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Final Remedial Investigation/Feasibility Study Work Plan

Saint-Gobain Performance Plastics Site
14 McCaffrey Street
Village of Hoosick Falls
Rensselaer County, New York

Mr. Edward J. Canning
Director of Health, Safety & Environment
SAINT-GOBAIN PERFORMANCE PLASTICS, CORP.
14 McCaffrey Street
Hoosick Falls, New York 12090

I, Kirk Moline, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Draft Final Remedial Investigation/Feasibility Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Prepared by:

C.T. MALE ASSOCIATES
50 Century Hill Drive
Latham, New York 12110
(518) 786-7400
FAX (518) 786-7299

C.T. Male Project No: 14.4756

REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET, VILLAGE OF HOOSICK FALLS
RENSSELAER COUNTY, NEW YORK

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EXHIBITS

Exhibit 1:	1996 Parsons Phase I and Phase II ESA Reports, & 2016 Ramboll Site Sampling Results Report
Exhibit 2:	NYSDEC Comment Letter, June 10, 2016
	NYSDEC Comment Letter, August 19, 2016

ACRONYMS AND ABBREVIATIONS

ASP	Analytical Services Protocol
AWS	Alternate Water Supply
BGS	Below Ground Surface
°C	Degrees Celsius
CAMP	Community Air Monitoring Plan
CN	Cyanide
CP Plan	Citizen Participation Plan
DER	Division of Environmental Remediation
DO	Dissolved Oxygen
DQO	Data Quality Objective
DUSR	Data Usability Summary Report
EDD	Electronic Data Deliverable
EDR	Environmental Data Resources, Inc.
EDS	Electronic Data Summary
ESA	Environmental Site Assessment
FS	Feasibility Study
FSP	Field Sampling Plan
FWRIA	Fish & Wildlife Resources Impact Analysis
GPS	Global Positioning Equipment
HASP	Health and Safety Plan
HDPE	High Density Polyethylene
IDW	Investigation-Derived Waste
IRM	Interim Remedial Measure
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MWS	Municipal Water System
ng/g	Nanograms per gram (parts per billion)
ng/L	Nanograms per liter (parts per trillion)
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSGS	New York State Geological Survey
ORP	Oxidation-Reduction Potential
OSHA	Occupational Safety and Health Administration
PARCC	Precision, Accuracy, Reproducibility, Completeness, and Comparability
PARSONS	Parsons Engineering Science, Inc.
PCBs	Polychlorinated biphenyls
PFCs	Perfluorinated Compounds
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PID	Photoionization Detector
PPE	Personal Protective Equipment

PSAT	Pressure Sensitive Adhesive Tape
PTFE	Polytetrafluoroethylene
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RI	Remedial Investigation
Saint-Gobain	Saint-Gobain Performance Plastics Corporation
SC	Site Characterization
SCG	Standards, Criteria & Guidance
SCO	Soil Cleanup Objectives
SVOCs	Semi-Volatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TOC	Total Organic Carbon
TOGS	Technical Operations Guidance Series
TPH	Total Petroleum Hydrocarbons
μg/kg	Micrograms per kilogram (parts per billion)
μg/L	Micrograms per liter (parts per billion)
USEPA	United States Environmental Protection Agency
USGS	United State Geologic Survey
VOCs	Volatile Organic Compounds
WP	Work Plan

1.0 INTRODUCTION & PURPOSE

This document constitutes the Remedial Investigation/Feasibility Study (RI/FS) Work Plan RI/FS Work Plan for the Saint-Gobain Performance Plastics Corporation (Saint-Gobain) site (the "Site") located at 14 McCaffrey Street in the Village of Hoosick Falls, Rensselaer County, New York (see Figure 1: Site Location Map).

The NYS Department of Environmental Conservation (NYSDEC) has classified the Site as a Class 2 Inactive Hazardous Waste Disposal Site (Site No. 442046).

This RI/FS Work Plan has been revised to address comments to the plan in letters dated June 10, 2016 and August 19, 2016 from the NYSDEC Division of Environmental Remediation. These letters are presented in Exhibit 2. Based on discussions with NYSDEC staff during the June 28, 2016 project meeting regarding Comment #6, it was explained that the use of PFC containing products on the vertical tower coaters in the fabric department at the McCaffrey Street facility occurred until 2003. At that time, these coaters and the associated stacks were removed from the McCaffrey Street facility. As such, it was agreed that stack testing was not required.

The RI/FS Work Plan also incorporates verbal comments received from NYSDEC Project Manager, Rick Mustico, in a telephone conversation with Edward Canning of Saint-Gobain on July 6, 2016 regarding stack testing, roof top wipe sampling, and alternative on-site and off-site shallow surface soil sampling at rooftop down spouts and drip lines.

The purpose of this RI/FS Work Plan is to provide specific guidelines and to establish procedures for the RI/FS. The proposed investigation incorporates the findings of previous Site investigations. This RI/FS Work Plan is intended to augment the existing data, define the nature and extent of potential contaminant sources, and evaluate the fate and transport mechanisms applied to any identified contaminants so that the Site's conceptual model can be refined and an appropriate remedy can be developed for the Site. The FS will be conducted to develop and evaluate alternatives for contaminated media identified by the remedial investigation.

This RI/FS Work Plan outlines a systematic investigative approach specific to the Site considering its history, geology and hydrogeology, known or suspected contaminants, and surrounding land use. The goal of this RI/FS Work Plan is to support the development of potential remedial alternatives, as necessary, which will allow Saint-Gobain to develop an Interim Remedial Measures (IRM) Work Plan and/or a Remedial Action Work Plan for NYSDEC review, comment and approval.

This work plan was developed in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (May 2010) (DER-10) and NYSDEC 6 NYCRR 375 Environmental Remediation Programs (December 14, 2006).

2.0 SITE DESCRIPTION & HISTORY

2.1 Site Description

The Site is located at 14 McCaffrey Street in the Village of Hoosick Falls, Rensselaer County, New York. The Site is approximately 6.47 acres and is identified on the Rensselaer County Tax Map as parcel number 37.06-3-1. The majority of the Site is improved with an approximate 60,000 square foot manufacturing building with associated entranceways, accessways, parking lots and loading areas. The northwestern portion of the Site consists of unimproved wood land.

The Site building was reportedly built in 1961. Additions to the original building were completed in 1966 and 1975. The 1961 Building is a slab-on-grade, single-story, wood-frame constructed rectangular building that makes up the northwestern portion of the overall building footprint. The 1966 Building is a slab-on-grade, four-story, steel reinforced concrete constructed building that makes up the central portions of the overall building footprint. The 1975 Building includes two (2) interconnected slab-on-grade, single-story, corrugated metal warehouse structures that make up the southern portion of the overall building footprint. Two (2) aboveground propane tanks are located on southern portions of the Site.

The Site slopes from the northwest towards the southeast with a steep drop in elevation of approximately 20 feet in central portions of the Site. The 1961 Building sits atop the highest portion of the Site. The 1966 and 1975 Buildings lie at an elevation that is approxiamtely 20 feet lower than the 1961 Building. Lands surrounding the Site slope to the east, southeast, south and southwest (see Figure 2: Proposed Sampling Locations Plan).

The Site is accessed from McCaffrey Street. A paved parking lot for employees and visitors is located to the northeast and northwest of the manufacturing building. Access ways for company, shipping and delivery vehicles are located along the southern and western portions of the manufacturing building.

2.2 Adjacent Land Use

Land use adjacent to the Site consists of residential dwellings and the Village of Hoosick Falls sewer pump station to the north, and residential dwellings and undeveloped land to the east. Land use to the south and west of the site includes: the Hoosic River Greenway (former railroad track); wooded, undeveloped land; the Village of Hoosick Falls water supply well field, water treatment plant and highway garage; and the Hoosic River.

2.3 Site History

The Site is currently occupied and operated by Saint-Gobain, who acquired the Site in 1999. Saint-Gobain currently uses the Site for the manufacture of pressure sensitive adhesive tape (PSAT) products.

Prior to 1961, the site reportedly consisted of undeveloped land. The Site building was reportedly first developed in 1961 for Dodge Fibers Corporation to produce extruded tapes and later circuit board laminates. The Site was acquired by Oak Materials Group (Oak Electronetics) in 1967 and then by AlliedSignal Fluorglas in 1987 to manufacture polytetrafluoroethylene (PTFE) coated fiberglass. The Site was then acquired by Furon in 1996 and Saint-Gobain in 1999.

2.4 Site Utilities

Electricity is supplied to the Site by National Grid. Municipal water and sanitary sewer service are provided by the Village of Hoosick Falls. There are no known water supply wells within the Site. Liquid propane is used for heating and manufacturing purposes.

2.5 Site Drainage Features

There are no storm sewer catch basins on the Site. The Site's storm water sheet flows over impervious surfaces into surrounding vegetated areas. Precipitation that accumulates on the building rooftops is channeled into a roof drain that reportedly discharges to a public sanitary sewer overflow manhole/piping located to the east of the Site. The overflow piping discharges along the bank of the Hoosic River, south of the Site.

Domestic sewage and floor drains within the 1961 Building are gravity fed into a public sanitary sewer manhole located on the north-central portion of the Site. Sewage and floor drain discharges from the 1966 Building enter a sewage ejector pit within the lowest section of the building from which it is pumped into a second public sewer manhole located on the northeastern portion of the Site. The sewer manholes discharge to the Village of Hoosick Falls sewer pump station located along the northern side of Carey Avenue, approximately 50 feet northeast of the Site's northeastern property line.

According to the FEMA website mapping, the southeastern portions of the 1966 and 1975 Buildings are located in areas designated as "Other Flood Areas" which are defined as areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than one (1) foot or with drainage areas less than one (1) square mile; and areas protected by levees from 1% annual chance flood. Remaining southern and southeastern portions of the Site are located within a 100 year flood plain.

2.6 Topographic Description and Nearby Surface Water Bodies

According to the United States Geological Survey (USGS) Topographic Map in Figure 1, the subject Site lies approximately 430 to 460 feet above Mean Sea Level. The Site slopes from the northwest towards the southeast with a steep drop in elevation of approximately 20 feet in central portions of the Site. Lands surrounding the Site slope to the east, southeast, south and southwest.

The Hoosic River is located approximately 180 feet southwest of the Site's southern property boundary. The Hoosic River flows in a general westerly and northerly direction in the Site's vicinity. Low-lying wet areas are located in vegetated areas to the south and southeast of the Site.

2.7 Site Geology

2.7.1 Regional Geologic Setting

Hoosick Falls lies in the New England Upland (Taconic Range) physiographic province. The bedding planes of the bedrock are often inclined, and other distortions from the horizontal are evident. These are the result of thrust and folding pressures exerted from the east as a landmass moved gradually westward during the middle Ordovician Taconic mountain-building episode. This westward movement stacked and displaced large deposits of clay, sand, gravel and carbonates, which had accumulated on the floor of a deep ancient sea, moving then along faults as slices of rock that became intermixed and stratigraphically disordered. Bedrock underlying the Site is mapped as the Walloomsac Formation which consists of slate, phyllite, schist and meta-graywacke.

Glacial sediment deposits overlay the bedrock surface, resulting in deposits of sands, gravel, silt, clay and glacial till. Compact glacial till underlies the higher elevation northern portions of the Site. The remaining portions of the Site are underlain by glacial fluvial outwash consisting of various percentages of sand, gravel, silt and clay.

2.7.2 Site Geologic Conditions

Test borings were advanced during a Site investigation conducted by others in 1996 (see Section 2.9). The borings were advanced to total depths ranging from 8.5 to 17.5 feet below ground surface (bgs). The borings depicted fill material underlain by glacial till and bedrock. The fill material was encountered to a maximum depth of 2.7 feet bgs and generally consisted of sand and silt with minor percentages of silt and clay. The till consisted of varying percentages of silt, gravel and sand with minor clay. Bedrock underlying the till was identified as greywacke.

Test borings were advanced during a preliminary Site investigation conducted by C.T. Male Associates in 2015 (see Section 2.9). The borings were advanced to total depths ranging from 19 to 45 feet bgs. Bedrock, identified as slate, was encountered in all of the borings at depths ranging from 19 to 43 feet bgs. Glacial till was encountered in the borings completed in northern portions of the Site and was not encountered in borings completed in low-lying southern areas of the Site. The subsurface lithology for borings completed in northern portions of the Site consisted of alternating layers and occurrences of sand and gravel; sand and silt; sand, silt and gravel; and sand, silt, gravel and clay. Glacial till consisting of sand, silt and gravel with minor amounts of clay, was encountered at depths ranging from 12 to 15 feet bgs. The till was 8 to 12 feet in thickness. The subsurface lithology of borings completed in low-lying southern areas of the Site consisted of alternating layers and occurrences of sand and silt; sand and gravel; and sand, gravel, cobbles and silt.

2.7.3 Site Hydrogeologic Setting

Two (2) hydro-stratigraphic units were identified on the Site during the past investigations. A shallow unconfined hydro-stratigraphic unit was encountered throughout the Site. A deeper hydro-stratigraphic unit was present in the northern portion of the Site underlain by glacial till. Groundwater movement in the shallow hydro-stratigraphic unit is generally from northwest to southeast. Groundwater movement in the deep hydro-stratigraphic unit was not able to be determined as only two (2) monitoring wells were installed within the deeper unit.

2.8 Environmental Site History

2.8.1 Previous Property Use

Since the early 1960's, the Site has historically been used for manufacturing purposes, which included, but was not limited to, the manufacture of extruded tapes, circuit board laminates and PTFE coated fiberglass. Saint-Gobain has utilized the Site for the manufacture of pressure sensitive adhesive tape (PSAT).

2.8.2 Historical Chemical Use

Historical chemical use affiliated with past Site usage may have included petroleum fuels, lubricants, degreasing agents, solvents, paints, Teflon, Triton and perfluorinated compounds (PFCs).

2.8.3 Environmental Orders, Decrees and Violations Associated with the Site

The Site was identified in the NYSDEC Spills Incidents and Bulk Storage databases. The following table summarizes the spills incidents and the bulk storage for the Site.

SPILLS INCIDENTS DATABASE			
Spill No.	**Spill Date/Closure**	**Site Occupant**	**Summary**
0302139	05.30.2003/07.23.2003	Saint-Gobain	A commercial vehicle leaked 15 gallons of hydraulic oil into the site's soils.

BULK STORAGE DATABASE			
Tank Type	**Tank Capacity**	**Product Stored**	**Date Tank Closed**
Underground	10,000 Gallons	#2 Fuel Oil	08.01.1995 by Removal

2.9 Previous Environmental Investigations

The following environmental investigations have been completed for the Site, as listed below and presented in Exhibit 1.

- Phase I Environmental Site Assessment (ESA) – AlliedSignal Fluorglas prepared by Parsons Engineering Science, Inc., dated March 1996 (1996 Parsons Phase I ESA).
- Phase II Environmental Site Assessment (ESA) – Furon Company prepared by Parsons Engineering Science, Inc., dated May 1996 (1996 Parsons Phase II ESA).
- Site Sampling Results – Saint Gobain Performance Plastics McCaffrey Street Facility prepared by Ramboll Enviro, dated February 4, 2016 (2016 Ramboll Site Sampling Results Report).

1996 Parsons Phase II ESA

The 1996 Parsons Phase II ESA was conducted to address recognized environmental conditions (RECs) and other conditions of concern identified during a Phase I ESA conducted on the Site by Parsons in 1995 (see 1996 Parsons Phase I ESA report in Exhibit 1), and to establish a baseline of Site environmental conditions. The scope of the Phase II ESA included the following:

- Installation of five (5) soil borings/monitoring wells to determine baseline soil and groundwater quality. Collection of six (6) groundwater samples for laboratory analysis for Target Compound List (TCL) volatile organic compounds (VOCs) and Total Petroleum Hydrocarbons (TPH). Two (2) of the groundwater samples were also analyzed for TCL semi-volatile organic compounds (SVOCs) and Target Analyte List (TAL) metals.

- Laboratory analysis of surface soil samples collected from the vicinity of an old pad mounted transformer (3 samples) and a gravel driveway (2 samples) that was believed to have historically had oil applied to it for dust suppression. The samples were analyzed for PCBs and TPH.

- Laboratory analysis of six (6) subsurface soil samples from the soil borings for laboratory analysis for TCL VOCs and TPH. Two (2) of the samples were also analyzed for TCL SVOCs and TAL metals.

Parsons compared the soil sampling analytical results to the recommended soil cleanup objectives (SCOs) presented in NYSDEC TAGM 4046, Determination of Soil Cleanup Objectives and Cleanup Levels.

Elevated TPH concentrations (3,760 mg/kg and 831 mg/kg) were present in the surface soil samples collected of the gravel drive where oil was historically applied for dust suppression. The Parsons report indicated that the samples were collected from oily stained zones. TPH was also detected at a concentration of 50.7 mg/kg in one (1) surface soil sample collected in the vicinity of the old transformer. There are no SCOs for TPH. PCBs were not-detected in any of the surface soil samples.

Five (5) metals (beryllium, chromium, nickel, selenium and zinc) were detected above TAGM SCOs in subsurface soils from downgradient soil borings. As a cursory evaluation, the 1996 analytical results for metals were compared to current SCOs promulgated at 6 NYCRR Part 375. The metal detections are all below SCOs for Unrestricted Use Sites promulgated at 6 NYCRR 375.

The groundwater analytical results were compared to the NYS Groundwater Class GA standards, Primary Drinking Water Quality Standards, and the Federal Safe Drinking Water Act Maximum Contaminant Levels (MCLs). One (1) VOC (trichloroethene) and one (1) metal (antimony) were detected above NYS Groundwater Class GA standards. Trichloroethene (detections of 13 ug/l and 6 ug/l) was detected above its standard of 5 ug/l in groundwater from two (2) downgradient monitoring wells. Antimony (16 ug/l) was detected above its standard of 3 ug/l in groundwater from one (1) downgradient monitoring well. Monitoring wells installed during the Parsons investigation were abandoned in January 2013.

<u>2016 Ramboll Site Sampling Results Report</u>

The Ramboll report provides analytical results for soil, groundwater, and wastewater sampling investigations completed by C.T. Male and Ramboll in 2015. The following sections summarize the results of the sampling.

2015 C.T. Male Preliminary Investigation

The 2015 C.T. Male Preliminary Investigation included the advancement of seven (7) test borings to aid in the collection of soil samples and for installation of monitoring wells. Two (2) of the test borings (shallow well couplets at MW-1 and MW-2) were advanced solely for the installation of monitoring wells; as such, soil samples were not collected from these borings. Four (4) test borings were completed on northern portions of the Site situated at a higher elevation than remaining portions of the Site. These test borings were converted to shallow/deep monitoring well couplets designated as MW-1/MW-1S and MW-2/MW-2S (the "S" references a shallow well). Three (3) test borings were completed in lower lying southern and southeastern portions of the Site. These test borings were converted to monitoring wells designated as MW-3 to MW-5.

Soil samples were collected from the 0-2′ and 2′-4′ depth intervals at five (5) test borings and analyzed for PFCs. Analytical results identified the following: perfluorooctanoic acid (PFOA) in soils at concentrations that ranged from 1.0 ug/kg (MW-1) to 4.1 ug/kg (MW-4) in soil samples collected from the 0-2′ depth intervals and 0.41 ug/kg (MW-2) to 2.4 ug/kg (MW-1) in soil samples collected from the 2′-4′ depth interval; perfluoroheptanoic acid (PFHpA) in soils at concentrations that ranged from 0.011 ug/kg (MW-3) to 0.17 ug/kg (MW-4) in soil samples collected from the 0-2′ depth intervals and 0.038 ug/kg (MW-5) to 0.080 (MW-4) in soil samples collected from the 2′-4′ depth interval; perfluorohexane sulfonate (PFHxS) in soils at a concentration of 0.15 ug/kg in a soil sample collected from the 0-2′ depth interval at MW-4 only; perfluorononanoic acid (PFNA) in soils at concentrations that ranged from 0.01 ug/kg (MW-2) to 0.14 ug/kg (MW-4) in soil samples collected from the 0-2′ depth intervals and 0.03 ug/kg (MW-3) to 0.07 ug/kg (MW-4) in soil samples collected from the 2′-4′ depth interval; perfluorooctane sulfonate (PFOS) in soils at concentrations that ranged from 0.028 ug/kg (MW-2) to 0.63 ug/kg (MW-4) in soil samples collected from the 0-2′ depth intervals and 0.018 ug/kg (MW-5) to 0.28 ug/kg (MW-4) in soil samples collected from the 2′-4′ depth interval.

Two (2) rounds of groundwater sampling were conducted in early and late September 2015. The groundwater samples were analyzed for PFCs.

Analytical results for Round 1 groundwater sampling conducted on September 2 and 3, 2015 identified PFOA in groundwater at concentrations ranging from 580 ng/l at MW-5 to 18,000 ng/l at MW-2 and perfluoroheptanoic acid (PFHpA) at concentrations ranging from 10 ng/l at MW-5 to 340 ng/l at MW-2.

Analytical results for Round 2 groundwater sampling conducted on September 30 and October 1, 2015 identified PFOA in groundwater at concentrations that ranged from 570 ng/l at MW-5 to 17,000 ng/l at MW-2 and PFHpA at concentrations ranging from 10 ng/l at MW-5 to 390 ng/l at MW-2.

2015 Ramboll Sampling Investigation

In October 2015, Ramboll collected wastewater samples for PFCs analysis from Manhole #1 and the Sewage Ejector Pit within the site building. Analytical results for Manhole #1 identified PFOA at a concentration of 1,000 ng/l and PFHpA at a concentration of 20 ng/l. Analytical results for the Sewage Ejector Pit identified PFOA at a concentration of 850 ng/l and PFHpA at a concentration of 10 ng/l.

3.0 OBJECTIVES, SCOPE & RATIONALE

3.1 Objectives

The objective of this RI/FS Work Plan is to complete an appropriate level of investigation to support the preparation of a RI/FS Report that presents the nature and extent of contamination at the Site. The project intent is to obtain sufficient information to develop a suitable remedy, if necessary, through completion of a FS. Potential remedial actions based upon the investigation will be developed, presented and evaluated in the RI/FS Report.

3.2 RI Scope & Rationale

The RI/FS Work Plan scope of work was developed based on the conceptual model of Site conditions to date. The potential chemical parameters of concern were selected based on current Site conditions, the Site's history and as a requirement of DER-10.

The primary chemical of concern at the Site is PFOA. PFOA has been detected in the Site's soils and groundwater, the Village of Hoosick Falls public water system and in private residential wells in and around the Village and Town of Hoosick Falls.

PFOA is a member of the class of substances called perfluorinated chemicals (PFCs). The chemical formula of PFOA is $CF_3(CF_2)_6COOH$. PFOA and other PFCs have been produced and used in commercial products and industrial processes for over 60 years. Known commercial uses of PFOA include: water-, soil-, and stain-resistant coatings for clothing, leather, upholstery, and carpets; oil-resistant coatings for food contact paper; aviation hydraulic fluids; fire-fighting foams; paints, adhesives, waxes, polishes, and other products. Known industrial uses of PFOA include: surfactants, emulsifiers, wetting agents, additives, and coatings. Additionally, PFOA is used as a processing aid (emulsifier) in the production of PTFE and other fluoropolymers and fluoroelastomers which are used as non-stick coatings on cookware, membranes for waterproof/ breathable clothing, electrical wire casing, fire and chemical resistant tubing, and plumbing thread seal tape.

PFOA is an anthropogenic contaminant that is resistant to environmental degradation processes, and thus is highly persistent. However, unlike other persistent and bioaccumulative organic pollutants, PFOA is highly water-soluble, and may have limited sorption to soil, sediments and organic matter.

Other parameters that will be analyzed to evaluate the Site's overall environmental quality per DER-10 include the Target Compound List (TCL) of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides and PCBs; the Target Analyte List (TAL) of metals (including mercury); cyanide (CN); major cations (Ca, Mg, Na and K) and anions (Cl, SO_4, CO_3 and HCO_3); and TO-15 list of VOCs in indoor air and soil gas.

The sample type, laboratory analysis, sampling method and sampling rationale for the samples to be collected during the RI investigation are summarized in Table 1: Proposed Sampling Schedule, which is presented in the Tables section of this work plan.

The proposed RI scope of work is summarized below and described in more detail in the following subsections.

- Collection of surface soil samples for subjective and laboratory analysis.
- Collection of on-site and off-site shallow soil samples for subjective and laboratory analysis.
- Advancement of test borings to aid in the collection of soil samples and for installation of monitoring wells.
- Collection of soil samples from the test boring locations for subjective and laboratory analysis.
- Monitoring well development, and purging and collection of groundwater samples for laboratory analysis.
- Collection of sediment samples for subjective and laboratory analysis.
- Collection of surface water samples for laboratory analysis.
- Collection of sub-slab soil gas and indoor air quality samples for laboratory analysis.
- Collection and laboratory analysis of quality control source and field samples.
- Completion of geophysical surveys to map the Site's underlying glacial till and bedrock and the location of the municipal sewer overflow pipe purportedly located along the eastern and southern sides of the Site.
- Conduct a boundary and topographic survey.

- Evaluate ecological resources by conducting a Fish & Wildlife Resources Impact Analysis.
- Conduct a Qualitative Human Health Exposure Assessment.

3.2.1 Surface Soil Sampling

Surface soil samples will be collected from locations depicted on Figure 2 as SS-1 to SS-11, MW-6 to MW-16, MW-20, MW-21, SB-1 and SB-2. Surface soil sampling locations SS-1 to SS-11 were derived by establishment of a 200′ by 200′ grid over the Site. Surface soil sampling locations identified as MW-6 to MW-16, MW-20, MW-21, SB-1 and SB-2 will be collected at test boring locations.

Surface soil samples SS-1 to SS-11 will be collected to evaluate the environmental quality of surface soils representative of site-wide conditions; from low-lying vegetated areas of the site; from vegetated areas in the vicinity of the site's property line, access roads and site buildings; in the vicinity of an aboveground propane tank and former transformer; and from beneath gravel parking and loading areas.

Surface soil samples will be collected at the test boring locations (MW-6 to MW-16, MW-20, MW-21, SB-1 and SB-2) to further evaluate the environmental quality of soils in: presumed hydraulically upgradient areas of the site; at an off-site location in the vicinity of the Hoosick Falls Sewer Pump Station; in the vicinity of on-site sewer manholes; at off-site locations in the vicinity of sewer overflow pipe manholes; between the Saint-Gobain plant building and the Hoosic River; areas of the site where no previous investigations have been conducted; hydraulically downgradient of the Saint-Gobain building's roof drainage piping; in the vicinity of a Sewage Ejector Pit in the Saint-Gobain building; near the Hoosic River riverbank; in an open grassy area downgradient of the site building; and in a flat area to the southeast of the site.

Two (2) discrete soil samples will be collected at each surface soil sampling location. The first discrete surface soil sample will be collected from the ground surface (or below any sub-base material, if present) to a depth of 2″ and will include any underlying vegetation (roots) or organic debris. This sample will be analyzed in the laboratory for PFCs, TOC, moisture content and grain size analysis. The second discrete surface soil sample will be collected alongside the first sample and will be collected from beneath the vegetative root zone (or below any sub-base material, if present) to a depth of 2″. As a requirement of DER-10, this sample will be analyzed in the laboratory for the TCL/TAL parameters and CN.

3.2.2 Shallow Soil Sampling - Roof Drain/Drip Line

Shallow soil samples may be collected for laboratory analysis from both on-site and off-site locations.

On-site shallow soil sampling locations will be determined by evaluating the presence, if any, of downspouts, roof drains and drip lines affiliated with the site building's roofing system. Shallow soil samples will be collected from vegetated areas in proximity to the roof drainage appurtenances. The proposed sampling locations will be approved by the Department prior to initiation of the sampling program.

Off-site shallow soil samples will be collected from three residential properties located downwind of the subject site. Downwind properties where the samples will be collected from will be determined through review of air models for the Saint-Gobain facility. Four shallow soil samples will be collected at each property. Two samples will be collected from vegetated areas in proximity to roof drains and/or roof drip lines. Two samples will be collected for background purposes in vegetated areas of the property that do not receive drainage from the roof systems.

Shallow soil samples will be collected from the ground surface to a depth of 2" (including the vegetative root zone, if present) and from the 2" to 12" depth interval. The samples will be analyzed in the laboratory for PFCs, TOC and moisture content.

If subjective indications, (elevated PID readings, oily liquid, strongly odiferous soils, staining, etc.) are noted in the shallow soil samples, the sample will also be analyzed for the TCL/TAL parameters including CN.

3.2.3 Subsurface Soil Sampling

Subsurface soil samples will be collected at discrete sampling intervals from surface soil sampling locations SS-1 to SS-11 and test borings MW-6 to MW-16, MW-20, MW-21, SB-1 and SB-2 (see Figure 2). Soil samples will not be collected from the MW-17 to MW-19 test boring locations as these borings will be for the installation of bedrock monitoring wells only.

The subsurface soil samples will be collected to evaluate overall subsurface conditions and the environmental quality of soils in: low-lying vegetated areas of the site; from vegetated areas in the vicinity of the site's property line, access roads and site buildings;

in the vicinity of an aboveground propane tank and former transformer; from beneath gravel parking and loading areas; presumed upgradient areas of the site (MW-6); at an off-site location in the vicinity of the Hoosick Falls Sewer Pump Station (MW-7); in the vicinity of on-site sewer manholes (MW-8, MW-9, MW-11); at off-site locations in the vicinity of overflow pipe sewer manholes (MW-10, MW-12); between the Saint-Gobain plant building and the Hoosic River (MW-13); areas of the site where no previous investigations have been conducted (MW-14); downgradient of the Saint-Gobain building's roof drainage piping (MW-15); in the vicinity of a Sewage Ejector Pit in the Saint-Gobain building (MW-16); near the Hoosic River riverbank (MW-20 and MW-21); in an open grassy area downgradient of the site building (SB-1); and in a flat area to the southeast of the site (SB-2).

At each surface soil and test boring location, soil samples will be collected from 2”-12” below the ground surface (or below any sub-base material, if present), and analyzed for PFCs, TOC, moisture content and grain size analysis, and TCL/TAL parameters including CN.

Additional subsurface soil samples will be collected from the test boring locations (MW-6 to MW-16, MW-20, MW-21, SB-1 and SB-2) at the following depth intervals: immediately above the water table; at soil mottling zones; at the fill/native soil interface; and at major stratigraphic changes. In the event that major stratigraphic changes are not encountered at the depths explored, soil samples will be collected from the 5’-7’ and 10’-12’ depth intervals. The samples will be analyzed for PFCs, TOC, moisture content and grain size analysis, and TCL/TAL parameters including CN. Soil sampling depths may be adjusted in the field with input from Department field-oversight staff.

If subjective impacts (elevated PID readings, oily liquid, strongly odiferous soils/fill, staining, etc.) are noted in soils above the water table, a sample of the soil will be collected for laboratory analysis for PFCs, TOC, moisture content and grain size analysis, and TCL/TAL parameters including CN.

3.2.4 Sediment Sampling

Fourteen (14) sediment samples indentified as SED-1 to SED-14 on Figure 2 will be collected. Samples SED-1 to SED-3 will be collected from on-site locations to evaluate the environmental quality of accumulated sediments (solids), if present, within the sewer manholes. Sediment samples will be collected from off-site locations (SED-4 to SED-14) to evaluate the environmental quality of sediments (solids) within the off-site sewer manholes along the 12" diameter municipal pump station overflow discharge pipe (SED-4, SED-5); sediments from the off-site pump station overflow outfall pipe (SED-6); sediments from along the eastern bank of the Hoosick River, topographically downgradient of the site (SED-7 to SED-9); sediments from the river bottom upriver, midriver and downriver of the Site (SED-10 to SED-12); and sediments from low-lying wet areas to the southeast of the Site (SED-13, SED-14). Water samples, if present, will also be collected from within the off-site sewer manholes/catch basins in addition to the sediment samples.

The on-site sediment (solids) samples will be analyzed for TCL/TAL parameters, CN, PFCs and TOC. The off-site sediment samples (and water samples, if present) will be analyzed for PFCs and TOC.

