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Report on the October 2009 Sampling Event
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Ravenna, Ohio

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14. ABSTRACT

This document presents a summary of the facility-wide groundwater monitoring conducted in October 2009. Included in the report are:

- Summary of the groundwater elevations and water level measurements taken for each of the wells sampled.
- Analytical summary tables presenting the analytes detected above the method detection limit for this monitoring event.
- QA/QC and data verification reports for the event.

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FINAL
FACILITY-WIDE GROUNDWATER MONITORING PROGRAM

REPORT ON THE OCTOBER 2009 SAMPLING EVENT

RAVENNA ARMY AMMUNITION PLANT,
RAVENNA, OHIO

MARC Contract Number W912QR-04-D-0036
Delivery Order 0006

Prepared for

U.S. Army Corps of Engineers
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April 19, 2010

FWGWMP October 2009 Final Sampling Event Report
Distribution List

Organization	Number of Printed Copies	Number of Electronic Copies
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Ohio EPA – Ohio EPA Twinsburg Office
OHARNG – RTLS/ENV – Ohio Army National Guard Ravenna Training and Logistics Site/Environmental
RVAAP – Ravenna Army Ammunition Plant
USACE – U.S. Army Corps of Engineers
USAEC – U.S. Army Environmental Center
NGB – National Guard Bureau
EQM – Environmental Quality Management, Inc.

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PLATES

LIST OF GENERAL ACRONYMS

ADR	Automatic Data Review
AOC	Area of Concern
BRAC	U.S. Army Base Realignment and Closure Office
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
DOD	Department of Defense
EQM	Environmental Quality Management, Inc.
EPA	Environmental Protection Agency
FWGWMP	Facility-Wide Groundwater Monitoring Plan
FWGWMPP	Facility-Wide Groundwater Monitoring Program Plan
FWSAP	Facility-Wide Sampling and Analysis Plan
GOCO	Government Owned, Contractor Operated
IDW	Investigative Derived Waste
IRP	Installation Restoration Program
LCS	Laboratory Control Sample
LCG	Louisville Chemistry Guidelines
MARC	Multiple Award Remediation Contract
MCL	Maximum Contaminant List
MDL	Method Detection Limit
MS/MSD	Matrix spike/matrix spike duplicate
NGB	National Guard Bureau
OHARNG	Ohio Army National Guard
PCB	Polychlorinated biphenyl
PQL	Practical Quantitation Limit
PRG	Preliminary Remediation Goal
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RVAAP	Ravenna Army Ammunition Plant
SRC	Site Related Contaminant
SVOC	Semi-volatile Organic Compound
TAL	Target Analyte List
TOC	Top of Casing
USACE	U.S. Army Corps of Engineers
USP&FO	United States Property and Fiscal Officer
VOC	Volatile Organic Compound

LIST OF AREA OF CONCERN ACRONYMS

B12	Building 1200
BKG	Background
CBL	C-Block
CBP	Central Burn Pits
CP	Cobbs Pond
DA2	Demolition Area #2
EBG	Erie Burning Grounds
FBQ	Fuze and Booster Quarry
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
WBG	Winklepeck Burning Grounds

SECTION 1

INTRODUCTION

1.1 Facility Description

Past Department of Defense (DOD) activities at the Ravenna Army Ammunition Plant (RVAAP) date to 1940 and include the manufacturing, loading, handling and storage of military explosives and ammunition. Until 1999, the RVAAP was identified as a 21,419-acre installation. The property boundary was resurveyed by the Ohio Army National Guard (OHARNG) over a two year period from 2002 and 2003 and the actual total acreage of the property was found to be 21,683.289 acres. As of February 2006, a total of 20,403 acres of the former 21,683 acre RVAAP have been transferred to the United States Property and Fiscal Officer (USP&FO) for Ohio for use by the OHARNG as a military training site. The current RVAAP consists of 1,280 acres in several distinct parcels scattered throughout the confines of the OHARNG Camp Ravenna Joint Military Training Center (Camp Ravenna). The RVAAP and Camp Ravenna are collocated on contiguous parcels of property and the Camp Ravenna perimeter fence completely encloses the remaining parcels of the RVAAP. Camp Ravenna is in northeastern Ohio within Portage and Trumbull Counties, approximately 4.8 kilometers (3 miles) east-northeast of the city of Ravenna and approximately 1.6 kilometers (1 mile) northwest of the city of Newton Falls (Figure 1-1). The RVAAP portions of the property are solely located within Portage County. Camp Ravenna (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). Camp Ravenna 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 Camp Ravenna did not exist and the entire 21,683-acre parcel was a government-owned, contractor-operated (GOCO) industrial facility. The RVAAP Installation Restoration Program (IRP) encompasses investigation and cleanup of past activities over the entire 21,683 acres of the former RVAAP and therefore references to the RVAAP in this document are considered to be inclusive of the historical extent of the RVAAP, which is inclusive of the combined acreages of the current Camp Ravenna and RVAAP, unless otherwise specifically stated.

1.2 Project Description

1.2.1 Historical Monitoring

In 2004 the U.S. Army and the Ohio EPA finalized the Facility-Wide Groundwater

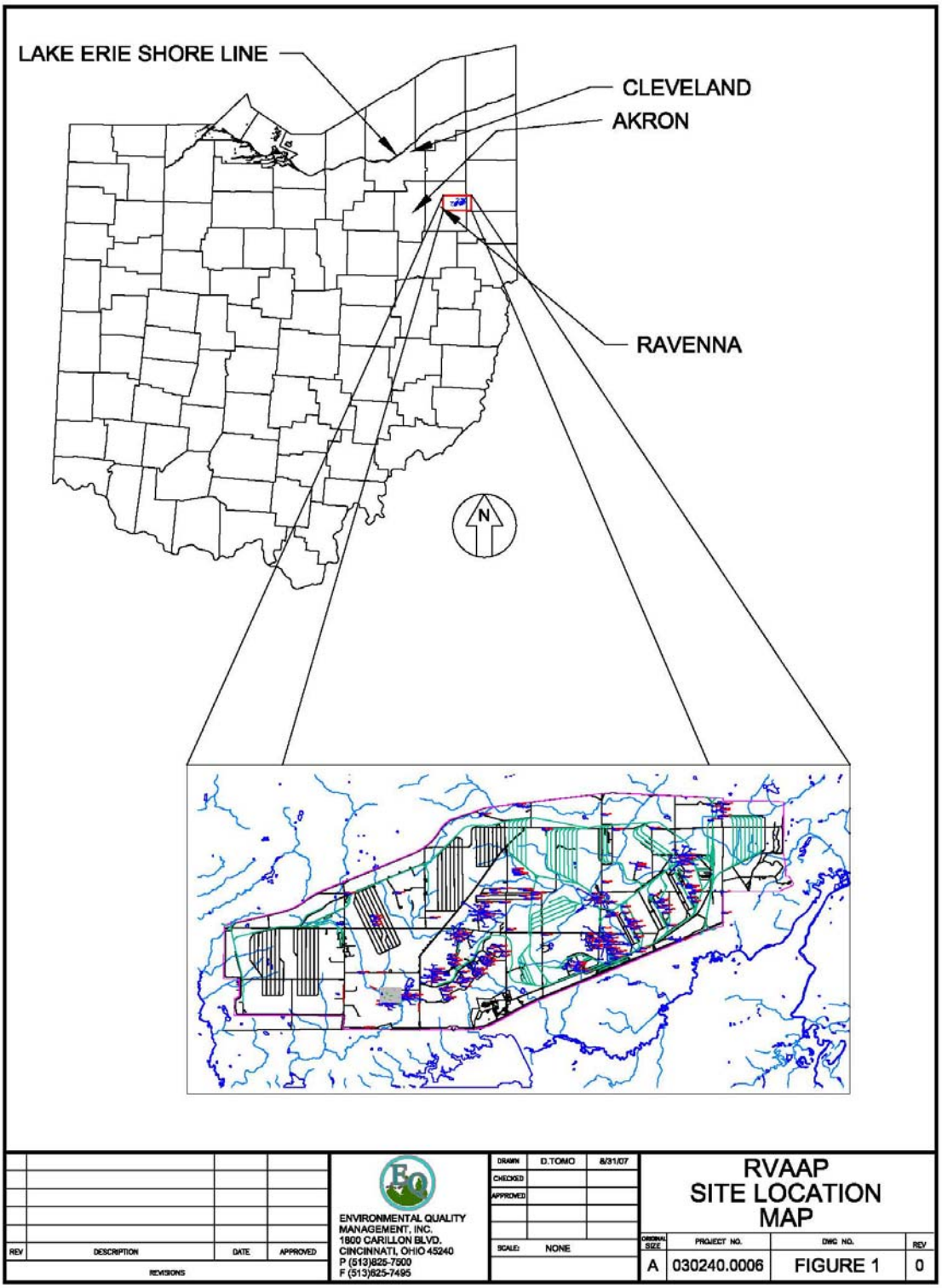

Fig. 1-1 General Location Map

Fig 1-2 RVAAP Facility Map

Monitoring Program (FWGWMP) Plan which details the requirements of the program. The FWGWMP was initiated in 2005 with three consecutive quarters of FWGWMP well sampling. Quarterly sampling has continued through the current monitoring event. The initial FWGWMP wells identified for monitoring were sampled once every quarter, with the exception of the 5 Resource Conservation and Recovery Act (RCRA) wells that include Ramsdell Quarry Landfill (RQL) wells RQLmw-007, -008, and -009, and two Demolition (DA) Area 2 wells, DA2mw-DETmw-003 and DETmw-004. The RQL and DA2 wells are sampled twice a year, during the second (April) and fourth (October) sampling events.

Details of the program design and requirements are contained in the *RVAAP Facility-Wide Groundwater Monitoring Program Plan*, Portage Environmental, September 2004. This document contains the Facility-Wide Sampling and Analysis Plan (FWSAP), Site Safety and Health Plan, and Quality Assurance Project Plan addenda that pertain to the proposed work. Additional details pertaining to performance of field and laboratory activities are contained in the *RVAAP Facility-Wide Sampling and Analysis Plan/Quality Assurance Project Plan (FWSAP)*, SAIC, March 2001. As detailed in the FWGWMPP, the initial monitoring program consisted of the sampling of 36 wells specified in Table 4-1 of the FWGWMPP. Fourteen of these wells are "Background Wells"; the remainder are wells situated at various Areas of Concern (AOCs) at RVAAP. The first sampling event for this project was conducted in April 2005. The results of the previous FWGWMP sampling events are presented in the reports referenced in Section 4 of this report. The final assessment monitoring event for the initial well sampling and analysis was completed in October 2007.

1.2.2 Current Monitoring

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

Section 3.1.2.2 of the FWGWMP Plan establishes a protocol for adding and removing wells from the FWGWMP: "Future wells installed as part of individual AOC investigations conducted under the ongoing Comprehensive Environmental Response Compensation and Liability Act (CERCLA) process at RVAAP will be evaluated for incorporation into the FWGWMP upon completion of at least four quarterly groundwater sampling events to be conducted as part of the Remedial Investigation (RI) phase at each AOC. The frequency of the initial sampling events may be other than quarterly if agreed upon by the Army and Ohio EPA". Based on this protocol the USACE notified the Ohio EPA on December 12, 2007 that the wells to be sampled would be changed effective with the January 2008 monitoring event. The Ohio EPA provided concurrence with this change in an email dated January 8, 2008. The Ohio EPA was notified of an additional change on February 27, 2008 increasing the number of wells to be sampled for the April

2008 event. The Ohio EPA was notified on March 21, 2008 that the number of FWGWMP wells to be sampled in April 2008 (and the July 2008, October 2008, and January 2009 events) would be increased to 132 plus the 5 RCRA wells sampled semi-annually (in order to complete 4 quarters of sampling for each of the 132 wells). Copies of this correspondence are presented in Appendix A.

Beginning with the April 2009 sampling event the remaining wells on the list contained in the *Draft Proposal to Update the Facility-Wide Ground Water Monitoring Program* (USACE October 2007) were sampled. Note that 12 wells were not included in the Draft Proposal to Update the Facility-Wide Ground Water Monitoring Program (USACE October 2007). These wells (located in LLs 1 ,2, 3, and 4) were all identified for Long Term Monitoring and were not included in the original groundwater monitoring schedule. The list of FWGWMP wells monitored for the October 2009 event is presented in Appendix B.

1.3 Scope of Work for the October 2009 Sampling Event

Environmental Quality Management, Inc. (EQM) was contracted (MARC Contract Number W912QR-04-D-0036) by the Louisville District USACE to conduct the FWGWMP monitoring program beginning in April 2007. The objective of this project is to continue quarterly monitoring under the RVAAP Facility-Wide Groundwater Monitoring Program. The following tasks were performed during the October 2009 sampling event in accordance with specifications contained in the FWGWMPP, the FWSAP, and the Scope of Work written by the USACE:

- Performed groundwater sampling at the 51 wells identified in Appendix B. This includes the 5 RCRA wells (DETmw-003, DETmw-004, RQLmw-007, RQLmw-008, and RQLmw-009).
- Performed laboratory analysis for the collected samples.
- Verified, validated and reduced the laboratory analytical data produced for the event (exclusive of the quality assurance samples analyzed by RTI).
- Prepared the Investigative Derived Waste (IDW) Characterization and Disposal Report for the IDW collected during monitoring activities.
- Prepared and submitted the quarterly monitoring report for the sampling event.
- Performed metals sampling (filtered and unfiltered) for 234 wells at the facility three wells (LL1mw-063, LL3mw-235, RQLmw-017) did not have sufficient water (i.e., <0..25-feet of water in the wells) to sample them. These wells are scheduled for metals sampling during the January 2010 groundwater monitoring event.

1.4 Report Presentation

This report presents the results of the October 2009 sampling event. The report is structured in the following way:

- Section 1.0 – Introduction.
- Section 2.0 – Description of Project Activities. This section describes project-specific details not contained in the FWSAP and FWGWMPP on how the tasks described above were performed.
- Section 3.0 – Results of Investigation. The results of the sampling event are summarized, groundwater elevation measurements, analytical results, data verification/validation information.
- Section 4.0 – Summary of Results
- Section 5.0 – References.

The appendices contain the following items:

- Appendix A - Correspondence Documenting the Change in Wells to be Sampled in 2008-2009.
- Appendix B – List of Wells Sampled During the October 2009 Event.
- Appendix C – Water Level Measurements/Field Log Book and Purge Records/Daily Quality Control Reports.
- Appendix D – Data Verification Reports/Laboratory Data Sheets.
- Appendix E – Investigation-Derived Waste (IDW) Characterization and Disposal Plans.
- Appendix F – Reporting Limits that Currently Do Not Meet the RVAAP Quality Assurance Project Plan (QAPP) Practical Quantitation Limits (PQLs) and/or Region 9 Preliminary Remediation Goals (PRGs).
- Appendix G – Correspondence & Comment/Response Table

The report is contained in 3 volumes:

- Volume 1 presents the main text and Appendices A-D.
- Volume 2 presents the Appendix D analytical data sheets/validation reports.
- Volume 3 presents Appendices D-F and the plates.

SECTION 2

PROJECT ACTIVITIES

2.1 Groundwater Level Monitoring

Depth to water from the top of the inner casing was measured in the 46 FWGWMP wells on October 12, 2009. Water level measurements were taken with a Herron Dipper-T water-level indicator. The depth to the bottom of the well from the top of the inner casing was also measured with the electronic water level indicator.

The results of the groundwater level monitoring for the FWGWMP wells sampled during this monitoring event are presented in Section 3.1 and Appendix C. The monitoring well location map, identified as Plate 1, is included with this report. Potentiometric maps created from groundwater measurements from all RVAAP monitoring wells in January 2009 are presented on Plates 2 and 3. The potentiometric maps were generated from the January 2009 water level measurements taken from all 237 facility wells. These maps are updated on a yearly basis. The water levels from the quarterly events are not included in these plates.). Additionally, the groundwater elevations from the new Sharon Conglomerate wells were evaluated and determined not to be representative of either the Homewood or the Sharon aquifers, therefore they were not used to determine the potentiometric contours. The groundwater elevations for these wells will be further evaluated after the next groundwater elevation monitoring event for all wells (January 2010).

2.2 Groundwater Sampling

All identified quarterly and RCRA monitoring wells were sampled between October 12-15, 2009. Wells were sampled using micropurge techniques in accordance with the specifications contained in the FWGWMPP and FWSAP. The wells were micropurged until certain groundwater parameters (i.e., temperature, specific conductivity, pH, and dissolved oxygen) had stabilized. The groundwater parameters were measured using a Horiba U-22 with flow cells or equivalent**.** Groundwater parameter measurements obtained during micropurging are presented in Appendix C.

Groundwater samples were collected with bladder pump micropurge equipment with the exception of DETmw-004 which was sampled using a Teflon bailer. Equipment and sampling details are contained in Appendix C. Groundwater samples were collected in laboratory supplied containers and stored in iced coolers for shipment in accordance with FWSAP and FWGWMPP specifications. All coolers were received by the laboratory at temperatures within the prescribed limits of the FWGWMP.

2.3 Laboratory Analysis

Laboratory analyses on all primary samples and associated quality control samples were performed by TestAmerica Laboratories. Table 2-1 presents the analytical methods used to analyze the groundwater samples.

Table 2-1 Analytical Methods

CONSTITUENTS	METHOD[1]
Polychlorinated Biphenyls (PCBs)	GC Semivolatile Organics (8082)
Pesticides	GC Semivolatile Organics (8081A)
Base/Neutrals and Acids (SVOCs)	GC/MS Semivolatile Organic (8270C)
Volatile Organic (VOCs)	GC/MS Volatile Organics (8260B)
Nitroguanidine (Propellants)	Organic Compounds by UV/HPLC (8330 modified)
Nitroaromatics & Nitramines: (Explosives)	GC Semivolatile Organics Explosives (8330)
Nitrocellulose as N (Propellant)	General Chemistry (353.2 modified)[2]
Cyanide, (Total)	General Chemistry (9012A)
Metals (Magnesium, Manganese, Barium, Nickel, Potassium, Silver, Sodium, Vanadium, Chromium, Calcium, Cobalt, Copper, Arsenic, Lead, Selenium)	Inductively Coupled Plasma (6010B)
Metals (Antimony, Iron, Beryllium, Thallium, Zinc, Cadmium, Aluminum)	Inductively Coupled Plasma Mass Spectrometry (6020)
Metals (Mercury)	(7470A, Cold Vapor) - Liquid

1 = USEPA SW846
2 = EPA Methods for Chemical Analysis of Water and Waste

All quarterly and RCRA well groundwater samples were analyzed for the following parameters: explosives, propellants (nitrocellulose and nitroguanidine), cyanide, volatile organic compounds (VOCs), semi-volatile compounds (SVOCs), target analyte list (TAL) metals (filtered and unfiltered), pesticides, and polychlorinated biphenyls (PCBs).

Quality control (QC) samples were collected from the following wells:

LL7mw-006 – Duplicate sample	LL7mw-003 – MS/MSD
LL8mw-005 – Duplicate sample	Ll8mw-002 – MS/MSD
LL9mw-004 – Duplicate sample	LL9mw-003 – MS/MSD
LL10mw-006 - Duplicate sample	LL10mw-004 – MS/MSD
LL11mw-010 – Duplicate sample	LL11mw-004 – MS/MSD
ASYmw-008 – Duplicate Sample	ASYmw-004 – MS/MSD

All samples were picked up from the facility and delivered to the laboratory in iced coolers by a TestAmerica courier under proper chain-of-custody procedures (Appendix D). Laboratory analyses on all quality assurance (QA) samples were performed by RTI Laboratories in Livonia Michigan. Six QA samples were collected for this sampling event from the same wells where the duplicate samples were collected.

All QA samples were shipped in iced coolers via overnight delivery service under proper chain-of-custody procedures.

Table 2-2 presents the QA Table summary for all samples collected for the October 2009 monitoring event. This table presents in tabular form all analyses and associated QA/QC. The Daily Quality Control Reports are presented in Appendix C.

Laboratory results are summarized in Section 3.2. Laboratory data sheets, including QA/QC information are contained in Appendix D.

2.4 Data Verification/Validation

Data from TestAmerica were verified in accordance with project specifications by EQM chemists Angye Dragotta, and Eric Corbin using the Automatic Data Review (ADR) program. Data validation/verification is summarized in Section 3.3. The Data Verification/Validation Summary Reports are presented in Appendix D.

2.5 Investigation Derived Waste

Investigation Derived Waste (IDW) Reports were prepared for both the sampling event and the redevelopment activities discussed in section 3. Purge water was collected at each well location in 5-gallon buckets and transferred to 55-gallon drums located inside Building 1036. No more than four gallons were purged from any well. Instruments and equipment were decontaminated after purging and sampling each monitoring well. Decontamination fluids were collected in separate, AOC-designated 55-gallon drum stored inside Building 1036. Pending analysis of the monitoring well samples, IDW fluids will be stored in the 55-gallon drums until the IDW Report is approved. The IDW will then be disposed of in accordance with FWSAP requirements. The IDW Reports are presented in Appendix E.

2.6 Additional Metals Sampling and Analysis

In conjunction with the October 2009 groundwater monitoring event, metals sampling was conducted at the remaining 186 additional wells at the facility. These wells were each sampled for filtered and unfiltered metals in support of a future geochemical evaluation to be conducted to further evaluate groundwater conditions at the facility. The

data collected from this sampling is presented in a separate, stand alone document entitled *Report on the 2009 Metals Sampling Event*, which will be provided to the Ohio EPA under separate cover.

