556	07/11/12 13:26	BD	TAL NC

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Lab Chronicle

Client: Environmental Quality Mgt., Inc.
 Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Client Sample ID: FWG-IDW-TANK3-GW

Lab Sample ID: 240-12752-4

Date Collected: 06/28/12 11:00

Matrix: Water

Date Received: 06/28/12 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6010B		1	50581	07/11/12 13:31	NJM	TAL NC
Total/NA	Analysis	9040B		1	49216	06/28/12 16:18	LG	TAL NC
Total/NA	Analysis	1010		1	49569	07/02/12 11:30	TH	TAL NC
Total/NA	Prep	9012A			49572	07/02/12 09:10	MJC	TAL NC
Total/NA	Analysis	9012A		1	49633	07/02/12 11:06	CN	TAL NC
Total/NA	Prep	9030B			49677	07/03/12 07:56	BW	TAL NC
Total/NA	Analysis	9034		1	49769	07/03/12 13:48	BW	TAL NC
Total	Prep	EXTRACTION, SOLID PHASE			2193012_P	07/11/12 06:00	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	2193012	07/11/12 13:05	LW	TAL WSC

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Certification Summary

Client: Environmental Quality Mgt., Inc.
Project/Site: RVAAP (OH) - IDW

TestAmerica Job ID: 240-12752-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Canton	California	NELAC	9	01144CA
TestAmerica Canton	Connecticut	State Program	1	PH-0590
TestAmerica Canton	Florida	NELAC	4	E87225
TestAmerica Canton	Georgia	State Program	4	N/A
TestAmerica Canton	Illinois	NELAC	5	200004
TestAmerica Canton	Kansas	NELAC	7	E-10336
TestAmerica Canton	Kentucky	State Program	4	58
TestAmerica Canton	L-A-B	DoD ELAP		L2315
TestAmerica Canton	Minnesota	NELAC	5	039-999-348
TestAmerica Canton	Nevada	State Program	9	OH-000482008A
TestAmerica Canton	New Jersey	NELAC	2	OH001
TestAmerica Canton	New York	NELAC	2	10975
TestAmerica Canton	Ohio VAP	State Program	5	CL0024
TestAmerica Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica Canton	USDA	Federal		P330-11-00328
TestAmerica Canton	Virginia	NELAC	3	460175
TestAmerica Canton	Washington	State Program	10	C971
TestAmerica Canton	West Virginia DEP	State Program	3	210
TestAmerica Canton	Wisconsin	State Program	5	999518180
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Northern Mariana Islands	State Program	9	MP0007
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	Federal		LE146388-0
TestAmerica West Sacramento	USDA	Federal		P330-11-00436
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	State Program	3	9930C
TestAmerica West Sacramento	West Virginia DEP	State Program	3	334
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Chain of Custody Record

TestAmerica Laboratory location: DW NPDES RCRA Other

Client Contact Company Name: <u>EQM</u> Address: <u>1800 Carillon Blvd</u> City/State/Zip: <u>Cincinnati OH 45240</u>		Site Contact Name: <u>E. Corbin</u> Telephone: <u>513 825 7500</u> Fax: <u>(714) 95</u>		Lab Contact Name: <u>M. Loeb</u> Telephone: _____		Lab No: <u>046412</u> COC No: <u>1 of 2</u> COC: <u>062-40413</u>	
Client Project Manager Name: <u>John Miller</u> Telephone: <u>513 825 7500</u> Email: <u>ecorbin@eqm.com</u>		Method of Shipment/Carrier <u>Dropoff</u>		Analyses 8082 PCBs 8081R Pest 8200B VOC Metals (4020/6010) 9034 Sulfide		Sample Specific Notes / Special Instructions: <u>00010110</u> <u>4127</u> <u>L430</u> <u>5509</u> <u>4127/429</u>	
Project Information Project Name: <u>513 825 7500</u> Project Number: <u>2VAAP-66</u> Shipping/Tracking No: <u>30174.0016</u> P.O.#: _____		TAT If different than below 3 weeks <input type="checkbox"/> 2 weeks <input checked="" type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day <input type="checkbox"/>		Other H2O <input type="checkbox"/> H2S <input type="checkbox"/> HCN <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> SO2 <input type="checkbox"/> SO3 <input type="checkbox"/> Other: _____		Sample Date: <u>6-28-12</u> Sample Time: <u>0800</u> <u>6-28-12</u> <u>1000</u> <u>6-28-12</u> <u>1015</u> <u>6-28-12</u> <u>1100</u>	
Sample Identification <u>Trip Blanks</u> <u>FAG-IDW-Tank1a - GW</u> <u>EW1-IDW-SBcomp-50</u> <u>FW6-IDW-Tank3 - GW</u>		Sample Time: <u>2</u> <u>1</u>		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Date/Time: _____ Date/Time: _____ Date/Time: _____ Date/Time: _____	
Relinquished by: <u>Steph Along</u> Company: <u>EQM</u> Date/Time: <u>6/28/12 1215</u>		Relinquished by: <u>Mable Spoford</u> Company: <u>TAR</u> Date/Time: <u>6/28/12 1259</u>		Relinquished by: _____ Company: _____ Date/Time: _____		Relinquished by: _____ Company: _____ Date/Time: _____	

All Tank 1A has shorter turn on Trip attached, other samples (SBcomp3 + Tank3) are 10 day turn.

All VOC's in cooler 4127

Login Sample Receipt Checklist

Client: Environmental Quality Mgt., Inc.