3.2.5 Surface Water Sampling

Three (3) surface water samples depicted as SW-1 to SW-3 on Figure 2 will be collected at off-site locations to evaluate the environmental quality of surface water from the Hoosic River upriver and downriver of the Site (SW-1, SW-2), and from low-lying wet areas to the southeast of the Site (SW-3).

The surface water samples will be analyzed in the laboratory for TCL/TAL parameters, CN, PFCs, and major cations (Ca, Mg, Na and K) and anions (Cl, SO_4, CO_3 and HCO_3).

3.2.5.1 Surface Water Field Parameters

Surface water geochemical field parameters including temperature, conductivity, pH, oxidation-reduction potential (ORP), and dissolved oxygen (DO) will be monitored and recorded to provide geochemical data. The geochemical field parameters will be collected with a calibrated electronic field parameter meter. The field parameter meter will be calibrated at the start of each day and will have documented calibration checks at the middle and end of each day. All calibration records and checks will be documented on field notes or on sampling records by recording the value of the calibration solution, what the instrument was reading prior to calibration, and a checkmark if re-calibration was needed. Fresh calibration solution will be used each day that samples are collected, but may be re-used throughout the day.

3.2.6 Groundwater Sampling

Overburden test borings MW-6 to MW-16, MW-20 and MW-21 (Figure 2) will be converted to 2-inch diameter monitoring wells with protective enclosures to aid in the collection of groundwater samples for laboratory analysis. SB-1 and SB-2 will not be converted to monitoring wells, per direction from the Department. Groundwater samples will also be collected from the newly installed bedrock monitoring wells (MW-17 to MW-19 on Figure 2) and the existing monitoring wells (MW-1, MW-1S, MW-2, MW-2S, MW-3 to MW-5) installed during the previous site investigation. The new wells will be developed and purged. The existing wells will only be purged as they were developed during the previous investigation. The groundwater samples will be analyzed in the laboratory for the TCL/TAL parameters, CN, PFCs and major cations (Ca, Mg, Na and K) and anions (Cl, SO_4, CO_3 and HCO_3).

3.2.6.1 Groundwater Field Parameters

Groundwater geochemical field parameters including temperature, conductivity, pH, oxidation-reduction potential (ORP), and dissolved oxygen (DO) will be monitored and recorded to provide general geochemical data and evaluate groundwater stabilization criteria prior to sample collection. The geochemical field parameters will be collected with a calibrated electronic field parameter meter. The field parameter meter will be calibrated at the start of each day and will have documented calibration checks at the middle and end of each day. All calibration records and checks will be documented on field notes or on sampling records by recording the value of the calibration solution, what the instrument was reading prior to calibration, and a checkmark if re-calibration was needed. Fresh calibration solution will be used each day that samples are collected, but may be re-used throughout the day.

3.2.7 Soil Gas and Indoor Air Quality Sampling

A total of five (5) samples each depicted as VI-1 to VI-5 on Figure 2 will be collected of sub-slab soil gas beneath the building and indoor air within the building. One (1) sub-slab soil gas and one (1) indoor air quality sample will be collected per distinct building (five (5) buildings total) to evaluate if VOCs are present in vapor beneath the building slabs and in the air within the buildings. One (1) ambient outdoor air sample will also be collected to document the quality of ambient air in an upwind location to the site building. The samples will be analyzed for VOCs.

3.2.8 Sampling Quality Control

<u>Source Materials Quality Control</u>

As discussed in Section 3.2, PFCs (including PFOA) are found in several everyday items. As a check for cross-contamination, quality control samples will be collected from source materials and equipment that are anticipated to be used for the investigation. These include water used by the drilling contractor for drilling and equipment decontamination; casing, rods, core samplers, water totes and tanks; filter sand used as monitoring well sand pack; monitoring well construction materials (PVC riser and screen); bottled water used as final decontamination rinse water, and various sampling equipment, apparatus and expendable supplies. The samples will be collected and analyzed for PFCs. Analytical results will be reviewed prior to Site mobilization. Mobilization to the Site will only be permitted if analytical results identify PFCs below detection limits or at concentrations that are not expected to cross-contaminate environmental samples. The types of source materials quality control samples to be collected, and the sampling method and rationale are detailed in Table 1 in the Tables section of this work plan. Source equipment including driller casing, rods, core samplers, totes and tanks will be segregated and will not be used for any other purpose by the drilling contractor from the time that the quality control samples are collected to the time that the equipment is mobilized to the Site for the investigation.

<u>Field Quality Control</u>

Field Quality Control samples include Equipment Blanks, Duplicates, and Matrix Spike/Matrix Spike Duplicates (MS/MSD). Quality Control samples will be prepared for each media type at a ratio of one (1) set of Quality Control samples per each 20 media samples. Laboratory prepared Trip Blanks will be submitted with aqueous samples requiring analysis for TCL VOCs and PFCs. Field Trip Blanks will be submitted with aqueous samples requiring analysis for PFCs. The types of field quality control samples to be collected and the sampling method and rationale are detailed in Table 1 of the Tables section of this work plan.

3.2.9 Laboratory Reporting and Data Validation

The laboratory will generate NYSDEC ASP Category B data deliverable packages of the investigative analytical data. A Data Usability Summary Report (DUSR) of the analytical data will be prepared to confirm that the data meets the project specific criteria for data quality and data use. The DUSR will be completed by an independent data validator and will be conducted in accordance with Appendix 2B of DER-10 entitled *Guidance for Data Deliverables and the Development of Data Usability Summary Reports.*

3.2.10 Geophysical Survey

Geophysical survey techniques will be utilized to map subsurface glacial till and bedrock contacts, and to identify the location of the municipal sewer pump station overflow pipe along the eastern and southern side of the Site. The survey will be completed prior to the initiation of the subsurface investigations.

3.2.11 Surveying Methods

A Boundary and Topographic Survey will be conducted of the Site and portions of the adjacent properties, and to establish investigation sampling points. The horizontal location of the boreholes will be surveyed utilizing GPS based on the New York State Plane Coordinate System, Eastern Zone, NAD 1983/2011 EPOCH 2010.0, and the vertical elevation of the boreholes at grade will be surveyed utilizing GPS based on NAVD 1988. The GPS coordinates will be converted to decimal degrees based on the WGS84 datum for inputting into the NYSDEC electronic data deliverable (EDD) system.

3.2.12 Fish and Wildlife Resources Impact Analysis

As part of the ecological exposure evaluation, Part I of a Fish and Wildlife Resources Impact Analysis (FWRIA) will be completed to the extent required based on the October 1994 NYSDEC Fish and Wildlife Impact Analysis (FWIA) for Inactive Hazardous Waste

Sites. Resource characterization under the FWRIA will be completed as a function of the RI to identify actual or potential impacts to fish and wildlife resources from site contaminants of ecological concern. This scope includes five (5) steps, as follows.

1. Identification of all fish and wildlife resources based upon knowledge of the site and a search of DEC records and/or other resources.

2. Description of the resources on the site and within one-quarter mile of the site.

3. Identification of contaminant migration pathways and any fish and wildlife exposure pathways.

4. Identification of contaminants of ecological concern.

5. Conclusions regarding the actual or potential adverse impacts to fish and wildlife resources.

3.2.13 Qualitative Human Health Exposure Assessment

A qualitative human health exposure assessment of the Site will be completed in general accordance with Appendix 3B of DER-10. At a minimum, the exposure assessment will evaluate the five (5) elements associated with exposure pathways. The elements include the following.

1. A description of the contaminant source(s) including the location of the contaminant release to the environment or if the original source is unknown, the contaminated environmental medium at the point of exposure.

2. An explanation of the contaminant release and transport mechanisms to the exposed population.

3. Identification of all potential exposure point(s) where actual or potential human contact with a contaminated medium may occur. Potential off-site exposure routes include surface soil, groundwater, public drinking water, and surface water and sediment in the Hoosic River.

4. Description(s) of the route(s) of exposure (i.e., ingestion, inhalation, dermal absorption).

5. A characterization of the receptor populations who may be exposed to contaminants at a point of exposure.

3.3 Feasibility Study Scope & Rationale

Existing Site data and data obtained from the Remedial Investigation will be utilized to evaluate potential remedies for the Site through a Feasibility Study. Remedies currently under consideration by the Department, as identified in the June 3, 2016 Order on Consent and Administrative Settlement, provided in the following subsections.

A study and assessment of alternatives to eliminate or reduce PFOA in the Municipal Water System (MWS) in the Village of Hoosick Falls will also be conducted (see Section 3.3.1).

Additional remedies may be considered based on the results of the remedial investigation. Each remedial alternative will be evaluated in accordance with NYCRR Parts 375-1.8 and 2.8.

3.3.1 Assessment of Potential Creation of Alternate Source Water Supply

As indicated in Section II.A.2 of the Order, a study and assessment regarding the potential creation of an alternate source water supply for the Village of Hoosick Falls will be completed as part of the RI/FS.

The NYSDEC and its standby contractor started the work on the Alternate Water Supply (AWS) assessment and have completed several of the initial tasks. Data and information developed by NYSDEC and its standby contractor during the initial tasks will be assembled, summarized and provided by NYSDEC to the Respondents to facilitate completion of the AWS assessment by the Respondents.

3.3.1.1 Scope of Work

The AWS assessment includes the following scope of work:

1. Review data and information to be provided by NYSDEC, Village of Hoosick Falls and Rensselaer County DOH relative to the work already completed in regard to potential AWS sources; water well construction information; purported and documented locations of PFC source areas; analytical results for PFCs samples collected by NYSDEC/NYSDOH in surface waters, sediments, surface

and subsurface soils, springs, residential and non-potable (irrigation/livestock) water wells; and monitoring wells within the study area.

2. Review additional data available from the Village of Hoosick Falls, Town of Hoosick, and/or Rensselaer County Health Department regarding:

   a. zoning & land use;
   b. geologic logs or well completion records;
   c. City of Troy water distribution system;
   d. Hoosick Falls production well construction, flow capacity and water quality data;
   e. Hoosick Falls water treatment system; and
   f. Hoosick Falls water distribution system.

3. Attend a meeting with NYSDEC to discuss project goals and review the data and information already developed by NYSDEC. Other parties (i.e., NYSDOH, Rensselaer County, etc.) may participate as appropriate and based on their availability in the initial and subsequent meetings.

4. Secure an area-wide EDR Environmental Database Search Report to identify known regulatory-listed sites within the evaluation area. The Database Search Report is provided by Environmental Data Resources, Inc. and is procured on-line for a fee. The report identifies regulatory-listed sites within a geographic area defined by the user of the report.

5. Conduct a desktop study of area topography, surface water drainage characteristics, surficial and bedrock geology, current and historic land uses, flood plains, zoning, and other information indicated in Items 1 & 2 above.

3.3.1.2 Anticipated Alternatives for AWS Assessment

The following alternatives (or a combination of one or more thereof) are anticipated for consideration and evaluation, per the Order:

1. New Groundwater Source;
2. New Surface Water Source;
3. Interconnection with Existing Water Supply Sources;
4. Remediating and or treating the sources of PFOA to the groundwater and the MWS;

5. Modification of the Municipal Water System (MWS) - Full Capacity System for possible expanded distribution; and
6. No Further Action, which would include the continuation of the existing IRMs, including a full capacity GAC treatment system to address PFOA in the MWS for the permitted maximum daily flow ("Full Capacity System")

3.3.1.3 Evaluation Factors for AWS Assessment

The alternatives for the AWS assessment will be evaluated on criteria set forth in 6 NYCRR 375-1.8(f), in conjunction with additional guidance provided for each criterion in subdivisions (b) through (j) of Section 4.2 of DER-10. The criteria are as follows:

1. Overall protectiveness of the public health and the environment;
2. Compliance with applicable standards, criteria, and guidance (SCGs);
3. Long-term effectiveness and permanence;
4. Reduction of toxicity, mobility or volume of contamination through treatment;
5. Short-term impacts and effectiveness;
6. Implementability;
7. Cost-effectiveness (capital and O&M costs); and
8. Land use.

4.0 SUPPLEMENTAL PLANS

4.1 Field Sampling Plan

The field activities for this project will include collection and laboratory analysis of surface, shallow and subsurface soil/fill, sediment, surface water, groundwater, soil gas and indoor air samples. The procedures relative to implementation of these field activities are presented in the Field Sampling Plan (FSP) in Appendix A, which also conforms to the Quality Assurance Project Plan (QAPP) presented in Appendix B. The FSP describes in detail the various methods and techniques to be followed during the completion of the sampling activities, instrument operation and calibration, and chain of custody procedures.

4.2 Quality Assurance/ Quality Control Plan

The QAPP describes the quality assurance and quality control procedures to be followed from the time media samples are collected to the time they are analyzed by the environmental analytical laboratory and evaluated by a third party according to the NYSDEC Data Usability Summary Report (DUSR) guidelines. The QAPP is presented in Appendix B.

The QAPP will be followed by field personnel during the Site investigation activities and media sampling events. It will also be used by the project management team and Quality Assurance Officer to assure the data collected and generated is representative and accurate. The laboratory results will be reported in NYSDEC ASP Category B data deliverable packages, which will be subjected to data validation in accordance with NYSDEC's DUSR guidelines to determine if the data is valid and usable.

4.3 Health and Safety Plan

A Site-specific Health and Safety Plan (HASP) has been prepared for this project to address Site worker health and safety issues. The HASP is presented in Appendix C. The HASP will be used by field personnel. Although the plan addresses all of the planned Site activities, subcontractors will be required to develop their own HASP for work they will perform, as well, in compliance with 29 CFR Part 1019.120. C.T. Male's on-site employees and the subcontractor's on-site employees will have completed the OSHA 40-hour HAZWOPER training with all ensuing refresher courses.

4.4 Citizen Participation (CP) Plan

A project-specific Citizen Participation Plan (CP Plan) will be developed for this project in general accordance with DER 10 and will be submitted to the NYSDEC. The objective of the plan is to disseminate information to the public regarding the RI and other activities at the Site and to involve the public in the decision making process. This is accomplished by keeping the public informed of the investigation through direct mailings, email, public notice in local newspapers and other publications, and by having project documents available for review at public accessible repository locations and via the NYSDEC website.

5.0 REPORTING AND SCHEDULE

5.1 Reporting

Upon completion of field activities and receipt and independent validation of the analytical laboratory data, a Draft RI/FS Report will be prepared. The RI portion of the report will summarize and discuss the investigations completed as well as any non-conformance to the approved work plan. The report will present the investigations at the Site, analytical results of samples collected and analyzed, and interpretations of the data. The FS portion of the report will evaluate alternatives for contaminated media identified by the remedial investigation.

5.2 Schedule

It is currently planned to initiate field work within 2 to 3 weeks following NYSDEC approval of the Work Plan. A detailed project schedule is presented in Appendix D.

6.0 SUBMITTALS

Communications will be transmitted by email, United States Postal Service, private courier, or hand delivered to the following individuals. Final documents, as they become available, will also be submitted to the following individuals:

- NYSDEC Project Manager
  William L. Daigle
  NYSDEC Central Office
  Division of Environmental Remediation
  625 Broadway, 11th Floor
  Albany, NY 12233-7013
  Phone: 518.402.9676
  Email: William.Daigle@dec.ny.gov

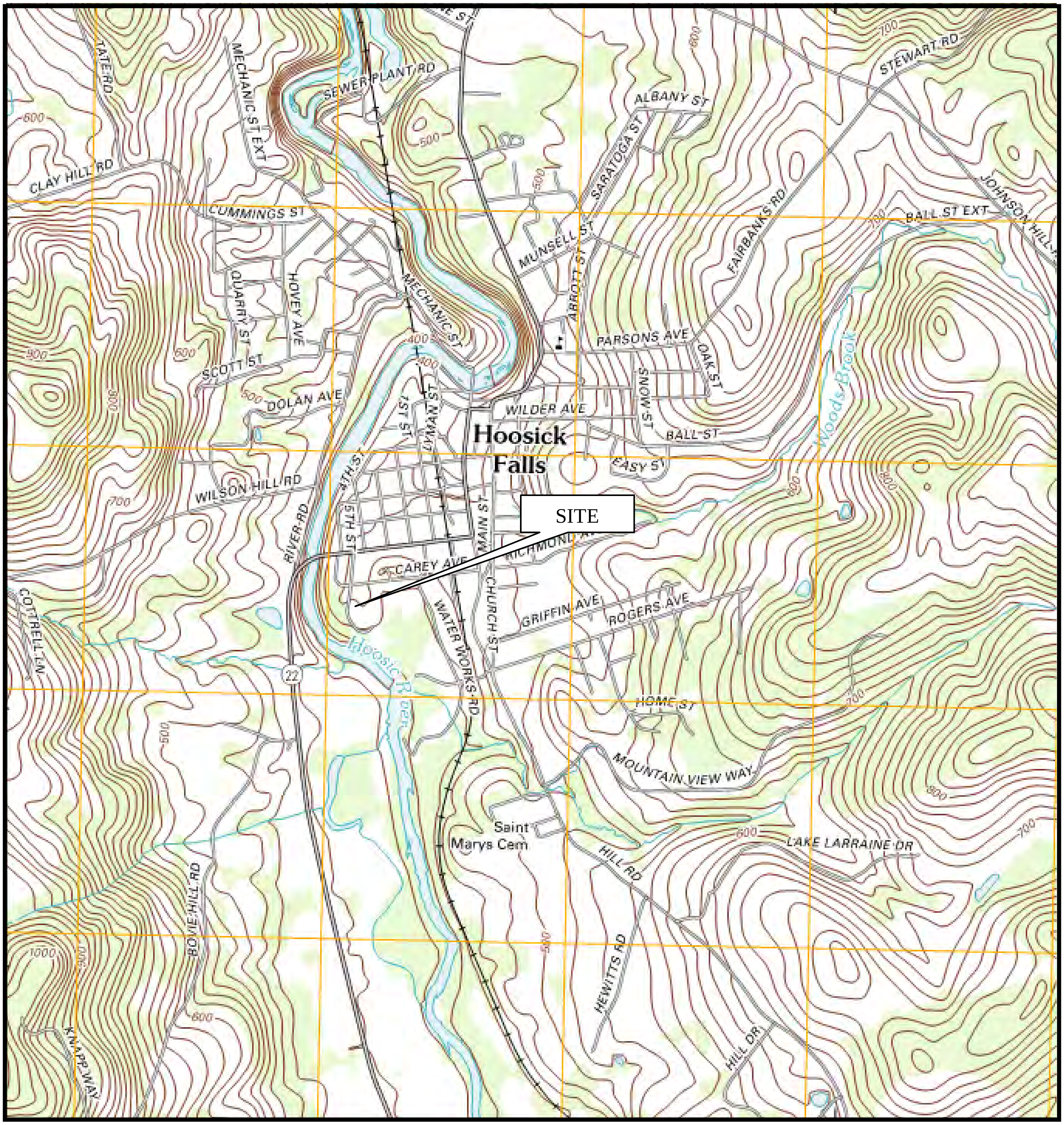
- DOH Project Manager
  Albert DeMarco
  New York State Department of Health
  Corning Tower
  Empire State Plaza
  Albany, New York 12237
  Phone: 518.402.7860
  Email: albert.demarco@health.ny.gov

- Mr. Edward Canning
  Director of Health, Safety & Environment
  Saint-Gobain Performance Plastics Corporation
  One Sealants Park
  Granville, New York 12832
  Phone: 518.686.7301
  Email: Edward.J.Canning@saint-gobain.com

FIGURES

FIGURE 1

SITE LOCATION MAP



MAP REFERENCE

United States Geological Survey
7.5 Minute Series Topographic Map
Quadrangle: Hoosick Falls, NY
Date: 2013

N

C.T.MALE ASSOCIATES
ENGINEERING, SURVEYING, ARCHITECTURE & LANDSCAPE ARCHITECTURE, D.P.C.

50 CENTURY HILL DRIVE
LATHAM, NY 12110

FIGURE 1 - SITE LOCATION
Saint-Gobain Performance Plastics

VILLAGE OF HOOSICK FALLS	RENSSELAER COUNTY, NY
SCALE: 1:2,000±	The locations and features depicted on this map are approximate and do not represent an actual survey.
DRAFTER: BAW	
PROJECT No: 14.4756	

FIGURE 2

PROPOSED SAMPLING LOCATIONS PLAN

Map Note: The locations and features depicted on this map are approximate and do not represent a field survey.

Project Number: 14.4756
Data Source: NYSGIS Clearinghouse
Projection: State Plane NAD83 NYE (Feet)
Date: July 07, 2016
File: Fig2_SG_McCafferySt11X17.mxd
GIS: C Secor

Figure 2: Proposed Sampling Locations Plan
Saint - Gobain - McCaffrey Street Facility

Village of Hoosick Falls — **Rensselaer County, NY**

C.T. MALE ASSOCIATES
ENGINEERING, SURVEYING, ARCHITECTURE & LANDSCAPE ARCHITECTURE, D.P.C
50 CENTURY HILL DRIVE, LATHAM, NEW YORK 12110
(518) 786-7400 * FAX (518) 786-7299 * WWW.CTMALE.COM
FOUNDED IN 1910

TABLES

TABLE 1: PROPOSED SAMPLING SCHEDULE

TABLE 1: PROPOSED SAMPLING SCHEDULE
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET, HOOSICK FALLS, NEW YORK
REMEDIAL INVESTIGATION WORK PLAN
(Revised July 7, 2016)

Sample Type	Sampling Location	Sample Depth	Analytical Parameter	Grab/Comp.	Sampling Method	Rationale
SURFACE SOIL SAMPLING (SS-1 to SS-11, MW-6 to MW-16, MW-20, MW-21, SB-1, SB-2)	SS-1 to SS-11, MW-6 to MW-16, MW-20, MW-21, SB-1, SB-2	0-2" Beneath Vegetative Root Zone or Sub-Base Material	TCL/TAL, CN	Grab	Decomtaminated hand spade and/or hand auger wearing new, nitrile gloves at each sampling location. Place soils for VOC analysis directly into soil containers first. The remaining soils will be placed in a stainless steel bowl and homogenized. An aliquot will then be collected and transferred into laboratory provided sampling containers. The remaining soils, if there is sufficient volume, will be retained for grain size analysis.	As a requirement of DER-10, to evaluate the overall environmental quality of surface soils across the site. SS-1 to SS-11 locations are based on a 200'X200' grid. Surface soil samples from SS-1 to SS-11 sampling locations will be collected from low-lying vegetated areas of the site; from vegetated areas in the vicinity of the site's property line, access roads and site buildings; in the vicinity of an aboveground propane tank (SS-6) and former transformer (SS-7); and from beneath gravel parking and loading areas. Surface soil samples collected from MW-6 to MW-16, MW-20, MW-21, SB-1 and SB-2 sampling locations will be collected in: presumed upgradient areas of the site (MW-6); at an off-site location in the vicinity of the Hoosick Falls Sewer Pump Station (MW-7); in the vicinity of on-site sewer manholes (MW-8, MW-9, MW-11); at off-site locations in the vicinity of sewer manholes (MW-10, MW-12); between the Saint-Gobain plant building and the Hoosic River (MW-13); areas of the site where no previous investigations have been conducted (MW-14); downgradient of the Saint-Gobain building's roof drainage piping (MW-15); in the vicinity of a Sewage Ejector Pit in the Saint-Gobain building (MW-16(3)); near the Hoosic River shoreline (MW-20, MW-21); in an open grassy area downgradient of the site building (SB-1); and in a flat area to the southeast of the site (SB-2).
	SS-1 to SS-11, MW-6 to MW-16, MW-20, MW-21, SB-1, SB-2	0-2" Beneath Surface Grade or Sub-Base Material. To Include Vegetative Root Zone, if Present.	PFCs, TOC, Moisture Content, Grain Size Analysis	Grab		
	FIELD QC (REPLICATE)	NA	TCL/TAL, CN or PFCs	1 Per 20 Media Samples	For VOCs analysis, collect by splitting the sample and putting equal portions into parent and replicate sample jars. For non-VOCs analysis, collect by honogenizing the sample and putting equal portions into parent and replicate sample jars.	To evaluate field sampling technique, the homogeneity/heterogeneity of Site soils, and to check for laboratory precision.
	FIELD QC (MS/MSD)	NA	TCL/TAL, CN or PFCs	1 Per 20 Media Samples	For VOCs analysis, collect by splitting the sample and putting equal portions into parent and replicate sample jars. For non-VOCs analysis, collect by honogenizing the sample and putting equal portions into parent and replicate sample jars.	To evaluate if there is sample matrix interference and to evaluate laboratory accuracy (MS) and precision (MSD).
	FIELD QC (EQUIPMENT BLANK)	NA	TCL/TAL, CN or PFCs	1 Per 20 Media Samples	Collect by pouring distilled water over decontaminated sampling equipment and capturing in lab provided sample containers.	To evaluate the decontamination effort and sampling equipment cleanliness between sampling locations.

TABLE 1: PROPOSED SAMPLING SCHEDULE
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET, HOOSICK FALLS, NEW YORK
REMEDIAL INVESTIGATION WORK PLAN
(Revised July 7, 2016)

Sample Type	Sampling Location	Sample Depth	Analytical Parameter	Grab/Comp.	Sampling Method	Rationale
SHALLOW SOIL ROOF DRAIN DRIP LINE (To Be Determined)	Potential On-Site & Off-Site Locations	0-2", 2"-12"	PFCs, TOC, Moisture Content.	Grab	Collect using decomtaminated hand spade and/or hand auger. New, nitrile gloves will be worn at each sampling location and sampling depth interval. Soils will be placed in a stainless steel bowl and homogenized. An aliquot will then be collected and transferred into laboratory provided sampling containers.	To evaluate the environmental quality of shallow soils in proximity to on-site roof drainage systems. To evaluate the environmental quality of shallow soils in proximity to roof drainage systems and in areas not affected by roof drainage at off-site properties considered downwind of the Saint-Gobain facility.
	FIELD QC (REPLICATE)	NA	PFCs	1 Per 20 Media Samples	Collect by honogenizing the sample and putting equal portions into parent and replicate sample jars.	To evaluate field sampling technique, the homogeneity/heterogeneity of Site soils, and to check for laboratory precision.
	FIELD QC (MS/MSD)	NA	PFCs	1 Per 20 Media Samples	Collect by honogenizing the sample and putting equal portions into parent and replicate sample jars.	To evaluate if there is sample matrix interference and to evaluate laboratory accuracy (MS) and precision (MSD).
	FIELD QC (EQUIPMENT BLANK)	NA	PFCs	1 Per 20 Media Samples	Collect by pouring distilled water over decontaminated sampling equipment and capturing in lab provided sample containers.	To evaluate the decontamination effort and sampling equipment cleanliness between sampling locations.
SUBSURFACE SOIL SAMPLING SS-1 to SS-11 & TEST BORINGS[1] MW-6 to MW-16, MW-20, MW-21, SB-1, SB-2[2]	SS-1 to SS-11 & Test Borings MW-6 to MW-16, MW-20, MW-21, SB-1 & SB-2	2"-12" Below the Ground Surface or Sub-Base"	TCL/TAL, CN, PFCs, TOC, Moisture Content, Grain Size Analysis.	Grab	Collect using decomtaminated hand spade and/or hand auger. New, nitrile gloves will be worn at each sampling location and sampling depth interval. Soils collected for VOCs analysis will be directly transferred from the sampling equipment into laboratory provided sampling containers. Soils collected for non-VOCs analysis will be placed in a stainless steel bowl and homogenized. An aliquot will then be collected and transferred into laboratory provided sampling containers. The remaining soils, if there is sufficient volume, will be retained for grain size analysis	To evaluate overall subsurface conditions and the environmental quality of soils in: low-lying vegetated areas of the site; from vegetated areas in the vicinity of the site's property line, access roads and site buildings; in the vicinity of an aboveground propane tank (SS-6) and former transformer (SS-7); from beneath gravel parking and loading areas; in presumed upgradient areas of the site (MW-6); at an off-site location in the vicinity of the Hoosick Falls Sewer Pump Station (MW-7); in the vicinity of on-site sewer manholes (MW-8, MW-9, MW-11); at off-site locations in the vicinity of sewer manholes (MW-10, MW-12); between the Saint-Gobain plant building and the Hoosic River (MW-13); areas of the site where no previous investigations have been conducted (MW-14); downgradient of the Saint-Gobain building's roof drainage piping (MW-15); in the vicinity of a Sewage Ejector Pit in the Saint-Gobain building (MW-16[3]); near the Hoosic River shoreline (MW-20, MW-21); in an open grassy area downgradient of the site building (SB-1); and in a flat area to the southeast of the site (SB-2).
	Test Borings MW-6 to MW-16, MW-20, MW-21, SB-1 & SB-2	Immediately Above the Water Table, at Soil Mottling Zones, at the Fill/Native Soil Interface, Subjectively Impacted Soils, and Major Stratigraphic Changes. If No Stratigraphic Changes, then at the 5'-7' and 10'-12' Depth Intervals.	TCL/TAL, CN, PFCs, TOC, Moisture Content, Grain Size Analysis.	Grab		

TABLE 1: PROPOSED SAMPLING SCHEDULE
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET, HOOSICK FALLS, NEW YORK
REMEDIAL INVESTIGATION WORK PLAN
(Revised July 7, 2016)

Sample Type	Sampling Location	Sample Depth	Analytical Parameter	Grab/Comp.	Sampling Method	Rationale
SUBSURFACE SOIL SAMPLING SS-1 to SS-11 & TEST BORINGS[1] MW-6 to MW-16, MW-20, MW-21, SB-1, SB-2[2]	MW-17 to MW-19	NA	NA	NA	NA	MW-17, MW-18 and MW-19 will be advanced for installation of bedrock wells only. Soil samples will not be collected from these borings. The wells will be cased approximately five (5) feet into bedrock and the annulus between the outside of the casing and borehole wall grouted to the ground surface. The borehole will then be advanced into the bedrock to a depth of approximately 20 to 25 feet below the bottom of the casing depth.
	FIELD QC (REPLICATE)	NA	TCL/TAL, CN, PFCs	1 Per 20 Media Samples	For VOCs analysis, collect by splitting the sample and putting equal portions into parent and replicate sample jars. For non-VOCs analysis, collect by honogenizing the sample and putting equal portions into parent and replicate sample jars.	To evaluate field sampling technique, the homogeneity/heterogeneity of Site soils, and to check for laboratory precision.
	FIELD QC (MS/MSD)	NA	TCL/TAL, CN, PFCs	1 Per 20 Media Samples	For VOCs analysis, collect by splitting the sample and putting equal portions into parent and replicate sample jars. For non-VOCs analysis, collect by honogenizing the sample and putting equal portions into parent and replicate sample jars.	To evaluate if there is sample matrix interference and to evaluate laboratory accuracy (MS) and precision (MSD).
	FIELD QC (EQUIPMENT BLANK)	NA	TCL/TAL, CN, PFCs	1 Per 20 Media Samples	Collect by pouring distilled water over decontaminated sampling equipment and capturing in lab provided sample containers.	To evaluate the decontamination effort and sampling equipment cleanliness between sampling locations.
SEDIMENT SAMPLING (SED-1 to SED-14)	SED-1 to SED-3	NA	PFCs, TOC, TCL/TAL, CN	Grab	Decontaminated hand spade and/or scoop, and new nitrile gloves at each sampling location. Soils collected for VOCs analysis will be directly transferred from the sampling equipment into laboratory provided sampling containers. Soils collected for non-VOCs analysis will be placed in a stainless steel bowl and homogenized. An aliquot will then be collected and transferred into laboratory provided sampling containers.	To evaluate the environmental quality of accumulated sediment, if present, within the on-site sewer manholes.
	SED-4, SED-5 (if present, collect water sample)	NA	PFCs, TOC	Grab	Decontaminated hand spade and/or scoop, and new nitrile gloves at each sampling location. Soils will be placed in a stainless steel bowl and homogenized. An aliquot will then be collected and transferred into laboratory provided sampling containers. If a sufficient volume of water is present for sample collection, employ new, factory sealed disposable bailer and/or collect directly in sample containers wearing new nitrile gloves at each sampling location.	To evaluate the environmental quality of accumulated sediment (and water), if present, within the off-site sewer manholes along the 12" diameter municipal pump station overflow discharge pipe.
	SED-6	0-6"	PFCs, TOC	Grab	Decontaminated hand auger and/or macro-core sampler, and new nitrile gloves at each sampling location. Soils will be placed in a stainless steel bowl and homogenized. An aliquot will then be collected and transferred into laboratory provided sampling c	To evaluate the environmental quality of sediment at the off-site pump station overflow outfall pipe.
	SED-7 to SED-9	0-6"	PFCs, TOC	Grab	Decontaminated hand spade and/or scoop, and new nitrile gloves at each sampling location. Soils will be placed in a stainless steel bowl and homogenized. An aliquot will then be collected and transferred into laboratory provided sampling containers.	To evaluate the environmental quality of sediment along the eastern bank of the Hoosick River, topographically downgradient of the site.
	SED-10 to SED-12	0-6"	PFCs, TOC	Grab	Decontaminated hand auger and/or macro-core sampler, and new nitrile gloves at each sampling location. Soils will be placed in a stainless steel bowl and homogenized. An aliquot will then be collected and transferred into laboratory provided sampling containers.	To evaluate the environmental quality of river bottom sediment upriver, midriver and downriver of the site.

