Draft Long Term Monitoring, Operations and Maintenance, and Site Closeout Plan, Site 4, Aircraft Refueling Apron Spill Site Francis S. Gabreski Airport, 106th Rescue Wing, Westhampton Beach, NY								
Document Prepared by: CH2M HILL, INC.					**Prime Contract No.: W9133L-14-D-0003**		**Prime Delivery Order No.: 0003**	
Comment No.	**Page No.**	**Para No.**	**Section No.**	**Category C-M-S-A**	**Text in Document**	**Proposed Revision to Text**	**Rationale for Change or Other Comment**	**Response to Comment**
Comments Submitted By: BB&E (Cindy Lang)								
1	1-1	2		A			Operations and maintenance (O&M) should be added to Acronym List	Operations and maintenance (O&M) has been added to the acronym list, and the list has been updated.
2	2-1	2		A	The APM will support the PM for technical, site monitoring, and communication functions.		Since this is first use, please define APM.	APM has been defined at first use as ‘assistant project manager’.
3	2-2		Table 2-1	A			Please add Cindy Lang/ BB&E to Table 2-1:	Cindy Lang/BB&E has been added to Table 2-1.
4	4-1	5	4.4	A	Groundwater elevations are approximately 15 to 19 feet above the NGVD (depth to groundwater averages 35 to 40 feet below ground surface [bgs]).		Since this is first use in the text, please define NGVD.	NGVD has been defined at first use as ‘National Geodetic Vertical Datum’.
5	6-2	1-2	6.2/6.3	A			In Sections 6.2 and 6.3, the references to the tables in the QAPP are one off (e.g. Table 4-4 should be Table 4-3).	The table number references in Sections 6.2 and 6.3 have been revised for consistency with the QAPP.
6	III		Acronyms and Abbreviations	A			Please add “No further Action (NFA), Senior Technical Consultant (STC), and Programmable logic control (PLC) to the acronym list.	The Acronyms and Abbreviations list has been updated.
7	QAPP, pg v		Acronyms and Abbreviations	A			Please review the acronym and abbreviations list for completeness as there are a few missing (e.g. APM, BTEX, COC, NFA, O&M, RA, STC, PID).	The Acronyms and Abbreviations list has been reviewed and missing acronyms and abbreviations have been added and defined.

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8	QAPP, pg 2-1	5	2.2.2	A	The Program Quality QA Manager is accountable for development, maintenance, and auditing of the QCP.		Please define QCP since this is the first use.	QCP has been defined at first use as 'Quality Control Plan'.
9	QAPP, pg 2-1	6	2.2.3	A	He will lead the scoping of technical tasks and work elements for this project and will verify that the technical quality of deliverables generated by CH2M and our subcontractors before submittal to NGB or the regulatory agencies.		This sentence is awkward. Please consider revising.	This sentence has been revised to, *"He will lead the scoping of technical tasks and work elements for this project to ensure the technical quality of deliverables generated by CH2M and its subcontractors prior to submittal to ANG or the regulatory agencies."*
10	QAPP, pg 13-3	2	13.2	A	Corrective action procedures are handled initially at the bench level by the analyst, who reviews the preparation or extraction procedure for possible errors and checks the instrument calibration, spike and calibration mixes, instrument sensitivity, and similar.		This sentence is awkward. Please consider revising.	This sentence has been revised to, *"Corrective action procedures are handled initially by the laboratory analyst, who reviews the preparation or extraction procedure for possible errors and checks the instrument calibration, spike and calibration mixes, instrument sensitivity, and other possible error sources."*
11	QAPP, pg 14-1	1	14	A	These reports include periodic assessments of measurement data accuracy, precision, and completeness, results of performance audits, results of system audits, identification of significant QA problems, and recommended solutions.	These reports include periodic assessments of measurement data for accuracy, precision, and completeness, results of performance audits, results of system audits, identification of significant QA problems, and recommended solutions.	This sentence is missing a word.	This sentence has been revised, as suggested.

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Instructions for Using Comment Matrix

1. Please enter the name of the organization submitting the comment in the field adjacent to "Comments submitted by."
2. Please provide the name, telephone number, and e-mail address of a point of contact (POC) that can assist if there are any questions related to the comments submitted.
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   C – Critical. Non-concurrence in draft will result if concern is not satisfactorily addressed.

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   A – Administrative. Administrative comments address typographical errors, grammatical errors, etc.
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INSTALLATION RESTORATION PROGRAM

Draft Final
Long-Term Monitoring, Operations and Maintenance, and Site Closeout Plan
Site 4, Aircraft Refueling Apron Spill Site
Francis S. Gabreski Airport

106th Rescue Wing
Westhampton Beach, New York
ANG Project No. F9WFEV6064A001

Prepared for:
U.S. Air National Guard/A4OR
Shepperd Hall, 3501 Fetchet Avenue
Joint Base Andrews, MD 20762-5157

May 2017

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Long-Term Monitoring, Operations and Maintenance, and Site Closeout Plan
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Acronyms and Abbreviations

µg/L	microgram per liter
°F	degrees Fahrenheit
ANG	Air National Guard
APM	assistant project manager
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
btoc	below top of casing
CH2M	CH2M HILL, Inc.
COC	contaminant of concern
DO	dissolved oxygen
EM	environmental manager
Gabreski Airport	Francis S. Gabreski Airport in Westhampton Beach, New York
HSP	Health and Safety Plan
ID	identification
IRP	Installation Restoration Program
JP	jet petroleum fuel
LTM	long-term monitoring
mL/min	milliliters per minute
NFA	No Further Action
NGB	National Guard Bureau
NGVD	National Geodetic Vertical Datum
NTU	nephelometric turbidity unit
NY ANG	New York Air National Guard
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	operations and maintenance
ORP	oxidation-reduction potential
PEER	PEER Consultants, PC
PLC	programmable logic control
PM	project manager
POL	petroleum, oil, and lubricants
PVC	polyvinyl chloride
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RA	remedial action

RA-O	remedial action operation
RDW	remediation-derived waste
SAIC	Science Applications International Corporation
SCO	site closeout
TBD	to be determined
TOC	top of casing
UTM	Universal Transverse Mercator
VOC	volatile organic compound
WGS	World Geodetic System

SECTION 1

Introduction

The National Guard Bureau (NGB) has retained CH2M HILL, Inc. (CH2M) to provide Installation Restoration Program (IRP) services under NGB Contract W9133L-14-D-0003 at five Air National Guard (ANG) installations in the eastern United States. This project is being performed for the New York Air National Guard (NY ANG) 106th Rescue Wing at Francis S. Gabreski Airport in Westhampton Beach, Suffolk County, New York (Gabreski Airport) (Figure 1-1). Under a 56-month period of performance for ANG Project Number F9WFEV6064A001, long-term monitoring (LTM), operations and maintenance (O&M), and site closeout (SCO) activities will be implemented at Site 4, Aircraft Refueling Apron Spill Site.

Remedial action operation (RA-O) activities at Site 4 include operating an air biosparge system to increase dissolved oxygen (DO) concentrations in the shallow aquifer and stimulate aerobic biodegradation of contaminants of concerns (COC) with concentrations above New York State Department of Environmental Conservation (NYSDEC) Class GA groundwater criteria and conduct quarterly groundwater monitoring.

The air biosparge system began operating in 2009 and initially was comprised of 38 air biosparge points. Groundwater monitoring data collected between July 2009 and August 2012 indicated benzene, toluene, ethylbenzene, and total xylenes (BTEX) contamination outside the influence of the air biosparge treatment system was not declining rapidly enough for near-term SCO; therefore, the system was optimized in September 2012 (Leidos, 2016a). Optimization activities included adding 24 air biosparge points and a second air compressor to address the source areas and expand the treatment area. In October 2013, an additional five air biosparge points were installed to further expand the treatment area. In August 2015, three additional air biosparge points were installed, increasing the number of air biosparge points to 70, to increase air biosparge system performance in two areas of high residual contaminant concentrations (Leidos, 2016a).

The full injection network at Site 4 has consistently received flow from one compressor since July 11, 2013, and from both compressors since January 13, 2014. The air biosparge system operated approximately 24 hours per day during operational periods, with a total runtime of 25,001 hours or 2.85 years between September 28, 2012 and May 30, 2016 (Leidos, 2016a). Operation of the air biosparge system has resulted in an overall 99.7 percent reduction in BTEX concentrations from system startup through May 2016 (Leidos, 2016a).

Since the air biosparge system startup in 2009, 20 rounds of groundwater monitoring have been conducted at Site 4. During the most recent LTM sampling event (May 2016), five volatile organic compounds (VOCs) were detected at concentrations exceeding NYSDEC Class GA groundwater criteria in at least one groundwater sample collected from the eight monitoring wells at Site 4. As needed, air injection will be optimized to focus on these remaining recalcitrant areas. Once remediation goals are attained, operation of the system will be discontinued, and four additional rounds of groundwater sampling will be conducted to verify the objectives have been maintained. Air biosparge system inspections and maintenance will be conducted monthly, and additional routine maintenance will be performed in accordance with the manufacturer’s recommendations.

This document, prepared in accordance with the *Air National Guard Environmental Restoration Program Investigation Guidance* (ANG Investigation Guidance; ANG, 2009), is the LTM, O&M, and SCO Plan for continuing quarterly groundwater monitoring, monthly and routine O&M activities, and decommissioning the air biosparge system and abandoning monitoring well at Site 4 (Figure 1-2).

1.1 Purpose and Objectives

This LTM, O&M, and SCO Plan documents procedures to be used to evaluate the effectiveness of the remedial action (RA) in reducing the COC concentrations below NYSDEC Class GA groundwater criteria, perform O&M activities, and decommission the air biosparge system and abandon monitoring wells once a No Further Action (NFA) determination is received. This LTM, O&M, and SCO Plan also includes a Quality Assurance Project Plan

(QAPP; Appendix A) that presents the overall policies and requirements that will be employed during the field efforts at Site 4.

In accordance with the *Final RA-O Work Plan, Addendum #3* (Science Applications International Corporation [SAIC], 2012), groundwater monitoring for Site 4 will consist of the following activities until COC concentrations are below NYSDEC Class GA groundwater criteria:

- Quarterly groundwater sampling and groundwater level measurements from monitoring wells MW04-GW01, MW04-GW02, MW04-GW03, MW04-GW04R, MW04-GW05, SDW-23AR, SW-06, and SW-07
- Quarterly BTEX analysis of each sample
- Semiannual analysis of VOCs
- Semiannual groundwater level measurements from 22 monitoring wells (MW04-GW01, MW04-GW02, MW04-GW03, MW04-GW04R, MW04-GW05, SW-4, SW-5, SW-6, SW-6A, SW-6B, SW-7, SW-10, SDW-21, SDW-22, SDW-23, SDW-23AR, SDW-24, SDW-24A, PZ-01, PZ-02, PZ-03, and PZ-04)

Once NYSDEC Class GA groundwater criteria are achieved, four quarterly compliance monitoring events consisting of VOC analysis, will be performed for 22 monitoring wells (MW04-GW01, MW04-GW02, MW04-GW03, MW04-GW04R, MW04-GW05, SW-4, SW-5, SW-6, SW-6A, SW-6B, SW-7, SW-10, SDW-21, SDW-22, SDW-23, SDW-23AR, SDW-24, SDW-24A, PZ-01, PZ-02, PZ-03, and PZ-04) to demonstrate attainment of groundwater criteria and achieve SCO in accordance with the *Final Decision Document* (ANG, 2008).

1.2 Project Approach

The scope of work presented in this LTM, O&M, and SCO Plan describes the procedures that will be implemented to complete quarterly groundwater monitoring, O&M activities, and air biosparge system decommissioning, including monitoring well abandonment, at Site 4. Field activities include completing quarterly groundwater monitoring events from the established well network, monthly O&M activities associated with the air biosparge system, removing and disposing of air biosparge system components, and abandoning monitoring wells. Work will be performed in accordance with the state, federal, and ANG Investigation Guidance (ANG, 2009) requirements.

Project Management Approach

CH2M's approach to project management is to make the project management organization accessible to NGB, NY ANG, NYSDEC, and the New York State Department of Health (NYSDOH) to establish relationships with each stakeholder that encourage open dialogue to successfully complete this project. CH2M's project manager (PM) will work directly with NGB and NY ANG personnel to achieve the overall project objectives. As such, the PM has overall project responsibility to NGB from a schedule and resources aspect. Table 2-1 lists the project team contact information.

2.1 Project Management Organization

CH2M's project management organization, as it relates to the LTM, O&M, and SCO activities at Site 4, gives the PM overall responsibility for project efforts including technical, schedule, and budget aspects. The PM will be responsible for the day-to-day management and integration of all project elements and will be accountable for each activity. The assistant project manager (APM) will support the PM for technical, site monitoring, and communication functions.

2.2 Project Procedures

The APM will actively communicate with NY ANG personnel as needed during scheduled monitoring activities. Communications with NYSDEC and NYSDOH will be conducted by CH2M as directed by NGB. Under no circumstance will CH2M, its contractors, or other personnel contact NYSDEC or NYSDOH without express approval from NGB.

The CH2M APM will coordinate with the project team to assess the status of the project schedule during LTM, O&M, and SCO activities. Project team members will provide the APM with project status updates for their areas of responsibility, including progress toward start and end dates, progress toward milestones, and percent complete.

The APM will support the PM with preparing monthly project reports, which include:

- Planned versus actual progress
- Completed milestones
- Significant future milestones

The monthly project report is used to communicate the project status to NGB and CH2M program management.

2.3 Quality Management

The CH2M program quality manager will implement the quality assurance (QA) program. The senior technical consultant will review project deliverables before submittal. The PM or APM will provide instructions on the scope, schedule, and level of effort for the review. Should the need for corrective action be identified during project activities, the PM will notify the NGB Program Manager, who will obtain approval authority from the NGB Contracting Officer for the corrective action and field changes that may occur.

2.4 Subcontractor Management

Subcontracted services that may be used by CH2M for the LTM, O&M, and SCO work include:

- Chemical testing laboratory
- Certified waste hauler

2.5 Schedule Management

Groundwater monitoring will be performed quarterly beginning in the second quarter of 2017 and ending with the second quarterly monitoring event in 2020, or sooner depending on the progress of the remedy. Groundwater sampling of eight monitoring wells is expected to take 3 to 4 days each, depending on weather conditions and other factors. Compliance monitoring events consisting of groundwater sampling of 22 monitoring wells are expected to take 4 to 6 days each, depending on weather conditions and other factors. NY ANG, NYSDEC, and NYSDOH will be contacted at least 1 week before conducting each monitoring activity to inform them of the planned onsite activities.

Background Information

3.1 Installation Description

The 106th Rescue Wing of the NY ANG is located on Old Riverhead Road at Gabreski Airport in Suffolk County, New York. Gabreski Airport occupies 1,486 acres on the eastern end of Long Island, approximately 2 miles north of the Atlantic Ocean shoreline, in Westhampton Beach. Suffolk County owns the airport. The 106th Rescue Wing leases approximately 70 acres of runways, hangars, and maintenance/service facilities on the southwestern side of the airport. The airport is bounded to the north by undeveloped land, to the east by the Quogue Wildlife Refuge, to the south by the Long Island Railroad, and to the west by Old Riverhead Road (Figure 1-1).

The Civil Aeronautics Authority acquired the airport property in 1942 and used it for military training, aircraft maintenance, and armed forces support until 1969. Since 1970, Suffolk County has leased portions of the airport to numerous tenants, including NY ANG. In 1990, Suffolk County purchased the property and began operation of Suffolk County Airport, which was renamed Francis S. Gabreski Airport in 1999 (PEER Consultants, PC [PEER], 2004).

3.2 Site Description and Background

Site 4, Aircraft Refueling Apron Spill Site, encompasses a grassy area adjacent to the refueling apron southeast of Building 358 (Figures 1-2 and 3-1). The refueling apron was used from the 1950s through the 1980s, when fuel was pumped from the on-base petroleum, oil, and lubricants (POL) tank farm located approximately 3,000 feet southeast of the refueling apron to fuel outlets in a depressed concrete area at the apron. The depressed area was constructed to prevent potential surface releases of fuel from migrating onto the grassy area. Unused fuel was pumped back to the tank farm. Surface drainage from Site 4 discharges to a drainage ditch at an outfall approximately 800 feet south of the refueling apron, designated Site 9 (Figures 1-2 and 3-1). Reportedly, the U.S. Army Corps of Engineers removed subsurface lines and tanks at Site 4, and fuel distribution pumps at the concrete apron have been inactive since 1980.

Two fuel spills are known to have occurred at Site 4. Following a spill on July 6, 1987, the fire department reportedly applied foam to the area. The flow of fuel, water, and foam was stopped at the drains, with the remainder staying on the ramp surface and allowed to evaporate. Absorbent matting and powdered absorbent were placed along the outfall. This spill does not have an NYSDEC spill number, and the quantity of fuel spilled is not known. A subsequent spill, NYSDEC Spill No. 94-04858, occurred on July 8, 1994, when approximately 100 gallons of jet petroleum fuel No. 8 (JP-8) spilled onto the ramp during a heavy rain event. The material washed down the storm drains to Site 9. Approximately 300 gallons of oil-water mixture from this spill was recovered (ANG, 2008).

3.3 Previous Investigations and Remedial Actions

Site 4 was identified during a base-wide IRP Phase I records search performed in 1987. In 1988, a tracer leak test was conducted of JP-4 storage tanks, pipelines, and hydrants at Sites 4 and 6, and in 1990, the initially identified Site 4 was subdivided into Sites 4 and 9, as described above. Subsequent fieldwork in 1991 included a limited soil-gas survey and installation of monitoring wells and piezometers at upgradient and downgradient locations (PEER, 2004).

Soil and groundwater sampling conducted in 1994 identified fuel-related VOCs in soil and groundwater at concentrations that exceeded NYSDEC action levels, and a Site Investigation report completed in 1997 identified the suspected sources as spills at the two fuel distribution pumps, releases at a sump tank, and leakage along subsurface fuel lines (ABB Environmental Services Inc., 1997). Additional groundwater samples were collected from Site 4 monitoring wells for a Remedial Investigation completed in 2004. While groundwater continued to contain VOC concentrations exceeding NYSDEC action levels and/or maximum contaminant levels, observations of conditions indicative of biological activity and an overall decrease in contaminant concentrations and areal extent of the plume indicated natural attenuation was likely occurring at the site. The Remedial Investigation recommended NFA to investigate surface or subsurface soil and evaluation and implementation of RA alternatives to address the groundwater contaminant plume at Site 4 (PEER, 2004).

A Decision Document was completed for Sites 4, 7, and 9 in 2008 (ANG, 2008). Site remedies were selected based on the Administrative Record for these sites and in accordance with New York Society for Ethical Culture Law and Title 6 New York Codes, Rules, and Regulations Part 375. The selected remedy for groundwater at Site 4 included constructing, operating, and maintaining an air biosparge system to reduce COC concentrations and allow monitored natural attenuation to achieve site closure criteria. NFA for soil at Site 4 was approved as presented in the Decision Document (ANG, 2008).

In July 2009, SAIC installed the air biosparge treatment system. Each of the 38 initial air biosparging points was constructed of 0.75-inch inside diameter polyvinyl chloride (PVC) riser and one 3-foot section of 1.4-inch outer diameter, 0.75-inch inside diameter 0.010-inch slotted PVC well screen. The air biosparging system points were completed with flush-mount covers and light traffic-rated vaults. A Rietschle Model DLR 400 Rotary Claw Compressor was installed to deliver compressed air to the air biosparging points. The compressor was installed on a 4-foot by 6-foot skid, placed on a 12-inch-thick, 12-foot by 8-foot gravel pad. The compressor was located at the entrance of the POL yard. A new transformer and electrical meter were installed in 2009 adjacent to an existing transformer because no electrical connection for the air biosparging system existed at Site 4. This electrical service provides the 3-phase, 480-volts required for the air biosparging system (SAIC, 2009).

The aboveground piping for the air biosparging system is galvanized Schedule 40 steel pipe, and below ground piping is Schedule 40 PVC. Three-inch Schedule 40 PVC supply lines delivers air from the compressor to 1-inch Schedule 40 PVC lines connected to the air biosparging wells. The supply lines were installed at a minimum depth of 24 inches below ground surface (bgs) (SAIC, 2009).

In September 2012, the existing air biosparge system was expanded to more effectively treat remaining BTEX contamination at Site 4. Upgrades included:

- Installed 24 additional air biosparge injection wells; constructed of 0.75-inch Schedule 40 PVC with 3-foot 0.010-inch slotted screens. The new injection wells were completed with light traffic-rated vaults and hinged lids.
- Added an additional blower (Busch Model 1322 Rotary Claw Compressor) to provide sufficient capacity for the expanded system and provide separate air flows to Sites 4 and 9 (an adjacent site also being treated via air biosparge).
- Upgraded valves, flow indicators, and meters throughout the existing air biosparge well network to allow controlled delivery and monitoring of air.
- Added a second 3-inch-diameter PVC trunk line and 1-inch-diameter PVC branch supply lines to connect new air biosparge injection wells to the appropriate trunk lines. The new trunk line and branch supply lines were placed approximately 24 inches bgs.

The compressor installed in 2009 was moved and co-located with the new air biosparge compressor inside a new 140-square-foot storage shed. The shed is at the southeastern corner of the POL yard, east of the former air biosparge system and immediately across the POL yard entrance (Figure 3-1). The new compressor was connected to the existing transformer that was installed in 2008. System compressors are integrated by a single web-based telemetry programmable logic control (PLC) panel. The integrated PLC system includes alarm and control functions, alarm notification, a phone-in connection to review operation, and phone-in operational control of each compressor unit (SAIC, 2013).

Additional system modifications were made in 2013 and 2014, including repairs needed because of ramp and taxiway improvement construction activities and additional optimization activities. In October 2013, five additional air biosparge injection wells and associated 1-inch-diameter PVC branch supply lines necessary to connect the new air biosparge injection wells to the appropriate trunk were installed. The additional air biosparge points were constructed of 0.75-inch Schedule 40 PVC with 3-foot, 0.010-inch slotted screens and completed with light traffic-rated vaults with hinged lids (Leidos, 2014).

In August 2015, three additional air biosparge points, including supply lines and protective vaults, were installed near MW04-GW03 and MW04-GW05 to focus on these two areas of high residual COC concentrations. A detailed description of construction activities and design drawings are provided in the *April 2016 Semiannual Performance Monitoring Report* (Leidos, 2016b).

3.4 Current Nature and Extent of Contamination

After the September 2012 optimization field activities, quarterly sampling of groundwater was implemented, additional air biosparge points were installed, monitoring wells were replaced at Site 4, and closure monitoring was completed at Site 9. The most recently completed semiannual sampling report (Leidos, 2016a) summarizes the results of two quarterly groundwater monitoring events conducted in January and May 2016. Figure 3-2 shows the BTEX plume based on May 2016 groundwater analytical results.

Currently, eight monitoring wells (MW04-GW01, MW04-GW02, MW-GW03, MW04-GW04R, MW04-GW-05, SW-06, SW-07, and SDW-23AR) are sampled quarterly at Site 4 to evaluate effectiveness of the air biosparge system (Figure 3-3). Table 3-1 summarizes the well specifications, and Table 3-2 summarizes the groundwater analytical results from the most recent quarterly sampling at Site 4 conducted in January and May 2016.

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SECTION 4

Environmental Setting

4.1 Climate and Topography

Gabreski Airport is in Westhampton, New York, in a humid-continental climate with a maritime influence, characterized by periods of freeze-free temperatures, a reduced range in diurnal and annual temperature, and heavy precipitation in winter relative to summer. The airport is on a glacial outwash plain south of the Ronkonkoma terminal moraine, which formed during Wisconsin glaciation. The outwash plain slopes southward from the terminal moraine to the bays and barrier islands along the Atlantic Ocean shoreline. Relief is characteristically flat with subtle rolling terrain and steeper stream channels (PEER, 2004).

Westhampton has an average annual precipitation of 46.86 inches and an average annual temperature of 49.6 degrees Fahrenheit (°F) (U.S. Climate Data, 2016). Average temperatures during the winter months (December through February) range from approximately 26 to 39°F. Average temperatures during the summer months (July through September) range from 63 to 71°F (U.S. Climate Data, 2016).

4.2 Soil

The soil underlying Gabreski Airport is glacial outwash consisting of 100 to 120 feet of stratified fine- to coarse-grained sand and gravel, underlain by a 40-foot-thick clay bed (Gardiners Clay). The sand and gravel sediments beneath the airport are of light- to dark-brown, tan, and yellowish-brown color. Soils underlying the base are characterized as deep, nearly level to gently sloping, well-drained to excessively drained, and moderately coarse textured. These glacially derived soils have characteristically low soil moisture content that is not suitable for most agricultural purposes and supports only limited types of native vegetation (PEER, 2004).

4.3 Geology

Rock formations that underlie the area of Gabreski Airport dip generally to the south and consist of hard, dense schist, gneiss, and granite. Bedrock is approximately 1,600 feet below mean sea level. Two deep borings penetrated bedrock (hard, banded, granite gneiss) at a depth of approximately 1,600 feet bgs at locations 18 miles west of the airport (PEER, 2004).

4.4 Hydrogeology

The Upper Glacial aquifer forms the shallowest aquifer beneath the airport. This water-bearing unit is an unconfined aquifer present directly below the airport. Groundwater elevations are approximately 15 to 19 feet above the National Geodetic Vertical Datum (NGVD) (depth to groundwater averages from 35 to 40 feet bgs). The fine- to coarse-grained sand and gravel are very porous and highly permeable, store large quantities of water, and yield large quantities of water to wells. There are no effective barriers to the movement of water within the unit, but substantial variation may occur in permeability locally. Because the surficial deposits were formed by water flowing generally from north to south, individual lenses of sand and gravel may be elongated in this direction, and there may be areas of material with relatively higher permeability along which water might move more rapidly under proper hydraulic conditions (ANG, 2008).

The direction of groundwater flow in the Upper Glacial aquifer beneath Gabreski Airport is toward the south-southeast. The Gardiners Clay, which underlies the glacial deposits, acts as an aquitard between the Upper Glacial aquifer and the deeper Magothy aquifer that is approximately 150 to 1,000 feet below mean sea level. Migration of contaminants downward into lower aquifers is unlikely (ANG, 2008).

4.5 Surface Water Hydrology

Surface water runoff at Gabreski Airport flows in a southerly and southeasterly direction. The fine- to coarse-grained sand and gravel at ground surface are very porous and highly permeable, so a high proportion of rainfall infiltrates where it falls. Although some precipitation may move short distances as runoff, it generally percolates into the soil and moves in the subsurface aquifer. The airport drains to Aspatuck Creek located near the southeastern corner of the base. This creek flows into Quantuck Bay, which is separated from the Atlantic Ocean by a narrow barrier island (PEER, 2004).

4.6 Critical Habitats and Endangered/Threatened Species

Gabreski Airport is within the Long Island Pine Barrens, which are characterized by open, sunlit woodlands dominated by pitch pine interspersed with white and scarlet oak. The nearby Quogue Wildlife Refuge is characterized by dwarf pitch pines ranging from 3 to 6 feet tall. The airport is surrounded by pitch pines and scattered scrub oak (PEER, 2004).

Wildlife includes abundant birds but few large mammals, the most common being white-tail deer and red fox. The following are threatened and endangered, or state-listed species potentially located within a 4-mile radius of the site (U.S. Fish and Wildlife Service, 2016):

- Piping plover (*Charadrius melodus*)
- Red knot (*Calidris canutus rufa*)
- Roseate tern (*Sterna dougallii dougallii*)
- Upland sandpiper (*Bartramia longicauda*)
- Northern harrier (*Circus cyaneus*)
- Sandplain gerardia (*Agalinis acuta*)
- Seabeach amaranth (*Amaranthus pumilus*)
- Northern long-eared bat (*Myotis septentrionalis*)

SECTION 5

Permits and Site Access

No permits are required for quarterly monitoring and O&M activities at Site 4. Permits required for system optimization modifications and SCO activities, including hot work and dig permits, will be obtained before starting these activities.

The field activities will be conducted at Gabreski Airport. Access to the airport is restricted through guarded gate entrances. Hours of access are restricted at these gates. Access for CH2M personnel will be coordinated through the 106th Rescue Wing Environmental Manager (EM). The point of contact for the 106th Rescue Wing Environmental Management Office is Shaun Denton or his designee.

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SECTION 6

Groundwater Monitoring Procedures and Sampling Requirements

This section describes the field investigation procedures, analytical methods, and QA/quality control (QC) procedures that will be used during LTM activities to assess the RA effectiveness at Site 4.

6.1 Groundwater Monitoring Procedures

Groundwater will be sampled using the low-flow drawdown method (less than 500 milliliters per minute [mL/min]) in accordance with ANG Investigation Guidance (ANG, 2009). Water levels will be measured before sampling and will be monitored to minimize drawdown to 10 centimeters during purging in accordance with ANG Investigation Guidance (ANG, 2009). The purpose of the low-flow sampling procedure is to obtain groundwater samples that are representative of the source from which they are collected and to minimize sampler exposure to groundwater contaminants. The groundwater sample must be representative of the particular saturated zone of the substrate being sampled to be considered useful and accurate. The physical, chemical, and bacteriological integrity of the sample must be maintained from the time of sampling to the time of testing to keep any changes in water quality parameters to a minimum.

Each monitoring well will be purged immediately before sample collection using a bladder or peristaltic pump. The pump or bottom of the tubing will be positioned at either the midpoint of the screen or the midpoint of the water column to ensure standing water is removed and fresh formation water is drawn into the well. Where the water level in a given well is at an elevation above the top of the screen, the pump will be placed at or slightly above the midpoint of the screen. If the water level is below the top of the screen, the pump will be placed at or slightly above the midpoint of the water column. Low-flow purging techniques (flow rate of 100 to 500 mL/min) will be used in conjunction with a flow-through cell to measure the following water quality parameters: pH, specific conductivity, turbidity, DO, oxidation-reduction potential (ORP), and temperature. Purging will be considered complete when the indicator parameters of pH, temperature, conductivity, and turbidity have stabilized for three successive readings within the following limits:

- pH ± 0.1 standard unit
- Temperature ± 1 degree Celsius
- Conductivity ± 10 percent
- DO ± 10 percent
- ORP ± 10 millivolts
- Turbidity ± 10 percent and less than 50 nephelometric turbidity units (NTUs)

If turbidity has not decreased below 50 NTUs after 1 hour of purging and all other parameters have stabilized, the groundwater sample will be collected. Low turbidity is a desired goal but is not a requirement when collecting VOC samples. If wells recharge slowly and are not capable of sustaining adequate purging, the wells will be purged dry, allowed to recharge, and sampled when a sufficient volume of water has entered the wells.

Groundwater samples will be submitted to a laboratory for analysis by the methods provided in the QAPP (Appendix A). The QAPP contains a full discussion of the appropriate sample containers, preservative requirements, and field QA/QC procedures (Appendix A).

6.2 Laboratory Methods

Samples will be shipped to GCAL Laboratories in Baton Rouge, Louisiana, for the target analyte list presented in Table 4-3 of the QAPP (Appendix A). Specific methods of analysis, holding times, and preservatives are indicated in Table 4-4 of the QAPP (Appendix A).

6.3 Field Quality Control Samples

The QC samples to be included for this project consist of matrix spike/matrix spike duplicate samples, field duplicate samples, equipment blanks, and trip blanks. Field QC samples are discussed in Section 4.2 and summarized in Table 4-2 of the QAPP (Appendix A).

6.4 Documentation Procedures

Field documentation for activities at Gabreski Airport will consist of site-specific field logbook and monitoring well sampling logs. Field documentation procedures are described in detail in Section 7 of the QAPP (Appendix A).

6.5 Sample Handling Procedures

Sample containers will be labeled in advance of sampling activities. The sample label will include specific sample identification. The sample label also will include the date and time the sample was collected, name or initials of the sampler, and sample location. The label also will identify the container preservative, if any, as prepared by the laboratory. Sample identification and handling procedures are described in Section 6 of the QAPP (Appendix A).

SECTION 7

Equipment Decontamination

Reusable water level indicators, low-flow pumps, and water quality instruments will be decontaminated before and between each use using a laboratory-grade detergent (Alconox, or equivalent), followed by a rinse with potable or deionized water, and an isopropanol alcohol rinse when appropriate. Decontaminated sampling equipment that will not be immediately used will be allowed to air dry and will be wrapped in aluminum foil. Wrapped equipment will be stored in such a manner as to reduce the potential for accidental contamination. This decontamination procedure will be followed before using the equipment.

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SECTION 8

Remediation-Derived Waste Management

Wastes generated during LTM efforts will be containerized and classified as remediation-derived waste (RDW). RDW will be marked "Hazardous Waste Pending Analysis" until determined otherwise. RDW water generated during the field events will be containerized in 55-gallon drums. Wastes will be staged onsite in an area designated by the 106th Rescue Wing EM. RDW water will be characterized for disposal before completing the field project using semiannual groundwater monitoring results, historical analytical results, and site knowledge. Based on previous groundwater monitoring results, it is anticipated that RDW water generated at Site 4 will be classified as nonhazardous.

RDW generated during groundwater monitoring activities will be disposed offsite by CH2M. A waste hauler will be subcontracted to remove RDW in accordance with the *Policy on Air National Guard Investigation- or Remediation-Derived Waste (IDW/RDW) Management* (ANG, 2005).

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SECTION 9

Operations and Maintenance Activities

9.1 Monthly Inspections

The primary system components requiring inspection and maintenance include:

- Rotary claw compressors
- Piping, fittings, and valves
- Well head vaults
- Pressure gauges
- Electrical components (that is, electrical panel, transformer, connections, and wiring)

Monthly inspections will be performed, and O&M activities will include checking the compressor oil level, cleaning the compressor, recording pressure measurements, checking piping for leakage, inspecting well head construction, and ensuring valves and gauges are operable. The compressor oil will be changed and bearings will be greased at a frequency of approximately every 5,000 hours of operating service. CH2M will develop site-specific inspection and O&M forms for monthly inspections and non-routine repairs. Figure 3-1 shows the locations and layouts for equipment, piping, valves, connections, gauges, and air biosparging wells, and Appendix B contains the system design drawings.

In addition, the following will be recorded on a site-specific O&M Field Log Sheet during each inspection:

- Compressor discharges and representative individual air biosparging well pressure
- Air biosparging system flow rate
- Compressor runtime hours
- Oil levels of the compressors
- Completed maintenance

Detailed O&M manuals for the air biosparging system are provided by the manufacturers and are included as Appendix H in the *2009 Final Remedial Action Completion Report* (SAIC, 2009) and Appendix D in the *2013 Remedial Action Optimization Construction Completion Report* (SAIC, 2013).

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SECTION 10

Site Closeout Activities

10.1 Objectives

The objectives of the SCO effort include:

- Plug and abandon 70 air biosparging wells and 22 monitoring wells associated with Site 4
- Decommission the air biosparge system, including air supply lines, vaults, compressors, control panel, storage shed, heat exchanger, transformer, and associated electrical components

SCO activities will begin once an NFA determination is received from NYSDEC.

10.2 Assumptions

The following assumptions affect the well abandonment and decommissioning activities:

- For well pads in grassy areas, the stick-up protective metal casing and cement will be removed, and the remaining void will be graded and restored to pre-existing conditions (grass or gravel), to the extent practicable.
- The subcontractor will dispose of waste as construction waste.

10.3 Well Abandonment

In accordance with the standards of NYSDEC CP-43: Groundwater Monitoring Well Decommissioning Policy (NYSDEC, 2009), CH2M will mobilize equipment, supplies, and personnel required to complete the well abandonment activities at Site 4. CH2M will subcontract a New York state-licensed driller to support the well plugging and abandonment field activities.

During field activities, 70 air biosparging wells and 22 monitoring wells will be abandoned. Each well will be abandoned with the casing and screen left in the borehole using a positive displacement method (tremie method). A tremie pipe will be lowered to the bottom of the well, and the pressurized cement-bentonite grout will be forced into the bottom of the well through the tremie pipe as the pipe is slowly retracted.

The grout used to abandon the wells will be a bentonite-cement grout consisting of Portland Type I cement conforming to ASTM International C-150 standards. The cement-bentonite grout will be mixed using approximately 7.8 gallons of water and 3.9 pounds of bentonite per 94-pound bag of cement. The bentonite powder will be mixed into the water before adding the cement. Cement will be added to the bentonite-water mixture, and grout will be mixed thoroughly before being forced through the tremie pipe into the borehole.

The grout will be deposited to within 2 feet of the ground surface. For wellhead protection pads in asphalt or concrete areas, their stick-up protective metal casings will be removed and filled flush to the surface with concrete. Concrete protection pads will be removed from monitoring wells in grassy areas, and the disturbed areas will be returned to pre-existing conditions, to the extent practicable.

Each abandoned well will be inspected at least 4 hours after grouting to ensure the well has been properly abandoned. If settling has occurred at this point, a sufficient amount of grout will be added to fill the casing to within 2 feet of ground surface. Once grout settling has subsided (at least 24 hours), the remaining 2 feet of casing will be filled with concrete to ensure a secure surface seal.

RDW, including pieces of PVC pipe, metal well protective casing, well pads, wooden forms, and manholes, will be disposed of as construction debris.

Well abandonment will be conducted in accordance with the standards of the NYSDEC CP43: Groundwater Monitoring Well Decommissioning Policy (NYSDEC, 2009). Health and safety requirements will be addressed in the site-specific Health and Safety Plan (HSP). All appropriate CH2M and subcontractor personnel will be required to read, sign, and abide by the site-specific HSP.

10.4 Air Biosparge System Decommissioning

In addition to abandoning 70 air biosparging wells, air biosparge system decommissioning activities will include:

- Removing approximately 3,600 linear feet of 3-inch-diameter PVC trunk line
- Removing approximately 2,300 linear feet of 1-inch-diameter PVC branch supply line
- Removing two compressors, the heat exchanger, transformer, control panel, 140-square-foot storage shed, and associated electrical components. Qualified electricians will terminate electrical connections.
- Removing vaults and vault covers. The opening will be filled with concrete or soil, depending on surrounding conditions, to match the existing grade and create a smooth surface suitable for heavy traffic (trucks, snow plows, etc.).

System components removed during decommissioning will be either salvaged or disposed offsite.

Appendixes B and C contain system design drawings and photographs, respectively. Detailed descriptions of air biosparge system construction and modification activities are provided in the following documents:

- *Final Remedial Action Completion Report* (SAIC, 2009)
- *Final Remedial Action Optimization Construction Completion Report* (SAIC, 2013)
- *Final Remedial Action Optimization Construction Completion Report* (Leidos, 2014)
- *Final Semiannual Performance Monitoring Report, April 2016* (Leidos, 2016b)

Reports

11.1 Quarterly Long-Term Monitoring Reports

Following each event, CH2M will prepare draft, draft final, and final quarterly monitoring and O&M reports. Groundwater monitoring and O&M reports will include an executive summary, background introduction, field activities, sampling data and results, conclusions, analytical reports, data validation report, chain-of-custody, plume maps, potentiometric maps, summary of O&M activities conducted during the reporting period, and electronic geographic information system data. CH2M will provide a draft of the quarterly report to ANG and the 106th Rescue Wing EM for concurrent review. After adjudication of comments, CH2M will revise draft quarterly reports accordingly and submit draft final documents to ANG, the 106th Rescue Wing EM, NYSDEC, and NYSDOH. After adjudication of comments, CH2M will revise draft final quarterly reports accordingly and submit final documents to ANG, the 106th Rescue Wing EM, NYSDEC, and NYSDOH.

11.2 Site Closeout Report

Following SCO field activities, CH2M will prepare draft and final SCO reports in abbreviated letter format for review by ANG. The reports will include a synopsis of the fieldwork performed and a discussion of any deviations from the work plan.

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SECTION 12

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Tables

Table 2-1. Project Team Contact Information

Site 4, Aircraft Refueling Apron Spill Site, Francis S. Gabreski Airport, 106th Rescue Wing, Westhampton Beach, New York

Contact	Role	Address	Phone No.	E-Mail
Jody Ann Murata	NGB Program Manager	NGB/A4OR Sheppard Hall 3501 Fetchet Ave. Joint Base Andrews, MD 20762	(301) 836-8120	jody.a.murata.civ@mail.mil
Shaun Denton	106th Rescue Wing Environmental Manager	106th Rescue Wing/EM 150 Old Riverhead Rd. Francis S. Gabreski Airport (ANGB) Westhampton Beach, NY 119788	(631) 723-7349	shaun.f.denton.mil@mail.mil
Heather Bishop	NYSDEC Project Manager	Division of Environmental Remediation Remedial Bureau A 625 Broadway, 11th Floor Albany, NY 12233	(518) 402-9692	heather.bishop@dec.ny.gov
Steven Karpinski	NYSDOH Project Manager	Bureau of Environmental Exposure Investigation Empire State Plaza Corning Tower, Room 1787 Albany, NY 12237	(518) 402-7860	steven.karpinski@health.ny.gov
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Dan Marion	CH2M ANG Program Manager	6600 Peachtree Dunwoody Rd. 400 Embassy Row, Suite 600 Atlanta, GA 30328	(678) 530-4222	dan.marion1@ch2m.com
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Angela Barch	CH2M Assistant Project Manager	6600 Peachtree Dunwoody Rd. 400 Embassy Row, Suite 600 Atlanta, GA 30328	(678) 530-4073	angela.barch@ch2m.com
Kimberly Amley	CH2M Program Quality Manager	6600 Peachtree Dunwoody Rd. 400 Embassy Row, Suite 600 Atlanta, GA 30328	(810) 360-2016	kimberly.amley@ch2m.com

Table 2-1. Project Team Contact Information

Site 4, Aircraft Refueling Apron Spill Site, Francis S. Gabreski Airport, 106th Rescue Wing, Westhampton Beach, New York

Contact	Role	Address	Phone No.	E-Mail
Mike Perlmutter	CH2M Senior Technical Consultant	6600 Peachtree Dunwoody Rd. 400 Embassy Row, Suite 600 Atlanta, GA 30328	(678) 530-4271	mike.perlmutter@ch2m.com
Juan Acaron	CH2M Program Chemist	3011 S.W. Williston Rd. Gainesville, FL 32608	(352) 384-7002	juan.acaron@ch2m.com
To be determined (TBD)	CH2M Field Team Leader	TBD	TBD	TBD
Natalie Luciano	Eurofins Lancaster Laboratories Environmental, LLC	2425 New Holland Pike Lancaster, PA 17601	(717) 556-7258	NatalieLuciano@eurofinsUS.com

Table 3-1. Long-Term Monitoring Network Well Specifications, Site 4
Site 4, Aircraft Refueling Apron Spill Site, Francis S. Gabreski Airport, 106th Rescue Wing, Westhampton Beach, New York

Well ID	Diameter (inches)	Construction	Completion	Total Depth (feet btoc)	Screened Interval (feet btoc)	TOC Elevation (NGVD 88)	Easting UTM Zone 18N (WGS 84)	Northing UTM Zone 18N (WGS 84)
MW04-GW01	0.75	PVC	flush	35.30	25.30–35.30	45.25	699036.16	4523355.51
MW04-GW02	0.75	PVC	flush	31.70	16.70–31.70	37.50	698935.00	4523283.37
MW04-GW03	0.75	PVC	flush	33.20	18.20–33.20	38.37	698975.34	4523359.71
MW04-GW04R	1.00	PVC	flush	40.05	30.05–40.05	44.88	698830.90	4523229.21
MW04-GW05	0.75	PVC	flush	40.00	30.00–40.00	40.57	698987.93	4523313.55
SW-04	2.00	PVC	flush	50.00	40.00–50.00	U	U	U
SW-05	2.00	PVC	stick-up	39.46	26.00–36.00	42.58	698965.20	4523450.78
SW-06	2.00	PVC	stick-up	32.60	20.00–30.00	39.08	698895.86	4523227.38
SW-06A	2.00	PVC	flush	49.70	39.70–49.70	36.56	698891.31	4523226.12
SW-06B	2.00	PVC	flush	39.70	29.70–39.70	36.43	698900.48	4523228.03
SW-07	2.00	PVC	stick-up	37.41	25.00–35.00	44.69	698846.11	4523289.49
SW-10	2.00	PVC	stick-up	38.82	24.50–34.50	43.54	698985.12	4523251.97
SDW-21	1.00	PVC	stick-up	39.07	27.20–36.80	45.94	699021.01	4523406.57
SDW-22	1.00	PVC	stick-up	63.56	58.10–63.10	45.90	699022.35	4523405.56
SDW-23	1.00	PVC	stick-up	32.90	21.10–31.30	40.60	698913.63	4523172.62
SDW-23AR	1.00	PVC	flush	44.62	34.62–44.62	38.86	698916.71	4523173.44
SDW-24	1.00	PVC	stick-up	32.41	20.80–30.80	40.12	698941.56	4523173.72
SDW-24A	0.75	PVC	flush	45.30	35.30–45.30	38.24	698944.18	4523342.85
PZ-01	0.75	PVC	flush	32.00	22.00–32.00	U	U	U
PZ-02	0.75	PVC	flush	33.50	23.50–33.50	U	U	U

Table 3-1. Long-Term Monitoring Network Well Specifications, Site 4

Site 4, Aircraft Refueling Apron Spill Site, Francis S. Gabreski Airport, 106th Rescue Wing, Westhampton Beach, New York

Well ID	Diameter (inches)	Construction	Completion	Total Depth (feet btoc)	Screened Interval (feet btoc)	TOC Elevation (NGVD 88)	Easting UTM Zone 18N (WGS 84)	Northing UTM Zone 18N (WGS 84)
PZ-03	0.75	PVC	flush	36.90	26.90–36.90	U	U	U
PZ-04	0.75	PVC	flush	40.00	30.00–40.00	U	U	U

Note: Elevations and coordinates for replacement wells MW04-GW04R and SDW-23AR are from the original wells.

btoc = below top of casing
ID = identifier
NGVD = National Geodetic Vertical Datum
PVC = polyvinyl chloride
TOC = top of casing
U = data unavailable or not readily available
UTM = Universal Transverse Mercator
WGS = World Geodetic System

Table 3-2. January and May 2016 Groundwater Analytical Results Summary, Site 4

Site 4, Aircraft Refueling Apron Spill Site, Francis S. Gabreski Airport, 106th Rescue Wing, Westhampton Beach, New York

Well ID	NYSDEC[a]	MCL[b]	MW04-GW01		MW04-GW02		MW04-GW03		MW04-GW04R		MW04-GW05		SDW-23AR		SW-06				SW-07	
			1/20/2016	5/9/2016	1/20/2016	5/9/2016	1/20/2016	5/9/2016	1/20/2016	5/9/2016	1/20/2016	5/9/2016	1/20/2016	5/9/2016	1/20/2016	1/20/2016	5/9/2016	5/9/2016	1/20/2016	5/10/2016
Acetone	50	--	**26.2**	**64.4**	**11.2**	**4.8 J**	5 U	**25.7**	5 U	**5.07**	5 U	5 U	5 U	5 U	**4.85 J**	**2.9 J**	**9.69**	**9.64**	5 U	**62.9**
Benzene	1	5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-Butanone	--	--	5 U	**6.16**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**15.7**	5 U	5 U	5 U	5 U	5 U	5 U	**4.53 J**
n-Butylbenzene	5	--	**5.3**	**3.37**	**1.11**	**0.481 J**	**1.49**	**0.688 J**	0.5 U	**0.601 J**	0.5 U	0.5 U	**1.02**	0.5 U	**0.707 J**	**0.567 J**	**0.844 J**	**0.782 J**	0.5 U	0.5 U
sec-Butylbenzene	5	--	**3.82**	**2.9**	**0.596 J**	**0.318 J**	**1.52**	0.5 U	0.5 U	**0.477 J**	0.5 U	0.5 U	**0.589 J**	0.5 U	0.5 U	0.5 U	**0.276 J**	**0.267 J**	0.5 U	0.5 U
tert-Butylbenzene	5	--	**0.557 J**	**0.605 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.308 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	60	--	1 U	1 UJ	1 U	1 UJ	1 U	1 UJ	1 U	1 UJ	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 UJ	1 UJ	1 U	1 UJ
Cyclohexane	--	--	**1.02 J**	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**19.9**	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Ethylbenzene	5	700	0.5 U	0.5 U	**3**	**1.14**	0.5 U	0.5 U	0.5 U	**0.918 J**	0.5 U	0.5 U	**56.7**	0.5 U	0.5 U	0.5 U	**0.671 J**	**0.675 J**	0.5 U	**0.875 J**
2-Hexanone	50	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	5	--	**2.12**	**1.12**	**2.16**	**0.958 J**	**0.364 J**	0.5 U	**0.307 J**	**1.05**	0.5 U	0.5 U	**6.96**	0.5 U	0.5 U	0.5 U	**0.409 J**	**0.411 J**	0.5 U	**0.938 J**
p-Isopropyltoluene	5	--	**3.15**	**1.08**	**0.408 J**	**0.254 J**	**0.742 J**	**0.509 J**	0.5 U	**0.427 J**	0.5 U	0.5 U	**0.815 J**	0.5 U	**0.325 J**	0.5 U	**0.404 J**	**0.392 J**	0.5 U	0.5 U
Methyl Cyclohexane	--	--	**11.4**	**2.65 J**	**3.42 J**	**1.63 J**	**4.53 J**	**1.85 J**	2 U	**1.34 J**	2 U	2 U	**11**	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	10	--	**0.251 J**	0.4 U	**0.713 J**	**0.714 J**	**0.215 J**	0.4 U	0.4 U	**0.764 J**	0.4 U	0.4 U	**11.5**	**2.61**	**1.53**	**1.02**	**1.99**	**1.98**	0.4 U	**0.378 J**
n-Propylbenzene	5	--	**3.47**	**1.79**	**2.18**	**1.19**	**0.17 J**	0.25 U	**0.411 J**	**1.01**	0.25 U	0.25 U	**5.83**	0.25 U	0.25 U	0.25 U	**0.427 J**	**0.417 J**	0.25 U	**0.941 J**
1,1,2,2-Tetrachloroethane	5	--	**1.1**	**0.846 J**	**0.528 J**	0.4 U	**0.822 J**	**0.87 J**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	**0.289 J**	0.4 U	**0.343 J**	**0.344 J**	0.4 U	0.4 U
Toluene	5	1000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.61**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	5	--	**23.7**	**11.6**	**14.6**	**6.26**	0.5 U	**0.375 J**	**1.81**	**11.9**	0.5 U	0.5 U	**23.1**	**1.55**	**8.37**	**6.02**	**9.89**	**9.95**	0.5 U	**7.06**
1,3,5-Trimethylbenzene	5	--	**20.9**	**12.6**	**8.25**	**3.48**	**2.21**	**0.873 J**	**1.3**	**7.4**	0.5 U	0.5 U	**19.5**	0.5 U	**6.72**	**4.98**	**6.6**	**6.51**	**1.01**	**2.78**
m-,p-Xylene	5 ea	--	1 U	1 U	**21.4**	**6.52**	1 U	1 U	**1.52**	**13**	1 U	1 U	**44.3**	**1.58**	**5.94**	**4**	**8.14**	**8.26**	1 U	**5.49**
o-Xylene	5	--	0.5 U	0.5 U	**9.89**	**3.62**	0.5 U	0.5 U	**0.694 J**	**9.5**	0.5 U	0.5 U	**113**	**0.86 J**	**5.12**	**3.44**	**5.29**	**5.43**	0.5 U	**1.57**

All results reported in micrograms per liter (µg/L).