Job Number: 240-12752-1

Login Number: 12752

List Source: TestAmerica Canton

List Number: 1

Creator: Livengood, Chris

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX G
CORRESPONDENCE/COMMENT RESPONSE TABLE



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

December 28, 2012

RE: RAVENNA ARMY AMMUNITION PLANT
PORTAGE/TRUMBULL COUNTIES
NOTICE OF DEFICIENCY, FWGWMP,
FINAL, MONITORING WELL
INSTALLATION REPORT, DATED
DECEMBER 18, 2012 (Ohio EPA ID #
267-000859-036)

Mr. Mark Patterson
Facility Manager
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, OH 44266

CERTIFIED MAIL
7010 3090 0000 3936 7273

Dear Mr. Patterson:

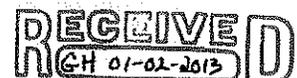
The Ohio Environmental Protection Agency (Ohio EPA) has received and reviewed the "Final, Facility-Wide Groundwater Monitoring Program, RVAAP-66 Facility-Wide Groundwater Monitoring Well Installation Report" for the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio. This document was received at Ohio EPA's Northeast District Office (NEDO), Division of Environmental Response and Revitalization (DERR), on December 19, 2012 and is dated December 18, 2012. The document was prepared for the U.S. Army Corps of Engineers (USACE) – Louisville District by EQM, under contract no. GS-10F-0293K.

Pursuant to the June 14, 2004 Director's Final Findings and Orders (DFFOs), Ohio EPA has prepared this notice of deficiency documenting Ohio EPA's Disapproval under Paragraph 39.

According to Ohio EPA records, Ohio EPA did not receive or review the "Response to Ohio EPA Comments" (letter dated November 19, 2012) prior to receiving the above final document.

Ohio EPA reviewed the "Response to Ohio EPA Comments" table that was included in the Final document and does not agree with the response to Comment # 6, regarding the use of permeameter data. All other comments were adequately addressed.

The response indicates the "Permeameter data is necessary to complete hydrogeologic system modeling and to conduct contaminant fate-and-transport modeling for a facility-wide approach." Ohio EPA disagrees with the use of permeameter data for modeling and fate-and-transport modeling. Permeameter results are of limited value and may bear little relation to actual field hydraulic conductivities. Even results from several samples may not be representative of the overall hydraulic conductivity of a groundwater zone. However,



MR. MARK PATTERSON
RVAAP
DECEMBER 28, 2012
PAGE 2

the typical concern with permeameter results is that they are not representative of secondary or larger scale features, such as fractures.

Pursuant to the DFFOs, Paragraph 41, and this notification, the "Respondent shall within thirty (30) days from the date of actual receipt of the disapproval, correct the deficiencies and submit" revised page(s) to Ohio EPA for approval. "This time limitation may be extended by mutual written agreement of the Project Managers. The revised submission shall incorporate all of the uncontested changes, additions, and/or deletions specified by Ohio EPA in its notice of deficiency."

Paragraph 42 of the DFFOs provides for a meeting request by the Respondent to discuss and clarify issues. The DFFOs state, "... the meeting shall commence within fifteen (15) days of the close of the comment period" and again can be extended by mutual written agreement of the Project Managers. Please let Ohio EPA's Project Manager, Eileen Mohr, know if the Army wants to request a meeting.

Sincerely,



Nancy Zikmanis, CHMM
Environmental Supervisor
Division of Environmental Response and Revitalization

NZ/kss

cc: Ann Wood, NGB
Katie Tate, OHNGB

ec: Vicki Deppisch, Ohio EPA, NEDO, DERR
All Muller, Ohio EPA, NEDO, DDAGW
Eileen Mohr, Ohio EPA, NEDO, DERR
Justin Burke, Ohio EPA, CO, DERR

RECEIVED
41 01-02-2013

**Response to Ohio EPA's Notice of Deficiency dated December 28, 2012 for FWGWMP,
Final Monitoring Well Installation Report (December 18, 2012)**

Ohio EPA did not agree with response to Comment #6 in the "Response to Ohio EPA Comments" table that was included in the final document. EQM's response stated that "Permeameter data is necessary to complete hydrogeologic system modeling and to conduct contaminant fate-and-transport modeling for a facility-wide groundwater approach. Additional data will be collected during the slug and pump test to be conducted as part of the RI work. This data will supplement previously collected historical data to get more meaningful hydraulic conductivity values. At the end of Section 2.4.1 and 2.4.2 the following statement will be added: *"Geotechnical data will be further evaluated within the RI, along with the hydrogeologic system modeling and contaminant fate-and-transport modeling for of a facility-wide groundwater approach."*

The Ohio EPA indicated that the typical concern with permeameter results is that they are not representative of secondary or larger scale features, such as fractures.

Response: We do not disagree with the Ohio EPA as to the limitations of permeameter data with regard to secondary or large-scale features such as fractures, which is why this information is only being used to supplement slug and pump test data that will also be obtained as part of the RI work (refer to our response to Comment #6). In addition, slug test data previously obtained from existing wells will be incorporated into the groundwater model, as needed. Collection of the geotechnical data was previously approved by the Ohio EPA in the Final Facility-Wide Groundwater Monitoring Program Plan RVAAP-66 Facility-Wide Groundwater Addendum (EQM, January 2012). The purpose of the Monitoring Well Installation Report was to report the procedures and findings of the field activities, including the permeameter data. Actual usage of the permeameter data in the groundwater model, if at all, will be presented in the RI Report as part of a separate discussion of the input parameters for the model.