TABLE 1: PROPOSED SAMPLING SCHEDULE
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET, HOOSICK FALLS, NEW YORK
REMEDIAL INVESTIGATION WORK PLAN
(Revised July 7, 2016)

Sample Type	Sampling Location	Sample Depth	Analytical Parameter	Grab/Comp.	Sampling Method	Rationale
SEDIMENT SAMPLING (SED-1 to SED-14)	SED-13, SED-14	0-6"	PFCs, TOC	Grab	Decontaminated hand auger and/or macro-core sampler, and new nitrile gloves at each sampling location. Soils will be placed in a stainless steel bowl and homogenized. An aliquot will then be collected and transferred into laboratory provided sampling containers.	To evaluate the environmental quality of sediment in low-lying wet areas to the southeast of the site.
	FIELD QC (REPLICATE)	NA	PFCs, TCL/TAL, CN(4)	1 Per 20 Media Samples	For VOCs analysis, collect by splitting the sample and putting equal portions into parent and replicate sample jars. For non-VOCs analysis, collect by honogenizing the sample and putting equal portions into parent and replicate sample jars.	To evaluate field sampling technique, the homogeneity/heterogeneity of Site soils, and to check for laboratory precision.
	FIELD QC (MS/MSD)	NA	PFCs, TCL/TAL, CN(4)	1 Per 20 Media Samples	For VOCs analysis, collect by splitting the sample and putting equal portions into parent and replicate sample jars. For non-VOCs analysis, collect by honogenizing the sample and putting equal portions into parent and replicate sample jars.	To evaluate if there is sample matrix interference and to evaluate laboratory accuracy (MS) and precision (MSD).
	FIELD QC (EQUIPMENT BLANK)	NA	PFCs, TCL/TAL, CN(4)	1 Per 20 Media Samples	Collect by pouring distilled water over decontaminated sampling equipment and capturing in lab provided sample containers.	To evaluate the decontamination effort and sampling equipment cleanliness between sampling locations.
SURFACE WATER SAMPLING (SW-1 to SW-3)	SW-1, SW-2	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	New, factory sealed disposable bailer and/or collect directly in sample containers wearing new nitrile gloves at each sampling location.	To evaluate the environmental quality of surface water from the Hoosic River upriver and downriver of the site.
	SW-3	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	New, factory sealed disposable bailer and/or collect directly in sample containers wearing new nitrile gloves at each sampling location.	To evaluate the environmental quality of surface water in low-lying wet areas to the southeast of the site.
	FIELD QC (REPLICATE)	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	1 Per 20 Media Samples	Collect by putting equal portions into parent and replicate sample containers, filling VOC containers first.	To evaluate field sampling technique and laboratory precision.
	FIELD QC (MS/MSD)	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	1 Per 20 Media Samples	Collect by putting equal portions into parent, MS and MSD sample containers, filling VOC containers first.	To evaluate if there is sample matrix interference and to evaluate laboratory accuracy (MS) and precision (MSD).
	FIELD QC (EQUIPMENT BLANK)	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	1 Per 20 Media Samples	Collect by pouring distilled water over decontaminated/new sampling equipment and capturing in lab provided sample containers.	To evaluate the decontamination effort and sampling equipment cleanliness between sampling locations.
	FIELD QC (LABORATORY TRIP BLANK)	NA	PFCs, VOCS	1 Per Cooler	Trip Blank to always remain in cooler that contains aqueous samples.	Used to evaluate potential impacts during the entire collection and sample container handling process from shipment to and from the laboratory, temporary storage and transport, and staging in the field.
	FIELD QC (FIELD TRIP BLANK)	NA	PFCs	1 Per Cooler	Prepared in the field during sampling by transfering a lab provided container of reagent water into a new empty lab provided sample container.	To evaluate if there is PFC cross-contamination at the sampling site.

TABLE 1: PROPOSED SAMPLING SCHEDULE
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET, HOOSICK FALLS, NEW YORK
REMEDIAL INVESTIGATION WORK PLAN
(Revised July 7, 2016)

Sample Type	Sampling Location	Sample Depth	Analytical Parameter	Grab/Comp.	Sampling Method	Rationale
GROUNDWATER SAMPLING (Newly Installed MW-6 to MW-21 & Existing MW-1, MW-1S, MW-2, MW-2S, MW-3 to MW-5)	MW-6	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	This is considered an upgradient well location in relation to both the upper and lower hydro-statigraphic units and will assist in defining groundwater movement in both units, and in determining if an upgradient off-site source of PFOA exists. A hydraulic conductivity (slug) test will also be completed.
	MW-7	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	To evaluate if groundwater at the sewer pump station is a potential source of PFOA. A hydraulic conductivity (slug) test will also be completed.
	MW-8, MW-9	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	To evaluate if PFOA is present at the location of on-site sewer manholes. A hydraulic conductivity (slug) test will also be completed.
	MW-10 to MW-12	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	To evaluate the environmental quality of groundwater in the vicinity of on-site and off-site sewer pump station overflow pipe manholes. A hydraulic conductivity (slug) test will also be completed.
	MW-13	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	To evaluate the environmental quality of groundwater between the site building and the Hoosic River and to determine if there is a component of groundwater movement directly toward the river. A hydraulic conductivity (slug) test will also be completed.
	MW-14	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	To evaluate the environmental quality of groundwater within central portions of the site where there have been no previous investigations. A hydraulic conductivity (slug) test will also be completed.
	MW-15	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	To evaluate the environmental quality of groundwater immediately downgradient of the site building's roof drainage discharge pipe. A hydraulic conductivity (slug) test will also be completed.
	MW-16[3]	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	To evaluate the environmental quality of groundwater in the area of the site building's sewage ejector pit.
	MW-17	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	Bedrock monitoring well set 20 to 25 feet within bedrock. To evaluate the environmental quality of groundwater in bedrock at an assumed hydraulically upgradient location, and to aid in the development of a bedrock groundwater contour map.

TABLE 1: PROPOSED SAMPLING SCHEDULE
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET, HOOSICK FALLS, NEW YORK
REMEDIAL INVESTIGATION WORK PLAN
(Revised July 7, 2016)

Sample Type	Sampling Location	Sample Depth	Analytical Parameter	Grab/Comp.	Sampling Method	Rationale
GROUNDWATER SAMPLING (Newly Installed MW-6 to MW-21 & Existing MW-1, MW-1S, MW-2, MW-2S, MW-3 to MW-5)	MW-18	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	Bedrock monitoring well set 20 to 25 feet within bedrock. To evaluate the environmental quality of groundwater in bedrock in the approximate central area of the site and to aid in the development of a bedrock groundwater contour map.
	MW-19	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	Bedrock monitoring well set 20 to 25 feet within bedrock. To evaluate the environmental quality of groundwater in bedrock and to aid in the development of a bedrock groundwater contour map.
	MW-20 & MW-21	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	To evaluate the environmental quality of groundwater in the vicinity of the Hoosic River shoreline.
	MW-1, MW-1S, MW-2, MW-2S, MW-3 to MW-5	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	Grab	Low-flow sampling techniques with peristaltic pump and new clean tubing and nitrile gloves at each sampling location.	To evaluate the environmental quality of groundwater in conjunction with the environmental quality of groundwater from the newly installed wells. Aid in generating more detailed groundwater contour maps of the different hydro-stratigraphic units.
	FIELD QC (REPLICATE)	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	1 Per 20 Media Samples	Collect by putting equal portions into parent and replicate sample containers, filling VOC containers first.	To evaluate field sampling technique and laboratory precision.
	FIELD QC (MS/MSD)	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	1 Per 20 Media Samples	Collect by putting equal portions into parent, MS and MSD sample containers, filling VOC containers first.	To evaluate if there is sample matrix interference and to evaluate laboratory accuracy (MS) and precision (MSD).
	FIELD QC (EQUIPMENT BLANK)	NA	TCL/TAL, CN, PFCs, Major Cations/Anions	1 Per 20 Media Samples	Collect by pouring distilled water over decontaminated/new sampling equipment and capturing in lab provided sample containers.	To evaluate the decontamination effort and sampling equipment cleanliness between sampling locations.
	FIELD QC (LABORATORY TRIP BLANK)	NA	PFCs, VOCS	1 Per Cooler	Trip Blank to always remain in cooler that contains aqueous samples.	Used to evaluate potential impacts during the entire sample collection and container handling process from shipment to and from the laboratory, temporary storage and transport, and staging in the field.
	FIELD QC (FIELD TRIP BLANK)	NA	PFCs	1 Per Cooler	Prepared in the field during sampling by transfering a lab provided container of reagent water into a new empty lab provided sample container.	To evaluate if there is PFC cross-contamination at the sampling site.

TABLE 1: PROPOSED SAMPLING SCHEDULE
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET, HOOSICK FALLS, NEW YORK
REMEDIAL INVESTIGATION WORK PLAN
(Revised July 7, 2016)

Sample Type	Sampling Location	Sample Depth	Analytical Parameter	Grab/Comp.	Sampling Method	Rationale
VAPOR INTRUSION SAMPLING (VI-1 to VI-5)	*VI-1 to VI-5*	Sub-Slab and Indoor Air	VOCs	Air Flow per Period of Time	Lab provided Suma canisters with air flow regulators.	Per DER-10, one (1) sub-slab vapor and one (1) indoor air quality sample will be collected per distinct building (five (5) buildings total) to evaluate if VOCs are present in vapor beneath the building slabs and in the air within the buildings.
	FIELD QC (REPLICATE)	NA	VOCs	1 Per 20 Media Samples	Place a second Suma canister in tandem with one (1) of the parent Suma canister.	To evaluate field sampling technique and laboratory precision.
	FIELD QC (AMBIENT)	NA	VOCs	1 Per 20 Media Samples	Utilize Suma canister to obtain an outdoor air sample.	To evaluate background concentrations of VOCs in outdoor ambient air.
SITE SURVEY	NA	NA	NA	NA	NA	Boundary and Topographic Survey of the Site and local, and to establish investigation sampling points using NAD 83 (horizontal) and NAVD 88 (vertical) coordinate system.
GEOPHYSICAL SURVEY	SITE WIDE	NA	NA	NA	NA	Geophysical survey potentially utilizing seismic refraction/reflection/electromagnetic techniques to map subsurface glacial till and bedrock lithologies and Ground Penetrating Radar (GPR) for utility locating.
QC - IMPORTED SOURCE MATERIALS	Source Sample - Imported Water for Drilling	NA	PFCs	Grab	Obtain one (1) grab sample of water to be used by driller from the drilling contractor's place of business.	To evaluate that water brought onto the Site by the drilling subcontractor does not contain PFCs. Water will be obtained at a municipal water source outside of the boundaries of the Village and Town of Hoosick Falls, NY. Laboratory analysis of the sample must indicate PFCs as non-detect prior to Site media sampling.
	Source Sample - Imported Water for Decontamination	NA	PFCs	Grab	Obtain one (1) grab sample of water to be used for decontamination.	To evaluate that water brought onto the Site for decontamination does not contain PFCs. Water will be obtained at a municipal water source outside of the boundaries of the Village and Town of Hoosick Falls, NY. Laboratory analysis of the sample must indicate PFCs as non-detect prior to Site media sampling.
	Equipment Rinse Blank - Totes/Tanks used by Driller	NA	PFCs	Grab	Pour distilled water through driller tanks/totes and capture in laboratory provided containers.	To evaluate that totes/tanks brought onto the Site by the drilling contractor do not contain PFCs. Laboratory analysis of the sample must indicate PFCs as non-detect prior to Site mobilization(5).
	Source Sample - Filter Sand Used as Monitoring Well Sand Pack	NA	PFCs	Grab	Collect one (1) grab sample of well construction filter sand per source/grain size/supplier.	To evaluate that filter sand brought onto the Site by the drilling contractor for monitoring well construction does not contain PFCs. Laboratory analysis of the sample must indicate PFCs as non-detect prior to Site mobilization.
	Equipment Rinse Blank - PVC Well Riser from Driller	NA	PFCs	Grab	Pour distilled water over/through PVC Well Riser and capture in laboratory provided containers.	To evaluate that PVC Well Riser brought onto the Site by the drilling contractor for monitoring well construction does not contain PFCs. Laboratory analysis of the sample must indicate PFCs as non-detect prior to Site mobilization.

TABLE 1: PROPOSED SAMPLING SCHEDULE
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET, HOOSICK FALLS, NEW YORK
REMEDIAL INVESTIGATION WORK PLAN
(Revised July 7, 2016)

Sample Type	Sampling Location	Sample Depth	Analytical Parameter	Grab/Comp.	Sampling Method	Rationale
QC - IMPORTED SOURCE MATERIALS	Equipment Rinse Blank - PVC Well Screen from Driller	NA	PFCs	Grab	Pour distilled water over/through PVC Well Screen and capture in laboratory provided containers.	To evaluate that PVC Well Screen brought onto the Site by the drilling contractor for monitoring well construction does not contain PFCs. Laboratory analysis of the sample must indicate PFCs as non-detect prior to Site mobilization.
	Equipment Rinse Blank - Steel Bedrock Well Casing from Driller	NA	PFCs	Grab	Pour distilled water over/through Steel Casing and capture in laboratory provided containers.	To evaluate that Steel Casing brought onto the Site by the drilling contractor for the bedrock monitoring wells does not contain PFCs. Laboratory analysis of the sample must indicate PFCs as non-detect prior to Site mobilization.
	Equipment Rinse Blank - Override Casing from Driller	NA	PFCs	Grab	Pour distilled water over/through driller override casing and capture in laboratory provided containers.	To evaluate that drilling override casing brought onto the Site by the drilling contractor for advancement of test borings does not contain PFCs. Laboratory analysis of the sample must indicate PFCs as non-detect prior to Site mobilization(5).
	Equipment Rinse Blank - Drill Rods from Driller	NA	PFCs	Grab	Pour distilled water over/through driller drill rods and capture in laboratory provided containers.	To evaluate that drilling rods brought onto the Site by the drilling contractor for advancement of test borings does not contain PFCs. Laboratory analysis of the sample must indicate PFCs as non-detect prior to Site mobilization(5).
	Equipment Rinse Blank - Core Barells from Driller	NA	PFCs	Grab	Pour distilled water over/through driller core barrel and capture in laboratory provided containers.	To evaluate that core barrels brought onto the Site by the drilling contractor for collection of soil samples does not contain PFCs. Laboratory analysis of the sample must indicate PFCs as non-detect prior to Site mobilization(5).
	Source Sample - Distilled Water for Field Tool Decontamination	NA	PFCs	Grab	Obtain one (1) sample of distilled water for field tool decontamination.	To evaluate that distilled water brought onto the Site does not contain PFCs. Laboratory analysis of the sample must indicate PFCs as non-detect prior to distilled water being imported onto the Site.
	Source Sample - Distilled Water for Rinse Samples	NA	PFCs	Grab	Obtain one (1) sample of distilled water for rinse samples.	To evaluate that distilled water brought onto the Site does not contain PFCs. Laboratory analysis of the sample must indicate PFCs as non-detect prior to distilled water being imported onto the Site.

Notes:
(1) Test borings/monitoring wells MW-6 to MW-15, MW-20 & MW-21 may be constructed as shallow and deep couplets in the shallow and deep hydro-stratigraphic units. The deep boring will be advanced first, followed by the shallow boring. Subsurface soil samples will be collected from the deep test borings only. Test boring MW-16 will consist of a single boring that will be converted to a shallow monitoring well. The cooncrete floor will first be cored a diameter of approximately 10"-12" prior to advancement of MW-16. Test borings MW-17 to MW-19 will be advanced for installation of bedrock wells only. Soil samples will not be collected from these borings.
(2) Several soil samples will be collected at each test boring location. Prior to drilling, soil samples requiring collection with hand tools will be collected first. These samples will be collected adjacent to the proposed boring location.
(3) This test boring will be advanced through concrete flooring. Sample intervals will be initiated beneath the concrete slab material.
(4) Laboratory analysis for QC samples affiliated with media samples collected on-site will be TCL/TAL, CN and PFCs and PFC for samples collected off-site.
(5) Driller totes, tanks, over casing, drill rods and core samplers will be segregated and will not be used for any other purpose from the time that rinsate samples are collected to the time that they are brought onto the Site.
TCL = Target Compound List of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Pesticides and PCBs
TAL = Target Analyte List of Metals, including Mercury
CN = Cyanide
PFC = Perfluorinated Compounds
TOC = Total Organic Carbon
QC = Quality Control
MS = Matrix Spike
MSD = Matrix Spike Duplicate
MW = Monitoring Well
NA = Not Applicable

APPENDIX A

FIELD SAMPLING PLAN
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 McCAFFREY STREET
VILLAGE OF HOOSICK FALLS
RENSSELAER COUNTY, NEW YORK

FIELD SAMPLING PLAN
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 McCAFFREY STREET
VILLAGE OF HOOSICK FALLS
RENSSELAER COUNTY, NEW YORK

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ATTACHMENTS:

Attachment A: QA/QC Forms and Field Report Forms

1.0 INTRODUCTION

This document is the Field Sampling Plan (FSP) for the Remedial Investigation (RI) to be conducted at the Saint-Gobain Performance Plastics (Saint-Gobain) Site ('the Site") located at 14 McCaffrey Street in the Village of Hoosick Falls, Rensselaer County, New York. It has been developed in accordance with the RI Work Plan (RIWP) as prepared by C.T. Male Associates. A description of the property, background information, objectives, and the proposed scope of work, are presented in the referenced RIWP.

This FSP is a supplement to the RIWP in that it presents the standard field sampling and data gathering procedures to be followed during implementation of the field activity portion of the scope of work. This plan addresses sampling locations and frequencies, drilling methods including advancement of soil borings and installation of monitoring wells, vapor intrusion assessment including sub-slab soil gas and indoor air sampling, decontamination procedures, sampling procedures, field screening and testing procedures, field instrumentation operating procedures, field measurements, sample handling and chain of custody procedures, water level measurement procedures and investigative derived waste management. The applicable portions of the RIWP that coincide with the FSP will be provided to, and followed by the field team. This FSP is intended to be applicable to field sampling activities conducted by C.T. Male Associates and its subcontractors.

The FSP forms an integral part of the Quality Assurance Project Plan (QAPP). The field sampling and data gathering procedures presented in the FSP are incorporated into the QAPP by reference. The FSP and the QAPP document the laboratory quality assurance/quality control procedures to be followed during analysis of samples collected in the field so that valid data of a known quality is generated.

The FSP has been prepared, in part, in general accordance with the following NYSDEC and EPA guidance documents:

- DER-10, Technical Guidance for Site Investigation and Remediation, NYSDEC, May 2010.

- 6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1 to 375-4 and 375-6, Effective December 14, 2006.

- A Compendium of Superfund Field Operations Methods, EPA/540/P-87/001, USEPA, December 1987.

2.0 MEDIA SAMPLING LOCATIONS AND FREQUENCY

Sampling will be performed for volatile organic vapor screening, subjective media assessment, laboratory analyses, and for geologic and hydrogeologic characterization of the project Site. The environmental media to be sampled includes:

- Soil,
- Groundwater,
- Surface Water,
- Sediment,
- Soil Gas, and
- Indoor Air.

Detail for the proposed media sampling strategy is presented in Section 3.0 of this report.

In general, approximately 52 surface soil, 62 shallow soil and 45 subsurface soil samples will be collected from 11 surface soil, 16 shallow soil and 15 test boring locations throughout the Site and from off-site locations. At least 22 groundwater samples will be collected from seven (7) existing monitoring wells and from newly installed overburden and bedrock monitoring wells. Three (3) surface water samples will be collected from off-site low-lying wet areas and from the Hoosic River. Fourteen (14) sediment samples will be collected from on-site and off-site locations. Five (5) soil gas and five (5) indoor air samples will be collected as part of a vapor intrusion assessment of the Site building.

3.0 SITE INVESTIGATION OVERVIEW

3.1 General

The proposed Site investigations include: collection and laboratory analysis of quality control samples of source materials and rinse blanks of equipment that will be imported to the Site to conduct the investigations; collection and laboratory analysis of surface soil; collection of shallow soil samples in the vicinity of roof drainage systems at yet to be determined on-site and off-site locations; advancement of test borings to aid in the collection of surface, shallow and subsurface soil samples for field screening and laboratory analysis, for installation of monitoring wells and characterization of the Site's subsurface; collection and laboratory analysis of groundwater samples from the installed monitoring wells; collection and laboratory analysis of surface water and sediment samples; collection and laboratory analysis of soil gas and indoor air samples as part of a vapor intrusion survey; and completion of a geophysical survey to map the glacial till and bedrock contact depths and to identify the location of the municipal sewer pump station overflow piping.

3.1.1 Source Materials and Equipment Rinse Blanks

Quality control samples will be collected of source materials and equipment that is anticipated to be imported to the Site for the investigations. Source materials to be sampled include potable water used by the drilling contractor for drilling and decontamination, bottled water used as final decontamination rinse water, and filter sand used for the monitoring well sand pack. Equipment rinsate blank samples will be collected by pouring bottled deionized water over and through driller water totes and tanks, drill casings, drill rod, monitoring well PVC riser and monitoring well PVC screen. The aforementioned samples will be analyzed for PFCs and the analytical results will be reviewed prior to Site mobilization. Mobilization of equipment and material will only be permitted if analytical results indicate PFCs as non-detect. The drill tooling and material will be designated for Site use only and will not be used for other drilling projects prior to being mobilized to the Site.

3.1.2 Surface Soil Sampling

Surface soil samples will be collected within the Site by establishment of a 200′ by 200′ grid over the Site (11 sampling locations, SS-1 to SS-11) and at test boring locations MW-6 to MW-16, MW-20, MW-21, SB-1 and SB-2 (15 sampling locations). Surface soil samples will not be collected from MW-17 to MW-19 as these borings will be converted to bedrock monitoring wells.

Surface soil samples collected from the 200′ by 200′ grid system will be collected to evaluate the environmental quality of surface soils representative of site-wide conditions; from low-lying vegetated areas of the site; from vegetated areas in the vicinity of the site's property line, access roads and site buildings; in the vicinity of an aboveground propane tank and former transformer; and from beneath gravel parking and loading areas.

Surface soil samples will be collected at the test boring locations to further evaluate the environmental quality of soils in: presumed upgradient areas of the site; at an off-site location in the vicinity of the Hoosick Falls Sewer Pump Station; in the vicinity of on-site sewer manholes; at off-site locations in the vicinity of sewer manholes; between the Saint-Gobain plant building and the Hoosic River; areas of the site where no previous investigations have been conducted; downgradient of the Saint-Gobain building's roof drainage piping; in the vicinity of a Sewage Ejector Pit in the Saint-Gobain building; near the Hoosic River riverbank; in an open grassy area downgradient of the site building; and in a flat area to the southeast of the site.

Two (2) discrete soil samples will be collected at each surface soil sampling location. The first discrete surface soil sample will be collected from the ground surface (or below any sub-base material, if present) to a depth of 2″ and will include any underlying vegetative and/or organic matter. This sample will be analyzed in the laboratory for PFCs (Modified), TOC, moisture content and grain size analysis. The second discrete surface soil sample will be collected from beneath the vegetative root zone (or below any pavement or sub-base material, if present) to a depth of 2″. As a requirement of DER-10, this sample will be analyzed in the laboratory for the TCL/TAL parameters and cyanide (CN).

3.1.3 Shallow Soil Sampling

Shallow soil samples may be collected for laboratory analysis from both on-site and off-site locations.

On-site shallow soil sampling locations will be determined by evaluating the presence, if any, of downspouts, roof drains and drip lines affiliated with the site building's roofing system. Shallow soil samples will be collected from vegetated areas in proximity to the roof drainage appurtenances. The proposed sampling locations will be approved by the Department prior to initiation of the sampling program.

Off-site shallow soil samples will be collected from three residential properties located downwind of the subject site. Downwind properties where the samples will be collected from will be determined through review of air models for the Saint-Gobain facility. Four shallow soil samples will be collected at each property. Two samples will be collected from vegetated areas in proximity to roof drains and/or roof drip lines. Two samples will be collected for background purposes in vegetated areas of the property that do not receive drainage from the roof systems.

Shallow soil samples will be collected from the ground surface to a depth of 2" (including the vegetative root zone, if present) and from the 2" to 12" depth interval. The samples will be analyzed in the laboratory for PFCs (Modified), total organic carbon (TOC) and moisture content.

If subjective indications, (elevated PID readings, oily liquid, strongly odiferous soils, staining, etc.) are noted in the shallow soil samples, the sample will also be analyzed for the TCL/TAL parameters including CN.

3.1.4 Subsurface Soil Sampling

Subsurface soil samples will be collected at discrete sampling intervals from surface soil sampling locations SS-1 to SS-11 and test borings MW-6 to MW-16, MW-20, MW-21, SB-1 and SB-2 (see Figure 2). Soil samples will not be collected from the MW-17 to MW-19 test boring locations as these borings will be for the installation of bedrock monitoring wells only.

The subsurface soil samples will be collected to evaluate overall subsurface conditions and the environmental quality of soils in: low-lying vegetated areas of the site; from vegetated areas in the vicinity of the site's property line, access roads and site buildings; in the vicinity of an aboveground propane tank and former transformer; from beneath gravel parking and loading areas; presumed upgradient areas of the site (MW-6); at an off-site location in the vicinity of the Hoosick Falls Sewer Pump Station (MW-7); in the vicinity of on-site sewer manholes (MW-8, MW-9, MW-11); at off-site locations in the vicinity of overflow pipe sewer manholes (MW-10, MW-12); between the Saint-Gobain plant building and the Hoosic River (MW-13); areas of the site where no previous investigations have been conducted (MW-14); downgradient of the Saint-Gobain building's roof drainage piping (MW-15); in the vicinity of a Sewage Ejector Pit in the Saint-Gobain building (MW-16); near the Hoosic River riverbank (MW-20 and MW-21); in an open grassy area downgradient of the site building (SB-1); and in a flat area to the southeast of the site (SB-2).

At each surface soil and test boring location, soil samples will be collected from 2”-12” below the ground surface (or below any sub-base material, if present), and analyzed for PFCs, TOC, moisture content and grain size analysis, and TCL/TAL parameters including CN.

Additional subsurface soil samples will be collected from the test boring locations (MW-6 to MW-16, MW-20, MW-21, SB-1 and SB-2) at the following depth intervals: immediately above the water table; at soil mottling zones; at the fill/native soil interface; and at major stratigraphic changes. In the event that major stratigraphic changes are not encountered at the depths explored, then soil samples will be collected from the 5’-7’ and 10’-12’ depth intervals. The samples will be analyzed for PFCs, TOC, moisture content and grain size analysis, and TCL/TAL parameters including CN. Soil sampling depths may be adjusted in the field with input from Department field-oversight staff.

If subjective impacts (elevated PID readings, oily liquid, strongly odiferous soils/fill, staining, etc.) are noted in soils above the water table, a sample of the soil will be collected for laboratory analysis for PFCs, TOC, moisture content and grain size analysis, and TCL/TAL parameters including CN.

3.1.5 Sediment Sampling

Sediment samples will be collected from on-site locations to evaluate the environmental quality of accumulated sediments, if present, within the sewer manholes. Off-site locations will be sampled to evaluate the environmental quality of sediments within the off-site sewer manholes along the 12" diameter municipal sewer pump station overflow discharge pipe; at the off-site sewer pump station overflow outfall pipe; along the eastern bank of the Hoosick River, topographically downgradient of the site; from the river bottom sediment upriver, mid-river and downriver of the site; and in low-lying wet areas to the southeast of the site. Water samples, if present, will also be collected from within the off-site sewer manholes/catch basins (SED-4 & SED-5) in addition to the sediment samples.

The on-site sediment samples will be analyzed in the laboratory for TCL/TAL, CN, PFCs (Modified) and TOC. The off-site sediment samples (and water samples, if present) will be analyzed in the laboratory for PFCs (Modified) and TOC.

3.1.6 Surface Water Sampling

Surface water samples will be collected at off-site locations to evaluate the environmental quality of surface water from the Hoosic River upriver and downriver of the Site, and from low-lying wet areas to the southeast of the Site

The surface water samples will be analyzed in the laboratory for TCL/TAL parameters, CN, PFCs and major cations (Ca, Mg, Na and K) and anions (Cl, SO_4, CO_3 and HCO_3).

3.1.7 Groundwater Sampling

Each of the overburden test borings will be converted to two-inch diameter monitoring wells with protective enclosures to allow the periodic collection of groundwater samples for laboratory analysis. Groundwater samples will also be collected from the newly installed bedrock monitoring wells and existing monitoring wells installed during the previous site investigation. The new wells will be developed and purged prior to sampling. The existing wells will only be purged as they were developed during the previous investigation. The groundwater samples will be analyzed for the TCL/TAL parameters, CN, PFCs and major cations (Ca, Mg, Na and K) and anions (Cl, SO_4, CO_3 and HCO_3).

3.1.8 Soil Gas and Indoor Air Quality Sampling

As part of the NYS Department of Health (NYSDOH) vapor intrusion assessment, five (5) samples will be collected from the sub-slab soil gas beneath the five (5) discrete building sections along with corresponding indoor air samples. The samples will be analyzed for the TO-15 list of VOCs.

3.2 Observation of Drilling Operations, Monitoring Well Installations and Geophysical Survey

All drilling, monitoring well installation, geophysical survey and other associated field work involved in the RI to be performed by C.T. Male Associates subcontractors will be observed by full-time, on-site, C.T. Male Associates' representatives. The representatives will be responsible for the collection of soil samples, soil classification, field screening of soil samples, recording of drilling and sampling data, recording of groundwater data, deciding on the final drilling depths and monitoring well screened intervals (with input from the project manager), recording the monitoring well construction procedures, monitoring the decontamination procedures, and overall supervision of the geophysical survey subcontractor. The C.T. Male Associates representatives will also develop and purge the monitoring wells and conduct groundwater sampling.

Field system audits will be conducted and field reports will be prepared that document the daily activities and their conformance to the work plan (described further in the QAPP). A copy of the forms to be utilized by the applicable field team personnel as part of the field quality assurance/quality control (QA/QC) procedures are presented in Attachment A of this FSP.

The project manager will be kept informed of the progress of work and any problems encountered during the RI so appropriate corrective action can be implemented, and Saint-Gobain and NYSDEC can be notified.

3.3 Drilling and Sampling of Overburden for Installation of Monitoring Wells

The test boreholes will be advanced through the overburden and bedrock employing sonic drilling techniques with the exception of the test borehole that will be advanced within the Site building. Direct-push (Geoprobe) drilling techniques will be employed at this location.

Sonic Drilling

A 5′ long by 4″-6″ diameter core sampler will be continuously advanced to the terminus depth of each overburden test boring. At each five (5) foot interval, the core sampler will be extracted from the overburden and the soils within the core sampler will be examined for soil classification, screening and sampling. Prior to retrieving the core sampler, steel overcasing having a diameter of 6″-8″ will be advanced around the core sampler to maintain the integrity of the borehole. The overcasing will be advanced to the terminus depths of the overburden test borings and will be removed upon installation of the monitoring wells. In the event that an upper and lower hydro-stratigraphic unit is encountered requiring installation of shallow and deep monitoring well couplets, overcasing will remain in the ground at a strategic depth interval to preclude the mixing of the upper and lower hydro-stratigraphic units. 2″ PVC monitoring wells will be installed at each of the overburden test boring locations.