[a] New York State Department of Conservation Class GA groundwater standards from Division of Water Technical and Operation Guidance Series 1.1.1.

[b] U.S. Environmental Protection Agency National Primary and Secondary Drinking Water Standards.

Bolded text indicates analyte was detected.

Shaded text indicates concentration exceeds criteria.

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Figures

VICINITY MAP

LEGEND

Francis S. Gabreski
Air National Guard Base Boundary

N

0 400 800
Feet

Figure 1-1
Installation Location Map
106th Rescue Wing,
New York Air National Guard
Westhampton Beach, New York

\\NWOFPP01\GROUPS\GIS\00_PROJ\F\FRANCIS_GABRESKI\MAPFILES\F1-1_INSTALLATION_LOCATION_MAP.MXD SSTEWAR8 12/21/2016 10:35:33 AM

ch2m:

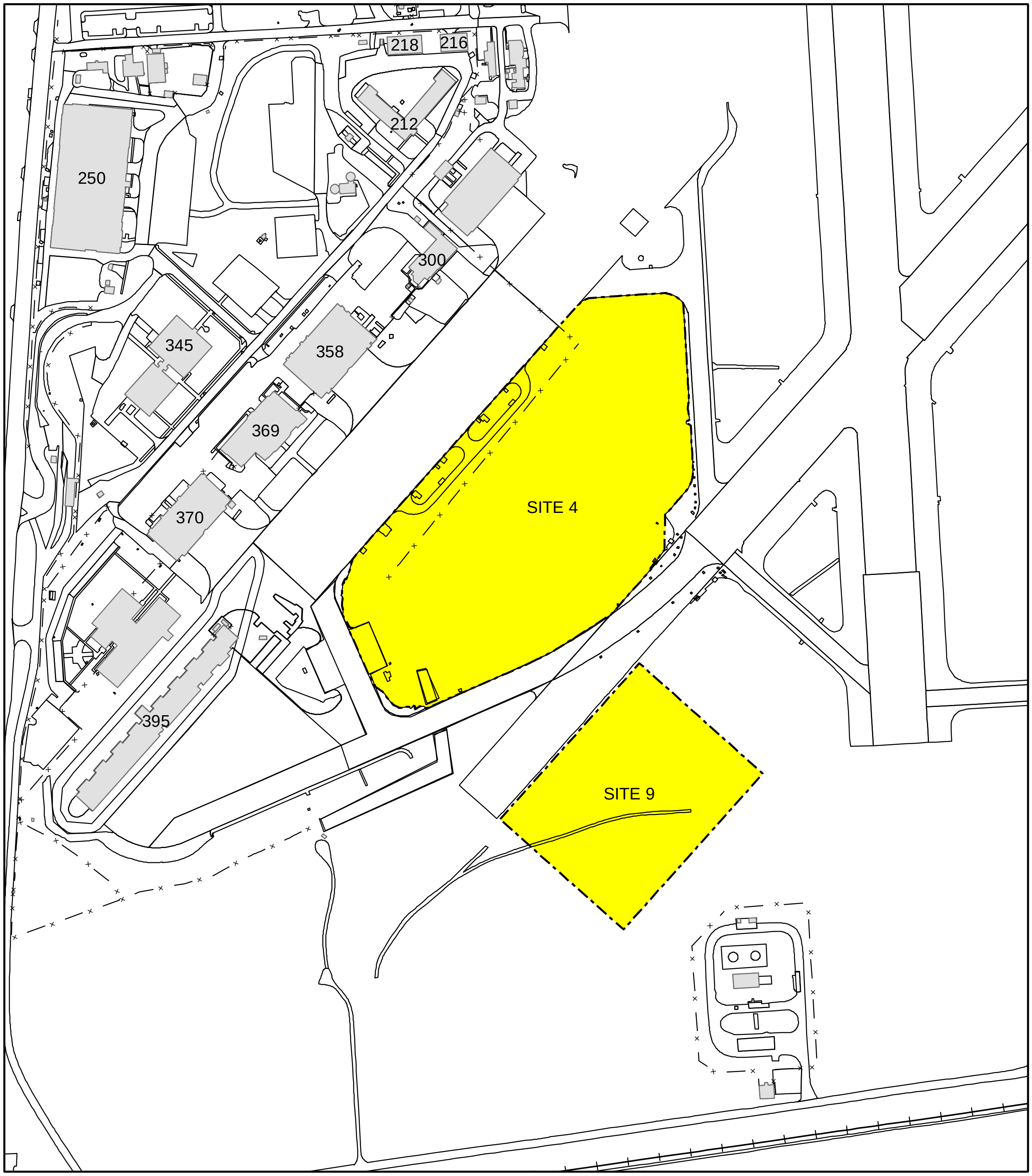


Figure 1-2
Site Location Map
106th Rescue Wing,
New York Air National Guard
Westhampton Beach, New York

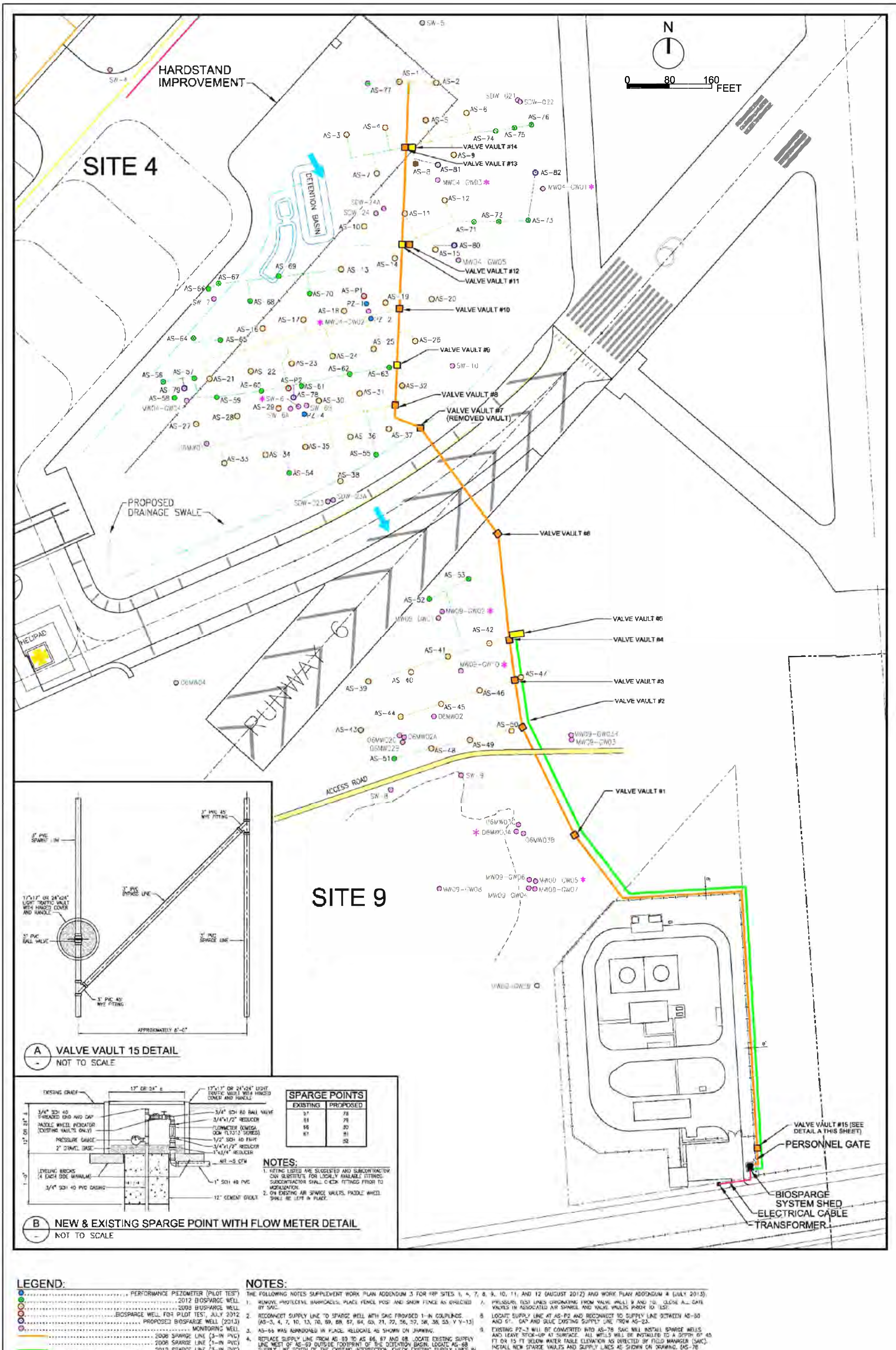
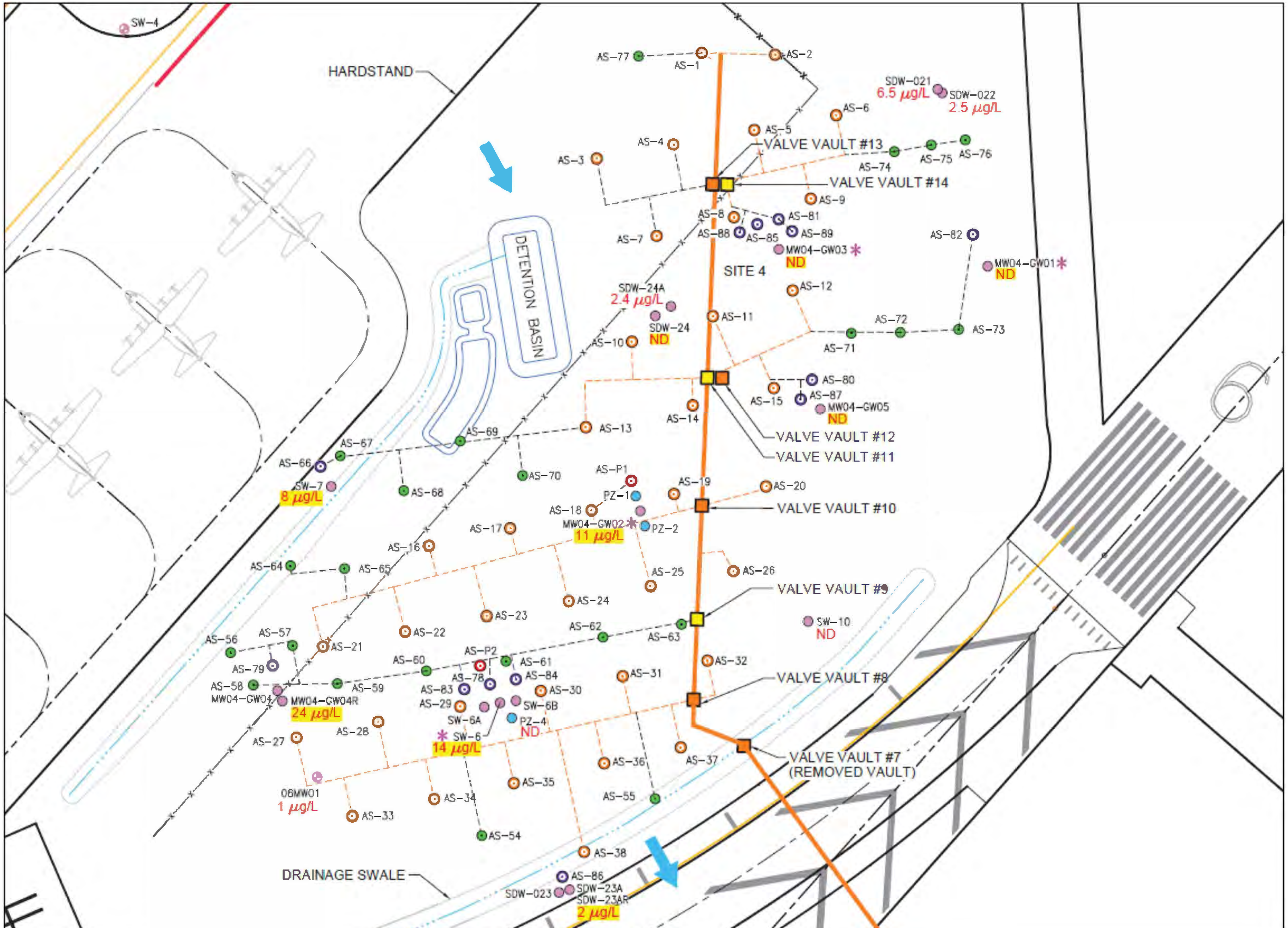


Figure 3-1
Biosparge System Layout
106th Rescue Wing,
New York Air National Guard
Westhampton Beach, New York

NOTE: Taken from the Final Remedial Action Optimization Construction Completion Report (Leidos, 2014)



N

0 100 200 Feet

Legend

- PERFORMANCE PIEZOMETER (PILOT TEST)
- 2012 BIOSPARGE WELL
- 2008 BIOSPARGE WELL
- 2012 BIOSPARGE WELL FOR PILOT TEST
- 2013/2015 BIOSPARGE WELL
- MONITORING WELL
- PERFORMANCE MONITORING WELL
- DRAINAGE FEATURE
- 2008 SPARGE LINE (3-IN PVC)
- 2008 SPARGE LINE (1-IN PVC)
- 2012/2013 SPARGE LINE (3-IN PVC)
- 2012/2015 SPARGE LINE (1-IN PVC)
- 2008 VALVE VAULT
- 2012/2013 VALVE VAULT
- GROUNDWATER FLOW DIRECTION
- 15 BTEX CONCENTRATION (µg/L)
- ND NON-DETECT
- 15 MAY 2016 BTEX CONCENTRATION (µg/L)

NOTE: Taken from the Final Semiannual Performance Monitoring Report, October 2016 (Leidos, 2016)

Figure 3-2
Extent of BTEX Contamination in Groundwater at Site 4, May 2016
106th Rescue Wing,
New York Air National Guard
Westhampton Beach, New York

ch2m:

atlfpp01| Proj | USAirNationalGuard | 682140EasternIRP | 08.Historic_Deliverables | 01.Gabreski | QAPP | Figures | f06_682140.dgn

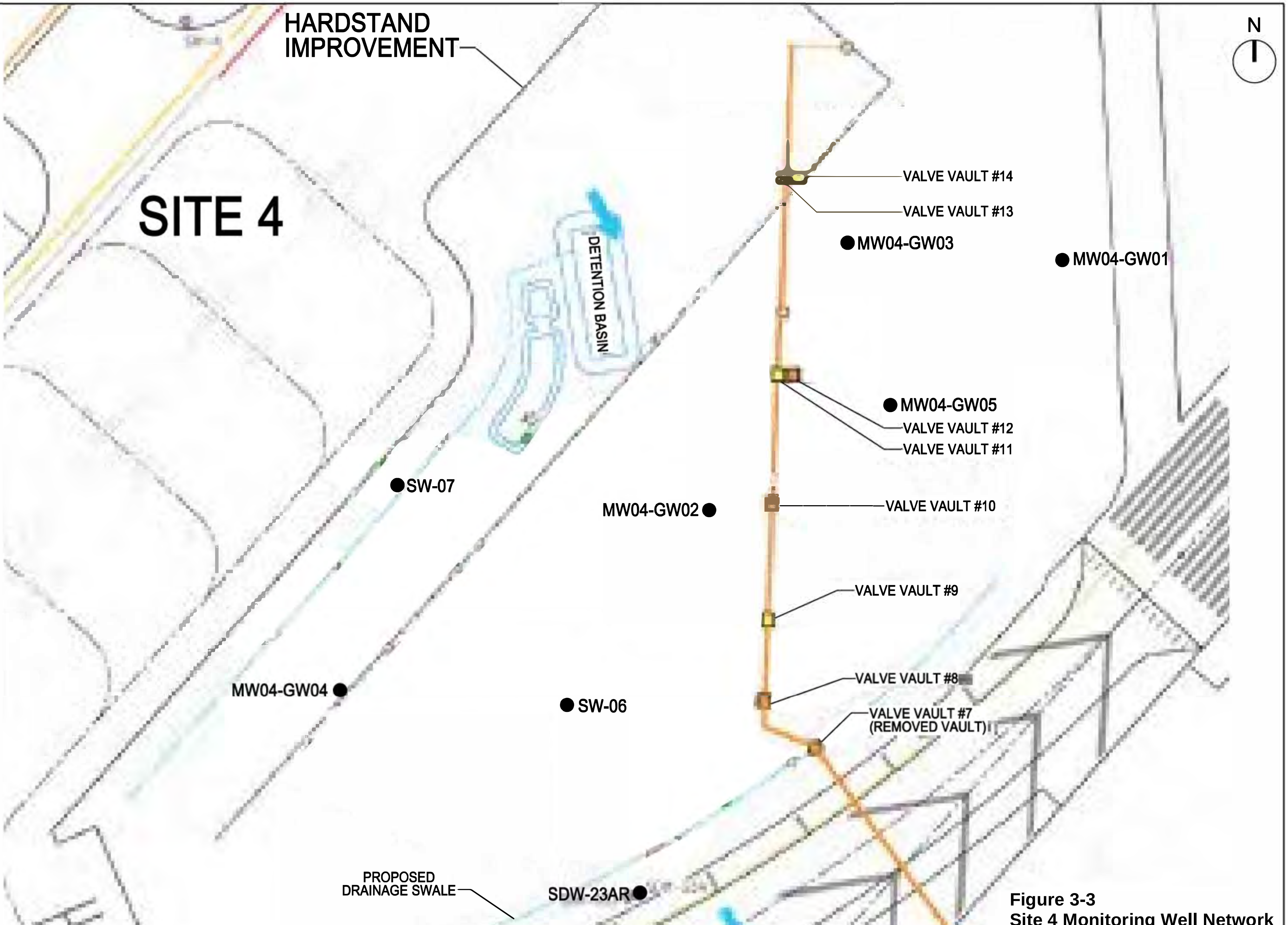


Figure 3-3
Site 4 Monitoring Well Network
106th Rescue Wing,
New York Air National Guard
Westhampton Beach, New York

DRAWING NOT TO SCALE

atlfpp01| Proj | USAirNationalGuard | 682140EasternIRP | 08.Historic_Deliverables | 01.Gabreski | QAPP | Figures | f05_682140.dgn

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Appendix A
Quality Assurance Project Plan

Draft Final

Quality Assurance Project Plan
Long-Term Monitoring, Operations and Maintenance, and Site Closeout at Site 4
Aircraft Refueling Apron Spill Site
Francis S. Gabreski Airport
106th Rescue Wing, Westhampton Beach, New York

May 2017

Prepared for:

National Guard Bureau Environmental Support Branch (NGB/A4OR)

Prepared by:
CH2M HILL, Inc.

Prepared under:
Contract W9133L-14-D-0003, Delivery Order 0003
ANG Project Number F9WFEV6064A001

REVIEW SIGNATURE:	APPROVAL SIGNATURE:
______________________________	______________________________
CASEY HUDSON, PE **CH2M – PROJECT MANAGER**	**KIMBERLY AMLEY** **CH2M – PROJECT QUALITY ASSURANCE MANAGER**

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Contents

Tables

Figures

Attachment

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Acronyms and Abbreviations

°C	degrees Celsius
µg/L	microgram(s) per liter
ANG	Air National Guard
APM	assistant project manager
ASCII	American Standard Code for Information Interchange
BTEX	benzene, toluene, ethylbenzene, and total xylenes
btoc	below top of casing
CAS	Chemical Abstracts Service
CH2M	CH2M HILL, Inc.
CLP	Contract Laboratory Program
COC	contaminant of concern
DL	detection limit
DO	dissolved oxygen
DoD	U.S. Department of Defense
DQO	data quality objective
ELAP	Environmental Laboratory Accreditation Program
EPA	U.S. Environmental Protection Agency
ERPIMS	Environmental Resources Program Information Management System
FTL	field team leader
Gabreski Airport	Francis S. Gabreski Airport in Westhampton Beach, Suffolk County, New York
HCl	hydrochloric acid
ID	identification
IRP	Installation Restoration Program
LCS	laboratory control sample
LOD	level of detection
LOQ	limit of quantitation
LTM	long-term monitoring
mL	milliliter
MS	matrix spike
MSD	matrix spike duplicate
N/A	not applicable
NFA	No Further Action

NGB	National Guard Bureau
NGB/A4OR	Air National Guard Environmental Restoration Branch
NGVD	National Geodetic Vertical Datum
NY ANG	New York Air National Guard
NYSDEC	New York State Department of Environmental Conservation
O&M	operations and maintenance
ORP	oxidation-reduction potential
PARCC	precision, accuracy, representativeness, comparability, and completeness
PID	photoionization detector
PM	project manager
PVC	polyvinyl chloride
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
QCP	Quality Control Plan
QSM	*Department of Defense Quality Systems Manual for Environmental Laboratories*
RA	remedial action
RPD	relative percent difference
SCO	site closeout
SOP	standard operating procedure
STC	senior technical consultant
TOC	top of casing
UFP	Uniform Federal Policy
UTM	Universal Transverse Mercator
VOC	volatile organic compound
WGS	World Geodetic System

SECTION 1

Introduction

The National Guard Bureau (NGB) has retained CH2M HILL, Inc. (CH2M) to provide Installation Restoration Program (IRP) services under Air National Guard (ANG) Project Number F9WFEV6064A001, Contract W9133L-14-D-0003 at five ANG installations in the eastern United States. This project is being performed for the New York Air National Guard (NY ANG) 106th Rescue Wing at Francis S. Gabreski Airport in Westhampton Beach, Suffolk County, New York (Gabreski Airport). CH2M will conduct long-term monitoring (LTM), operations and maintenance (O&M), and site closeout (SCO) activities at Site 4, Aircraft Refueling Apron Spill Site.

This Quality Assurance Project Plan (QAPP) presents the overall policies and requirements that will be employed during the field effort at Site 4. Elements of the Uniform Federal Policy (UFP) for QAPPs, per the *Air National Guard Environmental Restoration Program Investigation Guidance* (ANG Investigation Guidance; ANG, 2009), are incorporated where applicable. The UFP-QAPP is a set of consensus documents prepared by the Intergovernmental Data Quality Task Force to provide instructions for preparing QAPPs for any environmental data collection operation. The UFP was developed as a joint initiative by the U.S. Environmental Protection Agency (EPA), the U.S. Department of Defense (DoD), and the U.S. Department of Energy to ensure environmental data are of known and documented quality and suitable for their intended uses, and environmental data collection and technology programs meet stated requirements. Table 1-1 is crosswalk reference that identifies where UFP-required QAPP worksheets are in this QAPP and/or the LTM, O&M, and SCO Plan.

Table 1-1. Crosswalk Table for UFP-QAPP Workbook Guidance and Site 4 Documents
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Required UFP-QAPP Element(s) and Corresponding UFP-QAPP Section(s)		Required Information	Crosswalk to Site 4 Documents
Project Management and Objectives			
2.1	Title and Approval Page	– Title	QAPP Cover Page
2.2	Document Format and Table of Contents 2.2.1 Document Control Format 2.2.2 Document Control Numbering System 2.2.3 Table of Contents 2.2.4 QAPP Identifying Information	– Table of Contents – QAPP Identifying Information	QAPP Pages i-ii, QAPP Section 1
2.3	Distribution List and Project Personnel Sign-Off Sheet 2.3.1 Distribution List 2.3.2 Project Personnel Sign-Off Sheet	– Distribution List – Project Personnel Sign-Off Sheet	LTM, O&M, SCO Plan Section 2 QAPP Cover
2.4	Project Organization 2.4.1 Project Organizational Chart 2.4.2 Communication Pathways 2.4.3 Personnel Responsibilities and Qualifications 2.4.4 Special Training Requirements and Certification	– Project Organizational Chart – Communication Pathways – Personnel Responsibilities and Qualifications – Special Personnel Training Requirements	QCP Section 2 QAPP Section 2.3 QAPP Section 2.2 N/A
2.5	Project Planning/Problem Definition 2.5.1 Project Planning (Scoping)	– Project Planning Session Documentation (including Data Needs tables)	N/A

Table 1-1. Crosswalk Table for UFP-QAPP Workbook Guidance and Site 4 Documents
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Required UFP-QAPP Element(s) and Corresponding UFP-QAPP Section(s)		Required Information	Crosswalk to Site 4 Documents
	2.5.2 Problem Definition, Site History, and Background	– Project Scoping Session Participants Sheet	N/A
		– Problem Definition, Site History, and Background	LTM, O&M, SCO Plan Section 3
		– Site Maps (Historical and Present)	LTM, O&M, SCO Plan Section 1
2.6	Project Quality Objectives and Measurement Performance Criteria		
	2.6.1 Development of Project Quality Objectives Using the Systematic Planning Process	– Site-Specific Project Quality Objectives	QAPP Section 3
	2.6.2 Measurement Performance Criteria	– Measurement Performance Criteria Table	QCP Section 4 and QAPP Section 5
2.7	Secondary Data Evaluation	– Sources of Secondary Data and Information	LTM, O&M, SCO Plan Section 3
		– Secondary Data Criteria and Limitations Table	N/A
2.8	Project Overview and Schedule		
	2.8.1 Project Overview	– Summary of Project Tasks	LTM, O&M, SCO Plan Section 1
	2.8.2 Project Schedule	– Reference Limits and Evaluation Table	QAPP Section 4
		– Project Schedule/Timeline Table	LTM, O&M, SCO Plan Section 2
Measurement/Data Acquisition			
3.1	Sampling Tasks		
	3.1.1 Sampling Process Design and Rationale	– Sampling Design and Rationale	QAPP Section 4 and LTM, O&M, SCO Plan Section 6
	3.1.2 Sampling Procedures and Requirements	– Sample Location Map	LTM, O&M, SCO Plan Section 3
	3.1.2.1 Sampling Collection Procedures	– Sampling Locations and Methods/ SOP Requirements Table	LTM, O&M, SCO Plan Sections 6 and 7
	3.1.2.2 Sample Containers, Volume, and Preservation	– Analytical Methods/SOP Requirements Table	QAPP Section 4
	3.1.2.3 Equipment/Sample Containers Cleaning and Decontamination Procedures	– Field Quality Control Sample Summary Table	QAPP Section 4
	3.1.2.4 Field Equipment Calibration, Maintenance, Testing, and Inspection Procedures	– Sampling SOPs	N/A
	3.1.2.5 Supply Inspection and Acceptance Procedures	– Project Sampling SOP References Table	N/A
	3.1.2.6 Field Documentation Procedures	– Field Equipment Calibration, Maintenance, Testing, and Inspection Table	QAPP Sections 8 and 12 for calibrations and maintenance QAPP Sections 6 and 7 for field documentation
3.2	Analytical Tasks		
	3.2.1 Analytical SOPs	– Analytical SOPs	QAPP Sections 4, 5, and 8
	3.2.2 Analytical Instrument Calibration Procedures	– Analytical SOP References Table	
		– Analytical Instrument Calibration Table	

Table 1-1. Crosswalk Table for UFP-QAPP Workbook Guidance and Site 4 Documents
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

	Required UFP-QAPP Element(s) and Corresponding UFP-QAPP Section(s)	Required Information	Crosswalk to Site 4 Documents
	3.2.3 Analytical Instrument and Equipment Maintenance, Testing, and Inspection Procedures 3.2.4 Analytical Supply Inspection and Acceptance Procedures	– Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table	
3.3	Sample Collection Documentation, Handling, Tracking, and Custody Procedures 3.3.1 Sample Collection Documentation 3.3.2 Sample Handling and Tracking System 3.3.3 Sample Custody	– Sample Collection Documentation Handling, Tracking, and Custody SOPs – Sample Container Identification – Sample Handling Flow Diagram – Example Chain-of-custody Form and Seal	QAPP Sections 6, 7, and 9
3.4	Quality Control Samples 3.4.1 Sampling Quality Control Samples 3.4.2 Analytical Quality Control Samples	– QC Samples Table – Screening/Analysis Decision Tree	QAPP Section 4 and LTM, O&M, SCO Plan Section 6
3.5	Data Management Tasks 3.5.1 Project Documentation and Records 3.5.2 Data Package Deliverables 3.5.3 Data Reporting Formats 3.5.4 Data Handling and Management 3.5.5 Data Tracking and Control	– Project Documents and Records – Analytical Services – Data Management SOPs	QAPP Sections 9 and 10
	Assessment/Oversight		
4.1	Assessments and Response Actions (Audits) 4.1.1 Planned Assessments 4.1.2 Assessment Findings and Corrective Action Responses	– Assessments and Response Actions – Planned Project Assessments – Audit Checklists – Assessment Findings and Corrective Action Responses	QAPP Sections 11 and 13
4.2	Quality Assurance Management Reports	– Quality Assurance Management Reports Table	QAPP Section 14
4.3	Final Project Status Report	– Final Status Report(s)	LTM, O&M, SCO Plan Section 9
	Data Review		
5.1	Overview		
5.2	Data Review Steps 5.2.1 Step I: Verification 5.2.2 Step II: Validation 5.2.2.1 Step IIa Validation Activities 5.2.2.2 Step IIb Validation Activities 5.2.3 Step III: Usability Assessment 5.2.3.1 Data Limitations and Actions from Usability Assessment 5.2.3.2 Activities	– Verification (Step I) Process – Validation (Steps IIa and IIb) Process – Validation (Steps IIa and IIb) Summary – Usability Assessment	QAPP Sections 9 and 10

Table 1-1. Crosswalk Table for UFP-QAPP Workbook Guidance and Site 4 Documents
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Required UFP-QAPP Element(s) and Corresponding UFP-QAPP Section(s)		Required Information	Crosswalk to Site 4 Documents
5.3	Streamlining Data Review 5.3.1 Data Review Steps to be Streamlined 5.3.2 Criteria for Streamlining Data Review 5.3.3 Amounts and Types of Data Appropriate for Streamlining		N/A

N/A = not applicable
QCP = *Quality Control Plan, FY16 Eastern Region Installation Restoration Program, Multiple Air National Guard Installations* (CH2M, 2016)
SOP = Standard Operating Procedure

1.1 Project Description

This QAPP is submitted as part of the Site 4 LTM, O&M, and SCO Plan and provides information regarding data collection and quality assurance (QA) activities, quality control (QC) requirements, and procedures so that valid data are collected during groundwater monitoring and O&M efforts.

This site-specific QAPP presents the overall policies, data quality objectives (DQOs), and specific QA/QC requirements that will be employed during the field effort. This QAPP establishes guidelines for field sampling, documentation, laboratory analysis, QA/QC procedures, and reporting requirements that will result in data of known quality. Qualitative and quantitative goals for precision, accuracy, representativeness, comparability, completeness, and sensitivity (PARCC) are defined in this QAPP to confirm that the data will meet the needs of the end user.

The primary objective of the Site 4 remedial action (RA) is to reduce concentrations of contaminants of concern (COC) in groundwater to below New York State Department of Environmental Conservation (NYSDEC) Class GA groundwater criteria. ANG installed an air biosparge treatment system at the site, as outlined in the Decision Document (ANG, 2008), which is still operating. Operation of the air biosparge system has resulted in an overall 99.7 percent reduction in benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations since system startup (Leidos, 2016). No Further Action (NFA) for soils at Site 4 was approved as presented in the Decision Document (ANG, 2008).

The purpose of the groundwater monitoring program is to evaluate the RA effectiveness in reducing the concentrations of COCs below established remediation levels and document conditions for site closure. Once remedial objectives are achieved, four quarterly groundwater monitoring events will be performed to demonstrate attainment of groundwater criteria and to achieve site closure. Until COC concentrations are below NYSDEC Class GA groundwater criteria, the monitoring well network will consist of eight monitoring wells (MW04-GW01, MW04-GW02, MW04-GW03, MW04-GW04R, MW04-GW-05, SDW-23AR, SW-06, and SW-07). Once NYSDEC Class GA groundwater criteria are achieved, quarterly compliance monitoring will be performed for 22 monitoring wells (MW04-GW01, MW04-GW02, MW04-GW03, MW04-GW04R, MW04-GW05, SW-4, SW-5, SW-6, SW-6A, SW-6B, SW-7, SW-10, SDW-21, SDW-22, SDW-23, SDW-23AR, SDW-24, SDW-24A, PZ-01, PZ-02, PZ-03, and PZ-04). Data collected to meet these objectives will be analyzed at a fixed-base analytical laboratory for definitive data.

Monthly and routine O&M activities will be conducted to continue operation and maintain effectiveness of the existing air biosparge system. Monthly inspections will include checking the compressor oil level, cleaning the compressor, recording pressure measurements, checking piping for leakage, inspecting well head construction, and ensuring valves and gauges are operable. Routine maintenance will include changing the compressor oil and greasing bearings at a frequency of approximately every 5,000 hours of operating service.

This QAPP is applicable for O&M activities and quarterly monitoring events beginning with the second quarter of 2017 and ending with the second quarterly monitoring event in 2020 and compliance monitoring events thereafter. The number of quarterly monitoring events may be reduced if the RA objectives are met sooner.

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SECTION 2

Organization and Responsibilities

CH2M will conduct the LTM, O&M, and SCO activities as described in the LTM, O&M, and SCO Plan. This work will be performed under the direction of ANG. The ANG Environmental Restoration Branch (NGB/A4OR) and ANG IRP manage site-related activities.

2.1 Project Management Organization

The project management organization is presented in Section 2 of the LTM, O&M, and SCO Plan.

2.2 Authority and Responsibility

This section identifies key project team members and lists the QA/QC responsibilities associated with each position. The organizational structure and responsibilities are designed to provide project control and QA for the proposed investigation.

2.2.1 Project Manager

The project manager (PM) is responsible for overall project activities across multiple geographical areas and installations. The PM is responsible for cost, schedule control, and technical quality. The PM is responsible for overall project execution. The PM's primary responsibility is to verify that work is performed in a safe manner and the RAs are conducted in a manner that will lead to project objectives being achieved at Site 4.

2.2.2 Program Quality Assurance Manager

The program QA manager is accountable for developing, maintaining, and auditing the Quality Control Plan (QCP). The program QA manager determines the proper procedures for conducting audits and is responsible for confirming compliance with requirements in the Performance Work Statement. The program QA manager also is responsible for addressing quality problems and initiating, recommending, and confirming that corrective actions are implemented.

2.2.3 Senior Technical Consultant

The senior technical consultant (STC) is responsible for overseeing the development and implementation of project corrective action implementation and regulatory strategies. The STC will be actively engaged in the oversight and review of project activities and document preparation. The STC will lead the scoping of technical tasks and work elements for this project to ensure the technical quality of deliverables generated by CH2M and its subcontractors prior to submittal to ANG or the regulatory agencies. The STC will act as the lead technical reviewer for technical work elements at each installation.

2.2.4 Assistant Project Manager

The assistant project manager (APM) directly reports to the PM and is responsible for implementing and administering the QAPP and reviewing the onsite policies, objectives, and procedures at installations within the defined geographies, specifically including this site. Technical support may be provided by engineers, geologists, chemists, hydrogeologists, and scientists who will assist the APM in monitoring, controlling, reviewing, and documenting the quality of onsite field activities and project deliverables. The APM is accountable for all work activities undertaken on this project at installations within a given geography.

2.2.5 Project Chemist

The project chemist assists with preparing the project work planning documents, provides a point of communication between the laboratory and the project team, supervises the analytical data quality evaluation, and participates in preparing deliverables to the client. The project chemist coordinates with the project team and the analytical laboratory during the field activities. The project chemist also is responsible for monitoring project-specific laboratory activities (including checking laboratory invoices and reports) and may audit the laboratory or field operations at the PM's direction. The project chemist also verifies that the QA/QC requirements described in this QAPP are completed effectively.

2.2.6 Field Team Leader

The field team leader (FTL) reports to the APM and is responsible for the coordination and successful completion of field efforts. The FTL provides for the availability and maintenance of sampling equipment and materials and provides shipping and packing materials. The FTL will supervise completion of the chain-of-custody records, supervise the proper handling and shipping of samples, and is responsible for accurate completion of the field notebook. As the lead field representative, the FTL is responsible for consistently implementing program QA/QC measures at the site and performing field activities in accordance with approved work plans, policies, and field procedures.

2.2.7 Subcontractor Requirements

Procurement of laboratory subcontractors for analyzing environmental samples will be strictly controlled. Only fixed-based laboratories approved by the State of New York and accredited under the DoD Environmental Laboratory Accreditation Program (ELAP) (Attachment 1), which has a demonstrated capability to provide the level of data quality required for this project, will be employed. Elements of analytical services procurement criteria for the fixed-based laboratory include:

- Demonstrated ability to perform the analyses required at a specific detection limit and capacity
- Ability to handle the types of material to be analyzed, including all applicable licenses and permits
- Demonstrated ability to perform the types of analysis and QC required
- Demonstrated ability to produce documentation and deliverables required for this project, including analytical results and electronic data
- Capability and availability of laboratory equipment and personnel

The laboratory selected to perform analyses of samples collected for this project is listed below:

Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 170601
Phone: (225) 769-4900

New York State Department of Health Certificate of Approval for Laboratory Services, Laboratory Identification (ID) No. 10670; DoD ELAP Accreditation, DoD ELAP Accreditation Certificate No. 0001.01 (Attachment 1).

2.3 Project Communications

One of the most critical elements in performing any type of project is to establish and maintain lines of communication among all project personnel. At the beginning of the project, the project team will prepare a QC plan and a work plan that will be distributed to all team members. These documents will identify each team member's responsibility in meeting the project objectives.

Before field activities begin, a project team chartering meeting will be held to review the project objectives, assumptions, field approach, and deliverables. Periodic meetings will be held to review data validity, technical evaluations, major decisions, and overall progress toward completing the project. The STC will participate in the meetings to help focus the technical approach and site strategy and define specific issues.

During the field investigation phase, the field team will meet daily to review the project status and discuss technical and safety issues. When necessary, other meetings will be scheduled, or the FTL will meet individually with field personnel or project subcontractors to resolve problems.

During the field effort, the FTL will provide verbal updates to the APM and PM, as necessary. When significant problems or decisions requiring additional authority occur, the FTL will immediately contact the APM, PM, or STC for assistance. The project chemist will coordinate communication with the laboratory through sample collection, sample analysis, and data quality evaluation and consult with the APM.

All communications with the NGB Program Manager will be channeled through the PM, who will be informed of field activities being conducted for each quarterly event by the APM.

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SECTION 3

Data Quality Objectives

DQOs are quantitative and qualitative statements specified to ensure data of known and appropriate quality are obtained during field efforts. DQOs must be established in the project planning process so that data generated during field activities are adequate to support decisions regarding the objectives and the method by which decisions will be made. DQOs are based on the specific use of the data collected. Data obtained during the Site 4 field efforts will provide the basis for decisions on site closure and confirm the site is within compliance standards. Specifically, the data collected during the quarterly groundwater monitoring will be used to:

- Evaluate COC concentrations in groundwater
- Make recommendations for optimized air injection via the existing air biosparge system, NFA, or alternative RA

The quantitative measurements that estimate the true value or actual concentration of a physical property always involve some level of uncertainty. The uncertainty associated with a sample generally results from natural variability (heterogeneity) of the sample, sample handling operations and conditions, spatial and temporal patterns, and analytical variability. These uncertainties must be estimated to obtain reliable data and to make appropriate decisions about remediation progress. If the level of uncertainty can be quantified, then it can be compared to standard quantitative indicators, the DQOs, for data quality. By quantifying the level of uncertainty, a decision maker will be able to use the results derived from the data collected.

3.1 Quality Management

The QA manager or a designee will be responsible for ensuring QC procedures are followed. The QA manager or a designee will be responsible for conducting audits, if required, to ensure the QA program is implemented in compliance with the QCP (CH2M, 2016), project-specific requirements outlined in project instructions and/or field instructions, NGB requirements, and EPA regulations. Immediate corrective actions will be taken at any time it is deemed necessary, and verification of corrective actions will be provided. QC procedures will be performed in accordance with this QAPP.

3.2 Data Quality Objective Levels

DQOs are divided into two data quality levels, screening and definitive. Screening-level data are used for informational purposes only; definitive data may be used for risk-based decisions. These levels express the uncertainty level a decision maker is willing to accept when considering analytical data results derived from environmental investigation activities. DQOs are a management tool used to decrease the probability of data leading to an incorrect conclusion. Fixed-base laboratory data will encompass all QC elements required for definitive-level data with summary form deliverables.

3.2.1 Screening-level Data

Screening-level data are generated by rapid, less-precise methods of analysis with less-rigorous sample preparation. Sample preparation steps may be restricted to simple procedures, such as dilution with a solvent, instead of elaborate extraction/digestion and cleanup or direct matrix introduction. Screening data provide analyte identification and potentially supply limited quantitation, although the quantitation may be relatively imprecise.