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

November 19, 2012

RE: RAVENNA ARMY AMMUNITION PLANT,
PORTAGE/TRUMBULL COUNTIES,
FWGWMP, DRAFT, FACILITY-WIDE
GROUNDWATER MONITORING WELL
INSTALLATION REPORT DATED
OCTOBER 11, 2012 (# 267-000859-036)

Mr. Mark Patterson
Installation Manager
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, OH 44266

CERTIFIED MAIL
7010 3090 0000 3936 7037

Dear Mr. Patterson:

The Ohio Environmental Protection Agency (Ohio EPA) has received and reviewed the "Draft, Facility-Wide Groundwater Monitoring Program, RVAAP-66 Facility-Wide Groundwater Monitoring Well Installation Report," dated October 11, 2012 for the Ravenna Army Ammunition Plant (RVAAP), Ravenna, OH. This document was received at Ohio EPA's Northeast District Office (NEDO), Division of Environmental Response and Revitalization (DERR), on October 12, 2012. The document was prepared for the U.S. Army Corps of Engineers (USACE) – Louisville District, by Environmental Quality Management, Inc. (EQM), under contract no. W912QR-11-F-0266.

The report provides a summary of activities associated with the installation of 38 ground water monitoring wells as part of the remedial investigation (RI) for facility-wide ground water at the RVAAP. The wells were installed in accordance with the Final FWGWMP Addendum, dated January 2012, and approved by Ohio EPA on January 24, 2012. Under the Final FWGWMP Addendum, a total of 39 wells were planned to be installed. However, the well scheduled for installation in unconsolidated material in Demolition Area 2 (DA2) could not be installed, because there is only 3.5 feet of unconsolidated material at that location. Proposed locations of eight monitoring wells (FWGmw-01, B12mw-013, FWGmw-004, LLomw-008, LL6mw-009, LL11mw-011, LL11mw-012, and FWGmw-014) were nominally field adjusted based on stakeholder input.

The primary objective of the wells is to provide additional information in support of hydro geologic and fate and transport models. In addition, the wells were installed to further evaluate potential exit pathways along the southern and eastern borders and to assess potential ground water impacts from current Compliance Restoration (CR) sites. Also, one two-inch diameter stainless steel well (LL12mw-182ss) was installed to assess whether the occurrence of bis(2-ethylhexyl)phthalate is the result of leaching from polyvinyl chloride (PVC) well casings and screens. Samples of unconsolidated material and bedrock cores were collected for testing permeability, porosity, and total organic carbon (TOC).



Well Installation & Construction:

The monitoring wells were installed between February 27th and June 27, 2012. Twenty wells were completed in unconsolidated glacial material. Sixteen of these were completed in the first encountered ground water zone, and three in the second encountered ground water zone. The three wells installed in the second encountered ground water zone were originally part of five wells proposed to be installed in the Homewood Member. It was decided to evaluate the second encountered ground water zone at these three locations, because of the thickness of the unconsolidated materials and the presence of clay till between the first and second zones.

Eighteen wells were completed in bedrock with 15 of these in the Sharon Member and three in the Homewood Member of the Pottsville Formation. **Note:** FWGmw-005 was originally completed in overburden at the top of bedrock, but did not yield ground water after three weeks. This well was abandoned and was replaced with a well completed in the Homewood.

With the exception of the one stainless steel well, the monitoring wells were constructed with two-inch diameter PVC casings and typically with 10-foot long well screens.

Permeability Testing:

At six monitoring well locations, completed in unconsolidated materials, Shelby Tube samples were collected for permeability testing utilizing a flexible wall permeameter. The aforementioned samples were collected from depths near the center of the water bearing zones. Two of the unconsolidated samples, one is a sand and the other is a sand and gravel, fell apart and could not be analyzed. The four unconsolidated samples that were analyzed range from clayey sandy silt to sandy lean clay. Also, 14 rock core samples were collected for testing permeability also using a flexible wall permeameter. Two of the rock cores were from the Homewood Member and the remaining 12 were from the Sharon Member. Thirteen of the core samples consisted of sandstone and one was shale.

Total Organic Carbon:

One sample of unconsolidated glacial material and four rock core samples were analyzed for TOC.

MR. MARK PATTERSON
RAVENNA ARMY AMMUNITION PLANT
NOVEMBER 19, 2012
PAGE 3

Enclosed are Ohio EPA's comments. If you have any questions, please call me at (330) 963-1160.

Sincerely,



Nancy Zikmanis, Supervisor
Division of Environmental Response and Revitalization

NZ:VD/kss

enclosure

cc: Katie Tait, OHARNG RTLS
Ann Wood, NGB
Eileen Mohr, Ohio EPA, NEDO, DERR

ec: Vicki Deppisch, Ohio EPA, NEDO, DERR
Al Muller, Ohio EPA, NEDO, DDAGW

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM
RVAAP-66 FACILITY-WIDE GROUNDWATER
MONITORING WELL INSTALLATION REPORT
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO
COMMENT RESPONSE TABLE**

Draft – October 11, 2012

(November 19, 2012)