Table 2-2 QA Table for October 2009 Sampling Event

	Contractor Laboratory							Government Laboratory		Requested Laboratory Analysis					
Sample Locations	Primary Lab Sample ID	Date	Sample Type	Assoc. QC Dup Number	Assoc. QC Rinsate Number	Assoc. QC Trip Blank Number	MS / MSD	QA Lab Sample ID	Assoc. QC Trip Blank Number	VOCs	SVOCs	Explosives & Propellants	Pesticides / PCBs	Filtered Metals / Cyanide	Perchlorate
LL6mw-005	FWGLL6mw-005C-1427-GW/GF	10/12/09	GW		EQUIPRinse1-1490	FWGTeam1-Trip				X	X	X	X	X	
LL6mw-006	FWGLL6mw-006C-1428-GW/GF	10/12/09	GW		EQUIPRinse1-1490	FWGTeam1-Trip				X	X	X	X	X	
LL6mw-007	FWGLL6mw-007C-1429-GW/GF	10/12/09	GW		EQUIPRinse1-1490	FWGTeam1-Trip				X	X	X	X	X	
LL7mw-001	FWGLL7mw-001C-1430-GW/GF	10/12/09	GW		EQUIPRinse1-1490	FWGTeam3-Trip				X	X	X	X	X	
LL7mw-002	FWGLL7mw-002C-1431-GW/GF	10/12/09	GW		EQUIPRinse1-1490	FWGTeam3-Trip				X	X	X	X	X	
LL7mw-003	FWGLL7mw-003C-1432-GW/GF	10/12/09	GW		EQUIPRinse1-1490	FWGTeam3-Trip	Yes			X	X	X	X	X	
LL7mw-004	FWGLL7mw-004C-1433-GW/GF	10/12/09	GW		EQUIPRinse1-1490	FWGTeam2-Trip				X	X	X	X	X	
LL7mw-005	FWGLL7mw-005C-1434-GW/GF	10/12/09	GW		EQUIPRinse1-1490	FWGTeam2-Trip				X	X	X	X	X	
LL7mw-006	FWGLL7mw-006C-1435-GW/GF	10/12/09	GW	DUP1-1473	EQUIPRinse1-1490	FWGTeam2-Trip		FWGLL7mw-006C-1478S-GW/GF	Trip Blank	X	X	X	X	X	
LL10mw-001	FWGLL10mw-001C-1449-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam1-Trip				X	X	X	X	X	
LL10mw-002	FWGLL10mw-002C-1450-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam3-Trip				X	X	X	X	X	
LL10mw-003	FWGLL10mw-003C-1451-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam3-Trip				X	X	X	X	X	
LL8mw-001	FWGLL8mw-001C-1436-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam3-Trip				X	X	X	X	X	
LL8mw-002	FWGLL8mw-002C-1437-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam3-Trip	Yes			X	X	X	X	X	
LL8mw-003	FWGLL8mw-003C-1438-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam3-Trip				X	X	X	X	X	
LL8mw-004	FWGLL8mw-004C-1439-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam3-Trip				X	X	X	X	X	
LL8mw-005	FWGLL8mw-005C-1440-GW/GF	10/13/09	GW	DUP2-1474	EQUIPRinse2-1491	FWGTeam2-Trip		FWGLL8mw-005C-1479S-GW/GF	TripBlank	X	X	X	X	X	
LL8mw-006	FWGLL8mw-006C-1441-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam2-Trip				X	X	X	X	X	
LL9mw-001	FWGLL9mw-001C-1442-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam2-Trip				X	X	X	X	X	
LL9mw-002	FWGLL9mw-002C-1443-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam1-Trip				X	X	X	X	X	
LL9mw-003	FWGLL9mw-003C-1444-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam1-Trip	Yes			X	X	X	X	X	
LL9mw-004	FWGLL9mw-004C-1445-GW/GF	10/13/09	GW	DUP3-1475	EQUIPRinse2-1491	FWGTeam2-Trip		FWGLL9mw-004C-1480S-GW/GF	TripBlank	X	X	X	X	X	
LL9mw-005	FWGLL9mw-005C-1446-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam1-Trip				X	X	X	X	X	
LL9mw-006	FWGLL9mw-006C-1447-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam2-Trip				X	X	X	X	X	
LL9mw-007	FWGLL9mw-007C-1448-GW/GF	10/13/09	GW		EQUIPRinse2-1491	FWGTeam1-Trip				X	X	X	X	X	
ASYmw-001	FWGASYmw-001C-1463-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam3-Trip				X	X	X	X	X	
DET-003	FWGDETmw-003C-1488-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam2-Trip				X	X	X	X	X	
DET-004*	FWGDETmw-004C-1489-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam2-Trip				X	X	X	X	X	
LL10mw-004	FWGLL10mw-004C-1452-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam1-Trip	Yes			X	X	X	X	X	
LL10mw-005	FWGLL10mw-005C-1453-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam2-Trip				X	X	X	X	X	
LL10mw-006	FWGLL10mw-006C-1454-GW/GF	10/14/09	GW	DUP4-1476	EQUIPRinse3-1492	FWGTeam2-Trip		FWGLL10mw-006C-1481S-GW/GF	TripBlank	X	X	X	X	X	
LL11mw-001	FWGLL11mw-001C-1455-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam1-Trip				X	X	X	X	X	
LL11mw-003	FWGLL11mw-003C-1456-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam1-Trip				X	X	X	X	X	
LL11mw-004	FWGLL11mw-004C-1457-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam1-Trip	Yes			X	X	X	X	X	
LL11mw-005	FWGLL11mw-005C-1458-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam1-Trip				X	X	X	X	X	
LL11mw-006	FWGLL11mw-006C-1459-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam3-Trip				X	X	X	X	X	
LL11mw-008	FWGLL11mw-008C-1460-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam3-Trip				X	X	X	X	X	
LL11mw-009	FWGLL11mw-009C-1461-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam3-Trip				X	X	X	X	X	
LL11mw-010	FWGLL11mw-010C-1462-GW/GF	10/14/09	GW	DUP5-1477	EQUIPRinse3-1492	FWGTeam3-Trip		FWGLL11mw-010C-1482S-GW/GF	TripBlank	X	X	X	X	X	
RQLmw-007	FWGRQLmw-007C-1485-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam2-Trip				X	X	X	X	X	
RQLmw-008	FWGRQLmw-008C-1486-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam2-Trip				X	X	X	X	X	
RQLmw-009	FWGRQLmw-009C-1487-GW/GF	10/14/09	GW		EQUIPRinse3-1492	FWGTeam2-Trip				X	X	X	X	X	
ASYmw-002	FWGASYmw-002C-1464-GW/GF	10/15/09	GW		EQUIPRinse4-1493	FWGTeam2-Trip				X	X	X	X	X	
ASYmw-003	FWGASYmw-003C-1465-GW/GF	10/15/09	GW		EQUIPRinse4-1493	FWGTeam3-Trip				X	X	X	X	X	
ASYmw-004	FWGASYmw-004C-1466-GW/GF	10/15/09	GW		EQUIPRinse4-1493	FWGTeam1-Trip	Yes			X	X	X	X	X	
ASYmw-005	FWGASYmw-005C-1467-GW/GF	10/15/09	GW		EQUIPRinse4-1493	FWGTeam1-Trip				X	X	X	X	X	
ASYmw-006	FWGASYmw-006C-1468-GW/GF	10/15/09	GW		EQUIPRinse4-1493	FWGTeam1-Trip				X	X	X	X	X	
ASYmw-007	FWGASYmw-007C-1469-GW/GF	10/15/09	GW		EQUIPRinse4-1493	FWGTeam3-Trip				X	X	X	X	X	
ASYmw-008	FWGASYmw-008C-1470-GW/GF	10/15/09	GW	DUP6-1483	EQUIPRinse4-1493	FWGTeam3-Trip		FWGASYmw-008C-1484S-GW/GF	Trip Blank	X	X	X	X	X	
ASYmw-009	FWGASYmw-009C-1471-GW/GF	10/15/09	GW		EQUIPRinse4-1493	FWGTeam3-Trip				X	X	X	X	X	
ASYmw-010	FWGASYmw-010C-1472-GW/GF	10/15/09	GW		EQUIPRinse4-1493	FWGTeam2-Trip				X	X	X	X	X	

*Sampled by bailer and/or over multiple, successive days due to inadequate well volume to fill required sample containers.

SECTION 3

RESULTS

3.1 Groundwater Elevations

Groundwater elevations for the 51 FWGWMP quarterly and RCRA monitoring wells were obtained on October 12-15, 2009 as described in Section 2.1. The groundwater elevations for the FWGWMP wells are presented in Table 3-1. The monitoring well location map, identified as Plate 1, is included with this report. Facility-wide groundwater potentiometric maps (Plates 2, and 3) based on all RVAAP groundwater measurements taken during the January 2009 event are also included in this report.

3.1.1 Sediment Accumulation

EQM has reviewed the historical sediment accumulation footages and the description of bottom for the wells currently being sampled. Based on this evaluation the following wells were redeveloped during the during the September 21-23, 2009 timeframe:

CBLmw-001	CBLmw-003	CBPmw-001
CPmw-001	DA2mw-106	DETmw-001
FBQmw-073	FBQmw-174	LL1mw-065
LL1mw-082	LL1mw-084	LL10mw-003
LL11mw-001	LL2mw-263	LL4mw-198
LL5mw-002	MBSmw-001	MBSmw-002
MBSmw-004	NTAmw-113	RQLmw-014
WBGmw-012		

CPmw-006 had no accumulated sediment but water is very turbid and was therefore identified for redevelopment.

The results of the redevelopment activities are presented in Table 3-2. The following summarizes the results of the redevelopment activities:

- Fourteen wells were redeveloped to remove significant (>0.10 feet) of sediment from the bottom of the wells. Of these, eight of them were redeveloped to depths equal to or greater than the reported construction depth (CBLmw-001, CBPmw-001, FBQmw-173, LL1mw-065, LL2mw-263, LL4mw-198, MBSmw-002, and MBSmw-004). The other wells (LL1mw-084, FBQmw-174, LL11mw-001, NTAmw-113, and RQLmw-014, WBGmw-012) was redeveloped and were reported to have a hard bottom, but the current (post redevelopment) depth of these wells are shallower than the reported construction depth as shown in Table 3-6. Based on the redevelopment activities conducted and the presence of hard

Table 3-1 October 2009 FWGMP Monitoring Well Measurements

Well	Monitoring Zone	Top of Casing (TOC) Elevation[a] (ft)	2009 1st Quarter Groundwater Elevation (Jan/2009) (ft)	2009 2nd Quarter Groundwater Elevation (Apr/2009) (ft)	2009 3rd Quarter Groundwater Elevation (Jul/2009) (ft)	2009 4th Quarter Groundwater Elevation (Oct/2009) (ft)	Depth to Water (ft below TOC) Oct/2009	Reported Construction Depth from TOC[a] (ft)	Oct/2009 Measured Depth from TOC (ft)	Oct/2009 Sediment Accumulation (ft)	Oct/2009 Description of Bottom
Loadline 6											
LL6mw-005	Homewood	1120.47	1,108.61	1,110.58	1,107.82	1,106.67	13.80	22.5	22.22	0.28	Hard
LL6mw-006	Unconsolidated	1124.37	1,109.15	1,113.03	1,109.82	1,107.58	16.79	17	17.72	-0.72	Hard
LL6mw-007	Homewood	1115.62	1,110.12	1,113.33	1,108.11	1,105.85	9.77	19.5	19.32	0.18	Hard
Loadline 7											
LL7mw-001	Homewood	1129.64	1,109.29	1,111.55	1,108.66	1,105.91	23.73	32.2	33.02	-0.82	Hard
LL7mw-002	Homewood	1129.55	1,113.93	1,116.57	1,111.97	1,110.02	19.53	27.8	27.15	0.65	Hard
LL7mw-003	Homewood	1120.84	1,109.61	1,111.72	1,108.81	1,107.19	13.65	33.6	33.55	0.05	Hard
LL7mw-004	Homewood	1126.32	1,111.57	1,113.52	1,110.75	1,109.21	17.11	32.5	32.23	0.27	Hard
LL7mw-005	Homewood	1135.87	1,114.23	1,116.34	1,113.52	1,111.68	24.19	30.6	30.37	0.23	Hard
LL7mw-006	Homewood	1123.56	1,113.18	1,115.04	1,111.55	1,110.07	13.49	30.4	30.35	0.05	Hard
Loadline 8											
LL8mw-001	Unconsolidated	1121.46	1,110.01	1,113.54	1,109.52	1,107.26	14.20	26.8	27.47	-0.67	Medium
LL8mw-002	Unconsolidated	1124.51	1,106.24	1,109.76	1,105.78	1,102.80	21.71	32.8	32.61	0.19	Hard
LL8mw-003	Unconsolidated	1119.05	1,106.36	1,109.85	1,105.88	1,103.11	15.94	23.3	23.00	0.30	Hard
LL8mw-004	Unconsolidated	1115.75	1,104.88	1,108.06	1,104.26	1,101.33	14.42	23	22.71	0.29	Hard
LL8mw-005	Homewood	1115.73	1,101.95	1,106.15	1,101.94	1,099.63	16.10	27.2	26.94	0.26	Medium
LL8mw-006	Homewood	1117.17	1,097.47	1,100.08	1,096.97	1,095.56	21.61	26.8	27.02	-0.22	Medium
Loadline 9											
LL9mw-001	Homewood	1134.62	1,119.61	1,123.11	1,118.23	1,117.30	17.32	23.3	23.26	0.04	Hard
LL9mw-002	Homewood	1127.30	1,116.61	1,113.43	1,113.49	1,110.55	16.75	22.4	22.71	-0.31	Hard
LL9mw-003	Homewood	1135.76	1,124.33	1,128.47	1,122.32	1,119.27	16.49	23.8	24.14	-0.34	Hard
LL9mw-004	Homewood	1131.83	1,110.62	1,111.08	1,110.72	1,108.88	22.95	34.9	34.67	0.23	Hard
LL9mw-005	Homewood	1130.93	1,114.83	1,124.00	1,113.61	1,112.13	18.80	23.3	23.48	-0.18	Hard
LL9mw-006	Homewood	1129.88	1,110.96	1,111.76	1,110.13	1,108.25	21.63	28.9	28.79	0.11	Hard
LL9mw-007	Homewood	1119.99	1,110.69	1,103.91	1,109.85	1,108.31	11.68	18.5	18.09	0.41	Hard
Loadline 10											
LL10mw-001	Homewood	1132.77	1,107.67	1,110.61	1,108.28	1,106.42	26.35	29.8	29.50	0.30	Hard
LL10mw-002	Homewood	1127.13	1,109.33	1,113.04	1,108.93	1,107.59	19.54	29.7	29.78	-0.08	Hard
LL10mw-003	Homewood	1130.28	1,109.33	1,113.06	1,108.77	1,108.58	21.70	28.9	28.50	0.40	Hard
LL10mw-004	Homewood	1122.39	1,108.97	1,113.39	1,108.44	1,106.90	15.49	33.8	33.46	0.34	Hard
LL10mw-005	Homewood	1125.67	1,109.92	1,113.48	1,109.48	1,107.85	17.82	29.3	29.21	0.09	Hard
LL10mw-006	Unconsolidated	1123.83	1,111.64	1,114.38	1,110.63	1,108.63	15.20	26.1	26.49	-0.39	Hard

Table 3-1 October 2009 FWGMP Monitoring Well Measurements

Well	Monitoring Zone	Top of Casing (TOC) Elevation[a] (ft)	2009 1st Quarter Groundwater Elevation (Jan/2009) (ft)	2009 2nd Quarter Groundwater Elevation (Apr/2009) (ft)	2009 3rd Quarter Groundwater Elevation (Jul/2009) (ft)	2009 4th Quarter Groundwater Elevation (Oct/2009) (ft)	Depth to Water (ft below TOC) Oct/2009	Reported Construction Depth from TOC[a] (ft)	Oct/2009 Measured Depth from TOC (ft)	Oct/2009 Sediment Accumulation (ft)	Oct/2009 Description of Bottom
Loadline 11											
LL11mw-001	Unconsolidated	1100.16	1,091.45	1,092.44	1,089.06	1,088.45	11.71	24.1	23.22	0.88	Hard
LL11mw-003	Unconsolidated	1088.48	1,087.78	1,087.98	1,085.39	1,085.56	2.92	15.9	16.01	-0.11	Hard
LL11mw-004	Unconsolidated	1084.72	1,084.32	1,084.63	1,082.08	1,081.94	2.78	16.2	16.15	0.05	Hard
LL11mw-005	Unconsolidated	1079.40	1,073.00	1,075.63	1,070.52	1,068.42	10.98	16	16.39	-0.39	Hard
LL11mw-006	Unconsolidated	1086.50	1,083.01	1,085.08	1,080.48	1,079.92	6.58	15.5	15.68	-0.18	Hard
LL11mw-008	Unconsolidated	1087.74	1,084.06	1,087.05	1,083.72	1,083.49	4.25	15.4	15.69	-0.29	Hard
LL11mw-009	Unconsolidated	1091.54	NM	1,089.52	1,086.93	1,086.83	4.71	16.6	19.47	-2.87	Hard
LL11mw-010	Unconsolidated	1082.68	1,078.95	1,079.68	1,077.06	1,076.38	6.30	23.4	23.40	0.00	Hard
Atlas Scrap Yard											
ASYmw-001	Sharon	981.13	NM	970.52	968.89	967.29	13.84	23.7	23.11	0.59	Hard
ASYmw-002	Sharon	985.24	NM	974.86	970.61	968.78	16.46	22.7	22.88	-0.18	Hard
ASYmw-003	Sharon	982.21	NM	970.89	969.01	957.46	24.75	23.5	23.46	0.04	Hard
ASYmw-004	Sharon	979.66	NM	971.41	969.88	967.73	11.93	29.6	29.72	-0.12	Hard
ASYmw-005	Sharon	979.8	NM	973.03	971.57	968.75	11.05	26.2	27.11	-0.91	Hard
ASYmw-006	Sharon	983.01	NM	969.96	968.77	967.47	15.54	28.8	28.84	-0.04	Hard
ASYmw-007	Unconsolidated	984.16	NM	969.64	968.91	967.92	16.24	28.8	28.85	-0.05	Hard
ASYmw-008	Unconsolidated	978.85	NM	974.64	974.75	972.24	6.61	27.7	26.58	1.12	Medium
ASYmw-009	Sharon	982.7	NM	971.73	969.65	968.31	14.39	24.3	24.32	-0.02	Medium
ASYmw-010	Unconsolidated	981.05	NM	969.72	968.63	967.25	13.80	29.8	31.07	-1.27	Hard
Detonation Area 2											
DETmw-003	Unconsolidated	1036.81	NM	1,027.92	NM	1,027.03	9.78	13.00	16.01	-3.01	Medium
DETmw-004	Unconsolidated	1038.68	NM	1,029.39	NM	1,027.71	10.97	12.00	13.81	-1.81	Hard
Ramsdell Quarry											
RQLmw-007	Sharon	965.91	NM	960.16	NM	955.15	10.76	18.2	18.6	-0.40	Hard
RQLmw-008	Sharon	966.08	NM	960.13	NM	955.68	10.4	18.5	18.62	-0.12	Hard
RQLmw-009	Sharon	964.58	NM	960.08	NM	955.13	9.45	18.4	18.79	-0.39	Hard

a = Elevations are in feet above mean sea level (amsl)

NM = New wells added to the sampling schedule, not measured in all quarters

Table 3-2. September 2009 Redevelopment Results

Well ID	Reported Construction Depth (ft)	October 2007 Well Depth Measurement (ft)	July 2008 Well Depth Measurement (ft)	January 2009 Well Depth Measurement (ft)	September 2009 Well Depth Measurement Pre-Redevelopment (ft)	September 2009 Well Depth Measurement Post-Redevelopment (ft)	Current Description of Bottom/Comments
CBLmw-001	51.6	49.79	49.95	49.70	49.63	50.81	dry sinks into sand
CBLmw-001	51.6	49.79	49.95	49.70	50.8	51.15	hard, Water cleared during redevelopment activities.
CBLmw-003	45.8	44.82	44.92	44.71	44.7	44.7	goes dry, hard, Water cleared during redevelopment activities.
CBPmw-001	34.9	32.84	32.81	32.68	32.58	34.89	goes dry
CPmw-001	15.3	14.8	14.81	14.74	14.7	14.73	hard goes dry
CPmw-006	20.2	20.74	20.75	20.62	20.62	20.62	hard, Water cleared during redevelopment activities.
CPmw-006	20.2	20.74	20.75	20.62	20.62	20.62	Hard. Development water was a slurry-like mixture containing grey clay. Water cleared during redevelopment activities.
DA2mw-106	18.1	16.9	16.97	16.78	16.78	16.78	hard, goes dry, Water cleared during redevelopment activities.
DET-001B	40.5	38.61	38.69	38.48	38.51	38.51	hard, Water cleared during redevelopment activities.
FBQmw-173	53.0	51.79	51.89	51.75	51.65	52.95	hard, Water cleared during redevelopment activities.
FBQmw-174	26.2	22.95	23.04	22.84	22.83	23.00	hard
LL10mw-003	28.9	28.62	28.7	28.49	28.5	28.5	hard
LL11mw-001	24.1	21.61	21.65	21.45	21.39	23.25	hard
LL1mw-065	23.4	23.14	23.01	23.05	23.11	23.37	hard
LL1mw-082	41.8	41.56	41.48	41.48	41.33	41.56	dry
LL1mw-082	41.8	41.56	41.48	41.48	41.56	41.57	goes dry
LL1mw-084	39.3	38.99	38.97	38.85	38.85	39.04	goes dry
LL2mw-263	23.0	22.66	22.65	22.53	22.48	23.40	hard, Water cleared during redevelopment activities.
LL4mw-198	22.3	21.04	20.90	20.72	20.66	22.71	Hard. Development water was a slurry-like mixture containing grey clay. Water did not clear during redevelopment activities.
LL5mw-002	27.9	27.6	27.04	27.42	27.4	27.49	goes dry 9/22/2009
LL5mw-002	27.9	27.6	27.04	27.42	27.49	27.51	goes dry 9/23/2009
MBS-001	31.5	31.03	31.10	30.92	30.92	30.97	hard, Water cleared during redevelopment activities.
MBS-002	30.7	30.44	30.52	30.33	30.31	31.12	hard
MBS-004	27.0	26.66	26.70	26.52	26.58	27.15	hard, Water cleared during redevelopment activities.
NTAmw-113	30.6	29.41	29.79	29.30	29.11	29.65	hard
RQLmw-014	31.6	31.44	31.25	31.15	31.13	31.49	hard, Water cleared during redevelopment activities.
WBGmw-012	32.0	31.73	31.75	31.55	31.5	31.63	goes dry , hard, Water cleared during redevelopment activities.

- well bottoms following redevelopment EQM believes there is no significant sediment accumulation in those wells.
- The remaining eight wells (CBLmw-003, CPmw-001, DA2mw-106, DETmw-001, LL10mw-003, LL1mw-082, LL5mw-002, and MBSmw-001) were also redeveloped with no significant change in the well depth measurement, and with reported hard bottoms. These wells were all however 0.23 to 1.99 feet shallower than the reported construction depth. Based on the lack of sediment removed, and the reported hard bottom of the wells, EQM believes there is no significant sediment accumulation in those wells.
- CPmw-006 was redeveloped for turbidity issues. This well was redeveloped until all indicator parameters were stabilized and the water was clear.

It should be noted that in order to minimize turbid samples, low flow purging and sampling techniques are used. The pumps are suspended at least one foot above the bottom of the well to avoid agitation of the sediment potentially accumulating in the well sump. EQM will continue to monitor any high turbidity readings and make a determination for future redevelopment and other evaluation of any affected wells.