This level is characterized using handheld instruments, including a photoionization detector (PID) that may identify the presence of a class of compounds without actually identifying or quantifying a specific compound, a water quality meter, and water quality parameter test kits. This level of data may be used for gross determination of analytes in samples. Screening-level data for the field efforts will be required for field measurement data. Field measurement data are specified for routine field measurements, such as water level measurements, pH, and conductivity measurements during sampling events. Definitive confirmation is not required because the intended use of data is primarily for monitoring site conditions.

3.2.2 Definitive-level Data

Definitive-level data are generated using rigorous analytical methods, such as approved EPA reference methods. Data are analyte-specific, with confirmation of analyte identity and concentrations. Methods produce tangible raw data (for example, chromatograms, spectra, and digital values) in the form of paper printouts or computer-generated electronic files. Data may be generated at the site or at an offsite location, as long as the QA/QC requirements are satisfied.

This level is characterized by fixed-base laboratory analysis or sample analysis at sophisticated mobile laboratories. Analytical protocols provide data at lower detection limits, information on a wide range of calibrated analytes, matrix recovery information, information on laboratory process control, and produce analytical data at known levels of precision and accuracy. EPA-accepted methods, such as those in Solid Waste Method 846 (EPA, 2015) and the Contract Laboratory Program (CLP), are used for definitive data.

Quality Control for Sample Collection and Analysis

The overall QC objective is to develop and implement procedures that will result in sufficient quality in field sample collection, fixed-base laboratory analysis, and reporting that will meet the needs of end users of the data. Documentation requirements, including field logbooks, and chain-of-custody records, are in other sections of this QAPP. This section presents the overall analytical QC from the time of collection through analysis.

4.1 Sample Collection

Procedures for collecting groundwater samples will follow the LTM, O&M, and SCO Plan and will conform to the ANG Investigation Guidance (ANG, 2009). Groundwater sampling will be performed quarterly for eight performance monitoring wells (MW04-GW01, MW04-GW02, MW04-GW03, MW04-GW04R, MW04-GW-05, SDW-23AR, SW-06, and SW-07) until NYSDEC Class GA groundwater criteria are achieved. Once groundwater criteria are achieved, compliance groundwater sampling will be performed for four quarters for the 22 site monitoring wells (Table 4-1). Groundwater samples collected at Site 4 will be analyzed quarterly for BTEX by EPA Method 8260 and semiannually for full suite volatile organic compounds (VOCs) by EPA Method 8260.

Quarterly groundwater level elevations will be collected from eight monitoring wells (MW04-GW01, MW04-GW02, MW04-GW03, MW04-GW04R, MW04-GW-05, SDW-23AR, SW-06, and SW-07). Groundwater level elevations will be collected semiannually from the 22 site monitoring wells (Table 4-1). The LTM, O&M, and SCO Plan includes a description of the field procedures, field equipment, and field sampling methods. LTM network monitoring well locations are shown on Figure 3-3 of the LTM, O&M, and SCO Plan.

The FTL is responsible for ensuring samples are collected using properly decontaminated equipment and contained in properly cleaned sample containers. The steps required for sample control and identification, data recording, and chain-of-custody documentation are discussed in Section 6. Before beginning each sampling event, the FTL will meet with the assigned sampling personnel and review the purpose and objectives of the event. This meeting will provide final clarification of the sampling event details. Topics of review and discussion will include items such as sampling locations, types of samples to be collected, number of samples to be collected, sample numbering, parameters to be analyzed, sampling procedures, equipment decontamination procedures, and chain-of-custody requirements.

Equipment decontamination is an integral part of the data collection and QA process. The implementation of proper decontamination practices and procedures will begin in the field before using sample collection equipment. Field sampling equipment will be decontaminated in accordance with Section 7 of the LTM, O&M, and SCO Plan.

Table 4-1. Site 4 Well Specifications and Groundwater Sampling Summary
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Well ID	Well Type	Well Dia. (inches)	Completion	Total Depth (feet btoc)	Screened Interval (feet btoc)	TOC Elevation (NGVD 88)	Easting UTM Zone 18N (WGS 84)	Northing UTM Zone 18N (WGS 84)
MW04-GW01	P	0.75	flush	35.30	25.30–35.30	45.25	699036.16	4523355.51
MW04-GW02	P	0.75	flush	31.70	16.70–31.70	37.50	698935.00	4523283.37
MW04-GW03	P	0.75	flush	33.20	18.20–33.20	38.37	698975.34	4523359.71
MW04-GW04R	P	1.00	flush	40.05	30.05–40.05	44.88	698830.90	4523229.21
MW04-GW05	P	0.75	flush	40.00	30.00–40.00	40.57	698987.93	4523313.55
SW-04	C	2.00	flush	50.00	40.00–50.00	U	U	U
SW-05	C	2.00	stick-up	39.46	26.00–36.00	42.58	698965.20	4523450.78
SW-06	P	2.00	stick-up	32.60	20.00–30.00	39.08	698895.86	4523227.38
SW-06A	C	2.00	flush	49.70	39.70–49.70	36.56	698891.31	4523226.12
SW-06B	C	2.00	flush	39.70	29.70-39.70	36.43	698900.48	4523228.03
SW-07	P	2.00	stick-up	37.41	25.00–35.00	44.69	698846.11	4523289.49
SW-10	C	2.00	stick-up	38.82	24.50–34.50	43.54	698985.12	4523251.97
SDW-21	C	1.00	stick-up	39.07	27.20–36.80	45.94	699021.01	4523406.57
SDW-22	C	1.00	stick-up	63.56	58.10–63.10	45.90	699022.35	4523405.56
SDW-23	C	1.00	stick-up	32.90	21.10–31.30	40.60	698913.63	4523172.62
SDW-23AR	P	1.00	flush	44.62	34.62–44.62	38.86	698916.71	4523173.44
SDW-24	C	1.00	stick-up	32.41	20.80–30.80	40.12	698941.56	4523173.72
SDW-24A	C	0.75	flush	45.30	35.30–45.30	38.24	698944.18	4523342.85
PZ-01	C	0.75	flush	32.00	22.00–32.00	U	U	U
PZ-02	C	0.75	flush	33.50	23.50–33.50	U	U	U
PZ-03	C	0.75	flush	36.90	26.90–36.90	U	U	U
PZ-04	C	0.75	flush	40.00	30.00–40.00	U	U	U

Note: Elevations and coordinates for replacement wells MW04-GW04R and SDW-23AR are from the original wells. All wells are constructed of PVC.
Well type: P = Performance; C = Compliance
btoc = below top of casing
ID = identifier
NGVD = National Geodetic Vertical Datum
PVC = polyvinyl chloride
TOC = top of casing
U = data unavailable or not readily available
UTM = Universal Transverse Mercator
WGS = World Geodetic System

4.2 Field Quality Control Samples

Field duplicate samples, equipment rinsates/blanks, matrix spike (MS)/matrix spike duplicates (MSDs), field blanks, and trip blanks will be submitted to the analytical laboratory to provide the means to assess the quality of the data resulting from the field sampling program. Trip blank samples will be analyzed for procedural contamination. Equipment blanks will be analyzed to assess equipment decontamination procedures and check for cross-contamination. Duplicate samples will be submitted under a non-indicative sample identification to provide a QA check on analytical procedures and results. MS/MSD samples will be collected to provide the laboratory enough sample volume to perform the required laboratory QC analyses. Table 4-2 summarizes the QC samples for groundwater that will be collected per event for the Site 4 LTM activities. The QC samples and associated frequencies for this project are described below.

Table 4-2. Field Quality Control Samples
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Analysis	Primary	Groundwater			
		Duplicate	**MS/MSD**	**Equipment Rinsate Blank**	**Trip Blank**
Quarterly Sampling Until NYSDEC Class GA Groundwater Criteria Achieved					
VOCs	8	1	1	1	2
Quarterly Sampling Once NYSDEC Class GA Groundwater Criteria Achieved					
VOCs	22	3	2	3	4

Note: Samples are per event.

4.2.1 Trip Blanks

Trip blanks are used to detect contamination by VOCs during shipping and handling. Trip blanks are 40-milliliter (mL) vials of analyte-free water and are preserved with hydrochloric acid to a pH of ≤2. The laboratory performing the analysis will supply trip blanks. Trip blanks must have zero headspace and should not be opened in the field. One trip blank set will be placed in each cooler containing samples for VOC analysis and be submitted to the fixed-base laboratory. The number of 40-mL vials comprising a trip blank is laboratory-dependent. The number of vials required will be specified by the selected fixed-base laboratory. Trip blanks will be analyzed for VOCs as part of the definitive dataset and not as screening data.

4.2.2 Equipment Blanks

Equipment blanks are used as a measure of the effectiveness of the decontamination process. Equipment blanks are samples of the final analyte-free water rinse from equipment cleaning and are submitted to the fixed-base laboratory for analysis. The equipment blanks will be analyzed for the same analytes as the primary samples that are collected. Samples will be collected for reusable sampling equipment at a frequency of one sample per event for fixed-base laboratory analysis.

4.2.3 Field Duplicates

Field duplicates are used to assess the precision of sampling techniques and to provide checks on laboratory and field procedures. Field duplicates will be collected at a 10 percent frequency for fixed-base confirmation analysis of all samples.

4.2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD samples are samples from a specific media that are spiked at the laboratory with known quantities of analytes. MS/MSD samples are used to determine the accuracy and precision of the laboratory analyses as well as matrix interferences. Data from MS/MSD sample recovery supply percentage recovery information so the laboratory can evaluate its measurement accuracy and precision. MS/MSD samples are equal portions of a single initial sample that have been spiked with specific analytes in known quantities and must meet certain laboratory requirements to be acceptable. The total number of MS/MSD samples will be at a frequency of 1 per 20 samples collected per sample matrix for fixed-base laboratory analysis or 1 per day. An unspiked laboratory duplicate analysis may be performed instead of an MSD for inorganic parameters.

4.3 Analytical Parameters

Analysis of groundwater samples, collected in accordance with the LTM, O&M, and SCO Plan, will be performed using analytical procedures that conform to EPA guidelines published in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (EPA, 2015) and DoD guidelines published in Version 5.0 of the *Department of Defense Quality Systems Manual for Environmental Laboratories* (QSM) (DoD, 2013). Analytical results will be reported using CLP-type documentation.

Groundwater samples collected at Site 4 will be analyzed for VOCs only. Remediation-derived waste will be characterized based on existing site data. CLP-type summary forms without raw data will be required to meet fixed-base laboratory analytical data quality levels required for LTM activities. Analytical QA/QC requirements are discussed in Section 5.

4.4 Fixed-Base Laboratory

All fixed-base laboratory analysis will require 21-day turn-around for data package deliverables. Table 4-3 identifies the analytical reporting limits for groundwater that will be conducted for the Site 4 LTM activities.

Table 4-3. Project Reporting Levels for VOCs in Groundwater
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Parameter	CAS Number	LOQ	DL	LOD
Volatile Organic Compounds – Water*		***µg/L***	***µg/L***	***µg/L***
1,1,1-Trichloroethane	71-55-6	1	0.5	1
1,1,2,2-Tetrachloroethane	79-34-5	1	0.5	1
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	76-13-1	10	2	4
1,1,2-Trichloroethane	79-00-5	1	0.5	1
1,1-Dichloroethane	75-34-3	1	0.5	1
1,1-Dichloroethene	75-35-4	1	0.5	1
1,2,3-Trichlorobenzene	87-61-6	5	1	2
1,2,4-Trichlorobenzene	120-82-1	5	1	2
1,2,4-Trimethylbenzene	95-63-6	5	1	2
1,2-Dibromo-3-chloropropane	96-12-8	5	2	4
1,2-Dibromoethane	106-93-4	1	0.5	1
1,2-Dichlorobenzene	95-50-1	5	1	2
1,2-Dichloroethane	107-06-2	1	0.5	1
1,2-Dichloropropane	78-87-5	1	0.5	1
1,3,5-Trimethylbenzene	108-67-8	5	1	2
1,3-Dichlorobenzene	541-73-1	5	1	2
1,4-Dichlorobenzene	106-46-7	5	1	2

Table 4-3. Project Reporting Levels for VOCs in Groundwater
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Parameter	CAS Number	LOQ	DL	LOD
2-Butanone (MEK)	78-93-3	10	3	8
2-Hexanone	591-78-6	10	3	8
4-Methyl-2-pentanone (MIBK)	108-10-1	10	3	8
Acetone	67-64-1	20	6	12
Benzene	71-43-2	1	0.5	1
Bromochloromethane	74-97-5	5	1	2
Bromodichloromethane	75-27-4	1	0.5	1
Bromoform	75-25-2	4	0.5	1
Bromomethane	74-83-9	1	0.5	1
Carbon Disulfide	75-15-0	5	1	2
Carbon Tetrachloride	56-23-5	1	0.5	1
Chlorobenzene	108-90-7	1	0.5	1
Chloroethane	75-00-3	1	0.5	1
Chloroform	67-66-3	1	0.5	1
Chloromethane	74-87-3	1	0.5	1
cis-1,2-Dichloroethene	156-59-2	1	0.5	1
cis-1,3-Dichloropropene	10061-01-5	1	0.5	1
Cyclohexane	110-82-7	5	2	4
Dibromochloromethane	124-48-1	1	0.5	1
Dichlorodifluoromethane (Freon-12)	75-71-8	1	0.5	1
Ethylbenzene	100-41-4	1	0.5	1
Isopropylbenzene	98-82-8	5	1	2
Methyl acetate	79-20-9	5	1	2
Methyl tert-butyl ether	1634-04-4	1	0.5	1
Methylcyclohexane	108-87-2	5	1	2
Methylene Chloride	75-09-2	3	2	3
m-Xylene and p-Xylene	179601-23-1	1	0.5	1
Naphthalene	91-20-3	5	1	2
o-Xylene	95-47-6	1	0.5	1
Styrene	100-42-5	5	1	2
Tetrachloroethene	127-18-4	1	0.5	1
Toluene	108-88-3	1	0.5	1
trans-1,2-Dichloroethene	156-60-5	1	0.5	1
trans-1,3-Dichloropropene	10061-02-6	1	0.5	1
Trichloroethene	79-01-6	1	0.5	1
Trichlorofluoromethane	75-69-4	1	0.5	1

Table 4-3. Project Reporting Levels for VOCs in Groundwater
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Parameter	CAS Number	LOQ	DL	LOD
Vinyl Chloride	75-01-4	1	0.5	1
Xylene (total)	1330-20-7	1	0.5	1

Note: Sample quantitation limits are highly matrix-dependent. The quantitation limits listed herein are provided for guidance and may not always be achievable.
* VOCs analysis for water: Preparation method is 5030B or 5030C; analytical method is 8260C.
µg/L = microgram(s) per liter
CAS = Chemical Abstracts Service
DL = detection limit
LOD = level of detection
LOQ = limit of quantitation

4.5 Sample Preservation and Holding Times

Sample containers and preservatives used to maintain samples designated for chemical analysis will be provided by the laboratory performing the analysis. The preferred container types will be I Chem Series 300 bottles or equivalent. The bottles must be pre-cleaned and traceable to the laboratory that performed the cleaning. The lot number of the containers and reagents used for preservatives must be traceable to the laboratory (or supplier) that performed the initial assay. Certificates of cleanliness must be provided by the laboratory (or supplier) and kept in the project file.

Samples for chemical analysis will be placed on ice as soon as possible following collection. Samples will be chilled to 4 ± 2 degrees Celsius (°C) and maintained at that temperature through transport and subsequent storage at the analytical laboratory. Table 4-4 identifies the holding times, sample volumes, and preservative requirements. Sample quantitation limits are highly matrix-dependent. The quantitation limits listed herein are provided for guidance and may not always be achievable.

Table 4-4. Summary of Sample Containers, Preservation Methods, and Holding Times
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Parameter	Analytical Method	Sample Container		Preservative	Holding Time
		Quantity	Container		
Groundwater					
VOCs	SW-846 8260C	3	40-mL glass vials with Teflon-lined septum (no headspace)	HCl to pH <2 Cool, 4°C	14 days

Note: Recommended containers will be used unless otherwise specified by the receiving laboratory.
HCl = hydrochloric acid

Precision, Accuracy, Representativeness, Comparability, and Completeness Objectives

Analytical performance requirements are expressed in terms of PARCC. Brief definitions for each PARCC parameter and calculation equations, as appropriate, are provided below.

5.1 Precision

Precision is a measure of the agreement or repeatability of a set of replicate results obtained from duplicate analyses made under identical conditions. Precision can be estimated by comparing MSD concentrations and field duplicate sample results. Long-term analytical precision for an analyte in a method can be calculated from multiple determinations of the analyte from a homogeneous sample or a laboratory control sample (LCS) over time. LCS values obtained over a period should be used to construct a control chart and to evaluate long-term analytical precision. Control limits for each method and analytes represent the long-term analytical precision desired for this program. The laboratory-established, long-term analytical precision is not a reporting requirement for the data packages. Single analytical batch precision can be measured from laboratory duplicates (for example, LCS and LCS duplicate). The precision of a duplicate determination can be expressed as the relative percent difference (RPD), calculated as:

$$\text{RPD} = \left\{ \frac{\left|X_1 - X_2\right|}{\frac{\left(X_1 + X_2\right)}{2}} \right\} x100$$

where:

X1 is the result from the native sample, and X2 is the result from the duplicate sample. Laboratory RPDs are set by the QSM (DoD, 2013). An RPD of 20 percent will be used for aqueous field samples.

5.2 Accuracy

Accuracy is a measure of the agreement between an experimental determination and the true value of the parameter being measured. Accuracy is estimated using known reference materials and MSs. Both field and analytical accuracy will be monitored through initial and continuing calibration of instruments. In addition, internal standards, MSs, blank samples, LCSs, and surrogate standards will be used to assess the accuracy of the analytical data. Accuracy is calculated from analytical data and is not measured directly. Spiking of reference materials into a sample matrix provides a measure of the matrix effects on analytical accuracy. Spiking of reference materials into a “non-matrix,” such as deionized water or Ottawa sand, provides a measure of the accuracy of the analytical method itself. Accuracy, defined as percent recovery (P), is calculated as:

$$\text{P} = \left[\frac{\left(\text{SSR - SR}\right)}{\text{SA}} \right] \text{x } 100$$

Where SSR is the spiked sample result, SR is the sample result (native), and SA is the spike concentration added to the spiked sample.

5.3 Representativeness

Representativeness is a qualitative measure of the degree to which sample data accurately and precisely represent a characteristic environmental condition. Representativeness is a subjective parameter and is used to evaluate the efficacy of the sampling plan design. Representativeness is demonstrated by providing full descriptions of the sampling techniques and the rationale used for selecting sampling locations in the project planning documents.

There cannot be a target goal for a qualitative parameter such as representativeness or comparability. Therefore, this criterion is completed and evaluated subjectively rather than quantitatively. The measure for representativeness is answered during the preparation of the sampling and analysis approach and rationale and then reassessed during the data usability process. For example, an integral part of developing the sampling and analysis approach and rationale is to answer the question "How many samples are needed to fully evaluate x?" Then, during the data usability process, the question "Were enough data collected to answer the original question?" must be answered.

5.4 Completeness

The data completeness of laboratory analyses results will be assessed for compliance with the amount of data required for decision making. Complete data are data that are not rejected according to the procedures described in Section 9. Data qualified with qualifiers such as a "J" or a "UJ" are still deemed acceptable and can still be used to make project decisions. Completeness is defined as the percentage of measurements judged to be valid, compared with the total number of measurements made for a specific sample matrix and analysis. Completeness is calculated using the formula:

$$Completeness = \frac{Valid\ Measurements}{Total\ Measurements} x 100$$

Experience on similar projects has shown that laboratories typically achieve approximately 90 percent completeness. All validated data will be used. During the data validation process, an assessment of whether the valid data are sufficient to meet project objectives will be made. If sufficient valid data are not obtained, the PM will initiate corrective action.

5.5 Comparability

Comparability is another qualitative measure designed to express the confidence with which one data set may be compared with another. Sample collection and handling techniques, sample matrix type, and analytical method all affect comparability. Comparability is limited by the other PARCC parameters because data sets can be compared with confidence only when precision and accuracy are known. Data from one phase of an investigation can be compared with others when similar methods are used and the similar data package is obtained.

SECTION 6

Sample Identification and Chain-of-Custody

6.1 Requirements

Sample chain-of-custody procedures require that the possession and handling of samples from the moment of collection through analysis be documented by written record. The record must clearly reflect the movement of the samples through the chain-of-custody so that the sample has been controlled and has not been tampered with in any way. A sample is judged in custody when one of the following criteria has been met:

- The sample is in one's actual physical possession.
- The sample is in one's clear field of view after being in one's physical possession.
- The sample is in one's physical possession and is then locked up in a secure container so that no one can tamper with it.
- The sample is kept in a secured area that is restricted to authorized personnel only.

6.2 Sample Identification

A standardized numbering system will be used to identify all samples collected during sampling activities (Table 6-1). The numbering system provides a tracking procedure so that data retrieval of all collected samples is accurate. A listing of the sample identification numbers will be maintained by the FTL who will be responsible for enforcing the use of the standardized numbering system during all sampling activities. Sample identification for all samples collected during the Site 4 LTM activities will follow the format described below. The code consists of alphanumeric characters in five information groups:

- Site designator (five-character, alphanumeric code)
- Station type (two characters)
- Station number (two digits)
- Sample type (two digits)
- Sample date (MMDDYY)

Table 6-1. Sample Identification Example
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Site ID	Sample Description
FSG04-MW04-GW01-042117	Groundwater sample collected from Francis S. Gabreski Airport at Site 4 from groundwater monitoring well MW04-GW01, collected April 21, 2017

6.2.1 Site Designator

All samples collected during this field effort will be identified by an alphanumeric character code, beginning with the six-digit alphanumeric code to signify a specific site as follows:

- FSG04 = Francis S. Gabreski Airport – Site 4

6.2.2 Station Type

The next segment will consist of a two-character code to identify the station type, including MW = groundwater. Blind duplicate samples will be collected and given a station type DP. The associated blind duplicate parent sample will be recorded in the field notebook.

6.2.3 Station Number

The station type will be followed by a two-digit code that will sequentially identify the sample location number for each media (for example, monitoring well identification number). Blind duplicate samples will have the station type followed by a two-digit code '01'.

6.2.4 Sample Type

The last two-digit code will be used to identify the sample type:

- EB = equipment rinsate blank
- TB = trip blank

6.2.5 Sample Sequence Qualifier

The station number will be followed by a six-digit code that will sequentially identify the date (month, day, and year) that the sample was collected.

- MM = month
- DD = day
- YY = last two digits of the year

6.3 Sample Labels

All samples will be identified with a label attached directly to the container. Sample label information will be completed using waterproof black ink and will contain the following information:

- Sample identification
- Sample matrix
- Parameters to be analyzed
- Preservative (if any)
- Destination laboratory
- Date and time of collection
- Initials of sampler

6.4 Chain-of-Custody Record

To maintain a record of sample collection, a chain-of-custody record will be filled out for each sample submitted for fixed-base analysis at each sampling location, for the transfer of samples between sample custodians, shipment, and receipt by the laboratory. Figure 6-1 illustrates a standard chain-of-custody record. Sample chain-of-custody procedures require that the possession and handling of the sample from the moment of its collection through analysis will be documented by written record. The record must clearly reflect the movement of the sample through the chain-of-custody to confirm that the sample has been controlled and has not been tampered with in any way. Each time the samples are transferred, the signatures of the person relinquishing and the person receiving the samples, as well as the date and time of transfer, will be documented.

The chain-of-custody record for each sample shipment will contain the following information:

- Sample identification (for each sample in shipment)
- Collection date and time (for each sample in shipment)
- Time shipment was packed
- Number of containers of each sample (for each sample in shipment)
- Sample description (environmental medium)
- Analyses required for each sample

- Shipping address of the laboratory
- Date, time, and method of shipment
- Air bill number
- Sample custodian signature areas
- Temperature upon arrival at the laboratory

Each chain-of-custody record will be identified by a unique number located in the upper right corner. The chain-of-custody record will be inspected for completeness and accuracy before shipping. Any corrections to the chain-of-custody record entries will be made by a single-line strike mark through the incorrect item and by entering the correct entry adjacent to the strikeout item. Corrections will be initialed and dated by the person making the change. After the record has been inspected and determined to be satisfactorily complete, the person(s) collecting the samples will sign, date, and note the time of transfer on the record. The chain-of-custody record will be placed in a re-sealable plastic bag and taped to the inside of the cooler lid. A copy of the record is detached and maintained as part of the field documentation.

6.5 Transfer of Custody and Shipment

Before the shipment of samples, the chain-of-custody record will be signed and dated by a member of the field team who has verified that those samples indicated on the chain-of-custody record are indeed being shipped. After packaging has been completed, the samples will be sealed within the cooler, and custody seals, signed and dated by a member of the field team, will be placed over the lid edge of each cooler.

All samples will be shipped by courier (such as FedEx or local laboratory representative) to the fixed-base laboratory. Fixed-base samples will be transported, generally each day, by field personnel from the installation to the courier location for subsequent shipment to the laboratory. Upon receipt of the samples at the laboratory, the receiver will complete the transfer by dating and signing the chain-of-custody record. If shipped by commercial courier, the air bill number and shipping data will be transcribed to the chain-of-custody. A copy of the air bill is to be kept with the field copy of the chain-of-custody record to reflect specific shipping information.

6.6 Laboratory Sample Receiving and Storage

The sample custodian will inspect sample containers for integrity upon receipt. The presence of leaking or broken containers will be noted on the laboratory’s Sample Receipt Form and communicated to the field sampling representative. The sample custodian will sign the chain-of-custody record with the date and time of receipt, thus assuming custody of the samples.

The information on the chain-of-custody record will be compared with the information on the sample tags and labels to verify exact sample identity. Any inconsistencies will be immediately resolved with the field sampling representative before sample analysis proceeds. Samples will be moved to a locked restricted access sample storage refrigerator maintained at 4 ± 2°C. The laboratory is required to document all internal custody transfers. The laboratory will submit copies of appropriate chain-of-custody records with each data package and retain the original chain-of-custody records in the project laboratory files.

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ch2m:

CHAIN-OF-CUSTODY RECORD

				COC NUMBER:
				- -
PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No., and Fax No.):
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No., and Fax No.):
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No., and Fax No.):

ITEM	SAMPLE ID	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	ANALYSES REQUIRED (Include Method Numbers)									SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

SAMPLER(S) AND COMPANY: (please print)	FedEX number:	SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use):

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Distribution: [ ] **Original** - Laboratory (To be returned with Analytical Report); [ ] **Copy 1** - Project File; [ ] **Copy 2** - PMO				*Form CC1001, Rev 06/00*	

Figure 6-1. Chain-of-Custody Record

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SECTION 7

Documentation Procedure

Logbooks will be bound notebooks with water-resistant or waterproof pages and sequentially numbered by either mechanical overprint or handwritten entry. All entries will be legible and made with black, waterproof ink. No pages will be removed from a logbook. For any page partially filled with an entry, a line will be drawn diagonally from below the last line entry to the bottom of the page. Blank pages will be identified by writing "page intentionally left blank." Individuals making entries will sign and date the bottom of each page of their respective logbooks. Corrections will be marked through with a single line, initialed, and dated. No "white-out," erasure, or other obliteration will be accepted. At the end of each day, all logbooks are to be turned in to the FTL so that he/she may assess the entries for completeness.

7.1 Logbook

Information required on the cover of the site logbook also must be provided on the cover of each field logbook. Entries in the field logbook must be continuous through the day. Field logbook pages as well as the logbooks themselves are numbered consecutively. The following information should be included in field logbook:

- Date, time of specific activities, and physical location
- Weather conditions the day of the field activity and 48 hours prior, if not previously documented
- Names, titles, and organizations of personnel onsite, names and titles of visitors, and times of visits
- Field observations, including specific details on sampling activities (including type of sampling, time of sampling, and sample numbers), a description of any field tests and their results, and references to any field forms used, and type of document generated
- A detailed description of samples collected and any splits, duplicates, MS/MSDs, or blanks that were prepared (A list of sample identification numbers, packaging numbers, and chain-of-custody record numbers pertinent to each sample or referenced to the appropriate documentation should be noted.)
- Field changes or variances with references to the appropriate documentation of these changes
- Specific comments related to peculiar problems that occurred during the day, if any, and their resolution
- Lists of times, equipment types, and decontamination procedures followed (if different from the project work plan) or a reference to the appropriate documentation
- Lists of dates, times, and file names of photograph records

Additional information may be recorded at the discretion of the logbook user. Information to be recorded may include the following:

- Identification of well
- Static water level, depth, and measurement technique
- Presence of immiscible layers and detection methods
- Collection method for immiscible layers and sample identification numbers
- Total depth of well
- Well yield
- Purge volume and pumping rate
- Well purging times and volumes
- Sample withdrawal procedure

- Date and time of collection
- Well sampling sequence
- Types of sample containers and sample identification numbers
- Preservatives used
- Laboratory analyses requested
- Field analysis data and methods
- Sample distribution and transporter

7.2 Photographs

Photographs will be taken during key field activities. The photographs will be collected at the end of the fieldwork and will be submitted to the appropriate project team members, including the ANG Program Manager, upon request.

7.3 Corrections to Documentation

Original handwritten data recorded in field notebooks, sample identification tags, chain-of-custody records, and receipts-for-sample forms will be written with black, waterproof ink. Corrections must be marked with a single line, dated, and initialed. Documents such as site, field, and calibration logbooks are not to be destroyed or discarded, even if illegible or inaccurate. None of these accountable serialized documents are to be destroyed or disregarded, even if they are illegible or contain inaccuracies that require a replacement document.

If an error is made on an accountable document assigned to one team, the FTL may make corrections simply by drawing a single line through the error and entering the correct information. The erroneous information should not be obliterated. Any subsequent error discovered on an accountable document should be corrected by the person who made the entry. All subsequent corrections must be initialed and dated.

7.4 Final Evidence File Documentation

The APM will keep records to document the QA/QC activities and provide support for possible evidential proceedings. All evidential file documentation will be maintained on the project server. The APM will confirm that the QA/QC records are properly stored and retrievable.

SECTION 8

Calibration Procedures and Frequency for Measurement Data

Instruments and equipment used to gather, generate, or measure environmental data will be calibrated with sufficient frequency and in such a manner that accuracy and reproducibility of results are consistent with the manufacturer's specifications.

Groundwater sample measurements, such as specific conductance, temperature, turbidity, and pH, and surveying and health and safety monitoring will be performed and recorded in the field. The primary QA objectives of field activities where measurements will be taken are to verify QC checks are performed, verify measurements were obtained to the degree of accuracy consistent with their intended use, and provide documentation of adherence to the measurement procedures. Measurement data will be generated in many field activities, including:

- Monitoring VOC concentrations in the breathing zone
- Determining elevations of groundwater levels
- Measuring pH, conductivity, turbidity, oxidation-reduction potential (ORP), dissolved oxygen (DO), and temperature parameters during groundwater sampling

Field equipment will be calibrated, maintained, tested, and inspected in accordance with manufacturer's instructions and Table 8-1.

8.1 Analytical Data

Analytical data include all data generated by the fixed-base laboratory. Before any laboratory instrument is used as a measuring device, the instrument response to known reference materials traceable to National Institute of Standards and Technology or other EPA-approved standards must be determined. All instruments will be calibrated in accordance with the QSM (DoD, 2013) and method requirements. The manner in which various instruments are calibrated is dependent on the particular type of instrument and its intended use. All sample measurements will be made within the calibrated range of the instrument.

Laboratory calibrations typically consist of two types: initial and continuing calibration. Initial calibration procedures establish the calibration range of the instrument and determine instrument response over that range. Typically, three to five analyte concentrations are used to establish instrument response over a concentration range. The instrument response over its range is expressed as a correlation coefficient or by a response factor. Continuing calibration standards are analyzed at an established frequency to verify that the instrument remains properly calibrated.

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Table 8-1. Field Equipment Calibration, Maintenance, Testing, and Inspection
Site 4, 106th Rescue Wing, Francis S. Gabreski Airport, Westhampton Beach, New York

Field Equipment	Calibration Activity	Maintenance Frequency	Testing / Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person
Flame Ionization Detector/ Photo-ionization Detector	Calibrate before use using supplied gases; calibration check: check battery, clean probe, check methane filter.	Daily before use and when unstable readings occur.	Visual inspection, test function.	Daily before use and when unstable readings occur.	Proper calibration, stable readings.	Recharge battery, recalibrate. Do not use if unable to calibrate properly.	FTL
YSI 6920 V2 (or similar multi-parameter water monitoring/ logging device)	Calibrate probe using multiple calibration standard solutions; calibrate mechanical and electronic parts, verify system continuity, check battery, and clean probes. Calibration check.	Daily before use and when unstable readings occur.	Visual inspection.	Daily before use and when unstable readings occur.	Stable readings after 3 minutes pH reads 4.0 +/- 3%, 7.0 +/- 3%, and 10.0 +/- 3% Conductivity reads 4.49 +/- 3% DO reads DO% based on 100% saturated air, air temperature, and local barometric pressure +/- 5% Turbidity reads 100.0 +/- 5% ORP reads 240 +/- 5%	Clean probe with deionized water and calibrate again. Do not use this instrument if unable to calibrate properly.	FTL
Groundwater sampling pumps and tubing	No calibration required.	N/A	Inspect pumps, tubing and air/ sample line quick-connects.	Once before use and when unstable readings occur.	Maintained in good working order per manufacturer's recommendations.	Replace items.	FTL
Water level meter	Calibration will be performed by the equipment supplier. Supplier to provide calibration sheet to document the equipment performs within manufacturer's specifications.	N/A	Test function in accordance with owners' manual.	Once before use and when unstable readings occur.	Maintained in good working order per manufacturer's recommendations.	Follow troubleshooting guidelines in owners' manual if functionality cannot be restored in the field replace meter.	FTL

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SECTION 9

Data Reduction, Verification, and Reporting

Data reduction is the process of converting raw data to a useable format. Data verification is the process of evaluating procedures, which assess the usability of data at an intended data quality level or DQO.

9.1 Field Data

The field data that will be collected during the Site 4 LTM can generally be characterized as either objective or subjective data. Objective data include all direct measurements, such as field screening/analytical parameters and water level measurements. Subjective data include activity descriptions and observations.

9.1.1 Field Data Reduction

All field data will be recorded by field personnel in bound field notebooks and on standard forms. After checking the validity of data in the field notes and on standard forms, the APM will be responsible for entering pertinent data into data files. Where appropriate, the data files will be set up for direct input of objective data into the project database. Subjective data will be filed as hardcopies for later review by the APM and for incorporation into technical reports, as appropriate.

9.1.2 Field Data Substantiation

Substantiation of field activities is primarily verification that proper procedures were followed while taking measurements related to samples, locations, and survey information. Typical measurements include:

- Water level measurements
- pH, temperature, DO, ORP, turbidity, and specific conductance

Field measurements are considered valid if the following are maintained:

- Calibration records for field measurement equipment are properly maintained
- Training records exist that document that field personnel are familiar with standard procedures for calibration and collecting measurements
- Verification that calculations and observations are accurately recorded and transcribed

Verification of objective field and technical data will be performed at two levels. On the first level, data will be substantiated at the time of collection by following standard procedures and QC checks. At the second level, data will be substantiated by the FTL, who will review the data so that the correct codes and units have been included. After data reduction into tables or the project database, the PM will review data sets for anomalous values. Any inconsistencies or anomalies discovered will be resolved immediately, if possible, by seeking clarification from field personnel responsible for collecting the data. Subjective field and technical data will be substantiated by the FTL, who will review field reports for reasonableness and completeness. In addition, random checks of sampling and field conditions will be made by the PM and QA manager, who will check recorded data at that time to confirm the recorded observations. Whenever possible, peer review also will be incorporated into the data substantiation process, particularly for subjective data, to maximize the consistency among field personnel.

9.2 Laboratory Analysis

The project chemist will conduct data quality evaluations. As stated above, the data quality evaluation process is used to assess the effect of the overall analytical process on the usability of the data. The two major categories of data evaluation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance with the method requirements and is a straightforward examination—either the laboratory did, or did not, analyze the samples within the limits of the analytical method. Evaluation of the matrix interferences is more subtle and involves the analysis of several results, including surrogate spike recoveries, MS recoveries, and duplicate sample results.

Before the analytical results are released by the laboratory, both the sample and QC data will be reviewed carefully to verify sample identity, instrument calibration, detection limits, dilution factors, numerical computations, accuracy of transcriptions, and chemical interpretations. Additionally, the QC data will be reduced and spike recoveries will be included in control charts, and the resulting data will be reviewed to ascertain whether they are within the laboratory-defined limits for accuracy and precision. Any non-conforming data will be discussed in the data package cover letter and case narrative. The laboratory will retain all analytical and QC documentation associated with each data package. Samples that do not meet the acceptance limit criteria will be indicated with a qualifying flag, which is a one- or two-letter abbreviation that indicates a problem with the data. Flags used in the text may include:

- U (Undetected): Analyte was analyzed for but was not detected above the method detection limit.
- J (Estimated): The analyte was present, but the reported value may not be accurate or precise.
- UJ (Detection limit estimated): The analyte was not detected above the detection limit, but the actual detection limit may be estimated.
- R (Rejected): The data were rejected because the corresponding QC data were not within the method-specified limits.

It is important to note that laboratory qualifying flags are included on the data summary forms (Form I) that are submitted to the PM by the laboratory. However, during the data review and validation process, the laboratory qualifying flags are evaluated and replaced with the project-specific validation flags.

Once each of the data packages has been reviewed and the data review worksheets completed, the entire data set will be evaluated for overall trends in data quality and usability. Information summarized as part of the data quality evaluation may include chemical compound frequencies of detection, dilution factors that might affect data usability, and patterns of target compound distribution. The data set also will be evaluated to identify potential data limitations or uncertainties in the laboratory. Additional areas of review are described below.

9.2.1 Field and Laboratory Blank Contamination

The appearance and concentration of target compounds in field and laboratory blanks, as well as environmental samples, will be reviewed. Common field sampling and laboratory contaminants detected in blanks include acetone, methylene chloride, and phthalates. Acetone and methylene chloride are used to extract samples in the laboratory and are common laboratory contaminants. Phthalates are used as plasticizers, the most common of which is bis(2-ethylhexyl)phthalate, and are often introduced during sample handling.

If these compounds are encountered in a method blank at a concentration greater than the practical quantitation limit, corrective actions will be taken to eliminate these compounds. Analytical data above the practical quantitation limit associated with these compounds will be flagged to indicate possible cross-contamination.

9.2.2 Surrogate Spike Recoveries

Surrogate spike compounds are added to each sample for the organic analytical methods. Surrogate spike compounds are structurally similar (but not identical) to target compounds and should behave in a similar manner during analysis. Surrogate spike recoveries are used to monitor both laboratory performance and matrix interferences. Surrogate spike recoveries from field and laboratory blanks are used to evaluate laboratory performance because these blanks represent an ideal sample matrix. Surrogate spike recoveries for field samples are used to evaluate the potential for matrix interferences. When surrogate spike recoveries for field samples fall outside the method target acceptance windows, the samples are re-extracted, if appropriate, and re-analyzed. If the surrogate spike recovery is still outside the acceptance window for the re-analyzed sample, the sample results are qualified as affected by matrix interferences.

9.2.3 Matrix Spike Recoveries

For this QC measure, three aliquots of a single sample are analyzed—one native and two spiked with the same concentration of MS compounds. Unlike the surrogate spike compounds, MS compounds are found on the method target compound list. Spike recovery is used to evaluate potential matrix interferences, as well as accuracy. The duplicate spike results are compared to evaluate precision.

9.2.4 Laboratory Control Samples

An aliquot of ASTM International Type II water is spiked with target analytes or compounds at concentrations in the middle of the linear calibration range and then prepared and analyzed with a batch of samples. The LCS is used to QC a preparation batch.

9.2.5 Duplicate Sample Results

One field duplicate sample will be collected and analyzed as part of the field sampling. Both the native and duplicate samples will be analyzed for the same parameters. Target compounds that are detected in both the native and duplicate samples will be compared, and the precision estimated for the sample results will be calculated.

9.3 Laboratory Data Verification

The project chemic will internally verify definitive data for administrative validity. This will be accomplished by reviewing the data packages for completeness and consistency with electronic data deliverables.

9.4 Data Quality Evaluation

The data quality evaluation process will be used to assess the effect of the overall analytical process on the usability of the data. Before the analytical results are released by the laboratory, both the sample and QC data will be reviewed to verify sample identity, instrument calibration, detection limits, dilution factors, numerical computations, accuracy of transcriptions, and chemical interpretations. Additionally, the QC data will be reduced and spike recoveries will be included in control charts, and the resulting data will be reviewed to ascertain whether they are within the laboratory-defined limits for accuracy and precision. Any nonconforming data will be discussed in the data package cover letter and case narrative associated with each data package.

The data package will be validated by the Project Chemist using a process analogous to that outlined in the guidance documents *Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (EPA, 2016a), *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, 2016b), and respective EPA region guidelines. The data review and validation process will be independent of the laboratory's checks and focused on the usability of the data to support the project data interpretation and decision-making process.

9.5 Data Management and ERPIMS Data Uploads

Microsoft Access database management software will be used to manage the project database.

The analytical laboratory will provide the data in electronic format to the database supervisor. The electronic deliverable from the laboratory will be a comma-delimited American Standard Code for Information Interchange (ASCII) file that contains the information required to complete the Environmental Resources Program Information Management System (ERPIMS) BCHTEST and BCHRES files when combined with the information in the Sample Tracking Program. The database supervisor will execute a program that loads the data from the laboratory into CH2M's Validation Data Management System. The latest Web-based ERPTOOL will be used to submit ERPIMS data to the Air Force Civil Engineer Center.

The ERPIMS data file names and descriptions are as follows:

- LDI: Location Definition Information
- SLX: Site and Location Cross-Reference
- SAMPLE: Environmental Sampling Information
- TEST: Environmental Sample Preparation Information
- RESULT: Analytical Chemistry Results Information
- FREQUENCY: Ratio of Sampling
- PERFORMANCE: QC Criteria for Analytical Data

Submittal of ERPIMS data to Air Force Civil Engineer Center will be performed within 70 days of sample collection.

SECTION 10

Analytical Data Reporting and Validation

10.1 Fixed-Base Laboratory Data Reporting

Complete sample data packages from the fixed-base laboratory are required to be submitted to the Project Chemist within 21 days of sample receipt. Hard copy deliverables will include data packages consistent with requirements listed in the QSM (DoD, 2013), Appendix A, including item 7, except for raw data. Electronic data deliverables will include information identified by, and a format consistent with, that required by the most recent version of ERPIMS.

10.2 Fixed-Base Laboratory Validation

Validation will follow the general logic of EPA's *Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (EPA, 2016a), *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, 2016b), and respective EPA region guidelines. Because raw data will not be submitted by the laboratory, any reference to raw data review in the Functional Guidelines will not be required.

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SECTION 11

Performance and System Audits

Audits may consist of two types: system and performance. The purpose of a system audit is to determine whether appropriate project systems are in place. Performance audits are used to indicate whether those systems are functioning properly. Audits will be conducted by the project QA manager, as tasked by the PM, to verify the existence of an effective QC system. Additionally, the audit will evaluate the level of compliance of that system in terms of adherence to QC measures, standards, records, project documentation, and control.

11.1 Project System Audits

The QA manager may periodically call for a system audit on an unannounced basis. The PM will respond by submitting the QAPP. When audits are conducted, they will determine whether the QAPP is in place and whether the operations called for by the QAPP have been performed. Results of project audits will be reported to the PM. External audits may be conducted in conjunction with, or at the direction of, ANG or the regulatory authority.

11.2 Technical Performance Audits

Technical performance audits will be conducted by the project QA manager on an ongoing basis during the project. All numerical analyses, including manual calculations, mapping, and computer support activities, will be documented and will be subject to performance audits in the form of QC procedural reviews, mathematical re-analysis, and peer review. Technical peer review is the responsibility of the PM. Records of numerical analyses will be legible, with high reproduction quality, and complete enough to permit logical reconstruction by a qualified objective reviewer.

11.3 Field Audits

A field performance audit may be conducted by the QA manager or designee at the beginning of the field effort. The purpose of the field audit is to verify that proper methods and protocols detailed in this QAPP are consistently practiced in the field. Audits will be performed using checklists prepared by the QA manager. The requirements and audit questions to be developed will be as specific as possible and will focus on significant investigation techniques. Checklists are encouraged to be completed to the maximum extent possible to give a complete picture of field techniques using a structured approach.

Field operation records will be reviewed to verify field-related activities were performed in accordance with appropriate project procedures. Items reviewed will include field equipment calibration records, daily field logs, and chain-of-custody documentation. Upon audit completion, an audit report containing observations and findings and recommended corrective actions will be submitted to the PM.

11.4 Laboratory Audits

The laboratory QA manager has the responsibility of monitoring the internal QA program. The auditor will verify that standardized QA programs are in effect to provide objective oversight of laboratory procedures. Additionally, copies of internal QA reports may be requested so that standards of quality performance are in effect.

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SECTION 12

Preventive Maintenance

Preventive maintenance is an organized program of actions taken to maintain proper instrument and equipment performance and to prevent instruments and equipment from failing during use. An adequate preventive maintenance program increases reliability of a measurement system and minimizes downtime of field and laboratory instruments.

12.1 Preventive Maintenance for Field Equipment

Field equipment will be properly calibrated, charged, and in good working condition before the beginning of each working day. Manufacturers' specifications define the required equipment checks for each type of field equipment used. Non-operational field equipment will be removed from service and a replacement will be immediately obtained within 24 hours. Significant repairs to field equipment will not be performed in the field.

Field instruments will be properly protected against inclement weather during the field investigation. Each instrument is specially designed to maintain its operating integrity during variable temperature ranges that are representative of ranges that will be encountered during working conditions. At the end of each working day, field equipment will be taken out of the field and placed in a climate-controlled, dry room for overnight storage.