Ohio EPA Reviewers: VickiDeppisch, DERR, and AIMuller, DDAGW, DGW

Comment No.	Page/Line	Comment	Recommendation	Response
1	Page 9, Section 2, Lines 5-8	Section 2 indicates that only 38 of the 39 monitoring wells were installed. According to the approved Facility-Wide Ground Water Addendum, a monitoring well screened in unconsolidated material was scheduled for installation in Demolition Area 2 (DA2). However, that well was not installed, because there was only 3.5 feet of unconsolidated material at that location.	Ohio EPA agrees with the rationale for not installing the monitoring well screened in unconsolidated material scheduled for the location in DA2. No response is required.	Agreed.
2	Page 9, Section 2, Lines 13-14	Section 2 indicates that eight monitoring well locations were nominally field adjusted based on "stakeholder" input. As this is a stand-alone document, the stakeholders should be listed.	Please clarify who the "stakeholders" are.	Agreed, the ending of the sentence will be revised to "...based on stakeholder input, including the USACE, Ohio EPA, ARNG, OHARNG, and the RVAAP Restoration Advisory Board."
3	Page 15, Section 2.3, Lines 4-10	Section 2.3 indicates that three monitoring wells (FWGmw-02, LL1mw-086, and NTAmw-119) were completed in the second water bearing zone in the glacial unconsolidated material. These three locations were originally part of five wells scheduled to be installed in the Homewood Member. However, it was decided to instead monitor the second ground water zone in the unconsolidated material considering the thickness of the glacial units, the presence of clay till between the first and second ground water zones, and the predicted communication between deeper glacial and bedrock ground water zones.	Ohio EPA agrees with the rationale for changing the installation of three of the five wells to be installed in the Homewood member to monitor the second ground water zone in the unconsolidated glacial material. No response is required.	Agreed.
4	Page 15, Section	Ohio EPA could not locate a discussion if any of the soil cores were saved and	Please clarify.	The following sentence will be added at the end of the 1 st paragraph for Section 2.3.1: “

**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM
RVAAP-66 FACILITY-WIDE GROUNDWATER
MONITORING WELL INSTALLATION REPORT
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO
COMMENT RESPONSE TABLE**

Draft – October 11, 2012

(November 19, 2012)

Ohio EPA Reviewers: VickiDeppisch, DERR, and AIMuller, DDAGW, DGW

	2.3.1	archived.		<i>All portions of the bagged soil cores were disposed of as soil cuttings after headspace screening.” Please note that Section 2.3.2, 2nd paragraph, line 29 indicates that the “The cores were placed on wood pallets and stored on a shelf in Building 1047 at the site.”</i>
5	Page 15, Section 2.3, Lines 15-17	Section 2.3 indicates that monitoring well fwgmw-005 was originally completed in the unconsolidated material at the top of bedrock, but did not yield water after about three weeks and was subsequently abandoned. This abandoned well was replaced with a well screened in the Homewood Member, which is the first ground water zone in bedrock at the facility.	Ohio EPA agrees with the rationale for abandoning the original monitoring well and replacing it with a monitoring well screened in the Homewood member. No response is required.	Agreed.
6	Page 21, Sections 2.4.1 and 2.4.2, Lines 1-32	Section 2.4.1 indicates that six samples of unconsolidated materials were collected for permeability testing utilizing a flexible wall permeameter. Two of the unconsolidated samples, one is a sand and the other is a sand and gravel, fell apart and could not be analyzed. Four unconsolidated samples that were analyzed range from clayey sandy silt to sandy lean clay. Section 2.4.2 indicates that 14 rock core samples were collected for permeability testing also using a flexible wall permeameter. Two of the rock cores were from the Homewood Member and the remaining 12 were from the Sharon Member. It is not clear what the intended use of the lab-derived permeability values are. Permeameter results may bear little relation to actual field hydraulic conductivities. Even results from several	Please clarify the intended use of the permeameter data. Also, please discuss in more detail how the permeabilities are representative of the glacial unconsolidated ground water zones and ground water zones in the Homewood and Sharon Members of the Pottsville Group. Ohio EPA recommends the USACE consider utilizing pumping and slug test data from an appropriate number of representative monitoring wells, to get more meaningful hydraulic conductivity values. (It is the understanding of Ohio EPA that two pumping tests are currently being conducted at RVAAP.)	Permeameter data is necessary to complete hydrogeologic system modeling and to conduct contaminant fate-and-transport modeling for a facility-wide groundwater approach. Additional data will be collected during the slug and pump test to be conducted as part of the RI work. This data will supplement previously collected historical data to get more meaningful hydraulic conductivity values. At the end of Section 2.4.1 and 2.4.2 the following statement will be added: “ <i>Geotechnical data will be further evaluated within the RI, along with the hydrogeologic system modeling and contaminant fate-and-transport modeling for of a facility-wide groundwater approach.</i> ”