3.1.2 Groundwater pH

Groundwater pH values of less than 5 have been noted in several wells over the past four sampling events. EQM has reviewed the historical purge records for these wells. The pH readings are presented below for these wells. The low pH in some of the wells could be indicative of groundwater contamination, however a full evaluation of the conditions at these wells will be conducted once all of the wells have been sampled.

pH Levels for Selected Wells

Well ID	January 2009 pH Range	April 2009 pH Range	July 2009 pH Range	October 2009 pH Range
LL11mw-005	5.09 – 5.76	4.91 - 4.97	4.52 – 4.62	5.03 – 5.83
LL6mw-007	7.85 – 8.05	4.12 - 4.13	6.34 – 7.39	6.57 – 6.95
LL9mw-006	4.6 – 5.21	4.73 – 6.61	4.30 – 5.57	4.41 – 4.64
LL7mw-006	5.20 – 5.40	5.37 – 5.60	4.69 – 4.75	5.27 – 5.31
LL9mw-007	4.8 – 5.6	5.74 - 8.31	4.78 – 5.28	5.83 – 5.88
LL9mw-002	4.9 – 5.1	5.0 – 5.05	4.75 – 4.87	5.27 – 5.4

As noted above, there does not seem to be a trend toward decreasing pH levels in these wells.

3.2 Summary of Analytical Results

Summaries of laboratory analytical results are presented in Tables 3-3, 3-4, 3-6, 3-7, and 3-8. Appendix D presents the Laboratory Data Sheets**.** A brief summary of the detected compounds and elements are presented in the following sub-sections. The data presented in the tables are the validated and verified data. Data verification and validation is discussed in Section 3.3 and Appendix D. While reviewing the summary of analytical results please note the following:

- The screening levels referenced in the analytical summary tables are the 40 CFR Part 141 National Primary Drinking Water Regulations, Maximum Contaminant Levels (MCLs); and the Region 9 Preliminary Remediation Goals (PRGs) for tap water. MCLs are referenced as the screening criteria (for constituents not having an MCL, the Region 9 PRG is used). Also used as screening levels for metals are the RVAAP Facility-Wide Background Criteria referenced in Table 3-5.

- As discussed in Section 3.3, under the data validation process data are qualified by EQM's validator following the guidelines and qualifier requirements set forth by the FWSAP, QAPP and the current Louisville Chemistry Guidelines (LCG) (i.e., data are either accepted or requalified per the requirements of the LCG). This results in the flags designated by EQM sometimes differing from those in the laboratory data sheets. The flags designated by the validator override any laboratory flagging of the data by the laboratory. For a complete explanation of the data qualifiers used for each constituent refer to Section 3.3 and to the Data Verification Summary Reports found in Appendix D.

- For purposes of consistency, all detected concentrations that are elevated above both the method detection limit (MDL) and the above referenced screening levels are called out in the following text. In the tables, the compounds and elements that were detected above the method detection limit are presented in bold numbers. This includes constituents flagged as estimated.

- Several analytical methods used to analyze a number of explosives, VOCs, metals, SVOCs, and pesticides currently do not meet the RVAAP QAPP reporting limits or Region 9 preliminary remediation goals (PRGs). Tables listing the reporting limits that currently do not meet the RVAAP QAPP PQLs and/or Region 9 PRG levels are presented in Appendix G.

3.2.1 Explosives and Propellants

Explosive and propellant compound analytical results are summarized in Table 3-3. The following compounds were detected at concentrations above the method detection limits:

- 1,3,5-Trinitrobenzene – LL6mw-005 (0.039 µg/L J), LL6mw-006 (0.037 µg/L J), LL7mw-003 (0.042 µg/L J), LL7mw-004 (0.035 µg/L J), LL7mw-005 (0.032 µg/L J), LL7mw-006 (0.039 µg/L J), ASYmw-008 (0.098 µg/L J B).

There is no MCL for 1,3,5-Trinitrobenzene. The Region 9 PRG is 1,100 μg/L.

- 2,6-Dinitotoluene – LL6mw-006 (0.090 μg/L J), LL9mw-007 (0.098 μg/L J B). There is no MCL for 2,6-Dinbitrotoluene. The Region 9 PRG is 36 μg/L.

- HMX – LL7mw-004 (0.048 μg/L), DETmw-004 (1.5 μg/L). There is no MCL for HMX. The Region 9 PRG is 1,800 μg/L.

- Nitrobenzene – LL7mw-003 (0.13 μg/L J), LL7mw-005 (0.051 μg/L J). There is no MCL for Nitrobenzene. The Region 9 PRG is 3.4 μg/L.

- Nitrocellulose – LL8mw-003 (0.15 μg/L J), LL8mw-006 (0.13 μg/L J B), LL10mw-003 (0.13 μg/L J B). There is no MCL or Region 9 PRG for Nitrocellulose.

- RDX – LL7mw-006 (0.78 μg/L), DETmw-004 (0.43 μg/L). There is no MCL for RDX. The Region 9 PRG is 0.61 μg/L.

As shown in Table 3-3, the only explosive detected at levels above the Region 9 PRGs during the October 2009 sampling event was RDX in LL7mw-006 at a level of 0.78 μg/L. The Region 9 PRG is 0.61 μg/L.

Table 3-3 FWGWMP October 2009 Explosive and Propellant Analytical Results

Station ID				LL6mw-005	LL6mw-006	LL6mw-007	LL7mw-001	LL7mw-002	LL7mw-003	LL7mw-004
Sample ID		MCL	Region 9 PRG	FWGLL6mw-005C-1427-GW	FWGLL6mw-006C-1428-GW	FWGLL6mw-007C-1429-GW	FWGLL7mw-001C-1430-GW	FWGLL7mw-002C-1431-GW	FWGLL7mw-003C-1432-GW	FWGLL7mw-004C-1433-GW
Date Collected				10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,3,5-Trinitrobenzene	µg/L	NS	1100	**0.039 J**	**0.037 J**	0.097 U	0.097 U	0.10 U	**0.042 J**	**0.035 J**
1,3-Dinitrobenzene	µg/L	NS	3.6	0.10 U	0.10 U	0.097 U	0.097 U	0.10 U	0.097 U	0.11 U
2,4,6-Trinitrolouene	µg/L	NS	2.2	0.10 U	0.10 U	0.097 U	0.097 U	0.10 U	0.097 U	0.11 U
2,4-Dinitrotoluene	µg/L	NS	73	0.10 U	0.10 U	0.097 U	0.097 U	0.10 U	0.097 U	0.11 U
2,6-Dinitrotoluene	µg/L	NS	36	0.10 U	**0.090 J**	0.097 U	0.097 U	0.10 U	0.097 U	0.11 U
2-Amino-4,6-dinitrotoluene	µg/L	NS	NS	0.10 U	0.10 U	0.097 U	0.097 U	0.10 U	0.097 U	0.11 U
2-Nitrotoluene	µg/L	NS	0.049	0.51 U	0.50 U	0.48 U	0.48 U	0.52 U	0.48 U	0.53 U
3-Nitrotoluene	µg/L	NS	120	0.51 U	0.50 U	0.48 U	0.48 U	0.52 U	0.48 U	0.53 U
4-Amino-2,6-Dinitrotoluene	µg/L	NS	NS	0.10 U	0.10 U	0.097 U	0.097 U	0.10 U	0.097 U	0.11 U
4-Nitrotoluene	µg/L	NS	0.66	0.51 U	0.50 U	0.48 U	0.48 U	0.52 U	0.48 U	0.53 U
HMX	µg/L	NS	1800	0.10 U	0.10 U	0.097 U	0.097 U	0.10 U	0.097 U	**0.048 J**
Nitrobenzene	µg/L	NS	3.4	0.10 U	0.10 U	0.097 U	0.097 U	0.10 U	**0.13 J**	0.11 U
Nitrocellulose	mg/L	NS	NS	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Nitroglycerin	µg/L	NS	4.8	0.66 U	0.65 U	0.63 U	0.63 U	0.67 U	0.63 U	0.69 U
Nitroguanidine	µg/L	NS	NS	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PETN	µg/L	NS	NS	0.66 U	0.65 U	0.63 U	0.63 U	0.67 U	0.63 U	0.69 U
RDX	µg/L	NS	0.61	0.10 U	0.10 U	0.097 U	0.097 U	0.10 U	0.097 U	0.11 U
Tetryl	µg/L	NS	360	0.10 U	0.10 U	0.097 U	0.097 U	0.10 U	0.097 U	0.11 U

Notes:
NS = no standard
Bold = detected compound above the MDL
N/A = Not Analyzed

Table 3-3 FWGWMP October 2009 Explosive and Propellant Analytical Results

Station ID				LL7mw-005	LL7mw-006	LL8mw-001	LL8mw-002	LL8mw-003	LL8mw-004	LL8mw-005
Sample ID		MCL	Region 9 PRG	FWGLL7mw-005C-1434-GW	FWGLL7mw-006C-1435-GW	FWGLL8mw-001C-1436-GW	FWGLL8mw-002C-1437-GW	FWGLL8mw-003C-1438-GW	FWGLL8mw-004C-1439-GW	FWGLL8mw-005C-1440-GW
Date Collected				10/12/2009	10/12/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,3,5-Trinitrobenzene	µg/L	NS	1100	**0.032 J**	**0.039 J**	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U
1,3-Dinitrobenzene	µg/L	NS	3.6	0.10 U	0.11 U	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U
2,4,6-Trinitrolouene	µg/L	NS	2.2	0.10 U	0.11 U	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U
2,4-Dinitrotoluene	µg/L	NS	73	0.10 U	0.11 U	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U
2,6-Dinitrotoluene	µg/L	NS	36	0.10 U	0.11 U	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U
2-Amino-4,6-dinitrotoluene	µg/L	NS	NS	0.10 U	0.11 U	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U
2-Nitrotoluene	µg/L	NS	0.049	0.50 U	0.54 U	0.52 U	0.50 U	0.52 U	0.49 U	0.48 U
3-Nitrotoluene	µg/L	NS	120	0.50 U	0.54 U	0.52 U	0.50 U	0.52 U	0.49 U	0.48 U
4-Amino-2,6-Dinitrotoluene	µg/L	NS	NS	0.10 U	0.11 U	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U
4-Nitrotoluene	µg/L	NS	0.66	0.50 U	0.54 U	0.52 U	0.50 U	0.52 U	0.49 U	0.48 U
HMX	µg/L	NS	1800	0.10 U	**0.085 J**	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U
Nitrobenzene	µg/L	NS	3.4	**0.051 J**	0.11 U	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U
Nitrocellulose	mg/L	NS	NS	0.50 U	0.50 U	0.50 UJ	0.50 UJ	**0.15 JB**	0.50 UJ	0.50 UJ
Nitroglycerin	µg/L	NS	4.8	0.66 U	0.70 U	0.68 U	0.66 U	0.67 U	0.64 U	0.63 U
Nitroguanidine	µg/L	NS	NS	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PETN	µg/L	NS	NS	0.66 U	0.70 U	0.68 U	0.66 U	0.67 U	0.64 U	0.63 U
RDX	µg/L	NS	0.61	0.10 U	**0.78 J**	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U
Tetryl	µg/L	NS	360	0.10 U	0.11 U	0.10 U	0.10 U	0.10 U	0.098 U	0.097 U

Notes:
NS = no standard
Bold = detected compound above the MDL
N/A = Not Analyzed

Table 3-3 FWGWMP October 2009 Explosive and Propellant Analytical Results

Station ID				LL8mw-006	LL9mw-001	LL9mw-002	LL9mw-003	LL9mw-004	LL9mw-005	LL9mw-006
Sample ID		MCL	Region 9 PRG	FWGLL8mw-006C-1441-GW	FWGLL9mw-001C-1442-GW	FWGLL9mw-002C-1443-GW	FWGLL9mw-003C-1444-GW	FWGLL9mw-004C-1445-GW	FWGLL9mw-005C-1446-GW	FWGLL9mw-006C-1447-GW
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,3,5-Trinitrobenzene	µg/L	NS	1100	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U
1,3-Dinitrobenzene	µg/L	NS	3.6	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U
2,4,6-Trinitrolouene	µg/L	NS	2.2	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U
2,4-Dinitrotoluene	µg/L	NS	73	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U
2,6-Dinitrotoluene	µg/L	NS	36	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U
2-Amino-4,6-dinitrotoluene	µg/L	NS	NS	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U
2-Nitrotoluene	µg/L	NS	0.049	0.48 U	0.51 U	0.48 U	0.52 U	0.49 U	0.48 U	0.52 U
3-Nitrotoluene	µg/L	NS	120	0.48 U	0.51 U	0.48 U	0.52 U	0.49 U	0.48 U	0.52 U
4-Amino-2,6-Dinitrotoluene	µg/L	NS	NS	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U
4-Nitrotoluene	µg/L	NS	0.66	0.48 U	0.51 U	0.48 U	0.52 U	0.49 U	0.48 U	0.52 U
HMX	µg/L	NS	1800	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U
Nitrobenzene	µg/L	NS	3.4	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U
Nitrocellulose	mg/L	NS	NS	**0.13 JB**	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ
Nitroglycerin	µg/L	NS	4.8	0.62 U	0.66 U	0.62 U	0.67 U	0.64 U	0.63 U	0.67 U
Nitroguanidine	µg/L	NS	NS	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PETN	µg/L	NS	NS	0.62 U	0.66 U	0.62 U	0.67 U	0.64 U	0.63 U	0.67 U
RDX	µg/L	NS	0.61	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U
Tetryl	µg/L	NS	360	0.096 U	0.10 U	0.095 U	0.10 U	0.098 U	0.097 U	0.10 U

Notes:
NS = no standard
Bold = detected compound above the MDL
N/A = Not Analyzed

Table 3-3 FWGWMP October 2009 Explosive and Propellant Analytical Results

Station ID				LL9mw-007	LL10mw-001	LL10mw-002	LL10mw-003	LL10mw-004	LL10mw-005	LL10mw-006
Sample ID		MCL	Region 9 PRG	FWGLL9mw-007C-1448-GW	FWGLL10mw-001C-1449-GW	FWGLL10mw-002C-1450-GW	FWGLL10mw-003C-1451-GW	FWGLL10mw-004C-1452-GW	FWGLL10mw-005C-1453-GW	FWGLL10mw-006C-1454-GW
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,3,5-Trinitrobenzene	µg/L	NS	1100	0.098 U	0.098 U	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U
1,3-Dinitrobenzene	µg/L	NS	3.6	0.098 U	0.098 U	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U
2,4,6-Trinitrolouene	µg/L	NS	2.2	0.098 U	0.098 U	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U
2,4-Dinitrotoluene	µg/L	NS	73	0.098 U	0.098 U	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U
2,6-Dinitrotoluene	µg/L	NS	36	**0.098 JB**	0.098 U	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U
2-Amino-4,6-dinitrotoluene	µg/L	NS	NS	0.098 U	0.098 U	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U
2-Nitrotoluene	µg/L	NS	0.049	0.49 U	0.49 U	0.50 U	0.53 U	0.48 U	0.48 U	0.52 U
3-Nitrotoluene	µg/L	NS	120	0.49 U	0.49 U	0.50 U	0.53 U	0.48 U	0.48 U	0.52 U
4-Amino-2,6-Dinitrotoluene	µg/L	NS	NS	0.098 U	0.098 U	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U
4-Nitrotoluene	µg/L	NS	0.66	0.49 U	0.49 U	0.50 U	0.53 U	0.48 U	0.48 U	0.52 U
HMX	µg/L	NS	1800	0.098 U	0.098 U	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U
Nitrobenzene	µg/L	NS	3.4	0.098 U	0.098 U	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U
Nitrocellulose	mg/L	NS	NS	0.50 UJ	0.50 UJ	0.50 UJ	**0.13 JB**	0.50 UJ	0.50 UJ	0.50 UJ
Nitroglycerin	µg/L	NS	4.8	0.64 U	0.64 U	0.64 U	0.69 U	0.63 U	0.63 U	0.67 U
Nitroguanidine	µg/L	NS	NS	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PETN	µg/L	NS	NS	0.64 U	0.64 U	0.64 U	0.69 U	0.63 U	0.63 U	0.67 U
RDX	µg/L	NS	0.61	0.098 U	**0.078 J**	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U
Tetryl	µg/L	NS	360	0.098 U	0.098 U	0.099 U	0.11 U	0.097 U	0.097 U	0.10 U

Notes:
NS = no standard
Bold = detected compound above the MDL
N/A = Not Analyzed

Table 3-3 FWGWMP October 2009 Explosive and Propellant Analytical Results

Station ID				LL11mw-001	LL11mw-003	LL11mw-004	LL11mw-005	LL11mw-006	LL11mw-008	LL11mw-009
Sample ID		MCL	Region 9 PRG	FWGLL11mw-001C-1455-GF	FWGLL11mw-003C-1456-GW	FWGLL11mw-004C-1457-GW	FWGLL11mw-005C-1458-GW	FWGLL11mw-006C-1459-GW	FWGLL11mw-008C-1460-GW	FWGLL11mw-009C-1461-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,3,5-Trinitrobenzene	µg/L	NS	1100	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	0.098 U
1,3-Dinitrobenzene	µg/L	NS	3.6	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	0.098 U
2,4,6-Trinitrolouene	µg/L	NS	2.2	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	0.098 U
2,4-Dinitrotoluene	µg/L	NS	73	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	0.098 U
2,6-Dinitrotoluene	µg/L	NS	36	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	**0.098 JB**
2-Amino-4,6-dinitrotoluene	µg/L	NS	NS	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	0.098 U
2-Nitrotoluene	µg/L	NS	0.049	0.50 U	0.65 U	0.50 U	0.50 U	0.52 U	0.50 U	0.49 U
3-Nitrotoluene	µg/L	NS	120	0.50 U	0.65 U	0.50 U	0.50 U	0.52 U	0.50 U	0.49 U
4-Amino-2,6-Dinitrotoluene	µg/L	NS	NS	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	0.098 U
4-Nitrotoluene	µg/L	NS	0.66	0.50 U	0.65 U	0.50 U	0.50 U	0.52 U	0.50 U	0.49 U
HMX	µg/L	NS	1800	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	0.098 U
Nitrobenzene	µg/L	NS	3.4	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	0.098 U
Nitrocellulose	mg/L	NS	NS	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ
Nitroglycerin	µg/L	NS	4.8	0.65 U	0.84 U	0.65 U	0.65 U	0.68 U	0.66 U	0.64 U
Nitroguanidine	µg/L	NS	NS	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PETN	µg/L	NS	NS	0.65 U	0.84 U	0.65 U	0.65 U	0.68 U	0.66 U	0.64 U
RDX	µg/L	NS	0.61	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	0.098 U
Tetryl	µg/L	NS	360	0.10 U	0.13 U	0.10 U	0.10 U	0.10 U	0.10 U	0.098 U

Notes:
NS = no standard
Bold = detected compound above the MDL
N/A = Not Analyzed

Table 3-3 FWGWMP October 2009 Explosive and Propellant Analytical Results

Station ID				LL11mw-010	ASYmw-001	ASYmw-002	ASYmw-003	ASYmw-004	ASYmw-005	ASYmw-006
Sample ID		MCL	Region 9 PRG	FWGLL11mw-010C-1462-GW	FWGASYmw-001C-1463-GW	FWGASYmw-002C-1464-GW	FWGASYmw-003C-1465-GW	FWGASYmw-004C-1466-GW	FWGASYmw-005C-1467-GW	FWGASYmw-006C-1468-GW
Date Collected				10/14/2009	10/14/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,3,5-Trinitrobenzene	µg/L	NS	1100	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U
1,3-Dinitrobenzene	µg/L	NS	3.6	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U
2,4,6-Trinitrolouene	µg/L	NS	2.2	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U
2,4-Dinitrotoluene	µg/L	NS	73	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U
2,6-Dinitrotoluene	µg/L	NS	36	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U
2-Amino-4,6-dinitrotoluene	µg/L	NS	NS	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U
2-Nitrotoluene	µg/L	NS	0.049	0.48 U	0.52 U	0.49 U	0.49 U	0.50 U	0.50 U	0.50 U
3-Nitrotoluene	µg/L	NS	120	0.48 U	0.52 U	0.49 U	0.49 U	0.50 U	0.50 U	0.50 U
4-Amino-2,6-Dinitrotoluene	µg/L	NS	NS	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U
4-Nitrotoluene	µg/L	NS	0.66	0.48 U	0.52 U	0.49 U	0.49 U	0.50 U	0.50 U	0.50 U
HMX	µg/L	NS	1800	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U
Nitrobenzene	µg/L	NS	3.4	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U
Nitrocellulose	mg/L	NS	NS	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Nitroglycerin	µg/L	NS	4.8	0.63 U	0.67 U	0.64 U	0.64 U	0.66 U	0.65 U	0.64 U
Nitroguanidine	µg/L	NS	NS	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PETN	µg/L	NS	NS	0.63 U	0.67 U	0.64 U	0.64 U	0.66 U	0.65 U	0.64 U
RDX	µg/L	NS	0.61	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U
Tetryl	µg/L	NS	360	0.097 U	0.10 U	0.098 U	0.098 U	0.10 U	0.10 U	0.099 U

Notes:
NS = no standard
Bold = detected compound above the MDL
N/A = Not Analyzed

Table 3-3 FWGWMP October 2009 Explosive and Propellant Analytical Results

Station ID				ASYmw-007	ASYmw-008	ASYmw-009	ASYmw-010	DETmw-003	DETmw-004
Sample ID		MCL	Region 9 PRG	FWGASYmw-007C-1469-GW	FWGASYmw-008C-1470-GW	FWGASYmw-009C-1471-GW	FWGASYmw-010C-1472-GW	FWGDETmw-003C-1488-GW	FWGDETmw-004C-1489-GW
Date Collected				10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units								
1,3,5-Trinitrobenzene	µg/L	NS	1100	0.10 U	**0.098 BJ**	0.10 U	0.098 U	**0.099 JB**	0.11 U
1,3-Dinitrobenzene	µg/L	NS	3.6	0.10 U	0.098 U	0.10 U	0.098 U	0.099 U	0.11 U
2,4,6-Trinitrolouene	µg/L	NS	2.2	0.10 U	0.098 U	0.10 U	0.098 U	0.099 U	0.11 U
2,4-Dinitrotoluene	µg/L	NS	73	0.10 U	0.098 U	0.10 U	0.098 U	0.099 U	0.11 U
2,6-Dinitrotoluene	µg/L	NS	36	0.10 U	0.098 U	0.10 U	0.098 U	0.099 U	0.11 U
2-Amino-4,6-dinitrotoluene	µg/L	NS	NS	0.10 U	0.098 U	0.10 U	0.098 U	0.099 U	0.11 U
2-Nitrotoluene	µg/L	NS	0.049	0.51 U	0.49 U	0.51 U	0.49 U	0.50 U	0.53 U
3-Nitrotoluene	µg/L	NS	120	0.51 U	0.49 U	0.51 U	0.49 U	0.50 U	0.53 U
4-Amino-2,6-Dinitrotoluene	µg/L	NS	NS	0.10 U	0.098 U	0.10 U	0.098 U	0.099 U	0.11 U
4-Nitrotoluene	µg/L	NS	0.66	0.51 U	0.49 U	0.51 U	0.49 U	0.50 U	0.53 U
HMX	µg/L	NS	1800	0.10 U	0.098 U	0.10 U	0.098 U	0.099 U	**1.5**
Nitrobenzene	µg/L	NS	3.4	0.10 U	0.098 U	0.10 U	0.098 U	0.099 U	0.11 U
Nitrocellulose	mg/L	NS	NS	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Nitroglycerin	µg/L	NS	4.8	0.66 U	0.64 U	0.66 U	0.64 U	0.64 U	0.69 U
Nitroguanidine	µg/L	NS	NS	20 U	20 U	20 U	20 U	20 U	20 U
PETN	µg/L	NS	NS	0.66 U	0.64 U	0.66 U	0.64 U	0.64 U	0.69 U
RDX	µg/L	NS	0.61	0.10 U	0.098 U	0.10 U	0.098 U	0.099 U	**0.43 J**
Tetryl	µg/L	NS	360	0.10 U	0.098 U	0.10 U	0.098 U	0.099 U	0.11 U