12.2 Laboratory Equipment

Designated laboratory personnel will be trained in routine maintenance procedures for all major instrumentation. When repairs become necessary, they will be made either by trained personnel or trained service engineers/technicians employed by the instrument manufacturer. The laboratory will have multiple instruments that will serve as backup to minimize the potential for downtime.

Preventive maintenance is performed according to the procedures delineated in the manufacturer's instrument manuals, including lubrication, source cleaning, detector cleaning, and the frequency of such maintenance, and should be listed in greater detail in the laboratory's QA plan.

Chromatographic carrier gas purification traps, injector liners, and injector septa are cleaned or replaced on a regular basis. Precision and accuracy data are examined for trends and excursions to identify evidence of instrument malfunction. Maintenance will be performed when an instrument begins to degrade, as evidenced by the degradation of peak resolution, shift in calibration curves, decrease in sensitivity, or failure to meet one or more of the QC criteria.

Instrument downtime is minimized by keeping adequate supplies of expendable items (that is, an expected lifetime of less than 1 year). Selected items include gas tanks, gasoline filters, syringes, septa, gas chromatograph columns, adsorbent traps, ferrules, printer paper and ribbons, pump oil, jet separators, open-split interfaces, and MS filaments.

12.3 Instrument Maintenance Logbooks

Maintenance will be documented in permanent logs that will be available for review by auditing personnel. Both scheduled and unscheduled maintenance required by operational failures will be recorded. The designated laboratory operations coordinator will review maintenance records regularly to ensure the required maintenance is occurring.

Instrument maintenance logbooks are maintained in laboratories at all times. The logbooks, in general, contain a schedule of maintenance, as well as a complete history of past maintenance, both routine and non-routine.

Corrective Action Protocols

The QA manager will prepare a formal report of all initial non-conformance issues. The programmatic impact of a nonconformance (for example, lack of or a failure to use an appropriate procedure) will be determined by the QA manager and reported to the PM. A corrective action plan and implementation schedule will be required, and the PM will be responsible for verifying that immediate action to correct the nonconformance is initiated. The PM will be responsible for confirming the successful implementation of the corrective action plan and that no additional work that is dependent on the nonconforming action is performed until the nonconformance is corrected. Corrective action may include re-analyzing samples if holding times permit, re-sampling, and evaluating and amending sampling and analytical processes.

The PM will be responsible for ensuring the corrective action adequately addresses the nonconformance. The QA manager will ensure corrective actions for non-conformance are implemented by performing the following:

- Evaluating all reported nonconformances
- Controlling additional work on nonconforming items
- Maintaining a log of nonconformances
- Confirming nonconformance and corrective action reports are included in the site documentation files

Following implementation of satisfactory corrective action, the QA manager will conduct follow-up activities sufficient to ensure implementation of the corrective action. Such confirmation will be documented, along with any other recommendations, in a formal closeout of the non-conformance in a Closeout Report. The Closeout Report will be distributed to appropriate project management personnel.

13.1 Field Corrective Action

The initial responsibility for monitoring the quality of field measurements and observations lies with field personnel. The FTL and the APM are responsible for ensuring QC procedures are being followed. This requires that the FTL assess the correctness of field methods and the ability to meet QA objectives. If a problem occurs that might jeopardize the integrity of the project or cause some specific QA objective not to be met, it is the responsibility of all field project staff to report all suspected nonconformances by initiating a Nonconformance Report and submitting it to the APM.

The APM will submit a copy of the Nonconformance Report to the QA manager for formal investigation and copy the PM. An appropriate corrective action will then be decided upon and implemented. The APM will document the problem, the corrective action, and the results using a typical nonconformance form (Figure 13-1). Copies of the documentation form will be provided to the PM and the QA manager.

ch2m:

Nonconformance Report

Project name:		NCR no.:	
Project no.:		Date:	
Location:		PO no.:	
Subcontractor:			
Item:			
Drawing or specification reference:			
Requirement:			
Nonconformance:			
Issued by (CQM):		Date:	ASME: Y ☐ N ☐
Engineering approval required: Y ☐ N ☐		Date required:	
Disposition: ☐ Accept-As-is	☐ Repair	☐ Rework	☐ Replace
Details:			
Disposition Approvals (as required)	Authorized Inspector: Y ☐ N ☐	Date:	
DM:		Date:	
CQM:		Date:	
Client		Date:	
Disposition action assigned to:		Date:	
Disposition complete: Y ☐ N ☐		Date:	
Disposition Acceptance			
CQM:		Date:	
AI:		Date:	
Remarks:			

Figure 13-1. Nonconformance Report

13.2 Laboratory Corrective Action

The laboratory department supervisors will review the data generated to ensure all QC samples have been run as specified in the protocol. Laboratory personnel are alerted that corrective actions may be necessary if the following should occur:

- QC data are outside the warning or acceptable windows for precision and accuracy established for laboratory samples.
- Blanks contain contaminants at concentrations above the levels specified in the laboratory QAPP for any target compound.

- Undesirable trends are detected in MS recoveries or RPD between MSDs.
- There are unusual changes in detection limits exceeding applicable maximum contaminant levels.
- Deficiencies are detected by the laboratory QA director during internal or external audits or from the results of performance evaluation samples.

If nonconformance in analytical methodologies, QC sample results, or similar is identified by the bench analyst, corrective actions are implemented immediately. Corrective action procedures are handled initially by the laboratory analyst, who reviews the preparation or extraction procedure for possible errors and checks the instrument calibration, spike and calibration mixes, instrument sensitivity, and other possible error sources. The analyst immediately notifies his/her supervisor of the problem that is identified and the investigation being made. If the problem persists or cannot be identified, the matter must be referred to the laboratory supervisor and QA/QC officer for further investigation. Once resolved, full documentation of the corrective action procedure must be filed with the laboratory supervisor, and the QA/QC officer must be provided with a corrective action memorandum for inclusion into the project file if data are affected. In some cases, it may be necessary to contact the Project Chemist or PM to fully define the corrective actions to be taken. Corrective actions may include the following:

- Re-analyzing suspect samples
- Re-sampling and analyzing new samples
- Evaluating and amending sampling and/or analytical procedures
- Accepting data with an acknowledged level of uncertainty
- Recalibrating analytical instruments
- Qualifying or rejecting the data

Following the implementation of the required corrective action measures, data that are deemed unacceptable may not be accepted by the PM, and follow-up corrective actions may be explored.

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SECTION 14

Quality Assurance Reports to Management

The purpose of QA reports is to document implementation of the QAPP. These reports include periodic assessments of measurement data for accuracy, precision, and completeness, results of performance audits, results of system audits, identification of significant QA problems, and recommended solutions.

If necessary, the analytical laboratory will be responsible for submitting monthly progress reports to the PM. The PM is responsible for submitting these reports to the NGB, as required.

The final QA report will be attached as an appendix to the project report and may include the following:

- Data quality assessment in terms of PARCC and the method detection limits
- Degree to which DQOs were met
- Limitations of the measurement data and usability of the data
- Applicability of the data to site conditions
- Laboratory QC activities, including a summary of planned versus actual laboratory QC activities, explanations for deviations, and an evaluation of data quality for each analysis for each medium
- Field QC activities, including a summary of planned versus actual field QC activities, explanations for deviations, and evaluations of the data quality of field QC samples/activities and estimated effect on sample data
- Data presentation and evaluation, including an assessment of sampling and analysis techniques, data quality for each analysis and each medium, and data usability

A final report will be submitted to the NGB after comments from the NGB and regulatory agencies have been incorporated.

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Attachment 1
Contract Laboratory
DoD ELAP Accreditation

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Accredited Laboratory

A2LA has accredited

EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC

Lancaster, PA

for technical competence in the field of

Environmental Testing

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2005, the 2009 TNI Environmental Testing Laboratory Standard, and the requirements of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in version 5.0 of the DoD Quality System Manual for Environmental Laboratories (QSM), accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

Presented this 13th day of November 2014.

Senior Director of Quality and Communications
For the Accreditation Council
Certificate Number 0001.01
Valid to January 31, 2017
Revised 11/16/2016

For the tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.

EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL LLC
2425 New Holland Pike
Lancaster, PA 17601
Dorothy M. Love Phone: 717-556-7327

ENVIRONMENTAL

Valid To: January 31, 2017 Certificate Number: 0001.01

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the laboratory's compliance with ISO IEC 17025:2005, the 2009 NELAC Standard, and the requirements of the DoD Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in version 5.0 of the DoD Quality Systems Manual for Environmental Laboratories, accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and in the analyte categories identified below:

Testing Technologies

Atomic Absorption/ICP-AES Spectrometry, ICP-MS Spectrometry, Gas Chromatography, Gas Chromatography/Mass Spectrometry, Gravimetry, High Performance Liquid Chromatography, Ion Chromatography, Misc.-Electronic Probes (pH, F^-, O_2), Oxygen Demand, Spectrophotometry (Visible), Spectrophotometry (Automated), Titrimetry, TCLP, Total Organic Carbon, Turbidity, Liquid Chromatography/Mass Spectrometry/Mass Spectrometry, High Resolution Gas Chromatography/Mass Spectrometry

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Demands					
BOD	---------------	----------	SM 5210B-2001	---------------	----------
CBOD	---------------	----------	SM 5210B-2001	---------------	----------
COD	---------------	----------	EPA 410.4	---------------	----------
Total Carbon	---------------	----------	---------------	SM 5310C-2000	SM 5310B-2000 MOD
Total Inorganic Carbon	---------------	----------	---------------	SM 5310C-2000	SM 5310B-2000 MOD

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Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Total Organic Carbon	---------------	----------	EPA 415.1 EPA 9060 EPA 9060A SM 5310C-2000	EPA 9060 EPA 9060A SM 5310C-2000	EPA 9060 EPA 9060A SM 5310B MOD
Nutrients					
Ammonia	---------------	-----------	EPA 350.1 SM 4500 NH3 B & D-1997	---------------	EPA 350.1
Fluoride	---------------	-----------	SM 4500 FC-1997 EPA 300.0 EPA 340.2 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	EPA 300.0
Nitrate (as N)	---------------	----------	EPA 300.0 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	EPA 300.0
Nitrite (as N)	---------------	-----------	EPA 300.0 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	EPA 300.0
Nitrate/Nitrite	-------------	-----------	EPA 353.2	-------------	----------------
Orthophosphate (as P)	---------------	-----------	EPA 365.3	---------------	-----------
Total Kjeldahl Nitrogen	---------------	-----------	EPA 351.2	---------------	EPA 351.2
Total Phosphorus	---------------	-----------	EPA 365.1	---------------	EPA 365.1
Wet Chemistry					
Acid Volatile Sulfide	---------------	-----------	---------------	---------------	EPA-821-R-91-100
Acidity	---------------	-----------	SM 2310B-1997	---------------	-----------
Alkalinity	---------------	-----------	SM 2320B-1997	---------------	-----------
Bromide	---------------	-----------	EPA 300.0 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	-----------
Bulk Density	---------------	-----------	---------------	ASTM E868-82	ASTM E868-82
Chloride	---------------	-----------	EPA 300.0 EPA 325.3 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	EPA 300.0
Color	---------------	-----------	SM 2120B-2001	---------------	----------
Corrosivity	---------------	-----------	---------------	SW-846 Chapter 7	SW-846 Chapter 7
Cyanide	EPA 9012A EPA 9012B	-----------	EPA 335.2 EPA 335.4 MOD EPA 9012A EPA 9012B ASTM D7511 OIA-1677-09	EPA 9012A EPA 9012B ASTM D7511 OIA-1677-09	EPA 9012A EPA 9012B

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Dissolved Oxygen	---------------	-----------	SM 4500 OG-2001	---------------	-----------
Dissolved Silica	---------------	-----------	EPA 370.1 SM 4500 SiC-1997	---------------	-----------
Ferrous Iron	---------------	----------	SM 3500Fe B-MOD 1997	---------------	-----------
Filterable Residue	---------------	----------	SM 2540C-1997	---------------	-----------
Flashpoint	---------------	----------	---------------	EPA1010A	EPA 1010A
Grain Size	---------------	----------	---------------	---------------	ASTM D422
Hardness	---------------	----------	SM 2340C-1997	---------------	-----------
HEM-SGT	---------------	----------	EPA 1664A EPA 1664B	---------------	EPA 9071B
Hexavalent Chromium Digestion	EPA 3060A	----------	---------------	---------------	EPA 3060A
Hexavalent Chromium	EPA 7196A	----------	SM 3500 CrB-2009 EPA 218.6 EPA 7196A EPA 7199	EPA 218.6 EPA 7196A EPA 7199	EPA 7196A EPA 7199
Ignitability	---------------	----------	---------------	40 CFR 261.21	40 CFR 261.21
Non-filterable Residue	---------------	----------	EPA 160.2 SM 2540D-1997	---------------	-----------
Oxidation Reduction Potential	---------------	----------	ASTM D1498	ASTM D1498	ASTM D1498
Paint Filter Test	---------------	----------	EPA 9095A	EPA 9095A	EPA 9095A
pH	---------------	----------	SM 4500 H+B-2000 EPA 150.1 EPA 9040B EPA 9040C	EPA 9040B EPA 9040C EPA 9045C EPA 9045D	EPA 9040B EPA 9040C EPA 9045C EPA 9045D
Phenol	---------------	----------	EPA 420.4 EPA 9066	EPA 9066	-----------
Reactivity	---------------	----------	---------------	SW-846 Chapter 7.3	SW-846 Chapter 7.3
Settleable Residue	---------------	----------	SM 2540F-1997	---------------	-----------
Specific Conductance	---------------	----------	EPA 120.1 SM 2510B-1997 EPA 9050A	EPA 9050A	
Sulfate	---------------	----------	EPA 300.0 EPA 375.4 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	EPA 300.0

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Sulfide	---------------	----------	EPA 376.1 EPA 376.2 SM 4500 S2D-2000 SM 4500 S2F-2000	---------------	-----------
Surfactants	---------------	----------	SM 5540C-2000	---------------	-----------
Total Filterable Residue	---------------	----------	SM 2540C-1997	---------------	-----------
Total Residue	---------------	----------	EPA 160.3 SM 2540B-1997	---------------	-----------
Total Fixed and Total Volatile Solids, Dissolved Fixed and Dissolved Volatile Solids, Suspended Fixed and Suspended Volatile Solids			SM 2540 E-1997		
Turbidity	---------------	----------	EPA 180.1 SM 2130 B-2001	-----------	-----------
Volatile Residue	---------------	----------	EPA 160.4	-----------	-----------
Metals					
Metals Digestion	EPA 3050B	EPA 3050B	EPA 200.2 EPA 3050B EPA 3005A EPA 3010A EPA 3010A MOD	EPA 3050B EPA 3010A EPA 3010A MOD	EPA 3050B
Aluminum	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Antimony	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 200.8 MOD EPA 6020 EPA 6020A	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Arsenic	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 200.8 MOD EPA 6020 EPA 6020A	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Barium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Beryllium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 200.8 MOD EPA 6020 EPA 6020A	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Boron	EPA 6010B EPA 6010C	----------	EPA 200.7 EPA 6010B EPA 6010C	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C
Cadmium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 200.8 MOD EPA 6020 EPA 6020A	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Calcium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Chromium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 200.8 MOD EPA 6020 EPA 6020A	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Cobalt	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Copper	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Iron	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Lead	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 200.8 MOD EPA 6020 EPA 6020A	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Molybdenum	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Magnesium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Manganese	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 200.8 MOD EPA 6020 EPA 6020A	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Mercury	EPA 7471A EPA 7471B	----------	EPA 245.1 EPA 7470A	EPA 7470A	EPA 7471A EPA 7471B
Nickel	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 200.8 MOD EPA 6020 EPA 6020A	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Potassium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Selenium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Silicon	----------	----------	EPA 6010C	EPA 6010C	EPA 6010C
Silver	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Sodium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Strontium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Thallium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	----------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Tin	EPA 6010B EPA 6010C	----------	EPA 200.7 EPA 6010B EPA 6010C	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C
Titanium	---------------	-----------	EPA 200.7 EPA 6010B EPA 6010C	EPA 200.7 EPA 6010B EPA 6010C	EPA 200.7 EPA 6010B EPA 6010C
Vanadium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 200.8 MOD EPA 6020 EPA 6020A	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Zinc	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 200.8 MOD EPA 6020 EPA 6020A	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Zirconium	---------------	-----------	EPA 200.7 EPA 6010B EPA 6010C	EPA 200.7 EPA 6010B EPA 6010C	EPA 200.7 EPA 6010B EPA 6010C
Purgeable Organics (Volatiles)					
Volatile Preparation	---------------	----------	EPA 5030A EPA 5030B	EPA 5030A EPA 5030B	EPA 5035 EPA 5035A
Acetone	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Acetonitrile	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Acrolein	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Acrylonitrile	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Alpha Methyl Styrene	---------------	EPA TO-15	---------------	---------------	---------------
Allyl Chloride	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
tert-Amyl Alcohol	-----------	---------	------------------	---------------	EPA 8260B EPA 8260C
tert-Amyl Methyl Ether	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
tert-Butyl Alcohol	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
tert-Butyl formate	--------------	---------	-----------------	----------------	EPA 8260B EPA 8260C
Benzene	---------------	EPA TO-15 EPA TO-15 SIM EPA 18 mod EPA 25 mod	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
Benzyl Chloride	---------------	EPA TO-15	---------------	---------------	---------------
Bromobenzene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Bromochloromethane	---------------	-----------	EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Bromodichloromethane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Bromoethene	---------------	EPA TO-15	---------------	---------------	---------------
Bromoform	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Bromomethane	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Butane	--------------	EPA 18 mod EPA 25 mod	------------------	------------------	---------------

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
1,3-Butadiene	---------------	EPA TO-15 EPA TO-15 SIM	-----------	-----------	-----------
2-Butanone	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
n-Butylbenzene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
sec-Butylbenzene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
tert-Butylbenzene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Carbon Disulfide	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Carbon Tetrachloride	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
2-Chloro-1,3-Butadiene	---------------	-----------	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Chloroacetonitrile	---------------	-----------	EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Chlorobenzene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1-Chlorobutane	---------------	-----------	EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Chlorodifluoromethane	---------------	EPA TO-15	-----------	-----------	-----------
Chloroethane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
2-Chloroethyl Vinyl Ether	---------------	-----------	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Carbon Range Organics C1-C10 (including subsets of this range i.e. hydrocarbons as propane, hydrocarbons as methane, hydrocarbons as hexane)	---------------	EPA 18 mod EPA 25 mod	------------------	----------------	--------------
Chloroform	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Chloromethane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
3-Chloroprene	---------------	EPA TO-15	-----------	-----------	-----------
2-Chlorotoluene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
4-Chlorotoluene	---------------	-----------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Cyclohexane	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Di-Isopropyl Ether	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Dibromochloromethane	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2-Dibromo-3-chloropropane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8011 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8011 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Dibromomethane	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2-Dibromoethane (EDB)	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8011 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8011 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2-Dichlorobenzene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,3-Dichlorobenzene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,4-Dichlorobenzene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
trans-1,4-Dichloro-2-Butene	---------------	---------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Dichlorodi-fluoromethane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
1,1-Dichloroethane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2-Dichloroethane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1-Dichloroethene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
cis-1,2-Dichloroethene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
trans-1,2-Dichloroethene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Dichlorofluoromethane	---------------	EPA TO-15	EPA 524.2 (DW)	-----------	-----------
1,2-Dichloropropane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,3-Dichloropropane	---------------	-----------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
2,2-Dichloropropane	---------------	-----------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1-Dichloropropanone	---------------	-----------	EPA 524.2 (DW)	-----------	-----------
1,1-Dichloropropene	---------------	-----------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
cis-1,3-Dichloropropene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
trans-1,3-Dichloropropene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,4-Dioxane	---------------	EPA TO-15	EPA 8260B EPA 8260C EPA 8260 SIM	EPA 8260B EPA 8260C EPA 8260 SIM	EPA 8260B EPA 8260C EPA 8260 SIM
Ethanol	---------------	EPA TO-15	EPA 8260B EPA 8260C EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Ethane	---------------	EPA 18 mod EPA 25 mod	-----------	-----------	-----------
Ethyl Acetate	---------------	EPA TO-15	-----------	-----------	-----------
Ethyl Acrylate	---------------	EPA TO-15	-----------	-----------	-----------
Ethylbenzene	---------------	EPA TO-15 EPA TO-15 SIM EPA 18 mod EPA 25 mod	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
Ethyl Ether	---------------	----------	EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Ethyl Methacrylate	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
4-Ethyltoluene	---------------	EPA TO-15	-----------	-----------	-----------
Ethyl tert-Butyl Ether	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Freon-113	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Freon-114	---------------	EPA TO-15	-----------	-----------	-----------
Gasoline Range Organics (GRO) [Volatile Petroleum Hydrocarbons (VPH)]	---------------	-----------	EPA 8015B EPA 8015C EPA 8015D EPA 8260B EPA 8260C NW TPH-Gx MA VPH WA DOE VPH OA-1	EPA 8015B EPA 8015C EPA 8015D EPA 8260B EPA 8260C NW TPH-Gx MA VPH WA DOE VPH OA-1	EPA 8015B EPA 8015C EPA 8015D EPA 8260B EPA 8260C NW TPH-Gx MA VPH WA DOE VPH OA-1
Heptane	---------------	EPA TO-15	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Hexane	---------------	EPA TO-15 EPA 18 mod EPA 25 mod	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
2-Hexanone	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Hexachlorobutadiene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Hexachloroethane	---------------	EPA TO-15	EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Isooctane	---------------	EPA TO-15	-----------	-----------	-----------
Isopropyl Alcohol	---------------	EPA TO-15	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Isopropylbenzene	---------------	EPA TO-15	EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260COA-1

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
1,4-Isopropyltoluene	---------------	-----------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methane	---------------	EPA 18 mod EPA 25 mod	-------------------	------------------	---------------
Methylacrylonitrile	---------------	-----------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Acetate	---------------	-----------	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Acrylate	---------------	EPA TO-15	EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Iodide	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Ethyl Ketone	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methylene Chloride	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Isobutyl Ketone	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Methacrylate	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl tert-Butyl Ether	---------------	EPA TO-15 EPA TO-15 SIM EPA 18 mod EPA 25 mod	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
4-Methyl-2-pentanone	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methylcyclohexane	---------------	-----------	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
2-Nitropropane	---------------	-----------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Naphthalene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
Nitrobenzene	---------------	-----------	EPA 524.2 (DW)	-----------	-----------
Octane	---------------	EPA TO-15	-----------	-----------	-----------
Pentachloroethane	---------------	-----------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Pentane	---------------	EPA TO-15 EPA 18 mod EPA 25 mod	-----------	-----------	-----------
Propionitrile	---------------	-----------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Propane	---------------	EPA 18 mod EPA 25 mod	-------------------	----------------	---------------
Propene	---------------	EPA TO-15	-----------	-----------	-----------
n-Propylbenzene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Styrene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 602 EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
tert-Amyl Ethyl Ether	---------------	-----------	EPA 8260B EPA 8260C EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1,1,2-Tetrachloroethane	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1,2,2-Tetrachloroethane	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Tetrachloroethene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Tetrahydrofuran	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Toluene	---------------	EPA TO-15 EPA TO-15 SIM EPA 18 mod EPA 25 mod	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
1,2,3-Trichlorobenzene	---------------	---------	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2,4-Trichlorobenzene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
1,1,1-Trichloroethane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1,2-Trichloroethane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Trichloroethene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Trichlorofluoromethane	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2,3-Trichloropropane	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2,4-Trimethylbenzene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,3,5-Trimethylbenzene	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Vinyl Acetate	---------------	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Vinyl Chloride	---------------	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Xylenes, total	---------------	EPA TO-15 EPA TO-15 SIM EPA 18 mod EPA 25 mod	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
1,2-Xylene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
1,3-Xylene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
1,4-Xylene	---------------	EPA TO-15 EPA TO-15 SIM	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
Extractable Organics (Semivolatiles)					
Organic Extraction	EPA 3540C EPA 3546 EPA 3550B EPA 3550C	---------	EPA 3510C EPA 3511	EPA 3510C EPA 3511	EPA 3540C EPA 3546 EPA 3550B EPA 3550C
Acenaphthene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Acenaphthylene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Acetic Acid	---------------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	---------
Acetophenone	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Acetylaminofluorene	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Alkylated PAHs	EPA 8270C SIM EPA 8270D SIM	---------	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM
4-Aminobiphenyl	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Amino-4,6-dinitrotoluene	---------------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
4-Amino-2,6-dinitrotoluene	---------------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Aniline	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Anthracene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Atrazine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Benzaldehyde	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Benzidine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Benzoic Acid	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Benzo (a) Anthracene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Benzo (b) Fluoranthene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Benzo (k) Fluoranthene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Benzo (ghi) Perylene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Benzo (a) Pyrene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Benzo (e) Pyrene	EPA 8270C SIM EPA 8270D SIM	---------	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM
Benzyl Alcohol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Biphenyl	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Bis (2-chloroethoxy) Methane	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Bis (2-chloroethoxy) Ether	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Bis (2-chloroethyl) Ether	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Bis (2-chloroisopropyl) Ether	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Bis (2-ethylhexyl) Phthalate	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
4-Bromophenylphenyl Ether	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Butyl benzyl Phthalate	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Butyric Acid	--------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	--------------
Caprolactam	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Carbazole	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Carbon Range Organics C8-C44 (including subsets of this range i.e. HRO, MRO, ORO, RRO)	---------	---------	EPA 8015B EPA 8015C EPA 8015D EPA 8270C TN EPH	EPA 8015B EPA 8015C EPA 8015D EPA 8270C TN EPH	EPA 8015B EPA 8015C EPA 8015D EPA 8270C TN EPH
4-Chloroaniline	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Chloro-3-methylphenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Chlorobenzilate	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1-Chloronaphthalene	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Chloronaphthalene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Chlorophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
4-Chlorophenyl Phenyl Ether	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Chrysene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Citric Acid	--------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	--------------
Cresols (Methyl Phenols)	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
cis-/trans-Diallate	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,4-Diamino-6-nitrotoluene	---------	---------	EPA 8330B	EPA 8330B	EPA 8330B
2,6-Diamino-4-nitrotoluene	---------	---------	EPA 8330B	EPA 8330B	EPA 8330B
Dibenzo (a,h) Acridine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Dibenzo (a,h) Anthracene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Dibenzofuran	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270D SIM
Dibenzothiophene	EPA 8270C SIM EPA 8270D SIM	---------	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM
1,2-Dichlorobenzene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,3-Dichlorobenzene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,4-Dichlorobenzene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
3,3’-Dichlorobenzidine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Diesel Range Organics (DRO) [Extractable Petroleum Hydrocarbons (EPH)]	---------	---------	EPA 8015B EPA 8015C EPA 8015D EPA 8270C CT ETPH MA EPH NWTPH DX NJ EPH TX1005/ TX1006 WADOE EPH OA-2	EPA 8015B EPA 8015C EPA 8015D EPA 8270C CT ETPH MA EPH NWTPH DX NJ EPH TX1005/ TX1006 WADOE EPH OA-2	EPA 8015B EPA 8015C EPA 8015D EPA 8270C CT ETPH MA EPH NWTPH DX NJ EPH TX1005/ TX1006 WADOE EPH OA-2
2,4-Dichlorophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,6-Dichlorophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Diethyl Phthalate	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Dimethoate	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
p- Dimethylaminoazobenze ne	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
7,12-Dimethylbenz (a) Anthracene	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
alpha-,alpha- Dimethyphenethylamine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,4-Dimethylphenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Dimethyl Phthalate	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
3,3’-Dimethylbenzidine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Di-n-butyl Phthalate	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Di-n-octyl Phthalate	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
3,5-Dinitroaniline	---------	---------	EPA 8330B	EPA 8330B	EPA 8330B

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
1,3-Dinitrobenzene	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B
2,4-Dinitrophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,4-Dinitrotoluene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B
2,6-Dinitrotoluene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B
1,4-Dioxane	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Diphenylamine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Diphenyl Ether	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,2-Diphenylhydrazine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Ethyl Methane Sulfonate	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Fluoroanthene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Fluorene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Formic Acid	--------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	--------------
Hexachlorobenzene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Hexachlorobutadiene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Hexachlorocyclo-pentadiene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Hexachloroethane	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Hexachloropropene	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	--------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Indeno (1,2,3-cd) Pyrene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Isodrin	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Isophorone	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Isosafrole	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Isobutyric Acid	--------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	--------------
Lactic Acid	--------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	--------------
Methapyriline	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
3-Methycholanthrene	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
2-Methyl-4,6-Dinitrophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Methyl Methane Sulfonate	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1-Methylnaphthalene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
2-Methylnaphthalene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D SIMEPA 8270D	EPA 8270C EPA 8270C SIM EPA 8270D SIM EPA 8270D
2-Methylphenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Methylphenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Naphthalene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
1,4-Naphthoquinone	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1-Naphthylamine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Naphthylamine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Nitroquinoline-1-oxide	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Nitroaniline	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
3-Nitroaniline	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Nitroaniline	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Nitrobenzene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B
Nitroglycerin	---------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
2-Nitrophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Nitrophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Nitrotoluene	---------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
3-Nitrotoluene	---------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
4-Nitrotoluene	---------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
5-Nitro-o-toluidine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitroso-di-n-butylamine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosodiethylamine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosodimethylamine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosodimethylethylamine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosomorpholine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosodi-n-propylamine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosodiphenylamine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
n-Nitrosopiperidine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosopyrrolidine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	---------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Oxalic Acid	---------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	---------
2,2-Oxybis (1-chloropropane)	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pentachlorobenzene	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pentachloronitrobenzene	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pentachlorophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pentaerythritol Tetranitrate (PETN)	-----------	-----------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Perylene	EPA 8270C SIM EPA 8270D SIM	---------	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM
Petroleum Range Organics	-----------	-----------	FLPRO	FLPRO	FLPRO
Phenacetin	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Phenanthrene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Phenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,4-Phenylenediamine	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Picoline	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pronamide	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Propionic Acid	--------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	---------

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Pyrene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	---------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Pyridine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pyruvic Acid	--------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	--------------
Quinic Acid	--------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	--------------
Succinic Acid	--------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	--------------
Tartaric Acid	--------	---------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	--------------
Safrole	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,2,4,5-Tetrachlorobenzene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,3,4,6-Tetrachlorophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Tetraethyl Dithiopyrophosphate	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Tetryl	--------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Thionazin	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
o-Toluidine	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,3,5-Trinitrobenzene	--------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
2,4,5-Trichlorophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,4,6-Trichlorophenol	EPA 8270C EPA 8270D	---------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
O,O,O-Tri-ethylphosphorothioate	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,3,5-Trinitrobenzene	EPA 8270C EPA 8270D	---------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,4,6-Trinitrotoluene	---------	---------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Pesticides/Herbicides/ PCBs					
Organic Extraction	EPA 3540C EPA 3546 EPA 3550B EPA 3550C	---------	EPA 3510C EPA 3511	EPA 3510C EPA 3511	EPA 3540C EPA 3546 EPA 3550B EPA 3550C
Acifluorfen	---------	---------	EPA 8151A	EPA 8151A	EPA 8151A
Aldrin	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Azinphos Methyl (Guthion)	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
alpha-BHC	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
beta-BHC	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
delta-BHC	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
gamma-BHC (Lindane)	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Bentazon	---------	---------	EPA 8151A	EPA 8151A	EPA 8151A
Bolstar	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
alpha-Chlordane	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Chloramben	---------	---------	EPA 8151A	EPA 8151A	EPA 8151A
Chlordane (technical)	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Chlorobenzilate	---------	---------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Chlorpyrifos	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Coumaphos	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
2,4-D	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
2,4'-DDD	EPA 8081A EPA 8081B	---------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
2,4'-DDE	EPA 8081A EPA 8081B	---------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
2,4'-DDT	EPA 8081A EPA 8081B	---------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Dalapon	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
2,4-DB	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
4,4'-DDD	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
4,4'-DDE	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
4,4'-DDT	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Demeton-O	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Demeton-S	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Diallate	---------	---------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Diazinon	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
1.2-Dibromo-3-chloropropane (DBCP)	---------	---------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Dicamba	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
3,5-Dichlorobenzoic Acid	---------	---------	EPA 8151A	EPA 8151A	EPA 8151A
Dichlorvos	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Dichloroprop	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
Dieldrin	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Dinoseb	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
Disulfoton	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Diuron	---------	---------	EPA 8321A	EPA 8321A	EPA 8321A
Endosulfan I (alpha)	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Endosulfan II (beta)	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Endosulfan Sulfate	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Endrin	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Endrin Aldehyde	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Endrin Ketone	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Ethion	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Ethoprop	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Fensulfothion	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Fenthion	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Fenuron	---------	---------	EPA 8321A	EPA 8321A	EPA 8321A
Gamma-chlordane	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Heptachlor	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Heptachlor Epoxide	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Hexachlorobenzene	EPA 8081A EPA 8081B	---------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Hexachlorocyclopentadiene	---------	---------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Isodrin	---------	---------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Malathion	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
MCPA	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
MCPP	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
Merphos	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Methoxychlor	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Mevinphos	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Mirex	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Parathion Ethyl	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Parathion Methyl	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
PCB-1016 (Arochlor)	EPA 8082 EPA 8082A	---------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1221	EPA 8082 EPA 8082A	---------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1232	EPA 8082 EPA 8082A	---------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1242	EPA 8082 EPA 8082A	---------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1248	EPA 8082 EPA 8082A	---------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1254	EPA 8082 EPA 8082A	---------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1260	EPA 8082 EPA 8082A	---------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1262	EPA 8082 EPA 8082A	---------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1268	EPA 8082 EPA 8082A	---------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
Aroclor 5432	----------	---------	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
Aroclor 5442	----------	---------	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
Aroclor 5460	----------	---------	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB Congeners (209)	EPA 1668	---------	EPA 1668	EPA 1668	EPA 1668
Pentachlorophenol (PCP)	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
Phorate	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Picloram	---------	---------	EPA 8151A	EPA 8151A	EPA 8151A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Simazine	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Stirophos (Tetrachlorvinphos)	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
2,4,5-T	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
Tokuthion (Prothiofos)	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
2,4,5-TP (Silvex)	EPA 8151A	---------	EPA 8151A	EPA 8151A	EPA 8151A
Toxaphene	EPA 8081A EPA 8081B	---------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Trichloronate	---------	---------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
PCB Homologues					
Monochlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Dichlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Trichlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Tetrachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Pentachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Hexachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Heptachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Octachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Nonachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Decachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Dioxins/Furans					
2,3,7,8-TCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
2,3,7,8-TCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,7,8-PeCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
2,3,4,7,8-PeCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,7,8-PeCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,4,7,8-HxCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,6,7,8-HxCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
2,3,4,6,7,8-HxCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,7,8,9-HxCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,4,7,8,-HxCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
1,2,3,6,7,8-HxCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,7,8,9-HxCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,4,6,7,8-HpCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,4,7,8,9-HpCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,4,6,7,8-HpCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
OCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
OCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total HpCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total HpCDF	EPA 1613B EPA 8290A	----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total HxCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total HxCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total PeCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total PeCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total TCDD	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total TCDF	EPA 1613B EPA 8290A	-----------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Misc. Headspace Analysis					
Carbon Dioxide	---------	---------	RSK-175	RSK-175	---------
Ethane	---------	---------	RSK-175	RSK-175	---------
Ethene	---------	---------	RSK-175	RSK-175	---------
Methane	---------	---------	RSK-175	RSK-175	---------
Hazardous Waste Characteristics					
Toxicity Characteristic Leaching Procedure	---------	---------	---------	EPA 1311	EPA 1311
Synthetic Precipitation Leaching Procedure	---------	---------	---------	EPA 1312	EPA 1312
Other					
Perchlorate	---------	---------	EPA 6850	EPA 6850	EPA 6850

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Hydrazine	---------	---------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Formaldehyde	---------	---------	- - - - - - - - -	EPA 8315A	EPA 8315A
Methylhydrazine	---------	---------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
1,1-Dimethylhydrazine	---------	---------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Volatile Preparation	---------	---------	EPA 5030A EPA 5030B	EPA 5030A EPA 5030B	EPA 5035 EPA 5035A
Organic Extraction	EPA 3540C EPA 3546 EPA 3550B EPA 3550C	---------	EPA 3510C EPA 3511	EPA 3510C EPA 3511	EPA 3540C EPA 3546 EPA 3550B EPA 3550C
Perfluorinated Alkyl Acids (PFAAs)					
N-ethyl perfluorooctane-sulfonamidoacetic acid (NEtFOSAA)			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	
N-methyl perfluorooctane-sulfonamidoacetic acid (NMeFOSAA)			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	
Perfluorobutanesulfonate			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorodecanoic acid			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorododecanoic acid			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluoroheptanoic acid			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorohexanesulfonate			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorohexanoic Acid			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorononanoic Acid			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluoro-octanesulfonate			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Perfluorooctanoic Acid			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorotetradecanoic Acid			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorotridecanoic Acid			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluoroundecanic Acid			EPA 537 / 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
8:2 Fluorotelomersulfonate			EPA 537 / 537 MOD	EPA 537 MOD	

* **DW noted in parenthesis for drinking water method**

In addition, in recognition of the successful completion of the A2LA evaluation process (including an assessment of the laboratory's compliance with ISO IEC 17025:2005, the 2009 NELAC Standard and for the test methods applicable to Kentucky Statute KRS 224.60-130(2)(a), and for the test methods applicable to the Wyoming Storage Tank Remediation Laboratory Accreditation Program), accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and in the analyte categories identified below:

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Demand					
BOD	- - - - - - - -	- - - - - - -	SM 5210B-2001	- - - - - - -	- - - - - - -
CBOD	- - - - - - - -	- - - - - - -	SM 5210B-2001	- - - - - - -	- - - - - - -
COD	- - - - - - - -	- - - - - - -	EPA 410.4	- - - - - - -	- - - - - - -
Total Carbon	- - - - - - - -	- - - - - - -	- - - - - - -	SM 5310C-2000	SM 5310B-2000 MOD
Total Inorganic Carbon	- - - - - - - -	- - - - - - -	- - - - - - -	SM 5310C-2000	SM 5310B-2000 MOD
Dissolved Organic Carbon	- - - - - - - -	- - - - - - -	EPA 415.1 SM 5310C-2000	- - - - - - -	- - - - - - -
Total Organic Carbon	- - - - - - - -	- - - - - - -	EPA 415.1 EPA 9060 EPA 9060A SM 5310C-2000	EPA 9060 EPA 9060A SM 5310C-2000	EPA 9060 EPA 9060A SM 5310B-2000 MOD
Nutrients					
Ammonia	- - - - - - - -	- - - - - - -	EPA 350.1 SM 4500 NH3 B&D-1997	- - - - - - -	EPA 350.1
Fluoride	- - - - - - - -	- - - - - - -	SM4500 FC-1997 EPA 300.0 EPA 340.2 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	EPA 300.0
Nitrate (as N)	- - - - - - - -	- - - - - - -	EPA 300.0 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	EPA 300.0
Nitrite (as N)	- - - - - - - -	- - - - - - -	EPA 300.0 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	EPA 300.0
Nitrate/Nitrite	-------------	-------	EPA 353.2	-------------	----------------
Orthophosphate (as P)	- - - - - - - -	- - - - - - -	EPA 365.3	- - - - - - -	- - - - - - -
Total Kjeldahl Nitrogen	- - - - - - - -	- - - - - - -	EPA 351.2	- - - - - - -	EPA 351.2

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Total Phosphorus	- - - - - - - - -	- - - - - - -	EPA 365.1	- - - - - - -	EPA 365.1
Wet Chemistry					
Acid Volatile Sulfide	- - - - - - - - -	- - - - - - -	- - - - - - - - - -	- - - - - - -	EPA-821-R-91-100
Acidity	- - - - - - - - -	- - - - - - -	SM 2310B-1997	- - - - - - -	- - - - - - -
Alkalinity	- - - - - - - - -	- - - - - - -	SM 2320B-1997	- - - - - - -	- - - - - - -
Bromide	- - - - - - - - -	- - - - - - -	EPA 300.0 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	- - - - - - -
Bulk Density	- - - - - - - - -	- - - - - - -	- - - - - - - - - -	ASTM E868-82	ASTM E868-82
Chloride	- - - - - - - - -	- - - - - - -	EPA 300.0 EPA 325.3 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	EPA 300.0
Color	- - - - - - - - -	- - - - - - -	SM 2120B-2001	- - - - - - -	- - - - - - -
Corrosivity	- - - - - - - - -	- - - - - - -	- - - - - - - - - -	SW-846 Chapter 7	SW-846 Chapter 7
Cyanide	EPA 9012A EPA 9012B		EPA 335.2 EPA 335.4 MOD EPA 9012A EPA 9012B ASTM D7511 OIA-1677-09	EPA 9012A EPA 9012B ASTM D7511 OIA-1677-09	EPA 9012A EPA 9012B
Dissolved Oxygen	- - - - - - - - -	- - - - - - -	SM 4500 OG-2001	- - - - - - -	- - - - - - -
Dissolved Silica	- - - - - - - - -	- - - - - - -	EPA 370.1 SM 4500 SiC-1997	- - - - - - -	- - - - - - -
Ferrous Iron	- - - - - - - - -	- - - - - - -	SM 3500 Fe B mod-1997	- - - - - - -	- - - - - - -
Filterable Residue	- - - - - - - - -	- - - - - - -	SM 2540C-1997	- - - - - - -	- - - - - - -
Flashpoint	- - - - - - - - -	- - - - - - -	- - - - - - - - - -	EPA 1010A	EPA 1010A
Grain Size	- - - - - - - - -	- - - - - - -	- - - - - - - - - -	- - - - - - -	ASTM D422
Hardness	- - - - - - - - -	- - - - - - -	SM 2340C-1997	- - - - - - -	- - - - - - -
HEM-SGT	- - - - - - - - -	- - - - - - -	EPA 1664A EPA 1664B	- - - - - - -	EPA 9071B
Hexavalent Chromium Digestion	EPA 3060A	- - - - - - -	- - - - - - -	- - - - - - -	EPA 3060A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Hexavalent Chromium	EPA 7196A		SM 3500 CrB-2009 EPA 218.6 EPA 7196A EPA 7199	EPA 218.6 EPA 7196A EPA 7199	EPA 7196A EPA 7199
Ignitability	- - - - - - - -	- - - - - - -	- - - - - - -	40 CFR 261.21	40 CFR 261.21
Non-Filterable Residue	- - - - - - - -	- - - - - - -	EPA 160.2 SM 2540D-1997	- - - - - - -	- - - - - - -
Oxidation Reduction Potential	- - - - - - - -	- - - - - - -	ASTM D1498	ASTM D1498	ASTM D1498
Paint Filter Test	- - - - - - - -	- - - - - - -	EPA 9095A	EPA 9095A	EPA 9095A
pH	- - - - - - - -	- - - - - - -	SM 4500 H+B-2000 EPA 150.1 EPA 9040B EPA 9040C	EPA 9040B EPA 9040C EPA 9045C EPA 9045D	EPA 9040B EPA 9040C EPA 9045C EPA 9045D
Phenols	- - - - - - - -	- - - - - - -	EPA 420.4 EPA 9066	EPA 9066	- - - - - - -
Reactivity	- - - - - - - -	- - - - - - -	- - - - - - -	SW-846 Chapter 7.3	SW-846 Chapter 7.3
Settleable Residue	- - - - - - - -	- - - - - - -	SM 2540F-1997	- - - - - - -	- - - - - - -
Specific Conductance	- - - - - - - -	- - - - - - -	EPA 120.1 SM 2510B-1997 EPA 9050A	EPA 9050A	- - - - - - -
Sulfate	- - - - - - - -	- - - - - - -	EPA 300.0 EPA 375.4 EPA 9056 EPA 9056A	EPA 9056 EPA 9056A	EPA 300.0
Sulfide	- - - - - - - -	- - - - - - -	EPA 376.1 EPA 376.2 SM 4500 S2D-2000 SM 4500 S2F-2000	- - - - - - -	- - - - - - -
Surfactants	- - - - - - - -	- - - - - - -	SM 5540C-2000	- - - - - - -	- - - - - - -
Total Filterable Residue	- - - - - - - -	- - - - - - -	SM 2540C-1997	- - - - - - -	- - - - - - -
Total Residue	- - - - - - - -	- - - - - - -	EPA 160.3 SM 2540B-1997	- - - - - - -	- - - - - - -

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Total Fixed and Total Volatile Solids, Dissolved Fixed and Dissolved Volatile Solids, Suspended Fixed and Suspended Volatile Solids			SM 2540 E-1997		
Turbidity	- - - - - - - -	- - - - - - -	EPA 180.1 SM 2130 B-2001	- - - - - - -	- - - - - - -
Volatile Residue	- - - - - - - -	- - - - - - -	EPA 160.4	- - - - - - - - -	- - - - - - - - -
Metals					
Metals Digestion	EPA 3050B	- - - - - - -	EPA 200.2 EPA 3050B EPA 3005A EPA 3010A EPA 3010A MOD	EPA 3050B EPA 3010A EPA 3010A MOD	EPA 3050B
Aluminum	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	- - - - - - -	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Antimony	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	- - - - - - -	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Arsenic	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	- - - - - - -	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Barium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Beryllium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Boron	EPA 6010B EPA 6010C	-------	EPA 200.7 EPA 6010B EPA 6010C	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C
Cadmium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Calcium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Chromium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Cobalt	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Copper	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Iron	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Lead	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Magnesium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Manganese	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Mercury	EPA 7471A EPA 7471B	-------	EPA 245.1 EPA 7470A	EPA 7470A	EPA 7471A EPA 7471B