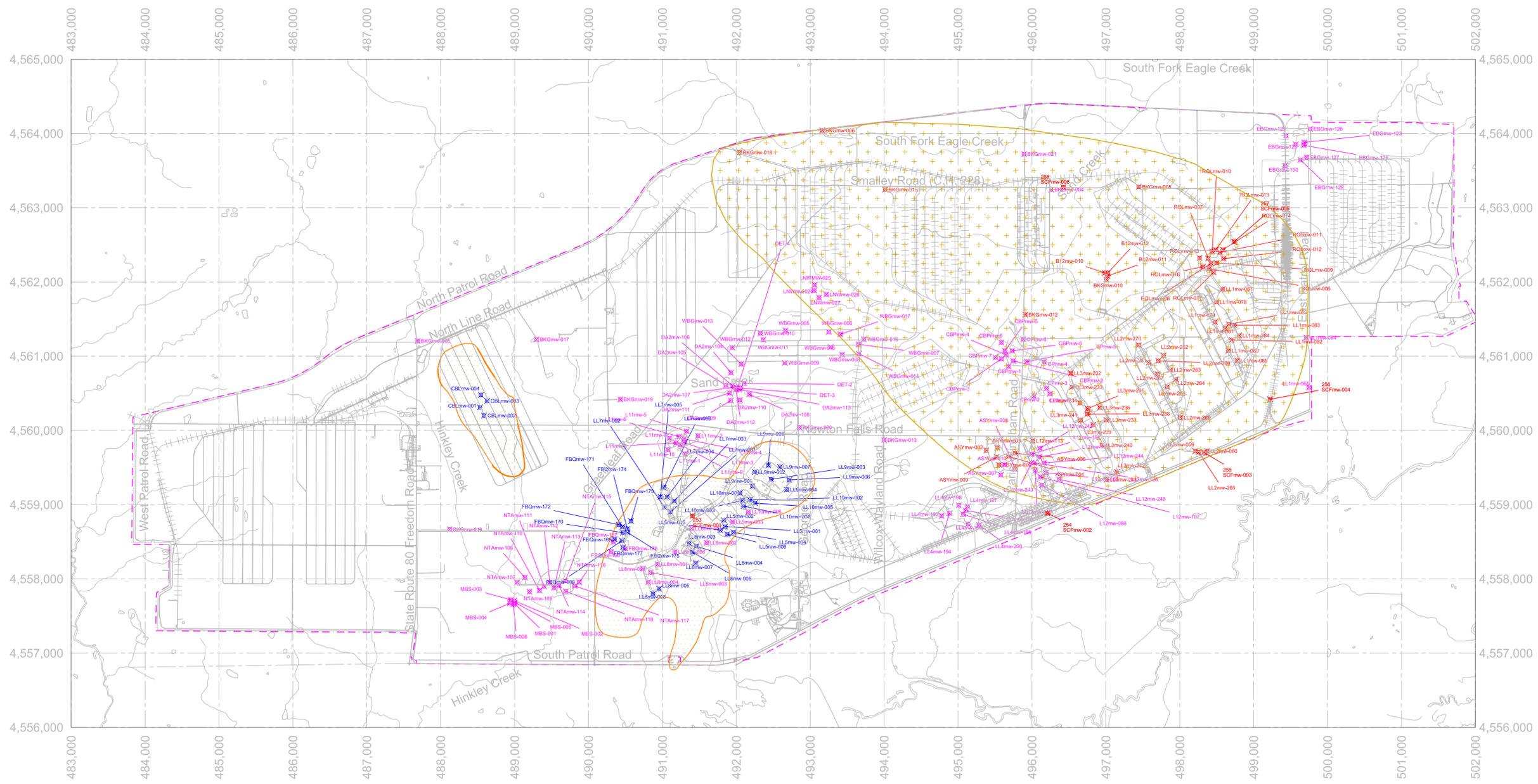
**FACILITY-WIDE GROUNDWATER MONITORING PROGRAM
RVAAP-66 FACILITY-WIDE GROUNDWATER
MONITORING WELL INSTALLATION REPORT
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO
COMMENT RESPONSE TABLE**

Draft – October 11, 2012

(November 19, 2012)

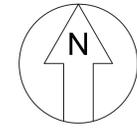
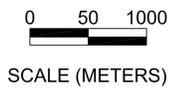
Ohio EPA Reviewers: VickiDeppisch, DERR, and AIMuller, DDAGW, DGW

		<p>samples may not be representative of the overall hydraulic conductivity of a ground water zone. Data from sand and sand and gravel units were not analyzed; therefore, data from glacial material does not appear to be representative of even the general variability in glacial materials. Permeameter results are not representative of secondary or larger scale features such as fractures.</p>		
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LEGEND

- ✕ UNCONSOLIDATED WELL
- ✕ HOMEWOOD MEMBER WELL
- ✕ SHARON MEMBER WELL
- - - PROPERTY LINE
- HOMEWOOD MEMBER
- SHARON MEMBER