Notes:
NS = no standard
Bold = detected compound above the MDL
N/A = Not Analyzed

Table 3-3 FWGWMP October 2009 Explosive and Propellant Analytical Results

Station ID				RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		MCL	Region 9 PRG	FWGRQLmw-007C-1485-GW	FWGRQLmw-008C-1486-GW	FWGRQLmw-009C-1487-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab
Analyte	Units					
1,3,5-Trinitrobenzene	µg/L	NS	1100	**0.10 JB**	0.10 U	**0.10 JB**
1,3-Dinitrobenzene	µg/L	NS	3.6	0.10 U	0.10 U	0.10 U
2,4,6-Trinitrolouene	µg/L	NS	2.2	0.10 U	0.10 U	0.10 U
2,4-Dinitrotoluene	µg/L	NS	73	0.10 U	0.10 U	0.10 U
2,6-Dinitrotoluene	µg/L	NS	36	0.10 U	0.10 U	0.10 U
2-Amino-4,6-dinitrotoluene	µg/L	NS	NS	0.10 U	0.10 U	0.10 U
2-Nitrotoluene	µg/L	NS	0.049	0.50 U	0.52 U	0.51 U
3-Nitrotoluene	µg/L	NS	120	0.50 U	0.52 U	0.51 U
4-Amino-2,6-Dinitrotoluene	µg/L	NS	NS	0.10 U	0.10 U	0.10 U
4-Nitrotoluene	µg/L	NS	0.66	0.50 U	0.52 U	0.51 U
HMX	µg/L	NS	1800	0.10 U	0.10 U	0.10 U
Nitrobenzene	µg/L	NS	3.4	0.10 U	0.10 U	0.10 U
Nitrocellulose	mg/L	NS	NS	0.50 UJ	0.50 UJ	0.50 UJ
Nitroglycerin	µg/L	NS	4.8	0.65 U	0.67 U	0.66 U
Nitroguanidine	µg/L	NS	NS	20 U	20 U	20 U
PETN	µg/L	NS	NS	0.65 U	0.67 U	0.66 U
RDX	µg/L	NS	0.61	0.10 U	0.10 U	0.10 U
Tetryl	µg/L	NS	360	0.10 U	0.10 U	0.10 U

Notes:
NS = no standard
Bold = detected compound above the MDL
N/A = Not Analyzed

Table 3-3 FWGWMP October 2009 Explosive and Propellant Analytical Results

Data Qualifiers

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

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

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

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

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

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

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

3.2.2 Inorganic Elements

Inorganic elements analytical results are presented in Table 3-4. The inorganics detected in the samples included: aluminum, arsenic, barium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, sodium, thallium, vanadium, and zinc. The inorganic elements that were detected were compared to facility-wide background levels, and against elements that are considered as essential nutrients to determine if they are to be considered as Site Related Contaminants (SRCs). Calcium, magnesium, iron, potassium, and sodium were eliminated as potential SRCs because they are considered as essential nutrients. Site-specific background levels for inorganic elements are presented in Table 3-5. The inorganic elements that were detected were compared to the appropriate background criteria to determine if they were SRCs. The following inorganic elements were detected above the method detection limits and the background levels reported in Table 3-5:

Aluminum

- Bedrock Zone – LL6mw-007 (117 µg/L J), LL7mw-005 (81.1 µg/L J), LL9mw-002 (38 µg/L J), LL9mw-005 (50.5 µg/L J), LL9mw-006 (23.5 µg/L J), ASYmw-001 (46.1 µg/L J), ASYmw-005 (43.6 µg/L J), ASYmw-009 (142 µg/L). The Groundwater Bedrock Zone Background Criteria (filtered) is 0 µg/L.
- Unconsolidated Zone – LL6mw-006 (180 µg/L J), LL8mw-001 (65 µg/L), LL8mw-003 (47.5 µg/L J), LL8mw-004 (23.3 µg/L J), LL8mw-005 (170 µg/L), LL10mw-001 (53.7 µg/L), LL11mw-005 (102 µg/L),LL11mw-008 (25.3 µg/L J), LL11mw-009 (41.7 µg/L J), LL11mw-010 (26.3 µg/L), ASYmw-008 (6,300 µg/L). The Groundwater Unconsolidated Zone Background Criteria (filtered) is 0 µg/L. The MCL for aluminum is 200 µg/L. The Region 9 PRG is 36,000 µg/L.

Arsenic

- Bedrock Zone – LL6mw-005 (14.4 µg/L), ASYmw-003 (8.6 µg/L), ASYmw-004 (28.0 µg/L), ASYmw-006 (17.0 µg/L), RQLmw-007 (71.4 µg/L), RQLmw-008 (29.9 µg/L), RQLmw-009 (8.9 µg/L). The Groundwater Bedrock Zone Background Criteria (filtered) is 0 µg/L.
- Unconsolidated Zone – ASYmw-008 (26.4 µg/L), ASYmw-010 (49.8 µg/L) The Groundwater Unconsolidated Zone Background Criteria (filtered) is 11.7 µg/L. The MCL for arsenic is 10 µg /L. The Region 9 PRG is 0.045 µg/L.

Cadmium

- Bedrock Zone: - LL6mw-007 (0.46 µg/L J), LL7mw-002 (0.40 µg/L J), LL7mw-006 (0.30 µg/L J). The Groundwater Bedrock Zone Background Criteria (filtered) is 0 µg/L.
- Unconsolidated Zone: - LL6mw-006 (0.47 µg/L J), LL11mw-004 (1.7 µg/L), LL11mw-005 (0.26 µg/L J). The Groundwater Unconsolidated Zone Background Criteria (filtered) is 0 µg/L.
  The MCL for cadmium is 5 µg/L. There Region 9 PRG is 18 µg/L.

Chromium

- Bedrock Zone: - RQlmw-008 (1.5 µg/L J), RQLmw-009 (1.8 µg/L J). The Groundwater Bedrock Zone Background Criteria (filtered) is 0 µg/L.
- Unconsolidated Zone: - ASYmw-008 (9.3 µg/L). The Groundwater Unconsolidated Zone Background Criteria (filtered) is 7.3 µg/L.
  The MCL is 100 µg/L. There Region 9 PRG is 110 µg/L.

Cobalt

- Bedrock Zone: - LL7mw-001 (7.0 µg/L), LL7mw-003 (4.6 µg/L J), LL7mw-004 (5.5 µg/L), LL7mw-005 (8.2 µg/L), LL9mw-004 (4.9 µg/L J), LL9mw-007 (9.3 µg/L), ASYmw-005 (3.4 µg/L J), RQLmw-007 (6.2 µg/L), RQLmw-009 (4.6 µg/L J). The Groundwater Bedrock Zone Background Criteria (filtered) is 0 µg/L.
- Unconsolidated Zone: - LL11mw-005 (1.5 µg/L J), ASYmw-008 (8.7 µg/L). The Groundwater Unconsolidated Zone Background Criteria (filtered) is 0 µg/L.
  There is no MCL for cobalt. The Region 9 PRG is 730 µg/L.

Copper

- Bedrock Zone: - None. The Groundwater Bedrock Zone Background Criteria (filtered) is 0 µg/L.
  The Groundwater Bedrock Zone Background Criteria is 0 µg/L.
- Unconsolidated Zone: - ASYmw-008 (15.0 µg/L). The Groundwater Unconsolidated Zone Background Criteria (filtered) is 0 µg/L.
  The MCL is 1,300 µg/L. The Region 9 PRG is 1,500 µg/L.

Lead

- Bedrock Zone: - None. The Groundwater Bedrock Zone Background Criteria (filtered) is 0 µg/L.
- Unconsolidated Zone: - ASYmw-008 (5.8 µg/L). The Groundwater Unconsolidated Zone Background Criteria (filtered) is 0 µg/L.
  The MCL is 15 µg/L. The Region 9 PRG is 880 µg/L.

Manganese

- Bedrock Zone: - LL7mw-003 (1,340 µg/L), LL7mw-005 (2,320 µg/L), LL8mw-005 (2,690 µg/L), LL9mw-004 (2,290 µg/L). The Groundwater Bedrock Zone Background Criteria (filtered) is 1,340 µg/L.
- Unconsolidated Zone: - None. The Groundwater Unconsolidated Zone Background Criteria (filtered) is 1,020 µg/L.
  The MCL for Manganese is 50 µg/L. The Region 9 PRG is 880 µg/L.

Nickel

- Bedrock Zone: - None. The Groundwater Bedrock Zone Background Criteria (filtered) is 83.4 µg/L.

- Unconsolidated Zone: - LL11mw-005 (12.2 µg/L J), LL11mw-009 (2.3 µg/L J), ASYmw-008 (16.9 µg/L B). The Groundwater Unconsolidated Zone Background Criteria (filtered) is 0 µg/L.
  There is no MCL for Nickel. The Region 9 PRG is 730 µg/L.

Selenium

- Bedrock Zone: - None. The Groundwater Bedrock Zone Background Criteria (filtered) is 0 µg/L.
- Unconsolidated Zone: - LL11mw-006 (5.3 µg/L). The Groundwater Unconsolidated Zone Background Criteria (filtered) is 0 µg/L. The MCL for Selenium is 50 µg/L. The Region 9 PRG is 180 µg/L.

Thallium

- Bedrock Zone: - LL7mw-003 (0.41 µg/L JB), LL9mw-004 (0.33 µg/L J). The Groundwater Bedrock Zone Background Criteria (filtered) is 0 µg/L.
- Unconsolidated Zone: - None. The Groundwater Unconsolidated Zone Background Criteria (filtered) is 0 µg/L. The MCL for Thallium is 2.0 µg/L. The Region 9 PRG is 2.4 µg/L.

Vanadium

- Bedrock Zone: - None. The Groundwater Bedrock Zone Background Criteria (filtered) is 0 µg/L.
- Unconsolidated Zone: - ASYmw-008 (10.7 µg/L). The Groundwater Unconsolidated Zone Background Criteria (filtered) is 0 µg/L. There is no MCL for Vanadium. The Region 9 PRG is 36 µg/L.

Zinc

- Bedrock Zone: - LL9mw-005 (58.1 µg/L J). The Groundwater Bedrock Zone Background Criteria (filtered) is 52.3 µg/L.
- Unconsolidated Zone: - None. The Groundwater Unconsolidated Zone Background Criteria (filtered) is 60.9 µg/L.
  The MCL for zinc is 5,000 µg/L. The Region 9 PRG is 11,000 µg/L.

Several inorganic compounds were detected at levels exceeding the MCLs and/or Region 9 PRGs. These included aluminum, manganese, arsenic, and iron for wells from all areas sampled. These compounds were also detected at concentrations exceeding the Facility-Wide Background Criteria for many of the wells. Table 4-1 in Section 4 presents a summary of all inorganic compounds and the associated wells that had detections exceeding MCLs or Region 9 PRGs.

The facility-wide groundwater conditions are still being evaluated, including background levels for all inorganic compounds. This will also include an evaluation of arsenic, iron, and manganese related to exceedances of the MCLs. The elevated concentrations of the subject parameters will be evaluated with respect to Ravenna's Draft Facility-Wide Clean-Up Goals (CUGs).

Table 3-4 FWGWMP October 2009 Inorganics Analytical Results

Station ID				LL6mw-005	LL6mw-006	LL6mw-007	LL7mw-001	LL7mw-002	LL7mw-003	LL7mw-004
Sample ID		MCL	Region 9 PRG	FWGLL6mw-005C-1427-GF	FWGLL6mw-006C-1428-GF	FWGLL6mw-007C-1429-GF	FWGLL7mw-001C-1430-GF	FWGLL7mw-002C-1431-GF	FWGLL7mw-003C-1432-GF	FWGLL7mw-004C-1433-GF
Date Collected				10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
Aluminum	µg/L	200	36000	50.0 UJ	**180 J**	**117 J**	50.0 UJ	50.0 UJ	50.0 U	50.0 UJ
Antimony	µg/L	6	15	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Arsenic	µg/L	10	0.045	**14.4**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Barium	µg/L	2000	2600	**64.2**	**26.5**	**15.4**	**22.1**	**51.7**	**48.1**	**40.5**
Beryllium	µg/L	4	73	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	µg/L	5	18	0.50 U	**0.47 J**	**0.46 J**	0.50 U	**0.40 J**	0.50 U	0.50 U
Calcium	µg/L	NS	NS	**78300**	**73100**	**55400**	**33600**	**37100**	**15800 J**	**8400**
Chromium	µg/L	100	110	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cobalt	µg/L	NS	730	5.0 U	5.0 U	5.0 U	**7.0**	5.0 U	**4.6 J**	**5.5**
Copper	µg/L	1300	1500	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cyanide	mg/L	0.2	0.73	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Iron	µg/L	300	11000	**946 J**	**363 J**	**185 J**	**8360 J**	50.0 U	**17200**	**17000 J**
Lead	µg/L	15	NS	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Magnesium	µg/L	NS	NS	**24400**	**29100**	**22700**	**11600**	**7830**	**5700**	**6260**
Manganese	µg/L	50	880	**501**	**72.4**	**394**	**460**	**311**	**1340**	**1230**
Mercury	µg/L	2	11	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	NS	730	10.0 U	10.0 U	10.0 U	**9.6 J**	**8.4 J**	**5.8 J**	**5.3 J**
Potassium	µg/L	NS	NS	**1040**	**1850**	**869 J**	**1020**	**1830**	**1160**	**1390**
Selenium	µg/L	50	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	µg/L	100	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sodium	µg/L	NS	NS	**8640**	**8220**	**7790**	**5800**	**2590**	**5240**	**15100**
Thallium	µg/L	2	2.4	1.0 U	1.0 U	0.25 UJB	0.32 UJB	1.0 U	**0.41 JB**	1.0 U
Vanadium	µg/L	NS	36	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Zinc	µg/L	5000	11000	10.0 U	**3.9 JB**	**2.4 JB**	**50.2 J**	**8.0 JB**	**14.3 B**	**14.4 B**

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-4 FWGWMP October 2009 Inorganics Analytical Results

Station ID				LL7mw-005	LL7mw-006	LL8mw-001	LL8mw-002	LL8mw-003	LL8mw-004	LL8mw-005	LL8mw-006
Sample ID		MCL	Region 9 PRG	FWGLL7mw-005C-1434-GF	FWGLL7mw-006C-1435-GF	FWGLL8mw-001C-1436-GF	FWGLL8mw-002C-1437-GF	FWGLL8mw-003C-1438-GF	FWGLL8mw-004C-1439-GF	FWGLL8mw-005C-1440-GF	FWGLL8mw-006C-1441-GF
Date Collected				10/12/2009	10/12/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units										
Aluminum	µg/L	200	36000	**81.1 J**	50.0 UJ	**65.0**	50.0 U	**47.5 J**	**23.3 J**	**170**	50.0 U
Antimony	µg/L	6	15	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Arsenic	µg/L	10	0.045	5.0 U	5.0 U	5.0 U	**6.6 J**	**4.1 J**	**3.3 J**	5.0 U	5.0 U
Barium	µg/L	2000	2600	**150**	**15.5**	**33.6**	**38.9**	**24.3**	**10.7**	**11.7**	**15.5**
Beryllium	µg/L	4	73	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	µg/L	5	18	0.50 U	**0.30 J**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Calcium	µg/L	NS	NS	**9040**	**8010**	**81900**	**95300**	**129000**	**88900**	**64400**	**70700**
Chromium	µg/L	100	110	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**1.4 J**	5.0 U	5.0 U
Cobalt	µg/L	NS	730	**8.2**	2.8 UJ	5.0 U	5.0 U	5.0 U	1.6 UJ	5.0 U	5.0 U
Copper	µg/L	1300	1500	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cyanide	mg/L	0.2	0.73	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Iron	µg/L	300	11000	**1290 J**	**2880 J**	**942**	**3850**	**929**	50.0 U	**1180**	50.0 U
Lead	µg/L	15	NS	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Magnesium	µg/L	NS	NS	**5150**	**5070**	**43600**	**38600**	**46000**	**43500**	**21600**	**28800**
Manganese	µg/L	50	880	**2320**	**1240**	**125**	**333**	**677**	**31.5**	**2690**	10.0 U
Mercury	µg/L	2	11	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	NS	730	**10.6**	**7.3 J**	10.0 U	10.0 U	10.0 U	10.0 U	**2.6 J**	10.0 U
Potassium	µg/L	NS	NS	**1120**	**902 J**	**1670**	**2070**	**2520**	**1290**	813 UJ	**1620**
Selenium	µg/L	50	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	µg/L	100	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sodium	µg/L	NS	NS	**2070**	**7650**	**29100**	**29400**	**45400**	**23300**	**11000**	**4760**
Thallium	µg/L	2	2.4	0.16 UJB	1.0 U	0.16 UJ	0.43 UJ	1.0 U	0.17 UJ	1.0 U	1.0 U
Vanadium	µg/L	NS	36	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Zinc	µg/L	5000	11000	**8.9 JB**	**12.6 B**	10.0 U	10.0 U	10.0 U	10.0 U	**3.0 JB**	10.0 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-4 FWGWMP October 2009 Inorganics Analytical Results

Station ID				LL9mw-001	LL9mw-002	LL9mw-003	LL9mw-004	LL9mw-005	LL9mw-006	LL9mw-007	LL10mw-001
Sample ID		MCL	Region 9 PRG	FWGLL9mw-001C-1442-GF	FWGLL9mw-002C-1443-GF	FWGLL9mw-003C-1444-GF	FWGLL9mw-004C-1445-GF	FWGLL9mw-005C-1446-GF	FWGLL9mw-006C-1447-GF	FWGLL9mw-007C-1448-GF	FWGLL10mw-001C-1449-GF
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units										
Aluminum	µg/L	200	36000	50.0 U	**38.0 J**	357	50.0 U	**50.5**	**23.5 J**	50.0 U	**53.7**
Antimony	µg/L	6	15	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Arsenic	µg/L	10	0.045	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Barium	µg/L	2000	2600	**8.1 J**	**3.3 J**	**12.9**	**31.0**	10.0 U	**43.6**	**14.8**	10.0 U
Beryllium	µg/L	4	73	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	µg/L	5	18	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Calcium	µg/L	NS	NS	**37100**	**17400**	**18100**	**12000**	**9220**	**5280**	**12000**	**66100**
Chromium	µg/L	100	110	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cobalt	µg/L	NS	730	5.0 U	5.0 U	5.0 U	**4.9 J**	5.0 U	2.4 UJ	**9.3**	5.0 U
Copper	µg/L	1300	1500	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cyanide	mg/L	0.2	0.73	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Iron	µg/L	300	11000	50.0 U	50.0 U	**3240**	**10600**	**157**	**1930**	**9900**	**133**
Lead	µg/L	15	NS	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Magnesium	µg/L	NS	NS	**11300**	**7520**	**5220**	**9850**	**4710**	**5800**	**6450**	**23800**
Manganese	µg/L	50	880	**3.6 J**	**9.2 J**	**111**	**2290**	**24.8**	**677**	**1050**	**2.6 J**
Mercury	µg/L	2	11	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	NS	730	10.0 U	**5.5 J**	**6.6 J**	**6.9 J**	**5.3 J**	**11.2**	**19.2**	10.0 U
Potassium	µg/L	NS	NS	**888 J**	**1300**	**2180**	793 UJ	715 UJ	**1130**	**1270**	**1030**
Selenium	µg/L	50	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	µg/L	100	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sodium	µg/L	NS	NS	**2940**	**1940**	**2770**	**4650**	**3870**	**2660**	**3090**	**8320**
Thallium	µg/L	2	2.4	1.0 U	1.0 U	0.41 UJ	**0.33 J**	0.15 UJ	1.0 U	0.18 UJ	1.0 U
Vanadium	µg/L	NS	36	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Zinc	µg/L	5000	11000	10.0 U	**4.5 JB**	**21.2 B**	**12.9 B**	**58.1 J**	**10.8 B**	**25.9 B**	**3.0 JB**

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-4 FWGWMP October 2009 Inorganics Analytical Results

Station ID				LL10mw-002	LL10mw-003	LL10mw-004	LL10mw-005	LL10mw-006	LL11mw-001	LL11mw-003	LL11mw-004
Sample ID		MCL	Region 9 PRG	FWGLL10mw-002C-1450-GF	FWGLL10mw-003C-1451-GF	FWGLL10mw-004C-1452-GF	FWGLL10mw-005C-1453-GF	FWGLL10mw-006C-1454-GF	FWGLL11mw-001C-1455-GF	FWGLL11mw-003C-1456-GF	FWGLL11mw-004C-1457-GF
Date Collected				10/13/2009	10/13/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units										
Aluminum	µg/L	200	36000	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Antimony	µg/L	6	15	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Arsenic	µg/L	10	0.045	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Barium	µg/L	2000	2600	**17.3**	10.0 U	**3.1 J**	**3.3 J**	**12.2**	**76.1**	**29.9**	**53.3**
Beryllium	µg/L	4	73	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	µg/L	5	18	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	**1.7**
Calcium	µg/L	NS	NS	**36300**	**51200**	**68400**	**62200**	**17800**	**88500**	**101000**	**78900**
Chromium	µg/L	100	110	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.7 UJ	5.0 U
Cobalt	µg/L	NS	730	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Copper	µg/L	1300	1500	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cyanide	mg/L	0.2	0.73	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Iron	µg/L	300	11000	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	**143 J**	70.4 U
Lead	µg/L	15	NS	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Magnesium	µg/L	NS	NS	**10700**	**14500**	**20200**	**14500**	**6980**	**29000**	**30500**	**25700**
Manganese	µg/L	50	880	10.0 U	10.0 U	**24.4**	**15.8**	**4.5 J**	**960**	**498**	**272**
Mercury	µg/L	2	11	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	NS	730	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Potassium	µg/L	NS	NS	**910 J**	716 UJ	737 UJ	723 UJ	**1020**	**954 J**	**981 J**	**1100**
Selenium	µg/L	50	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	µg/L	100	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sodium	µg/L	NS	NS	**6320**	**10300**	**4210**	**3400**	**2730**	**12400**	**10800**	**12700**
Thallium	µg/L	2	2.4	1.0 U	1.0 U	0.39 UJ	1.0 U	1.0 U	1.0 U	0.37 UJ	0.37 UJ
Vanadium	µg/L	NS	36	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Zinc	µg/L	5000	11000	10.0 U	10.0 U	**4.2 JB**	**2.5 JB**	**3.9 JB**	**2.9 JB**	**5.6 JB**	**18.4 B**