For the bedrock borings, 6″casing will be advanced from the ground surface to approximately 5′ into bedrock and set in place. Grout will be placed between the exterior of the casing and the borehole wall. Thereafter, the bedrock will be core drilled an additional depth of approximately 20′-25′. The open core hole within the bedrock will serve as the bedrock monitoring well.

Direct-Push Drilling

Direct-push drilling techniques will be employed for the overburden test borehole within the site building due to space constraints. Prior to drilling, a 10"-12" diameter core drill will be used to penetrate and remove the building's concrete flooring. A 5' long by 2" diameter macro-core sampler with new acetate liner will be continuously advanced to the terminus depth of the test boring. At each five (5) foot depth interval, the core sampler will be extracted from the overburden and the soils within the acetate liner will be examined for soil classification, screening and soil sampling.

All soils will be visually classified in the field using the Unified Soil Classification System in general accordance with ASTM D-2488, Standard Practice for Description and Identification of Soils. The soil description may include matrix and clast descriptions, moisture content, color, appearance, odor, behavior of the material and other pertinent observations. This information will be recorded on a subsurface exploration log form along with the boring identification and elevation, date started and completed, sampling intervals, standard penetration values, length of recovered sample and depth of first groundwater encountered. During the drilling, a photoionization detector (PID) meter will be used to monitor the volatile organic vapors exiting the borehole and soil cuttings, and of all recovered subsurface samples. These visual observations and field measurements will be recorded on the Subsurface Exploration Log. A blank copy of a Subsurface Exploration Log form is enclosed in Attachment A.

In the event a borehole is not converted into a monitoring well, it will be abandoned by tremie grouting it from the bottom depth of the boring to grade with a cement/bentonite grout mixture (approximately 20 to 1 ratio). Soil cuttings will be transferred to labeled DOT 17H approved 55-gallon open top steel drums and staged on site. The contents of the drums will be subsequently characterized and profiled for off-site disposal.

3.4 Vapor Intrusion Sampling

Vapor intrusion sampling will include the collection of sub-slab soil gas samples and indoor air quality samples.

Installation of the sub-slab soil vapor probes will consist of utilizing mechanical methods (i.e., hammer drill) to penetrate through the concrete flooring. The vapor probes will not be installed in the vicinity of any breaches (cracks, seams, expansion joints, etc.) in the concrete flooring. Once the concrete floor has been penetrated, a stainless steel sampling point and attached inert tubing will be installed to a depth of approximately two (2) inches beneath the bottom of the slab. The slab penetration will then be sealed with hydrated bentonite.

Prior to VI air monitoring, an assessment of the physical features of the interior of the building will be performed. An inventory will be made of sumps; chemical products; HVAC systems; floor, wall and ceiling staining; pipe and utility penetrations; storage tanks, etc. that could be a vapor source or migration pathway. Relevant features will be identified in a field sketch and the NYSDOH provided Indoor Air Quality Questionnaire and Building Inventory template will be completed. A subjective vapor assessment will also be conducted of the building employing a photoionization detector (PID) having the capability of measuring organic vapors in the parts per billion (ppb) range. If organic vapors are measured above background, an attempt will be made to identify the source of the elevated organic vapors and remove it from the premises during the testing period.

Prior to sampling, one to three air volumes will be purged from each sampling point and tubing. The sub-slab vapor samples will be collected in a laboratory-certified clean 6-liter Summa canister with pre-set air flow regulator. The requisite volume of soil gas will be collected and the sample forwarded to the laboratory of record for analysis for VOCs by EPA Method TO-15. As a check to ensure that ambient air has not entered the sampling stream, a tracer gas (i.e., helium) will be applied into a ground surface mounted structure overlying the exit point of the sample tubing. The tracer gas will be applied prior to sample collection and at the completion of sampling. The tracer gas will be measured employing a portable field measuring instrument. The soil vapor sampling stream will be considered acceptable if the tracer gas concentration is measured at less than 10 percent. If the tracer gas is measured at concentrations exceeding 10 percent, additional measures will be undertaken to seal the soil vapor sampling apparatus until tracer gas concentrations are less than 10 percent. Upon completion of sampling, the vapor probe will be removed and the floor restored with hydraulic cement.

The indoor air quality sampling canisters will be placed at strategic locations where employees congregate, approximately three feet above the floor surface. The building does not contain a basement. The indoor air quality samples will be collected in laboratory-certified clean 6-liter Summa canisters with pre-set air flow regulators. The requisite volume of soil gas will be collected and the samples forwarded to the laboratory for analysis for VOCs by EPA Method TO-15.

The outdoor (ambient) air quality sampling location will be determined in the field at the time of sampling and will be selected upwind in an area not subject to wind obstructions and away from features and activities that may emit vapors. A field sketch will be developed depicting the sub-slab vapor, indoor air quality and outdoor air quality sampling locations along with site features having the potential to emit vapors.

3.5 Media Sampling and Soil Field Screening Procedures

Media samples anticipated to be collected during the RI include surface soil samples (0-2″ bgs), shallow soil samples (6″-12″ and 12″-18″ bgs), subsurface soil samples (5′-7′ and 10′-12′ bgs), sediment samples, surface water samples, groundwater samples, rooftop wipe samples, soil gas samples, and indoor air samples.

3.5.1 Surface, Shallow and Subsurface (2″-12″ bgs) Soil Sampling

The soil sampling procedures that will be followed for surface and shallow soil samples include the following:

1. Place and secure a new 5′ by 5′ sheet of plastic sheeting over the sampling location and remove a 6″ by 6″ opening in the center of the sheeting.

2. Remove vegetation and/or humus, where present, down to ground surface. If the sampling location is within asphalt pavement, the pavement will be removed using a pre-cleaned thin wall core barrel and electric vertical drill stand. In this instance, the collection of the soil samples will be initiated at the ground surface at the bottom depth of the asphalt and granular sub-base, if present. If the sampling location is within gravel sub-base, the gravel will be removed and the collection of the soil samples will be initiated at the ground surface at the bottom depth of the asphalt.

3. A cleaned (per Section 3.7) 3-inch diameter stainless steel hand auger and/or

hand spade will be used by the on-site sampling personnel for collection of the soil samples. New disposable nitrile gloves will be worn when handling the sampling equipment.

4. For VOCs analysis, immediately upon exposing the recovered sample, a portion of the soil sample for VOC analysis will be collected with a new Terra Core sampler and put directly into laboratory provided glass 40-ml vials and the vials sealed. The samples for VOC analysis are required to be frozen within 48 hours, which will be identified on the chain of custody record to be performed by the laboratory receiving the samples. For non-VOCs analysis, the soil sample will be transferred to a pre-cleaned stainless steel bowl and homogenized with a pre-cleaned stainless steel spoon wearing new nitrile gloves. An aliquot of the sample will then be transferred to laboratory provided sample containers. The PFC sample will be collected first, followed by the samples for SVOCs, PCBs, Pesticides, TOC, moisture content, metals and CN. The remaining portion of the sample will be placed in a new plastic zip lock bag, not more than one-half full, and sealed. This bag sample will be for head space analysis screening in the field for volatile organic compounds (VOCs) using a PID meter, and subsequent grain size analysis.

5. For samples to be collected for laboratory analysis, the sample container label will be completed with the soil sample location, sample interval, sampler's initials, date, and time. The client, project name, Site location, matrix, sample type (grab/composite) and laboratory analyses to be performed will also be recorded on the sample label.

6. Backfill each sampling location in vegetated areas with topsoil purchased at a national home improvement store and compact. Backfill each sampling location in paved areas with crusher run and compact, and restore the surface with sub base and asphalt having the same thickness and placement as surrounding sub base and asphalt. Backfill each sampling location in gravel sub-base locations with gravel sub-base.

7. The soil sample will be classified per Section 3.3 and a Subsurface Exploration Log will be completed.

8. The sampling equipment will be decontaminated between each sampling location and sampling depth interval per Section 3.7.

3.5.2 Subsurface Soil Samples

The subsurface soil sampling procedures that will be followed during advancement of test borings to be converted to monitoring wells includes the following:

1. A pre-cleaned (per Section 3.7) core sampler barrel will be used for each sampling interval. New disposable nitrile gloves will be worn when handling the core sampler.

2. A soil sample will be collected by advancing the core sampler employing sonic and/or direct push drilling techniques the desired 5-foot sampling interval.

3. For samples to be collected for laboratory analysis, the sample container label will be completed with the sample location (boring nomenclature), sample interval, sampler's initials, date, and time. The client, project name, Site location, matrix, sample type (grab/composite) and laboratory analyses to be performed will also be recorded on the sample label.

4. The recovered soil sample from the sonic drilling core sampler will be transferred from the core sampler into a clean plastic bag. The plastic bag will be placed on clean poly and the plastic bag will be opened to expose the sample. The recovered soil sample from the direct push drilling core sampler will be contained in a new acetate liner. The acetate will be placed on clean poly and the acetate liner opened to expose the sample.

5. For VOCs analysis, immediately upon exposing the recovered sample, a portion of the soil sample for VOC analysis will be collected with a new Terra Core sampler and put directly into laboratory provided glass 40-ml vials and the vials sealed. The samples for VOC analysis are required to be frozen within 48 hours, which will be identified on the chain of custody record to be performed by the laboratory receiving the samples. For non-VOCs analysis, the soil sample will be transferred to a pre-cleaned stainless steel bowl and homogenized with a pre-cleaned stainless steel spoon wearing new nitrile gloves. An aliquot of the sample will then be transferred to laboratory provided sample containers. The PFC sample will be

collected first, followed by the samples for SVOCs, PCBs, pesticides, TOC, moisture content, metals and CN. The remaining portion of the sample will be placed in a new plastic zip lock bag, not more than one-half full, and sealed. This bag sample will be for head space analysis screening in the field for volatile organic compounds (VOCs) using a PID meter, and subsequent grain size analysis.

6. The soil samples will be classified and the Subsurface Exploration Log completed as described in Section 3.3

7. The sampling equipment will be decontaminated per Section 3.7.

All of the soil samples, where sufficient sample is recovered to generate a headspace sample, will be screened in the field with a PID meter on a daily basis. The sample will be allowed to equilibrate to ambient temperature; the plastic bag will be shaken and the bag will be pierced with the tip of the PID meter; and the reading taken. The readings will be recorded on an Organic Vapor Headspace Analysis Log form. A blank copy is included in Attachment A. The PID meter calibration procedures are discussed in Section 7.0.

3.5.3 Sediment Sampling

The specific sediment sampling procedures that will be followed include the following:

1. A pre-cleaned hand spade and/or a scoop will be used to collect the sample.

2. For samples to be collected for laboratory analysis, the sample container label will be completed with the sample location, sample interval, sampler's initials, date, and time. The client, project name, Site location, matrix, sample type (grab/composite) and laboratory analyses to be performed will also be recorded on the sample label.

3. The recovered sediment sample will be placed on clean polyethylene sheeting.

4. For VOCs analysis, immediately upon exposing the recovered sample, a portion of the sediment sample for VOC analysis will be collected with a new Terra Core sampler and put directly into laboratory provided glass 40-ml vials and the vials sealed. The samples for VOC analysis are required to be frozen within 48 hours, which will be identified on the chain of custody record to be performed by the laboratory receiving the samples. For non-VOCs analysis, the sediment sample will

be transferred to a pre-cleaned stainless steel bowl and homogenized with a pre-cleaned stainless steel spoon wearing new nitrile gloves. An aliquot of the sample will then be transferred to laboratory provided sample containers. The PFC sample will be collected first, followed by the samples for SVOCs, PCBs, pesticides, TOC, moisture content, metals and CN. The remaining portion of the sample will be placed in a new plastic zip lock bag, not more than one-half full, and sealed. This bag sample will be for head space analysis screening in the field for volatile organic compounds (VOCs) using a PID meter, and subsequent grain size analysis. The sediment samples will be visually classified per Section 3.3 and recorded on a Subsurface Exploration Log.

5. The sampling equipment will be decontaminated per Section 3.7.

All of the sediment samples, where sufficient sample is recovered to generate a headspace sample, will be screened in the field with a PID meter on a daily basis. The sample will be allowed to equilibrate to ambient temperature; the plastic bag will be shaken and the bag will be pierced with the tip of the PID meter; and the reading taken. The readings will be recorded on an Organic Vapor Headspace Analysis Log form. A blank copy is included in Attachment A. The PID meter calibration procedures are discussed in Section 7.0.

3.5.4 Surface Water Sampling

The specific sampling procedures that will be followed for collection of surface water samples include the following. This procedure also applies to any water samples collected in tandem with sediment samples from the off-site sewer manholes/catch basins identified as SED-4 & SED-5 (see Section 3.1.5).

1. Each surface water sample will be collected using a new disposable bailer or the samples collected directly in the laboratory provided containers. A new pair of disposable nitrile gloves will be used to handle the sampling equipment and containers at each sampling location.

2. The disposable bailer will be lowered slowly into the water column to minimize the aeration of the samples. If samples are collected directly into the sample containers, care will be employed to prevent fixative from being spilled and/or rinsed from the container.

3. In order to insure the integrity of samples, sample containers must be filled properly. The following sections contain general procedures for sampling and specific procedures for sampling for VOCs and PFCs. Care shall be taken in sampling to assure that analytical results represent the actual sample composition.

General Sampling

1. Don't remove caps until the actual sampling time and only long enough to fill the container.
2. Identify every container by filling out the label with all the required data.
3. Fill all containers as recommended by the laboratory.
4. Some bottles may contain a fixative which should not be rinsed out of the bottle. Read the sample label treatment and fixative section to determine if a preservative/fixative has been added. Be careful not to contact fixatives with skin or clothing. If this should occur, rinse liberally with water.
5. Complete the Surface Water Sampling Log and Chain of Custody Record forms.

Collection of Field Parameters

Surface water geochemical field parameters including temperature, conductivity, pH, oxidation-reduction potential (ORP), and dissolved oxygen (DO) will be monitored and recorded to provide geochemical data. The geochemical field parameters will be collected with a calibrated electronic field parameter meter. The field parameter meter will be calibrated at the start of each day and will have documented calibration checks at the middle and end of each day. All calibration records and checks will be documented on field notes or on sampling records by recording the value of the calibration solution, what the instrument was reading prior to calibration, and a checkmark if re-calibration was needed. Fresh calibration solution will be used each day that samples are collected, but may be re-used throughout the day.

Sampling for Volatile Organic Compounds

1. Samples are to be collected in glass containers having a total volume in excess of 40 ml with open-top screw caps with Teflon-faced silicone septa. Sample containers will have hydrochloric acid (HCL) added to them as a preservative. This preservative must not be rinsed out.

2. A trip blank should be prepared from reagent grade water and carried through the sampling and handling procedure. It will serve as a check for transport and container contamination.

3. Fill sample container slowly to minimize aeration of the sample, until a curved meniscus is observed over the bottle rim.

4. Float the septa, Teflon™ side down on the liquid meniscus. The Teflon™ side is the thin layer observed when viewing the septum from the side horizontally.

5. Carefully set on septum, expelling excess sample and being careful to exclude air. Then screw open-top cap down.

6. Check for a good seal by inverting bottle and tapping and checking for visible air bubbles.

7. If air bubbles are visible or there is a bad seal, remove cap and add additional sample and repeat steps 4 to 6.

8. Groundwater samples for volatile analysis will be taken in triplicate.

Sampling for PFCs

1. To prevent cross-contamination or sample interference, possible PFOA containing items will be avoided during the sampling. These items include (but are not limited to) Teflon-containing materials, Tyvek clothing, clothes treated with stain or rain-resistant coatings, Teflon sample containers, aluminum foil, blue ice, packaged foods, and post-its.

2. Samples are to be collected in laboratory provided 250 ml HDPE plastic bottles with screw-on HDPE plastic caps. **Do not collect samples in glass containers.** Sample containers will have TRIZMA Preset Crystals (pH 7.0) added to them as a preservative. This preservative must <u>not</u> be rinsed out.

3. New, powder-free nitrile gloves must be donned prior to sample collection.

4. Fill laboratory provided containers slowly to avoid matrix agitation. Fill containers to the bottom of the sample container bottle neck. Immediately close sample container with screw-on cap.

5. Lightly agitate the sample to dissolve the preservative crystals.

6. Place sample containers on ice in cooler to maintain sample temperature of $\leq 6^{o}C$.

3.5.5 Soil Gas Sampling

Soil gas samples will be collected from beneath the building's concrete flooring/slab. The specific sampling procedures that will be followed for collection of soil gas samples include the following:

1. Mechanical methods (i.e., hammer drill) will be used to penetrate through the concrete flooring.

2. Once the concrete floor has been penetrated, install a new stainless steel sampling point and attached new, inert tubing at each sampling location. New nitrile gloves will be worn at each sampling location when handling the sampling points and tubing

3. Seal the floor penetration around the tubing with hydrated bentonite to create an airtight seal.

4. Attach the inert tubing to the Summa canister wearing new nitrile gloves.

5. Open sampling port to allow inflow of air into the canister. New nitrile gloves will be worn when opening the sampling port.

6. When sampling is complete, close sampling port wearing new nitrile gloves.

3.5.6 Indoor Air and Outdoor Ambient Air Sampling

Indoor air samples will be collected from areas within the building where employees congregate. The outdoor ambient air sample will be collected at an upwind location. The specific sampling procedures that will be followed for collection of air samples include the following:

1. Set Summa canisters at strategic locations approximately three (3) feet above the floor and/or ground surface.

2. Open sampling port to allow inflow of air into the canister. New nitrile gloves will be worn when opening the sampling port.

3. When sampling is complete, close sampling port wearing new nitrile gloves.

3.6 Monitoring Well Installation

Monitoring well materials will be installed in the overburden test boreholes completed using rotosonic drilling methods and the one (1) test borehole completed within the building using Geoprobe direct push methods. Monitoring well materials will not be installed in the boreholes completed in bedrock. Rather, groundwater samples will be collected from the bedrock boreholes of groundwater derived from surrounding bedrock fractures and/or joints.

For boreholes completed using rotosonic drilling techniques, the monitoring wells will be installed within the overcasing. Once the overcasing is advanced to the desired depth, 2-inch diameter monitoring wells with slotted screens will be installed in accordance with standard practices. For boreholes completed using direct push drilling techniques, the monitoring wells will be installed within the open borehole. Once the borehole is advanced to the desired depth, 1-inch diameter monitoring wells with slotted screens will be installed in accordance with standard practices. Typical monitoring well construction details are shown in Attachment A. All wells will be constructed of flush-threaded joint, Schedule 40 PVC riser pipe, machine slotted screen, bottom plug, and cap. The screens will be 0.010-inch slotted and generally ten feet in length.

Each well will be assembled as it is lowered into the borehole. The annulus around the well screen will be packed with clean #0 silica sand to a maximum of two feet above the screen. Additionally, a one-half foot choke of fine-grained #00 sand will be placed on top of the sand pack to preclude the migration of the seal material into the sand pack. A minimum two-foot bentonite seal will be installed in the annulus. The seal will consist of bentonite pellets/chips or slurry. The remainder of the annulus will be filled with cement/bentonite grout (ratio of 20 to 1). A steel monitoring well guard pipe or curb box will be set over each well head and cemented in place. A positive grade will be constructed of cement around the well to divert surface water away from the well. A permanent mark will be made at the top of the PVC riser to serve as a datum for all subsequent static water level measurements. Upon completion, a locking gripper well cap will be installed and locked. Monitoring well depths, and screen lengths and depths will be calculated by the environmental scientist/geologist by maintaining accurate measurements of screen and casing placed in the borehole. Monitoring Well

Construction Log forms (Attachment A) for the monitoring wells will be completed that documents the well materials and depths.

3.7 Monitoring Well Development

Once installed, each monitoring well will be developed by over pumping in order to remove any accumulated fine sediment within the well and to establish a hydraulic connection with the surrounding aquifer. Monitoring wells will be developed by surging and purging until water is clear, when field measured turbidity values are below 5 NTU's and/or the turbidity values have stabilized, or when ten well volumes are removed. During well development, pH, temperature, dissolved oxygen (DO) and specific conductance will be measured and recorded. Purge water will be containerized in DOT approved 55-gallon drums, labeled and stored in a secure location at the Site until laboratory analyses results of the soil and groundwater samples indicates the proper method of treatment or disposal.

Well development will be completed using new, clean tubing and nitrile gloves will be changed between wells, to prevent cross-contamination. Sampling equipment, such as the water level probe, will be decontaminated between wells.

3.8 Decontamination of Drilling and Sampling/Gauging Equipment

Drilling equipment including casing, rods, plugs, samplers, tools, drill unit and any piece of equipment that can come in contact with the formation will be cleaned with a high temperature/high pressure steam cleaner prior to the start of work and between each boring to prevent cross-contamination between borings. The equipment will also be cleaned using the same procedure at completion of the work (before leaving the Site) to prevent contamination from leaving the Site.

The sampling equipment (core samplers, stainless steel scoops, hand spades, hand augers, water level meter, etc.) will be cleaned prior to use, in between each sampling location, in between each sampling interval, and at completion of the work using the following procedure:

1. Remove any excess soil/sediment remaining on the sampling/gauging equipment.

2. Rinse sampling/gauging equipment with imported water.

3. Vigorously scrub the sampling/gauging equipment with a brush and laboratory-grade standard detergent (e.g., Alconox® or Liquinox®) and imported water.

4. Rinse the sampling/gauging equipment with bottled deionized water.

5. New disposable nitrile gloves will be worn when cleaning and handling the equipment to avoid contamination.

6. The water in the wash and rinse buckets will be changed between sampling locations to avoid cross contamination.

The decontamination rinse water will be collected and placed in DOT approved 55-gallon drums, labeled and stored at the project Site until laboratory analyses results of the soil, sediment and groundwater samples indicates the proper method of treatment or disposal. Disposable protective clothing will be placed in a garbage bag and disposed of as a solid waste. The personnel decontamination procedures are detailed in the Site Specific Health and Safety Plan.

4.0 GROUNDWATER SAMPLING PROCEDURES

4.1 General

During groundwater sampling, it is important to follow strict acceptable protocol during the collection and transportation of groundwater samples. This minimizes the potential for sample variation from well to well due to sampling and transportation techniques. Quality control measures will be instituted as discussed in this document and the QAPP as a check on the procedures being utilized so that the quality of the data can be assessed. The groundwater samples will be analyzed in the laboratory by standard methods following the QA/QC procedures outlined in the QAPP.

Prior to sampling, the water level in the well will be measured, and the well will be purged and allowed to recover to near static conditions. Groundwater samples will be taken employing low flow sampling techniques for field and laboratory analyses. The field parameters to be determined are pH, temperature, turbidity, specific conductance, dissolved oxygen (DO) and oxidation-reduction potential (ORP). All pertinent groundwater sampling information will be recorded on a Groundwater Services Field Log. A separate log will be completed for each monitoring well sampled. Logs will be dated and signed by the person making the entries and will be submitted to the project manager for inclusion in the project files. The following information will be included on the log forms:

1. Project name and location.
2. Date and times.
3. Monitoring well identification number.
4. Sampling method (i.e. low-flow sampling with peristaltic pump).
5. Well development data.
6. Physical characteristics of samples.
7. Field analyses results.
8. Name of sampler(s).
9. Recovery times of wells.

10. Other observations/information.

An Environmental Services Field Log will also be completed for the groundwater sampling event. Blank copies of the referenced forms are included in Attachment A.

4.2 Preparation for Sampling

Prior to groundwater sampling, the equipment and containers needed for sampling will be collected and prepared. A peristaltic pump with new disposable tubing will be utilized to facilitate the groundwater sampling. New disposable nitrile gloves will be worn during equipment cleaning and decontamination and handling of the media being sampled. Only new pre-cleaned laboratory provided sample containers and caps will be used for sample collection/analyses. All sample containers required to be fixed with a preservative, will be prepared by the laboratory before each sampling event. The container type, cap type and preservative requirements for the analytical parameters (water) to be analyzed are summarized in Table 1.

TABLE 1
Analytical Requirements for Containers and Preservatives for Water Samples and Equipment Blank Samples

PARAMETER	CONTAINER	TOP	PRESERVATION	COMMENTS
PFCs per EPA 537 (Water)	3-250 ml HDPE Plastic	HDPE Plastic	TRIZMA Preset Crystals (pH 7.0) Cool, ≤6° C	After the sample container is filled and sealed, gently agitate to dissolve the preservative.
TCL VOCs per EPA 8260C (Water)	3-40 ml vials (preserved)	Septum	HCl to pH<2 Cool, 4°C	NA
TCL SVOCs per EPA 8270D, TCL PCBs per EPA 8082A and TCL Pesticides per EPA 8081B (Water)	3-1L amber Glass	Teflon	0.008% $Na_2S_2O_3$ Cool, 4°C	Store in dark.
TAL Metals (Including Major Cations and Mercury) per EPA 6010C and 7470A (Water)	500 ml Plastic	Poly	HNO_3 to pH <2 Cool, 4°C	NA

PARAMETER	CONTAINER	TOP	PRESERVATION	COMMENTS
Cyanide per EPA 9010B (Water)	250 ml Plastic	Poly	NaOH to pH ≥12 Cool, 4°C	NA
Anions (Chloride, Sulfate) per EPA 9056	120 ml Plastic	Poly	Cool, 2°C- 4°C	NA
Anions (Carbonate, bicarbonate) per EPA 2320B	120 ml Plastic	Poly	Cool, 4°C	No Headspace

Sample labels will be prepared prior to sampling and affixed to the sample containers. The client, project name, Site location, matrix, sample type (grab/composite), preservative and laboratory analyses to be performed will be recorded on the sample labels by the laboratory. The sample location (i.e., monitoring well ID), date, sampler's initials and time will be filled out on the sample label at the time of sampling.

Upon arrival at the sampling location, the well will be observed for any damage, the cover of the guard pipe or curb box will be cleared of any debris and unlocked or unbolted. Clean polyethylene sheeting will be placed adjacent to the well to protect purging and sampling equipment from contamination. The cap and top of the well casing will be wiped with a clean cloth and then the cap removed. A PID meter reading will be collected when the well cap is removed. The water level in the well will then be measured.

4.3 Measuring the Water Level

Prior to purging and sampling, static water heights will be measured using a water level indicator to determine the standing water column height. A full set of water levels will be collected from the existing wells, and the new wells prior to initiating the purging/water sampling. The water column height and depth of the well are used to calculate the well water volume. Non-vented well caps will be removed for a period of ten minutes to allow the water column to reach static conditions prior to taking the water level measurements.

4.4 Well Purging Procedures

Prior to sampling of the groundwater, it is necessary to purge the wells. Purging of the wells allows for a representative sample to be taken from the screened interval of the well by removing stagnant water from the well.

Three to five well volumes of the standing water will be removed from the well. The volume of standing water in the well is calculated by subtracting the water level height from the well depth measurement, and multiplying this value by a conversion factor. The conversion factor is based on the well casing diameter and converts linear feet of water into gallons. In cases where the water recharges at a slow rate, the well will be purged dry when possible.

Low flow peristaltic pump with new, factory sealed tubing will be used to purge each well. Physical observations of the purge water will be noted and recorded on the Groundwater Services Field Log form. The actual quantity of purge water removed from the well will be measured by using a bucket graduated in gallons, and the volume will be recorded. Once purging is complete, the peristaltic pump tubing will be removed from the well and placed on the clean polyethylene sheeting adjacent to the well, until completion of the groundwater sampling.

All of the purge water from the monitoring wells will be placed in DOT approved 55-gallon drums, labeled and stored at the project Site until laboratory analyses results of the soil, sediment and groundwater samples indicates the proper method of treatment or disposal.

4.5 Sample Collection

Prior to sample collection, the wells will be allowed to recover to at least 80% of their initial static water level. Slow recharging wells will be allowed to recover for a period of four hours before sampling. Recovery times and water depths will be recorded on the Groundwater Services Field Log form.

The sample will be collected using a peristaltic pump with new tubing at each monitoring well location. A new pair of disposable nitrile gloves will be used to handle the sampling equipment and containers at each sampling location. Only non-powdered nitrile sampling gloves will be used during sampling.

The disposable tubing will be lowered slowly into the well to minimize the aeration of the samples. Volatile samples will be collected first, followed by field parameters and then in decreasing order of the volatility of the parameters being analyzed for; PFCs, SVOCs, PCBs, Pesticides, metals (including cations), anions and cyanide.

In order to insure the integrity of samples, sample containers must be filled properly. The following sections contain general procedures for sampling and specific procedures for sampling volatile organic compounds and PFCs. Care shall be taken in sampling to assure that analytical results represent the actual sample composition.

General Sampling

1. Don't remove caps until the actual sampling time and only long enough to fill the container.
2. Identify every container by filling out the label with all the required data.
3. Fill all containers completely.
4. Some bottles may contain a fixative which should <u>not</u> be rinsed out of the bottle. Read the sample label treatment and fixative section to determine if a preservative/fixative has been added. Be careful not to contact fixatives with skin or clothing. If this should occur, rinse liberally with water.
5. After the sample is taken, wipe the container with a paper towel and place the container in a cooler with bagged wet ice, to maintain the cooler at 4°C.
6. Complete the Groundwater Services Field Log and Chain of Custody Record forms.
7. Deliver or ship samples to the laboratory within 24 hours.

Collection of Field Parameters

Groundwater geochemical field parameters including temperature, conductivity, pH, oxidation-reduction potential (ORP), and dissolved oxygen (DO) will be monitored and recorded to provide general geochemical data and evaluate groundwater stabilization criteria prior to sample collection. The geochemical field parameters will be collected with a calibrated electronic field parameter meter. The field parameter meter will be calibrated at the start of each day and will have documented calibration checks at the middle and end of each day. All calibration records and checks will be documented on field notes or on sampling records by recording the value of the calibration solution, what the instrument was reading prior to calibration, and a checkmark if re-calibration was needed. Fresh calibration solution will be used each day that samples are collected, but may be re-used throughout the day.

Sampling for Volatile Organic Compounds

1. Samples are to be collected in glass containers having a total volume in excess of 40 ml with open-top screw caps with Teflon-faced silicone septa. Sample containers will have hydrochloric acid (HCL) added to them as a preservative. This preservative must not be rinsed out.

2. A trip blank should be prepared from reagent grade water and carried through the sampling and handling procedure. It will serve as a check for transport and container contamination.

3. Fill sample container slowly to minimize aeration of the sample, until a curved meniscus is observed over the bottle rim.

4. Float the septa, Teflon™ side down on the liquid meniscus. The Teflon™ side is the thin layer observed when viewing the septum from the side horizontally.

5. Carefully set on septum, expelling excess sample and being careful to exclude air. Then screw open-top cap down.

6. Check for a good seal by inverting bottle and tapping and checking for visible air bubbles.

7. If air bubbles are visible or there is a bad seal, remove cap and add additional sample and repeat steps 4 to 6.

8. Groundwater samples for volatile analysis will be taken in triplicate.

Sampling for PFCs

1. To prevent cross-contamination or sample interference, possible PFOA containing items will be avoided during the sampling. These items include (but are not limited to) Teflon-containing materials, Tyvek clothing, clothes treated with stain or rain-

resistant coatings, Teflon sample containers, aluminum foil, blue ice, packaged foods, and post-its.

2. Samples are to be collected in laboratory provided 250 ml HDPE plastic bottles with screw-on HDPE plastic caps. **Do not collect samples in glass containers.** Sample containers will have TRIZMA Preset Crystals (pH 7.0) added to them as a preservative. This preservative must not be rinsed out.

3. New, powder-free nitrile gloves must be donned prior to sample collection.

4. Fill laboratory provided containers slowly to avoid matrix agitation. Fill containers to the bottom of the sampling container bottle neck. Immediately close sampling container with screw-on cap.

5. Lightly agitate the sample to dissolve the preservative crystals.

6. Place sampling container in cooler with bagged wet ice to maintain sample temperature of $\leq 6^{o}C$.

At completion of the sampling the well cap will be replaced; and the cover to the protective guard pipe or curb box will be secured in place. The tubing, gloves, and sheeting will be properly disposed of as solid waste.

4.6 Field Analyses

The field analyses of surface water and groundwater include pH, temperature, specific conductivity, turbidity, DO and ORP. The field analyses will be measured in the field since these constituents change during storage. A minimum 40 ml sample will be collected and placed in clean unpreserved polyethylene or glass containers for analysis. The containers will be covered if the measurements are not recorded immediately.