NOTE: THE UNCONSOLIDATED AQUIFER OVERLAYS THE HOMEWOOD AND SHARON MEMBERS, EXCEPT AS INDICATED ON PLATE 2

COORDINATE SYSTEM UTM NAD 83 ZONE 17

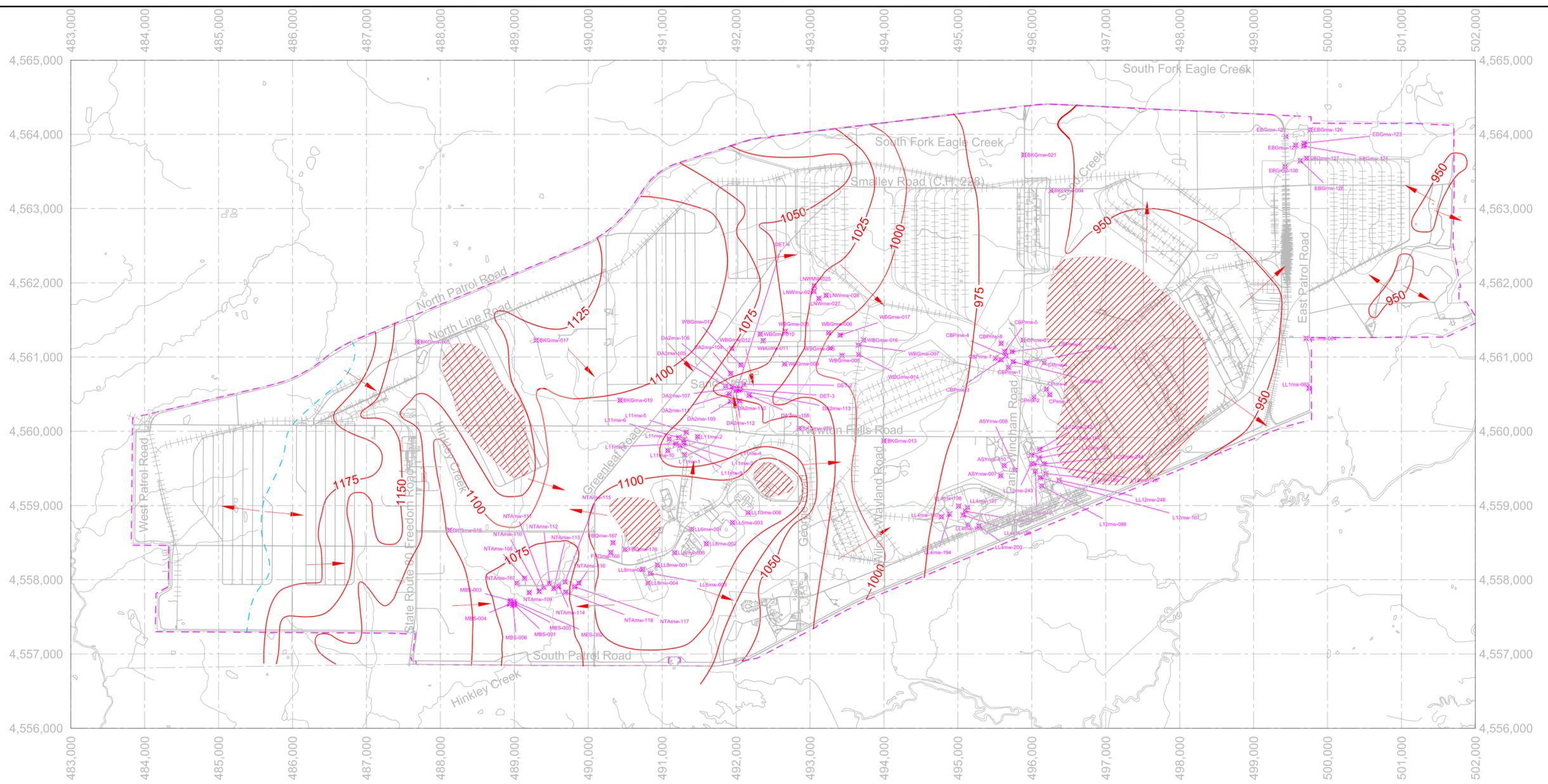
REV	DESCRIPTION	DATE	APPROVED	SCALE	NONE
1	ADDED NOTE	12-04-08	BT	DRAWN	D.TOMO
2	ADDED SFCmw-001 THRU 006	9-10-09	JM	CHECKED	
				APPROVED	
REVISIONS					



ENVIRONMENTAL QUALITY
MANAGEMENT, INC.
1800 CARILLON BLVD.
CINCINNATI, OHIO 45240
P (513)825-7500
F (513)825-7495

**MONITORING WELLS
AT RVAAP**

ORIGINAL SIZE	PROJECT NO.	DWG NO.	REV
E	030174.0016	PLATE 1	2



Well ID	Elevation (ft. amsl)
BKGmw-004	954.31
BKGmw-005	1139.60
BKGmw-013	976.38
BKGmw-016	1094.14
BKGmw-017	1117.18
BKGmw-019	1089.20
BKGmw-020	1057.50
BKGmw-021	959.34
CBPmw-001	962.74
CBPmw-002	960.94
CBPmw-003	962.18
CBPmw-004	960.08
CBPmw-005	959.26
CBPmw-006	959.53
CBPmw-007	960.41
CBPmw-008	956.88
CPmw-001	971.30
CPmw-002	972.19
CPmw-003	972.12
CPmw-004	970.36
CPmw-005	962.21
CPmw-006	955.17

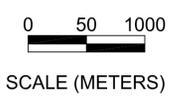
Well ID	Elevation (ft. amsl)
DA2mw-104	1051.80
DA2mw-105	1042.10
DA2mw-106	1038.56
DA2mw-107	1033.14
DA2mw-108	1025.41
DA2mw-109	1055.11
DA2mw-110	1053.23
DA2mw-111	1034.71
DA2mw-112	1029.85
DA2mw-113	1029.32
DETmw-001B	1042.14
DETmw-002	1028.46
DETmw-003	1027.16
DETmw-004	1027.94
EBGmw-123	938.52
EBGmw-124	938.42
EBGmw-125	942.46
EBGmw-126	938.63
EBGmw-127	938.98
EBGmw-128	938.67
EBGmw-129	938.77
EBGmw-130	937.95

Well ID	Elevation (ft. amsl)
FBQmw-166	1103.68
FBQmw-167	1110.29
FBQmw-176	1120.96
LL11mw-002	1073.01
LL10mw-006	1109.51
LL11mw-001	1089.90
LL11mw-003	1085.78
LL11mw-004	1082.67
LL11mw-005	1071.29
LL11mw-006	1082.11
LL11mw-007	1067.87
LL11mw-008	1085.94
LL11mw-009	1088.19
LL11mw-010	1077.84
LL12mw-088	973.80
LL12mw-107	969.89
LL12mw-128	968.02
LL12mw-153	971.42
LL12mw-154	969.93
LL12mw-182	973.22
LL12mw-184	969.86
LL12mw-185	971.91

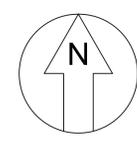
Well ID	Elevation (ft. amsl)
FBQmw-166	1103.47
LL12mw-187	970.13
LL12mw-188	975.93
LL12mw-242	972.40
LL12mw-243	971.24
LL12mw-244	970.29
LL12mw-245	971.36
LL12mw-246	967.67
LL1mw-064	933.38
LL1mw-065	932.79
LL4mw-193	976.08
LL4mw-194	974.49
LL4mw-195	971.31
LL4mw-196	970.95
LL4mw-197	980.64
LL4mw-198	974.42
LL4mw-199	969.37
LL4mw-200	969.67
LL5mw-003	1106.60
LL6mw-001	1108.95
LL6mw-002	1107.10
LL6mw-006	1108.22