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Molybdenum	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Nickel	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Potassium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Selenium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Silicon	----------	----------	EPA 6010C	EPA 6010C	EPA 6010C
Sodium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Strontium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	-------	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Thallium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	- - - - - - -	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Tin	EPA 6010B EPA 6010C	- - - - - - -	EPA 200.7 EPA 6010B EPA 6010C	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C
Titanium	--------------	-----------	EPA 200.7 EPA 6010B EPA 6010C	EPA 200.7 EPA 6010B EPA 6010C	EPA 200.7 EPA 6010B EPA 6010C
Vanadium	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	- - - - - - -	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Zinc	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	- - - - -	EPA 200.7 EPA 200.8 EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A	EPA 6010B EPA 6010C EPA 6020 EPA 6020A
Zirconium	--------------	---------	EPA 200.7 EPA 6010B EPA 6010C	EPA 200.7 EPA 6010B EPA 6010C	EPA 200.7 EPA 6010B EPA 6010C
Purgeable Organics (volatiles)					
Volatile Preparation	- - - - - - - -	- - - - -	EPA 5030A EPA 5030B	EPA 5030A EPA 5030B	EPA 5035 EPA 5035A
Acetone	- - - - - - - -	EPA T0-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Acetonitrile	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Acrolein	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Acrylonitrile	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Alpha Methyl Styrene	- - - - - - - -	EPA TO-15	- - - - - - - - -	- - - - - - - - -	- - - - - - -
Allyl Chloride	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
tert-Amyl Alcohol	-----------	--------	-----------------	---------------	EPA 8260B EPA 8260C
tert-Amyl Methyl Ether	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
tert-Butyl Alcohol	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
tert-Butyl Formate	--------	-------	-------------	-------------	EPA 8260B EPA 8260C
Benzene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM EPA 18 mod EPA 25 mod	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
Benzyl Chloride	- - - - - - - -	EPA TO-15	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Bromobenzene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Bromochloromethane	- - - - - - - -	- - - - -	EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Bromodichloromethane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Bromoethene	- - - - - - - -	EPA TO-15	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Bromoform	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Bromomethane	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Butane	-------------	EPA 18 mod EPA 25 mod	-------------------	----------------	------------------
1,3-Butadiene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	- - - - - - -	- - - - - - -	- - - - - - -
2-Butanone	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
n-Butylbenzene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
sec-Butylbenzene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
tert-Butylbenzene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Carbon Disulfide	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Carbon Tetrachloride	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
2-Chloro-1,3-Butadiene	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Chloroacetonitrile	- - - - - - -	- - - - -	EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Chlorobenzene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1-Chlorobutane	- - - - - - - -	- - - - -	EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Chlorodifluoromethane	- - - - - - - -	EPA TO-15	- - - - - - -	- - - - - - -	- - - - - - -
Chloroethane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
2-Chloroethyl Vinyl Ether	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Carbon Range Organics C1-C10 (including subsets of this range i.e. hydrocarbons as propane, hydrocarbons as methane, hydrocarbons as hexane)	--------------	EPA 18 mod EPA 25 mod	-------------------	------------------	-----------------
Chloroform	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Chloromethane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
3-Chloroprene	- - - - - - - -	EPA TO-15	- - - - - - -	- - - - - - -	- - - - - - -
2-Chlorotoluene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
4-Chlorotoluene	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Cyclohexane	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Di-isopropyl Ether	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Dibromochloromethane	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2-Dibromo-3-chloropropane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8011 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8011 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Dibromomethane	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2-Dibromoethane (EDB)	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8011 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8011 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
1,2-Dichlorobenzene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,3-Dichlorobenzene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,4-Dichlorobenzene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
trans-1,4-Dichloro-2-Butene	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Dichlorodifluoromethane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1-Dichloroethane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2-Dichloroethane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1-Dichloroethene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
cis-1,2-Dichloroethene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
trans-1,2-Dichloroethene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Dichlorofluoromethane	- - - - - - - -	EPA TO-15	EPA 524.2 (DW)	- - - - - - -	- - - - - - -
1,2-Dichloropropane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,3-Dichloropropane	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
2,2-Dichloropropane	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1-Dichloropropanone	- - - - - - - -	- - - - -	EPA 524.2 (DW)	- - - - - - -	- - - - - - -
1,1-Dichloropropene	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
cis-1,3-Dichloropropene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
trans-1,3-Dichloropropene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,4-Dioxane	- - - - - - - -	EPA TO-15	EPA 8260B EPA 8260C EPA 8260SIM	EPA 8260B EPA 8260C EPA 8260SIM	EPA 8260B EPA 8260C EPA 8260SIM
Ethanol	- - - - - - - -	EPA TO-15	EPA 8260B EPA 8260C EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Ethane	------------	EPA 18 mod EPA 25 mod	--------------------	------------------	------------------

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Ethyl Acetate	- - - - - - - - -	EPA TO-15	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Ethyl Acrylate	- - - - - - - - -	EPA TO-15	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Ethylbenzene	- - - - - - - - -	EPA TO-15 EPA TO-15 SIM EPA 18 mod EPA 25 mod	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
Ethyl Ether	- - - - - - - - -	- - - - -	EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Ethyl Methacrylate	- - - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Ethyl-tert-Butyl Ether	- - - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
4-Ethyltoluene		EPA TO-15	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Freon-113	- - - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Freon-114	- - - - - - - - -	EPA TO-15	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Gasoline Range Organics (GRO) [Volatile Petroleum Hydrocarbons (VPH)]	- - - - - - - - -	- - - - -	EPA 8015B EPA 8015C EPA 8015D EPA 8260B EPA 8260C MA VPH NWTPH GX WADOE VPH OA-1	EPA 8015B EPA 8015C EPA 8015D EPA 8260B EPA 8260C MA VPH NWTPH GX WADOE VPH OA-1	EPA 8015B EPA 8015C EPA 8015D EPA 8260B EPA 8260C MA VPH NWTPH GX WADOE VPH OA-1
Heptane	- - - - - - - - -	EPA TO-15	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Hexane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
2-Hexanone	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Hexachlorobutadiene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Hexachloroethane	- - - - - - - -	EPA TO-15	EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Isooctane	- - - - - - - -	EPA TO-15	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Isopropyl Alcohol	- - - - - - - -	EPA TO-15	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Isopropylbenzene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8260B EPA 8260C OA-1
1,4-Isopropyltoluene	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methane	-------------	EPA 18 mod EPA 25 mod	------------------	----------------	-----------------
Methylacrylonitrile	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Acetate	- - - - - - - -	- - - - -	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Acrylate	- - - - - - - -	EPA TO-15	EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Methyl Iodide	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methylene Chloride	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Ethyl Ketone	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Isobutyl Ketone	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl Methacrylate	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methyl-tert-Butyl-Ether	- - - - - - - -	EPA TO-15 EPA TO-15 SIM EPA 18 mod EPA 25 mod	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
4-Methyl-2pentanone	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Methylcyclohexane	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
2-nitropropane	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Naphthalene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8260B EPA 8260C OA-1

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Nitrobenzene	- - - - - - - -	- - - - -	EPA 524.2 (DW)	- - - - - - -	- - - - - - -
Octane	- - - - - - - -	EPA TO-15	- - - - - - -	- - - - - - -	- - - - - - -
Pentachloroethane	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Pentane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	- - - - - - -	- - - - - - -	- - - - - - -
Propionitrile	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Propene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	- - - - - - -	- - - - - - -	- - - - - - -
n-Propylbenzene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Styrene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 602 EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Tert-Amyl Ethyl Ether	- - - - - - - -	- - - - -	EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1,1,2-Tetrachloroethane	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1,2,2-Tetrachloroethane	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Tetrachloroethene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Tetrahydrofuran	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW)	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Toluene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM EPA 18 mod EPA 25 mod	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
1,2,3-Trichlorobenzene	- - - - - - - -	- - - - -	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2,4-Trichlorobenzene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1,1-Trichloroethane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,1,2-Trichloroethane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Trichloroethene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Trichlorofluoromethane	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2,3-Trichloropropane	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,2,4-Trimethylbenzene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
1,3,5-Trimethylbenzene	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Vinyl Acetate	- - - - - - - -	EPA TO-15	EPA 624 EPA 8260B EPA 8260C EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Vinyl Chloride	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 624 EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B	EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Xylenes, total	- - - - - - - -	EPA TO-15 EPA TO-15 SIM EPA 18 mod EPA 25 mod	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
1,2-Xylene	- - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
1,3-Xylene	- - - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
1,4-Xylene	- - - - - - - - -	EPA TO-15 EPA TO-15 SIM	EPA 602 EPA 624 EPA 8021B EPA 8260B EPA 8260C EPA 524.2 (DW) EPA 6200B OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1	EPA 8021B EPA 8260B EPA 8260C OA-1
Extractable Organics (Semivolatiles)					
Organic Extraction	EPA 3540C EPA 3546 EPA 3550B EPA 3550C	--------	EPA 3510C EPA 3511	EPA 3510C EPA 3511	EPA 3540C EPA 3546 EPA 3550B EPA 3550C
Acenaphthene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Acenaphthylene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Acetic Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -
Acetophenone	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Acetylaminofluorene	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Alkylated PAHs	EPA 8270C SIM EPA 8270D SIM	--------	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM
4-Aminobiphenyl	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Amino-4,6-dinitrotoluene	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
4-Amino-2,6-dinitrotoluene	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Aniline	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Anthracene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Atrazine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Benzaldehyde	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Benzidine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Benzoic Acid	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Benzo (a) Anthracene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Benzo (b) Fluoranthene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Benzo (k) Fluoranthene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Benzo (ghi) Perylene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Benzo (a) Pyrene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Benzo (e) Pyrene	EPA 8270C SIM EPA 8270D SIM	--------	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Benzyl alcohol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Biphenyl	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Bis (2-chloroethoxy) Methane	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Bis (2-chloroethoxy) Ether	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Bis (2-chloroethyl) Ether	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Bis (2-chloroisopropyl) Ether	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Bis (2-ethylhexyl) Phthalate	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
4-Bromophenylphenyl Ether	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Butyl Benzyl Phthalate	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Butyric Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -
Caprolactam	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Carbazole	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Carbon Range Organics C8-C44 (including subsets of this range i.e. HRO, MRO, ORO, RRO)	- - - - - - -	--------	EPA 8015B EPA 8015C EPA 8015D EPA 8270C TN EPH	EPA 8015B EPA 8015C EPA 8015D EPA 8270C TN EPH	EPA 8015B EPA 8015C EPA 8015D EPA 8270C TN EPH
4-Chloroaniline	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Chloro-3-methylphenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Chlorobenzilate	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1-Chloronaphthalene	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Chloronaphthalene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Chlorophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Chlorophenyl Phenyl Ether	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Chrysene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Citric Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Cresols (Methyl Phenols)	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
cis-/trans-Diallate	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,4-Diamino-6-nitrotoluene	- - - - - - -	--------	EPA 8330B	EPA 8330B	EPA 8330B
2,6-Diamino-4-nitrotoluene	- - - - - - -	--------	EPA 8330B	EPA 8330B	EPA 8330B
Dibenzo (a,h) Acridine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Dibenzo (a,h) Anthracene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Dibenzofuran	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270D SIM
Dibenzothiophene	EPA 8270C SIM EPA 8270D SIM	--------	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM
1,2-Dichlorobenzene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,3-Dichlorobenzene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,4-Dichlorobenzene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
3,3'-Dichlorobenzidine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Diesel Range Organics (DRO) [Extractable Petroleum Hydrocarbons (EPH)]	- - - - - - -	--------	EPA 8015B EPA 8015C EPA 8015D EPA 8270C CT ETPH MA EPH NWTPH DX NJ EPH TX1005/ TX1006 WADOE EPH OA-2	EPA 8015B EPA 8015C EPA 8015D EPA 8270C CT ETPH MA EPH NWTPH DX NJ EPH TX1005/ TX1006 WADOE EPH OA-2	EPA 8015B EPA 8015C EPA 8015D EPA 8270C CT ETPH MA EPH NWTPH DX NJ EPH TX1005/ TX1006 WADOE EPH OA-2
2,4-Dichlorophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,6-Dichlorophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Diethyl Phthalate	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Dimethoate	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
p-Dimethylaminoazobenzene	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
7,12-Dimethylbenz (a) Anthracene	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
alpha-,alpha-Dimethyphenethylamine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,4-Dimethylphenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Dimethyl Phtalate	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
3,3'-Dimethylbenzidine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Di-n-butyl Phthalate	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Di-n-octyl Phthalate	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
3,5-Dinitroaniline	- - - - - - -	--------	EPA 8330B	EPA 8330B	EPA 8330B
1,3-Dinitrobenzene	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B
2,4-Dinitrophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,4-Dinitrotoluene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B
2,6-Dinitrotoluene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B
1,4-Dioxane	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM
Diphenylamine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Diphenyl Ether	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,2-Diphenylhydrazine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Ethyl Methane Sulfonate	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Fluoroanthene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Fluorene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Formic Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -
Hexachlorobenzene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Hexachlorobutadiene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Hexachlorocyclopentadiene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Hexachloroethane	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Hexachloropropene	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Hexahydro-1-3-5-trinitro-1,3,5-triazine (RDX)	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Indeno (1,2,3-cd) Pyrene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Isobutyric Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	---------
Isodrin	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Isophorone	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Isosafrole	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Lactic Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -
Methapyriline	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
3-Methycholanthrene	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Methyl-4, 6-Dinitrophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Methyl Methane Sulfonate	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
1-Methylnaphthalene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
2-Methylnaphthalene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
2-Methylphenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Methylphenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Naphthalene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
1,4-Napthoquinone	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1-Naphthylamine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Naphthylamine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Nitroquinoline-1-oxide	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
2-Nitroaniline	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
3-Nitroaniline	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Nitroaniline	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Nitrobenzene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B	EPA 8270C EPA 8270D EPA 8330 EPA 8330A EPA 8330B
Nitroglycerin	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
2-Nitrophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
4-Nitrophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Nitrotoluene	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
3-Nitrotoluene	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
4-Nitrotoluene	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
5-Nitro-o-Toluidine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitroso-di-n-butylamine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
n-Nitrosodiethylamine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosodimethylamine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosodimethylethylamine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosomorpholine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosodi-n-propylamine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosodiphenylamine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosopiperidine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
n-Nitrosopyrrolidine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Oxalic Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -
2,2-Oxybis (1-Chloropropane)	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pentachlorobenzene	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Pentachloronitrobenzene	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pentachlorophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pentaerythritol Tetranitrate (PETN)	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Perylene	EPA 8270C SIM EPA 8270D SIM	--------	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM	EPA 8270C SIM EPA 8270D SIM
Petroleum Range Organics	- - - - - - -	--------	FLPRO	FLPRO	FLPRO
Phenacetin	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Phenanthrene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA 625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Phenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,4-Phenylenediamine	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2-Picoline	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pronamide	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Propionic Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Pyrene	EPA 8270C EPA 8270D EPA 8270C SIM EPA 8270D SIM	--------	EPA625 EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM	EPA 8270C EPA 8270C SIM EPA 8270D EPA 8270D SIM
Pyridine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Pyruvic Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -
Quinic Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -
Succinic Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -
Tartaric Acid	- - - - - - -	--------	EPA 8015B EPA 8015D	EPA 8015B EPA 8015D	- - - - - - -
Safrole	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,2,4,5-Tetrachlorobenzene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,3,4,6-Tetrachlorophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Tetraethyl Dithiopyrophosphate	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
Tetryl	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Thionazin	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
O-Toluidine	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
1,2,4-Trichlorobenzene	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,3,5-Trinitrobenzene	- - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
2,4,5-Trichlorophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,4,6-Trichlorophenol	EPA 8270C EPA 8270D	--------	EPA 625 EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
O,O,O-Triethylphosphorothioate	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
1,3,5-Trinitrobenzene	EPA 8270C EPA 8270D	--------	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D	EPA 8270C EPA 8270D
2,4,6-Trinitrotoluene	- - - - - - - -	--------	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B	EPA 8330 EPA 8330A EPA 8330B
Pesticides/Herbicides/ PCBs		--------			
Organic Extraction	EPA 3540C EPA 3546 EPA 3550B EPA 3550C	--------	EPA 3510C EPA 3511	EPA 3510C EPA 3511	EPA 3540C EPA 3546 EPA 3550B EPA 3550C
Acifluorfen	- - - - - - - -	--------	EPA 8151A	EPA 8151A	EPA 8151A
Aldrin	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Azinphos Methyl (Guthion)	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
alpha-BHC	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
beta-BHC	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
delta-BHC	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
gamma-BHC (Lindane)	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Bentazon	- - - - - - - -	--------	EPA 8151A	EPA 8151A	EPA 8151A
Bolstar	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
alpha-Chlordane	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Chloramben	- - - - - - - -	--------	EPA 8151A	EPA 8151A	EPA 8151A
Chlordane (technical)	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Chlorpyrifos	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Chlorobenzilate	- - - - - - - -	--------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Coumaphos	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
2,4-D	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A
2,4’-DDD	EPA 8081A EPA 8081B	--------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
2,4’-DDE	EPA 8081A EPA 8081B	--------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
2,4’-DDT	EPA 8081A EPA 8081B	--------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Dalapon	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A
2,4-DB	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
4,4'-DDD	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
4,4'-DDE	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
4,4'-DDT	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Demeton-O	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Demeton-S	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
1,2-Dibromo-3-chloropropane (DBCP)	- - - - - - - -	--------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Diallate	- - - - - - - -	--------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Diazinon	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
3,5-Dichlorobenzoic Acid	- - - - - - - -	--------	EPA 8151A	EPA 8151A	EPA 8151A
Dicamba	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A
Dichlorvos	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Dichloroprop	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A
Dieldrin	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Dinoseb	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A
Disulfoton	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Diuron	- - - - - - - -	--------	EPA 8321A	EPA 8321A	EPA 8321A
Endosulfan I (alpha)	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Endosulfan II (beta)	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Endosulfan Sulfate	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Endrin	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Endrin Aldehyde	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Endrin Ketone	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Ethion	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Ethoprop	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Fensulfothion	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Fenthion	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Fenuron	- - - - - - - -	--------	EPA 8321A	EPA 8321A	EPA 8321A
Gamma-chlordane	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Heptachlor	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Heptachlor Epoxide	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Hexachlorobenzene	EPA 8081A EPA 8081B	--------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Hexachlorocyclopentadiene	- - - - - - - -	--------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Isodrin	- - - - - - - -	--------	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Malathion	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
MCPA	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A
MCPP	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A
Merphos	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Methoxychlor	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Mevinphos	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Mirex	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Parathion Ethyl	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Parathion Methyl	- - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
PCB-1016 (Arochlor)	EPA 8082 EPA 8082A	--------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1221	EPA 8082 EPA 8082A	--------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1232	EPA 8082 EPA 8082A	--------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1242	EPA 8082 EPA 8082A	--------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1248	EPA 8082 EPA 8082A	--------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1254	EPA 8082 EPA 8082A	--------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1260	EPA 8082 EPA 8082A	--------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1262	EPA 8082 EPA 8082A	--------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB-1268	EPA 8082 EPA 8082A	--------	EPA 608 EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Aroclor 5432	---------	--------	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
Aroclor 5442		--------	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
Aroclor 5460		--------	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A	EPA 8082 EPA 8082A
PCB Congeners (209)	EPA 1668	--------	EPA 1668	EPA 1668	EPA 1668
Pentachlorophenol (PCP)	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A
Phorate	- - - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Picloram	- - - - - - - - -	--------	EPA 8151A	EPA 8151A	EPA 8151A
Simazine	- - - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
Stirophos (Tetrachlorvinphos)	- - - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
2,4,5-T	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A
Tokuthion (Prothiofos)	- - - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
2,4,5-TP (Silvex)	EPA 8151A	--------	EPA 8151A	EPA 8151A	EPA 8151A
Toxaphene	EPA 8081A EPA 8081B	--------	EPA 608 EPA 8081A EPA 8081B	EPA 8081A EPA 8081B	EPA 8081A EPA 8081B
Trichloronate	- - - - - - - - -	--------	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B	EPA 8141A EPA 8141B
PCB Homologues					
Monochlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Dichlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Trichlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Tetrachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Pentachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Hexachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Heptachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Octachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Nonachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Decachlorobiphenyls	---------	---------	EPA 680	EPA 680	EPA 680
Dioxins/Furans					
2,3,7,8-TCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
2,3,7,8-TCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,7,8-PeCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
2,3,4,7,8-PeCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,7,8-PeCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,4,7,8-HxCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,6,7,8-HxCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
2,3,4,6,7,8-HxCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,7,8,9-HxCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,4,7,8,-HxCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,6,7,8-HxCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,7,8,9-HxCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,4,6,7,8-HpCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
1,2,3,4,7,8,9-HpCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
1,2,3,4,6,7,8-HpCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
OCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
OCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total HpCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total HpCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total HxCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total HxCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total PeCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total PeCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total TCDD	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A
Total TCDF	EPA 1613B EPA 8290A	--------	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A	EPA 1613B EPA 8290A

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
Misc. Headspace Analysis		--------			
Carbon Dioxide	- - - - - - - -	--------	RSK-175	RSK-175	- - - - - - - -
Ethane	- - - - - - - -	--------	RSK-175	RSK-175	- - - - - - - -
Ethene	- - - - - - - -	--------	RSK-175	RSK-175	- - - - - - - -
Methane	- - - - - - - -	--------	RSK-175	RSK-175	- - - - - - - -
Hazardous Waste Characteristics		--------			
Toxicity Characteristic Leaching Procedure	- - - - - - - -	--------	- - - - - - - - -	EPA 1311	EPA 1311
Synthetic Precipitation Leaching Procedure	- - - - - - - -	--------	- - - - - - - - -	EPA 1312	EPA 1312
Other					
Perchlorate	Food & Food Products EPA 6850	--------	EPA 6850	EPA 6850	EPA 6850
Hydrazine	- - - - - - - -	--------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Methylhydrazine	- - - - - - - -	--------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
1,1-Dimethylhydrazine	- - - - - - - -	--------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Formaldehyde	- - - - - - - -	--------	- - - - - - - - -	EPA 8315A	EPA 8315A
Volatile Preparation	- - - - - - - -	--------	EPA 5030A EPA 5030B	EPA 5030A EPA 5030B	EPA 5035 EPA 5035A
Organic Extraction	EPA 3540C EPA 3546 EPA 3550B EPA 3550C	--------	EPA 3510C EPA 3511	EPA 3510C EPA 3511	EPA 3540C EPA 3546 EPA 3550B EPA 3550C
Kentucky UST Program		--------			
Metals		--------			
Arsenic	- - - - - - - -	--------	- - - - - - - - -	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C
Barium	- - - - - - - -	--------	- - - - - - - - -	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C
Cadmium	- - - - - - - -	--------	- - - - - - - - -	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
Chromium	- - - - - - - -	--------	- - - - - - - - -	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C
Lead	- - - - - - - -	--------	- - - - - - - - -	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C
Mercury	- - - - - - - -	--------	- - - - - - - - -	EPA 7470A	EPA 7471A
Selenium	- - - - - - - -	--------	- - - - - - - - -	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C
Silver	- - - - - - - -	--------	- - - - - - - - -	EPA 6010B EPA 6010C	EPA 6010B EPA 6010C
Purgeable Organics (Volatiles)		--------			
Diesel Range Organics (DRO)	- - - - - - - -	--------	EPA 8015B EPA 8015C EPA 8015D	EPA 8015B EPA 8015C EPA 8015D	EPA 8015B EPA 8015C EPA 8015D
Gasoline Range Organics (GRO)	- - - - - - - -	--------	EPA 8015B EPA 8015C EPA 8015D	EPA 8015B EPA 8015C EPA 8015D	EPA 8015B EPA 8015C EPA 8015D
Wyoming Storage Tank Program		--------			
Metals		--------			
Cadmium	- - - - - - - -	--------	- - - - - - - - -	EPA 6010C	EPA 6010C
Chromium (total, hexavalent)	- - - - - - - -	--------	- - - - - - - - -	EPA 7196A	EPA 7196A
Lead	- - - - - - - -	--------	- - - - - - - - -	EPA 6010C	EPA 6010C
Purgeable Organics (Volatiles)		--------			
Gasoline Range Organics (GRO C6-C10)	- - - - - - - -	--------	- - - - - - - - -	EPA 5030B EPA 8260B EPA 8260C	EPA 8260B EPA 8260C
Extractable Organics (Semivolatiles)		--------			
Diesel Range Organics (DRO C10-C32)	- - - - - - - -	--------	- - - - - - - - -	EPA 8015C w/ EPA 3630 cleanup	EPA 8015C w/ EPA 3630 cleanup
Food and Feed (WHO 29)[1]	**Food**				
2,3,7,8-TCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
2,3,7,8-TCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,7,8-PeCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
2,3,4,7,8-PeCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,7,8-PeCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,4,7,8-HxCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,6,7,8-HxCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
2,3,4,6,7,8-HxCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,7,8,9-HxCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,4,7,8-HxCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,6,7,8-HxCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,7,8,9-HxCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,4,6,7,8-HpCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,4,7,8,9-HpCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
1,2,3,4,6,7,8-HpCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
OCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
OCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Total HpCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Total HpCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Total HxCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Total HxCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Total PeCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Total PeCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Total TCDD	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -
Total TCDF	EPA 1613B	--------	- - - - - - - - -	- - - - - - - - -	- - - - - - - - -

Parameter/Analyte	Tissue	Air	Nonpotable Water (*DW)	Solid Hazardous Waste	
				Aqueous	Solid
12 Dioxin-like PCBs (dl-PCBs)/coplanar PCBs (PCB77, PCB81, PCB105, PCB114, PCB118, PCB123, PCB126, PCB156, PCB157, PCB167, PCB169, and PCB189)	EPA 1668	--------	- - - - - - - - -	- - - - - - -	- - - - - - - - -
6 marker PCBs (PCB28, PCB52, PCB101, PCB138, PCB153, and PCB180)	EPA 1668	--------	- - - - - - - - -	- - - - - - -	- - - - - - - - -
Perfluorinated Alkyl Acids (PFAAs)					
N-ethyl perfluorooctane-sulfonamidoacetic acid (NEtFOSAA)			EPA 537 MOD (DW and NPW)	EPA 537 MOD	- - - - - - - - -
N-methyl perfluorooctane-sulfonamidoacetic acid (NMeFOSAA)			EPA 537 MOD (DW and NPW)	EPA 537 MOD	- - - - - - - - -
Perfluorobutanesulfonate			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorodecanoic acid			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorododecanoic acid			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluoroheptanoic acid			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorohexanesulfonate			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorohexanoic Acid			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorononanoic Acid			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluoro-octanesulfonate			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorooctanoic Acid			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorotetradecanoic Acid			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluorotridecanoic Acid			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD
Perfluoroundecanic Acid			EPA 537 MOD (DW and NPW)	EPA 537 MOD	EPA 537 MOD

Parameter/Analyte	**Tissue**	**Air**	**Nonpotable Water (*DW)**	**Solid Hazardous Waste**	
				Aqueous	**Solid**
8:2 Fluorotelomersulfonate			EPA 537 MOD	EPA 537 MOD	

* **DW noted in parenthesis for drinking water method**

Parameter/Analytes		Drinking Water	Nonpotable Water	Solid Hazardous Waste	
				Aqueous	Solid
Tobacco Analyses[1]					
Metals					
Tobacco pH	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	EPA 9045C (mod)
Tobacco - Total TSNA - NNN, NNK, NAB, NAT	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	CLIENT SPECIFIC
Tobacco Aldehydes -Formaldehyde, Acetaldehyde, Crotonaldehyde	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	EPA 8315A (mod)
Tobacco Moisture	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	EPA 160.3 (mod) SM 2540 G-1997
Tobacco Nitrite	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	CLIENT SPECIFIC
Tobacco Nitrate	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	CLIENT SPECIFIC
Tobacco Mercury	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	EPA 7471A (mod) EPA 7471B (mod)
Tobacco - Se, Cd, Pb, As, Ni, Cr	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	EPA 6020 (mod) EPA 6020A (mod)
Tobacco - Se, Cd, Pb, As, Ni, Cr	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	EPA 6010B (mod) EPA 6010C (mod)
Tobacco Nicotine	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	CLIENT SPECIFIC
Tobacco Benzo (a) Pyrene	- - - - - - - -	- - - - - - -	- - - - - - - - -	- - - - - - - - -	CLIENT SPECIFIC

[1] Tobacco Analyses and Food and Feed Analyses do not fall under the NELAC /TNI Scope of Accreditation

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2017
Issued April 01, 2016

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DUANE LUCKENBILL
EUROFINS LANCASTER LABORATORIES
ENVIRONMENTAL LLC
2425 NEW HOLLAND PIKE
LANCASTER, PA 17601-5994

NY Lab Id No: 10670

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:

Bacteriology

Coliform, Total / E. coli (Qualitative)	SM 18-22 9223B (-97) (Colilert)
Heterotrophic Plate Count	SM 18-22 9215B (-00)

Chlorinated Acids

2,4,5-TP (Silvex)	EPA 515.1
2,4-D	EPA 515.1
Dalapon	EPA 515.1
Dicamba	EPA 515.1
Dinoseb	EPA 515.1
Pentachlorophenol	EPA 515.1
Picloram	EPA 515.1

Disinfection By-products

Bromide	EPA 300.0 Rev. 2.1

Dissolved Gases

Acetylene	RSK-175
Ethane	RSK-175
Ethene (Ethylene)	RSK-175
Methane	RSK-175

Fuel Additives

Methyl tert-butyl ether	EPA 524.2
Naphthalene	EPA 524.2

Metals I

Arsenic, Total	EPA 200.8 Rev. 5.4
Barium, Total	EPA 200.7 Rev. 4.4

Metals I

Barium, Total	EPA 200.8 Rev. 5.4
Cadmium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Chromium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Copper, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Iron, Total	EPA 200.7 Rev. 4.4
Lead, Total	EPA 200.8 Rev. 5.4
Manganese, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Mercury, Total	EPA 245.1 Rev. 3.0
Selenium, Total	EPA 200.8 Rev. 5.4
Silver, Total	EPA 200.7 Rev. 4.4
Zinc, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4

Metals II

Aluminum, Total	EPA 200.7 Rev. 4.4
Antimony, Total	EPA 200.8 Rev. 5.4
Beryllium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Nickel, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Thallium, Total	EPA 200.8 Rev. 5.4
Vanadium, Total	EPA 200.7 Rev. 4.4

Serial No.: 53967

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All approved analytes are listed below:

Metals III	
Calcium, Total	EPA 200.7 Rev. 4.4
Magnesium, Total	EPA 200.7 Rev. 4.4
Potassium, Total	EPA 200.7 Rev. 4.4
Sodium, Total	EPA 200.7 Rev. 4.4
Methylcarbamate Pesticides	
3-Hydroxy Carbofuran	EPA 531.1
Aldicarb	EPA 531.1
Aldicarb Sulfone	EPA 531.1
Aldicarb Sulfoxide	EPA 531.1
Carbaryl	EPA 531.1
Carbofuran	EPA 531.1
Methomyl	EPA 531.1
Oxamyl	EPA 531.1
Microextractibles	
1,2-Dibromo-3-chloropropane	EPA 504.1
1,2-Dibromoethane	EPA 504.1
Miscellaneous	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	EPA 1613B
Benzo(a)pyrene	EPA 525.2
Bis(2-ethylhexyl) phthalate	EPA 525.2
Di (2-ethylhexyl) adipate	EPA 525.2
Hexachlorobenzene	EPA 525.2
Hexachlorocyclopentadiene	EPA 525.2
Methyl iodide	EPA 524.2

Miscellaneous	
Organic Carbon, Total	SM 21-22 5310C (-00)
Surfactant (MBAS)	SM 18-22 5540C (-00)
Turbidity	SM 18-22 2130 B (-01)
	EPA 180.1 Rev. 2.0
Non-Metals	
Alkalinity	SM 18-22 2320B (-97)
Calcium Hardness	SM 18-22 2340C (-97)
	SM 18-22 2340B (-97)
Chloride	EPA 300.0 Rev. 2.1
Color	SM 18-22 2120B (-01)
Cyanide	EPA 335.4 Rev. 1.0
Fluoride, Total	EPA 300.0 Rev. 2.1
	SM 18-22 4500-F C (-97)
Nitrate (as N)	EPA 353.2 Rev. 2.0
	EPA 300.0 Rev. 2.1
Nitrite (as N)	EPA 353.2 Rev. 2.0
	EPA 300.0 Rev. 2.1
Orthophosphate (as P)	SM 18-22 4500-P E (-99)
Silica, Dissolved	SM 20-22 4500-SiO2 C (-97)
Solids, Total Dissolved	SM 18-22 2540C (-97)
Specific Conductance	SM 18-22 2510B (-97)
Sulfate (as SO4)	EPA 300.0 Rev. 2.1
Organohalide Pesticides	
Alachlor	EPA 507
	EPA 525.2

Serial No.: 53967

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WADSWORTH CENTER

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CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DUANE LUCKENBILL
EUROFINS LANCASTER LABORATORIES
ENVIRONMENTAL LLC
2425 NEW HOLLAND PIKE
LANCASTER, PA 17601-5994

NY Lab Id No: 10670

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:

Organohalide Pesticides

Atrazine	EPA 507
	EPA 525.2
Butachlor	EPA 525.2
Dieldrin	EPA 525.2
Endrin	EPA 525.2
Heptachlor	EPA 525.2
Heptachlor epoxide	EPA 525.2
Lindane	EPA 525.2
Methoxychlor	EPA 525.2
Metolachlor	EPA 525.2
Metribuzin	EPA 525.2
Propachlor	EPA 525.2
Simazine	EPA 507
	EPA 525.2

Trihalomethanes

Bromodichloromethane	EPA 524.2
Bromoform	EPA 524.2
Chloroform	EPA 524.2
Dibromochloromethane	EPA 524.2
Total Trihalomethanes	EPA 524.2

Volatile Aromatics

1,2,3-Trichlorobenzene	EPA 524.2
1,2,4-Trichlorobenzene	EPA 524.2
1,2,4-Trimethylbenzene	EPA 524.2
1,2-Dichlorobenzene	EPA 524.2

Volatile Aromatics

1,3,5-Trimethylbenzene	EPA 524.2
1,3-Dichlorobenzene	EPA 524.2
1,4-Dichlorobenzene	EPA 524.2
2-Chlorotoluene	EPA 524.2
4-Chlorotoluene	EPA 524.2
Benzene	EPA 524.2
Bromobenzene	EPA 524.2
Chlorobenzene	EPA 524.2
Ethyl benzene	EPA 524.2
Hexachlorobutadiene	EPA 524.2
Isopropylbenzene	EPA 524.2
n-Butylbenzene	EPA 524.2
n-Propylbenzene	EPA 524.2
p-Isopropyltoluene (P-Cymene)	EPA 524.2
sec-Butylbenzene	EPA 524.2
Styrene	EPA 524.2
tert-Butylbenzene	EPA 524.2
Toluene	EPA 524.2
Total Xylenes	EPA 524.2

Volatile Halocarbons

1,1,1,2-Tetrachloroethane	EPA 524.2
1,1,1-Trichloroethane	EPA 524.2
1,1,2,2-Tetrachloroethane	EPA 524.2
1,1,2-Trichloroethane	EPA 524.2
1,1-Dichloroethane	EPA 524.2

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Volatile Halocarbons

1,1-Dichloroethene	EPA 524.2
1,1-Dichloropropene	EPA 524.2
1,2,3-Trichloropropane	EPA 524.2
1,2-Dichloroethane	EPA 524.2
1,2-Dichloropropane	EPA 524.2
1,3-Dichloropropane	EPA 524.2
2,2-Dichloropropane	EPA 524.2
Bromochloromethane	EPA 524.2
Bromomethane	EPA 524.2
Carbon tetrachloride	EPA 524.2
Chloroethane	EPA 524.2
Chloromethane	EPA 524.2
cis-1,2-Dichloroethene	EPA 524.2
cis-1,3-Dichloropropene	EPA 524.2
Dibromomethane	EPA 524.2
Dichlorodifluoromethane	EPA 524.2
Methylene chloride	EPA 524.2
Tetrachloroethene	EPA 524.2
trans-1,2-Dichloroethene	EPA 524.2
trans-1,3-Dichloropropene	EPA 524.2
Trichloroethene	EPA 524.2
Trichlorofluoromethane	EPA 524.2
Vinyl chloride	EPA 524.2

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Acrylates

Acrolein (Propenal)	EPA 8260C
	EPA 624
Acrylonitrile	EPA 8260C
	EPA 624
Ethyl methacrylate	EPA 8260C
Methyl acrylonitrile	EPA 8260C
Methyl methacrylate	EPA 8260C

Amines

1,2-Diphenylhydrazine	EPA 8270D
1,4-Phenylenediamine	EPA 8270D
1-Naphthylamine	EPA 8270D
2,3-Dichloroaniline	EPA 625
2-Naphthylamine	EPA 8270D
2-Nitroaniline	EPA 8270D
3-Nitroaniline	EPA 8270D
4,4'-Methylenebis(2-chloroaniline)	EPA 8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
5-Nitro-o-toluidine	EPA 8270D
a,a-Dimethylphenethylamine	EPA 8270D
Aniline	EPA 625
	EPA 8270D
Carbazole	EPA 625
	EPA 8270D
Diphenylamine	EPA 8270D

Amines

Methapyrilene	EPA 8270D
Pronamide	EPA 8270D
Propionitrile	EPA 8260C
Pyridine	EPA 625
	EPA 8270D

Bacteriology

Coliform, Fecal	SM 9222D-97

Benzidines

3,3'-Dichlorobenzidine	EPA 625
	EPA 8270D
3,3'-Dimethylbenzidine	EPA 8270D
Benzidine	EPA 625
	EPA 8270D

Chlorinated Hydrocarbon Pesticides

4,4'-DDD	EPA 8081B
	EPA 608
4,4'-DDE	EPA 8081B
	EPA 608
4,4'-DDT	EPA 8081B
	EPA 608
Aldrin	EPA 8081B
	EPA 608
alpha-BHC	EPA 8081B
	EPA 608

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Chlorinated Hydrocarbon Pesticides

alpha-Chlordane	EPA 8081B
beta-BHC	EPA 8081B
	EPA 608
Chlordane Total	EPA 8081B
	EPA 608
delta-BHC	EPA 8081B
	EPA 608
Diallate	EPA 8270D
Dieldrin	EPA 8081B
	EPA 608
Endosulfan I	EPA 8081B
	EPA 608
Endosulfan II	EPA 8081B
	EPA 608
Endosulfan sulfate	EPA 8081B
	EPA 608
Endrin	EPA 8081B
	EPA 608
Endrin aldehyde	EPA 8081B
	EPA 608
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 8081B
	EPA 608
Heptachlor epoxide	EPA 8081B
	EPA 608

Chlorinated Hydrocarbon Pesticides

Isodrin	EPA 8270D
Kepone	EPA 8081B
	EPA 8270D
Lindane	EPA 8081B
	EPA 608
Methoxychlor	EPA 8081B
	EPA 608
Mirex	EPA 8081B
PCNB	EPA 8270D
Toxaphene	EPA 8081B
	EPA 608

Chlorinated Hydrocarbons

1,2,3-Trichlorobenzene	EPA 8260C
1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 625
	EPA 8270D
1-Chloronaphthalene	EPA 8270D
2-Chloronaphthalene	EPA 625
	EPA 8270D
Hexachlorobenzene	EPA 625
	EPA 8270D
Hexachlorobutadiene	EPA 625
	EPA 8270D
Hexachlorocyclopentadiene	EPA 625
	EPA 8270D

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Chlorinated Hydrocarbons	
Hexachloroethane	EPA 625
	EPA 8270D
Hexachloropropene	EPA 8270D
Pentachlorobenzene	EPA 8270D
Chlorophenoxy Acid Pesticides	
2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
2,4-DB	EPA 8151A
Dalapon	EPA 8151A
Dicamba	EPA 8151A
Dichloroprop	EPA 8151A
Dinoseb	EPA 8151A
	EPA 8270D
Demand	
Biochemical Oxygen Demand	SM 5210B-01,-11
Carbonaceous BOD	SM 5210B-01,-11
Chemical Oxygen Demand	EPA 410.4 Rev. 2.0
Dioxins and Furans	
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-diox	EPA 8290A
	EPA 1613B
1,2,3,4,6,7,8-Heptachlorodibenzofuran	EPA 8290A

Dioxins and Furans	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	EPA 1613B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxi	EPA 8290A
	EPA 1613B
1,2,3,4,7,8,9-Heptachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,4,7,8-Hexachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B
1,2,3,6,7,8-Hexachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B
1,2,3,7,8,9-Hexachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B
1,2,3,7,8-Pentachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B
2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290A
	EPA 1613B
2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290A
	EPA 1613B
2,3,7,8-Tetrachlorodibenzofuran	EPA 8290A

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Dioxins and Furans

2,3,7,8-Tetrachlorodibenzofuran	EPA 1613B
2,3,7,8-Tetrachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B

Dissolved Gases

Ethane	RSK-175
Ethene (Ethylene)	RSK-175
Methane	RSK-175
Propane	RSK-175

Fuel Oxygenates

Di-isopropyl ether	EPA 8260C
Ethanol	EPA 8260C
	EPA 8015D
	EPA 8015C
Methyl tert-butyl ether	EPA 8260C
	EPA 8021B
tert-amyl alcohol	EPA 8260C
tert-amyl methyl ether (TAME)	EPA 8260C
tert-butyl alcohol	EPA 8260C
tert-butyl ethyl ether (ETBE)	EPA 8260C

Haloethers

2,2'-Oxybis(1-chloropropane)	EPA 625
	EPA 8270D
4-Bromophenylphenyl ether	EPA 625
	EPA 8270D

Haloethers

4-Chlorophenylphenyl ether	EPA 625
	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 625
	EPA 8270D
Bis(2-chloroethyl)ether	EPA 625
	EPA 8270D

Low Level Halocarbons

1,2-Dibromo-3-chloropropane, Low Level	EPA 8011
1,2-Dibromoethane, Low Level	EPA 8011

Low Level Polynuclear Aromatics

Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM

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Low Level Polynuclear Aromatics

Pyrene Low Level	EPA 8270D SIM

Metals I

Barium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Cadmium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Calcium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Chromium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Copper, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Iron, Total	SM 3500-Fe B-97,-11
	EPA 200.7 Rev. 4.4
	EPA 6010C

Metals I

Iron, Total	EPA 6020A
	EPA 200.8 Rev. 5.4
Lead, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Magnesium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Manganese, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Nickel, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Potassium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Silver, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4

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Metals I

Sodium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Strontium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4

Metals II

Aluminum, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Antimony, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Arsenic, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Beryllium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4

Metals II

Chromium VI	EPA 218.6 Rev. 3.3
	EPA 7196A
	EPA 7199
	SM 3500-Cr B-09,-11
Mercury, Low Level	EPA 1631E
Mercury, Total	EPA 245.1 Rev. 3.0
	EPA 7470A
Selenium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Vanadium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Zinc, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4

Metals III

Cobalt, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Molybdenum, Total	EPA 200.7 Rev. 4.4

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Metals III

Molybdenum, Total	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Thallium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Tin, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Titanium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Uranium (Mass)	EPA 6020A
	EPA 200.8 Rev. 5.4

Mineral

Acidity	SM 2310B-97,-11
Alkalinity	SM 2320B-97,-11
Chloride	EPA 300.0 Rev. 2.1
	SM 4500-Cl- C-97,-11
	EPA 9056A
Fluoride, Total	EPA 300.0 Rev. 2.1
	SM 4500-F C-97,-11

Mineral

Fluoride, Total	EPA 9056A
Hardness, Total	SM 2340C-97,-11
	SM 2340B-97,-11
Sulfate (as SO4)	EPA 300.0 Rev. 2.1
	EPA 9056A

Miscellaneous

Boron, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
	EPA 200.8 Rev. 5.4
Bromide	EPA 300.0 Rev. 2.1
	EPA 9056A
Color	SM 2120B-01,-11
Cyanide, Available	OIA-1677
Cyanide, Free	OIA-1677
Cyanide, Total	EPA 335.4 Rev. 1.0
	EPA 9012B
	ASTM D7511-09
Formaldehyde	EPA 8315A
Oil and Grease Total Recoverable (HEM)	EPA 1664A
	EPA 1664B
Organic Carbon, Total	SM 5310C-00,-11
	EPA 9060A
Perchlorate	EPA 6850
Phenols	EPA 420.4 Rev. 1.0

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2017
Issued April 01, 2016

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DUANE LUCKENBILL
EUROFINS LANCASTER LABORATORIES
ENVIRONMENTAL LLC
2425 NEW HOLLAND PIKE
LANCASTER, PA 17601-5994

NY Lab Id No: 10670

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Miscellaneous

Phenols	EPA 9066
Silica, Dissolved	SM 4500-SiO2 C-97,-11
Specific Conductance	SM 2510B-97,-11
	EPA 9050A
Sulfide (as S)	SM 4500-S2- F-00,-11
	SM 4500-S2- D-00,-11
Surfactant (MBAS)	SM 5540C-00,-11
Turbidity	EPA 180.1 Rev. 2.0

Nitroaromatics and Isophorone

1,3,5-Trinitrobenzene	EPA 8270D
	EPA 8330A
1,3-Dinitrobenzene	EPA 8270D
	EPA 8330A
1,4-Naphthoquinone	EPA 8270D
2,4,6-Trinitrotoluene	EPA 8330A
2,4-Dinitrotoluene	EPA 625
	EPA 8270D
	EPA 8330A
2,6-Dinitrotoluene	EPA 625
	EPA 8270D
	EPA 8330A
2-Amino-4,6-dinitrotoluene	EPA 8330A
	EPA 8330B
2-Nitrotoluene	EPA 8330A
3,5-Dinitroaniline	EPA 8330B

Nitroaromatics and Isophorone

3-Nitrotoluene	EPA 8330A
4-Amino-2,6-dinitrotoluene	EPA 8330A
4-Nitrotoluene	EPA 8330A
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330A
Isophorone	EPA 625
	EPA 8270D
Methyl-2,4,6-trinitrophenylnitramine	EPA 8330A
Nitrobenzene	EPA 625
	EPA 8270D
	EPA 8330A
Nitroglycerine	EPA 8330B
Nitroquinoline-1-oxide	EPA 8270D
Octahydro-tetranitro-tetrazocine	EPA 8330A
Pentaerythritol tetranitrate	EPA 8330B