The pH, temperature, ORP, DO and conductivity of a sample are measured with a portable unit capable of measuring all five (5) parameters concurrently. The portable unit automatically adjusts to compensate for the temperature of the sample. The turbidity of a sample is measured with a separate portable unit. The pH, temperature, conductivity, turbidity, DO and ORP will be recorded on the Groundwater Services Field Log. The field parameter meters will be calibrated at the start of each day and will have documented calibration checks at the middle and end of each day. All calibration records and checks will be documented on field notes or on sampling records by recording the value of the calibration solution, what the instrument was reading prior to calibration, and a checkmark if re-calibration was needed. Fresh calibration solution will be used each day that samples are collected, but may be re-used throughout the day.

5.0 SOIL, SEDIMENT AND VAPOR INTRUSION SAMPLING PROCEDURES

5.1 Soil and Sediment Sampling Procedures

5.1.1 Headspace Analysis

The soil and sediment samples will be screened for the presence of petroleum/chemical related hydrocarbons by headspace analysis utilizing a PID meter to subjectively assess the recovered samples for evidence of petroleum/chemical contamination. The sample is transferred into a zip lock bag, sealed, shaken and then allowed to sit for several minutes. Once the sample has had a chance to sit or "volatilize," the vapor space inside the bag will be analyzed by inserting the tip of the PID meter through the bag, as described in Section 3.4.

5.1.2 Analytical Soil and Sediment Sampling

The soil and sediment samples will be subjected to laboratory analysis to assist in characterizing the Site's environmental quality. The samples will be extracted from the sampling equipment in a timely fashion such that the sample has limited exposure to the outside air reducing the chance for volatilization. Only new pre-cleaned laboratory provided sample containers and caps will be used for sample collection/analyses. All sample containers required to be fixed with a preservative, will be prepared by the laboratory before each sampling event. The container type, cap type and preservative requirements for the analytical parameters (soil and sediment) to be analyzed are summarized in Table 2.

TABLE 2
Analytical Requirements for Containers and Preservatives for Soil and Sediment Samples

PARAMETER	CONTAINER	TOP	PRESERVATION	COMMENTS
PFCs	250 ml HDPE Plastic	HDPE Plastic	Cool, ≤6°C	NA
TCL VOCs	Terra Core Kit with Three (3), 40 mL Glass Vials	Septum	Two (2) Vials with Water – HCl to pH<2, One (1) Vial with Methanol, Cool 4°C, Freeze Within 48 Hours.	NA
TCL SVOCs, PCBs and Pesticides	8 oz Glass	Teflon	Cool 4°C	NA

PARAMETER	CONTAINER	TOP	PRESERVATION	COMMENTS
TAL Metals	8 oz Glass	Teflon	Cool 4°C	NA
Cyanide	4 oz Glass	Teflon	Cool 4°C	NA
Total Organic Carbon (TOC)	4 oz Glass	Teflon	Cool 4°C	NA

5.2 Vapor Intrusion Sampling

The soil gas, indoor air and outdoor ambient air samples will be subjected to laboratory analysis to assist in characterizing the Site's environmental quality in relation to vapor intrusion of contaminants. Only pre-cleaned and certified laboratory provided Summa canisters will be used for sample collection/analyses. The Summa canister type, regulator type and preservative requirements for the analytical parameters (soil gas and air) to be analyzed are summarized in Table 2.

TABLE 3
Analytical Requirements for Containers and Preservatives for Soil Gas and Air Samples

PARAMETER	CONTAINER	TOP	PRESERVATION	COMMENTS
VOCs	Summa Canister	Air Flow Regulator	Store in Dark Place	NA

6.0 FIELD QUALITY CONTROL

6.1 Source Materials

Because PFCs (including PFOA) are found in several everyday items, samples will be collected of source materials prior to them being imported onto the Site for the investigation and sampling of the Site. These include water used by the drilling contractor for advancement of test borings, construction of monitoring wells and decontamination of drilling and sampling equipment; water used by the sampling technician to decontaminate sampling equipment; totes and tanks used by the drilling contractor for temporary storage of drilling water; drill rig casing and rods used by the drilling contractor for advancement of test borings; monitoring well construction materials (PVC riser and screen) used by the drilling contractor for construction of the monitoring wells; filter sand used by the drilling contractor for the monitoring well sand pack; and rinse (deionized) water used as a final rinse for decontaminating non-disposable sampling equipment. As a note, all water imported onto the Site for investigation/sampling purposes must be from a municipal potable water source located outside the limits of the Town and Village of Hoosick Falls, and the source of water must be identified. Table 5 summarizes the quality control sampling protocols that will be employed for the source materials.

TABLE 4: SOURCE MATERIALS SAMPLING PROTOCOLS

Sample Type	Sample Frequency	Sampling Procedure
Imported Drilling Water	One Time	Obtain one (1) grab sample of driller water at the drilling contractor's place of business prior to Site mobilization and analyze for PFCs. Analytical results **must** indicate PFCs as **Non Detect** prior to mobilization of the drilling contractor to the Site.
Imported Sampling Equipment Decontamination Water	One Time	Obtain one (1) grab sample of each sampling equipment decontamination water (bottled water) source(s) to be used during the project prior to Site mobilization and analyze for PFCs. Analytical results **must** indicate PFCs as **Non Detect** prior to conducting media sampling at the Site.

TABLE 4: SOURCE MATERIALS SAMPLING PROTOCOLS		
Sample Type	**Sample Frequency**	**Sampling Procedure**
Driller Totes and Tanks	One Time	Obtain one (1) grab rinsate blank sample from each water storage tote to be used at the drilling contractor's place of business prior to Site mobilization and analyze for PFCs. Sampling method to include pouring bottled water through each representative totes/tanks and capturing the water in laboratory provided containers. Analytical results **must** indicate PFCs as **Non Detect** prior to mobilization of the drilling contractor to the Site.
Drill Rig Casing, Drill Rods, Core Samplers, Plugs	One Time	Obtain one (1) grab rinsate blank sample from each of the drilling tools to be in contact with the subsurface soils. Samples will be collected at the drilling contractor's place of business prior to Site mobilization and analyzed for PFCs. Sampling method to include pouring bottled water over/through representative tools and capturing the water in laboratory provided containers. Analytical results **must** indicate PFCs as **Non Detect** prior to mobilization of the drilling contractor to the Site.
Monitoring Well Construction Materials	One Time	Obtain one (1) grab rinsate blank sample of monitoring well construction materials at the drilling contractor's place of business prior to Site mobilization and analyze for PFCs. Sampling method to include pouring bottled water through and over representative riser/screen and capturing the water in laboratory provided containers. Analytical results **must** indicate PFCs as **Non Detect** prior to mobilization of the drilling contractor to the Site.
Filter Sand	One Time	Obtain one (1) grab sample of each filter sand to be used from the drilling contractor's place of business prior to Site mobilization and analyze for PFCs. Analytical results **must** indicate PFCs as **Non Detect** prior to mobilization of the drilling contractor to the Site.
Rinse (Bottled) Water	One Time	Obtain one (1) grab sample of bottled water and analyze for PFCs. Analytical results **must** indicate PFCs as **Non Detect** prior to importation of bottled water onto the Site.

6.2 Field Sampling

Quality control samples will be taken during the field sampling to evaluate sampling technique, sampling equipment cleanliness, sample variability, sample handling and laboratory performance (analytical reproducibility). The quality control samples will include replicate samples, equipment/field blanks, matrix spike/matrix spike duplicate (MS/MSD) samples and trip blanks.

Replicate Samples

Replicate samples are samples taken from the same location with the same sampling device. Replicate samples are used to check on laboratory reproducibility, sampling technique and sample variability. The replicate samples will be coded so that the laboratory is not biased in performing the analyses. The code that is used will be identified in the field notes and on the sampling logs, but not on laboratory correspondence.

One (1) replicate soil and sediment sample each; one (1) replicate groundwater and surface water sample each, and one (1) air sample will be taken for every twenty (20) samples submitted to the laboratory for analysis. Replicate samples are collected simultaneously using identical procedures, but placing the samples in separate containers. The replicate soil and sediment samples that will undergo VOC analysis with the TerraCore sampling kit will be collected by filling the parent sample containers first followed by the replicate sample containers. For non-VOCs analysis the replicate soil and sediment samples will be collected by homogenizing the sample and transferring equal amounts into the various sample containers.

The replicate groundwater and surface water samples, except for VOC analysis, will be taken by splitting the sample by alternating the discharge of the sampling equipment between both sets of containers (sample and replicate containers) until the containers are filled. The replicate groundwater and surface water samples for VOCs analysis will be taken by filling one container completely and then filling the replicate container completely. Water samples for VOCs analysis are typically taken in triplicate, so this procedure will be repeated three times.

The replicate soil gas/air sample collected as part of the VI assessment will be collected by placing a second Summa canister in tandem with the parent Summa canister.

The replicate samples will be analyzed for the same parameters as the original sample, yet the sample designation is "blind" so that the laboratory can't determine which sample it is a duplicate of. No time or a different time will be used for the replicate samples on the chain of custody record so they are a blind sample to the laboratory.

Equipment/Field Blanks

Equipment/field blanks are samples taken to monitor sampling equipment cleanliness and decontamination procedures during field sampling. One equipment/field blank will be taken during soil, sediment, groundwater and surface water sampling for every twenty (20) samples submitted to the laboratory for analysis of all of the parameters of concern. Equipment/field blanks will not be collected of the clean, certified Summa canisters for soil gas/air sampling. The equipment/field blanks will be taken as follows per the environmental media being sampled:

Soil and Sediment Sampling - After the sampling scoop, hand auger, hand spade and/or core sampler has been decontaminated and are ready for sampling, pour bottled water through and/or over the sampling equipment and capture in laboratory provided sample container(s).

Groundwater and Surface Water - After the new disposable bailer and/or peristaltic pump tubing is removed from its packaging and ready for sampling, pour bottled water through and/or over the bailer/tubing and capture in laboratory provided sample container(s).

The equipment/field blanks will be identified as such and by the location to be sampled (i.e., equipment blank before SS-7; or before MW-9) in the Environmental Services Field Log.

Matrix Spike/Matrix Spike Duplicate

MS/MSD samples are used to check on sample matrix effect and laboratory accuracy and precision.

One MS/MSD soil and sediment sample each and one MS/MSD groundwater and surface water sample each will be taken for every twenty (20) samples submitted to the laboratory for analysis. MS/MSD samples will not be collected of the clean, certified

Summa canisters for soil gas/air sampling. The MS/MSD samples for VOC analysis will be collected by equally splitting the sample into the various analytical containers. MS/MSD samples that will not undergo VOC analysis will be homogenized and transferred into the various sample containers.

Laboratory Trip Blanks

Laboratory Trip Blanks are prepared when VOC and PFC analysis is to be performed on aqueous samples, and they are prepared in the laboratory when the sample containers are prepared.

For VOCs, trip blanks will be prepared in triplicate by filling 40 ml glass containers (with Teflon™ lined septum) with reagent grade water. For PFC analysis, trip blanks will be prepared by filling one (1) 250 ml plastic container with reagent grade water.

Field Trip Blanks

Field Trip Blanks are prepared by the laboratory for analysis of PFCs only. During sampling, a 250-ml laboratory provided plastic container of reagent grade water will be poured into an empty 250-ml laboratory provided sampling container. The Field Trip Blank is collected and analyzed to evaluate if PFCs are being introduced into the sampled matrix during field collection of samples.

The Laboratory and Field Trip Blanks are taken to monitor whether the samples have been contaminated during transport, as a result of handling in the field, during shipment or during storage in the laboratory. One trip blank will accompany each set of aqueous samples that are shipped/delivered to the laboratory for VOC and PFC analysis.

The field replicate samples will be identified as FD01, FD02, etc. The equipment/field blanks will be identified as EB01, EB02, etc. The sampling interval and location where the field replicates are collected will be identified in the Environmental Services Field Log. The MS/MSD samples will be labeled as required for the sample location except that in the comment section of the chain of custody record it shall read “use this sample for the MS/MSD” or equal.

7.0 FIELD INSTRUMENTATION OPERATING PROCEDURES

7.1 General

The field instruments that will be utilized during implementation of the Site investigations are: a PID meter for air monitoring of the total VOCs during drilling, and for headspace analysis of soil and sediment samples for total VOCs; a temperature/pH/ORP/DO/conductivity meter; a turbidity meter for field analysis of groundwater and surface water samples for these parameters; and dust monitors to measure particulate matter during ground intrusive work. The field instruments used will be calibrated and operated in accordance with the manufacturer's instructions and the procedures identified in the following sections.

7.2 Photoionization Detector Meter

A MiniRae PID meter and data logger with a 10.6 eV lamp will be utilized to measure total VOCs. The instrument is calibrated at the factory upon purchase and annually thereafter using certified service shops who utilize standards of benzene and isobutylene. Prior to use in the field, the instrument will be calibrated in accordance with the manufacturer's instructions using a disposable cylinder containing isobutylene obtained from a reputable supplier. The calibration value varies by the manufacturer, however, 100 parts per million is commonly utilized by C.T. Male Associates. During use the PID meter will be calibrated at least once every 8 hours. The calibration procedure is contained in the MiniRea PID meter User's Manual.

Care will be taken when handling and using the PID meter to prevent any debris from entering the sample line which will affect the instrument's operation. If this occurs, the field personnel will clean the unit or replace it with a functional PID meter.

7.3 Temperature, PH, ORP, DO and Specific Conductivity Meter

7.3.1 General

The YSI Pro Plus or equal unit will be used to measure temperature, pH, ORP, DO and specific conductivity. This instrument is equipped with an automatic temperature control for accurate adjustment to the temperatures of the samples and calibration standards.

7.3.2 pH

Prior to collecting the pH readings, the instrument will be calibrated with standard buffer solutions of pH 4.0, 7.0 and 10.0 with the unit automatically correcting the temperature. The instrument will be calibrated prior to use each day to ensure accurate measurements. Calibration procedures are presented in the manufacturer's operating instructions.

The pH measurement will be taken by setting the meter function to pH mode, immersing the electrode in the sample (after rinsing the probe with deionized water), gently stirring the water with the electrode probe until equilibrium is reached, and recording the pH when the instrument displays "ready." The pH electrode will be rinsed with deionized water after taking a measurement. The manufacturer recommends that the electrode be stored in an electrode storage solution when not in use.

7.3.3 Specific Conductivity

Prior to collecting specific conductance readings, the instrument will be calibrated prior to use each day to ensure accurate measurements. Calibration will be performed using standards of 147.0, 717.8 and 1,413 umhos/centimeter, being sure the instrument is showing automatic temperature correction. Calibration procedures are presented in the manufacturer's operating instructions.

The conductivity cell will be rinsed with deionized water before and after use. The measurement will be taken after rinsing the conductivity probe twice with the sample, immersing the probe in the sample, and recording the measured value when the instrument reads "ready."

7.3.4 ORP

Prior to collecting ORP readings, the instrument will be calibrated prior to use each day to ensure accurate measurements. Calibration will be performed using known standards, being sure the instrument is showing automatic temperature correction. Calibration procedures are presented in the manufacturer's operating instructions.

The ORP electrode will be rinsed with deionized water before and after use. The measurement will be taken after rinsing the ORP probe twice with the sample, immersing the probe in the sample, and recording the measured value when the instrument reads "ready.

7.4 Turbidity Meter

A LaMotte Turbidimeter (Model 2008), or equal unit, will be used to measure turbidity. The Model 2008 is a true nephelometer, measuring the amount of light scattered at right angles from a beam of light passing through the test sample. The instrument range is 0 to 19.99 NTU (20 scale) and 0-199.9 (full scale). The accuracy of this instrument is ±2% of the reading or 0.05 NTU, whichever is greater. The turbidity is pre-calibrated from the manufacturer, but will be calibrated daily to known standards of typically 4 and 40 NTU.

The turbidity measurement is collected by pouring a sample into a dedicated VOA vial or cuvette. The cuvette is wiped clean and them inserted into the instrument's chamber and covered. The reading is noted once stabilized.

8.0 SAMPLE HANDLING AND CHAIN OF CUSTODY PROCEDURES

Prior to sampling and filling the sample containers, the label on the container will be completed with the required information. After filling the sample containers they will be wiped with a paper towel. The container(s) will immediately be placed in a cooler with double bagged wet ice, to maintain a temperature of ≤6°C for the samples to be analyzed for PFCs and 4°C for the samples to be analyzed for the TCL/TAL parameters, CN and the major cations/anions. The containers will be delivered to the laboratory within 24 hours of sample collection.

A Chain of Custody Record will be completed by the sampler in the field after securing analytical samples. The sampler will be responsible for retaining possession of the samples until they are delivered to the laboratory or until they are delivered to a courier or common carrier for shipment to the laboratory. When the samples are released from the custody of the sampling personnel, the Chain of Custody Record will be signed by both relinquishing and receiving parties with the date and time indicated. A copy of the form will be retained by the sampler for inclusion in the project files and the original form will accompany the shipment. The Chain of Custody Record will then be signed by the relinquishing party and receiving laboratory personnel when the samples are ultimately received at the laboratory.

If samples are shipped, a bill of lading or an air bill will be used and retained in the project files as documentation of sample transportation. Prior to shipment, the cooler will be affixed with a custody seal as a check for tampering and the cooler will be securely wrapped with clear tape. A separate additional Chain of Custody Record will be completed for each cooler of samples. This form will be placed in a plastic bag. This form will be used by the laboratory personnel as a check to verify that the containers listed on the form are present in the cooler when they are received at the laboratory. A copy of the signed Chain of Custody Record will accompany the laboratory analysis reports.

9.0 WATER LEVEL MEASUREMENT PROCEDURES

Water levels will be measured in the monitoring wells using a water level indicator probe. The water levels will be measured from the surveyed reference point to the nearest 0.01 foot. Water levels will be measured progressively from upgradient monitoring wells to downgradient monitoring wells, attempting to measure water levels from the cleanest well to the dirtiest well.

To avoid possible cross contamination of the wells, the water level indicator will be decontaminated prior to and following the water measurement of individual wells. The water level indicator will be decontaminated by rinsing it with imported water, vigorously scrubbing with a brush and laboratory-grade standard detergent (e.g., Alconox® or Liquinox®) and imported water, then rinsing it with copious amounts of deionized water and drying with a paper towel.

The water depth levels and reference elevations determined from the monitoring well survey will be recorded on a Water Level Record form and the water table elevations calculated. A blank copy of this form is presented in Attachment A.

10.0 INVESTIGATION DERIVED WASTE MANAGEMENT

Wastes that are anticipated to be generated during the RI include: excess soils from test boring core samplers not placed into sampling containers; drill soil cuttings; groundwater from monitoring well development and purging; water used to decontaminate driller and sampling equipment; and disposables such as nitrile gloves and peristaltic pump tubing.

Soils will be placed in labeled DOT 17H approved 55-gallon open top steel drums and staged on-site at a secure location. The drum contents will be characterized and profiled for off-site disposal at a permitted facility.

Liquids will be placed in labeled DOT 17H approved 55-gallon open top steel drums and staged on-site at a secure location. The drum contents will be characterized and profiled for off-site disposal at a permitted facility.

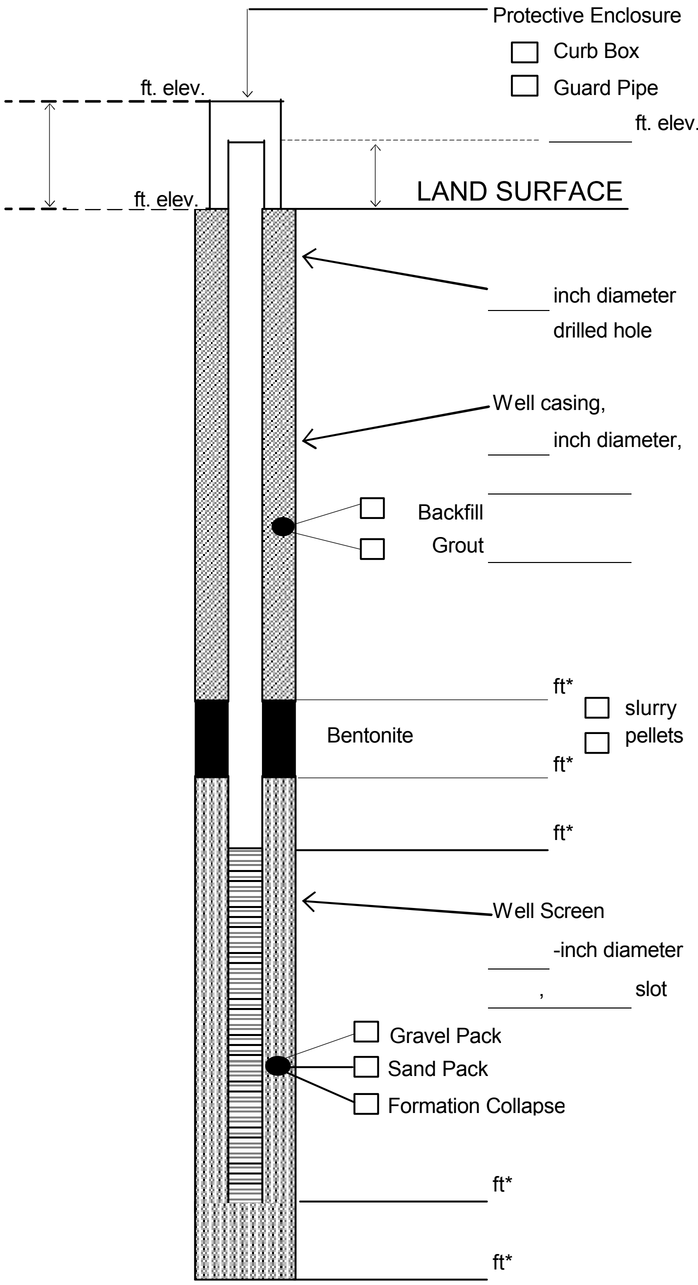
Disposables will be placed in plastic trash bags and disposed of off-site as solid waste.

ATTACHMENT A

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) FORMS AND FIELD REPORT FORMS

C.T. MALE ASSOCIATES, P.C.

MONITORING WELL CONSTRUCTION LOG



* Depth below land surface.

Project Number ____________________

Project Name ____________________

Well No. __________ Boring No. __________

Town/City ____________________

County __________ State __________

Installation Date(s) ____________________

Drilling Contractor ____________________

Drilling Method ____________________

Water Depth From Top of Riser ______ ft ________ Date

C.T. Male Observer ____________________

Notes:

C.T. MALE ASSOCIATES, P.C.

WATER LEVEL RECORD

Project Name ______________________________
Location ____________________________________
Method or Reading__________________________

Project Number ______________________
Measurement Taken By _______________
Datum______________________________

		Date _____________		Date_____________		Date_____________	
Well No.	Ref. Elev.	Depth	Elev.	Depth	Elev.	Depth	Elev.

Measuring Point(s) ____

____

Groundwater Services Field Log

DATE: ______________________ PROJECT NAME: ______________________

PROJECT NO.: ______________________ PROJECT LOCATION: ______________________

SAMPLING PERSONNEL: ____

MONITORING WELL ID#: ______________________ NOTES TAKEN BY: ______________________

DEPTH TO WATER: __________ FROM: __________ BAILER ID: ______________________

DEPTH TO BOTTOM: __________ FROM: __________ BAILER: LAB CLEANED / FIELD CLEANED

WATER COLUMN HEIGHT: ______________________ BAILER: STAINLESS STEEL __________

OTHER __________

WELL CASING DIAMETER

CONVERSION FACTORS LINEAR FEET TO GALLONS

1″ = 0.041 GALLONS	3" = 0.38 GALLONS
1.25" = 0.064 GALLONS	4" = 0.66 GALLONS
2" = 0.16 GALLONS	6" = 1.47 GALLONS

WELL VOLUME: ______________ GALLONS

VOLUMES PURGED: ______________ GALLONS PURGE METHOD: ______________________

TIME STARTED: ; TIME FINISHED:

OBSERVATIONS: COLOR ______________ ; ODOR ______________

SHEEN ______________ ; TURBIDITY ______________

OTHER ______________ ______________

WATER RECOVERY HEIGHT: ______________ ; RECOVERY TIME IN MINUTES: __________

FIELD PARAMETERS: pH ______________ , TEMPERATURE ______________

CONDUCTIVITY __________ UMHO/CM, OTHER ______________

SAMPLE COLLECTION TIME: ______________

NOTES: ____

____

____

Sheet 1 of __

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.:
ELEV.: **DATUM:**
START DATE: **FINISH DATE:**
SHEET **OF**

PROJECT: CTM PROJECT NO.:

LOCATION: CTM INSPECTOR:

DEPTH (FT.)	SAMPLE		BLOWS ON SAMPLER					RECOVERY	SAMPLE CLASSIFICATION	NOTES
	TYPE	NO.	0/6	6/12	12/18	18/24	N			
5										
10										
15										
20										
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: DRILL RIG TYPE:

METHOD OF INVESTIGATION:

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

THE SUBSURFACE INFORMATION SHOWN HEREON WAS OBTAINED FOR C.T. MALE DESIGN PURPOSES. IT IS MADE AVAILABLE TO AUTHORIZED USERS ONLY THAT THEY MAY HAVE ACCESS TO THE SAME INFORMATION AVAILABLE TO C.T.MALE. IT IS PRESENTED IN GOOD FAITH, BUT IS NOT INTENDED AS A SUBSTITUTE FOR INVESTIGATIONS, INTERPRETATION OR JUDGMENT OF SUCH AUTHORIZED USERS.

SAMPLE CLASSIFICATION BY:

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT:		PROJECT #:	PAGE 1 OF
CLIENT:			DATE COLLECTED:
LOCATION:			
INSTRUMENT USED:	LAMP	eV	DATE ANALYZED:
DATE INSTRUMENT CALIBRATED:		BY:	
TEMPERATURE OF SOIL:			ANALYST:

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT.)***	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.

Environmental Services Field Log

Date: ______________ Time On-Site: ______________ Time Off-Site: ______________

Project Name: ______________________________ Project No.: ______________

Purpose: ______________________________ Field Report No: ______________

Weather Conditions: ______________________________

Present at Site: ______________________________

Observations: ______________________________

Items to Verify: ______________________________

List of Attachments: ______________________________

Field Log Prepared by: ______________________________

Copies to:

APPENDIX B

QUALITY ASSURANCE PROJECT PLAN
SAINT-GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET
VILLAGE OF HOOSICK FALLS
RENSSELAER COUNTY, NEW YORK

QUALITY ASSURANCE PROJECT PLAN
SAINT GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET
VILLAGE OF HOOSICK FALLS
RENSSELAER COUNTY, NEW YORK

KEY PERSONNEL AND SIGNATURES

Approved: Daniel P. Reilly Date: 9/1/16
Project Principal
Daniel Reilly, P.E.
Environmental Services Manager
C.T. Male Associates

Approved: Date: 9/1/16
Project Manager & Health and Safety Coordinator
Kirk Moline
Managing Geologist
C.T. Male Associates

Approved: Elizabeth W. Rovers Date: 9/1/16
Quality Assurance Officer
Elizabeth Rovers, P.E.
Managing Engineer
C.T. Male Associates

QUALITY ASSURANCE PROJECT PLAN
SAINT GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET
VILLAGE OF HOOSICK FALLS
RENSSELAER COUNTY, NEW YORK

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Figure 1: Project Organizational Chart

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Table 1: Summary of Work Tasks and Corresponding Analytical Levels
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QUALITY ASSURANCE PROJECT PLAN
SAINT GOBAIN PERFORMANCE PLASTICS SITE
14 MCCAFFREY STREET
VILLAGE OF HOOSICK FALLS
RENSSELAER COUNTY, NEW YORK

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Attachment A:	Laboratory Certifications
Attachment B:	Data Validator Qualifications and Experience
Attachment C:	Guidance for the Development of DUSR

1.0 PROJECT DESCRIPTION

1.1 Introduction

This Quality Assurance Project Plan (QAPP) has been prepared for the implementation of a Remedial Investigation (RI) at the Saint-Gobain Performance Plastics Corporation (Saint-Gobain) Site ("the Site") located at 14 McCaffrey Street in the Village of Hoosick Falls, Rensselaer County, New York. It has been developed in conjunction with the RI/FS Work Plan as prepared by C.T. Male Associates. A description of the Site, background information, objectives and the Site investigation scope of work are presented in detail in the referenced RI/FS Work Plan.

This QAPP presents the organizational structure and data quality objectives (DQOs) for the site characterization, and the quality assurance (management system) and quality control methods of checks and audits to be implemented to ensure that the quantity and quality of the data required for its intended use is obtained and documented (i.e., that DQOs are met). The measurement parameters used to determine the quality of the data are precision, accuracy, completeness, representativeness and comparability, and are discussed further in this QAPP.

A Field Sampling Plan (FSP) has been prepared by C.T. Male Associates as a separate exhibit and forms an integral part of this QAPP. The field sampling and data gathering procedures are presented in the FSP and incorporated into the QAPP by reference. The QAPP and FSP document the laboratory quality assurance/quality control (QA/QC) procedures and field sampling and data gathering procedures that will be followed during implementation of the RI scope of work so that valid data of a known quality is generated.

The project specific field QA/QC procedures and the project specific laboratory QA/QC procedures are presented in the text of this QAPP. The general internal laboratory QA/QC procedures are presented in the subcontractor laboratory's Quality Manual which is retained at the laboratory's place of business. The NYS Department of Health (NYSDOH) ELAP Certified subcontract laboratories for this project are Eurofins Eaton Analytical, Inc. of South Bend, Indiana for aqueous analyses (NYSDOH ELAP #11398), and Eurofins Lancaster Laboratories, LLC of

Lancaster, Pennsylvania for solids analyses (NYSDOH ELAP #10670). The laboratory certifications are included in Attachment A.

The QAPP has been prepared in a manner consistent with the following guidance documents:

- DER-10 Technical Guidance For Site Investigation and Remediation, NYSDEC, May 2010.
- 6 NYCRR Part 375, Environmental Remediation Programs, Subparts 375-1 to 375-4 and 375-6, Effective December 14, 2006.
- Data Quality Objectives for Remedial Response Activities: Development Process, EPA/540/G-87/003, USEPA, March 1987.

1.2 Objectives and Scope of Work

It is the objective of the RI and this QAPP to obtain and present representative data of a known quality and sufficient quantity. The primary goal is to perform soil, groundwater, surface water, sediment, soil gas and indoor air sampling, and geophysical surveys, through a variety of investigative tasks. The data will be used to evaluate overall protection requirements for human health and the environment.

To achieve these objectives, the scope of work will include the following items as presented in the RI/FS Work Plan, in this QAPP and in the FSP. The investigative tasks will include the advancement of soil test borings, collection and analysis of soil samples, installation of monitoring wells, collection and analysis of groundwater samples, collection and analysis of surface water and sediment samples, collection and analysis of sub-slab soil gas samples, and collection and analysis of indoor air samples. Additionally, geophysical surveys will be conducted to map glacial till and bedrock contacts and to identify the location of the municipal sewer pump station overflow pipe along the eastern and southern portions of the Site.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

C.T. Male Associates is responsible for providing professional services associated with the quality control/quality assurance of the RI. These will include project management, coordination, and scheduling of activities in-house and with qualified subcontractors. The work tasks that will be performed by a subcontractor to C.T. Male Associates include: rotosonic and direct-push drilling of borings/monitoring wells, geophysical survey, analytical laboratory testing and third party validation of analytical data for preparation of a Data Usability Summary Report (DUSR).

A project organizational chart listing key individuals of the project and their associated title is presented as Figure 1 at the end of this document. Personnel from C.T. Male Associates and the drilling, geophysical, laboratory and data validation subcontractors can be reached at the following addresses:

- C.T. Male Associates
  Contact: Kirk Moline
  50 Century Hill Drive
  Latham, New York 12110
  Phone: (518) 786-7400
  Fax No.: (518) 786-7299
  Email: k.moline@ctmale.com

- Drilling Contractor: Cascade Drilling, L.P.
  430 Hudson River Road
  Waterford, New York 12188
  Phone: (518) 326-1441

- Geophysical Contractor: TBD

- Laboratory: Eurofins Eaton Analytical, Inc.
  110 S. Hill Street
  South Bend, Indiana 46617
  Phone: (800) 332-4345

- Laboratory: Eurofins Lancaster Laboratories, LLC.
  2425 New Holland Pike
  Lancaster, Pennsylvania 17605
  Phone: (717) 656-2300

- Data Validation: To Be Determined

A description of the responsibilities by title of the key individuals is presented as follows:

Project Principal is responsible for the review of the RI activities and reports for their technical adequacy and conformance to the scope of work.