Well ID	Elevation (ft. amsl)
LL8mw-001	1108.08
LL8mw-002	1103.67
LL8mw-003	1103.95
LL8mw-004	1102.23
LNWmw-024	1025.64
LNWmw-025	1024.46
LNWmw-026	1022.71
LNWmw-027	1019.91
MBS-001	1064.20
MBS-002	1064.54
MBS-003	1065.13
MBS-004	1064.52
MBS-005	1064.13
MBS-006	1069.04
NTAmw-107	1067.02
NTAmw-108	1067.26
NTAmw-109	1067.29
NTAmw-110	1067.72
NTAmw-111	1067.30
NTAmw-112	1068.66
NTAmw-113	1068.03
NTAmw-114	1071.69

Well ID	Elevation (ft. amsl)
NTAmw-115	1075.20
NTAmw-116	1088.43
NTAmw-117	1080.02
NTAmw-118	1070.81
WBGmw-005	1048.76
WBGmw-006	1008.06
WBGmw-007	982.86
WBGmw-008	993.64
WBGmw-009	1034.13
WBGmw-010	1061.71
WBGmw-011	1061.61
WBGmw-012	1057.29
WBGmw-013	1059.70
WBGmw-014	980.28
WBGmw-015	1000.37
WBGmw-016	979.43
WBGmw-017	998.23



- LEGEND**
- ✕ UNCONSOLIDATED WELL
 - - - PROPERTY LINE
 - 1100 — LINE OF EQUAL GROUNDWATER ELEVATION (ft. amsl)
 - ➔ GROUNDWATER DIRECTION
 - UNCONSOLIDATED AQUIFER MISSING
 - - - - INFERRED GROUNDWATER DIVIDE



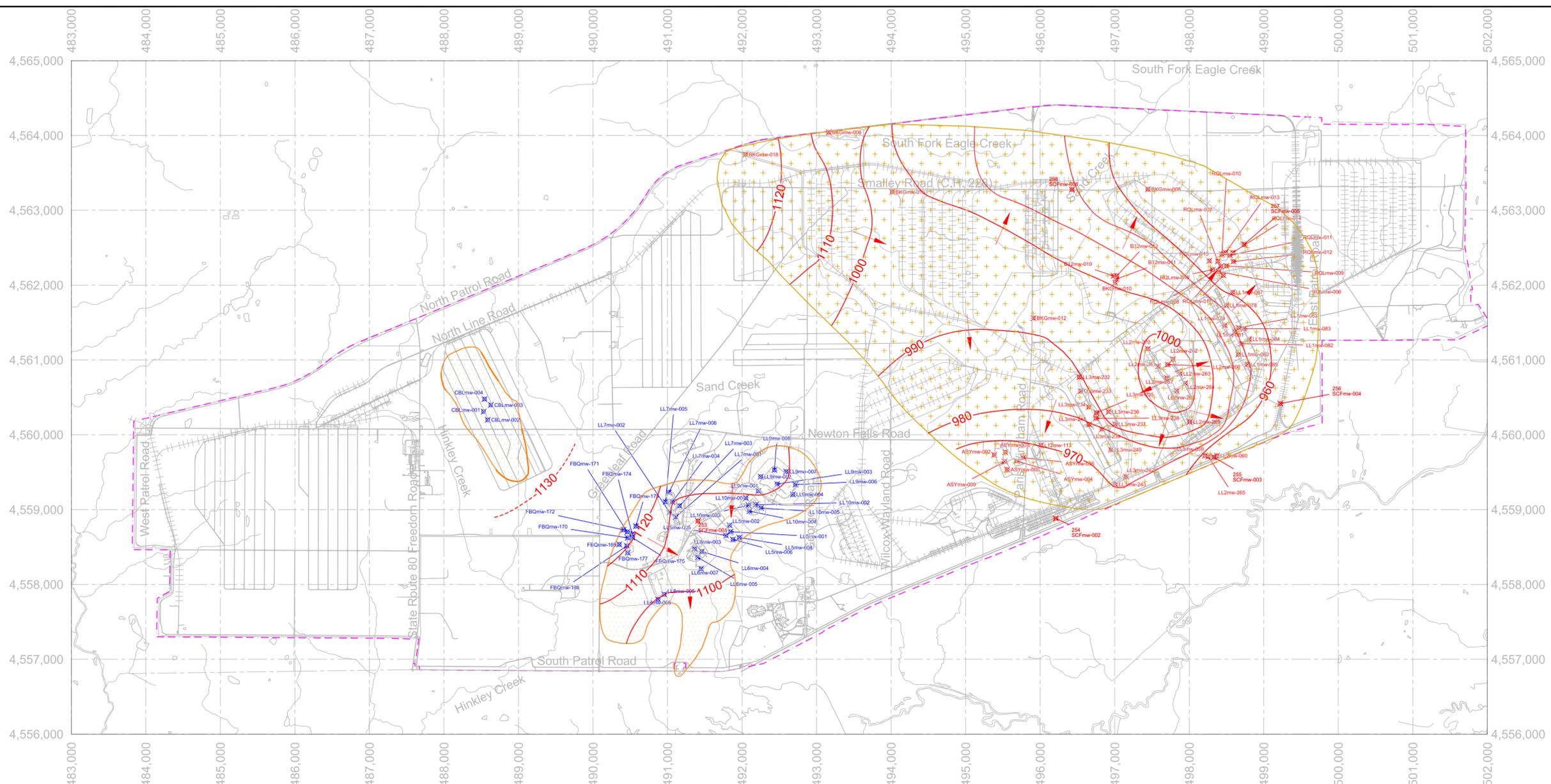
COORDINATE SYSTEM UTM NAD 83 ZONE 17



ENVIRONMENTAL QUALITY MANAGEMENT, INC.
1800 CARILLON BLVD.
CINCINNATI, OHIO 45240
P (513)825-7500
F (513)825-7495

REV	DESCRIPTION	DATE	APPROVED	SCALE	NONE	ORIGINAL SIZE	PROJECT NO.	DWG NO.	REV
							030174.0016	PLATE 2	1

POTENTIOMETRIC SURFACE OF UNCONSOLIDATED AQUIFER (OCT. 2011)