Nitrosoamines

N-Nitrosodiethylamine	EPA 8270D
N-Nitrosodimethylamine	EPA 625
	EPA 8270D
N-Nitrosodi-n-butylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625
	EPA 8270D
N-Nitrosodiphenylamine	EPA 625
	EPA 8270D
N-nitrosomethylethylamine	EPA 8270D
N-nitrosomorpholine	EPA 8270D

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Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

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Nitrosoamines

N-nitrosopiperidine	EPA 8270D
N-Nitrosopyrrolidine	EPA 8270D

Nutrient

Ammonia (as N)	SM 4500-NH3 C-97,-11
	EPA 350.1 Rev. 2.0
	SM 4500-NH3 D or E-97,-11
Kjeldahl Nitrogen, Total	EPA 351.2 Rev. 2.0
Nitrate (as N)	EPA 353.2 Rev. 2.0
	EPA 300.0 Rev. 2.1
	EPA 9056A
Nitrate-Nitrite (as N)	EPA 353.2 Rev. 2.0
Nitrite (as N)	EPA 353.2 Rev. 2.0
	EPA 300.0 Rev. 2.1
	EPA 9056A
Orthophosphate (as P)	EPA 365.3 Rev. 1978
	SM 4500-P E-99,-11
Phosphorus, Total	EPA 365.1 Rev. 2.0
	SM 4500-P F-99,-11

Organophosphate Pesticides

Atrazine	EPA 8141B
	EPA 8270D
Azinphos methyl	EPA 8141B
Chlorpyriphos	EPA 8141B
Demeton-O	EPA 8141B
Demeton-S	EPA 8141B

Organophosphate Pesticides

Diazinon	EPA 8141B
Dimethoate	EPA 8270D
Disulfoton	EPA 8141B
	EPA 8270D
Famphur	EPA 8141B
	EPA 8270D
Malathion	EPA 8141B
Parathion ethyl	EPA 8141B
	EPA 8270D
Parathion methyl	EPA 8141B
	EPA 8270D
Phorate	EPA 8141B
	EPA 8270D
Simazine	EPA 8141B
Sulfotepp	EPA 8270D
Thionazin	EPA 8270D

Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015D
	EPA 8015C
Gasoline Range Organics	EPA 8015D
	EPA 8015C

Phthalate Esters

Benzyl butyl phthalate	EPA 625
	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625

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Phthalate Esters

Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 625
	EPA 8270D
Dimethyl phthalate	EPA 625
	EPA 8270D
Di-n-butyl phthalate	EPA 625
	EPA 8270D
Di-n-octyl phthalate	EPA 625
	EPA 8270D

Polychlorinated Biphenyls

PCB 1	EPA 1668 A
PCB 10	EPA 1668 A
PCB 100	EPA 1668 A
PCB 101	EPA 1668 A
PCB 102	EPA 1668 A
PCB 103	EPA 1668 A
PCB 104	EPA 1668 A
PCB 105	EPA 1668 A
PCB 106	EPA 1668 A
PCB 107	EPA 1668 A
PCB 108	EPA 1668 A
PCB 109	EPA 1668 A
PCB 11	EPA 1668 A
PCB 110	EPA 1668 A
PCB 111	EPA 1668 A

Polychlorinated Biphenyls

PCB 112	EPA 1668 A
PCB 113	EPA 1668 A
PCB 114	EPA 1668 A
PCB 115	EPA 1668 A
PCB 116	EPA 1668 A
PCB 117	EPA 1668 A
PCB 118	EPA 1668 A
PCB 119	EPA 1668 A
PCB 12	EPA 1668 A
PCB 120	EPA 1668 A
PCB 121	EPA 1668 A
PCB 122	EPA 1668 A
PCB 123	EPA 1668 A
PCB 124	EPA 1668 A
PCB 125	EPA 1668 A
PCB 126	EPA 1668 A
PCB 127	EPA 1668 A
PCB 128	EPA 1668 A
PCB 129	EPA 1668 A
PCB 13	EPA 1668 A
PCB 130	EPA 1668 A
PCB 131	EPA 1668 A
PCB 132	EPA 1668 A
PCB 133	EPA 1668 A
PCB 134	EPA 1668 A
PCB 135	EPA 1668 A

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Polychlorinated Biphenyls

PCB 136	EPA 1668 A
PCB 137	EPA 1668 A
PCB 138	EPA 1668 A
PCB 139	EPA 1668 A
PCB 14	EPA 1668 A
PCB 140	EPA 1668 A
PCB 141	EPA 1668 A
PCB 142	EPA 1668 A
PCB 143	EPA 1668 A
PCB 144	EPA 1668 A
PCB 145	EPA 1668 A
PCB 146	EPA 1668 A
PCB 147	EPA 1668 A
PCB 148	EPA 1668 A
PCB 149	EPA 1668 A
PCB 15	EPA 1668 A
PCB 150	EPA 1668 A
PCB 151	EPA 1668 A
PCB 152	EPA 1668 A
PCB 153	EPA 1668 A
PCB 154	EPA 1668 A
PCB 155	EPA 1668 A
PCB 156	EPA 1668 A
PCB 157	EPA 1668 A
PCB 158	EPA 1668 A
PCB 159	EPA 1668 A

Polychlorinated Biphenyls

PCB 16	EPA 1668 A
PCB 160	EPA 1668 A
PCB 161	EPA 1668 A
PCB 162	EPA 1668 A
PCB 163	EPA 1668 A
PCB 164	EPA 1668 A
PCB 165	EPA 1668 A
PCB 166	EPA 1668 A
PCB 167	EPA 1668 A
PCB 168	EPA 1668 A
PCB 169	EPA 1668 A
PCB 17	EPA 1668 A
PCB 170	EPA 1668 A
PCB 171	EPA 1668 A
PCB 172	EPA 1668 A
PCB 173	EPA 1668 A
PCB 174	EPA 1668 A
PCB 175	EPA 1668 A
PCB 176	EPA 1668 A
PCB 177	EPA 1668 A
PCB 178	EPA 1668 A
PCB 179	EPA 1668 A
PCB 18	EPA 1668 A
PCB 180	EPA 1668 A
PCB 181	EPA 1668 A
PCB 182	EPA 1668 A

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Polychlorinated Biphenyls

PCB 183	EPA 1668 A
PCB 184	EPA 1668 A
PCB 185	EPA 1668 A
PCB 186	EPA 1668 A
PCB 187	EPA 1668 A
PCB 188	EPA 1668 A
PCB 189	EPA 1668 A
PCB 19	EPA 1668 A
PCB 190	EPA 1668 A
PCB 191	EPA 1668 A
PCB 192	EPA 1668 A
PCB 193	EPA 1668 A
PCB 194	EPA 1668 A
PCB 195	EPA 1668 A
PCB 196	EPA 1668 A
PCB 197	EPA 1668 A
PCB 198	EPA 1668 A
PCB 199	EPA 1668 A
PCB 2	EPA 1668 A
PCB 20	EPA 1668 A
PCB 200	EPA 1668 A
PCB 201	EPA 1668 A
PCB 202	EPA 1668 A
PCB 203	EPA 1668 A
PCB 204	EPA 1668 A
PCB 205	EPA 1668 A

Polychlorinated Biphenyls

PCB 206	EPA 1668 A
PCB 207	EPA 1668 A
PCB 208	EPA 1668 A
PCB 209	EPA 1668 A
PCB 21	EPA 1668 A
PCB 22	EPA 1668 A
PCB 23	EPA 1668 A
PCB 24	EPA 1668 A
PCB 25	EPA 1668 A
PCB 26	EPA 1668 A
PCB 27	EPA 1668 A
PCB 28	EPA 1668 A
PCB 29	EPA 1668 A
PCB 3	EPA 1668 A
PCB 30	EPA 1668 A
PCB 31	EPA 1668 A
PCB 32	EPA 1668 A
PCB 33	EPA 1668 A
PCB 34	EPA 1668 A
PCB 35	EPA 1668 A
PCB 36	EPA 1668 A
PCB 37	EPA 1668 A
PCB 38	EPA 1668 A
PCB 39	EPA 1668 A
PCB 4	EPA 1668 A
PCB 40	EPA 1668 A

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Polychlorinated Biphenyls	
PCB 41	EPA 1668 A
PCB 42	EPA 1668 A
PCB 43	EPA 1668 A
PCB 44	EPA 1668 A
PCB 45	EPA 1668 A
PCB 46	EPA 1668 A
PCB 47	EPA 1668 A
PCB 48	EPA 1668 A
PCB 49	EPA 1668 A
PCB 5	EPA 1668 A
PCB 50	EPA 1668 A
PCB 51	EPA 1668 A
PCB 52	EPA 1668 A
PCB 53	EPA 1668 A
PCB 54	EPA 1668 A
PCB 55	EPA 1668 A
PCB 56	EPA 1668 A
PCB 57	EPA 1668 A
PCB 58	EPA 1668 A
PCB 59	EPA 1668 A
PCB 6	EPA 1668 A
PCB 60	EPA 1668 A
PCB 61	EPA 1668 A
PCB 62	EPA 1668 A
PCB 63	EPA 1668 A
PCB 64	EPA 1668 A

Polychlorinated Biphenyls	
PCB 65	EPA 1668 A
PCB 66	EPA 1668 A
PCB 67	EPA 1668 A
PCB 68	EPA 1668 A
PCB 69	EPA 1668 A
PCB 7	EPA 1668 A
PCB 70	EPA 1668 A
PCB 71	EPA 1668 A
PCB 72	EPA 1668 A
PCB 73	EPA 1668 A
PCB 74	EPA 1668 A
PCB 75	EPA 1668 A
PCB 76	EPA 1668 A
PCB 77	EPA 1668 A
PCB 78	EPA 1668 A
PCB 79	EPA 1668 A
PCB 8	EPA 1668 A
PCB 80	EPA 1668 A
PCB 81	EPA 1668 A
PCB 82	EPA 1668 A
PCB 83	EPA 1668 A
PCB 84	EPA 1668 A
PCB 85	EPA 1668 A
PCB 86	EPA 1668 A
PCB 87	EPA 1668 A
PCB 88	EPA 1668 A

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Polychlorinated Biphenyls

PCB 89	EPA 1668 A
PCB 9	EPA 1668 A
PCB 90	EPA 1668 A
PCB 91	EPA 1668 A
PCB 92	EPA 1668 A
PCB 93	EPA 1668 A
PCB 94	EPA 1668 A
PCB 95	EPA 1668 A
PCB 96	EPA 1668 A
PCB 97	EPA 1668 A
PCB 98	EPA 1668 A
PCB 99	EPA 1668 A
PCB-1016	EPA 8082A
	EPA 608
PCB-1221	EPA 8082A
	EPA 608
PCB-1232	EPA 8082A
	EPA 608
PCB-1242	EPA 8082A
	EPA 608
PCB-1248	EPA 8082A
	EPA 608
PCB-1254	EPA 8082A
	EPA 608
PCB-1260	EPA 8082A
	EPA 608

Polychlorinated Biphenyls

PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

Polynuclear Aromatics

2-Acetylaminofluorene	EPA 8270D
3-Methylcholanthrene	EPA 8270D
7,12-Dimethylbenzyl (a) anthracene	EPA 8270D
Acenaphthene	EPA 625
	EPA 8270D
Acenaphthylene	EPA 625
	EPA 8270D
Anthracene	EPA 625
	EPA 8270D
Benzo(a)anthracene	EPA 625
	EPA 8270D
Benzo(a)pyrene	EPA 625
	EPA 8270D
Benzo(b)fluoranthene	EPA 625
	EPA 8270D
Benzo(ghi)perylene	EPA 625
	EPA 8270D
Benzo(k)fluoranthene	EPA 625
	EPA 8270D
Chrysene	EPA 625
	EPA 8270D
Dibenzo(a,h)anthracene	EPA 625

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Polynuclear Aromatics

Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 625
	EPA 8270D
Fluorene	EPA 625
	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 625
	EPA 8270D
Naphthalene	EPA 625
	EPA 8270D
Phenanthrene	EPA 625
	EPA 8270D
Pyrene	EPA 625
	EPA 8270D

Priority Pollutant Phenols

2,3,4,6 Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 625
	EPA 8270D
2,4,6-Trichlorophenol	EPA 625
	EPA 8270D
2,4-Dichlorophenol	EPA 625
	EPA 8270D
2,4-Dimethylphenol	EPA 625
	EPA 8270D
2,4-Dinitrophenol	EPA 625
	EPA 8270D

Priority Pollutant Phenols

2,6-Dichlorophenol	EPA 8270D
2-Chlorophenol	EPA 625
	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 625
	EPA 8270D
2-Methylphenol	EPA 625
	EPA 8270D
2-Nitrophenol	EPA 625
	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 625
	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 625
	EPA 8270D
Pentachlorophenol	EPA 8151A
	EPA 625
	EPA 8270D
Phenol	EPA 625
	EPA 8270D

Residue

Settleable Solids	SM 2540 F-97,-11
Solids, Total	SM 2540 B-97,-11
Solids, Total Dissolved	SM 2540 C-97,-11
Solids, Total Suspended	SM 2540 D-97,-11

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Semi-Volatile Organics

1,1'-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
2-Picoline	EPA 8270D
4-Amino biphenyl	EPA 8270D
Acetophenone	EPA 625
	EPA 8270D
alpha-Terpineol	EPA 625
Aramite	EPA 8270D
Benzaldehyde	EPA 8270D
	EPA 8315A
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D
Ethyl methanesulfonate	EPA 8270D
Isosafrole	EPA 8270D
Methyl methanesulfonate	EPA 8270D
n-Decane	EPA 625
n-Octadecane	EPA 625
O,O,O-Triethyl phosphorothioate	EPA 8270D
p-Dimethylaminoazobenzene	EPA 8270D
Phenacetin	EPA 8270D
Safrole	EPA 8270D

Volatile Aromatics

1,2,4-Trichlorobenzene, Volatile	EPA 8260C
1,2,4-Trimethylbenzene	EPA 8260C
1,2-Dichlorobenzene	EPA 8260C
	EPA 624
1,3,5-Trimethylbenzene	EPA 8260C
1,3-Dichlorobenzene	EPA 8260C
	EPA 624
1,4-Dichlorobenzene	EPA 8260C
	EPA 624
2-Chlorotoluene	EPA 8260C
4-Chlorotoluene	EPA 8260C
Benzene	EPA 8260C
	EPA 8021B
	EPA 624
	EPA 602
Bromobenzene	EPA 8260C
Chlorobenzene	EPA 8260C
	EPA 624
Ethyl benzene	EPA 8260C
	EPA 8021B
	EPA 624
	EPA 602
Isopropylbenzene	EPA 8260C
	EPA 8021B
m/p-Xylenes	EPA 8260C
	EPA 624

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Volatile Aromatics

m/p-Xylenes	EPA 602
Naphthalene, Volatile	EPA 8260C
n-Butylbenzene	EPA 8260C
n-Propylbenzene	EPA 8260C
o-Xylene	EPA 8260C
	EPA 624
	EPA 602
p-Isopropyltoluene (P-Cymene)	EPA 8260C
sec-Butylbenzene	EPA 8260C
Styrene	EPA 8260C
	EPA 624
tert-Butylbenzene	EPA 8260C
Toluene	EPA 8260C
	EPA 8021B
	EPA 624
	EPA 602
Total Xylenes	EPA 8260C
	EPA 8021B
	EPA 624
	EPA 602

Volatile Chlorinated Organics

Benzyl chloride	EPA 8260C
Epichlorohydrin	EPA 8260C

Volatile Halocarbons

1,1,1,2-Tetrachloroethane	EPA 8260C

Volatile Halocarbons

1,1,1-Trichloroethane	EPA 8260C
	EPA 624
1,1,2,2-Tetrachloroethane	EPA 8260C
	EPA 624
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260C
1,1,2-Trichloroethane	EPA 8260C
	EPA 624
1,1-Dichloroethane	EPA 8260C
	EPA 624
1,1-Dichloroethene	EPA 8260C
	EPA 624
1,1-Dichloropropene	EPA 8260C
1,2,3-Trichloropropane	EPA 8260C
1,2-Dibromo-3-chloropropane	EPA 8260C
1,2-Dibromoethane	EPA 8260C
1,2-Dichloro-1,1,2-Trifluoroethane	EPA 8260C
1,2-Dichloroethane	EPA 8260C
	EPA 624
1,2-Dichloropropane	EPA 8260C
	EPA 624
1,3-Dichloropropane	EPA 8260C
2,2-Dichloropropane	EPA 8260C
2-Chloro-1,3-butadiene (Chloroprene)	EPA 8260C
2-Chloroethylvinyl ether	EPA 8260C
	EPA 624
3-Chloropropene (Allyl chloride)	EPA 8260C

Serial No.: 53968

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2017
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CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DUANE LUCKENBILL
EUROFINS LANCASTER LABORATORIES
ENVIRONMENTAL LLC
2425 NEW HOLLAND PIKE
LANCASTER, PA 17601-5994

NY Lab Id No: 10670

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER All approved analytes are listed below:

Volatile Halocarbons

Bromochloromethane	EPA 8260C
Bromodichloromethane	EPA 8260C
	EPA 624
Bromoform	EPA 8260C
	EPA 624
Bromomethane	EPA 8260C
	EPA 624
Carbon tetrachloride	EPA 8260C
	EPA 624
Chloroethane	EPA 8260C
	EPA 624
Chloroform	EPA 8260C
	EPA 624
Chloromethane	EPA 8260C
	EPA 624
cis-1,2-Dichloroethene	EPA 8260C
	EPA 624
cis-1,3-Dichloropropene	EPA 8260C
	EPA 624
Dibromochloromethane	EPA 8260C
	EPA 624
Dibromomethane	EPA 8260C
Dichlorodifluoromethane	EPA 8260C
	EPA 624
Hexachlorobutadiene, Volatile	EPA 8260C
Methyl iodide	EPA 8260C

Volatile Halocarbons

Methylene chloride	EPA 8260C
	EPA 624
Tetrachloroethene	EPA 8260C
	EPA 624
trans-1,2-Dichloroethene	EPA 8260C
	EPA 624
trans-1,3-Dichloropropene	EPA 8260C
	EPA 624
trans-1,4-Dichloro-2-butene	EPA 8260C
Trichloroethene	EPA 8260C
	EPA 624
Trichlorofluoromethane	EPA 8260C
	EPA 624
Vinyl chloride	EPA 8260C
	EPA 624

Volatiles Organics

1,4-Dioxane	EPA 8260C
2-Butanone (Methylethyl ketone)	EPA 8260C
2-Hexanone	EPA 8260C
2-Nitropropane	EPA 8260C
4-Methyl-2-Pentanone	EPA 8260C
Acetone	EPA 8260C
Acetonitrile	EPA 8260C
Carbon Disulfide	EPA 8260C
Cyclohexane	EPA 8260C

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Volatiles Organics

Di-ethyl ether	EPA 8260C
Ethyl Acetate	EPA 1666
	EPA 8260C
Ethylene Glycol	EPA 8015C
Isobutyl alcohol	EPA 8260C
	EPA 8015D
	EPA 8015C
Isobutyraldehyde	EPA 1666
Isopropanol	EPA 8260C
Isopropyl Acetate	EPA 1666
Methanol	EPA 8015D
	EPA 8015C
Methyl acetate	EPA 8260C
Methyl cyclohexane	EPA 8260C
Methyl formate	EPA 1666
n-Amyl Acetate	EPA 1666
n-Amyl alcohol	EPA 1666
n-Butanol	EPA 8260C
n-Butyl Acetate	EPA 1666
o-Toluidine	EPA 8270D
Tetrahydrofuran	EPA 1666
Vinyl acetate	EPA 8260C
	EPA 624

Sample Preparation Methods

SM 4500-P B(5)-99,-11

Sample Preparation Methods

EPA 5030C
EPA 200.2
EPA 3010A
EPA 3005A
EPA 3510C
EPA 3520C
EPA 3020A
SM 4500-NH3 B-97,-11
SM 4500-CN G-99,-11
SM 4500-F B-97,-11

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved subcategories and/or analytes are listed below:

Dissolved Gases

Acetylene	RSK-175

Serial No.: 53969

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Acrylates

Acrolein (Propenal)	EPA 8260C
Acrylonitrile	EPA 8260C
Ethyl methacrylate	EPA 8260C
Methyl acrylonitrile	EPA 8260C
Methyl methacrylate	EPA 8260C

Amines

1,2-Diphenylhydrazine	EPA 8270D
1,4-Phenylenediamine	EPA 8270D
1-Naphthylamine	EPA 8270D
2-Naphthylamine	EPA 8270D
2-Nitroaniline	EPA 8270D
3-Nitroaniline	EPA 8270D
4,4'-Methylenebis(2-chloroaniline)	EPA 8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
5-Nitro-o-toluidine	EPA 8270D
a,a-Dimethylphenethylamine	EPA 8270D
Aniline	EPA 8270D
Carbazole	EPA 8270D
Diphenylamine	EPA 8270D
Methapyrilene	EPA 8270D
Pronamide	EPA 8270D

Benzidines

3,3'-Dichlorobenzidine	EPA 8270D
3,3'-Dimethylbenzidine	EPA 8270D

Benzidines

Benzidine	EPA 8270D

Carbamate Pesticides

Aldicarb	EPA 8318A
Aldicarb Sulfone	EPA 8318A
Carbofuran	EPA 8318A

Characteristic Testing

Corrosivity	EPA 9045D
Free Liquids	EPA 9095B
Ignitability	EPA 1010A
Synthetic Precipitation Leaching Proc.	EPA 1312
TCLP	EPA 1311

Chlorinated Hydrocarbon Pesticides

2,4'-DDD (Mitotane)	EPA 8081B
4,4'-DDD	EPA 8081B
4,4'-DDE	EPA 8081B
4,4'-DDT	EPA 8081B
Aldrin	EPA 8081B
alpha-BHC	EPA 8081B
alpha-Chlordane	EPA 8081B
Atrazine	EPA 8270D
beta-BHC	EPA 8081B
Chlordane Total	EPA 8081B
Chlorobenzilate	EPA 8270D
delta-BHC	EPA 8081B

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Chlorinated Hydrocarbon Pesticides

Diallate	EPA 8270D
Dieldrin	EPA 8081B
Endosulfan I	EPA 8081B
Endosulfan II	EPA 8081B
Endosulfan sulfate	EPA 8081B
Endrin	EPA 8081B
Endrin aldehyde	EPA 8081B
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 8081B
Heptachlor epoxide	EPA 8081B
Isodrin	EPA 8270D
Kepone	EPA 8081B
	EPA 8270D
Lindane	EPA 8081B
Methoxychlor	EPA 8081B
Mirex	EPA 8081B
Pentachloronitrobenzene	EPA 8270D
Simazine	EPA 8141B
Toxaphene	EPA 8081B

Chlorinated Hydrocarbons

1,2,3-Trichlorobenzene	EPA 8260C
1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270D
1-Chloronaphthalene	EPA 8270D

Chlorinated Hydrocarbons

2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D
Hexachloropropene	EPA 8270D
Pentachlorobenzene	EPA 8270D

Chlorophenoxy Acid Pesticides

2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
2,4-DB	EPA 8151A
Dalapon	EPA 8151A
Dicamba	EPA 8151A
Dichloroprop	EPA 8151A
Dinoseb	EPA 8151A
MCPA	EPA 8151A
MCPP	EPA 8151A
Pentachlorophenol	EPA 8151A

Dioxins and Furans

1,2,3,4,6,7,8,9-Octachlorodibenzofuran	EPA 8290A
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-diox	EPA 8290A
1,2,3,4,6,7,8-Heptachlorodibenzofuran	EPA 8290A
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxi	EPA 8290A
1,2,3,4,7,8,9-Heptachlorodibenzofuran	EPA 8290A

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All approved analytes are listed below:

Dioxins and Furans

1,2,3,4,7,8-Hexachlorodibenzofuran	EPA 8290A
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	EPA 8290A
1,2,3,6,7,8-Hexachlorodibenzofuran	EPA 8290A
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	EPA 8290A
1,2,3,7,8,9-Hexachlorodibenzofuran	EPA 8290A
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	EPA 8290A
1,2,3,7,8-Pentachlorodibenzofuran	EPA 8290A
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	EPA 8290A
2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290A
2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290A
2,3,7,8-Tetrachlorodibenzofuran	EPA 8290A
2,3,7,8-Tetrachlorodibenzo-p-dioxin	EPA 8290A

Haloethers

2,2'-Oxybis(1-chloropropane)	EPA 8270D
4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D

Low Level Polynuclear Aromatic Hydrocarbons

Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM

Low Level Polynuclear Aromatic Hydrocarbons

Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM

Metals I

Barium, Total	EPA 6010C
	EPA 6020A
Cadmium, Total	EPA 6010C
	EPA 6020A
Calcium, Total	EPA 6010C
	EPA 6020A
Chromium, Total	EPA 6010C
	EPA 6020A
Copper, Total	EPA 6010C
	EPA 6020A
Iron, Total	EPA 6010C
	EPA 6020A
Lead, Total	EPA 6010C
	EPA 6020A

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Metals I

Magnesium, Total	EPA 6010C
	EPA 6020A
Manganese, Total	EPA 6010C
	EPA 6020A
Nickel, Total	EPA 6010C
	EPA 6020A
Potassium, Total	EPA 6010C
	EPA 6020A
Silver, Total	EPA 6010C
	EPA 6020A
Sodium, Total	EPA 6010C
	EPA 6020A
Strontium, Total	EPA 6010C
	EPA 6020A

Metals II

Aluminum, Total	EPA 6010C
	EPA 6020A
Antimony, Total	EPA 6010C
	EPA 6020A
Arsenic, Total	EPA 6010C
	EPA 6020A
Beryllium, Total	EPA 6010C
	EPA 6020A
Chromium VI	EPA 7196A
	EPA 7199

Metals II

Lithium, Total	EPA 6010C
Mercury, Total	EPA 7471B
Selenium, Total	EPA 6010C
	EPA 6020A
Vanadium, Total	EPA 6010C
	EPA 6020A
Zinc, Total	EPA 6010C
	EPA 6020A

Metals III

Cobalt, Total	EPA 6010C
	EPA 6020A
Molybdenum, Total	EPA 6010C
	EPA 6020A
Silica, Dissolved	EPA 6010C
Thallium, Total	EPA 6010C
	EPA 6020A
Tin, Total	EPA 6010C
	EPA 6020A
Titanium, Total	EPA 6010C
	EPA 6020A

Miscellaneous

Boron, Total	EPA 6010C
	EPA 6020A
Cyanide, Total	EPA 9012B
Formaldehyde	EPA 8315A

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Miscellaneous

Organic Carbon, Total	Lloyd Kahn Method
	EPA 9060A
Perchlorate	EPA 6850
Phenols	EPA 9066
Specific Conductance	EPA 9050A

Nitroaromatics and Isophorone

1,2-Dinitrobenzene	EPA 8270D
1,3,5-Trinitrobenzene	EPA 8270D
	EPA 8330A
1,3-Dinitrobenzene	EPA 8270D
	EPA 8330A
1,4-Dinitrobenzene	EPA 8270D
1,4-Naphthoquinone	EPA 8270D
2,4,6-Trinitrotoluene	EPA 8330A
	EPA 8330B
2,4-Dinitrotoluene	EPA 8270D
	EPA 8330A
	EPA 8330B
2,6-Dinitrotoluene	EPA 8270D
	EPA 8330A
	EPA 8330B
2-Amino-4,6-dinitrotoluene	EPA 8330A
2-Nitrotoluene	EPA 8330A
3,5-Dinitroaniline	EPA 8330B
3-Nitrotoluene	EPA 8330A

Nitroaromatics and Isophorone

4-Amino-2,6-dinitrotoluene	EPA 8330A
4-Dimethylaminoazobenzene	EPA 8270D
4-Nitrotoluene	EPA 8330A
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330A
Isophorone	EPA 8270D
Methyl-2,4,6-trinitrophenylnitramine	EPA 8330A
Nitrobenzene	EPA 8270D
	EPA 8330A
Nitroglycerine	EPA 8330B
Nitroquinoline-1-oxide	EPA 8270D
Octahydro-tetranitro-tetrazocine	EPA 8330A
Pentaerythritol tetranitrate	EPA 8330B
Pyridine	EPA 8270D

Nitrosoamines

N-Nitrosodiethylamine	EPA 8270D
N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-butylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D
N-nitrosomethylethylamine	EPA 8270D
N-nitrosomorpholine	EPA 8270D
N-nitrosopiperidine	EPA 8270D
N-Nitrosopyrrolidine	EPA 8270D

Organophosphate Pesticides

Azinphos methyl	EPA 8141B

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Organophosphate Pesticides

Bolstar	EPA 8141B
Carbophenothion	EPA 8141B
Chlorpyriphos	EPA 8141B
Coumaphos	EPA 8141B
Demeton-O	EPA 8141B
Demeton-S	EPA 8141B
Diazinon	EPA 8141B
Dichlorvos	EPA 8141B
Dimethoate	EPA 8270D
Disulfoton	EPA 8141B
	EPA 8270D
EPN	EPA 8141B
Ethion	EPA 8141B
Ethoprop	EPA 8141B
Famphur	EPA 8141B
	EPA 8270D
Fensulfothion	EPA 8141B
Fenthion	EPA 8141B
Malathion	EPA 8141B
Mevinphos	EPA 8141B
NALED	EPA 8141B
Parathion ethyl	EPA 8141B
	EPA 8270D
Parathion methyl	EPA 8141B
	EPA 8270D
Phorate	EPA 8141B

Organophosphate Pesticides

Phorate	EPA 8270D
Ronnel	EPA 8141B
Sulfotepp	EPA 8270D
Thionazin	EPA 8270D
Tokuthion	EPA 8141B
Trichloronate	EPA 8141B

Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015D
	EPA 8015C
Gasoline Range Organics	EPA 8015D
	EPA 8015C
Oil and Grease Total Recoverable (HEM)	EPA 9071B (Solvent:Hexane)

Phthalate Esters

Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 8270D

Polychlorinated Biphenyls

PCB 1	EPA 1668 A
PCB 10	EPA 1668 A
PCB 100	EPA 1668 A
PCB 101	EPA 1668 A

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Polychlorinated Biphenyls

PCB 102	EPA 1668 A
PCB 103	EPA 1668 A
PCB 104	EPA 1668 A
PCB 105	EPA 1668 A
PCB 106	EPA 1668 A
PCB 107	EPA 1668 A
PCB 108	EPA 1668 A
PCB 109	EPA 1668 A
PCB 11	EPA 1668 A
PCB 110	EPA 1668 A
PCB 111	EPA 1668 A
PCB 112	EPA 1668 A
PCB 113	EPA 1668 A
PCB 114	EPA 1668 A
PCB 115	EPA 1668 A
PCB 116	EPA 1668 A
PCB 117	EPA 1668 A
PCB 118	EPA 1668 A
PCB 119	EPA 1668 A
PCB 12	EPA 1668 A
PCB 120	EPA 1668 A
PCB 121	EPA 1668 A
PCB 122	EPA 1668 A
PCB 123	EPA 1668 A
PCB 124	EPA 1668 A
PCB 125	EPA 1668 A

Polychlorinated Biphenyls

PCB 126	EPA 1668 A
PCB 127	EPA 1668 A
PCB 128	EPA 1668 A
PCB 129	EPA 1668 A
PCB 13	EPA 1668 A
PCB 130	EPA 1668 A
PCB 131	EPA 1668 A
PCB 132	EPA 1668 A
PCB 133	EPA 1668 A
PCB 134	EPA 1668 A
PCB 135	EPA 1668 A
PCB 136	EPA 1668 A
PCB 138	EPA 1668 A
PCB 139	EPA 1668 A
PCB 14	EPA 1668 A
PCB 140	EPA 1668 A
PCB 141	EPA 1668 A
PCB 142	EPA 1668 A
PCB 143	EPA 1668 A
PCB 144	EPA 1668 A
PCB 145	EPA 1668 A
PCB 146	EPA 1668 A
PCB 147	EPA 1668 A
PCB 148	EPA 1668 A
PCB 149	EPA 1668 A
PCB 15	EPA 1668 A

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LANCASTER, PA 17601-5994

NY Lab Id No: 10670

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All approved analytes are listed below:

Polychlorinated Biphenyls	
PCB 150	EPA 1668 A
PCB 151	EPA 1668 A
PCB 152	EPA 1668 A
PCB 153	EPA 1668 A
PCB 154	EPA 1668 A
PCB 155	EPA 1668 A
PCB 156	EPA 1668 A
PCB 157	EPA 1668 A
PCB 158	EPA 1668 A
PCB 159	EPA 1668 A
PCB 16	EPA 1668 A
PCB 160	EPA 1668 A
PCB 161	EPA 1668 A
PCB 162	EPA 1668 A
PCB 163	EPA 1668 A
PCB 164	EPA 1668 A
PCB 165	EPA 1668 A
PCB 166	EPA 1668 A
PCB 167	EPA 1668 A
PCB 168	EPA 1668 A
PCB 169	EPA 1668 A
PCB 17	EPA 1668 A
PCB 170	EPA 1668 A
PCB 171	EPA 1668 A
PCB 172	EPA 1668 A
PCB 173	EPA 1668 A

Polychlorinated Biphenyls	
PCB 174	EPA 1668 A
PCB 175	EPA 1668 A
PCB 176	EPA 1668 A
PCB 177	EPA 1668 A
PCB 178	EPA 1668 A
PCB 179	EPA 1668 A
PCB 18	EPA 1668 A
PCB 180	EPA 1668 A
PCB 181	EPA 1668 A
PCB 182	EPA 1668 A
PCB 183	EPA 1668 A
PCB 184	EPA 1668 A
PCB 185	EPA 1668 A
PCB 186	EPA 1668 A
PCB 187	EPA 1668 A
PCB 188	EPA 1668 A
PCB 189	EPA 1668 A
PCB 19	EPA 1668 A
PCB 190	EPA 1668 A
PCB 191	EPA 1668 A
PCB 192	EPA 1668 A
PCB 193	EPA 1668 A
PCB 194	EPA 1668 A
PCB 195	EPA 1668 A
PCB 196	EPA 1668 A
PCB 197	EPA 1668 A

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NEW YORK STATE DEPARTMENT OF HEALTH
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Polychlorinated Biphenyls

PCB 198	EPA 1668 A
PCB 199	EPA 1668 A
PCB 2	EPA 1668 A
PCB 20	EPA 1668 A
PCB 200	EPA 1668 A
PCB 201	EPA 1668 A
PCB 202	EPA 1668 A
PCB 203	EPA 1668 A
PCB 204	EPA 1668 A
PCB 205	EPA 1668 A
PCB 206	EPA 1668 A
PCB 207	EPA 1668 A
PCB 208	EPA 1668 A
PCB 209	EPA 1668 A
PCB 21	EPA 1668 A
PCB 22	EPA 1668 A
PCB 23	EPA 1668 A
PCB 24	EPA 1668 A
PCB 25	EPA 1668 A
PCB 26	EPA 1668 A
PCB 27	EPA 1668 A
PCB 28	EPA 1668 A
PCB 29	EPA 1668 A
PCB 3	EPA 1668 A
PCB 30	EPA 1668 A
PCB 31	EPA 1668 A

Polychlorinated Biphenyls

PCB 32	EPA 1668 A
PCB 33	EPA 1668 A
PCB 34	EPA 1668 A
PCB 35	EPA 1668 A
PCB 36	EPA 1668 A
PCB 37	EPA 1668 A
PCB 38	EPA 1668 A
PCB 39	EPA 1668 A
PCB 4	EPA 1668 A
PCB 40	EPA 1668 A
PCB 41	EPA 1668 A
PCB 42	EPA 1668 A
PCB 43	EPA 1668 A
PCB 44	EPA 1668 A
PCB 45	EPA 1668 A
PCB 46	EPA 1668 A
PCB 47	EPA 1668 A
PCB 48	EPA 1668 A
PCB 49	EPA 1668 A
PCB 5	EPA 1668 A
PCB 50	EPA 1668 A
PCB 51	EPA 1668 A
PCB 52	EPA 1668 A
PCB 53	EPA 1668 A
PCB 54	EPA 1668 A
PCB 55	EPA 1668 A

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Polychlorinated Biphenyls

PCB 56	EPA 1668 A
PCB 57	EPA 1668 A
PCB 58	EPA 1668 A
PCB 59	EPA 1668 A
PCB 6	EPA 1668 A
PCB 60	EPA 1668 A
PCB 61	EPA 1668 A
PCB 62	EPA 1668 A
PCB 63	EPA 1668 A
PCB 64	EPA 1668 A
PCB 65	EPA 1668 A
PCB 66	EPA 1668 A
PCB 67	EPA 1668 A
PCB 68	EPA 1668 A
PCB 69	EPA 1668 A
PCB 7	EPA 1668 A
PCB 70	EPA 1668 A
PCB 71	EPA 1668 A
PCB 72	EPA 1668 A
PCB 73	EPA 1668 A
PCB 74	EPA 1668 A
PCB 75	EPA 1668 A
PCB 76	EPA 1668 A
PCB 77	EPA 1668 A
PCB 78	EPA 1668 A
PCB 79	EPA 1668 A

Polychlorinated Biphenyls

PCB 8	EPA 1668 A
PCB 80	EPA 1668 A
PCB 81	EPA 1668 A
PCB 82	EPA 1668 A
PCB 83	EPA 1668 A
PCB 84	EPA 1668 A
PCB 85	EPA 1668 A
PCB 86	EPA 1668 A
PCB 87	EPA 1668 A
PCB 88	EPA 1668 A
PCB 89	EPA 1668 A
PCB 9	EPA 1668 A
PCB 90	EPA 1668 A
PCB 91	EPA 1668 A
PCB 92	EPA 1668 A
PCB 93	EPA 1668 A
PCB 94	EPA 1668 A
PCB 95	EPA 1668 A
PCB 96	EPA 1668 A
PCB 97	EPA 1668 A
PCB 98	EPA 1668 A
PCB 99	EPA 1668 A
PCB-1016	EPA 8082A
PCB-1221	EPA 8082A
PCB-1232	EPA 8082A
PCB-1242	EPA 8082A

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Polychlorinated Biphenyls

PCB-1248	EPA 8082A
PCB-1254	EPA 8082A
PCB-1260	EPA 8082A
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

Polynuclear Aromatic Hydrocarbons

2-Acetylaminofluorene	EPA 8270D
3-Methylcholanthrene	EPA 8270D
7,12-Dimethylbenzyl (a) anthracene	EPA 8270D
Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(ghi)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D
Dibenzo(a,j)acridine	EPA 8270D
Fluoranthene	EPA 8270D
Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D

Polynuclear Aromatic Hydrocarbons

Pyrene	EPA 8270D

Priority Pollutant Phenols

2,3,4,6 Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D
2,4-Dinitrophenol	EPA 8270D
2,6-Dichlorophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D
2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D

Semi-Volatile Organics

1,1'-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D

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Semi-Volatile Organics

2-Picoline	EPA 8270D
4-Amino biphenyl	EPA 8270D
Acetophenone	EPA 8270D
Aramite	EPA 8270D
Benzaldehyde	EPA 8270D
	EPA 8315A
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D
Ethyl methanesulfonate	EPA 8270D
Isosafrole	EPA 8270D
Methyl methanesulfonate	EPA 8270D
O,O,O-Triethyl phosphorothioate	EPA 8270D
Phenacetin	EPA 8270D
Safrole	EPA 8270D

Volatile Aromatics

1,2,4-Trichlorobenzene, Volatile	EPA 8260C
1,2,4-Trimethylbenzene	EPA 8260C
1,2-Dichlorobenzene	EPA 8260C
1,3,5-Trimethylbenzene	EPA 8260C
1,3-Dichlorobenzene	EPA 8260C
1,4-Dichlorobenzene	EPA 8260C
2-Chlorotoluene	EPA 8260C
4-Chlorotoluene	EPA 8260C

Volatile Aromatics

Benzene	EPA 8260C
	EPA 8021B
Bromobenzene	EPA 8260C
Chlorobenzene	EPA 8260C
Ethyl benzene	EPA 8260C
	EPA 8021B
Isopropylbenzene	EPA 8260C
	EPA 8021B
m/p-Xylenes	EPA 8260C
Naphthalene, Volatile	EPA 8260C
	EPA 8021B
n-Butylbenzene	EPA 8260C
n-Propylbenzene	EPA 8260C
o-Xylene	EPA 8260C
	EPA 8021B
p-Isopropyltoluene (P-Cymene)	EPA 8260C
sec-Butylbenzene	EPA 8260C
Styrene	EPA 8260C
tert-Butylbenzene	EPA 8260C
Toluene	EPA 8260C
	EPA 8021B
Total Xylenes	EPA 8260C
	EPA 8021B

Volatile Chlorinated Organics

Benzyl chloride	EPA 8260C

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Volatile Chlorinated Organics

Epichlorohydrin	EPA 8260C

Volatile Halocarbons

1,1,1,2-Tetrachloroethane	EPA 8260C
1,1,1-Trichloroethane	EPA 8260C
1,1,2,2-Tetrachloroethane	EPA 8260C
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260C
1,1,2-Trichloroethane	EPA 8260C
1,1-Dichloroethane	EPA 8260C
1,1-Dichloroethene	EPA 8260C
1,1-Dichloropropene	EPA 8260C
1,2,3-Trichloropropane	EPA 8260C
1,2-Dibromo-3-chloropropane	EPA 8260C
1,2-Dibromoethane	EPA 8260C
1,2-Dichloroethane	EPA 8260C
1,2-Dichloropropane	EPA 8260C
1,3-Dichloropropane	EPA 8260C
2,2-Dichloropropane	EPA 8260C
2-Chloro-1,3-butadiene (Chloroprene)	EPA 8260C
2-Chloroethylvinyl ether	EPA 8260C
3-Chloropropene (Allyl chloride)	EPA 8260C
Bromochloromethane	EPA 8260C
Bromodichloromethane	EPA 8260C
Bromoform	EPA 8260C
Bromomethane	EPA 8260C
Carbon tetrachloride	EPA 8260C

Volatile Halocarbons

Chloroethane	EPA 8260C
Chloroform	EPA 8260C
Chloromethane	EPA 8260C
cis-1,2-Dichloroethene	EPA 8260C
cis-1,3-Dichloropropene	EPA 8260C
Dibromochloromethane	EPA 8260C
Dibromomethane	EPA 8260C
Dichlorodifluoromethane	EPA 8260C
Hexachlorobutadiene, Volatile	EPA 8260C
Methyl iodide	EPA 8260C
Methylene chloride	EPA 8260C
Tetrachloroethene	EPA 8260C
trans-1,2-Dichloroethene	EPA 8260C
trans-1,3-Dichloropropene	EPA 8260C
trans-1,4-Dichloro-2-butene	EPA 8260C
Trichloroethene	EPA 8260C
Trichlorofluoromethane	EPA 8260C
Vinyl chloride	EPA 8260C

Volatile Organics

1,4-Dioxane	EPA 8260C
2-Butanone (Methylethyl ketone)	EPA 8260C
2-Hexanone	EPA 8260C
2-Nitropropane	EPA 8260C
4-Methyl-2-Pentanone	EPA 8260C
Acetone	EPA 8260C

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All approved analytes are listed below:

Volatile Organics

Acetonitrile	EPA 8260C
Carbon Disulfide	EPA 8260C
Cyclohexane	EPA 8260C
Ethyl Acetate	EPA 8260C
Ethylene Glycol	EPA 8015C
Isobutyl alcohol	EPA 8260C
Isopropanol	EPA 8260C
Methyl acetate	EPA 8260C
Methyl cyclohexane	EPA 8260C
Methyl tert-butyl ether	EPA 8260C
	EPA 8021B
n-Butanol	EPA 8260C
o-Toluidine	EPA 8270D
Propionitrile	EPA 8260C
tert-butyl alcohol	EPA 8260C
Vinyl acetate	EPA 8260C

Sample Preparation Methods

EPA 5035A-L
EPA 5035A-H
EPA 3010A
EPA 3005A
EPA 3050B
EPA 3550C
EPA 3540C
EPA 3020A

Sample Preparation Methods

EPA 3546
EPA 5035
EPA 3060A

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All approved analytes are listed below:

Acrylates

Acetonitrile	EPA TO-15
Acrylonitrile	EPA TO-15
Ethyl acrylate	EPA TO-15
Methyl methacrylate	EPA TO-15

Chlorinated Hydrocarbons

1,2,4-Trichlorobenzene	EPA TO-14A
	EPA TO-15
Hexachlorobutadiene	EPA TO-14A
	EPA TO-15
Hexachloroethane	EPA TO-15

Polynuclear Aromatics

Naphthalene	EPA TO-15

Purgeable Aromatics

1,2,4-Trimethylbenzene	EPA TO-14A
	EPA TO-15
1,2-Dichlorobenzene	EPA TO-14A
	EPA TO-15
1,3,5-Trimethylbenzene	EPA TO-14A
	EPA TO-15
1,3-Dichlorobenzene	EPA TO-14A
	EPA TO-15
1,4-Dichlorobenzene	EPA TO-14A
	EPA TO-15
2-Chlorotoluene	EPA TO-15

Purgeable Aromatics

Benzene	EPA TO-14A
	EPA TO-15
Chlorobenzene	EPA TO-14A
	EPA TO-15
Ethyl benzene	EPA TO-14A
	EPA TO-15
Isopropylbenzene	EPA TO-15
m/p-Xylenes	EPA TO-15
o-Xylene	EPA TO-15
Styrene	EPA TO-14A
	EPA TO-15
Toluene	EPA TO-14A
	EPA TO-15
Total Xylenes	EPA TO-14A
	EPA TO-15

Purgeable Halocarbons

1,1,1-Trichloroethane	EPA TO-14A
	EPA TO-15
1,1,2,2-Tetrachloroethane	EPA TO-14A
	EPA TO-15
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA TO-14A
	EPA TO-15
1,1,2-Trichloroethane	EPA TO-14A
	EPA TO-15
1,1-Dichloroethane	EPA TO-14A

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All approved analytes are listed below:

Purgeable Halocarbons

1,1-Dichloroethane	EPA TO-15
1,1-Dichloroethene	EPA TO-14A
	EPA TO-15
1,2-Dibromo-3-chloropropane	EPA TO-15
1,2-Dibromoethane	EPA TO-14A
	EPA TO-15
1,2-Dichloroethane	EPA TO-14A
	EPA TO-15
1,2-Dichloropropane	EPA TO-14A
	EPA TO-15
3-Chloropropene (Allyl chloride)	EPA TO-15
Bromodichloromethane	EPA TO-14A
	EPA TO-15
Bromoform	EPA TO-15
Bromomethane	EPA TO-14A
	EPA TO-15
Carbon tetrachloride	EPA TO-14A
	EPA TO-15
Chloroethane	EPA TO-14A
	EPA TO-15
Chloroform	EPA TO-14A
	EPA TO-15
Chloromethane	EPA TO-14A
	EPA TO-15
cis-1,2-Dichloroethene	EPA TO-14A
	EPA TO-15

Purgeable Halocarbons

cis-1,3-Dichloropropene	EPA TO-14A
	EPA TO-15
Dibromochloromethane	EPA TO-15
Dichlorodifluoromethane	EPA TO-14A
	EPA TO-15
Methylene chloride	EPA TO-14A
	EPA TO-15
Tetrachloroethene	EPA TO-14A
	EPA TO-15
trans-1,2-Dichloroethene	EPA TO-14A
	EPA TO-15
trans-1,3-Dichloropropene	EPA TO-14A
	EPA TO-15
Trichloroethene	EPA TO-14A
	EPA TO-15
Trichlorofluoromethane	EPA TO-14A
	EPA TO-15
Vinyl bromide	EPA TO-15
Vinyl chloride	EPA TO-14A
	EPA TO-15

Volatile Chlorinated Organics

Benzyl chloride	EPA TO-14A
	EPA TO-15

Volatile Organics

1,2-Dichlorotetrafluoroethane	EPA TO-14A

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NELAP RECOGNIZED TNI ACCREDITATION BODY

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Volatile Organics

1,2-Dichlorotetrafluoroethane	EPA TO-15
1,3-Butadiene	EPA TO-15
1,4-Dioxane	EPA TO-15
2,2,4-Trimethylpentane	EPA TO-15
2-Butanone (Methylethyl ketone)	EPA TO-15
4-Methyl-2-Pentanone	EPA TO-15
Acetone	EPA TO-15
Acrolein (Propenal)	EPA TO-15
Carbon Disulfide	EPA TO-15
Cyclohexane	EPA TO-15
Hexane	EPA TO-15
Methyl iodide	EPA TO-15
Methyl tert-butyl ether	EPA TO-15
n-Heptane	EPA TO-15
tert-butyl alcohol	EPA TO-15
Vinyl acetate	EPA TO-15

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Appendix B
Air Biosparge System Design Drawings

2009 Final Remedial Action Completion Report

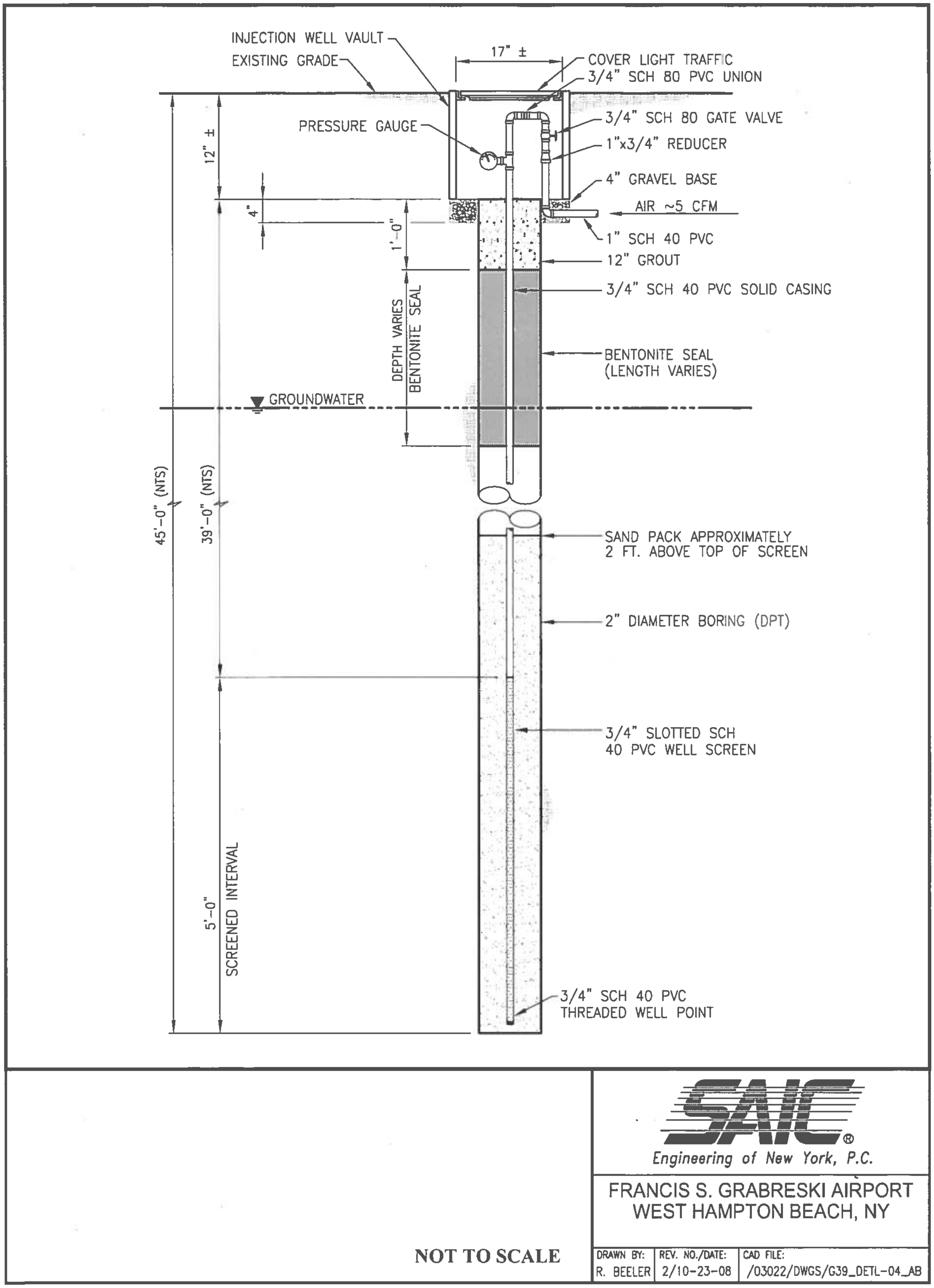


Figure 6-2. Air Biosparging Point As-Built Detail

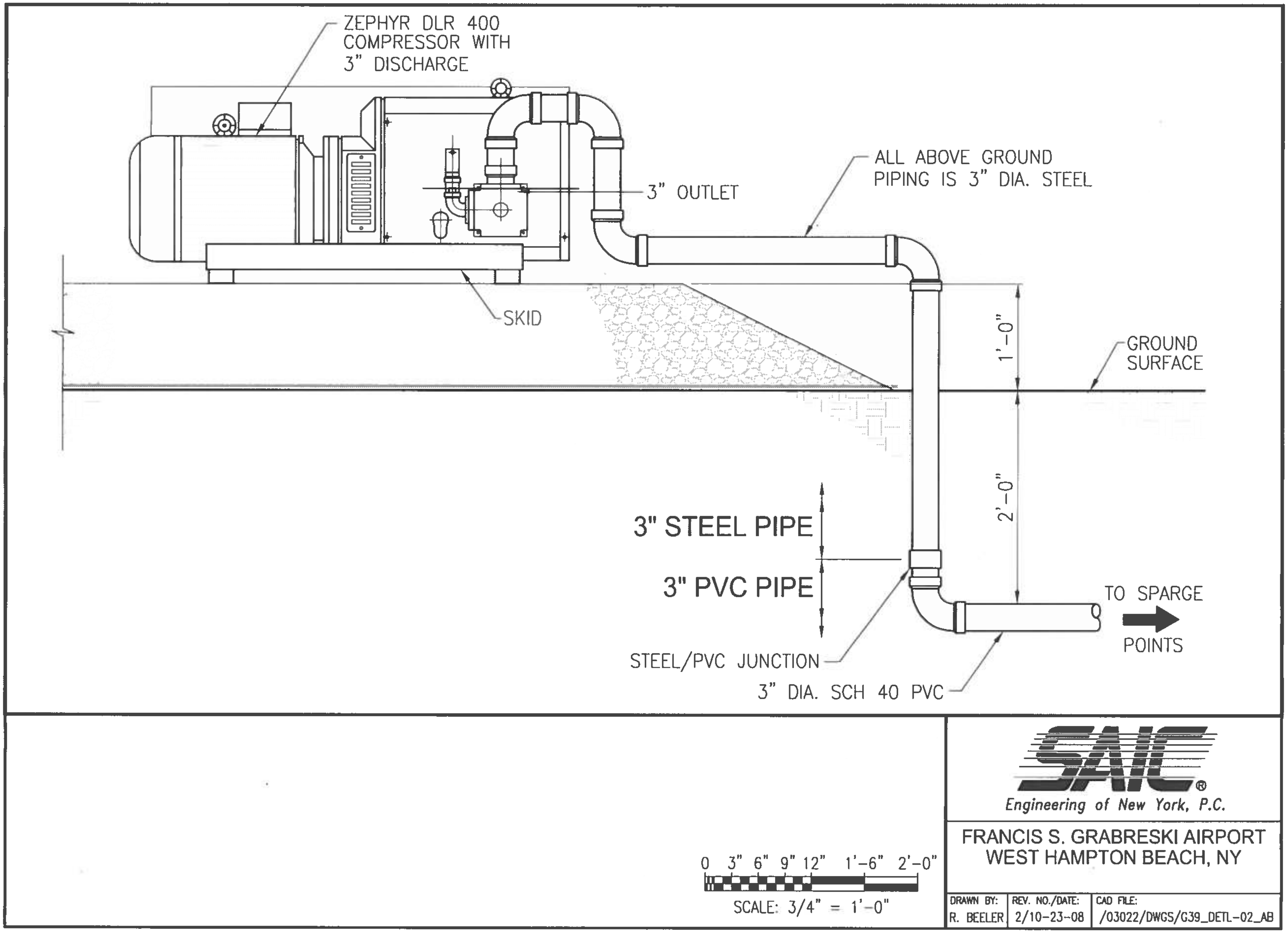


Figure 6-3. Above Ground/Below Ground Connection As-Built Detail

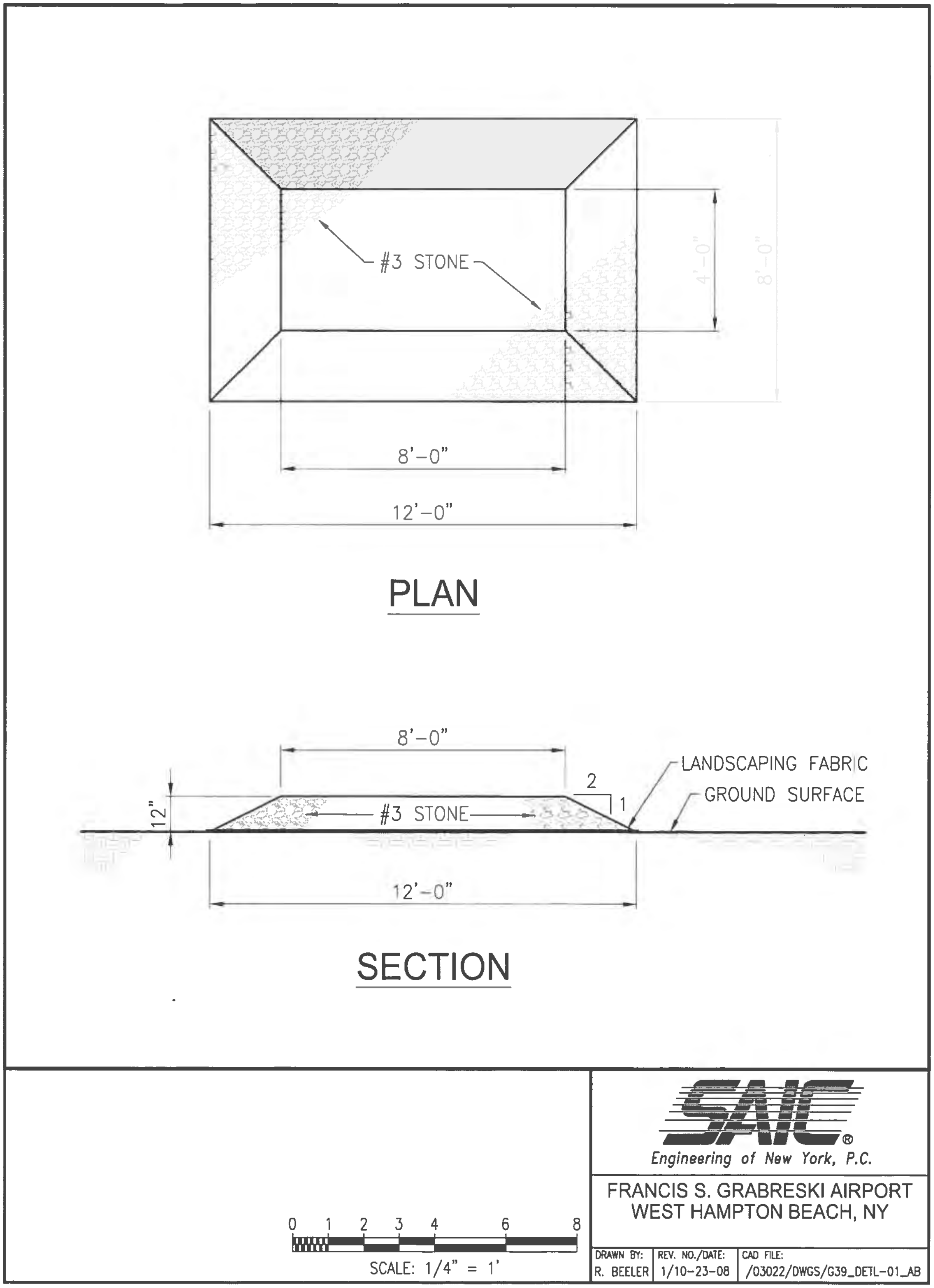


Figure 6-4. Air Biosparging Pad As-Built Detail

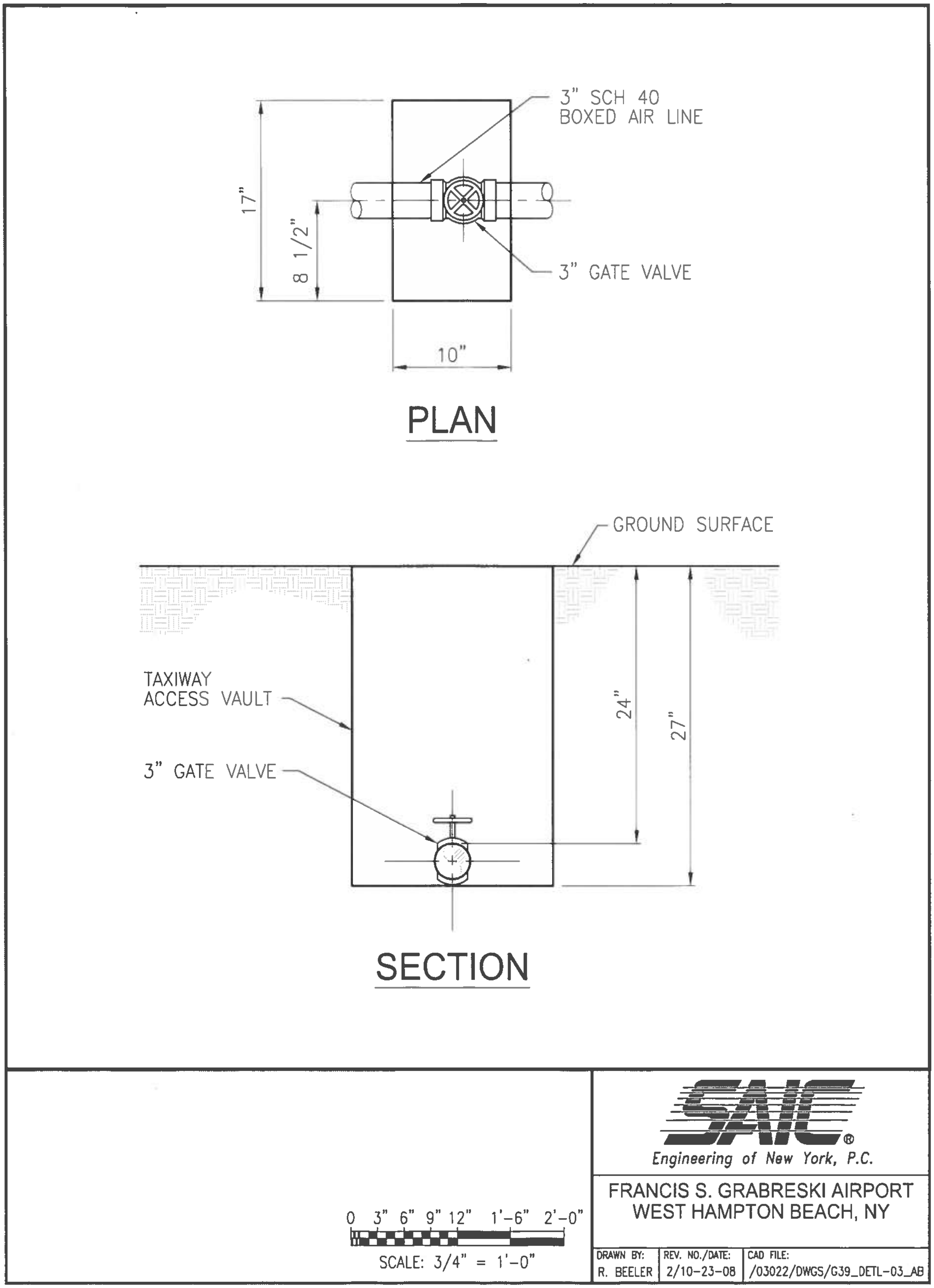


Figure 6-5. Taxiway Access Vault As-Built Detail

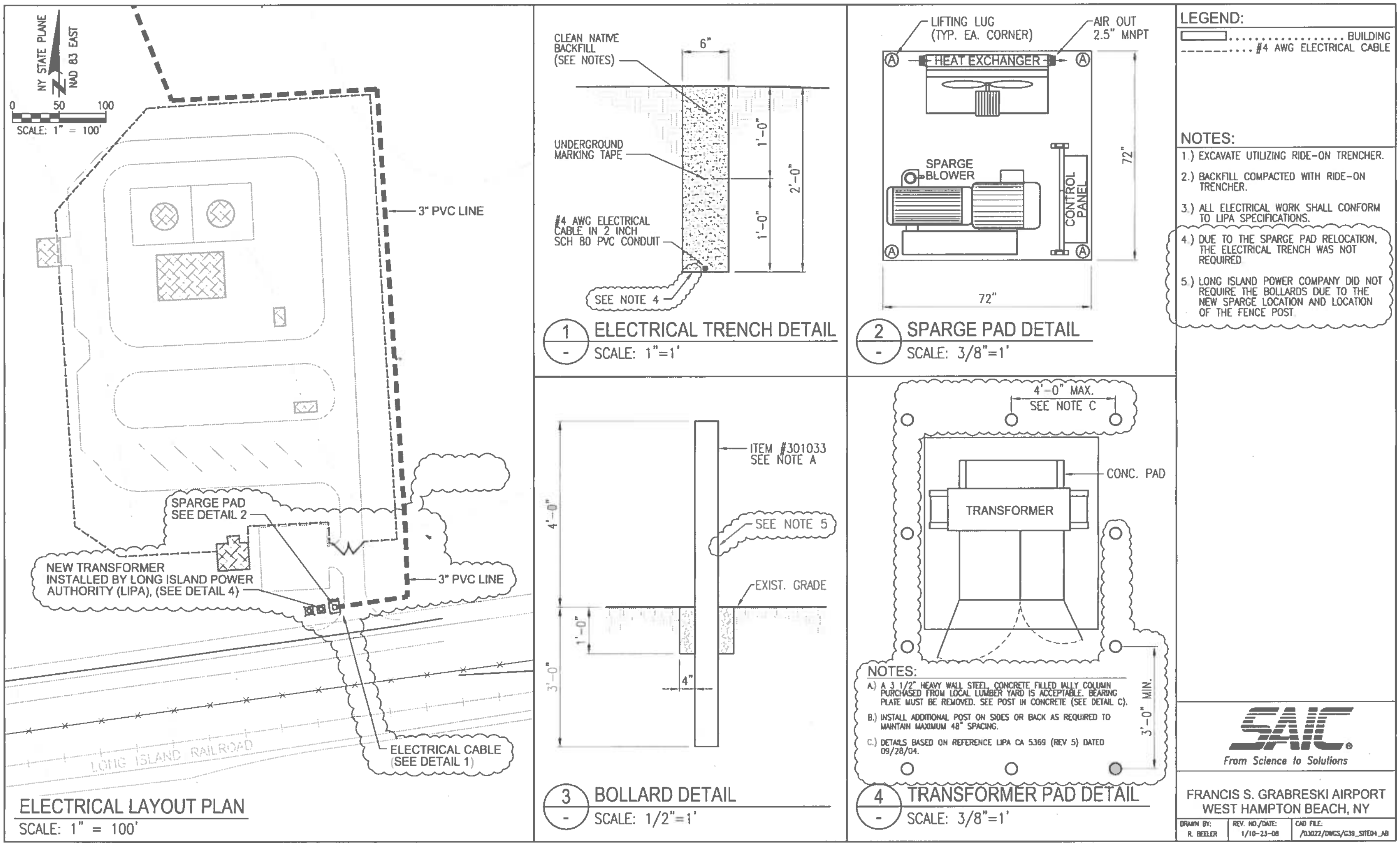


Figure 6-6. Electrical Layout and As-Built Details

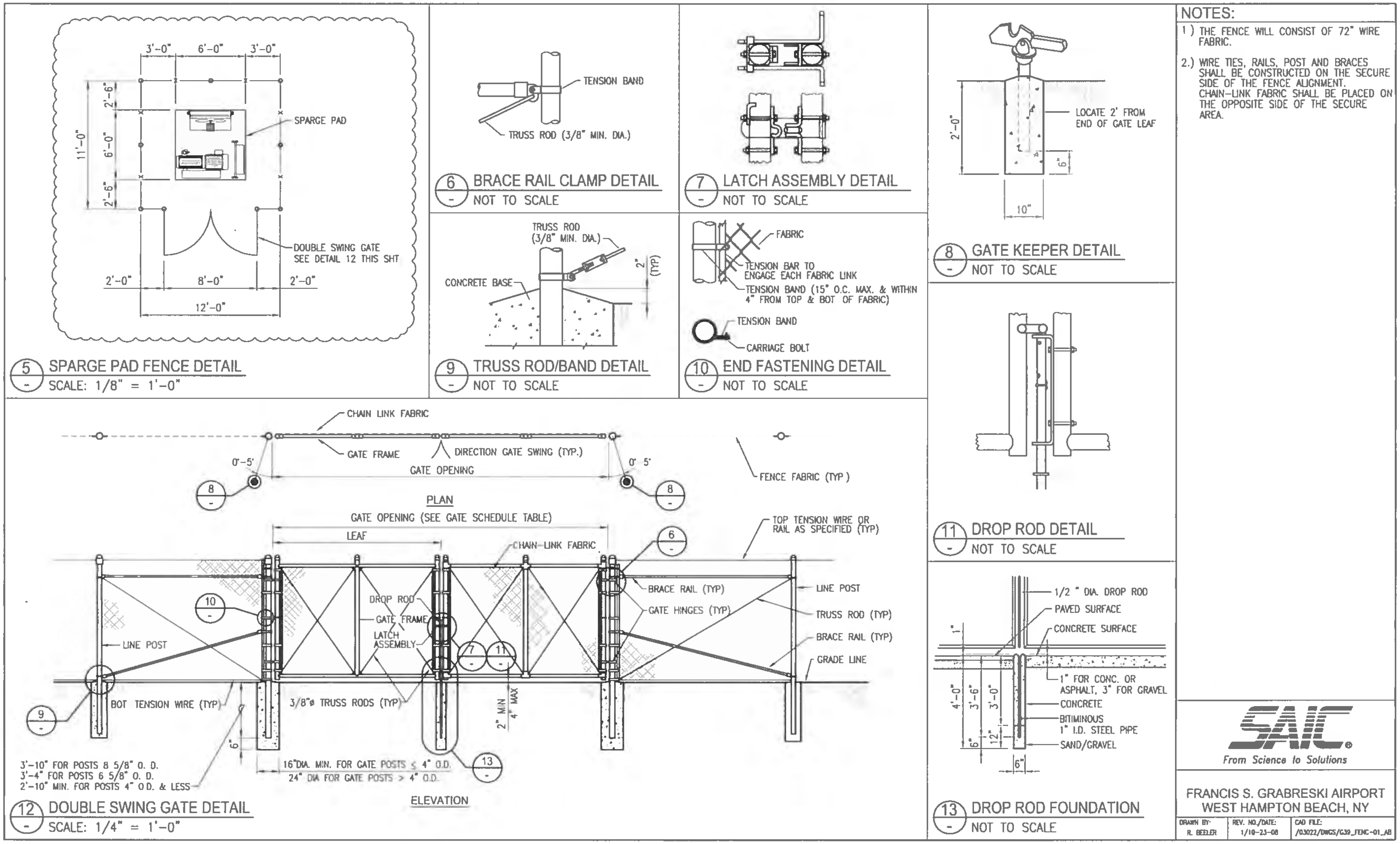


Figure 6-7. Fence As-Built Details

2013 Final Remedial Action Optimization

Construction Completion Report

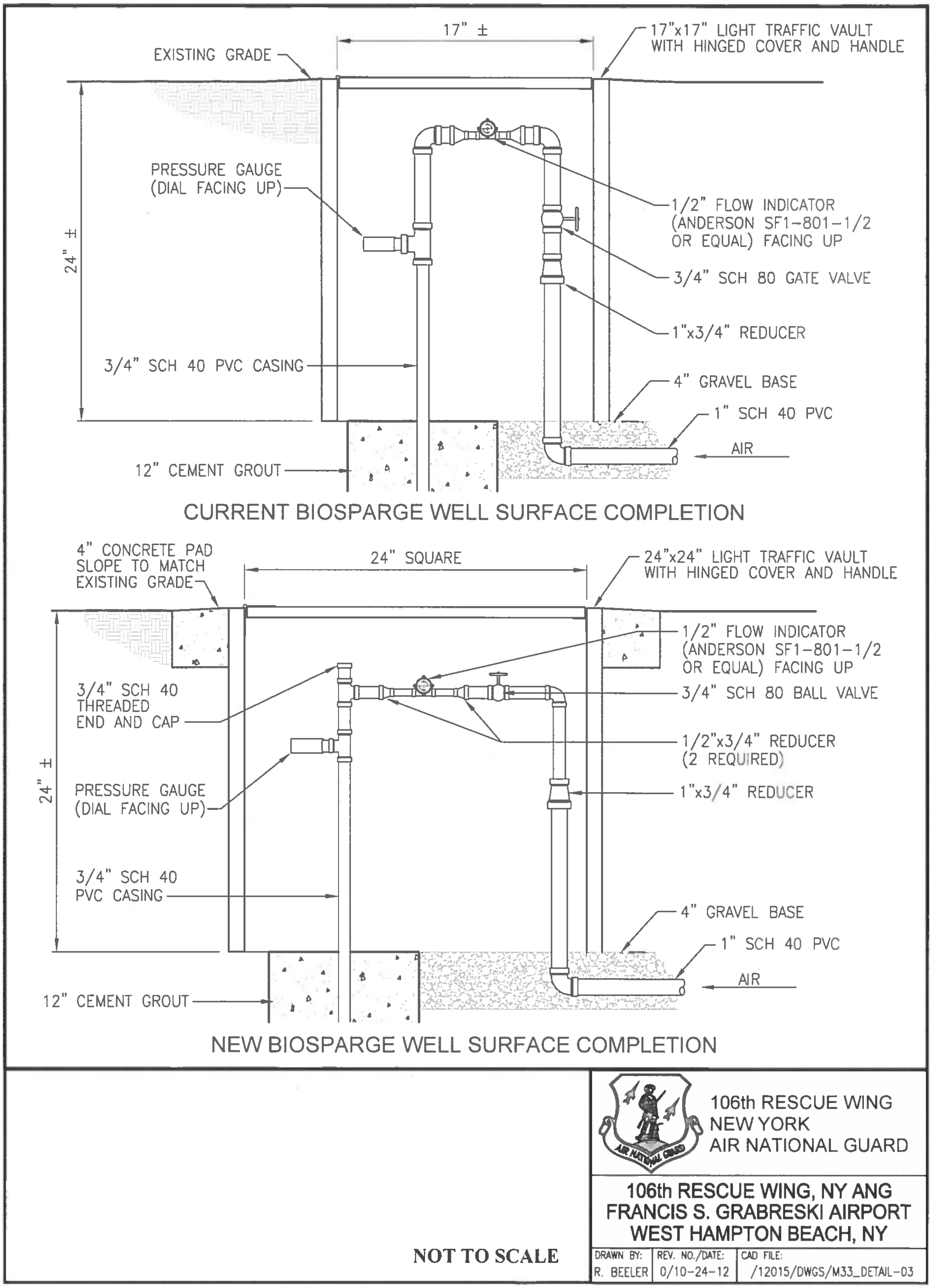
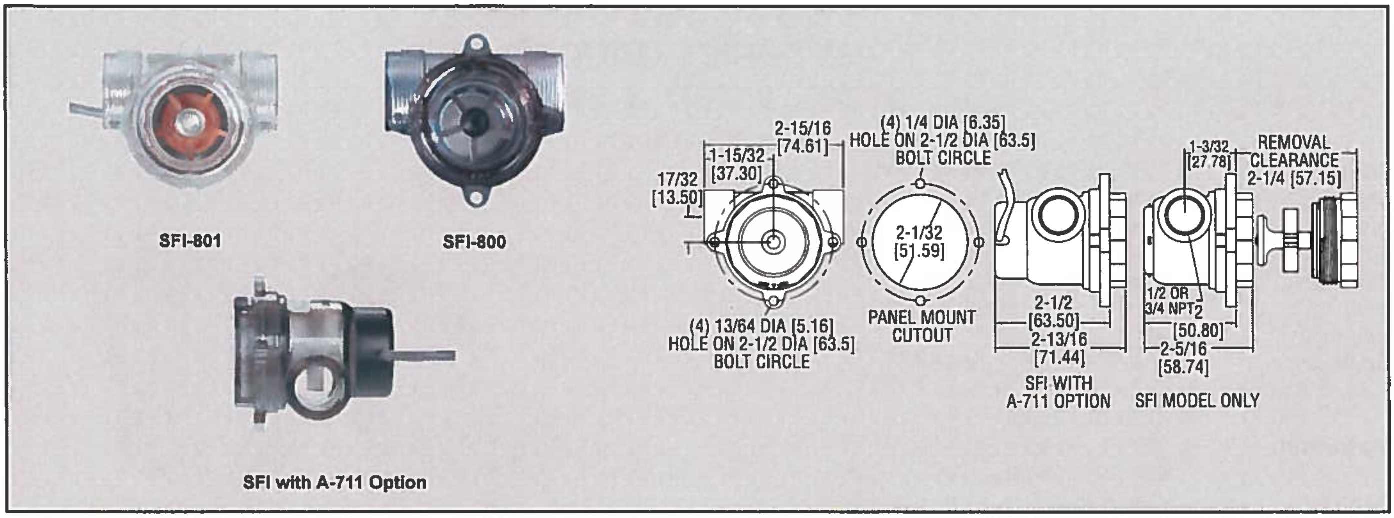


Figure 6-3. Control and Monitoring Detail for New and Existing Sparge Points

Series SFI-800

Sight Flow Indicator/Transmitter

Low Cost, Optional Output for Flow Rate and Totalization
UV Stabilized Polycarbonate Model



The Series SFI-800 Sight Flow Indicator is a low cost, durable rotor style flow indicator with optional Hall effect magnetic output packages for remote flow monitoring. Both SFI-800 and 801 models are constructed of clear plastic enabling 360° viewing of the spinning rotor for easy flow indication. SFI-800 models are constructed of polysulfone with excellent chemical compatibility, high pressure and temperature ratings, and all wetted materials are FDA/NSF ratable for potable water applications. SFI-801 models are constructed of UV stabilized polycarbonate making them ideal for outdoor applications (materials do not meet FDA/NSF). The SFI-801 models also feature an easy view bright red impeller.

Body and Sensors Attached:
To order **A-711** attached to flow indicator body add suffix -A711 to the body part number.
Example: **SFI-800-1/2-A711**

To order **A-712** attached to flow indicator body add suffix -A712 to the body part number.
Example: **SFI-800-1/2-A712**

To order **A-713** attached to flow indicator body add suffix -A713 to the body part number.
Example: **SFI-800-1/2-A713**

SENSOR ONLY

Model	Description
A-711	Pulsed Output
A-712	1 to 10 VDC
A-713	Two Open Collectors

***Sensor only, not attached to the flow indicator body.**

BODY ONLY

Model	Description	Range GPM (LPM)	Connection Female NPT
Polysulfone Body			
SFI-800-1/2	Indicator Only	2-20 (7.6-75.5)	1/2"
SFI-800-3/4	Indicator Only	3-35 (11.4-132.5)	3/4"
SFI-800-1/2-LF	Indicator Only	0.5-6.5 (1.9-24.6)	1/2"
Polycarbonate Body			
SFI-801-1/2	Indicator Only	2-20 (7.6-75.5)	1/2"
SFI-801-3/4	Indicator Only	3-35 (11.4-132.5)	3/4"
SFI-801-1/2-LF	Indicator Only	0.5-6.5 (1.9-24.6)	1/2"

SPECIFICATIONS
Service: Compatible fluids.
Wetted Materials
Body: SFI-800: Polysulfone; SFI-801: UV stabilized polycarbonate;
Window: SFI-800: Polysulfone; SFI-801: UV stabilized polycarbonate;
Rotor: SFI-800: White polysulfone; SFI-801: Red UV stabilized PBT;
Rotor Pin: 316 SS;
Thrust washers: 300 Series SS;
O-ring: SFI-800: Fluoroelastomer (NSF grade); SFI-801: Buna-N.
Temperature Limits: SFI-800: -20 to 212°F (-29 to 100°C); SFI-801: -20 to 130°F (-29 to 55°C).
Pressure Limits: SFI-800: 150 psi (10.34 bar); SFI-801: 125 psi (8.62 bar).
Viscosity Max: 200 SSU.
Weight: SFI-800: 3.35 oz (95 g); SFI-800-A711: 5.0 oz (142 g).

ELECTRICAL SPECIFICATIONS (for A-711 Option Only)
Temperature Limits: -20 to 212°F (-29 to 100°C).
Power Requirements: 8 to 28 VDC.
Output Signal: White lead: 5 VDC; Green lead: 8 to 28 VDC equal to supply voltage. Pulsed output with frequency rate proportional to flow rate.
Accuracy: ±5% of F.S.
Frequency Output Range: 0 to 100 Hz.
Electrical Connections: Black lead - ground; White lead: 5 VDC out pulse; Green lead: 8 to 28 VDC out pulse; Red lead: 8 to 28 VDC supply.

ELECTRICAL SPECIFICATIONS (for A-712 option only)
Temperature Limits: -20 to 212°F (-29 to 100°C).
Power Requirements: 15 to 28 VDC.
Output Signal: White lead: 1 to 10 VDC.
Accuracy: ±5% of F.S.
Electrical Termination: Black lead: Ground; Red lead: 15 to 28 VDC input; White lead: 1 to 10 VDC output.

ELECTRICAL SPECIFICATIONS (for A-713 option only)
Temperature Limits: -20 to 212°F (-29 to 100°C).
Power Requirements: 8 to 28 VDC.
Output Signal: White lead: Normally open switch; Green lead: Normally closed switch. Both open collector, 100 mA max, 28 VDC max.
Electrical Connections: Black lead: Ground; White lead: Normally open; Green lead: Normally closed; Red lead: 8 to 28 VDC.

Figure 6-4. Flow Indicator Detail

600 S Grace Street • PO Box 4364 • Rocky Mount NC 27803
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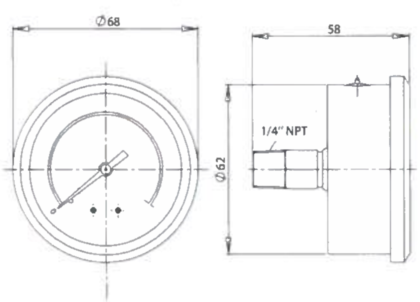
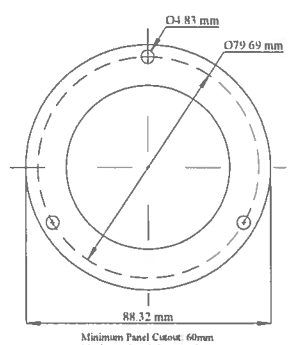
981 SERIES GAUGE
250BL, 250SD & 250SL
Specifications

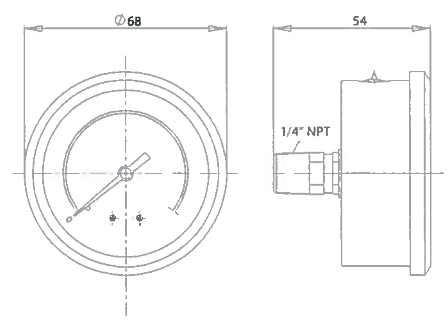
Sizes:	2½" - 250BL, 250SD & 250SL
Case:	Stainless Steel
Ring:	250BL - Crimped Stainless Steel 250SD & 250SL - Stainless Steel Bayonet
Window:	Acrylic
Dial:	White with black & blue scales
Pointer:	Black aluminum
Connection:	1/4" NPT Back & Lower*
Tube & Socket:	250BL -Brass/Bronze 250SD & 250SL - SS
Movement:	250BL - Brass 250SD & 250SL - SS
Ranges:	See Range Availability Chart Below All Ranges are dual scale PSI & Bar/Kpa
Accuracy:	ASME B40.1, Grade B. ± 3-2-3%
Liquid Fill:	Glycerine (BL & SL Models are liquid filled; SD is field fillable)
Options:	Front Flange or U-Clamp for panel mounting

	Vac	Vac/15	Vac/30	Vac/60	Vac/100	Vac/160	Vac/300	0/15	0/30	0/60	0/100	0/160	0/200	0/300	0/400	0/600	0/1000	0/1500	0/2000	0/3000	0/5000	0/6000	0/10,000
2½" 250BL 02L	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2½" 250BL O2B	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2½" 250SL 02L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2½" 250SL 02B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2½" 250SD 02L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2½" 250SD 02B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