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-4 FWGWMP October 2009 Inorganics Analytical Results

Station ID				LL11mw-005	LL11mw-006	LL11mw-008	LL11mw-009	LL11mw-010	ASYmw-001	ASYmw-002	ASYmw-003
Sample ID		MCL	Region 9 PRG	FWGLL11mw-005C-1458-GF	FWGLL11mw-006C-1459-GF	FWGLL11mw-008C-1460-GF	FWGLL11mw-009C-1461-GF	FWGLL11mw-010C-1462-GF	FWGASYmw-001C-1463-GF	FWGASYmw-002C-1464-GF	FWGASYmw-003C-1465-GF
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/15/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units										
Aluminum	µg/L	200	36000	**102**	50.0 U	**25.3 J**	**41.7 J**	**26.3 J**	**46.1 J**	50.0 U	50.0 U
Antimony	µg/L	6	15	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Arsenic	µg/L	10	0.045	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**8.6**
Barium	µg/L	2000	2600	**28.1**	**28.3**	**49.4**	**66.3**	**66.3**	**15.7**	**12.3**	**15.4**
Beryllium	µg/L	4	73	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	µg/L	5	18	**0.26 J**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Calcium	µg/L	NS	NS	**8580**	**81100**	**115000**	**82400**	**80200**	**144000**	**94800**	**196000**
Chromium	µg/L	100	110	1.7 UJ	5.0 U	5.0 U	5.0 U	**1.7 J**	5.0 U	5.0 U	5.0 U
Cobalt	µg/L	NS	730	**1.5 J**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Copper	µg/L	1300	1500	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cyanide	mg/L	0.2	0.73	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Iron	µg/L	300	11000	**225**	50.0 U	**26.6 J**	82.0 UJ	**249 J**	**631 J**	50.0 U	**2580**
Lead	µg/L	15	NS	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Magnesium	µg/L	NS	NS	**4510**	**17300**	**33800**	**28500**	**31300**	**47100**	**19800**	**68900**
Manganese	µg/L	50	880	**43.8**	10.0 U	**29.4**	**706**	**430**	**1040**	10.0 U	**529**
Mercury	µg/L	2	11	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	NS	730	**12.2**	10.0 U	10.0 U	**2.3 J**	10.0 U	**2.8 J**	10.0 U	10.0 U
Potassium	µg/L	NS	NS	625 UJ	**860 J**	**1130**	**956 J**	**1380**	**1190**	651 UJ	**1730**
Selenium	µg/L	50	180	5.0 U	**5.3**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	µg/L	100	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sodium	µg/L	NS	NS	**3030**	**7890**	**4920**	**12800**	**27600**	**6340**	**2260**	**21700**
Thallium	µg/L	2	2.4	0.47 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vanadium	µg/L	NS	36	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Zinc	µg/L	5000	11000	**22.4 B**	10.0 U	**3.7 JB**	**2.9 JB**	10.0 U	**7.6 JB**	**3.3 JB**	**2.4 JB**

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-4 FWGWMP October 2009 Inorganics Analytical Results

Station ID				ASYmw-004	ASYmw-005	ASYmw-006	ASYmw-007	ASYmw-008	ASYmw-009	ASYmw-010
Sample ID		MCL	Region 9 PRG	FWGASYmw-004C-1466-GF	FWGASYmw-005C-1467-GF	FWGASYmw-006C-1468-GF	FWGASYmw-007C-1469-GF	FWGASYmw-008C-1470-GF	FWGASYmw-009C-1471-GF	FWGASYmw-010C-1472-GF
Date Collected				10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
Aluminum	µg/L	200	36000	50.0 U	**43.6 J**	50.0 U	50.0 U	**6300**	**142**	50.0 U
Antimony	µg/L	6	15	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Arsenic	µg/L	10	0.045	**28.0**	5.0 U	**17.0**	5.0 U	**26.4**	5.0 U	**49.8**
Barium	µg/L	2000	2600	**12.7**	**32.7**	**14.3**	**20.6**	**45.3**	**26.9**	**56.1**
Beryllium	µg/L	4	73	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	µg/L	5	18	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Calcium	µg/L	NS	NS	**163000**	**153000**	**113000**	**138000**	**208000**	**196000**	**119000**
Chromium	µg/L	100	110	2.1 UJB	5.0 U	5.0 U	5.0 U	**9.3**	5.0 U	5.0 U
Cobalt	µg/L	NS	730	5.0 U	**3.4 J**	5.0 U	5.0 U	**8.7**	5.0 U	5.0 U
Copper	µg/L	1300	1500	5.0 U	5.0 U	5.0 U	5.0 U	**15.0**	5.0 U	5.0 U
Cyanide	mg/L	0.2	0.73	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Iron	µg/L	300	11000	**1940 J**	**289**	**1360**	46.1 UJB	**17000 J**	**323 J**	**2530**
Lead	µg/L	15	NS	3.0 U	3.0 U	3.0 U	3.0 U	**5.8**	**3.0 U**	**3.0 U**
Magnesium	µg/L	NS	NS	**81600**	**45100**	**71500**	**54500**	**97900**	**72700**	**86700**
Manganese	µg/L	50	880	**201**	**618**	**177**	**205**	**412**	**607**	**139**
Mercury	µg/L	2	11	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	NS	730	10.0 U	**2.2 J**	10.0 U	10.0 U	**16.9 B**	10.0 U	10.0 U
Potassium	µg/L	NS	NS	**3480**	**2580**	**3240**	**1450**	**5410**	**1560**	**2730**
Selenium	µg/L	50	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	µg/L	100	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sodium	µg/L	NS	NS	**52300**	**42100**	**38000**	**36400**	**36300**	**23400**	**45900**
Thallium	µg/L	2	2.4	0.17 UJ	0.18 UJ	1.0 U	1.0 U	1.0 U	0.17 UJ	1.0 U
Vanadium	µg/L	NS	36	10.0 U	10.0 U	10.0 U	10.0 U	**10.7**	10.0 U	10.0 U
Zinc	µg/L	5000	11000	**7.0 JB**	10.0 U	**3.0 JB**	**4.1 JB**	**36.5 J**	**3.5 JB**	**2.6 JB**

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-4 FWGWMP October 2009 Inorganics Analytical Results

Station ID				DETmw-003	DETmw-004	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		MCL	Region 9 PRG	FWGDETmw-003C-1488-GF	FWGDETmw-004C-1489-GF	FWGRQLmw-007C-1485-GF	FWGRQLmw-008C-1486-GF	FWGRQLmw-009C-1487-GF
Date Collected				10/14/2009	10/14/2009	10/14/2009		10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab
Analyte	Units							
Aluminum	µg/L	200	36000	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Antimony	µg/L	6	15	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Arsenic	µg/L	10	0.045	**11.5**	5.0 U	**71.4**	**29.9**	**8.9**
Barium	µg/L	2000	2600	**48.5**	**63.4**	**51.8**	**89.0**	**36.1**
Beryllium	µg/L	4	73	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	µg/L	5	18	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Calcium	µg/L	NS	NS	**87900**	**145000**	**144000**	**57700**	**22600**
Chromium	µg/L	100	110	5.0 U	5.0 U	5.0 U	**1.5 J**	**1.8 J**
Cobalt	µg/L	NS	730	5.0 U	5.0 U	**6.2**	5.0 U	**4.6 J**
Copper	µg/L	1300	1500	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cyanide	mg/L	0.2	0.73	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Iron	µg/L	300	11000	**1440**	50.0 U	**23900 J**	**49600 J**	**5280 J**
Lead	µg/L	15	NS	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Magnesium	µg/L	NS	NS	**32800**	**28600**	**86600**	**62900**	**20200**
Manganese	µg/L	50	880	**266**	**21.9**	**1740**	**408**	**1260**
Mercury	µg/L	2	11	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	NS	730	10.0 U	10.0 U	**12.6**	4.6 UJ	6.7 UJ
Potassium	µg/L	NS	NS	**1780**	**1820**	**7220**	**3690**	**3900**
Selenium	µg/L	50	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	µg/L	100	180	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sodium	µg/L	NS	NS	**12000**	**3100**	**9590**	**8350**	**1870**
Thallium	µg/L	2	2.4	1.0 U	1.0 U	0.44 UJ	1.0 U	0.33 UJ
Vanadium	µg/L	NS	36	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Zinc	µg/L	5000	11000	**5.4 JB**	**10.6 B**	**16.8 B**	**18.5 B**	**6.9 JB**

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-4 FWGWMP October 2009 Inorganics Analytical Results

Data Qualifiers

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

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

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

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

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

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

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

Table 3-5 RVAAP Facility-wide Background Criteria, (SAIC, 2001b)

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

3.2.3 Volatile Organic Compounds (VOCs)

VOC analytical results are summarized in Table 3-6. The following VOCs were detected above the MDL for this sampling event.

- Acetone – LL9mw-001 (1.7 µg/L J B), ASYmw-002 (1.7 µg/L J B), ASYmw-003 (2.1 µg/L J B), ASYmw-005 1.5 µg/L J B), ASYmw-006 (2.3 µg/L J B), ASYmw-008 (1.2 µg/L J B), DETmw-004 (2.2 µg/L J B). There is no MCL for acetone. The Region 9 PRG is 5,500 µg/L.

- Chloroform – LL10mw-001 (0.26 µg/L J), LL10mw-003 (0.26 µg/L J). There is no MCL for chloroform. The Region 9 PRG is 0.17.

- 1,1-Dichloroethane – LL7mw-001 (3.3 µg/L). There is no MCL for 1,1-dichloroethane. The Region 9 PRG is 810 µg/L.

- 1,1-Dichloroethene – LL7mw-001 (8.4 µg/L). The MCL for 1,1-dichlorethene is 7 µg/L. The Region 9 PRG is 340 µg/L.

- Carbon Tetrachloride – LL10mw-001 (1.6 µg/L J), LL10mw-003 (2.4 µg/L). The MCL for carbon tetrachloride is 5 µg/L. The Region 9 PRG is 0.17 µg/L.

- 1,1,1-Trichloroethane – LL7mw-001 (11 µg/L J). There is no MCL for 1,1,1-trichloroethane. The Region 9 PRG is 3,200 µg/L.

- Tetrachloroethene – LL11mw-009 (4.1 µg/L). The MCL for tetrachloroethene is 5 µg/L. The Region 9 PRG is 0.1 µg/L.

As shown in Table 3-6, the only VOCs detected at levels above the MCLs or Region 9 PRGs during the July 2009 event were:

- Chloroform at a concentration exceeding the Region 9 PRG of 0.17 µg/L [LL10mw-001 (0.26 µg/L J) and LL10mw-003 (0.26 µg/L J)].

- Carbon Tetrachloride at a concentration exceeding the Region 9 PRG of 0.17 µg/L [LL10mw-001 (1.6 µg/L) and LL10mw-003 (2.4 µg/L)].

- Tetrachloroethene at a concentration exceeding the Region 9 PRG of 0.1 µg/L [LL11mw-009 (4.1 µg/L)].

3.2.4 Semivolatile Organic Compounds (SVOCs)

SVOC analytical results are summarized in Table 3-7. The following SVOCs were detected above the MDL for this sampling event. Note that 2,4-Dinitrotoluene and 2,6-Dinitrotoluene are analyzed and reported under both SW-846 Methods 8330 (explosives and propellants and 8270 (SVOCs).

- Bis(2-Ethylhexyl)phthalate – LL6mw-007 (1.0 µg/L J), LL7mw-003 (10 µg/L), LL7mw-004 (2.3 µg/L J), LL7mw-005 (1.9 µg/L J), LL7mw-006 (2.2 µg/L J), LL8mw-005 (2.8 µg/L J), LL9mw-001 (5.3 µg/L J), LL9mw-002 (5.6 µg/L J), LL9mw-006 (1.7 µg/L J), LL10mw-002 (8.1 µg/L J), LL11mw-001 (350 µg/L), LL11mw-003 (8.6 µg/L J), LL11mw-004 (1.8 µg/L J), LL11mw-005 (1.5 µg/L J), LL11mw-008 (0.83 µg/L J), LL11mw-009 (0.95 µg/L J), LL11mw-010 (0.88 µg/L J), ASYmw-004 (1.3 µg/L J), ASYmw-006 (1.6 µg/L J), DETmw-004 (0.9 µg/L J). There is no MCL for Bis(2-Ethylhexyl)phthalate. The Region 9 PRG is 4.8 µg/L.

As shown in Table 3-7 the only SVOC detected at levels above the Region 9 PRGs was bis(2-Ethylhexyl)phthalate at the following wells:

- LL7mw-003 (10 µg/L), LL9mw-001 (5.3 µg J), LL9mw-002 (5.6 µg/L J), LL10mw-002 (8.1 µg/L J), LL11mw-001 (350 µg/L), LL11mw-003 (8.6 µg/L J). The Region 9 PRG is 4.8 µg/L.

3.2.5 Pesticides and Polychlorinated Biphenyls (PCBs)

Pesticides and PCBs analytical results are summarized in Table 3-8. The following pesticides and PCBs were detected above the MDL for this sampling event.

- alpha-BHA – RQLmw-008 (0.023 µg/L J). There is no MCL for alpha-BHC. The Region 9 PRG is 0.011 µg/L.

- beta-BHC – LL7mw-005 (0.014 µg/L J), LL11mw-003 (0.012 µg/L J), ASYmw-005 (0.017 µg/L J), ASYmw-007 (0.0096 µg/LJ), ASTmw-010 0.014 µg/L J), RQLmw-007 (0.015 µg/L J), RQLmw-008 (0.0095 µg/L J). There is no MCL for beta-BHC. The Region 9 PRG is 0.037 µg/L.

- delta-BHC – RQLmw-008 (0.025 µg/L J). There is no MCL or Region 9 PRG for delta-BHC.

As shown in Table 3-8 the only pesticides/PCBs detected at levels above the Region 9 PRG was alpha-BHC in RQLmw-008 (0.023 µg/L J). The Region 9 PRG is 0.011 µg/L.

Table 3-6 FWGWMP October 2009 VOCs Analytical Results

Station ID				LL6mw-005	LL6mw-006	LL6mw-007	LL7mw-001	LL7mw-002	LL7mw-003	LL7mw-004
Sample ID		MCL	Region 9 PRG	FWGLL6mw-005C-1427-GW	FWGLL6mw-006C-1428-GW	FWGLL6mw-007C-1429-GW	FWGLL7mw-001C-1430-GW	FWGLL7mw-002C-1431-GW	FWGLL7mw-003C-1432-GW	FWGLL7mw-004C-1433-GW
Date Collected				10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,1,1-Trichloroethane	µg/L	NS	3200	1.0 U	1.0 U	1.0 U	**11**	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	NS	0.052	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	NS	0.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	NS	810	1.0 U	1.0 U	1.0 U	**3.3**	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene (total)	µg/L	7	340	1.0 U	1.0 U	1.0 U	**8.4**	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	µg/L	NS	0.0056	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	0.12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (total)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	0.16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	µg/L	NS	7000	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	NS	5500	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Benzene	µg/L	5	0.35	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	NS	0.18	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	NS	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	µg/L	NS	8.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	NS	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	0.17	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	NS	110	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	NS	4.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	µg/L	NS	0.17	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	µg/L	NS	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-dichloroethene	µg/L	70	61	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	NS	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	µg/L	NS	0.13	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-xylenes	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	NS	4.3	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-xylene	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	100	1600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	0.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes	µg/L	10000	210	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-dichloroethene	µg/L	100	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	NS	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	0.028	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	0.02	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

NS = no standard

Bold = detected compound above the MDL

Table 3-6 FWGWMP October 2009 VOCs Analytical Results

Station ID				LL7mw-005	LL7mw-006	LL8mw-001	LL8mw-002	LL8mw-003	LL8mw-004	LL8mw-005
Sample ID		MCL	Region 9 PRG	FWGLL7mw-005C-1434-GW	FWGLL7mw-006C-1435-GW	FWGLL8mw-001C-1436-GW	FWGLL8mw-002C-1437-GW	FWGLL8mw-003C-1438-GW	FWGLL8mw-004C-1439-GW	FWGLL8mw-005C-1440-GW
Date Collected				10/12/2009	10/12/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,1,1-Trichloroethane	µg/L	NS	3200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	NS	0.052	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	NS	0.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	NS	810	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene (total)	µg/L	7	340	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	µg/L	NS	0.0056	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	0.12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (total)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	0.16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	µg/L	NS	7000	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	NS	5500	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 U
Benzene	µg/L	5	0.35	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	NS	0.18	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	NS	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	µg/L	NS	8.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	NS	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	0.17	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Chlorobenzene	µg/L	NS	110	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	NS	4.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	µg/L	NS	0.17	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	µg/L	NS	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-dichloroethene	µg/L	70	61	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	NS	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Dibromochloromethane	µg/L	NS	0.13	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Ethylbenzene	µg/L	700	1300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-xylenes	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ
Methylene chloride	µg/L	NS	4.3	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-xylene	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Styrene	µg/L	100	1600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Tetrachloroethene	µg/L	5	0.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes	µg/L	10000	210	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ
trans-1,2-dichloroethene	µg/L	100	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	NS	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Trichloroethene	µg/L	5	0.028	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	0.02	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

NS = no standard

Bold = detected compound above the MDL

Table 3-6 FWGWMP October 2009 VOCs Analytical Results

Station ID				LL8mw-006	LL9mw-001	LL9mw-002	LL9mw-003	LL9mw-004	LL9mw-005	LL9mw-006	LL9mw-007
Sample ID		MCL	Region 9 PRG	FWGLL8mw-006C-1441-GW	FWGLL9mw-001C-1442-GW	FWGLL9mw-002C-1443-GW	FWGLL9mw-003C-1444-GW	FWGLL9mw-004C-1445-GW	FWGLL9mw-005C-1446-GW	FWGLL9mw-006C-1447-GW	FWGLL9mw-007C-1448-GW
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units										
1,1,1-Trichloroethane	µg/L	NS	3200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	NS	0.052	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	NS	0.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	NS	810	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene (total)	µg/L	7	340	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	µg/L	NS	0.0056	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	0.12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (total)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	0.16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	µg/L	NS	7000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	NS	5500	10 U	**1.7 JB**	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	µg/L	5	0.35	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	NS	0.18	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	NS	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	µg/L	NS	8.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	NS	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	0.17	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Chlorobenzene	µg/L	NS	110	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	NS	4.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	µg/L	NS	0.17	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	µg/L	NS	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-dichloroethene	µg/L	70	61	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	NS	0.4	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Dibromochloromethane	µg/L	NS	0.13	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Ethylbenzene	µg/L	700	1300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-xylenes	µg/L	NS	NS	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
Methylene chloride	µg/L	NS	4.3	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-xylene	µg/L	NS	NS	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Styrene	µg/L	100	1600	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Tetrachloroethene	µg/L	5	0.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes	µg/L	10000	210	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
trans-1,2-dichloroethene	µg/L	100	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	NS	0.4	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Trichloroethene	µg/L	5	0.028	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	0.02	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

NS = no standard

Bold = detected compound above the MDL

Table 3-6 FWGWMP October 2009 VOCs Analytical Results

Station ID				LL10mw-001	LL10mw-002	LL10mw-003	LL10mw-004	LL10mw-005	LL10mw-006	LL11mw-001	LL11mw-003
Sample ID		MCL	Region 9 PRG	FWGLL10mw-001C-1449-GW	FWGLL10mw-002C-1450-GW	FWGLL10mw-003C-1451-GW	FWGLL10mw-004C-1452-GW	FWGLL10mw-005C-1453-GW	FWGLL10mw-006C-1454-GW	FWGLL11mw-001C-1455-GF	FWGLL11mw-003C-1456-GW
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units										
1,1,1-Trichloroethane	µg/L	NS	3200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	NS	0.052	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	NS	0.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	NS	810	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene (total)	µg/L	7	340	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	µg/L	NS	0.0056	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	0.12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (total)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	0.16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	µg/L	NS	7000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	NS	5500	10 U	10 U	10 U	10 UJ	10 UJ	10 U	10 UJ	10 UJ
Benzene	µg/L	5	0.35	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	NS	0.18	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	NS	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	µg/L	NS	8.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	NS	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	0.17	**1.6 J**	1.0 UJ	**2.8**	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ
Chlorobenzene	µg/L	NS	110	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	NS	4.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	µg/L	NS	0.17	**0.26 J**	1.0 U	**0.26 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	µg/L	NS	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-dichloroethene	µg/L	70	61	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	NS	0.4	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ
Dibromochloromethane	µg/L	NS	0.13	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-xylenes	µg/L	NS	NS	2.0 UJ	2.0 UJ	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 UJ
Methylene chloride	µg/L	NS	4.3	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-xylene	µg/L	NS	NS	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ
Styrene	µg/L	100	1600	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	0.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes	µg/L	10000	210	2.0 UJ	2.0 UJ	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 UJ
trans-1,2-dichloroethene	µg/L	100	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	NS	0.4	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ
Trichloroethene	µg/L	5	0.028	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	0.02	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