Quality Assurance Officer is responsible for the independent review of the RI documents and reports to check that the appropriate project documentation, of the quality control activities performed, exist and are maintained; and for conducting field and sampling audits.

Project Manager is responsible for the overall coordination and implementation of the project, the management of staff and resources, the implementation of schedules, the conformance by the technical staff and subcontractors to the scope of work, assessing the adequacy of the work being performed, implementing corrective action as necessary, interaction with the client and regulatory agencies, maintaining complete project documentation, and report preparation.

Health and Safety Coordinator is responsible for implementation of the project specific Health and Safety Plan, and resolution of safety issues which arise during the completion of the work. The Health and Safety Coordinator or designee will be present during the completion of the field work.

Laboratory Quality Assurance Officer is responsible for review of the laboratory data quality control procedures and documentation to determine if the QA objectives are being met; and to report non-conforming events to the laboratory technical staff and Project Manager and implement corrective action as necessary.

Laboratory Director is responsible for all activities within the laboratory, and for the performance of the laboratory work tasks in accordance with the project work plans, interactions with the Project Manager, and the adherence to project schedule.

Project Geologist/Engineer/Scientist is responsible for coordinating and conducting the field hydrogeologic activities and subcontractors, the adherence of activities to the QAPP and the FSP, evaluation of the collected data, soil classifications, report preparation and interaction with the Project Manager and Project Team.

Project Team is responsible for adequately performing the work tasks in accordance with the project work plans so that the objectives of the investigations and the project are achieved, notifying the Project Manager of any non-conformance to the work plan so that corrective actions can be taken as necessary, and notifying the Project Manager of unforeseen conditions so that modifications to the work plan, if necessary, can be approved and implemented.

Data Validator is responsible for review of all analytical data generated for this project. The data validator will review analytical data in accordance with New York State Department of Environmental Conservation (NYSDEC) Guidance for the Development of Data Usability Summary Reports, and prepare a report documenting if the analytical data is valid and usable. The report will also present data rejection and qualification, where necessary, based on laboratory performance.

3.0 QUALITY ASSURANCE OBJECTIVES FOR DATA MEASUREMENT

3.1 General

The Quality Assurance (QA) objective for this project is to produce data which is technically valid and of a known quality that meets the needs of its intended use. In this section the data quality objectives (DQOs) are defined by describing the intended use of the data; defining the type of data needed (i.e., physical or analytical); specifying the analytical levels, as established by EPA, appropriate to the data uses; specifying the quality control checks on field and laboratory procedures and frequency of checks; and presenting the quality control acceptance criteria.

Laboratory quality assurance objectives for data measurement are established for each measurement parameter in terms of precision, accuracy, completeness, representativeness and comparability. These terms form an integral part of the laboratory's quality assurance programs in that DQOs are set for each parameter.

3.2 Data Uses and Types

The data to be generated during the proposed work will be completion of RI and health and safety during implementation of the field activities. Both physical data including air monitoring and analytical data from soil, groundwater, surface water, sediment, soil gas and indoor air will be needed to provide the necessary information to complete the steps in the RI. The specific physical and analytical data proposed and its purposes are presented in the RI/FS Work Plan.

3.3 Data Quality Needs

To support data collection activities in obtaining quality data, EPA has established a series of analytical levels that are appropriate to Site investigation/remediation data uses. The analytical levels are defined as follows:

Level I	Field screening or analysis using portable instruments. Qualitative data.
Level II	Field analyses using more sophisticated portable analytical instruments. Qualitative and quantitative data can be obtained.
Level III	Laboratory analyses using standard EPA and NYSDOH approved procedures/methods.

Level IV	Laboratory analyses with NYSDEC ASP (Analytical Services Protocol) - Category B Data Deliverable Packages with QA/QC protocols and documentation.
Level V	Analyses by non-standard methods.

The data collection activities, the environmental media, the intended use of the data and the corresponding analytical levels that will be used to produce the project data are summarized in Table 1.

Table 1
Summary of Work Tasks and Corresponding Analytical Levels

Data Collection Activities	Sample Media & Description	Data Use[(a)]	Analytical Level
PID Meter Monitoring	Soil Vapors	1	I
Air Monitoring	Air/Ambient Air	2	II
Dust Monitoring	Dust/Particulates	2	II
Test Borings and Monitoring Wells, and Soil, Groundwater, Surface Water, Sediment, Soil Gas and Indoor Air Sampling	Soil, Groundwater, Surface Water, Sediment, Rooftop Wipe, Soil Gas and Indoor Air for Laboratory Analyses and Field Instrumentation	1, 3 & 4	I (Field Instrumentation) and IV (Laboratory Analyses)
Quality Control Imported Source Materials and Equipment	Driller Water, Totes and Tanks; Filter Sand Used as Monitoring Well Sand Pack; PVC Well Riser and Screen; Steel Well Casing; Drill Casing, Rods and Core Samplers; Bottled Water for Field Tool Decontamination; Deionized Water for Final Tool/Equipment Rinse.	1 & 4	IV (Laboratory Analyses)

Note:
(a) Data Uses Key:
1 - Site Characterization.

2 - Health and Safety and Community Air Monitoring During Implementation of Ground Intrusive Field Activities, if required.
3 - Risk Assessment.
4 - Evaluation of Environmental Quality.

Another consideration besides defining the Data Quality Needs is what level of cleanup will be required for the Site, if needed. The applicable or relevant and appropriate requirements (ARARs) are related to defining satisfactory cleanup efforts. In order to be able to evaluate the data generated with respect to potential ARARs, the samples will need to be analyzed by analytical methods that can achieve detection limits below or at existing ARAR values. The analytical methods selected for this project are designed to achieve ARAR values.

NYSDEC has not promulgated ARAR values for PFCs. The Environmental Protection Agency (EPA) March 2014 Fact Sheet entitled "Emerging Contaminants – Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)" indicates that in January 2009, the EPA's Office of Water established a provisional health advisory (PHA) of 0.2 micrograms per liter (ug/l) for PFOS and 0.4 ug/l for PFOA to assess the potential risk from short-term exposure of these chemicals through drinking water (EPA 2009d, 2013a). Also, EPA Region 4 calculated a residential soil screening level of 6 milligrams per kilogram (mg/kg) for PFOS and 16 mg/kg for PFOA (EPA Region 4 2009).

3.4 Quality Control Checks and Acceptance Criteria

To monitor and document the integrity of such factors as the environmental quality of source materials, sample variability, sampling equipment cleanliness, sampling technique, analytical reproducibility and sample handling which can affect data quality, several field quality control checks will be implemented. These will include collecting samples of source materials (i.e., driller water, decontamination water, drilling tools, monitoring well construction material, etc.) prior to importation of these materials to the Site; collecting equipment/field blanks after sampling equipment has been decontaminated to check for cross contamination and equipment cleanliness; taking replicate samples to monitor analytical precision/reproducibility and sampling technique; taking matrix spike/matrix spike duplicate (MS/MSD) samples to monitor sample matrix effect and laboratory accuracy/precision; and preparing laboratory and trip blanks and field trip blanks to be shipped with the sample containers for volatile and PFC analyses to monitor sample handling.

For this project, quality control samples will be collected of the following source materials that will be imported onto the Site to conduct the investigations.

- Water from the drilling contractor for drilling and decontamination.
- Totes and tanks used by the drilling contractor to store water. A rinsate blank will be collected of the totes/tanks by pouring deionized water through the totes/tanks and collecting in laboratory provided containers.
- Filter sand used for the monitoring well sand pack.
- PVC well riser and screen used by the drilling contractor for construction of monitoring wells. A rinsate blank will be collected of the PVC riser and screen by pouring deionized water through and over the riser and screen and collecting in laboratory provided containers.
- Steel well casing used by the drilling contractor for construction of the bedrock monitoring wells. A rinsate blank will be collected of the steel casing by pouring deionized water through and over the casing and collecting in laboratory provided containers.
- Drill casing, rods and core samplers used by the drilling contractor. A rinsate blank will be collected of the casing, rods and core samplers by pouring deionized water through and over the casing, rods and core samplers and collecting in laboratory provided containers.
- Bottled deionized water for decontamination and rinse samples.

The field Quality Control (QC) checks will consist of one (1) equipment/field blank, one (1) replicate sample and one (1) MS/MSD sample during sampling activities for every twenty (20) analytical samples per media type (i.e., soil, groundwater, surface water, sediment and soil gas/indoor air samples), and one (1) sample for each imported source material. Equipment/field blank and MS/MSD samples will not be collected of the soil gas/indoor air samples. A Laboratory Trip Blank will be prepared for each groundwater and surface water sample set to be submitted for volatile organic and PFC analyses. A Field Trip Blank will be prepared in the field for each aqueous sample set to be submitted for PFC analyses.

Internal laboratory quality control checks will be those specified in EPA Methods or in the most recent NYSDEC ASP for the analytical method performed and could consist of some of the following:

- Blanks (method, preparation),
- initial and continuing calibrations,
- surrogate spikes,
- matrix spike/matrix spike duplicates,
- ambient samples,
- duplicate samples, and
- control samples/matrix spike blanks.

The laboratory will be responsible for performing what is necessary for complying with appropriate standards and certifications of the selected EPA method and ASP requirements. The laboratory quality control acceptance criterion is method specific and will be the laboratory's responsibility to meet the most recent ASP criteria.

4.0 SAMPLING PROCEDURES

Procedures for sampling are presented in the Field Sampling Plan (FSP) and include the following:

- Selection of sampling sites and media to be sampled;
- Procedures for the collection of investigation equipment and material rinse blank samples;
- Specific sampling procedures for each environmental media to be sampled, and for QC samples to be taken;
- Field soil screening procedures;
- A description of the containers, procedures and equipment used for sample collection, preservation, transport and storage;
- Procedures for preparing the sample containers and sampling equipment prior to sampling and decontamination of sampling equipment during sampling;
- Chain of custody procedures and forms; and
- Description of the procedures, forms and notebooks to be used to document sampling activities, sample conditions and field conditions.

5.0 SAMPLE CUSTODY

Proper chain of custody will be established and maintained through a series of steps, beginning in the field and ending with final disposition of the analyzed sample(s). At the time of the field sampling, an external chain of custody form will be utilized to track sample collection until delivery to the analytical laboratory. An internal or "intra-laboratory" chain of custody will be used by laboratory personnel to track the sample(s) from the point it is received/logged and passed through the laboratory process. Chain of custody procedures are discussed in detail in the FSP.

6.0 CALIBRATION PROCEDURES

Calibration procedures for field equipment including the photo ionization detector (PID) meter, pH/conductivity/temperature/oxidation-reduction potential (ORP)/dissolved oxygen (DO) meter, and turbidity meter are presented in the FSP. Calibration procedures for laboratory equipment/instrumentation consist of the production and use of current certifiable standards and the measurement/adjustment of the instrument response. The laboratory is responsible for maintaining records documenting use of current standards and acceptable instrument responses. The laboratory is required to flag analytical data that has had potential contamination or poor instrument calibration that may have occurred during the analytical process.

7.0 SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

The analytical parameters, sample preparation and analysis methods, acceptable holding times and required method detection limits are presented in Table 2. The analytical methods specified reflect the requirements of the most recent NYSDEC ASP with the exception of PFCs, which reflect the requirements of EPA (see footnote 3 at the bottom of table).

Table 2
Analytical Methods and Requirements

Analytical Parameters	EPA Method	Holding Times(1)	Contract Required Quantitative Limits (as noted)(2)
TCL Volatile Organic Compounds (VOCs)	EPA Analytical Method SW-846 8260C for Water and Soil and EPA Preparation Methods 5030C (Water) and 5035A (Soil). EPA Preparation and Analytical Method TO-15 for Air.	Water: 7 Days Unpreserved to Analysis, 12 Days Preserved (HCl to pH<2) to Analysis. Soil: 48 hours to freeze, 14 days to analysis once unfrozen. Air: 30 days (keep out of sunlight)	0.5-5 ug/l (Water) 5 to 20 ug/kg (Soil) 1 to 5 ppbv (Air)
TCL Semi-Volatile Organic Compounds (SVOCs)	EPA Analytical Method SW-846 8270D for Water and Soil and EPA Preparation Methods 3510C (Water) and 3546 (Soil)	5 Days to Extraction, 40 Days to Analyze	0.5-30 ug/l (Water) 17-1,000 ug/kg (Soil)
TCL Pesticides	EPA Analytical Method SW-846 8081B for Soil and Water and EPA Preparation Methods 3510C (Water) and 3546 (Soil)	5 Days to Extraction, 40 Days to Analyze	0.01-1 ug/l (Water) 0.83-33 ug/kg (Soil)
TCL PCBs	EPA Analytical Method SW-846 8082A for Water and Soil and EPA Preparation Methods 3510C (Water) and 3546 (Soil)	5 Days to Extraction, 40 Days to Analyze	0.1-0.2 ug/l (Water) 17 ug/kg (Soil)
TAL Metals (Except Mercury)	EPA Analytical Method SW-846 6010C and 6020A for Water and Soil and EPA Preparation Methods 3005A	180 Days	0.001-2 mg/l (Water) 0.2-200 mg/kg (Soil)

Analytical Parameters	EPA Method	Holding Times(1)	Contract Required Quantitative Limits (as noted)(2)
	and 3020A (Water) and 3050B (Soil)		
Mercury	EPA Analytical and Preparation Methods SW-846 7470A (Water) and SW-846 7471B (Soil)	26 days	0.0002 mg/l (Water) 0.02 mg/kg (Soil)
Cyanide	EPA Analytical and Preparation Method SW-846 9012A for Water and Soil	14 Days	0.01 mg/l (Water) 0.5 mg/kg (Soil)
PFCs(3) (PFBS, PFHpA, PFHxS, PFNA, PFOS, PFOA, PFDA, PFDoA, PFHxA, PFPTA, PFTRDA, PFDOA)	EPA Analytical & Preparation(3) Method 537 for Water and EPA Method 537 (Modified) for Soil and Sediment.	14 Days to Extraction 28 Days to Analyze	2 to 10 ng/l (Water) 0.40 to 1.6 ng/g (Soil) 3 to 8 ng (Wipe)
Cations (Ca, Mg, Na, K)	EPA Analytical Methods SW-846 6010C and 6020A and EPA Preparation Methods 3005A and 3020A	180 Days	0.004-2 mg/l
Anions (Chloride, Sulfate)	EPA Analytical and Preparation Method SW-846 300.0	28 Days	2-5 mg/l
Anions (Carbonate, Bicarbonate)	EPA Analytical and Preparation Method SW-846 SM2320 B-1997	14 Days	2 mg/l as $CaCO_3$

Note:
1) Holding times are relative to the verifiable receipt at the laboratory.
2) The listed method detection limits are practical quantitation limits (PQLs) derived by the laboratory and updated on an annual basis. The method detection limit (MDL) is the best possible detection. Laboratories report PQLs which are typically 4 times the MDL for liquids and varies for solids depending on the quantity of contamination present. Efforts will be made to obtain the lowest possible detection limit. When the guidance value or standard value is below the detection limit, achieving the detection limit will be considered acceptable for meeting that guidance or standard value.
3) Method 537. Determination Of Selected Perfluorinated Alkyl Acids In Drinking Water By Solid Phase Extraction And Liquid Chromatography/Tandem Mass Spectrometry (Lc/Ms/Ms). EPA Document #: EPA/600/R-08/092, Version 1.1, September 2009. The most recent NYSDEC ASP does not have a method for PFCs. The laboratory uses a modified version of EPA Method 537 for

analysis of PFCs in solids. The laboratory utilizes a proprietary sample preparation method as EPA has not developed a sample preparation method.

Where matrix interference is noted, analytical clean-ups will be required to be performed by the laboratory following the procedures specified in SW-846, the most current NYSDEC ASP, or EPA Method 537, as applicable. In general, samples shall not be diluted more than 1 to 5.

8.0 DATA REDUCTION, VALIDATION AND REPORTING

The field measurement data and the laboratory analyses results of detected parameters will be compiled and tabulated to facilitate comparison and evaluation, and will be included in the Final RI/FS Report. The tabulated data will include at a minimum:

- soil analysis results,
- surface water and groundwater analysis results,
- sediment analysis results,
- soil gas analysis results,
- indoor air analysis results, and
- quality control results [imported source materials (i.e., drilling water and filter sand, material rinse blanks, etc.) results, equipment/field blanks, replicates/duplicates, matrix spike/matrix spike duplicates and trip blanks].

Field logs will also be compiled and included, in part, in the text and appendices of the Final RI Report, and will consist of:

- subsurface exploration logs,
- organic vapor headspace analysis logs,
- monitoring well construction logs,
- groundwater services field logs,
- water level records,
- stream water sampling logs,
- vapor point construction logs, and
- environmental services field logs.

Any observations or problems encountered during field activities which could affect the quality of the data or its validity will be noted on the appropriate field log.

The laboratory will generate ASP Category B Data Deliverable Package(s) that may be submitted as a separate volume to the RI/FS Report or on a CD within the RI/FS Report. It will include analytical results and quality control data deliverables as required by the most recent NYSDEC ASP.

Internal data validation will be performed by the laboratory QA officer to ensure that the data package is complete and meets the criteria of the work plan and this QAPP. Any problems encountered in performing the analyses by the laboratory such as out of limits surrogate recoveries, and comments on the quality and limitations of specific data and the validity of the data will be described in the case narrative of the laboratory report.

External data validation will be performed by an independent data validator who will utilize the USEPA National and Regional Validation Guidelines/Procedures and the NYSDEC Guidance in the Development of Data Usability Summary Reports to determine the applicable qualifications of the data. The validator will then prepare a NYSDEC Data Usability Summary Report (DUSR) in accordance with NYSDEC guidelines. The data validator will not be involved in any other portions of the project. The data validation company for this project is not yet determined. The validator's qualifications and work experience will be presented in Attachment B. The NYSDEC DUSR guidance from DER-10, Technical Guidance For Site Investigation and Remediation, is presented in Attachment C for reference.

9.0 FIELD & INTERNAL QUALITY CONTROL

Field QC will consist of collecting/generating source material samples, equipment/field blanks, replicate samples, preparing matrix spike/matrix spike duplicate samples and having trip blanks with aqueous volatile organic compounds and PFC sample sets. Field instrumentation will also be calibrated prior to use and the calibration maintained as discussed in the FSP.

Internal laboratory QC will generally consist of:

- Method (instrument) blanks,
- initial and continuing calibrations,
- surrogate spikes,
- matrix spike/matrix spike duplicates,
- duplicate samples, and
- laboratory control samples/matrix spike blanks.

The QC samples will be run in accordance with the protocols and frequencies specified in the NYSDEC ASP, SW-846 and EPA Methods as applicable for the analyses being performed, with the exception of the source material and equipment samples. One (1) sample will be collected of each source material and equipment identified in Section 3.4 for analysis for PFCs to ensure that materials and equipment imported to the Site for the investigation are not cross-contaminated with PFCs. The source equipment will be segregated and will be used for no other purpose from the time that the samples are collected to the time that the equipment is mobilized to the Site for the investigation.

10.0 PERFORMANCE AND SYSTEMS AUDITS

10.1 Field Audits

Field performance audits will consist of taking replicate samples, source material samples (i.e., drilling water and monitoring well construction materials, etc.) and equipment/field blanks and analyzing for the same parameters as other samples, as detailed in the FSP.

Field system audits will be conducted during field operation to ensure that the field activities are being conducted correctly and in accordance with the RIWP. The project field supervisor will check that the field instrumentation is calibrated prior to use, that field measurements are taken correctly, that equipment is properly decontaminated, and that the field activities are properly documented. Any deficiencies will be reported to the project manager and discussed with the field staff with corrective action taken. The person conducting the field audits will document the field system audits by use of a field report and submit the report to the project manager for review on a bi-weekly (twice per week) basis at a minimum. The project quality assurance officer, scientist/geologist/engineer or project manager will conduct system audits as appropriate or warranted.

The project manager will review the field system audit reports and the field documentation for completeness and correctness, and check that the work is proceeding on schedule and in accordance with the work plans.

10.2 Laboratory Audits

Laboratory system audits are not required if the laboratory maintains New York State Department of Health (NYSDOH) ELAP certification. Part of the ELAP certification process typically includes periodic performance evaluations and on-site systems audits. A copy of the laboratory NYSDOH ELAP certification documentation is presented in Attachment A.

11.0 PREVENTATIVE MAINTENANCE

C.T. Male Associates keeps an inventory of its field equipment and it is kept locked in a designated area. The field equipment is signed out when in use and its condition checked upon its return. The equipment is kept in good working order and frequently checked and calibrated by qualified employees. Additionally, select equipment (i.e., PID meter) is routinely serviced for cleaning and calibration by an independent repair facility.

The project geologist/engineer/scientist and field sampler are responsible for ensuring that the field equipment is tested, cleaned, charged and calibrated in accordance with the manufacturer's instructions prior to taking the equipment out into the field.

12.0 DATA ASSESSMENT PROCEDURES

The field and laboratory generated data will be assessed for precision, accuracy, representativeness, completeness, and comparability (PARCC parameters). Both quantitative and qualitative procedures will be used for these assessments.

The criteria for assessment of field measurements will be that the measurements were taken in accordance with the procedures specified in the FSP using calibrated instruments. Assessment of the sampling data with respect to field performance will be based on the criteria that the samples were properly collected and handled. Field replicate and equipment/field blank sample results will be used in assessing the sampling technique and representativeness of the samples collected.

The laboratory will calculate and report the precision, accuracy, and completeness of the analytical data. Precision will be expressed as the relative percent difference (RPD) between values of duplicate samples. Accuracy will be expressed as percent difference (PD) for surrogate standards and matrix spike compounds. Completeness is a measure of the amount of valid data derived from a set of samples based on the total amount expected to be derived under normal conditions. The precision and accuracy results will be compared to the QC acceptance criteria specified for each test method in the most recent NYSDEC ASP and EPA Methods.

The representativeness of the analysis is dictated primarily by the field sampling technique and sample location, as opposed to laboratory operations. The laboratory will take steps to ensure that the analysis is representative of the sample being submitted. The criteria for ensuring representativeness of the analysis are careful aliquot selection and proper compositing techniques. Laboratory performance will be based on the criteria that the samples were properly handled prior to submission to the laboratory, that the laboratory aliquots taken for analysis are representative (i.e., oversized particles discarded, sample thoroughly mixed except when dealing with volatile organics), that the samples were analyzed within holding times, and that no cross-contamination has occurred based on the method blank results. Data comparability will be assessed based on analyses being performed within required holding times, on consistent units of measure, and that analyses were performed in strict adherence with NYSDEC and EPA analytical methods/protocols.

13.0 CORRECTIVE ACTIONS

The investigation will be performed in accordance with the approved RI/FS Work Plan, the contents of the approved FSP and the approved QAPP. Any persons identifying unacceptable conditions or deficiencies in the work being performed such as deviation from or omission of health and safety procedures, sampling procedures or other field procedures, will immediately notify the project field supervisor, where applicable, and the project manager. The unacceptable conditions or deficiencies will be documented and submitted to the project manager. The project manager, with assistance from the technical quality review staff, if necessary, will be responsible for developing and initiating appropriate corrective action, documenting the corrective action and verifying that the corrective action has been effective.

Depending on the significance and potential impact of the problem or deficiency requiring corrective action, the NYSDEC and Saint-Gobain will be notified, as warranted, as soon as practical after becoming aware of the situation.

14.0 QUALITY ASSURANCE REPORTS TO MANAGEMENT

Field system audit/field reports from the project team, where applicable, will be submitted to the project manager on a bi-weekly basis at a minimum. The field report will include the project name, location, time, date, weather, temperature range, work in progress, conformance with schedule, persons present at the Site (arrival and departure times), observations, work start-up and stoppage, items to verify, information or action required, any attachments identified, and the reporting persons signature. The field report notifies the management as to the progress, conformance with the work plan, and any problems that may affect quality control. Field personnel will also keep field notebooks that will discuss day to day procedures followed, any problems encountered, etc. A copy of the field notes will be given to the project manager at least bi-weekly to keep the project manager informed of the project status and as a quality control check. The project manager will review the reports and field notes to assess the quality of the investigate data gathering efforts to make sure the objectives of the work are being met, to make sure the work is progressing on schedule, that the work is being conducted in accordance with the work plan, and that any problems encountered are addressed. These reports will be utilized in assessing the data quality with respect to field activities and the findings will be discussed in the RI Report where applicable.

Documentation of each phase of the project and all work tasks performed are kept in the file on the project. The documentation is available at all times for review by the Quality Assurance Officer, who will randomly check files for their completeness.

If any occurrences or conditions are encountered during the course of work that may require a change in the scope of work or departure from the approved work plan, the NYSDEC and Saint-Gobain will be notified and the situation reported as soon as possible.

FIGURE 1

Project Organizational Chart

C.T. Male Project Organizational Chart

Saint-Gobain Performance Plastics Corporation

Client/Requestor

Daniel Reilly, P.E.
Project Principal

Kirk Moline, CEI, CES
Project Manager

Elizabeth W. Rovers, P.E.
Quality Assurance Officer

Steve Bieber, CHMM
Environmental Scientist

Jonathan Dippert
Project Geologist

Larene Cameron
Project Scientist

Brittany Winslow
Project Scientist

Subconsultants & Contractors
- Laboratory Services
- Drilling Services
- Data Validation Services
- Geophysical Survey

ATTACHMENT A

Laboratory Certifications

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

DR. YONGTAO LI
EUROFINS EATON ANALYTICAL, INC
110 SOUTH HILL STREET
SOUTH BEND, IN 46617

NY Lab Id No: 11398

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)	Colisure
E. coli (Enumeration)	SM 18-22 9223B (-97) (Colilert)
Heterotrophic Plate Count	SimPlate

Chlorinated Acids

2,4,5-TP (Silvex)	EPA 515.3
2,4-D	EPA 515.3
Acifluorofen	EPA 515.3
Dalapon	EPA 515.3
Dicamba	EPA 515.3
Dinoseb	EPA 515.3
Pentachlorophenol	EPA 515.3
Picloram	EPA 515.3

Disinfection By-products

Bromate	EPA 317.0 Rev. 2.0
Bromide	EPA 300.0 Rev. 2.1
Bromochloroacetic acid	EPA 552.2
Chlorate	EPA 300.0 Rev. 2.1
Chlorite	EPA 300.0 Rev. 2.1
Dibromoacetic acid	EPA 552.2
Dichloroacetic acid	EPA 552.2
Monobromoacetic acid	EPA 552.2
Monochloroacetic acid	EPA 552.2
Trichloroacetic acid	EPA 552.2

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 200.8 Rev. 5.4
Cadmium, Total	EPA 200.8 Rev. 5.4
Chromium, Total	EPA 200.8 Rev. 5.4
Copper, Total	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 200.8 Rev. 5.4
Mercury, Total	EPA 245.1 Rev. 3.0
Selenium, Total	EPA 200.8 Rev. 5.4
Silver, Total	EPA 200.8 Rev. 5.4
Zinc, Total	EPA 200.8 Rev. 5.4

Metals II

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

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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
Uranium (Mass)	EPA 200.8 Rev. 5.4

Methylcarbamate Pesticides

3-Hydroxy Carbofuran	EPA 531.2
Aldicarb	EPA 531.2
Aldicarb Sulfone	EPA 531.2
Aldicarb Sulfoxide	EPA 531.2
Carbaryl	EPA 531.2
Carbofuran	EPA 531.2
Methomyl	EPA 531.2
Oxamyl	EPA 531.2

Microextractibles

1,2-Dibromo-3-chloropropane	EPA 504.1
1,2-Dibromoethane	EPA 504.1

Miscellaneous

Benzo(a)pyrene	EPA 525.2
Bis(2-ethylhexyl) phthalate	EPA 525.2
Di (2-ethylhexyl) adipate	EPA 525.2
Diquat	EPA 549.2
Endothall	EPA 548.1
Glyphosate	EPA 547

Miscellaneous

Hexachlorobenzene	EPA 525.2
Hexachlorocyclopentadiene	EPA 525.2
Organic Carbon, Dissolved	SM 21-22 5310C (-00)
Organic Carbon, Total	SM 21-22 5310C (-00)
Perchlorate	EPA 331.0
Turbidity	EPA 180.1 Rev. 2.0
UV 254	SM 19-22 5910B (-00)

Non-Metals

Alkalinity	SM 18-22 2320B (-97)
Calcium Hardness	SM 18-22 2340B (-97)
Chloride	EPA 300.0 Rev. 2.1
Color	SM 18-22 2120B (-01)
Corrosivity	SM 18-22 2330
Cyanide	EPA 335.4 Rev. 1.0
Fluoride, Total	SM 18-22 4500-F C (-97)
Nitrate (as N)	EPA 353.2 Rev. 2.0
Nitrite (as N)	EPA 353.2 Rev. 2.0
Orthophosphate (as P)	SM 18-22 4500-P E (-99)
Silica, Dissolved	EPA 200.7 Rev. 4.4
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 525.2
Aldrin	EPA 525.2

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All approved analytes are listed below:

Organohalide Pesticides

Atrazine	EPA 525.2
Butachlor	EPA 525.2
Chlordane Total	EPA 505
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 525.2
Toxaphene	EPA 505
Trifluralin	EPA 525.2

Polychlorinated Biphenyls

PCB Screen	EPA 505

Radiological Analytes

Gross Alpha	SM 17-22 7110B (-00)
	SM 18-22 7110C (-00)
Gross Beta	SM 17-22 7110B (-00)
Radium-226	SM 17-22 7500-Ra B (-01)
Radium-228	SM 17-22 7500-Ra D (-01)
Radon	SM 20-22 7500 Rn (-06)
Tritium	EPA 906.0

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
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

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NY Lab Id No: 11398

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All approved analytes are listed below:

Volatile Aromatics

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
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

Volatile Halocarbons

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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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

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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:

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

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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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All approved analytes are listed below:

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
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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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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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

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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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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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All approved analytes are listed below:

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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All approved analytes are listed below:

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		Polychlorinated Biphenyls	
PCB 102	EPA 1668 A	PCB 126	EPA 1668 A
PCB 103	EPA 1668 A	PCB 127	EPA 1668 A
PCB 104	EPA 1668 A	PCB 128	EPA 1668 A
PCB 105	EPA 1668 A	PCB 129	EPA 1668 A
PCB 106	EPA 1668 A	PCB 13	EPA 1668 A
PCB 107	EPA 1668 A	PCB 130	EPA 1668 A
PCB 108	EPA 1668 A	PCB 131	EPA 1668 A
PCB 109	EPA 1668 A	PCB 132	EPA 1668 A
PCB 11	EPA 1668 A	PCB 133	EPA 1668 A
PCB 110	EPA 1668 A	PCB 134	EPA 1668 A
PCB 111	EPA 1668 A	PCB 135	EPA 1668 A
PCB 112	EPA 1668 A	PCB 136	EPA 1668 A
PCB 113	EPA 1668 A	PCB 138	EPA 1668 A
PCB 114	EPA 1668 A	PCB 139	EPA 1668 A
PCB 115	EPA 1668 A	PCB 14	EPA 1668 A
PCB 116	EPA 1668 A	PCB 140	EPA 1668 A
PCB 117	EPA 1668 A	PCB 141	EPA 1668 A
PCB 118	EPA 1668 A	PCB 142	EPA 1668 A
PCB 119	EPA 1668 A	PCB 143	EPA 1668 A
PCB 12	EPA 1668 A	PCB 144	EPA 1668 A
PCB 120	EPA 1668 A	PCB 145	EPA 1668 A
PCB 121	EPA 1668 A	PCB 146	EPA 1668 A
PCB 122	EPA 1668 A	PCB 147	EPA 1668 A
PCB 123	EPA 1668 A	PCB 148	EPA 1668 A
PCB 124	EPA 1668 A	PCB 149	EPA 1668 A
PCB 125	EPA 1668 A	PCB 15	EPA 1668 A

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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 SOLID AND HAZARDOUS WASTE
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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Polychlorinated Biphenyls		**Polychlorinated Biphenyls**	
PCB 198	EPA 1668 A	PCB 32	EPA 1668 A
PCB 199	EPA 1668 A	PCB 33	EPA 1668 A
PCB 2	EPA 1668 A	PCB 34	EPA 1668 A
PCB 20	EPA 1668 A	PCB 35	EPA 1668 A
PCB 200	EPA 1668 A	PCB 36	EPA 1668 A
PCB 201	EPA 1668 A	PCB 37	EPA 1668 A
PCB 202	EPA 1668 A	PCB 38	EPA 1668 A
PCB 203	EPA 1668 A	PCB 39	EPA 1668 A
PCB 204	EPA 1668 A	PCB 4	EPA 1668 A
PCB 205	EPA 1668 A	PCB 40	EPA 1668 A
PCB 206	EPA 1668 A	PCB 41	EPA 1668 A
PCB 207	EPA 1668 A	PCB 42	EPA 1668 A
PCB 208	EPA 1668 A	PCB 43	EPA 1668 A
PCB 209	EPA 1668 A	PCB 44	EPA 1668 A
PCB 21	EPA 1668 A	PCB 45	EPA 1668 A
PCB 22	EPA 1668 A	PCB 46	EPA 1668 A
PCB 23	EPA 1668 A	PCB 47	EPA 1668 A
PCB 24	EPA 1668 A	PCB 48	EPA 1668 A
PCB 25	EPA 1668 A	PCB 49	EPA 1668 A
PCB 26	EPA 1668 A	PCB 5	EPA 1668 A
PCB 27	EPA 1668 A	PCB 50	EPA 1668 A
PCB 28	EPA 1668 A	PCB 51	EPA 1668 A
PCB 29	EPA 1668 A	PCB 52	EPA 1668 A
PCB 3	EPA 1668 A	PCB 53	EPA 1668 A
PCB 30	EPA 1668 A	PCB 54	EPA 1668 A
PCB 31	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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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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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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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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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

Serial No.: 53971

ATTACHMENT B

Data Validator Qualifications and Experience

(Pending)

ATTACHMENT C

Guidance for the Development of Data Usability Summary Reports

Appendix 2B
Guidance for Data Deliverables and the Development of
Data Usability Summary Reports

1.0 Data Deliverables

(a) DEC Analytical Services Protocol Category A Data Deliverables:

1. A Category A Data Deliverable as described in the most current DEC Analytical Services Protocol (ASP) includes:

i. a Sample Delivery Group Narrative;

ii. contract Lab Sample Information sheets;

iii. DEC Data Package Summary Forms;

iv. chain-of-custody forms; and,

v. test analyses results (including tentatively identified compounds for analysis of volatile and semi-volatile organic compounds)

2. For a DEC Category A Data Deliverable, a data applicability report may be requested, in which case it will be prepared, to the extent possible, in accordance with the DUSR guidance detailed below.