HOMEOOD MEMBER WELLS

Well ID	Elevation (ft. amsl)	Well ID	Elevation (ft. amsl)
CBLmw-001	1137.30	LL5mw-006	1106.41
CBLmw-002	1136.99	LL6mw-003	1107.76
CBLmw-003	1138.32	LL6mw-004	1107.18
CBLmw-004	1138.46	LL6mw-005	1107.27
FBQmw-168	1120.72	LL6mw-007	1107.12
FBQmw-169	1113.24	LL7mw-001	1107.69
FBQmw-170	1122.37	LL7mw-002	1111.55
FBQmw-171	1123.42	LL7mw-003	1108.04
FBQmw-172	1121.39	LL7mw-004	1110.22
FBQmw-173	1121.54	LL7mw-005	1112.95
FBQmw-174	1121.26	LL7mw-006	1111.35
FBQmw-175	1121.29	LL8mw-005	1100.46
FBQmw-177	1113.42	LL8mw-006	1095.67
LL10mw-001	1106.93	LL9mw-001	1118.03
LL10mw-002	1108.29	LL9mw-002	1114.33
LL10mw-003	1108.84	LL9mw-003	1123.12
LL10mw-004	1107.57	LL9mw-004	1109.70
LL10mw-005	1108.58	LL9mw-005	1113.56
LL5mw-001	1106.45	LL9mw-006	1109.53
LL5mw-002	1106.42	LL9mw-007	1109.56
LL5mw-004	1106.42		
LL5mw-005	1106.44		

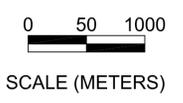
SHARON MEMBER WELLS

Well ID	Elevation (ft. amsl)	Well ID	Elevation (ft. amsl)	Well ID	Elevation (ft. amsl)
ASYmw-001	968.74	LL1mw-082	978.07	LL3mw-238	991.82
ASYmw-002	969.45	LL1mw-083	961.30	LL3mw-239	979.29
ASYmw-003	968.78	LL1mw-084	970.63	LL3mw-240	978.79
ASYmw-004	969.58	LL1mw-085	960.94	LL3mw-241	985.12
ASYmw-005	971.24	LL2mw-059	952.43	LL3mw-242	982.54
ASYmw-006	968.37	LL2mw-060	950.71	LL3mw-243	976.82
ASYmw-009	969.76	LL2mw-261	1004.41	RQLmw-006	959.99
B12mw-010	987.87	LL2mw-262	1005.30	RQLmw-007	959.60
B12mw-011	986.90	LL2mw-263	1004.02	RQLmw-008	959.44
B12mw-012	986.35	LL2mw-264	1006.33	RQLmw-009	959.63
BKGmw-006	1005.50	LL2mw-265	950.62	RQLmw-010	956.75
BKGmw-008	955.59	LL2mw-266	1005.26	RQLmw-011	954.51
BKGmw-010	989.72	LL2mw-267	1005.49	RQLmw-012	955.44
BKGmw-012	991.05	LL2mw-268	1002.80	RQLmw-013	955.30
BKGmw-015	991.51	LL2mw-269	994.97	RQLmw-014	953.28
BKGmw-018	1029.22	LL2mw-270	1002.17	RQLmw-015	959.20
LL1mw-063	968.14	LL3mw-232	980.69	RQLmw-016	960.36
LL1mw-067	960.86	LL3mw-233	977.58	RQLmw-017	960.73
LL1mw-078	962.85	LL3mw-234	996.54		
LL1mw-079	964.87	LL3mw-235	992.31		
LL1mw-080	986.47	LL3mw-236	995.39		
LL1mw-081	969.32	LL3mw-237	990.42		

SHARON SHALE WELLS

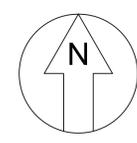
Well ID	Elevation (ft. amsl)
LL12mw-113	974.96
LL12mw-183	969.48
LL12mw-186	972.46
LL12mw-189	973.80

*WELLS NOT USED TO PRODUCE POTENTIOMETRIC MAP



LEGEND

- × HOMEWOOD MEMBER WELL
- × SHARON MEMBER WELL
- - - PROPERTY LINE
- 1100 — LINE OF EQUAL GROUNDWATER ELEVATION (ft.amsl)
- 1030 - - - (INTERMEDIATE DASHED)
- GROUNDWATER DIRECTION
- HOMEWOOD MEMBER
- SHARON MEMBER



COORDINATE SYSTEM UTM NAD 83 ZONE 17



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1	ADDED SFCmw-001 THRU 006	9-10-09	JM	DRAWN	S.RASOR	11-22-11
				CHECKED	W.THOMPSON	11-22-11
				APPROVED		
REV	DESCRIPTION	DATE	APPROVED	SCALE	NONE	
	REVISIONS					

POTENTIOMETRIC SURFACE OF BEDROCK -HOMEOOD AND SHARON (OCT. 2011)

ORIGINAL SIZE	PROJECT NO.	DWG NO.	REV
E	030174.0016	PLATE 3	1