NS = no standard

Bold = detected compound above the MDL

Table 3-6 FWGWMP October 2009 VOCs Analytical Results

Station ID				LL11mw-004	LL11mw-005	LL11mw-006	LL11mw-008	LL11mw-009	LL11mw-010	ASYmw-001	ASYmw-002
Sample ID		MCL	Region 9 PRG	FWGLL11mw-004C-1457-GW	FWGLL11mw-005C-1458-GW	FWGLL11mw-006C-1459-GW	FWGLL11mw-008C-1460-GW	FWGLL11mw-009C-1461-GW	FWGLL11mw-010C-1462-GW	FWGASYmw-001C-1463-GW	FWGASYmw-002C-1464-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units										
1,1,1-Trichloroethane	µg/L	NS	3200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	NS	0.052	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	NS	0.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	NS	810	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene (total)	µg/L	7	340	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	µg/L	NS	0.0056	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	0.12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (total)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	0.16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	µg/L	NS	7000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
2-Hexanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
Acetone	µg/L	NS	5500	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	**1.7 JB**
Benzene	µg/L	5	0.35	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	NS	0.18	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	NS	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Bromomethane	µg/L	NS	8.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	NS	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	0.17	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U
Chlorobenzene	µg/L	NS	110	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	NS	4.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	µg/L	NS	0.17	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	µg/L	NS	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-dichloroethene	µg/L	70	61	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	NS	0.4	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U
Dibromochloromethane	µg/L	NS	0.13	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-xylenes	µg/L	NS	NS	2.0 UJ	2.0 U	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
Methylene chloride	µg/L	NS	4.3	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-xylene	µg/L	NS	NS	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Styrene	µg/L	100	1600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	0.1	1.0 U	1.0 U	1.0 U	1.0 U	**4.1**	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes	µg/L	10000	210	2.0 UJ	2.0 U	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
trans-1,2-dichloroethene	µg/L	100	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	NS	0.4	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U
Trichloroethene	µg/L	5	0.028	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	0.02	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

NS = no standard

Bold = detected compound above the MDL

Table 3-6 FWGWMP October 2009 VOCs Analytical Results

Station ID				ASYmw-003	ASYmw-004	ASYmw-005	ASYmw-006	ASYmw-007	ASYmw-008	ASYmw-009	ASYmw-010
Sample ID		MCL	Region 9 PRG	FWGASYmw-003C-1465-GW	FWGASYmw-004C-1466-GW	FWGASYmw-005C-1467-GW	FWGASYmw-006C-1468-GW	FWGASYmw-007C-1469-GW	FWGASYmw-008C-1470-GW	FWGASYmw-009C-1471-GW	FWGASYmw-010C-1472-GW
Date Collected				10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units										
1,1,1-Trichloroethane	µg/L	NS	3200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	NS	0.052	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	NS	0.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	NS	810	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene (total)	µg/L	7	340	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	µg/L	NS	0.0056	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	0.12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (total)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	0.16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	µg/L	NS	7000	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
2-Hexanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	µg/L	NS	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Acetone	µg/L	NS	5500	**2.1 JB**	10 U	**1.5 JB**	**2.3 JB**	10 U	**1.2 JB**	10 U	10 U
Benzene	µg/L	5	0.35	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	NS	0.18	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	NS	8.5	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Bromomethane	µg/L	NS	8.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	NS	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	0.17	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	NS	110	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	NS	4.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	µg/L	NS	0.17	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	µg/L	NS	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-dichloroethene	µg/L	70	61	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	NS	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	µg/L	NS	0.13	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-xylenes	µg/L	NS	NS	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
Methylene chloride	µg/L	NS	4.3	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-xylene	µg/L	NS	NS	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Styrene	µg/L	100	1600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	0.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes	µg/L	10000	210	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
trans-1,2-dichloroethene	µg/L	100	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	NS	0.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	0.028	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	0.02	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

NS = no standard

Bold = detected compound above the MDL

Table 3-6 FWGWMP October 2009 VOCs Analytical Results

Station ID				DETmw-003	DETmw-004	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		MCL	Region 9 PRG	FWGDETmw-003C-1488-GW	FWGDETmw-004C-1489-GW	FWGRQLmw-007C-1485-GW	FWGRQLmw-008C-1486-GW	FWGRQLmw-009C-1487-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab
Analyte	Units							
1,1,1-Trichloroethane	µg/L	NS	3200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	NS	0.052	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	NS	0.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	NS	810	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene (total)	µg/L	7	340	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	µg/L	NS	0.0056	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	0.12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (total)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	0.16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	µg/L	NS	7000	10 U	10 UJ	10 U	10 U	10 U
2-Hexanone	µg/L	NS	NS	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	µg/L	NS	NS	10 U	10 UJ	10 U	10 U	10 U
Acetone	µg/L	NS	5500	10 U	**2.2 JB**	10 UJ	10 UJ	10 UJ
Benzene	µg/L	5	0.35	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	NS	0.18	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	NS	8.5	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Bromomethane	µg/L	NS	8.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	NS	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	0.17	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ
Chlorobenzene	µg/L	NS	110	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	NS	4.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	µg/L	NS	0.17	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	µg/L	NS	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-dichloroethene	µg/L	70	61	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	NS	0.4	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ
Dibromochloromethane	µg/L	NS	0.13	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-xylenes	µg/L	NS	NS	2.0 U	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
Methylene chloride	µg/L	NS	4.3	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-xylene	µg/L	NS	NS	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Styrene	µg/L	100	1600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	0.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes	µg/L	10000	210	2.0 U	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
trans-1,2-dichloroethene	µg/L	100	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	NS	0.4	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ
Trichloroethene	µg/L	5	0.028	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	0.02	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:

NS = no standard

Bold = detected compound above the MDL

Table 3-6 FWGWMP October 2009 VOCs Analytical Results

Data Qualifiers

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

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

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

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

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

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

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

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL6mw-005	LL6mw-006	LL6mw-007	LL7mw-001	LL7mw-002	LL7mw-003
Sample ID		MCL	Region 9 PRG	FWGLL6mw-005C-1427-GW	FWGLL6mw-006C-1428-GW	FWGLL6mw-007C-1429-GW	FWGLL7mw-001C-1430-GW	FWGLL7mw-002C-1431-GW	FWGLL7mw-003C-1432-GW
Date Collected				10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units								
1,2,4-Trichlorobenzene	µg/L	NS	7.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	NS	370	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	NS	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	NS	0.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-oxybis (1-chloropropane)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4,5-Trichlorophenol	µg/L	NS	3600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	µg/L	NS	3.6	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	NS	730	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrophenol	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrotoluene	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoluene	µg/L	NS	36	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloronaphthalene	µg/L	NS	490	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorophenol	µg/L	NS	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methylnaphthalene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Methylphenol	µg/L	NS	1800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitroaniline	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	NS	0.15	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
3-Nitroaniline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-methylphenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Bromophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	NS	150	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Methylphenol	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitroanaline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	µg/L	NS	370	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acenaphthylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Anthracene	µg/L	NS	1800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)anthracene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)pyrene	µg/L	0.2	0.0092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(b)fluoranthene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(g,h,i)perylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL6mw-005	LL6mw-006	LL6mw-007	LL7mw-001	LL7mw-002	LL7mw-003
Sample ID		MCL	Region 9 PRG	FWGLL6mw-005C-1427-GW	FWGLL6mw-006C-1428-GW	FWGLL6mw-007C-1429-GW	FWGLL7mw-001C-1430-GW	FWGLL7mw-002C-1431-GW	FWGLL7mw-003C-1432-GW
Date Collected				10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units								
Benzo(k)fluoranthene	µg/L	NS	0.92	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzoic acid	µg/L	NS	150000	10 U	10 U	10 U	10 U	10 U	10 U
Benzyl alcohol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
bis(2-Chloroethoxy)methane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Chloroethyl) ether	µg/L	NS	0.001	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl) phthalate	µg/L	NS	4.8	10 U	10 U	**1.0 J**	10 U	10 U	**10**
Butyl benzyl phthalate	µg/L	NS	7300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbazole	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	µg/L	NS	9.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzo(a,h)anthracene	µg/L	NS	0.0093	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzofuran	µg/L	NS	12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl phthalate	µg/L	NS	29,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dimethyl phthalate	µg/L	NS	360000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-butyl phthalate	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-octyl phthalate	µg/L	NS	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Fluorene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobenzene	µg/L	1	0.042	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	µg/L	NS	0.86	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	µg/L	50	220	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	µg/L	NS	4.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Isophorone	µg/L	NS	71	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	µg/L	NS	6.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nitrobenzene	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitroso-di-n-propylamine	µg/L	NS	9600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	µg/L	NS	14	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pentachlorophenol	µg/L	1	0.56	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Phenol	µg/L	NS	11000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL7mw-004	LL7mw-005	LL7mw-006	LL8mw-001	LL8mw-002	LL8mw-003
Sample ID		MCL	Region 9 PRG	FWGLL7mw-004C-1433-GW	FWGLL7mw-005C-1434-GW	FWGLL7mw-006C-1435-GW	FWGLL8mw-001C-1436-GW	FWGLL8mw-002C-1437-GW	FWGLL8mw-003C-1438-GW
Date Collected				10/12/2009	10/12/2009	10/12/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units								
1,2,4-Trichlorobenzene	µg/L	NS	7.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	NS	370	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	NS	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	NS	0.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-oxybis (1-chloropropane)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4,5-Trichlorophenol	µg/L	NS	3600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	µg/L	NS	3.6	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	NS	730	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrophenol	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
2,4-Dinitrotoluene	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoluene	µg/L	NS	36	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloronaphthalene	µg/L	NS	490	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorophenol	µg/L	NS	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methylnaphthalene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Methylphenol	µg/L	NS	1800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitroaniline	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	NS	0.15	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
3-Nitroaniline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-methylphenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Bromophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	NS	150	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Methylphenol	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitroanaline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	µg/L	NS	370	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acenaphthylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Anthracene	µg/L	NS	1800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)anthracene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)pyrene	µg/L	0.2	0.0092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(b)fluoranthene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(g,h,i)perylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL7mw-004	LL7mw-005	LL7mw-006	LL8mw-001	LL8mw-002	LL8mw-003
Sample ID		MCL	Region 9 PRG	FWGLL7mw-004C-1433-GW	FWGLL7mw-005C-1434-GW	FWGLL7mw-006C-1435-GW	FWGLL8mw-001C-1436-GW	FWGLL8mw-002C-1437-GW	FWGLL8mw-003C-1438-GW
Date Collected				10/12/2009	10/12/2009	10/12/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units								
Benzo(k)fluoranthene	µg/L	NS	0.92	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzoic acid	µg/L	NS	150000	10 U	10 U	10 U	10 U	10 U	10 U
Benzyl alcohol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
bis(2-Chloroethoxy)methane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Chloroethyl) ether	µg/L	NS	0.001	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl) phthalate	µg/L	NS	4.8	**2.3 J**	**1.9 J**	**2.2 J**	10 U	10 U	10 U
Butyl benzyl phthalate	µg/L	NS	7300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbazole	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	µg/L	NS	9.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzo(a,h)anthracene	µg/L	NS	0.0093	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzofuran	µg/L	NS	12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl phthalate	µg/L	NS	29,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dimethyl phthalate	µg/L	NS	360000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-butyl phthalate	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-octyl phthalate	µg/L	NS	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Fluorene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobenzene	µg/L	1	0.042	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	µg/L	NS	0.86	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	µg/L	50	220	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	µg/L	NS	4.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Isophorone	µg/L	NS	71	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	µg/L	NS	6.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nitrobenzene	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitroso-di-n-propylamine	µg/L	NS	9600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	µg/L	NS	14	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pentachlorophenol	µg/L	1	0.56	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ
Phenanthrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Phenol	µg/L	NS	11000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL8mw-004	LL8mw-005	LL8mw-006	LL9mw-001	LL9mw-002	LL9mw-003	LL9mw-004
Sample ID		MCL	Region 9 PRG	FWGLL8mw-004C-1439-GW	FWGLL8mw-005C-1440-GW	FWGLL8mw-006C-1441-GW	FWGLL9mw-001C-1442-GW	FWGLL9mw-002C-1443-GW	FWGLL9mw-003C-1444-GW	FWGLL9mw-004C-1445-GW
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,2,4-Trichlorobenzene	µg/L	NS	7.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	NS	370	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	NS	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	NS	0.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-oxybis (1-chloropropane)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4,5-Trichlorophenol	µg/L	NS	3600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	µg/L	NS	3.6	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	NS	730	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrophenol	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrotoluene	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoluene	µg/L	NS	36	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloronaphthalene	µg/L	NS	490	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorophenol	µg/L	NS	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methylnaphthalene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Methylphenol	µg/L	NS	1800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitroaniline	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	NS	0.15	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
3-Nitroaniline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-methylphenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Bromophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	NS	150	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Methylphenol	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitroanaline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	µg/L	NS	370	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acenaphthylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Anthracene	µg/L	NS	1800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)anthracene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)pyrene	µg/L	0.2	0.0092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(b)fluoranthene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(g,h,i)perylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL8mw-004	LL8mw-005	LL8mw-006	LL9mw-001	LL9mw-002	LL9mw-003	LL9mw-004
Sample ID		MCL	Region 9 PRG	FWGLL8mw-004C-1439-GW	FWGLL8mw-005C-1440-GW	FWGLL8mw-006C-1441-GW	FWGLL9mw-001C-1442-GW	FWGLL9mw-002C-1443-GW	FWGLL9mw-003C-1444-GW	FWGLL9mw-004C-1445-GW
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
Benzo(k)fluoranthene	µg/L	NS	0.92	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzoic acid	µg/L	NS	150000	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzyl alcohol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
bis(2-Chloroethoxy)methane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Chloroethyl) ether	µg/L	NS	0.001	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl) phthalate	µg/L	NS	4.8	10 U	**2.8 J**	10 U	**5.3 J**	**5.6 J**	10 U	10 U
Butyl benzyl phthalate	µg/L	NS	7300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbazole	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	µg/L	NS	9.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzo(a,h)anthracene	µg/L	NS	0.0093	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzofuran	µg/L	NS	12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl phthalate	µg/L	NS	29,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dimethyl phthalate	µg/L	NS	360000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-butyl phthalate	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-octyl phthalate	µg/L	NS	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Fluorene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobenzene	µg/L	1	0.042	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	µg/L	NS	0.86	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	µg/L	50	220	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	µg/L	NS	4.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Isophorone	µg/L	NS	71	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	µg/L	NS	6.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nitrobenzene	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitroso-di-n-propylamine	µg/L	NS	9600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	µg/L	NS	14	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pentachlorophenol	µg/L	1	0.56	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Phenanthrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Phenol	µg/L	NS	11000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL9mw-005	LL9mw-006	LL9mw-007	LL10mw-001	LL10mw-002	LL10mw-003	LL10mw-004
Sample ID		MCL	Region 9 PRG	FWGLL9mw-005C-1446-GW	FWGLL9mw-006C-1447-GW	FWGLL9mw-007C-1448-GW	FWGLL10mw-001C-1449-GW	FWGLL10mw-002C-1450-GW	FWGLL10mw-003C-1451-GW	FWGLL10mw-004C-1452-GW
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,2,4-Trichlorobenzene	µg/L	NS	7.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	NS	370	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	NS	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	NS	0.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-oxybis (1-chloropropane)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4,5-Trichlorophenol	µg/L	NS	3600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	µg/L	NS	3.6	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	NS	730	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrophenol	µg/L	NS	73	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ
2,4-Dinitrotoluene	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoluene	µg/L	NS	36	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloronaphthalene	µg/L	NS	490	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorophenol	µg/L	NS	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methylnaphthalene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Methylphenol	µg/L	NS	1800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitroaniline	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	NS	0.15	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
3-Nitroaniline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-methylphenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Bromophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	NS	150	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Methylphenol	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitroanaline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	µg/L	NS	370	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acenaphthylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Anthracene	µg/L	NS	1800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)anthracene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)pyrene	µg/L	0.2	0.0092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(b)fluoranthene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(g,h,i)perylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL9mw-005	LL9mw-006	LL9mw-007	LL10mw-001	LL10mw-002	LL10mw-003	LL10mw-004
Sample ID		MCL	Region 9 PRG	FWGLL9mw-005C-1446-GW	FWGLL9mw-006C-1447-GW	FWGLL9mw-007C-1448-GW	FWGLL10mw-001C-1449-GW	FWGLL10mw-002C-1450-GW	FWGLL10mw-003C-1451-GW	FWGLL10mw-004C-1452-GW
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
Benzo(k)fluoranthene	µg/L	NS	0.92	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzoic acid	µg/L	NS	150000	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzyl alcohol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
bis(2-Chloroethoxy)methane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Chloroethyl) ether	µg/L	NS	0.001	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl) phthalate	µg/L	NS	4.8	10 U	**1.7 J**	10 U	10 U	**8.1 J**	10 U	10 U
Butyl benzyl phthalate	µg/L	NS	7300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbazole	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	µg/L	NS	9.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzo(a,h)anthracene	µg/L	NS	0.0093	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzofuran	µg/L	NS	12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl phthalate	µg/L	NS	29,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dimethyl phthalate	µg/L	NS	360000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-butyl phthalate	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-octyl phthalate	µg/L	NS	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Fluorene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobenzene	µg/L	1	0.042	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	µg/L	NS	0.86	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	µg/L	50	220	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	µg/L	NS	4.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Isophorone	µg/L	NS	71	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	µg/L	NS	6.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nitrobenzene	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitroso-di-n-propylamine	µg/L	NS	9600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	µg/L	NS	14	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pentachlorophenol	µg/L	1	0.56	5.0 UJ	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 U
Phenanthrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Phenol	µg/L	NS	11000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL10mw-005	LL10mw-006	LL11mw-001	LL11mw-003	LL11mw-004	LL11mw-005	LL11mw-006
Sample ID		MCL	Region 9 PRG	FWGLL10mw-005C-1453-GW	FWGLL10mw-006C-1454-GW	FWGLL11mw-001C-1455-GF	FWGLL11mw-003C-1456-GW	FWGLL11mw-004C-1457-GW	FWGLL11mw-005C-1458-GW	FWGLL11mw-006C-1459-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,2,4-Trichlorobenzene	µg/L	NS	7.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	NS	370	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	NS	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	NS	0.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-oxybis (1-chloropropane)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4,5-Trichlorophenol	µg/L	NS	3600	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	µg/L	NS	3.6	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	NS	110	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	NS	730	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrophenol	µg/L	NS	73	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ
2,4-Dinitrotoluene	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoluene	µg/L	NS	36	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloronaphthalene	µg/L	NS	490	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorophenol	µg/L	NS	30	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methylnaphthalene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Methylphenol	µg/L	NS	1800	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitroaniline	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	µg/L	NS	NS	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	NS	0.15	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
3-Nitroaniline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-methylphenol	µg/L	NS	NS	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Bromophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	NS	NS	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	NS	150	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Methylphenol	µg/L	NS	NS	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitroanaline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	NS	NS	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	µg/L	NS	370	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acenaphthylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Anthracene	µg/L	NS	1800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)anthracene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)pyrene	µg/L	0.2	0.0092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(b)fluoranthene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(g,h,i)perylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL10mw-005	LL10mw-006	LL11mw-001	LL11mw-003	LL11mw-004	LL11mw-005	LL11mw-006
Sample ID		MCL	Region 9 PRG	FWGLL10mw-005C-1453-GW	FWGLL10mw-006C-1454-GW	FWGLL11mw-001C-1455-GF	FWGLL11mw-003C-1456-GW	FWGLL11mw-004C-1457-GW	FWGLL11mw-005C-1458-GW	FWGLL11mw-006C-1459-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
Benzo(k)fluoranthene	µg/L	NS	0.92	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzoic acid	µg/L	NS	150000	10 UJ	10 U	10 UJ	10 U	10 U	10 U	10 U
Benzyl alcohol	µg/L	NS	NS	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
bis(2-Chloroethoxy)methane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Chloroethyl) ether	µg/L	NS	0.001	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl) phthalate	µg/L	NS	4.8	10 U	10 U	**350**	**8.6 J**	**1.8 J**	**1.5 J**	10 U
Butyl benzyl phthalate	µg/L	NS	7300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbazole	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	µg/L	NS	9.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzo(a,h)anthracene	µg/L	NS	0.0093	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzofuran	µg/L	NS	12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl phthalate	µg/L	NS	29,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dimethyl phthalate	µg/L	NS	360000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-butyl phthalate	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-octyl phthalate	µg/L	NS	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Fluorene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobenzene	µg/L	1	0.042	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	µg/L	NS	0.86	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	µg/L	50	220	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	µg/L	NS	4.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Isophorone	µg/L	NS	71	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	µg/L	NS	6.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nitrobenzene	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitroso-di-n-propylamine	µg/L	NS	9600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	µg/L	NS	14	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pentachlorophenol	µg/L	1	0.56	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Phenol	µg/L	NS	11000	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL11mw-008	LL11mw-009	LL11mw-010	ASYmw-001	ASYmw-002	ASYmw-003	ASYmw-004
Sample ID		MCL	Region 9 PRG	FWGLL11mw-008C-1460-GW	FWGLL11mw-009C-1461-GW	FWGLL11mw-010C-1462-GW	FWGASYmw-001C-1463-GW	FWGASYmw-002C-1464-GW	FWGASYmw-003C-1465-GW	FWGASYmw-004C-1466-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/15/2009	10/15/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
1,2,4-Trichlorobenzene	µg/L	NS	7.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	NS	370	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	NS	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	NS	0.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-oxybis (1-chloropropane)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4,5-Trichlorophenol	µg/L	NS	3600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	µg/L	NS	3.6	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	NS	730	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrophenol	µg/L	NS	73	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ
2,4-Dinitrotoluene	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoluene	µg/L	NS	36	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloronaphthalene	µg/L	NS	490	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorophenol	µg/L	NS	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methylnaphthalene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Methylphenol	µg/L	NS	1800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitroaniline	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	NS	0.15	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
3-Nitroaniline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-methylphenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Bromophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	NS	150	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Methylphenol	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitroanaline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	µg/L	NS	370	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acenaphthylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Anthracene	µg/L	NS	1800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)anthracene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)pyrene	µg/L	0.2	0.0092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(b)fluoranthene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(g,h,i)perylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				LL11mw-008	LL11mw-009	LL11mw-010	ASYmw-001	ASYmw-002	ASYmw-003	ASYmw-004
Sample ID		MCL	Region 9 PRG	FWGLL11mw-008C-1460-GW	FWGLL11mw-009C-1461-GW	FWGLL11mw-010C-1462-GW	FWGASYmw-001C-1463-GW	FWGASYmw-002C-1464-GW	FWGASYmw-003C-1465-GW	FWGASYmw-004C-1466-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/15/2009	10/15/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
Benzo(k)fluoranthene	µg/L	NS	0.92	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzoic acid	µg/L	NS	150000	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzyl alcohol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
bis(2-Chloroethoxy)methane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Chloroethyl) ether	µg/L	NS	0.001	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl) phthalate	µg/L	NS	4.8	**0.83 J**	**0.95 J**	**0.88 J**	10 U	10 U	10 U	**1.3 J**
Butyl benzyl phthalate	µg/L	NS	7300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbazole	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	µg/L	NS	9.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzo(a,h)anthracene	µg/L	NS	0.0093	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzofuran	µg/L	NS	12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl phthalate	µg/L	NS	29,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dimethyl phthalate	µg/L	NS	360000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-butyl phthalate	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-octyl phthalate	µg/L	NS	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Fluorene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobenzene	µg/L	1	0.042	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	µg/L	NS	0.86	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	µg/L	50	220	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	µg/L	NS	4.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Isophorone	µg/L	NS	71	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	µg/L	NS	6.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nitrobenzene	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitroso-di-n-propylamine	µg/L	NS	9600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	µg/L	NS	14	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pentachlorophenol	µg/L	1	0.56	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Phenol	µg/L	NS	11000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				ASYmw-005	ASYmw-006	ASYmw-007	ASYmw-008	ASYmw-009	ASYmw-010
Sample ID		MCL	Region 9 PRG	FWGASYmw-005C-1467-GW	FWGASYmw-006C-1468-GW	FWGASYmw-007C-1469-GW	FWGASYmw-008C-1470-GW	FWGASYmw-009C-1471-GW	FWGASYmw-010C-1472-GW
Date Collected				10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units								
1,2,4-Trichlorobenzene	µg/L	NS	7.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	NS	370	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	NS	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	NS	0.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-oxybis (1-chloropropane)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4,5-Trichlorophenol	µg/L	NS	3600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	µg/L	NS	3.6	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	NS	730	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrophenol	µg/L	NS	73	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
2,4-Dinitrotoluene	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoluene	µg/L	NS	36	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloronaphthalene	µg/L	NS	490	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorophenol	µg/L	NS	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methylnaphthalene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Methylphenol	µg/L	NS	1800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitroaniline	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	NS	0.15	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
3-Nitroaniline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-methylphenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Bromophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	NS	150	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Methylphenol	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitroanaline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	µg/L	NS	370	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acenaphthylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Anthracene	µg/L	NS	1800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)anthracene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)pyrene	µg/L	0.2	0.0092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(b)fluoranthene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(g,h,i)perylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				ASYmw-005	ASYmw-006	ASYmw-007	ASYmw-008	ASYmw-009	ASYmw-010
Sample ID		MCL	Region 9 PRG	FWGASYmw-005C-1467-GW	FWGASYmw-006C-1468-GW	FWGASYmw-007C-1469-GW	FWGASYmw-008C-1470-GW	FWGASYmw-009C-1471-GW	FWGASYmw-010C-1472-GW
Date Collected				10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units								
Benzo(k)fluoranthene	µg/L	NS	0.92	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzoic acid	µg/L	NS	150000	10 U	10 U	10 U	10 U	10 U	10 U
Benzyl alcohol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
bis(2-Chloroethoxy)methane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Chloroethyl) ether	µg/L	NS	0.001	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl) phthalate	µg/L	NS	4.8	10 U	**1.6 J**	10 U	10 U	10 U	10 U
Butyl benzyl phthalate	µg/L	NS	7300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbazole	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	µg/L	NS	9.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzo(a,h)anthracene	µg/L	NS	0.0093	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzofuran	µg/L	NS	12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl phthalate	µg/L	NS	29,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dimethyl phthalate	µg/L	NS	360000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-butyl phthalate	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-octyl phthalate	µg/L	NS	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Fluorene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobenzene	µg/L	1	0.042	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	µg/L	NS	0.86	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	µg/L	50	220	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	µg/L	NS	4.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Isophorone	µg/L	NS	71	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	µg/L	NS	6.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nitrobenzene	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitroso-di-n-propylamine	µg/L	NS	9600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	µg/L	NS	14	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pentachlorophenol	µg/L	1	0.56	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Phenol	µg/L	NS	11000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				DETmw-003	DETmw-004	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		MCL	Region 9 PRG	FWGDETmw-003C-1488-GW	FWGDETmw-004C-1489-GW	FWGRQLmw-007C-1485-GW	FWGRQLmw-008C-1486-GW	FWGRQLmw-009C-1487-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab
Analyte	Units							
1,2,4-Trichlorobenzene	µg/L	NS	7.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	NS	370	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	NS	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	NS	0.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-oxybis (1-chloropropane)	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4,5-Trichlorophenol	µg/L	NS	3600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	µg/L	NS	3.6	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	NS	730	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrophenol	µg/L	NS	73	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
2,4-Dinitrotoluene	µg/L	NS	73	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoluene	µg/L	NS	36	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloronaphthalene	µg/L	NS	490	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorophenol	µg/L	NS	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methylnaphthalene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Methylphenol	µg/L	NS	1800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitroaniline	µg/L	NS	110	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	NS	0.15	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
3-Nitroaniline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-methylphenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Bromophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	NS	150	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Methylphenol	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitroanaline	µg/L	NS	3.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	µg/L	NS	370	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acenaphthylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Anthracene	µg/L	NS	1800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)anthracene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(a)pyrene	µg/L	0.2	0.0092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(b)fluoranthene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzo(g,h,i)perylene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Station ID				DETmw-003	DETmw-004	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		MCL	Region 9 PRG	FWGDETmw-003C-1488-GW	FWGDETmw-004C-1489-GW	FWGRQLmw-007C-1485-GW	FWGRQLmw-008C-1486-GW	FWGRQLmw-009C-1487-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab
Analyte	Units							
Benzo(k)fluoranthene	µg/L	NS	0.92	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Benzoic acid	µg/L	NS	150000	10 U	10 U	10 U	10 U	10 U
Benzyl alcohol	µg/L	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
bis(2-Chloroethoxy)methane	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Chloroethyl) ether	µg/L	NS	0.001	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl) phthalate	µg/L	NS	4.8	10 U	**0.90 J**	10 U	10 U	10 U
Butyl benzyl phthalate	µg/L	NS	7300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbazole	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	µg/L	NS	9.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzo(a,h)anthracene	µg/L	NS	0.0093	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibenzofuran	µg/L	NS	12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl phthalate	µg/L	NS	29,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dimethyl phthalate	µg/L	NS	360000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-butyl phthalate	µg/L	NS	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-octyl phthalate	µg/L	NS	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Fluorene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobenzene	µg/L	1	0.042	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	µg/L	NS	0.86	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	µg/L	50	220	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	µg/L	NS	4.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	NS	0.092	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Isophorone	µg/L	NS	71	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	µg/L	NS	6.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nitrobenzene	µg/L	NS	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitroso-di-n-propylamine	µg/L	NS	9600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	µg/L	NS	14	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pentachlorophenol	µg/L	1	0.56	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Phenol	µg/L	NS	11000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	µg/L	NS	NS	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-7 FWGWMP October 2009 SVOCs Analytical Results