(b) DEC Analytical Services Protocol Category B Data Deliverables

1. A Category B Data Deliverable is includes the information provided for the Category A Data Deliverable, identified in subdivision (a) above, plus related QA/QC information and documentation consisting of:

i. calibration standards;

ii. surrogate recoveries;

iii. blank results;

iv. spike recoveries;

v. duplicate results;

vi. confirmation (lab check/QC) samples;

vii. internal standard area and retention time summary;

viii. chromatograms;

ix. raw data files; and

x. other specific information as described in the most current DEC ASP.

2. A DEC Category B Data Deliverable is required for the development of a Data Usability Summary Report (DUSR).

2.0 Data Usability Summary Reports (DUSRs)

(a) Background. The Data Usability Summary Report (DUSR) provides a thorough evaluation of analytical data with the primary objective to determine whether or not the data, as presented, meets the site/project specific criteria for data quality and data use.

1. The development of the DUSR must be carried out by an experienced environmental scientist, such as the project Quality Assurance Officer, who is fully capable of conducting a full data validation. The DUSR is developed from:

i. a DEC ASP Category B Data Deliverable; or

ii. the *USEPA Contract Laboratory Program National Functional Data Validation Standard Operating Procedures for Data Evaluation and Validation*.

2. The DUSR and the data deliverables package will be reviewed by DER staff. If full third party data validation is found to be necessary (e.g. pending litigation) this can be carried out at a later date on the same data package used for the development of the DUSR.

(b) Personnel Requirements. The person preparing the DUSR must be pre-approved by DER. The person must submit their qualifications to DER documenting experience in analysis and data validation. Data validator qualifications are available on DEC's website identified in the table of contents.

(c) Preparation of a DUSR. The DUSR is developed by reviewing and evaluating the analytical data package. In order for the DUSR to be acceptable, during the course of this review the following questions applicable to the analysis being reviewed must be answered in the affirmative.

1. Is the data package complete as defined under the requirements for the most current DEC ASP Category B or USEPA CLP data deliverables?

2. Have all holding times been met?

3. Do all the QC data; blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications?

4. Have all of the data been generated using established and agreed upon analytical protocols?

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

6. Have the correct data qualifiers been used and are they consistent with the most current DEC ASP?

7. Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?

(d) Documenting the validation process in the DUSR. Once the data package has been reviewed and the above questions asked and answered the DUSR proceeds to describe the samples and the analytical parameters, including data deficiencies, analytical protocol deviations and quality control problems are identified and their effect on the data is discussed.

APPENDIX C

HEALTH & SAFETY PLAN

July 2016

SITE SPECIFIC HEALTH & SAFETY PLAN

Saint-Gobain Performance Plastics Site
14 McCaffrey Street
Village of Hoosick Falls
Rensselaer County
New York

Prepared by:

C.T. MALE ASSOCIATES
50 Century Hill Drive
Latham, New York 12110
(518) 786-7400
FAX (518) 786-7299

C.T. Male Associates Project No: 14.4756

SITE SPECIFIC HEALTH & SAFETY PLAN
SAINT-GOBAIN PERFORMANCE PLASTICS CORP.
14 MCCAFFERY STREET
VILLAGE OF HOOSICK FALLS
RENSSELAER COUNTY, NEW YORK

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1.0 GENERAL

1.1 Overview

This Health and Safety Plan (HASP) has been prepared for use during implementation of a Remedial Investigation (RI) at the Saint-Gobain Performance Plastics, Corp. (Saint-Gobain) Site ("the Site") located at 14 McCaffery Street in the Village of Hoosick Falls, Rensselaer County, New York.

Site specific training will be required by SGPP in addition to the procedures presented within this plan including health and safety, emergency communications and procedures, and monitoring.

A designated Health and Safety Officer (HSO) will be responsible for implementing this HASP during the completion of the field work. All persons or parties who enter the work area (support zone, decontamination zone or exclusion zone) must review, sign and comply with this HASP. A partial list of individuals authorized to enter the exclusion zone at the site is presented in Section 13.0 of this HASP. Others may be added to the list as needed. A copy of this HASP will be maintained at the Site throughout the duration of the project. A complete description of the Remedial Investigation work is presented in the RI Work Plan. A brief description of the proposed scope of work is outlined below:

<u>Remedial Investigation:</u>

- Collection of surface soil, shallow soil and sediment samples for classification and submission for laboratory analyses;
- Collection of surface water samples for submission for laboratory analyses;
- Collection of rooftop wipe samples for laboratory analyses;
- Collection of sub-slab soil gas and indoor air quality samples for laboratory analyses;
- Oversee the drilling of soil and bedrock borings and installation of groundwater monitoring wells;
- Collection of subsurface soil samples from the soil borings for classification and submission for laboratory analyses;

- Installation and development of overburden and bedrock monitoring wells;
- Groundwater purging and sampling for laboratory analyses;
- Collection of quality control samples of source, aqueous and solid materials for laboratory analysis;
- Oversee the geophysical survey to map the Site's underlying glacial till and bedrock and the location of the municipal sewer overflow pipe;
- Sampling locations and monitoring well location and elevation survey;
- Other unforeseen environmental conditions which may be encountered during investigative work

1.2 Contact Names & Numbers

For this project, the following project contacts have been assigned.

SAINT-GOBAIN CONTACTS:

EHS MANAGER:	Alicia M. Dorsey, M.S.E. Saint-Gobain 16 McCaffery Street Hoosick Falls, NY 12090	518.686.6278 (O) 518.203.9127 (C)
SR PROJECT MANAGER:	PJ Beaumont Saint-Gobain 16 McCaffery Street Hoosick Falls, NY 12090	518.686.6179 (O) 518.788.6296 (C)

CONSULTANT CONTACTS:

CONSULTING ENGINEER:	C.T. Male Associates 50 Century Hill Drive Latham, NY 12110	518.786.7400
	Dan Reilly, Project Principal	518.786.7625 (O) 518. 928.9792 (C)
	Kirk Moline, Project Manager	518.786.7502 (O) 518.265.1708 (C)

	Kirk Moline, Health & Safety Officer	518.786.7502 (O)
		518.265.1708 (C)
	Jon Dippert, HSO Designee	518.786.7563 (O)
		518.469.1183 (C)

EMERGENCY PHONE NUMBERS:

PERSONAL INJURY OR EMERGENCY:	Southern Vermont Medical Center 100 Hospital Drive Bennington, VT 05210 (approx. 20 minutes)	800.543.1624
FIRE DEPARTMENT:	Emergency Village of Hoosick Falls Fire Department Main Street Hoosick Falls, NY 12090	911 518.686.7427
POLICE:	Emergency Village of Hoosick Falls Police Department 24 Main Street Hoosick Falls, NY 12090	911 518.686.7900
NYS Police	Emergency NYS Troopers Barracks Town Hall, Route 66 Sand Lake, NY	911 518.674.4440
UPSTATE NEW YORK REGIONAL POISON CONTROL CENTER:	University Hospital Upstate Medical University SUNY Health Science Center 750 East Adams Street Syracuse, NY 13201	(800) 222-1222
NATIONAL RESPONSE CENTER:	c/o United States Coast Guard (G-OPF) 2100 2nd Street, Southwest - Room 2611 Washington, DC 20593-0001	(800) 424-8802
NYSDEC SPILL HOTLINE:		(800) 457-7362

2.0 HEATLH AND SAFETY PERSONNEL

The Health and Safety Officer (HSO) will be responsible for implementation of the HASP and the delegation of health and safety duties. The HSO will coordinate the resolution of safety issues that arise during site work. When field operations require only Level D protection, it will not be necessary for the HSO to be present on-site at all times. When the HSO is not present on-site, a designee will be authorized to perform the duties of the HSO, and the designee will be responsible for implementation of the HASP.

The HSO or designee has authority to stop work upon their determination of an imminent safety hazard, emergency situation or other potentially dangerous situations (e.g. weather conditions). Authorization to resume work will be issued by the HSO.

3.0 SITE LOCATION AND DESCRIPTION

The project site is owned and operated by Saint-Gobain. Various high performance polymer based products used for major industries worldwide are manufactured at the facility.

The site is accessed from McCaffery Street which is the only point of vehicular access and regress. Visitor parking is located on the northern side of the site building. Employee parking and loading docks are generally located along the southern side of the building complex.

The site is serviced with municipal water and sewer. Electric service is provided overhead, with the main lines entering the site from McCaffery Street. A buried telecommunication line also enters the site from McCaffery Street and generally follows the wood line on the western side of the access road into the site. The building heating fuel is propane, which is stored above ground at various locations throughout the site.

Overall, the site topography slopes gently to moderately from the northwest to the southeast.

4.0 POTENTIAL SITE CONTAMINANTS

Contaminants that may be encountered during the RI include PFCs in soil and groundwater and low level solvents (trichloroethene) and metals (antimony) in groundwater. These contaminants may also be present in other media that is planned to be investigated (i.e., sediment, surface water, soil gas, indoor air, and building rooftop residue). Material Safety Data Sheets for the known site contaminants are presented in Exhibit 1.

5.0 HAZARD ASSESSMENT

5.1 General

The hazard assessment, use of specific protective equipment, and monitoring associated with each field work task of the investigation to be conducted at the subject site are presented in following subsections.

For this project, C.T. Male will be subcontracting portions of the Remedial Investigation activities. Each subcontractor will be responsible for developing and implementing a site specific health and safety plan for their activities, for protection of their employees, and use of personal protective equipment. The subcontractor will also be responsible for developing and following their own Respiratory Protection Program, as applicable.

5.2 Media Sampling

5.2.1 Soil, Sediment, Rooftop, Surface Water and Groundwater Sampling

Soil, sediment, rooftop, surface water and groundwater sampling are planned for the site. The potential hazards to personnel during this work are dermal contact. Level D protection should be sufficient to protect against dermal contact during handling of soils, rooftop residues and water. If organic vapors are present at the action levels described in Section 5.4, on the basis of organic vapor monitoring of the area during the work, it may be necessary to upgrade to Level C respiratory protection.

5.2.2 Soil Gas and Indoor Air Sampling

Soil gas and indoor air quality sampling are planned for the Site as part of a vapor intrusion assessment. The potential hazards to personnel during this work are inhalation hazards and to a lesser degree dermal contact. Level D protection should be sufficient to protect against dermal contact during installation and removal of the soil gas and indoor air sampling points. If organic vapors are present at the action levels described in Section 5.4, on the basis of organic vapor monitoring of the area during the work, it may be necessary to upgrade to Level C respiratory protection.

5.3 Subsurface Work

Exploratory test borings (including the installation of monitoring wells) into soils and bedrock are planned for the site. The potential hazards to personnel during this work are dermal contact. Level D protection should be sufficient to protect against dermal contact during drilling of and/or handling of the subsurface soils, bedrock and groundwater. If organic vapors are present at the action levels described in Section 5.4, on the basis of organic vapor monitoring of the area during the work, it may be necessary to upgrade to Level C respiratory protection.

5.4 Air Monitoring

During ground intrusive activities, including the completion of test borings and installation of soil gas sampling points, the ambient air in the work area will be monitored with a photoionization detection meter (total volatile compound – MiniRAE 2000 or 3000) prior to the start of work and periodically as conditions warrant. If a concentration of 10 ppm (sustained for 5 minutes) of total volatile compounds is detected within the work area on the instrument, relative to an isobutylene standard (used to calibrate the instrument), work will cease immediately and the workers shall shut down equipment and leave the area immediately. The level of personal protective equipment (PPE) protection will be evaluated prior to continuing work. If a PPE upgrade to Level C is required, it will include: a half face air purifying respirator equipped with combination organic vapor and particulate cartridges for 10-15 ppm exposure levels; and a full-face air purifying respirator for greater than 15 ppm to less than 50 ppm exposure levels, prior to continuing work. If a concentration greater than 50 ppm is encountered, work will cease immediately and the situation will be evaluated prior to continuation of work. Table 1 summarizes the action levels relative to the required respiratory protection.

Table 1
C.T. Male Action Levels & Required Respiratory Protection

Action Level	Level of PPE	Type of Respiratory Protection
0-10 parts per million	Level D	No respiratory protection
10-15 parts per million	Level C	Negative pressure half-face respirator
15-50 parts per million	Level C	Positive pressure full-face respirator

Greater than 50	Cease Work	Evaluate work procedures

-Facial hair is not permitted while wearing most respirators.

-Workers required to wear a respirator must have a minimum of OSHA 40 Hour training with current medical monitoring and fit test documentation.

5.5 Community Air Monitoring Plan

A site specific Community Air Monitoring Plan (CAMP) will be followed for the project on the basis of the New York State Department of Health Generic Community Air Monitoring Plan dated May 2010. The CAMP is presented in Appendix C. Air monitoring for organic vapors and particulates will be conducted during portions of the remedial investigation where the site's soils may be disturbed. Investigative tasks having the potential to disturb the site's soils include collection of surface, shallow and subsurface soil samples, collection of sediment samples, advancement of test borings, and installation of sub-slab soil gas probes.

5.6 Hazard Identification and Control

The following table presents generalized hazards potentially involved with the tasks to be completed on this project. Table 2 identifies general procedures to follow to prevent or reduce accident, injury or illness. Any worker on-site who identifies a potential hazard must report the condition to the HSO or designee, and initiate control of the hazardous condition.

Table 2
Potential Hazards and Control

Potential Hazard	Control
Vehicular Traffic	1. Wear safety vest when vehicular hazards exist. 2. Use cones, flags, barricades, and caution tape to define work area. 3. Use vehicle to block work area. 4. Contact police for high traffic situations.
Slip, Trip, and Fall Protection	1. Assess work area to determine if there is a potential for falling. 2. Make sure work area is neat and tools are staged in one general area. 3. Wear steel-toe boots with adequate tread and always watch where the individual is walking. Carry flashlight when walking in poorly lighted areas.

Table 2
Potential Hazards and Control

Potential Hazard	Control
Inclement Weather	1. Stop outdoor work during electrical storms and other extreme weather conditions such as extreme heat or cold temperatures. 2. Take cover indoors or in vehicle. 3. Listen to local forecasts for warnings about specific weather hazards such as tornadoes, hurricanes, and flash floods.
Utility Lines Contact	1. Contact UFPO to have utility lines marked prior to any underground excavation, trenching or drilling. UFPO must be contacted at least 72 hours prior to work. 2. Refer to site drawings for utility locations. 3. Manually dig 3 to 5 feet below grade and 5 feet on each side of utility marked to avoid breaking utility lines.
Noise	1. Wear hearing protection when equipment such as a drill rig, excavator, jackhammer, or other heavy equipment is operating on-site. 2. Wear hearing protection whenever you need to raise your voice above normal conversational speech due to a loud noise source; as this much noise indicates the need for protection. 3. Hearing protection is required when measured sound exceeds 85 decibels (dB) where employees stand or conduct work.
Electrical Shock	1. Maintain appropriate distance between heavy equipment and overhead utilities; 20 foot minimum clearance from power lines; and 10 foot minimum clearance from shielded power lines. 2. Contact local underground utility locating service prior to penetrating the ground surface.
Physical Injury	1. Wear hard hats and safety glasses at all times when on-site. 2. Maintain visual contact with equipment operators and wear orange safety vest when heavy equipment is operating on-site. 3. Avoid loose clothing when working around rotary equipment. 4. Keep hands and feet away from drilling augers/casing/samplers and excavation equipment tracks/tires. 5. Test emergency shut-off switches on drill rigs and excavation equipment regularly.

Table 2 Potential Hazards and Control	
Potential Hazard	**Control**
Back Injury	1. Use a mechanical lifting device or a lifting aid where appropriate. 2. Ensure the route is free of obstructions. 3. Bend at the knees and use leg muscles when lifting. 4. Use the buddy system if lifting heavy or awkward objects. 5. Do not twist or jerk your body when lifting.
Heat Stress	1. Increase water intake while working. 2. Avoid excessive alcohol intake the night before working in heat stress situations. 3. Increase number of rest breaks as necessary, and rest in a shaded area. 4. Watch for signs and symptoms of heat exhaustion and fatigue. 5. Rest in cool, dry areas. 6. In the event of heat stress or heat stroke, bring the victim to a cool environment and call 911.
Cold Stress	1. Wear cotton, wool or synthetics (polypropylene) undergarments to absorb perspiration from the body. 2. Wear additional layers of light clothing as needed for warmth. The layering effect holds in air, trapping body heat, and some layers could be removed as the temperature rises during the day. 3. Pay close attention to body signals and feelings (hypothermia symptoms), especially to the extremities. Correct any problem indications by breaking from the work activity and moving to a rest area to warm up and add additional clothing. 4. Increase water intake while working. 5. Avoid excessive alcohol intake the night before working in cold conditions. 6. Increase the number of rest breaks as necessary, and rest in a warm area. 7. In the event of hypothermia or frost bite, bring the victim to a warm environment and call 911.
Fire Control	1. Smoking is not allowed on-site. 2. Keep flammable liquids in closed containers. 3. Isolate flammable and combustible materials from ignition sources.

Table 2 Potential Hazards and Control	
Potential Hazard	**Control**
	4. Keep fire extinguisher nearby and use only if deemed safe.
Media Sampling (water, soil, sediment, soil gas, etc.)	1. Wear appropriate PPE to avoid skin, eye, and inhalation contact with contaminated media. 2. Stand upwind to minimize possible inhalation exposure, especially when opening monitoring wells or closed containers/vessels and when penetrating flooring material. 3. Conduct air monitoring, whenever necessary to determine level of respiratory protection. 4. If necessary, employ engineering controls to assist in controlling chemical vapors. 5. When collecting samples on or near water bodies, wear a life jacket and employ the buddy system. 6. When collecting samples from water bodies, assess water conditions and the water current and ensure that the sampling vessel is stabilized. 7. When collecting rooftop samples, maintain a safe distance from the roof ledge.
Cleaning Equipment	1. Wear appropriate PPE to avoid skin and eye contact with Alconox or other cleaning materials. 2. Stand upwind to minimize possible inhalation exposure. 3. Properly dispose of spent chemical cleaning solutions and rinse accordingly.
Poor Structural Building Condition	1. Assess building and rooftop condition prior to accessing and note where exit points are at all times. 2. Be cautious when walking inside the building. Always look for holes in the floors or hanging debris which could cause injury. 3. Carry a high power flashlight and use as necessary in low light areas. 4. If working in the building, ensure work area is neat and tools are staged in one general area. 5. If working of the rooftop, maintain a safe distance from the roof ledge and do not access sloped roof surfaces without proper safety controls. 6. Wear steel-toe boots with adequate tread.

Table 2 Potential Hazards and Control	
Potential Hazard	**Control**
	7. Attempt to employ the buddy system so someone knows what part of the building individuals are in.
Deer Ticks	1. Wear pants and long sleeve shirts 2. Use tick repellent 2. Perform personal body checks for the presence of ticks 3. Notify the Health and Safety Officer immediately if you have been bitten by a tick and contact your physician.
Note: A first aid kit and fire extinguisher will be located in the C.T. Male company vehicle.	

Response actions to personal exposure from on-site contaminants include skin contact, eye contact, inhalation, ingestion, and puncture or laceration. The recommended response actions are presented in Section 11.2.

6.0 TRAINING

Site specific training of workers and personnel will be conducted and provided by the HSO or designee prior to any on-site activity. The training will specifically address the activities, procedures, monitoring and equipment for the site operations. It will include area and facility layout, hazards, emergency services (police, hospital, fire, etc.), and review of this HASP. Questions by workers, field personnel, etc. will be addressed at this time.

Workers and personnel conducting and/or supervising the project must have attended and successfully completed a 40 Hour Health and Safety Training Course for Hazardous Waste Operations and an annual 8 hour Refresher Course. Workers must take part in an employer medical surveillance program in accordance with OSHA 1910.120 requirements, including that the workers have had a medical physical within one (1) year prior to the date the work begins and that they are physically able to wear a respirator.

Documentation of training and medical surveillance will be submitted to the HSO or designee prior to the start of any on-site work. A copy of the training certificates shall be inserted into the pocket of this HASP in Appendix A.

7.0 SITE ACCESS

The RI will be conducted within the Site and at off-site locations. Due to the site location, it is possible that the public or curious bystanders will be present at the time of the work. As such, the work area and exclusion zone will be considered as the following, dependent on the investigative tasks performed.

- Chain-link fencing will be used to delineate an approximate 30 foot square around each outside test boring location. All work and equipment will remain within the designated work area/exclusion zone until completion of the test boring and installation of the monitoring well.

- Caution tape will be used to delineate an approximate 10 foot square around the inside test boring location. All work and equipment will remain within the designated work area/exclusion zone until completion of the test boring and installation of the monitoring well.

- Caution tape will be used to delineate an approximate 10 foot square around each sediment sampling location not located in the Hoosic River and each soil sampling location not originating from a test boring. All work and equipment will remain within the designated work area/exclusion zone until completion of the sediment and soil sampling.

- Caution tape will be used to delineate an approximate 10 foot square around each soil gas and indoor air quality sampling station. All work and equipment will remain within the designated work area/exclusion zone until completion of the sediment and soil sampling.

- Caution tape will be affixed at each rooftop access point during collection of the rooftop wipe samples. The caution tape will be removed after completion of the sampling activities.

- The boat will be considered as the designated work area/exclusion zone for sediment and surface water samples to be collected from open waters of the Hoosic River.

Only OSHA trained individuals which are qualified to do the work and have read and signed this Site specific HASP will be allowed within the work/exclusion zone. The HSO or designee will be responsible for limiting access to unauthorized individuals.

The Contamination Reduction Zone (decontamination area), and Support Zone (clean area, everywhere else) will be established outside the Exclusion Zone, as necessary. The exclusion, contamination reduction, and support zone during investigation/remediation work have been identified and designated as follows:

Work/Exclusion Zone - The location of the work/exclusion zone will be determined in the field prior to the start of work and will vary depending on the work activities conducted. For the most part, the work/exclusion zone is anticipated to be defined with chain link fencing and/or caution tape (see above). Only authorized persons with proper training and protective gear will be allowed to enter the work/exclusion zone.

Contamination Reduction Zone – If applicable, this zone will generally be a 30'± x 30'± area, marked off with stakes, colored flagging, or equal method, containing the decontamination pad. The location will be determined in the field prior to the start of work and will vary depending on the area(s) the work is being conducted. This zone is where decontamination of personnel and equipment will take place, as necessary, on the basis of the work being performed.

Support Zone - Area outside of contamination reduction zone and not including the work/exclusion zone. Unauthorized or untrained individuals must remain in this zone.

8.0 PERSONAL PROTECTION

8.1 Level of Protection

Based on evaluation of the potential hazards, the minimum level of protection to be worn by workers during implementation of the RI activities is defined as Level D protection, and will be controlled by the HSO or designee.

The minimum level D protective equipment will consist of field clothes, rubber gloves **(NITRILE and/or PVC ONLY)**, hard hats, safety glasses, and safety boots (steel-toe preferred). As appropriate, this level of protection may be modified to include protective suits **(NOT TYVEK)**, coveralls, leg chaps, or face shield for additional protection. Both full-face and half-face air purifying respirators should be readily available. Appropriate combination organic vapor and particulate cartridge filters will be available at the site to use, if necessary, with the air purifying respirators.

If required, level C protective equipment will consist of the items listed for Level D protection with the added protection of full-face, air purifying (organic vapor and particulate) respirator, chemical resistant clothing **(NOT TYVEK)**, inner and outer chemically resistant gloves (i.e. nitrile and/or PVC), and chemical resistant safety overboots.

Level B is not anticipated, but if required, level B protective equipment will consist of the items listed for Level D protection except a self-contained breathing apparatus (SCBA) will be worn dependent on the level of contaminants present in the work zone, and protective suits **(NOT TYVEK)** will be required. When site conditions warrant the need for level B protective equipment, work will cease and the project will be re-evaluated to determine the necessity for employing engineering controls to reduce or eliminate the potential contaminants of concern.

8.2 Safety Equipment

Basic emergency and first aid equipment will be available at an area within the Support Zone clearly marked and available or within C.T. Male's company vehicle. This shall include a first aid kit, fire extinguisher, supply of potable water, soap and towels. The HSO or designee shall be equipped with a cellular phone in case of emergencies. If the cellular phone is not available, or is inoperable, a phone in the Saint-Gobain facility will be used.

9.0 COMMUNICATIONS

Land line phone service is available within the site building. Regardless, the HSO or designee shall be equipped with a cellular phone in case of emergencies. If the cellular phone is not available, or is inoperable, the facility phone will be used. The HSO or designee shall notify the C.T. Male Project Manager as soon as safely possible in the event of an accident, injury or emergency action.

Hand signals for certain work tasks will be employed, as necessary, and the buddy system will be employed during drilling, and during test boring, open surface water, open water sediment and rooftop sampling activities.

10.0 DECONTAMINATION PROCEDURES

10.1 Personnel Decontamination Procedures

Decontamination procedures will be carried out by all personnel leaving the Work/Exclusion Zone (except under emergency evacuation). The amount of decontamination performed will be dependent on the level of personal protection currently being worn within the exclusion zone.

1. Do not remove respiratory protection until all steps have been completed.
2. Clean outer protective gloves and outer boots, if worn, with water (preferably with a pressurized washer) over designated wash tubs in the exclusion zone to remove the gross amount of contamination.
3. Deposit equipment used (tools, sampling devices, and containers) at designated drop stations - on plastic drop sheets or in plastic lined containers.
4. Rinse outer boots if worn and gloves with clean water in designated rinse tubs. Remove outer boots if worn and gloves and deposit in designated area to be determined in the field for use the next day or when necessary. If disposable outer boots are worn, remove and discard in designated container.
5. Remove hard hat & safety glasses, rinse with clean water as necessary and deposit in designated area for use the next day or when necessary.
6. Remove protective suit, if worn, and discard in designated container. Remove respirator at this time, if used; wash and rinse with clean water. Organic vapor cartridges, when used, will be replaced daily. Used cartridges will be discarded in the designated waste container. Remove inner gloves and discard in designated container.

10.2 Equipment and Sample Containers Decontamination

All decontamination will be completed by personnel in protective gear appropriate for the level of protection determined by the site HSO or designee. Manual sampling equipment including scoops, hand augers, and shovels which come into contact with the site's soils and sediment, will be cleaned with a tap water/detergent wash and a bottled water rinse. The sampling equipment will be decontaminated after each sample is collected at the Contaminant Reduction Zone (Decontamination Station). The sampling equipment wash and rinse water will be captured in plastic pails or tubs and ultimately transferred to labeled DOT 17H approved 55-gallon open top steel drums and staged on-site at a secure location.

Drill rig equipment (i.e., casing, drill rods, bits, core samplers) which comes into contact with the site's soils will be decontaminated with a high pressure/hot water wash and/or other methods within the Contaminant Reduction Area. The cleaning will be performed at the completion of each boring location. Equipment decontamination wastes will be transferred to labeled DOT 17H approved 55-gallon open top steel drums and staged on-site at a secure location.

Larger equipment (i.e., drill rig) which comes into contact with the site's soils will be decontaminated with a high pressure/hot water wash and/or other methods within a decontamination pad. The decontamination procedure will focus on portions of the equipment that has come into contact with the site's soils such as the tires and tracks. The cleaning will be performed prior to the equipment leaving the site. Equipment decontamination wastes will be transferred to labeled DOT 17H approved 55-gallon open top steel drums and staged on-site at a secure location.

If a boat is utilized for collection of surface water/sediment samples, portions of the boat that comes into contact with water will be decontaminated at the shoreline by scrubbing with a tap water/detergent wash and a distilled water rinse. The wash/rinse water will be allowed to discharge to the shoreline.

Exterior surfaces of sample containers will be wiped clean with disposable paper towels in the decontamination zone and transferred to a clean cooler for transportation or shipment to the analytical laboratory. Sample identities will be noted and checked off against the chain-of-custody record. The disposable paper towels will be placed in the designated disposal container and disposed of as solid waste.

11.0 EMERGENCY RESPONSE PROCEDURES

THE PROJECT EMERGENCY COORDINATOR IS:

Site Health and Safety Officer (HSO) Kirk Moline

The following standard emergency procedures will be used by on-site personnel. The Project Manager and HSO shall be notified of any on-site emergencies and be responsible for assuring that the appropriate procedures are followed.

11.1 Personal Injury

Emergency first aid shall be administered on-site as deemed necessary and only by a trained individual, if available at the site. If a trained individual is not available on-site, decontaminate, if feasible, and transport individual to nearest medical facility (Southern Vermont Medical Center). The HSO will supply medical data sheets to appropriate medical personnel and be responsible for completing the incident report. If the HSO is injured or controlling the emergency situation, the medical data sheets are available in Appendix B of this Health and Safety Plan.

11.2 Personal Exposure

The recommended response to worker exposure from contaminants on-site includes the following:

SKIN CONTACT: Use generous amounts of soap and water. Wash/rinse affected area thoroughly, then provide appropriate medical attention, as necessary.

EYE CONTACT: Wash eyes thoroughly with potable water supply provided on site. Eyes should be rinsed for at least 15 minutes subsequent to chemical contamination. Provide medical attention, as necessary.

INHALATION: Move worker to fresh air and outside of the work zone and/or, if necessary, decontaminate and transport to hospital (Southern Vermont Medical Center). If respirator use is implemented at the time of inhalation, worker must not remove respirator until completely away from the work zone.

INGESTION: Decontaminate, if feasible, and transport to hospital (Southern Vermont Medical Center).