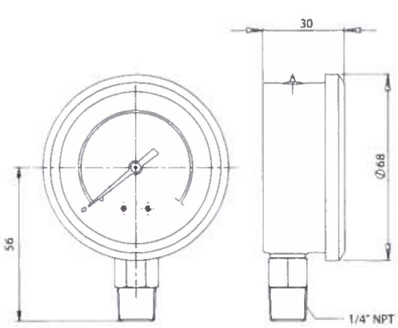


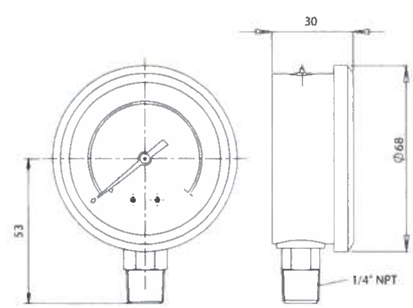
250BL





250SD & 250SL





All Dimensions are shown in mm

Figure 6-5. Pressure Gauge Detail

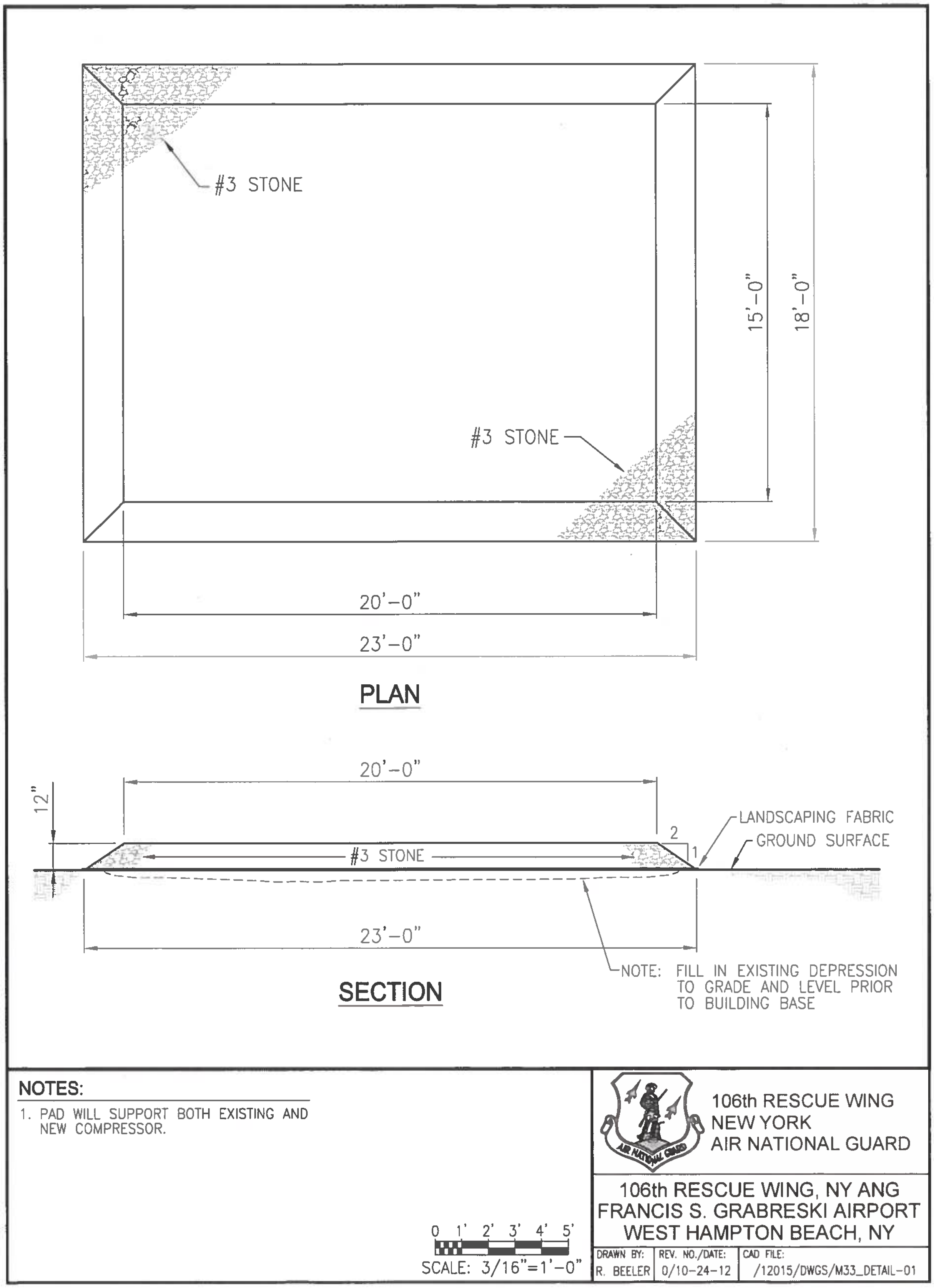


Figure 6-6. Pad Detail for Sparge Shed Installed on Ground Surface

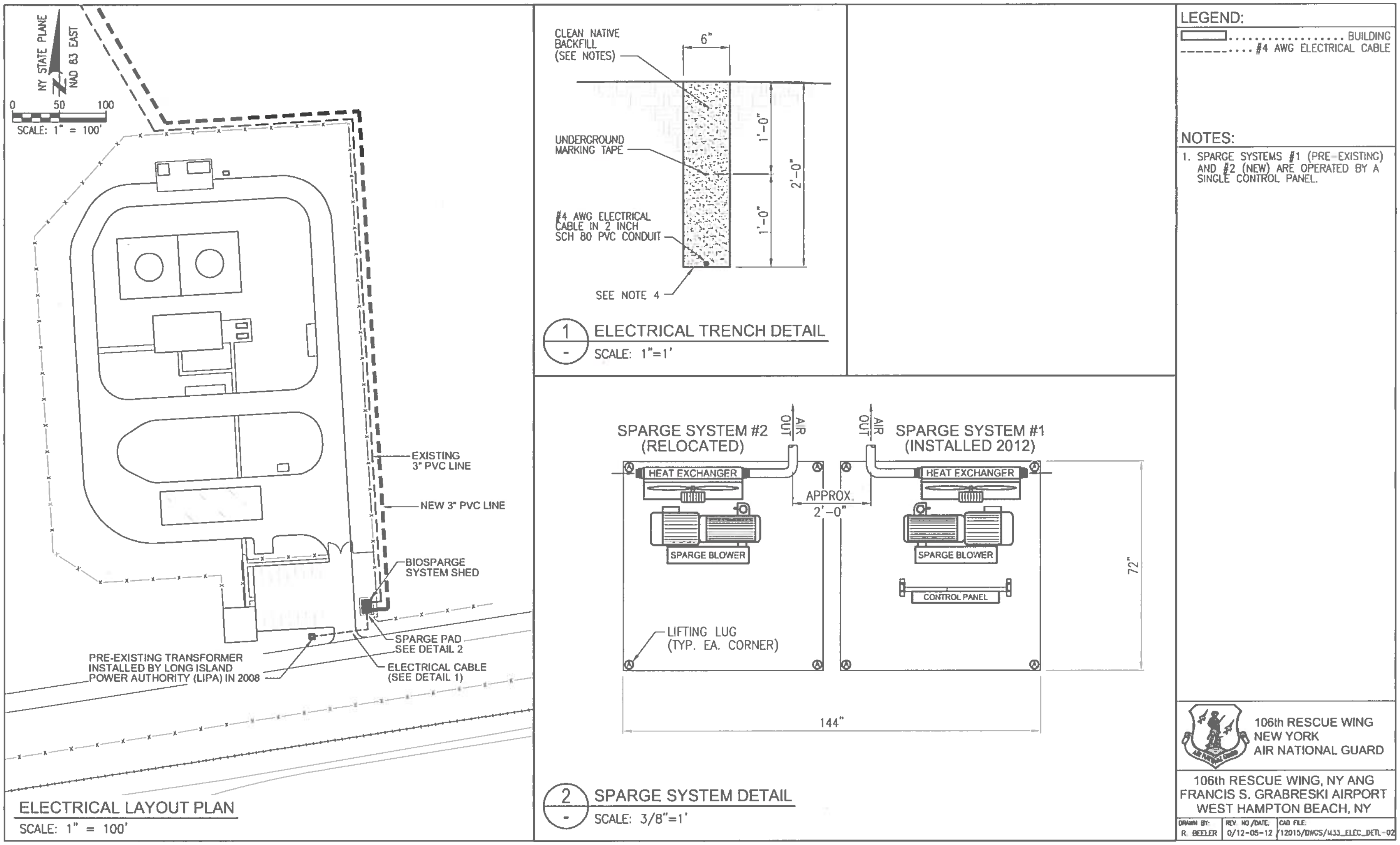


Figure 6-7. Electrical Layout and Details

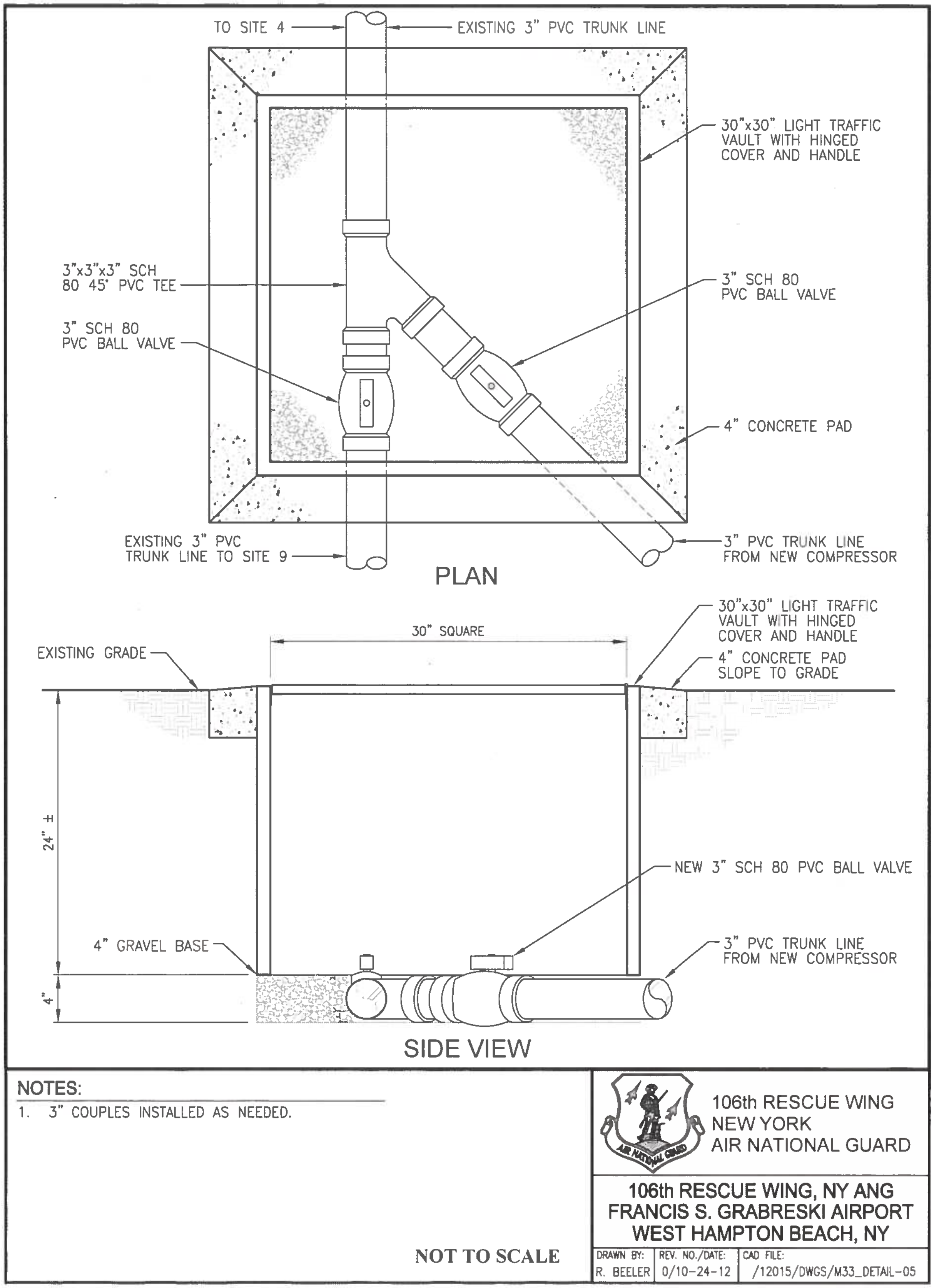


Figure 6-8. Existing and New Trunk Line Connection Detail

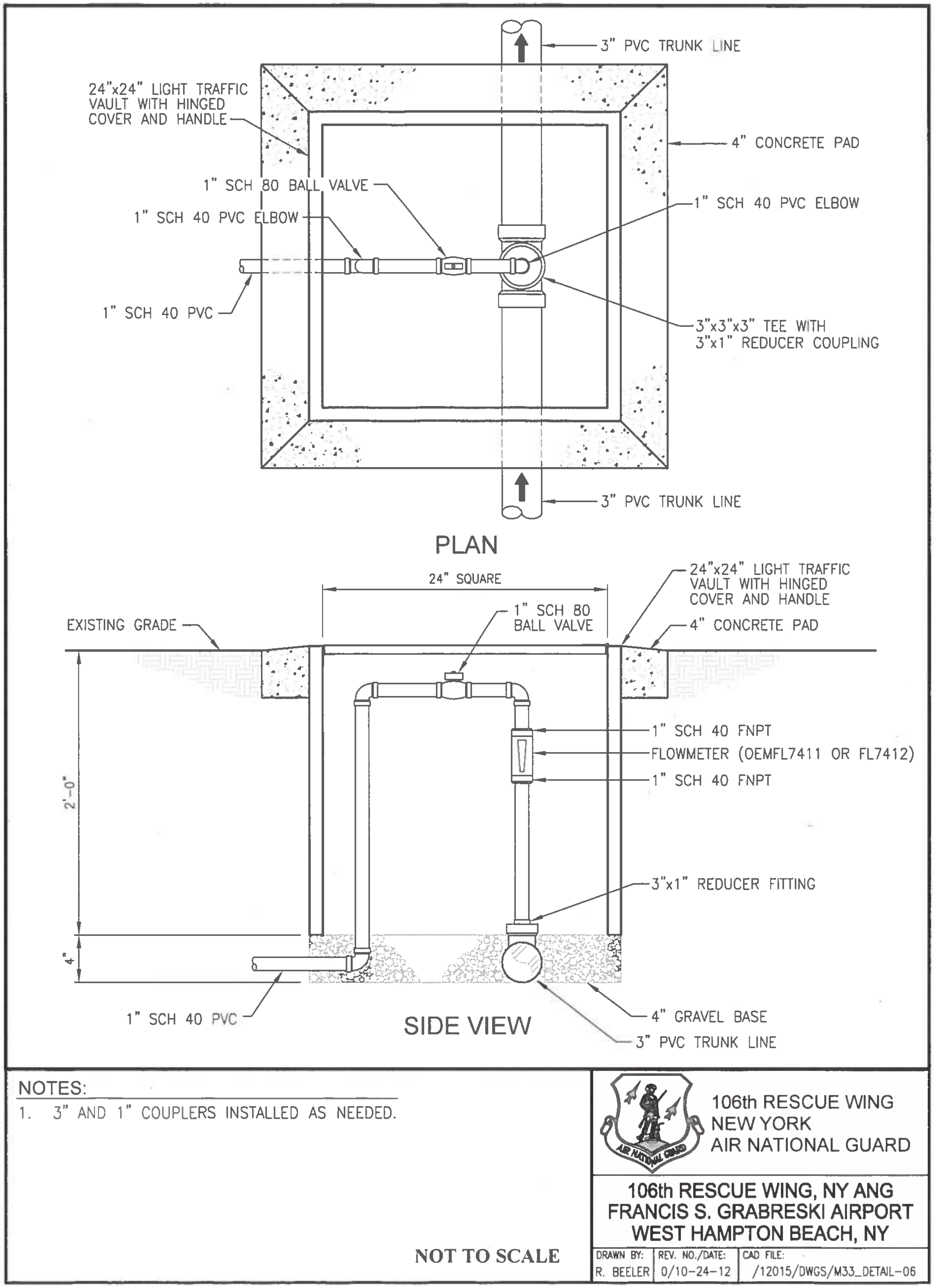


Figure 6-9. Control and Monitoring Valve Vault Between Trunk Line and Distribution Line Detail

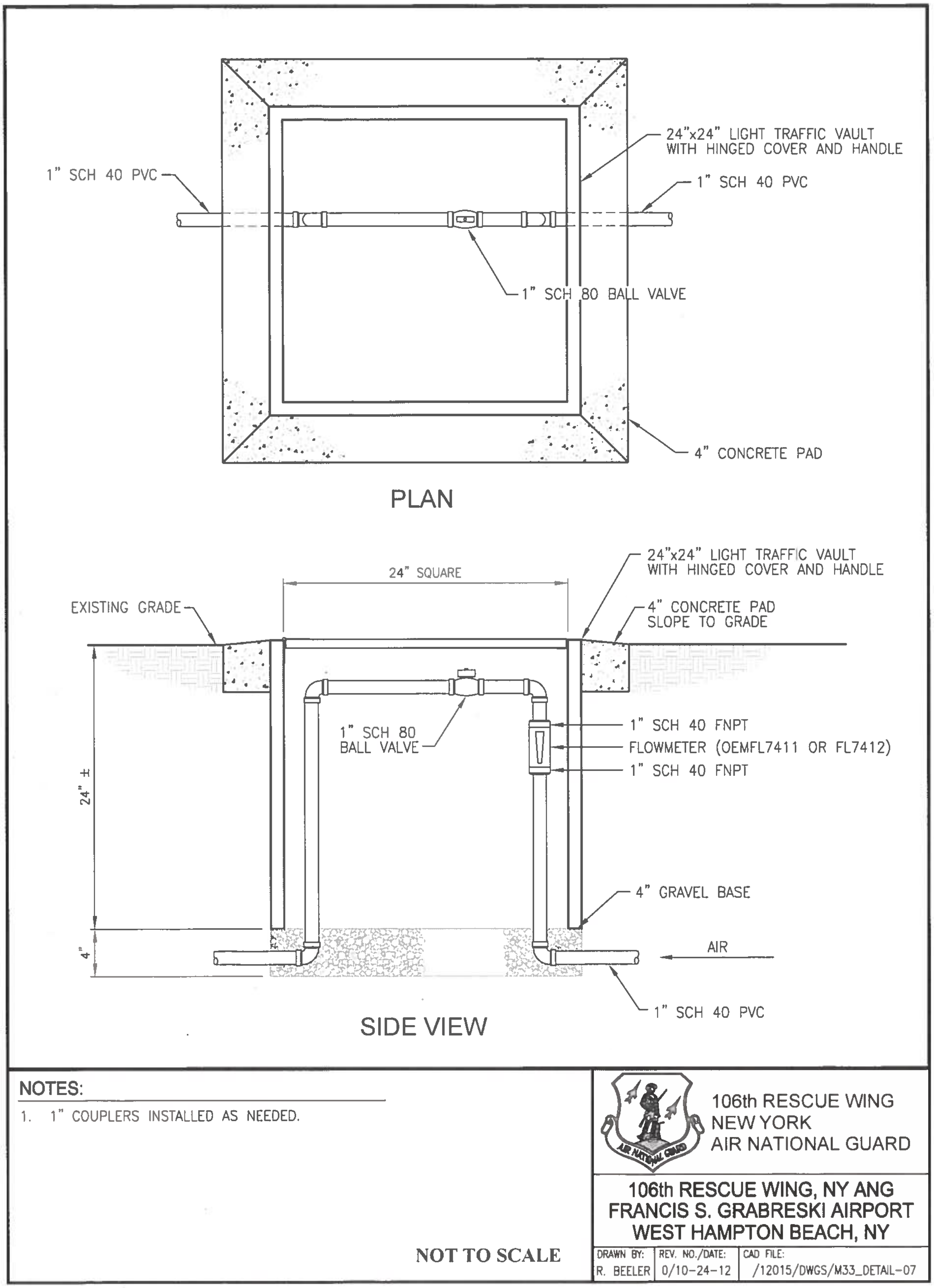


Figure 6-10. Control and Monitoring Valve Vault in Distribution Line Detail

OEM Style Acrylic Rotameters

FL7000 Series

MADE IN USA RoHS BY PARTS

OEM Style Acrylic Rotameters

Click for larger image.

FL7401

- 50 mm, 75 mm, 100 mm, 127 mm and 250 mm (1.97", 2.96", 5" and 9.85") Scale Lengths
- Floats Are Rod-Guided in Most Models
- Direct Reading Scales

View related products - Variable Area Flowmeters, Rotameters & Switches

scroll below To Order | Specs | Manuals | Related Products | Printer Friendly

FL7000 OEM-style rotameters are precisely machined from solid acrylic blocks. They are available in 50, 75, 100, 127, and 250 mm scale lengths (1.97, 2.96, 5, 3.94, and 9.85") and have accuracies between 2 and 6%.

SPECIFICATIONS

Construction: Acrylic tube, 316 SS float and guide rod (no guide rod for FL7211 through FL7215 air meters), PVC end fittings (brass on FL7200 series), EPR O-rings

Shipping Weights:
- **FL7200, 7300, 7500:** 0.45 kg (1 lb)
- **FL7400:** 0.79 kg (1.75 lb)
- **FL7600:** 1.25 kg (2.75 lb)

Max Pressure/Temperature:
- **Water Ranges:** 125 psig at 21°C (70°F); 54°C (130°F) at 0 psig
- **Air Ranges:** 100 psig at 21°C (70°F); 38°C (100°F) @ 0 psig

Full Scale Accuracy/Repeatability:
- **FL7200:** 6/2%
- **FL7300:** 6/1%
- **FL7400:** 4/1%
- **FL7500:** 3/½%
- **FL7600:** 2/½%

To Order (Specify Model Number) Add to Cart

What Other People Bought: When you see this icon, click on it to expand a list of products that other people have bought when they purchased this model.

Part Number	Availability	Price	Description	RoHS	Qty.

Figure 6-11. Flow Meter Detaill

2014 Final Remedial Action Optimization

Construction Completion Report

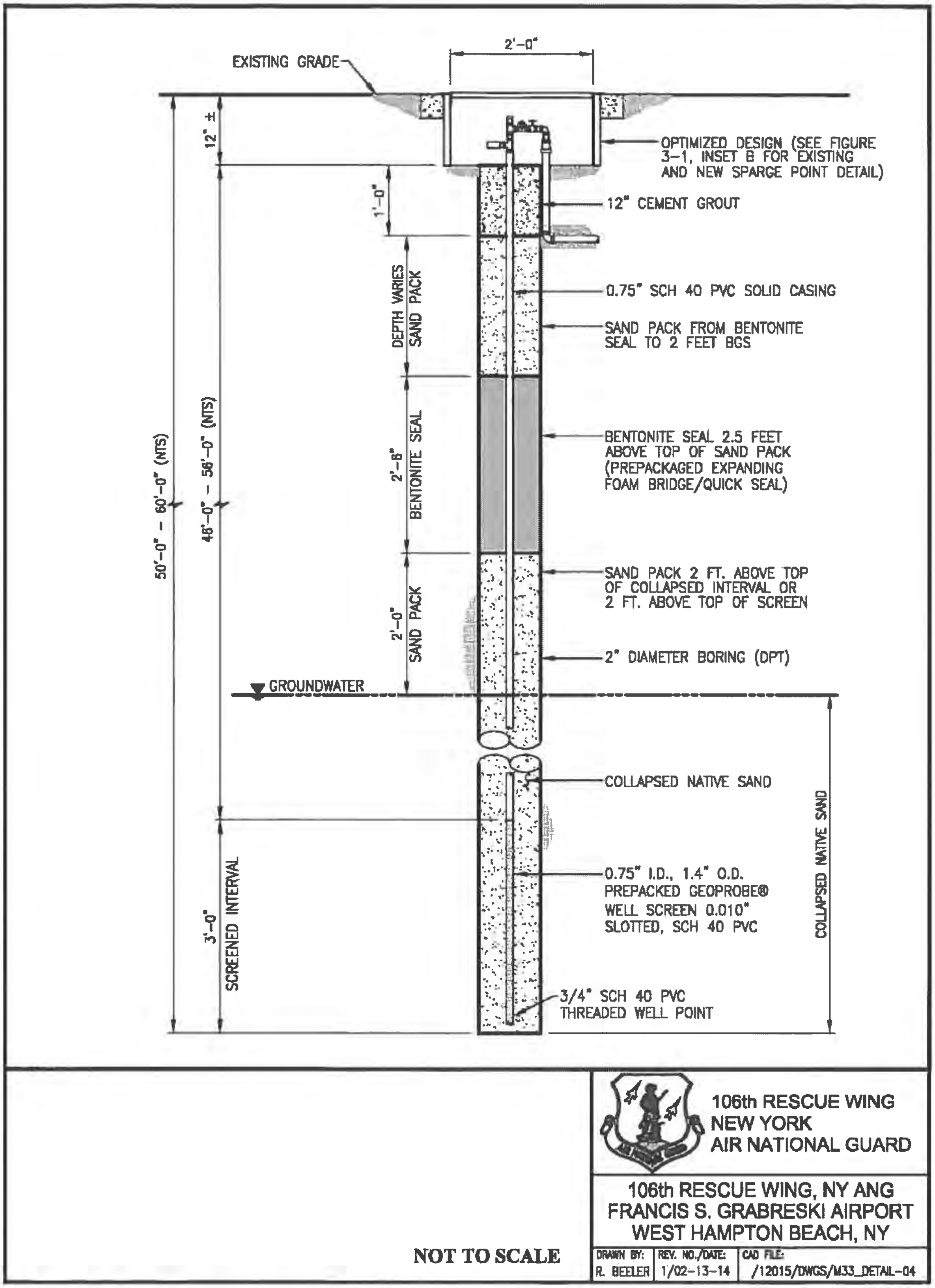


Figure 3-2. Sparge Point Detail Drawing

Appendix C
Air Biosparge System
Construction Photographs

2009 Final Remedial Action Completion Report

Photo 1.
Installation of Main Air Supply Line and Main Vault Just Prior to Section Running Beneath High Speed Taxiway

Photo 2.
View of Backfilled System Lines Across Site 4

Photo 3.
View of an Air Biosparging System Well Head With Pressure Gauge and Valve

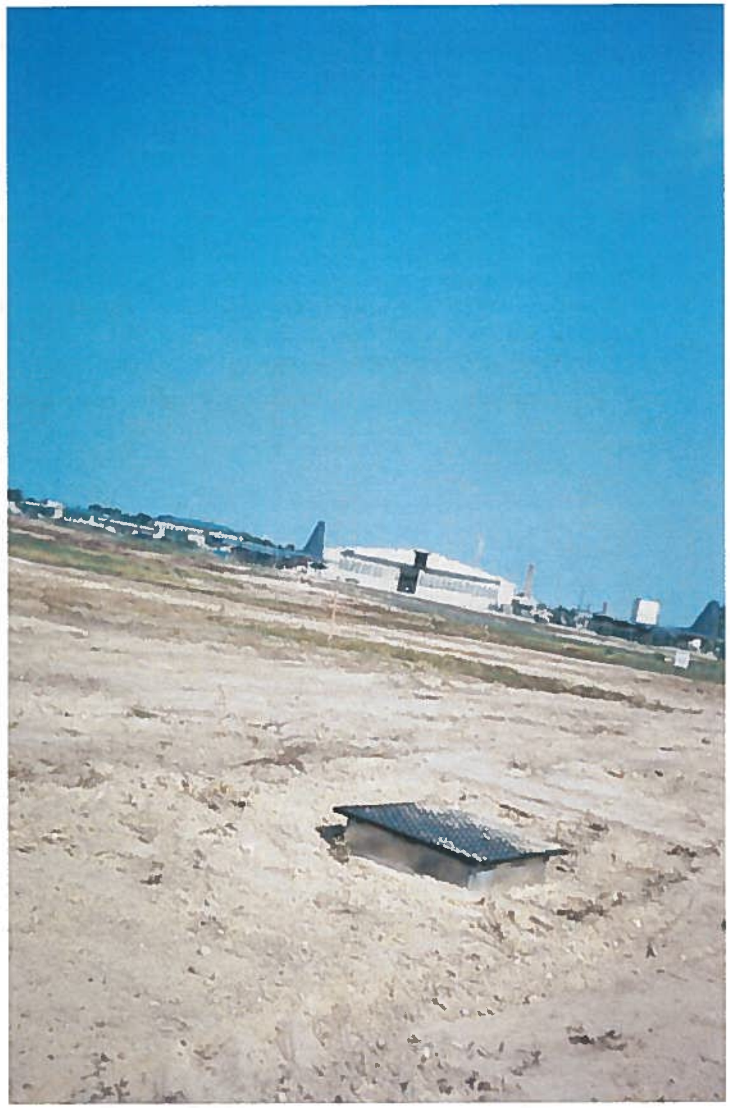


Photo 4.
View of Air Biosparging Well Vault Prior to Backfilling Vault Sides

Photo 5.
Directional Well Drill Rig Creating Borehole for Main Air Supply Line Beneath the High Speed Taxiway

Photo 6.
View of Directional Drill Rig Equipment in Operation

Photo 7.
Installation of Air Biosparging Well Vaults Across Site 9

Photo 8.
Air Biosparging Vault Installation and Backfilling of System Lines Across Site 4

Photo 9.
Backhoe Used for Backfilling Air Biosparging System Lines

Photo 10.
Sand Caved-In During Ditch-Witch Operation, Prompting Use of Backhoe to Install System Air Lines

Photo 11.
Tamper Used to Achieve Compaction Following Backfilling of System Air Lines

Photo 12.
Installation of Main Air Supply Line Across Site 9

Photo 13.
Change in Direction of Main Air Supply Line Around POL Yard

Photo 14.
Worker Measures Excavation to Ensure Consistent Depth for Air Supply Line

Photo 15.
Hand Clearance of Septic Line While Crossing Road in Site 9 Vicinity

Photo 16.
Installing Metal Utility Marking Tape to Facilitate Air Line Location with Metal Detectors

Photo 17.
Typical Completed Air Biosparging Well Vault

Photo 18.
WRS Compass was Contracted by Electrician to Excavate Area for New Electrical Vault and Transformer

Photo 19.
Site Restoration Included Mechanical Raking, Seeding with Gabreski ANG Seed Mix, and Hydro-Mulching (Green Coloration on Soil)

Photo 20.
Active Hydro-Mulching of Main Air Supply Line Run with Water Cannon, Adjacent to POL Yard

Photo 21.
Main Air Supply Run Following Raking, Seeding, and Hydro-Mulching

Photo 22.
View of Completed Air Biosparging System Compound with 10-ft High Chain Link Fence

2013 Final Remedial Action Optimization

Construction Completion Report

Photo 1: Future Air Supply Lines and Sparge Points are Marked

Photo 2: Installation of Compacted Base Layer Prior to Shed Installation

Photo 3: Views of Front (Top) and Side (Bottom) of Storage Shed

Photo 4: Interior View (Top) and Side Roll Door (Bottom) of Storage Shed

Photo 5: Pressure Testing of 3-in Trunk Line (Top) and Trunk Line North

Photo 6: Installation of New Biosparge Well Completion

Photo 7: Installation of New Sparge Vault

Photo 8: Installation of Sparge Vault with Utility Tape and Locater Wire

Photo 9: View of a Typical Sparge Vault at Completion

Photo 10: Installation of Electrical Supply Line

Photo 11: Installation of 1-in Branch Line to New Sparge Wells

Photo 12: Installation of New Biosparge Well Completion

Photo 13: Installation of New Biosparging Vault

Photo 14: Pressure Testing of 3-in Trunk Line

Photo 15: Excavation of 2-ft Trench for New Air Sparge LInes

Photo 16: Installation of New Air Sparge Lines

Photo 17: Backfilled Trench West of POL Yard

Photo 18: Backfilling Trenches and Installation of Locator Tape and Wire

Photo 19: View of Existing and New Trunk Line Connection

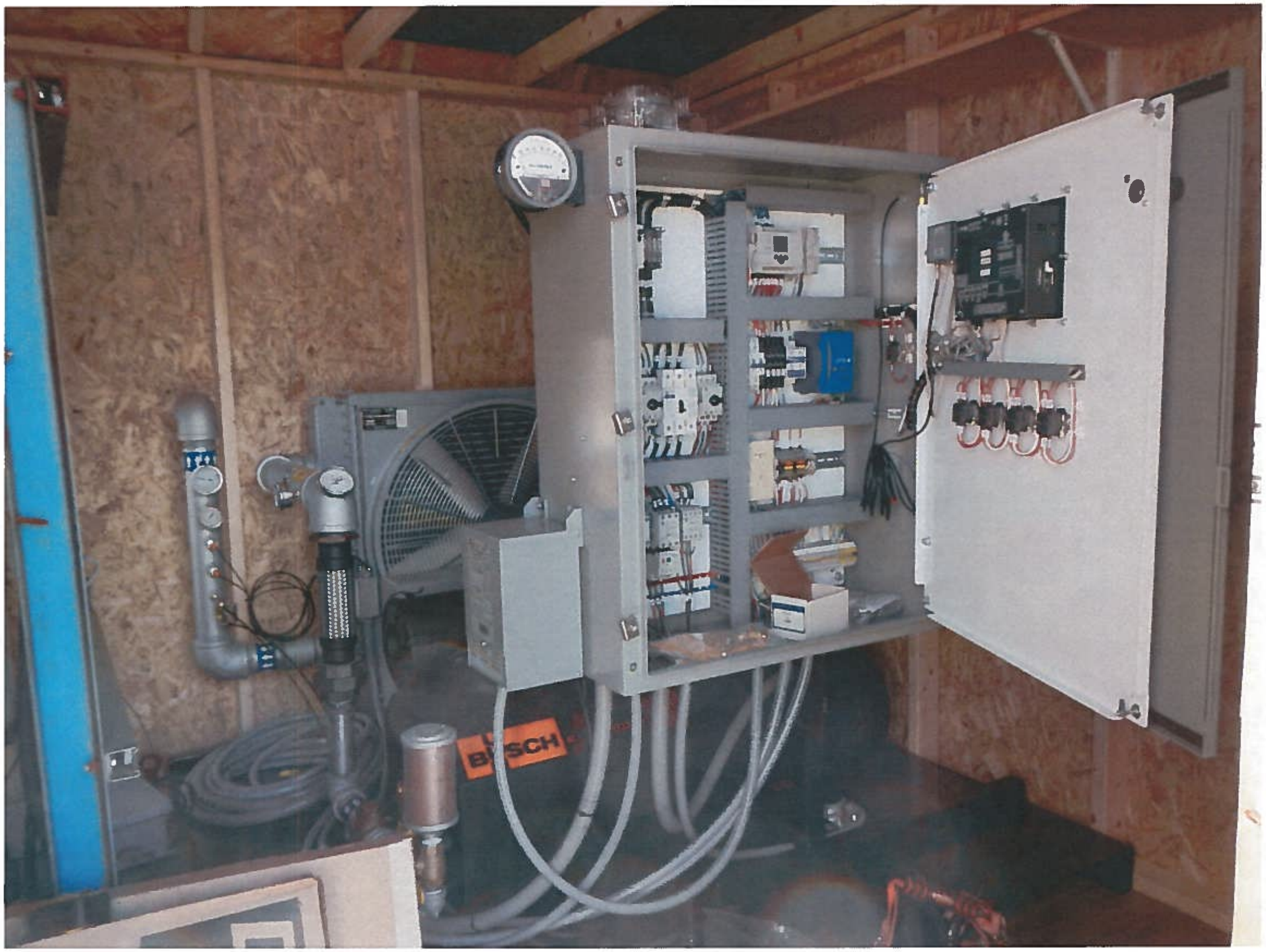


Photo 20: New Sparge System and Control Panel Inside Storage Shed

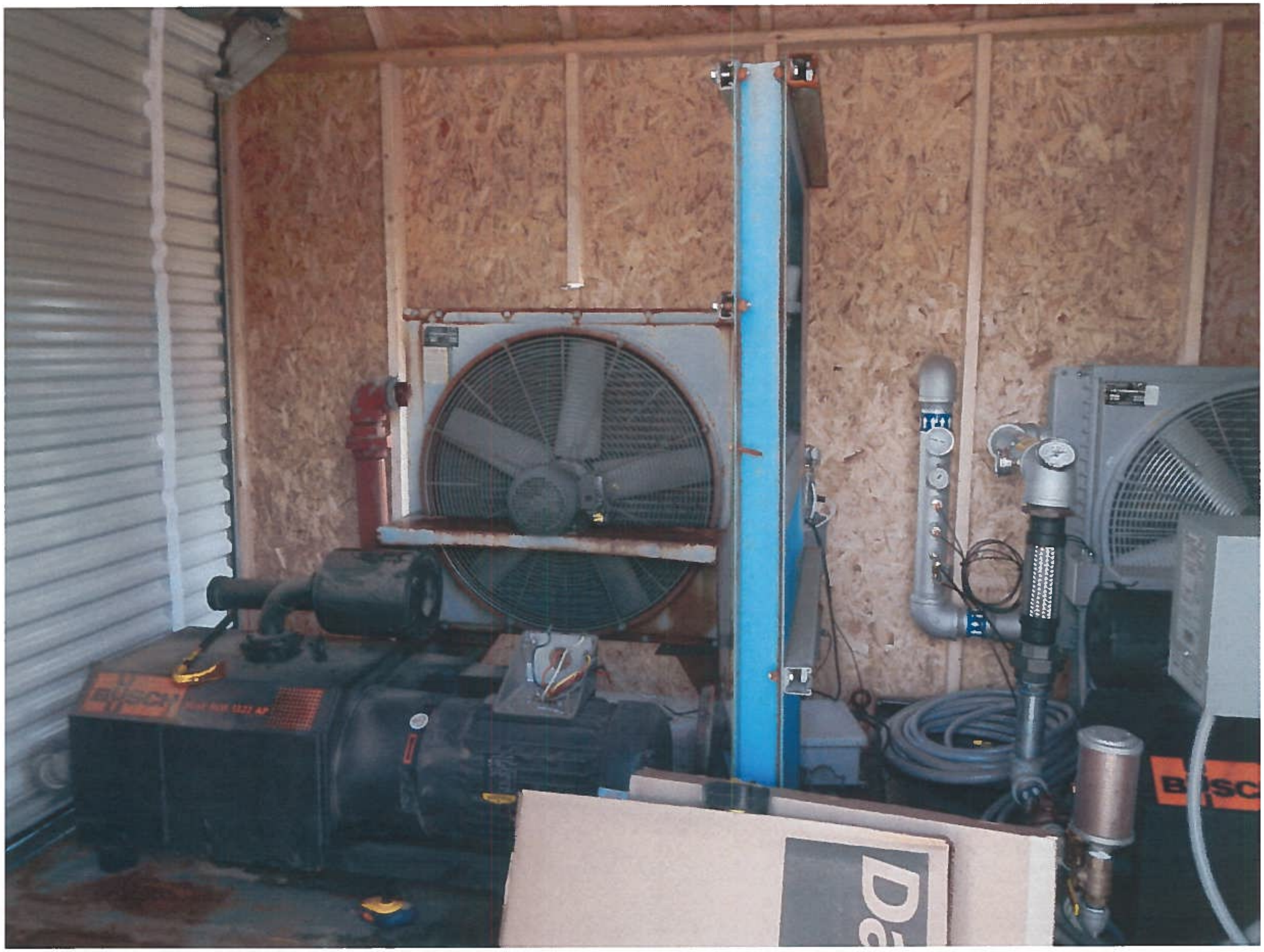


Photo 21: Existing Sparge System (Left) and New System (Right), Each with a Rotary Claw Compressor, Heat Exchanger, and Skid

Photo 22 : Vent Hoods Located on Back Side of Storage Shed

Photo 23: New and Existing Sparge Lines Into Storage Shed

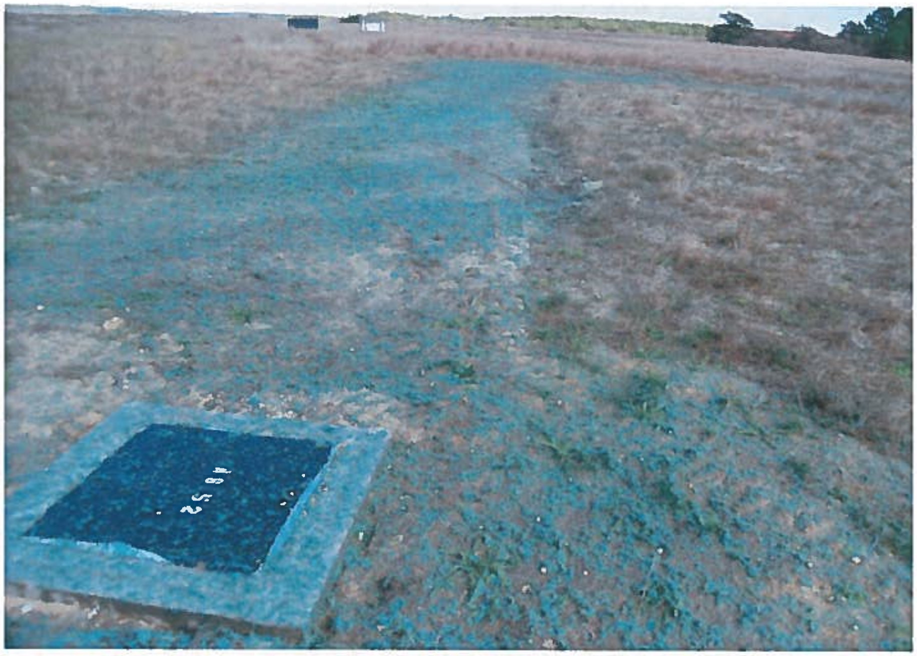


Photo 23: Disturbed land was restored using hydroseed

Photo 24: Hydroseeding At Completion

2014 Final Remedial Action Optimization

Construction Completion Report

1. Valve Vault Protective Measure Example

2. Valve Vault Protective Measure Example

3. Valve Vault Protective Measure Example

4. Valve Vault Protective Measure Example

5. Monitoring Well Protective Measure Example

6. Monitoring Well Protective Measure Example

7. PVC Piping Protective Measure Example

8. Trench to New AS-78 Sparge Well

9. Trench to New AS-78 Sparge Well

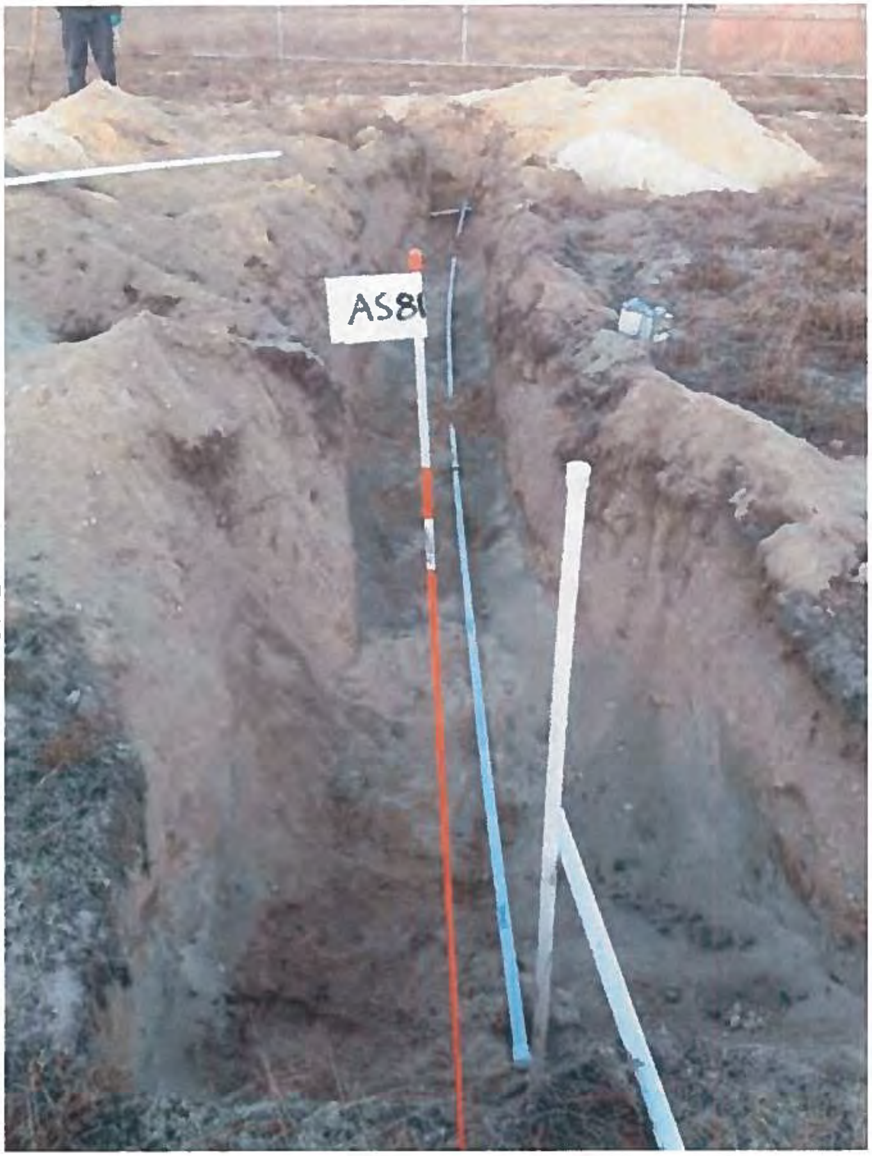
10. Trench to New AS-81 Sparge Well

11. Trench to New AS-81 Sparge Well

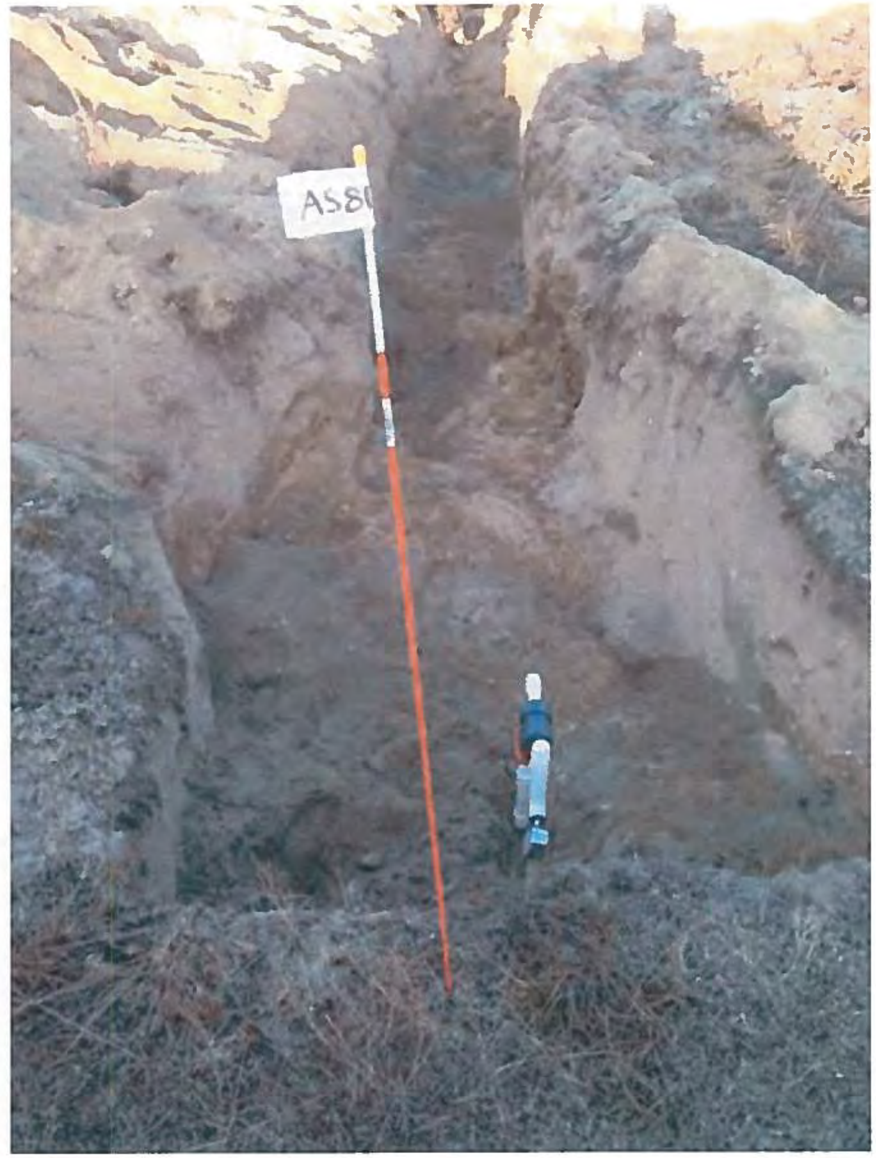
12. Trench to New AS-P2 Sparge Well

13. Trench to New AS-P2 Sparge Well

14. Utility Locate Wire Installation



15. PVC Piping Installation to AS-81 Sparge Well



16. PVC Piping Installation at AS-81 Sparge Well

17. PVC Piping Installation to AS-78 Sparge Well

18. PVC Piping Installation at AS-P2 Sparge Well

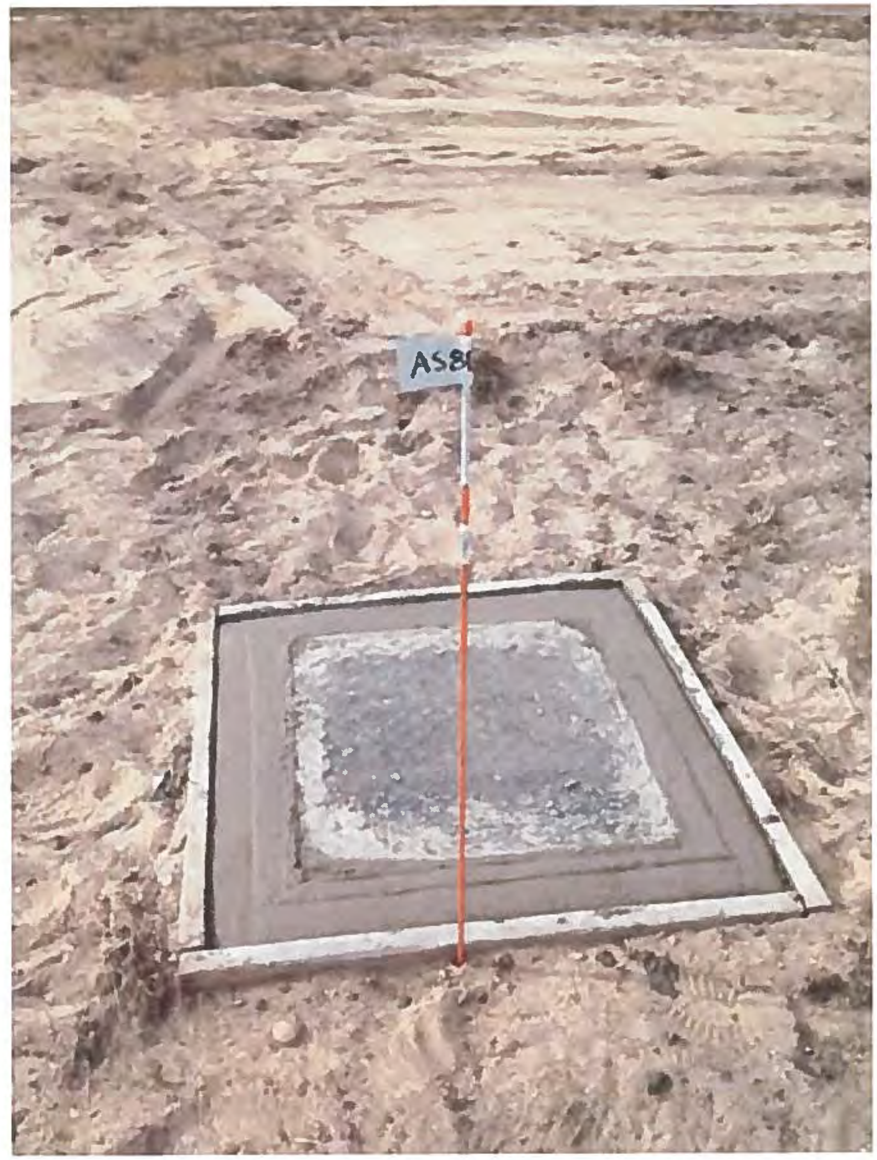
19. PVC Piping Installation to AS-78 and AS-P2 Sparge Well

20. PVC Piping Installation at AS-78 Sparge Well

21. Vault Placement at AS-78 Sparge Well

22. Concrete Placement at AS-78 Sparge Well

23. Utility Locate Wire Installation at AS-81



24. Concrete Placement at AS-81 Sparge Well

25. PVC Piping Installation to AS-67 Sparge Well

26. PVC Piping Installation to AS-66 and AS-67 Sparge Well

27. Vault Placement at AS-66 Sparge Well

28. Vault Placement at AS-66 Sparge Well

29. Vault Placement at AS-66 Sparge Well

30. Utility Locate Wire Installation at AS-66