Data Qualifiers

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

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

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

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

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

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

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

Table 3-8 FWGWMP October 2009 Pesticides and PCBs Analytical Results

Station ID				LL6mw-005	LL6mw-006	LL6mw-007	LL7mw-001	LL7mw-002	LL7mw-003
Sample ID		MCL	Region 9 PRG	FWGLL6mw-005C-1427-GW	FWGLL6mw-006C-1428-GW	FWGLL6mw-007C-1429-GW	FWGLL7mw-001C-1430-GW	FWGLL7mw-002C-1431-GW	FWGLL7mw-003C-1432-GW
Date Collected				10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units								
4,4'-DDD	µg/L	NS	0.28	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
4,4'-DDE	µg/L	NS	0.2	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
4,4'-DDT	µg/L	NS	0.2	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
Aldrin	µg/L	NS	0.004	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
alpha-BHC	µg/L	NS	0.011	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
alpha-Chordane	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
beta-BHC	µg/L	NS	0.037	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
delta-BHC	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
Dieldrin	µg/L	NS	0.0042	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
Endosulfan I	µg/L	NS	0.022	0.025 UJ	0.025 U	0.025 UJ	0.025 UJ	0.025 UJ	0.025 U
Endosulfan II	µg/L	NS	0.022	0.025 UJ	0.025 U	0.025 UJ	0.025 UJ	0.025 UJ	0.025 U
Endosulfan sulfate	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
Endrin	µg/L	2	11	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
Endrin aldehyde	µg/L	NS	11	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
Endrin ketone	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
Gamma-BHC	µg/L	0.2	0.052	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
gamma-Chlordane	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
Heptachlor	µg/L	0.4	0.015	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
Heptachlor epoxide	µg/L	0.2	0.0074	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U
Methoxychlor	µg/L	40	180	0.10 UJ	0.10 U	0.10 UJ	0.10 UJ	0.10 UJ	0.10 U
Toxaphene	µg/L	3	0.061	2.0 UJ	2.0 U	2.0 UJ	2.0 UJ	2.0 UJ	2.0 U
PCB- 1016	µg/L	0.5	0.96	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1221	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1232	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1242	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1248	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1254	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1260	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-8 FWGWMP October 2009 Pesticides and PCBs Analytical Results

Station ID				LL7mw-004	LL7mw-005	LL7mw-006	LL8mw-001	LL8mw-002	LL8mw-003
Sample ID		MCL	Region 9 PRG	FWGLL7mw-004C-1433-GW	FWGLL7mw-005C-1434-GW	FWGLL7mw-006C-1435-GW	FWGLL8mw-001C-1436-GW	FWGLL8mw-002C-1437-GW	FWGLL8mw-003C-1438-GW
Date Collected				10/12/2009	10/12/2009	10/12/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units								
4,4'-DDD	µg/L	NS	0.28	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
4,4'-DDE	µg/L	NS	0.2	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
4,4'-DDT	µg/L	NS	0.2	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 R	0.030 UJ
Aldrin	µg/L	NS	0.004	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
alpha-BHC	µg/L	NS	0.011	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
alpha-Chordane	µg/L	NS	NS	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
beta-BHC	µg/L	NS	0.037	0.030 UJ	**0.014 J**	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
delta-BHC	µg/L	NS	NS	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Dieldrin	µg/L	NS	0.0042	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endosulfan I	µg/L	NS	0.022	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ
Endosulfan II	µg/L	NS	0.022	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ
Endosulfan sulfate	µg/L	NS	NS	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endrin	µg/L	2	11	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endrin aldehyde	µg/L	NS	11	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endrin ketone	µg/L	NS	NS	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Gamma-BHC	µg/L	0.2	0.052	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
gamma-Chlordane	µg/L	NS	NS	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Heptachlor	µg/L	0.4	0.015	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Heptachlor epoxide	µg/L	0.2	0.0074	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Methoxychlor	µg/L	40	180	0.10 UJ	0.10 UJ	0.10 UJ	0.10 UJ	0.10 UJ	0.10 UJ
Toxaphene	µg/L	3	0.061	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
PCB- 1016	µg/L	0.5	0.96	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ
PCB- 1221	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ
PCB- 1232	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ
PCB- 1242	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ
PCB- 1248	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ
PCB- 1254	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ
PCB- 1260	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-8 FWGWMP October 2009 Pesticides and PCBs Analytical Results

Station ID				LL8mw-004	LL8mw-005	LL8mw-006	LL9mw-001	LL9mw-002	LL9mw-003
Sample ID		MCL	Region 9 PRG	FWGLL8mw-004C-1439-GW	FWGLL8mw-005C-1440-GW	FWGLL8mw-006C-1441-GW	FWGLL9mw-001C-1442-GW	FWGLL9mw-002C-1443-GW	FWGLL9mw-003C-1444-GW
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units								
4,4'-DDD	µg/L	NS	0.28	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
4,4'-DDE	µg/L	NS	0.2	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
4,4'-DDT	µg/L	NS	0.2	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
Aldrin	µg/L	NS	0.004	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
alpha-BHC	µg/L	NS	0.011	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
alpha-Chordane	µg/L	NS	NS	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
beta-BHC	µg/L	NS	0.037	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
delta-BHC	µg/L	NS	NS	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
Dieldrin	µg/L	NS	0.0042	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
Endosulfan I	µg/L	NS	0.022	0.025 UJ	0.025 UJ	0.025 UJ	0.025 U	0.025 UJ	0.025 U
Endosulfan II	µg/L	NS	0.022	0.025 UJ	0.025 UJ	0.025 UJ	0.025 U	0.025 UJ	0.025 U
Endosulfan sulfate	µg/L	NS	NS	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
Endrin	µg/L	2	11	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
Endrin aldehyde	µg/L	NS	11	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
Endrin ketone	µg/L	NS	NS	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
Gamma-BHC	µg/L	0.2	0.052	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
gamma-Chlordane	µg/L	NS	NS	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
Heptachlor	µg/L	0.4	0.015	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
Heptachlor epoxide	µg/L	0.2	0.0074	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U
Methoxychlor	µg/L	40	180	0.10 UJ	0.10 UJ	0.10 UJ	0.10 U	0.10 UJ	0.10 U
Toxaphene	µg/L	3	0.061	2.0 UJ	2.0 UJ	2.0 UJ	2.0 U	2.0 UJ	2.0 U
PCB- 1016	µg/L	0.5	0.96	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 U
PCB- 1221	µg/L	0.5	0.034	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 U
PCB- 1232	µg/L	0.5	0.034	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 U
PCB- 1242	µg/L	0.5	0.034	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 U
PCB- 1248	µg/L	0.5	0.034	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 U
PCB- 1254	µg/L	0.5	0.034	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 U
PCB- 1260	µg/L	0.5	0.034	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-8 FWGWMP October 2009 Pesticides and PCBs Analytical Results

Station ID				LL9mw-004	LL9mw-005	LL9mw-006	LL9mw-007	LL10mw-001	LL10mw-002	LL10mw-003
Sample ID		MCL	Region 9 PRG	FWGLL9mw-004C-1445-GW	FWGLL9mw-005C-1446-GW	FWGLL9mw-006C-1447-GW	FWGLL9mw-007C-1448-GW	FWGLL10mw-001C-1449-GW	FWGLL10mw-002C-1450-GW	FWGLL10mw-003C-1451-GW
Date Collected				10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
4,4'-DDD	µg/L	NS	0.28	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
4,4'-DDE	µg/L	NS	0.2	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
4,4'-DDT	µg/L	NS	0.2	0.030 UJ	0.030 R	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
Aldrin	µg/L	NS	0.004	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
alpha-BHC	µg/L	NS	0.011	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
alpha-Chordane	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
beta-BHC	µg/L	NS	0.037	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
delta-BHC	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
Dieldrin	µg/L	NS	0.0042	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
Endosulfan I	µg/L	NS	0.022	0.025 UJ	0.025 U	0.025 UJ	0.025 UJ	0.025 U	0.025 UJ	0.025 UJ
Endosulfan II	µg/L	NS	0.022	0.025 UJ	0.025 U	0.025 UJ	0.025 UJ	0.025 U	0.025 UJ	0.025 UJ
Endosulfan sulfate	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
Endrin	µg/L	2	11	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
Endrin aldehyde	µg/L	NS	11	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
Endrin ketone	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
Gamma-BHC	µg/L	0.2	0.052	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
gamma-Chlordane	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
Heptachlor	µg/L	0.4	0.015	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
Heptachlor epoxide	µg/L	0.2	0.0074	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ
Methoxychlor	µg/L	40	180	0.10 UJ	0.10 U	0.10 UJ	0.10 UJ	0.10 U	0.10 UJ	0.10 UJ
Toxaphene	µg/L	3	0.061	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 U	2.0 UJ	2.0 UJ
PCB- 1016	µg/L	0.5	0.96	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ
PCB- 1221	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ
PCB- 1232	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ
PCB- 1242	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ
PCB- 1248	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ
PCB- 1254	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ
PCB- 1260	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-8 FWGWMP October 2009 Pesticides and PCBs Analytical Results

Station ID				LL10mw-004	LL10mw-005	LL10mw-006	LL11mw-001	LL11mw-003	LL11mw-004	LL11mw-005
Sample ID		MCL	Region 9 PRG	FWGLL10mw-004C-1452-GW	FWGLL10mw-005C-1453-GW	FWGLL10mw-006C-1454-GW	FWGLL11mw-001C-1455-GF	FWGLL11mw-003C-1456-GW	FWGLL11mw-004C-1457-GW	FWGLL11mw-005C-1458-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
4,4'-DDD	µg/L	NS	0.28	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
4,4'-DDE	µg/L	NS	0.2	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
4,4'-DDT	µg/L	NS	0.2	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
Aldrin	µg/L	NS	0.004	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
alpha-BHC	µg/L	NS	0.011	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
alpha-Chordane	µg/L	NS	NS	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
beta-BHC	µg/L	NS	0.037	0.030 U	0.030 U	0.030 U	0.030 UJ	**0.012 J**	0.030 U	0.030 U
delta-BHC	µg/L	NS	NS	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
Dieldrin	µg/L	NS	0.0042	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
Endosulfan I	µg/L	NS	0.022	0.025 U	0.025 U	0.025 U	0.025 UJ	0.025 UJ	0.025 U	0.025 U
Endosulfan II	µg/L	NS	0.022	0.025 U	0.025 U	0.025 U	0.025 UJ	0.025 UJ	0.025 U	0.025 U
Endosulfan sulfate	µg/L	NS	NS	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
Endrin	µg/L	2	11	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
Endrin aldehyde	µg/L	NS	11	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
Endrin ketone	µg/L	NS	NS	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
Gamma-BHC	µg/L	0.2	0.052	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
gamma-Chlordane	µg/L	NS	NS	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
Heptachlor	µg/L	0.4	0.015	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
Heptachlor epoxide	µg/L	0.2	0.0074	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U
Methoxychlor	µg/L	40	180	0.10 U	0.10 U	0.10 U	0.10 UJ	0.10 UJ	0.10 U	0.10 U
Toxaphene	µg/L	3	0.061	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 UJ	2.0 U	2.0 U
PCB- 1016	µg/L	0.5	0.96	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1221	µg/L	0.5	0.034	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1232	µg/L	0.5	0.034	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1242	µg/L	0.5	0.034	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1248	µg/L	0.5	0.034	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1254	µg/L	0.5	0.034	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
PCB- 1260	µg/L	0.5	0.034	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-8 FWGWMP October 2009 Pesticides and PCBs Analytical Results

Station ID				LL11mw-006	LL11mw-008	LL11mw-009	LL11mw-010	ASYmw-001	ASYmw-002	ASYmw-003
Sample ID		MCL	Region 9 PRG	FWGLL11mw-006C-1459-GW	FWGLL11mw-008C-1460-GW	FWGLL11mw-009C-1461-GW	FWGLL11mw-010C-1462-GW	FWGASYmw-001C-1463-GW	FWGASYmw-002C-1464-GW	FWGASYmw-003C-1465-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/15/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
4,4'-DDD	µg/L	NS	0.28	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
4,4'-DDE	µg/L	NS	0.2	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
4,4'-DDT	µg/L	NS	0.2	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Aldrin	µg/L	NS	0.004	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
alpha-BHC	µg/L	NS	0.011	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
alpha-Chordane	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
beta-BHC	µg/L	NS	0.037	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
delta-BHC	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Dieldrin	µg/L	NS	0.0042	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endosulfan I	µg/L	NS	0.022	0.025 UJ	0.025 U	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ
Endosulfan II	µg/L	NS	0.022	0.025 UJ	0.025 U	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ
Endosulfan sulfate	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endrin	µg/L	2	11	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endrin aldehyde	µg/L	NS	11	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endrin ketone	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Gamma-BHC	µg/L	0.2	0.052	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
gamma-Chlordane	µg/L	NS	NS	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Heptachlor	µg/L	0.4	0.015	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Heptachlor epoxide	µg/L	0.2	0.0074	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Methoxychlor	µg/L	40	180	0.10 UJ	0.10 U	0.10 UJ	0.10 UJ	0.10 UJ	0.10 UJ	0.10 UJ
Toxaphene	µg/L	3	0.061	2.0 UJ	2.0 U	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
PCB- 1016	µg/L	0.5	0.96	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1221	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1232	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1242	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1248	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1254	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1260	µg/L	0.5	0.034	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-8 FWGWMP October 2009 Pesticides and PCBs Analytical Results

Station ID				ASYmw-004	ASYmw-005	ASYmw-006	ASYmw-007	ASYmw-008	ASYmw-009	ASYmw-010
Sample ID		MCL	Region 9 PRG	FWGASYmw-004C-1466-GW	FWGASYmw-005C-1467-GW	FWGASYmw-006C-1468-GW	FWGASYmw-007C-1469-GW	FWGASYmw-008C-1470-GW	FWGASYmw-009C-1471-GW	FWGASYmw-010C-1472-GW
Date Collected				10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009	10/15/2009
Sample Type				Grab	Grab	Grab	Grab	Grab	Grab	Grab
Analyte	Units									
4,4'-DDD	µg/L	NS	0.28	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
4,4'-DDE	µg/L	NS	0.2	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
4,4'-DDT	µg/L	NS	0.2	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
Aldrin	µg/L	NS	0.004	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
alpha-BHC	µg/L	NS	0.011	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
alpha-Chordane	µg/L	NS	NS	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
beta-BHC	µg/L	NS	0.037	0.030 U	**0.017 J**	0.030 UJ	**0.0096 J**	0.030 UJ	0.030 U	**0.014 J**
delta-BHC	µg/L	NS	NS	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
Dieldrin	µg/L	NS	0.0042	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
Endosulfan I	µg/L	NS	0.022	0.025 U	0.025 UJ	0.025 UJ	0.025 U	0.025 UJ	0.025 U	0.025 UJ
Endosulfan II	µg/L	NS	0.022	0.025 U	0.025 UJ	0.025 UJ	0.025 U	0.025 UJ	0.025 U	0.025 UJ
Endosulfan sulfate	µg/L	NS	NS	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
Endrin	µg/L	2	11	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
Endrin aldehyde	µg/L	NS	11	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
Endrin ketone	µg/L	NS	NS	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
Gamma-BHC	µg/L	0.2	0.052	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
gamma-Chlordane	µg/L	NS	NS	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
Heptachlor	µg/L	0.4	0.015	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
Heptachlor epoxide	µg/L	0.2	0.0074	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 UJ
Methoxychlor	µg/L	40	180	0.10 U	0.10 UJ	0.10 UJ	0.10 U	0.10 UJ	0.10 U	0.10 UJ
Toxaphene	µg/L	3	0.061	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
PCB- 1016	µg/L	0.5	0.96	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ
PCB- 1221	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ
PCB- 1232	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ
PCB- 1242	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ
PCB- 1248	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ
PCB- 1254	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ
PCB- 1260	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-8 FWGWMP October 2009 Pesticides and PCBs Analytical Results

Station ID				DETmw-003	DETmw-004	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		MCL	Region 9 PRG	FWGDETmw-003C-1488-GW	FWGDETmw-004C-1489-GW	FWGRQLmw-007C-1485-GW	FWGRQLmw-008C-1486-GW	FWGRQLmw-009C-1487-GW
Date Collected				10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009
Sample Type				Grab	Grab	Grab	Grab	Grab
Analyte	Units							
4,4'-DDD	µg/L	NS	0.28	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
4,4'-DDE	µg/L	NS	0.2	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
4,4'-DDT	µg/L	NS	0.2	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Aldrin	µg/L	NS	0.004	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
alpha-BHC	µg/L	NS	0.011	0.030 U	0.030 UJ	0.030 UJ	**0.023 J**	0.030 UJ
alpha-Chordane	µg/L	NS	NS	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
beta-BHC	µg/L	NS	0.037	0.030 U	0.030 UJ	**0.015 J**	**0.0095 J**	0.030 UJ
delta-BHC	µg/L	NS	NS	0.030 U	0.030 UJ	0.030 UJ	**0.025 J**	0.030 UJ
Dieldrin	µg/L	NS	0.0042	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endosulfan I	µg/L	NS	0.022	0.025 U	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ
Endosulfan II	µg/L	NS	0.022	0.025 U	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ
Endosulfan sulfate	µg/L	NS	NS	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endrin	µg/L	2	11	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endrin aldehyde	µg/L	NS	11	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Endrin ketone	µg/L	NS	NS	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Gamma-BHC	µg/L	0.2	0.052	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
gamma-Chlordane	µg/L	NS	NS	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Heptachlor	µg/L	0.4	0.015	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Heptachlor epoxide	µg/L	0.2	0.0074	0.030 U	0.030 UJ	0.030 UJ	0.030 UJ	0.030 UJ
Methoxychlor	µg/L	40	180	0.10 U	0.10 UJ	0.10 UJ	0.10 UJ	0.10 UJ
Toxaphene	µg/L	3	0.061	2.0 U	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
PCB- 1016	µg/L	0.5	0.96	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1221	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1232	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1242	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1248	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1254	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
PCB- 1260	µg/L	0.5	0.034	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U

Notes:

NS = no standard

Bold = detected compound above the MDL

N/A = Not Analyzed

Table 3-8 FWGWMP October 2009 Pesticide and PCBs Analytical Results

Data Qualifiers

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

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

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

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

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

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

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

3.3 Data Verification/Validation

As discussed in Sections 2.3 and 3.2, all primary chemical data were generated by TestAmerica. RTI conducted the independent QC analysis (EQM does not however verify RTI data). A three step process is then conducted which involves the lab, the ADR data program, and a data validator performing the data verification and validation of the data. The First Step is where each lab analyzes the data and assigns a qualifier as necessary in full accordance with USEPA and Louisville Chemistry (LCG) guidelines.

The data verification and validation process is continued with Step Two; when the data validator verifies all data received from TestAmerica, and validates greater than 10% of the data by running the lab data through the ADR program. The USACE-supplied ADR program assigned qualifiers to the data as necessary consistent with the programmed criteria of the ADR software. The Third step is when the data validator then uses professional judgment to check the validity of the qualified data and either accepts, rejects, or re-qualifies the ADR results following strict LCG and USEPA guidelines.

After this three-step process has been completed, the resulting final ADR qualifiers may not match the original lab qualifiers which are presented on the laboratory data sheets. As a result of the data validation process, one or more of four possibilities listed occurs:

1. The lab assigns a B, J, or E to the data, and ADR and/or the data validator changes the qualifier to a J, UJ, U, B, or R.
2. The lab assigns no qualifier to the data, and ADR and/or the data validator assigns a J, UJ, U, B, or R to the data.
3. The lab assigns a B, J, or E to the data, and ADR and/or the data validator assigns no qualifier to the data.
4. The lab may assign a J qualifier or use no qualifier, and ADR and/or the data validator accepts the lab designation.

For the October 2009 Sampling Event Report, the laboratory data with laboratory derived qualifiers following USEPA and LGC criteria are presented in Appendix D. The verification reports for the data are also presented in Appendix D, which includes the definitions of the ADR qualifiers. The data presented in Tables 3-3, 3-4, 3-6, 3-7, and 3-8 are the result of the data that has been subjected to the Three Step Process of verification and validation. These Tables display the final assigned data qualifier in accordance with ADR and LCG criteria.

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

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

- J - The identification of the analyte is acceptable, but the quality assurance criteria indicate that the quantitative values may be outside the normal expected range of precision (i.e., the quantitative value is estimated). Examples include:
  - Results detected above the laboratory MDL but less than the laboratory reporting limit.
  - MS/MSD percent recoveries outside the acceptance criteria.
  - Laboratory control sample (LCS) percent recoveries outside acceptance criteria.

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

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

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

Fifty-one wells were sampled during a four-day quarterly sampling event from October 12-15, 2009. During the quarterly event, twelve trip blanks were submitted for volatile organic analysis to TestAmerica.

Six field duplicates were collected during the four day period in order to assess the quality and consistency of sample collection. Project requirements of 10% field duplicates were met for this sampling event. In addition, five laboratory splits were collected and analyzed in order to assess the quality and consistency of the laboratory analysis. The project requirements of taking 10% laboratory splits were met for this sampling event. An equipment rinse blank was collected during each day of the sampling event.

For the October 2009 sampling event the following laboratory or field contamination at detections greater than ½ the method reporting limit (MRL) was reported for the field QA/QC samples.

A9J130104/ A9J130111

FWGEQUIPRinse1-1490-GW

- 2-butanone detected at 20ug/L, acetone at 17ug/L, methylene chloride at 0.63ug/L and toluene at 0.40ug/L. The acetone result for sample FWGLL7mw-DUP1-1473-GW was qualified, "B" as the result was <10x the equipment rinse

contamination. As there were no detected concentrations of the other rinse contaminants, no additional qualifications were made.

- Benzyl alcohol was detected at 0.83ug/L and diethyl phthalate at 0.67ug/L. No qualifications were made as there were no detected concentrations of these contaminants in the associated field samples.

Trip Blanks

- Acetone was detected in all three trip blanks from 1.9ug/L to 2.5ug/L. The acetone result for sample FWGLL7mw-DUP1-1473-GW was qualified, "B" as the result was <10x the trip blank contamination.

Method Blanks

- Benzyl alcohol was detected in the method blank at 0.69ug/L. Sample FWGEQUIPRinse1-1490-GW was qualified, "B", as the detected concentration was <5x the method blank contamination.
- Calcium was detected in the method blank at 817ug/L. All detected calcium results <5x contamination were qualified, "B".
- Cadmium was detected in the method blank(s) at 0.19ug/L, iron at 26.2ug/L, thallium at 0.19ug/L and 0.027ug/L and zinc at 9.8ug/L and 8.8. All detected thallium and zinc results <5x contamination were qualified, "B". No qualifications were made for cadmium and iron contamination as the associated field samples did not have detected concentrations of these contaminants or the detected concentrations in the associated field samples were >5x cadmium and iron contamination.

A9J140104 / A9J140124

FWGEQUIPRinse2-1491-GW

- Acetone was detected at 17ug/L and methylene chloride at 0.69ug/L. The acetone result for sample FWGLL9mw-001c-1442-GW was qualified, "B" as the result was <10x the equipment rinse contamination. As there were no detected concentrations of methylene chloride in the associated field samples, no additional qualifications were made.
- Benzyl alcohol was detected at 0.8ug/L and diethyl phthalate at 0.65ug/L in the equipment rinse. No qualifications were made as there were no detected concentrations of these contaminants in the associated field samples.
- 2,6-Dinitrotoluene was detected in the equipment rinse at 0.053ug/L, nitrobenzene at 0.084ug/L and PETN at 0.45ug/L. The PETN result for FWGLL9mw-DUP3-1475-GW were qualified "B" as the detected concentrations were<5x the equipment rinse contamination. No qualifications were made for 2,6-dinitrotoluene or nitrobenzene contamination as there were no detected concentrations <5x contamination detected in the field samples.
- Nitrocellulose was detected in the equipment rinse at 0.12ug/L. Samples FWGLL10mw-003c-1451-GW, FWGLL8mw-003c-1438-GW and FWGLL8mw-006c-1441-GW were qualified, "B", as the results were less than 5x the equipment rinse contamination.

Trip Blanks

- Acetone was detected in all three trip blanks from 2.3ug/L to 2.6ug/L. The acetone result for sample FWGLL9mw-001c-1442-GW was qualified, "B" as the result was <10x the trip blank contamination.

Method Blanks

- 2-butanone was detected in the method blank at 4.5ug/L and acetone at 1.1ug/L. The acetone results for samples FWGLL9mw-001c-1442-GW, FWGTeam1-Trip and FWGTeam2-Trip were qualified, "B". As there were no detected concentrations of 2-butanone in the associated field samples, no qualifications were made for 2- butanone contamination in the method blank.
- Zinc was detected in the method blanks at 6.5ug/L and 5.2ug/L. All detected zinc results <5x contamination were qualified, "B".

A9J150102 / A9J150103

FWGEQUIPRinse3-1492-GW

- FWGEQUIPRinse3-1492-GW had acetone detected at 29ug/L, 2-butanone at 14ug/L, chloroform at 0.8ug/L, toluene at 0.60ug/L and methylene chloride at 16ug/L. The acetone result FWGLL10mw-DUP4-1476-GW was qualified, "B" as the result was <10x the equipment rinse contamination. As there were no detected concentrations of 2-butanone, chloroform, toluene or methylene chloride, no additional qualifications were made.
- 2,6-Dinitrotoluene was detected in the equipment blank at 0.055ug/L and PETN at 0.46ug/L. 2,6-Dinitrotoluene results for samples FWGLL11mw-009c-1461-GW and FWGLL11mw-DUP5-1477-GW were qualified, "B" as the detected concentrations were <5x the equipment blank contamination. As there were no detected concentrations of PETN in the associated field samples, no qualifications were made for the PETN contamination.

Trip Blanks

Acetone was detected in all three trip blanks from 1.7ug/L to 2.2ug/L. The acetone results for samples FWGLL10mw-005c-1453-GW and FWGLL10mw-DUP4-1476-GW were qualified, "B" as the results were <10x the trip blank contamination.

Method Blanks

- 2-butanone was detected in the method blank at 1.6ug/L and methylene chloride at 0.96ug/L. As there were no detected concentrations of these blank contaminants in the associated samples, no qualifications were made.
- Zinc was detected in the method blanks at 5.6ug/L and 5.1ug/L. All detected zinc results <5x contamination were qualified, "B".
- Samples FWGRQLmw-007c-1485-GW, FWGRQLmw-008c-1486-GW, FWGRQLmw-009c-1486-GW, FWGLL11mw-DUP5-1477-GW, FWGLL11mw-010c-1462-GW and FWGASYmw-001c-1463-GW required filtration due to excessive particulates. A filter blank was extracted and analyzed with the samples. 1,35-Trinitrobenzene was detected at 0.035ug/L in the method blank and

at 0.040ug/L in the filter blank. No qualifications were made as there were no detected 1,35-trinitrobenzene results associated with these blanks.

A9J160102 / A9J160104

FWGEQUIPRinse4-1493-GW

FWGEQUIPRinse4-1493-GW had 2-butanone detected at 1.6ug/L, acetone at 6.7ug/L, chloroform at 0.81ug/L, methylene chloride at 15ug/L and toluene at 0.38ug/L. The acetone result for samples FWGASYmw-002c-1464-GW, FWGASYmw-003c-1465-GW, FWGASYmw-005c-1467-GW, FWGASYmw-006c-1468-GW, FWGASYmw-008c-1470-GW and FWGDETmw-004c-1489-GW were qualified, "B" as the results were <10x the equipment rinse contamination. As there were no detected concentrations of the other blank contaminants, no additional qualifications were made.

Trip Blanks

Acetone was detected in all three trip blanks from 3.9ug/L to 4.0ug/L. The acetone result for samples FWGASYmw-002c-1464-GW, FWGASYmw-003c-1465-GW, FWGASYmw-005c-1467-GW, FWGASYmw-006c-1468-GW, FWGASYmw-008c-1470-GW and FWGDETmw-004c-1489-GW were qualified, "B" as the results were <10x the trip blank contamination.

Method Blanks

- Chromium was detected in the method blank at 14.5ug/L, nickel at 5.0ug/L and copper at 4.8ug/L. Detected chromium, copper and nickel results <5x contamination were qualified, "B".
- Iron was detected in the method blank(s) at 41.8ug/L and zinc at 5.5ug/L and 8.1ug/L. All detected iron and zinc results <5x contamination were qualified, "B".
- Several of the samples required filtration due to excessive particulates. A filter blank was prepared and analyzed. 1,3,5-Trinitrobenzene was detected in the filter blank at 0.039ug/L, at 0.033ug/L in the method blank from batch 9294173 and at 0.034ug/L in batch 9295142. The 1,3,5-trinitrobenzene results for FWGASYmw-008c-1470-GW and FWGASYmw-DUP6-1483-GW were qualified "B" as the detected concentrations were <5x blank contamination.

For a discussion of method blank contamination please reference the Data Verification Reports and the Laboratory Case Narrative.

Laboratory analyses were performed in analytical batches of ≤ 20 in order to maximize efficiency and group quality control requirements. Method blanks and laboratory control samples were analyzed at a frequency of 1:20 (5%) samples, or in each analytical batch whichever was greater. Sufficient volume was provided to the laboratory in order to assess matrix spike analysis on project samples at a frequency of 1:10 (10%) samples. Matrix spike/matrix spike duplicate analysis was performed by the laboratory as batch quality control at a frequency of 1:10 (10%).

Field quality control and laboratory quality control results were evaluated as part of the verification assessment provided in Appendix D. Project requirements were met for the frequency and quality of these samples.

Table 3-9 presents the percent, by analytical method, of data that was acceptable (based on data not rejected) for use. Only 2 pieces of data out of 12,684 were rejected. The MRL analyzed 10/27/09 @ 0920 had 4,4'-DDT recovery below limits at 56%. The 4,4-DDT result for FWGLL9mw-005c-1446-GW and FWGLL8mw-002c-1437-GW were qualified as "R". Under the requirements of the LCG this data is deemed unusable. This does not, however, have any negative effect on the usability of other parameters analyzed under the same method. Rejected data do call into question the interpretation of that particular data for a given monitoring event and it is important to correct any problems to prevent a reoccurrence for future sampling events. All methods met the 90% completion requirement.

All qualified data has been discussed in the Data Verification Reports contained in Appendix D. All other data meet the requirements specified in the USACE Louisville Guidance Document and the QAPP associated with this site. All qualified data performed by the data validator is further discussed in the Data Verification Reports contained in Appendix D.

Table 3-9. Percent of Acceptable Data

Analytical Method	Total Number of Analytes	Number of Rejects	Percent Completeness
353.2 Modified	61	0	100
6010B	1920	0	100
6020	896	0	100
7470A	128	0	100
8081A	1281	2	99.8
8082	427	0	100
8260B	2847	0	100
8270C	4026	0	100
8330	976	0	100
9012A	61	0	100
8330 Modified	61	0	100
TOTAL	**12684**	**2**	**99.99**

SECTION 4

SUMMARY OF RESULTS

Explosive and Propellant Compounds

As shown in Table 3-3, the only explosive detected at levels above the Region 9 PRGs during the October 2009 sampling event was RDX in LL7mw-006 at a level of 0.78 µg/L. The Region 9 PRG is 0.61 µg/L.

Inorganic Elements

Several inorganic compounds were detected at levels exceeding the MCLs and/or Region 9 PRGs. These included manganese, aluminum, arsenic, and iron for wells from all areas sampled. These compounds were also detected at concentrations exceeding the Facility-Wide Background Criteria for many of the wells. Table 4-1 presents a summary of all inorganic compounds and the associated wells that had detections exceeding MCLs or Region 9 PRGs.

Volatile Organic Compounds

As shown in Table 3-6, the only VOCs detected at levels above the MCLs or Region 9 PRGs during the July 2009 event were:

- Chloroform at a concentration exceeding the Region 9 PRG of 0.17 µg/L [LL10mw-001 (0.26 µg/L J) and LL10mw-003 (0.26 µg/L J)].

- Carbon Tetrachloride at a concentration exceeding the Region 9 PRG of 0.17 µg/L [LL10mw-001 (1.6 µg/L) and LL10mw-003 (2.4 µg/L)].

- Tetrachloroethene at a concentration exceeding the Region 9 PRG of 0.1 µg/L [LL11mw-009 (4.1 µg/L)].

Tetrachloroethene (PCE) has been detected in well LL11mw-009 at levels ranging from 3.8µg/L to 4.1µg/L during the April, July and October 2009 sampling events. There does not appear to be an increasing or decreasing trend in the detected levels of PCE, the levels are remaining fairly steady-state. It should be noted that this well has been identified for future sampling and analysis after the required four quarters of sampling. PCE levels will be monitored closely over future sampling and analysis events. The 2010 FWGWMP includes the annual monitoring of this well.

Semivolatile Organic Compounds

As shown in Table 3-7 the only SVOC detected at levels above the Region 9 PRGs was bis(2-Ethylhexyl)phthalate at the following wells:

- LL7mw-003 (10 µg/L), LL9mw-001 (5.3 µg J), LL9mw-002 (5.6 µg/L J), LL10mw-002 (8.1 µg/L J), LL11mw-001 (350 µg/L), LL11mw-003 (8.6 µg/L J).

The Region 9 PRG is 4.8 μg/L.

Pesticides and Polychlorinated Biphenyls (PCBs)

As shown in Table 3-8 the only pesticides/PCBs detected at levels above the Region 9 PRG was alpha-BHC in RQLmw-008 (0.023 μg/L J). The Region 9 PRG is 0.011 μg/L.

Table 4-1. Inorganic Elements Detected at Concentrations Exceeding the MCLs or Region 9 PRGs

Area	Well Number	Compound or Element Detected	Oct-09 Level (ug/L)		MCL (ug/L)	Region 9 PRG (ug/L)	Facility-Wide Background Criteria (ug/L)
Load Line 6	LL6mw-005	Arsenic	**14.4**		10	0.045	0
		Iron	**946**	J	300	11,000	1,430
		Manganese	**501**		50	880	1,340
	LL6mw-006	Iron	**363**	J	300	11,000	279
		Manganese	**72.4**		50	880	1,020
	LL6mw-007	Manganese	**394**		50	880	1,340
Load Line 7	LL7mw-001	Iron	**8,360**	J	300	11,000	1,430
		Manganese	**460**		50	880	1,340
	LL7mw-002	Manganese	**311**		50	880	1,340
	LL7mw-003	Iron	**17,200**		300	11,000	1,430
		Manganese	**1,340**		50	880	1,340
	LL7mw-004	Iron	**17,000**	J	300	11,000	1,430
		Manganese	**1,230**		50	880	1,340
	LL7mw-005	Iron	**1,290**	J	300	11,000	1,430
		Manganese	**2,320**		50	880	1,340
	LL7mw-006	Manganese	**1,240**		50	880	1,340
		Iron	**2,880**	J	300	11,000	279
Load Line 8	LL8mw-001	Manganese	**125**		50	880	1,020
		Iron	**942**		300	11,000	279
	LL8mw-002	Arsenic	**6.6**	J	10	0.045	11.7
		Manganese	**333**		50	880	1,020
		Iron	**3,850**		300	11,000	279
	LL8mw-003	Arsenic	**4.1**	J	10	0.045	11.7
		Manganese	**677**		50	880	1,020
		Iron	**929**		300	11,000	279
	LL8mw-004	Arsenic	**3.3**	J	10	0.045	11.7
	LL8mw-005	Manganese	**2,690**		50	880	1,340
		Iron	**1,180**		300	11,000	1,430
Load Line 9	LL9mw-003	Manganese	**111**		50	880	1,340
		Iron	**3,240**		300	11,000	1,430
	LL9mw-004	Manganese	**2,290**		50	880	1,340
		Iron	**10,600**		300	11,000	1,430
	LL9mw-006	Manganese	**677**		50	880	1,340
		Iron	**1,930**		300	11,000	1,430
	LL9mw-007	Manganese	**1,050**		50	880	1,340
		Iron	**9,900**		300	11,000	1,430
Load Line 11	LL11mw-001	Manganese	**960**		50	880	1,020
	Ll11mw-003	Manganese	**498**		50	880	1,020
	LL11mw-004	Manganese	**272**		50	880	1,020
	LL11mw-009	Manganese	**706**		50	880	1,020
	LL11mw-010	Iron	**631**	J	300	11,000	279
		Manganese	**430**		50	880	1,020
Atlas Scrap Yard	ASYmw-001	Iron	**631**	J	300	11,000	1,430
		Manganese	**1,040**		50	880	1,340
	ASYmw-003	Arsenic	**8.6**		10	0.045	0.0
		Iron	**2,580**		300	11,000	1,430
		Manganese	**529**		50	880	1,340
	ASYmw-004	Iron	**1,940**	J	300	11,000	1,430
		Manganese	**201**		50	880	1,340
		Arsenic	**28**		10	0.045	0
	ASYmw-005	Manganese	**618**		50	880	1,340
	ASYmw-006	Arsenic	**17.0**		10	0.045	0
		Iron	**1,360**		300	11,000	1,430
		Manganese	**177**		50	880	1,340
	ASYmw-007	Manganese	**205**		50	880	1,020
	ASYmw-008	Aluminum	**6,300**		200	36,000	0
		Iron	**17,000**	J	300	11,000	279
		Manganese	**412**		50	880	1,020
		Arsenic	**26.4**		10	0.045	11.7
	ASYmw-009	Manganese	**607**		50	880	1,340
	ASYmw-010	Manganese	**139**		50	880	1020
		Iron	**2,530**		300	11,000	279

Table 4-1. Inorganic Elements Detected at Concentrations Exceeding the MCLs or Region 9 PRGs

Area	Well Number	Compound or Element Detected	Oct-09 Level (ug/L)		MCL (ug/L)	Region 9 PRG (ug/L)	Facility-Wide Background Criteria (ug/L)
Open Detonation Area 2	DETmw-003	Manganese	**266**		300	11,000	279
		Iron	**1,440**		50	880	1,020
		Arsenic	**11.5**		10	0.045	11.7
Ramsdell Quarry	RQLmw-007	Arsenic	**71.4**		10	0.045	0
		Iron	**23,900**	**J**	300	11,000	1,430
		Manganese	**1,740**		50	880	1,340
	RQLmw-008	Arsenic	**29.9**		10	0.045	0
		Iron	**49,600**	**J**	300	11,000	1,430
		Manganese	**408**		50	880	1,340
	RQLmw-009	Arsenic	**8.9**		10	0.045	0
		Iron	**5,280**	**J**	300	11,000	1,430
		Manganese	**1,260**		50	880	1,340

Notes:
J = estimated result. Results have been qualified "J" For more details refer to Data Verification/Validation Reports in Appendix D
B = the analyte is found in the method blank or any of the field blanks

SECTION 5

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