PUNCTURE WOUND OR
LACERATION: Provide first aid at the site and if wound needs medical attention, decontaminate, if feasible, and transport to hospital (Southern Vermont Medical Center).

If the affected worker is exposed to contaminants on-site and the injury or accident prevents decontamination of the individual, the emergency responders must be notified of this condition and the exposure must be kept to a minimum.

11.3 Potential or Actual Fire or Explosion

Immediately evacuate area in the event of potential or actual fire or explosion. Notify the local Fire and Police Departments, and other appropriate emergency response groups, as listed in Section 1.2. Perform off-site decontamination and contain wastes for proper disposal. If a fire or explosion occurs, all on-site personnel must meet in the designated area of the site (established by the HSO or designee) for an accurate head count.

11.4 Equipment Failure

Should there be any equipment failure, breakdown, etc. the Project Manager and HSO shall be contacted immediately. The Project Manager or the HSO will make every effort to replace or repair the equipment in a timely manner.

11.5 Spill Response

The site HSO or designee shall initiate a corrective action program with the subcontractors in the event of an accidental release of a hazardous material, suspected hazardous material or petroleum. The HSO or designee will act as the Emergency Coordinator with the subcontractors for the purposes of: spill prevention; identifying releases; implementing clean up measures; and notification of appropriate personnel.

The corrective action program will be implemented by the HSO and subcontractor to effectively control and minimize any impact accidental releases may have to the environment.

Effective control measures will include:

- Preliminary assessment of the release.
- Control of the release source.
- Containment of the released material.
- Effective clean-up of the released material.

Potential sources of accidental releases include: hydraulic oil spills or petroleum leaks from heavy equipment; cooling oils (potentially PCB containing) for electrical equipment handling and cleaning; and spills from drums, vats, vessels, and tanks. The HSO/Emergency Coordinator in conjunction with the subcontractor shall respond to an accidental release in the following manner:

- Identify the character, source, amount and area affected by the release.
- Have subcontractor take all reasonable steps to control the release.
- Notify facility personnel.
- Notify the NYSDEC Spill Hotline at 1-800-457-7362 if required.
- Contain the release with sorbent material which should include speedi-dry, spill socks and sorbent pads.
- Prevent the release from entering sensitive receptors (i.e., catch basins and surface water) using the specified sorbent material or sandbags.
- Coordinate cleanup of the released material.
- Oversee proper handling and storage of contaminated material for disposal.

At no time should personal health or safety be compromised or jeopardized in an attempt to control a release. All health and safety measures as outlined in this HASP should be adhered to.

12.0 ADDITIONAL WORK PRACTICES

Workers will be expected to adhere to the established safety practices. Work on the project will be conducted according to established protocol and guidelines for the safety and health of all involved. The following will be adhered to:

- Employ the buddy system when possible, and for those work tasks which require it. Establish and maintain communications.
- Minimize contact with potentially contaminated soil, sediment, rooftop residue and water.
- Employ disposable items when possible to minimize risks during decontamination and possible cross-contamination during sample handling.
- Smoking, eating, or drinking after entering the work zone and before decontamination will not be allowed.
- Avoid heat and other work stress related to wearing personal protective equipment. Take breaks as necessary and drink plenty of fluids to prevent dehydration.
- Withdrawal from a suspected or actual hazardous situation to reassess procedures is the preferred course of action.
- The removal of facial hair (except mustaches) prior to working on-site will be required to allow for a proper respiratory face piece fit.
- The Project Manager, the HSO, and sampling personnel shall maintain records recording daily activities, meetings, facts, incidents, data, etc. relating to the project. These records will remain at the project site during the full duration of the project so that replacement personnel may add information while maintaining continuity. These daily records will become part of the permanent project file.

13.0 AUTHORIZATIONS

Personnel authorized to enter the exclusion zone at the Saint-Gobain Performance Plastics, Corp. site at 14 McCaffrey Street in the Village of Hoosick Falls, Rensselaer County, New York while operations are being conducted must be certified by the HSO. Authorization will involve completion of appropriate training courses and review and sign off of this HASP.

Personnel authorized to perform work on-site are as follows:

1. Kirk Moline ________ C.T. Male
3. Jeffrey Marx ________ C.T. Male
4. Dan Achtyl ________ C.T. Male
5. Steve Bieber ________ C.T. Male
6. Jon Dippert ________ C.T. Male
7. Brittany Winslow ________ C.T. Male
8. Larene Cameron ________ C.T. Male
9. Chris Ormsby ________ C.T. Male
10. ________
11. ________
12. ________
13. ________
14. ________
15. ________
16. ________
17. ________

14.0 MEDICAL DATA SHEET

This medical data sheet will be completed by all on-site personnel and will be kept on-site during the duration of the project. This data sheet will accompany any personnel when medical assistance is needed or if transport to hospital facilities is required.

PROJECT: Remedial Investigation to be conducted at the Saint-Gobain Performance Plastics, Corp. Site at 14 McCaffrey Street in the Village of Hoosick Falls, New York.

Name ____________________________ Home Telephone ________________________

Address ____

Emergency Contact ____

Drug or Other Allergies ____

Particular Sensitivities ____

Do You Wear Contact Lenses ____

Provide a Checklist of Previous Illness or Exposure to Hazardous Chemicals

____

What Medications Are You Presently Using _____________________________________

____

Do You Have Any Physical or Medical Restrictions ______________________________

____

Are You Qualified to Wear Respirator (Provide Fit Test Results)___________________

Name, Address, and Telephone Number of Personal Physician:

____

____

____

15.0 FIELD TEAM REVIEW

Each field team member shall sign this section after site specific training is completed and before being permitted to work on-site.

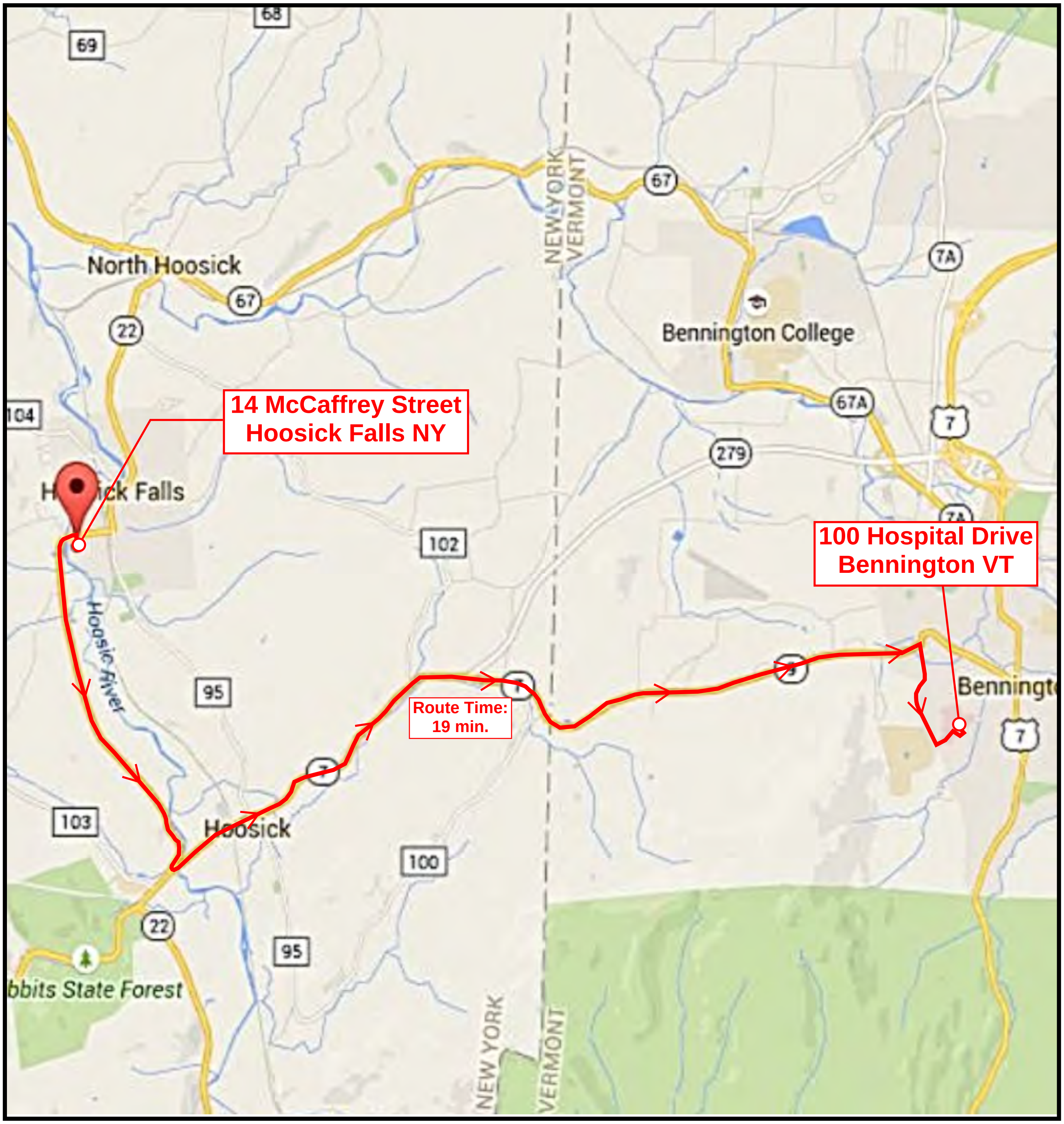
I have read and understood this Site Specific Health and Safety Plan, and I will comply with the provisions contained therein.

PROJECT: Site Investigation
Saint-Gobain Performance Plastics Corp. Site
14 McCaffrey Street
Village to Hoosick Falls
Rensselaer County, New York

Name: Printed	Signature	Date

FIGURE 1

MAP SHOWING ROUTE TO SOUTHERN VERMONT MEDICAL CENTER



MAP REFERENCE
Google Maps

C.T.MALE ASSOCIATES
ENGINEERING, SURVEYING, ARCHITECTURE & LANDSCAPE ARCHITECTURE, P.C.

50 CENTURY HILL DRIVE
LATHAM, NY 12110

ROUTE TO HOSPITAL
16 MCCAFFREY STREET

VILLAGE OF HOOSICK FALLS	RENSSELAER COUNTY, NY

SCALE: NONE	The locations and features depicted on this map are approximate and do not represent an actual survey.
DRAFTER: PAL	
PROJECT No: 14.4756	

APPENDIX A

TRAINING CERTIFICATES

APPENDIX B

MEDICAL DATA SHEETS

14.0 MEDICAL DATA SHEET

This medical data sheet will be completed by all on-site personnel and will be kept on-site during the duration of the project. This data sheet will accompany any personnel when medical assistance is needed or if transport to hospital facilities is required.

PROJECT: Remedial Investigation to be conducted at the Saint-Gobain Performance Plastics, Corp. Site at 14 McCaffrey Street in the Village of Hoosick Falls, New York.

Name ____________________________ Home Telephone ________________________

Address ____

Emergency Contact ____

Drug or Other Allergies ____

Particular Sensitivities ____

Do You Wear Contact Lenses ____

Provide a Checklist of Previous Illness or Exposure to Hazardous Chemicals

____

What Medications Are You Presently Using _____________________________________

____

Do You Have Any Physical or Medical Restrictions ______________________________

____

Are You Qualified to Wear Respirator (Provide Fit Test Results)___________________

Name, Address, and Telephone Number of Personal Physician:

____

____

____

APPENDIX C

COMMUNITY AIR MONITORING PROGRAM

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. APeriodic@ monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

EXHIBIT 1

MATERIAL SAFETY DATA SHEETS

Printer-friendly version

Perfluorooctanoic acid (Pentadecafluorooctanoic acid)

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL IDENTIFICATION

Exfluor Product ID: C8AC
Name: Perfluorooctanoic acid
Synonyms: Pentadecafluorooctanoic acid
Chemical Formula: CF3(CF2)6COOH
Issue Date: 12/15/1997
Revised: 07/21/2008

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS#: 335-67-1
EINECS#: 206-397-9

SECTION 3 - HAZARDS IDENTIFICATION

Precautionary Statements: Corrosive, irritant, irritating to eyes, respiratory system and skin, causes burns, harmful by inhalation and if swallowed
Target Organs: None known

SECTION 4 - FIRST-AID MEASURES

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Assure adequate flushing of the eyes by separating the eyelids with fingers.
Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.
Inhalation: Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
Ingestion: Do not induce vomiting. Allow victim to rinse his mouth with water provided person is conscious. Drink 2-4 cupfulls of water, and seek medical advice.

SECTION 5 - FIRE FIGHTING MEASURES

General Information: As in any fire, wear a self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent), and protective gear.
Extinguishing Media: In case of fire, use water spray, carbon dioxide, dry chemical, or polymer foam.
Flash Point: None
Fire Hazard: Slight fire hazard. Dust/air mixtures may ignite or explode.
Combustion: Carbon monoxide, Carbon dioxide, Hydrogen fluoride

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as in section 8.
Spills/Leaks: Do not touch spilled material. Stop leak if possible without personal risk. Small spills: Avoid raising dust. Collect spilled material in appropriate container for disposal. Absorbent may be used. Move containers away from spill to a safe area. Large spills: dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Ventilate area and wash spill site after material pickup is complete.

SECTION 7 - HANDLING AND STORAGE

General Information: Use proper personal protective equipment as in section 8.
Precautions: Store and handle in accordance with all current regulations and standards.
Handling:
Storage: Store in a cool dry place. Store in a tightly closed container. Keep seperated from incompatible substances.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits: 0.1 Mg/M3 recommended TWA (3m) (skin)
Ventilation: Provide local exhaust or process enclosure ventilitation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present.

Respiratory Protection: Wear a NIOSH/MSHA approved (or equivalent) respirator.
Eye Protection: Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Gloves: Wear appropriate chemical resistant glove.

SECTION 9 - PHYSICAL PROPERTIES

Molecular Formula: C8HF15O2
Physical State: White solid
Boiling Point: 189 C / 736 mmHg
Melting Point: 55-56 C
Freezing Point:
Liquid Density:
Specific Gravity: 1.7 Approximate
Vapor Pressure: 10.0 mm Hg @ 25C Approximate
Refractive Index:
Molecular Weight: 414
Solubility:
Odor:

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable at normal temperatures and pressure.
Conditions to Avoid: Heat and generating dust.
Incompatibilities: Strong oxidizing agents, strong bases, reducing agents
Hazardous Polymerization: Has not been reported
Hazardous Combustion: Carbon monoxide, Carbon dioxide, Hydrogen fluoride
RTECS#: RH0781000

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Effects: May cause irritation of the respiratory tract, eyes, and skin.
Chronic Effects: May cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. In some cases, pulmonary edema may develop, either immediately or more often within a period of 5-72 hours. The symptoms may include tigtness in the chest, dyspnea, frothy sputum, cyanosis, and dizziness. Physical findings may include moist rales, low blood pressure and high pulse pressure. Severe cases may be fatal direct contact may cause severe irritation, pain and possibly burns. There may be discoloration of the tissue. Swallowing and speech may be difficult at first and then almost impossible. The effects on the esophagus and gastrointestinal tract may range from irritation to severe corrosion. Edema of the epiglottis and shock may occur.
Toxicological Data: Eye Contact - Caused extreme irritation in animal studies, with a score of 108/110. Ingestion - Caused erosian of gastric mucosa in animal studies. The LD50 was estimated to lie between 500 and 1000 Mg/Kg. IPR-RAT LD50:189 Mg/Kg. TXAPA9 70,362,83. Toxicological properties have not been fully investigated.

SECTION 12 - ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 - DISPOSAL INFORMATION

Place in a chemical secured landfill or incinerate at 1200 (C) with a 2 second dwell time or at 1600 (C) with a 1.5 second dwell time.

SECTION 14 - TRANSPORTATION INFORMATION

Shipping Name: Corrosive solid, n.o.s. (Perfluorooctanoic acid)
UN/ID#: UN 1759
Hazard Class: 8
Packing Group: II
Labels: 8

SECTION 15 - REGULATORY INFORMATION

TSCA Inventory - Yes. Sara 311/312 (40CFR370.21): Acute yes

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES
Indication of Danger: C - Corrosive
R-Phrases: 22-34-52/53
Harmful if swallowed. Causes burns. Harmful to aquatic organisms, may cause long-term adverse effects in the

aquatic environment.
S-Phrases: 26-36/37/39-45
In case of contact with eyes, rinse immeditately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 16 - OTHER INFORMATION

TCI AMERICA

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Corrosive to eyes and skin on contact. Harmful compound, minimize exposure. Hygroscopic -- keep container tightly sealed.	

Section I. Chemical Product and Company Identification

Chemical Name	**Pentadecafluorooctanoic Acid Hydrate**
Catalog Number	P0764
Synonym	Perfluorooctanoic Acid
Chemical Formula	$C_8HF_{15}O_2 \cdot H_2O$
CAS Number	335-67-1

Supplier: TCI America
9211 N. Harborgate St.
Portland OR
1-800-423-8616

In case of Emergency Call: **Chemtrec®**
(800) 424-9300 (U.S.)
(703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Pentadecafluorooctanoic Acid Hydrate	335-67-1	Min. 98.0 (T)	Not available.	Rat LD_{50} (intraperitoneal) 189 mg/kg

Section III. Hazards Identification

Acute Health Effects

Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested.
Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death.
Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Chronic Health Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: Reproductive effects.
Mouse TDLo Oral 340 mg/kg, female 1-17 days of pregnancy
TOXIC Effects:
Effects on Fertility - Post-implantation mortality
Effects on Embryo or Fetus - Fetotoxicity
Effects on Embryo or Fetus - Fetal death
Mouse TDLo Oral 85 mg/kg, female 1-17 days of pregnancy
TOXIC Effects:
Maternal Effects - Breasts, lactation
Effects on Newborn - Growth statistic
Effects on Newborn - Physical
Mouse TDLo Oral 90 mg/kg, female 2-19 days of pregnancy
TOXIC Effects:
Effects on Embryo or Fetus - Fetotoxicity
Specific Developmental Abnormalities - Hepatobiliary system
Effects on Newborn - Biochemical and metabolic
Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

Section IV. First Aid Measures

Eye Contact

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact

In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Inhalation

If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.

Ingestion

DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Continued on Next Page

Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	Not available.
Flash Points	Not available.	Flammable Limits	Not available.

Combustion Products: These products are toxic carbon oxides (CO, CO_2), halogenated compounds.
WARNING: Highly toxic HF gas is produced during combustion.

Fire Hazards: Not available.

Explosion Hazards: Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Consult with local fire authorities before attempting large scale fire-fighting operations.

Section VI. Accidental Release Measures

Spill Cleanup Instructions: Corrosive material. Harmful material. Hygroscopic material.
Stop leak if without risk. DO NOT get water inside container. DO NOT touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. **Neutralize the residue with a dilute solution of sodium carbonate.** Consult federal, state, and/or local authorities for assistance on disposal.

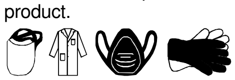
Section VII. Handling and Storage

Handling and Storage Information: CORROSIVE. HARMFUL. HYGROSCOPIC. Keep container dry. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. Do not breathe dust. Never add water to this product. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible. Treat symptomatically and supportively.
Always store away from incompatible compounds such as oxidizing agents, reducing agents, acids, alkalis (bases).

Section VIII. Exposure Controls/Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Face shield. Lab coat. Dust respirator. Boots. Gloves. A MSHA/NIOSH approved respirator must be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



Exposure Limits: Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Solid. (White Crystal ~ Powder.)	Solubility	Soluble in methanol. Slightly soluble in water.
Specific Gravity	0.9 (water=1)		
Molecular Weight	414.07 (Anh)	Partition Coefficient	Log P_{ow} 6.3
Boiling Point	189°C (372.2°F)	Vapor Pressure	20 Pa @ 25°C
Melting Point	57°C (134.6°F)	Vapor Density	Not available.
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Pungent.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability: This material is stable if stored under proper conditions. (See Section VII for instructions)

Conditions of Instability: Avoid excessive heat and light. Hygroscopic; keep container tightly closed.

Incompatibilities: Reactive with oxidizing agents, reducing agents, acids, alkalis (bases).

Continued on Next Page

Section XI. Toxicological Information

RTECS Number

RH0781000

Routes of Exposure

Eye Contact. Ingestion. Inhalation. Skin contact.

Toxicity Data

Rat LD_{50} (intraperitoneal) 189 mg/kg

Chronic Toxic Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: Reproductive effects.
Mouse TDLo Oral 340 mg/kg, female 1-17 days of pregnancy
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TOXIC Effects:
Maternal Effects - Breasts, lactation
Effects on Newborn - Growth statistic
Effects on Newborn - Physical
Mouse TDLo Oral 90 mg/kg, female 2-19 days of pregnancy
TOXIC Effects:
Effects on Embryo or Fetus - Fetotoxicity
Specific Developmental Abnormalities - Hepatobiliary system
Effects on Newborn - Biochemical and metabolic
Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

Acute Toxic Effects

Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested.
Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death.
Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Section XII. Ecological Information

Ecotoxicity

Not available.

Environmental Fate

The production of fluorinated surfactants such as perfluorooctanoic acid, and their use in fire-fighting applications, cosmetics, greases and lubricants, paints, polishes and adhesives may result in their release to the environment through various waste streams. If released to air, an estimated vapor pressure of 0.15 mm Hg at 25 deg C indicates perfluorooctanoic acid will exist solely as a vapor in the ambient atmosphere. Vapor-phase perfluorooctanoic acid will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 31 days. If released to soil, perfluorooctanoic acid is expected to have no mobility based upon an estimated Koc of 27,000. The pKa of perfluorooctanoic acid is 2.80, indicating that this compound will primarily exist in the dissociated form in the environment and anions generally do not adsorb to organic carbon and clay as strongly as their neutral counterparts. If released into water, perfluorooctanoic acid is expected to adsorb to suspended solids and sediment based upon the estimated Koc. A pKa of 2.80 indicates perfluorooctanoic acid will exist almost entirely in the ionized form at pH values of 5 to 9 and therefore volatilization from water surfaces is not expected to be an important fate process. An estimated BCF of 56 was reported for ammonium perfluorooctanoate and suggests the potential for bioconcentration in aquatic organisms is moderate. Organic fluorochemical compounds, such as perfluorooctanoic acid, are expected to be resistant to hydrolysis, photolysis and biodegradation. Occupational exposure to perfluorooctanoic acid may occur through inhalation and dermal contact with this compound at workplaces where perfluorooctanoic acid is produced or used.

Section XIII. Disposal Considerations

Waste Disposal

Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

Section XIV. Transport Information

DOT Classification

DOT Class 8: Corrosive material

PIN Number

UN3261

Proper Shipping Name

Corrosive solid, acidic, organic, n.o.s.

Packing Group (PG)

III

DOT Pictograms

Continued on Next Page

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is **ON** the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	CLASS E: Corrosive solid. On NDSL
EINECS Number (EEC)	206-397-9
EEC Risk Statements	R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R34- Causes burns.
Japanese Regulatory Data	ENCS No. 2-1182; 2-2659

Section XVI. Other Information

Version 1.0
Validated on 10/14/2010.
Printed 10/14/2010.

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATHESON TRI-GAS, INC.
150 Allen Road Suite 302
Basking Ridge, New Jersey 07920
Information: 1-800-416-2505

Emergency Contact:
CHEMTREC 1-800-424-9300
Calls Originating Outside the US:
703-527-3887 (Collect Calls Accepted)

SUBSTANCE: TRICHLOROETHYLENE

TRADE NAMES/SYNONYMS:
MTG MSDS 199; ACETYLENE TRICHLORIDE; ETHYLENE TRICHLORIDE; 1-CHLORO-2,2-DICHLOROETHYLENE; 1,1-DICHLORO-2-CHLOROETHYLENE; TCE; ETHINYL TRICHLORIDE; TRICHLOROETHENE; 1,1,2-TRICHLOROETHYLENE; 1,1,2-TRICHLOROETHENE; UN 1710; RCRA U228; C2HCl3; MAT23850; RTECS KX4550000

CHEMICAL FAMILY: halogenated, alkenes

CREATION DATE: Jan 24 1989
REVISION DATE: Dec 11 2008

2. COMPOSITION, INFORMATION ON INGREDIENTS

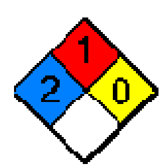
COMPONENT: TRICHLOROETHYLENE
CAS NUMBER: 79-01-6
PERCENTAGE: >99

COMPONENT: INHIBITORS
CAS NUMBER: Not assigned.
PERCENTAGE: <0.1

COMPONENT: AMINES
CAS NUMBER: Not assigned.
PERCENTAGE: <0.1

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=2 FIRE=1 REACTIVITY=0



EMERGENCY OVERVIEW:

COLOR: colorless
PHYSICAL FORM: liquid
ODOR: sweet odor
MAJOR HEALTH HAZARDS: respiratory tract irritation, skin irritation, eye irritation, central nervous system depression, allergic reactions, cancer hazard (in humans)
PHYSICAL HAZARDS: May polymerize. Containers may rupture or explode. May decompose on contact with air, light, moisture, heat or storage and use above room temperature. Releases toxic, corrosive, flammable or explosive gases.

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation, changes in blood pressure, nausea, vomiting, stomach pain, difficulty breathing, irregular heartbeat, headache, drowsiness, dizziness, disorientation, mood swings, tremors, loss of coordination, visual disturbances, bluish skin color, lung congestion, kidney damage, liver damage, unconsciousness, coma
LONG TERM EXPOSURE: same as effects reported in short term exposure, loss of appetite, weight loss, blood disorders, brain damage, cancer
SKIN CONTACT:
SHORT TERM EXPOSURE: irritation, allergic reactions
LONG TERM EXPOSURE: irritation, allergic reactions, nausea, loss of appetite, weight loss, difficulty breathing, headache, drowsiness, dizziness, joint pain, loss of coordination, visual disturbances, paralysis
EYE CONTACT:
SHORT TERM EXPOSURE: irritation (possibly severe), blurred vision
LONG TERM EXPOSURE: irritation (possibly severe), eye damage
INGESTION:
SHORT TERM EXPOSURE: same as effects reported in short term inhalation
LONG TERM EXPOSURE: same as effects reported in long term inhalation

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: If vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

NOTE TO PHYSICIAN: For ingestion, consider gastric lavage. Consider oxygen.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Slight fire hazard.

EXTINGUISHING MEDIA: carbon dioxide, regular dry chemical

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING: Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile).

FLASH POINT: No data available.
LOWER FLAMMABLE LIMIT: 7.8% @ 100 C
UPPER FLAMMABLE LIMIT: 52% @ 100 C
AUTOIGNITION: 770 F (410 C)

6. ACCIDENTAL RELEASE MEASURES

AIR RELEASE:
Reduce vapors with water spray. Collect runoff for disposal as potential hazardous waste.

SOIL RELEASE:
Dig holding area such as lagoon, pond or pit for containment. Dike for later disposal. Absorb with sand or other non-combustible material.

WATER RELEASE:
Absorb with activated carbon. Remove trapped material with suction hoses. Collect spilled material using mechanical equipment. Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

OCCUPATIONAL RELEASE:
Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Small liquid spills: Absorb with sand or other non-combustible material. Large spills: Dike for later disposal. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Store in a cool, dry place. Store in a well-ventilated area. Avoid heat, flames, sparks and other sources of ignition. Keep separated from incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
TRICHLOROETHYLENE:
100 ppm OSHA TWA
200 ppm OSHA ceiling
300 ppm OSHA peak (5 minutes in any 2 hours)
50 ppm (269 mg/m3) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)
200 ppm (1070 mg/m3) OSHA STEL (vacated by 58 FR 35338, June 30, 1993)
10 ppm ACGIH TWA
25 ppm ACGIH STEL
25 ppm NIOSH TWA 10 hour(s)
2 ppm NIOSH ceiling 60 minute(s) (used as halogenated anesthetic gas)

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.
At any detectable concentration -
Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.
Escape -
Any air-purifying full-facepiece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister.
Any appropriate escape-type, self-contained breathing apparatus.
For Unknown Concentrations or Immediately Dangerous to Life or Health -
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.
Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid
COLOR: colorless
ODOR: sweet odor
MOLECULAR WEIGHT: 131.39
MOLECULAR FORMULA: Cl-C-H-C-Cl2
BOILING POINT: 189 F (87 C)
FREEZING POINT: -99 F (-73 C)
VAPOR PRESSURE: 58 mmHg @ 20 C
VAPOR DENSITY (air=1): 4.53
SPECIFIC GRAVITY (water=1): 1.4642
WATER SOLUBILITY: 0.1%
PH: Not available
VOLATILITY: Not available
ODOR THRESHOLD: 21 ppm
EVAPORATION RATE: 0.69 (carbon tetrachloride=1)
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available
SOLVENT SOLUBILITY:
Soluble: alcohol, ether, acetone, chloroform, benzene, vegetable oils

10. STABILITY AND REACTIVITY

REACTIVITY: May decompose on contact with air, light, moisture, heat or storage and use above room temperature. Releases toxic, corrosive, flammable or explosive gases.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.

INCOMPATIBILITIES: bases, metals, combustible materials, oxidizing materials

HAZARDOUS DECOMPOSITION:
Thermal decomposition products: phosgene, halogenated compounds, oxides of carbon

POLYMERIZATION: May polymerize. Avoid contact with heat or light and monitor inhibitor content.

11. TOXICOLOGICAL INFORMATION

TRICHLOROETHYLENE:
IRRITATION DATA: 2 mg/24 hour(s) skin-rabbit severe; 20 mg/24 hour(s) eyes-rabbit moderate
TOXICITY DATA: 140700 mg/m3/1 hour(s) inhalation-rat LC50; >20 gm/kg skin-rabbit LD50; 4920 mg/kg oral-rat LD50
CARCINOGEN STATUS: NTP: Anticipated Human Carcinogen; IARC: Human Limited Evidence,

Animal Sufficient Evidence, Group 2A; ACGIH: A2 -Suspected Human Carcinogen
LOCAL EFFECTS:
Irritant: inhalation, skin, eye
ACUTE TOXICITY LEVEL:
Moderately Toxic: ingestion
Slightly Toxic: inhalation
Relatively Non-toxic: dermal absorption
TARGET ORGANS: immune system (sensitizer), central nervous system
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: heart problems
TUMORIGENIC DATA: Available.
MUTAGENIC DATA: Available.
REPRODUCTIVE EFFECTS DATA: Available.
ADDITIONAL DATA: May cross the placenta. Stimulants such as epinephrine may induce ventricular fibrillation.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:
FISH TOXICITY: 3100 ug/L 96 hour(s) LC50 (Mortality) Flagfish (Jordanella floridae)

INVERTEBRATE TOXICITY: 1700 ug/L 7 hour(s) EC50 (Regeneration) Flatworm (Dugesia japonica)

OTHER TOXICITY: 45000 ug/L 48 week(s) LC50 (Mortality) Clawed toad (Xenopus laevis)

FATE AND TRANSPORT:
BIOCONCENTRATION: 17 ug/L 1-14 hour(s) BCF (Residue) Bluegill (Lepomis macrochirus) 8.23 ug/L

13. DISPOSAL CONSIDERATIONS

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U228. Hazardous Waste Number(s): D040. Dispose of in accordance with U.S. EPA 40 CFR 262 for concentrations at or above the Regulatory level. Regulatory level- 0.5 mg/L. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:
PROPER SHIPPING NAME: Trichloroethylene
ID NUMBER: UN1710
HAZARD CLASS OR DIVISION: 6.1
PACKING GROUP: III
LABELING REQUIREMENTS: 6.1

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:
SHIPPING NAME: Trichloroethylene
UN NUMBER: UN1710
CLASS: 6.1
PACKING GROUP/CATEGORY: III

15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
TRICHLOROETHYLENE: 100 LBS RQ

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 Subpart B): Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 Subpart C): Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370 Subparts B and C):
ACUTE: Yes
CHRONIC: Yes
FIRE: No
REACTIVE: No
SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65):
TRICHLOROETHYLENE

OSHA PROCESS SAFETY (29 CFR 1910.119): Not regulated.

STATE REGULATIONS:
California Proposition 65:
Known to the state of California to cause the following:
TRICHLOROETHYLENE
Cancer (Apr 01, 1988)

CANADIAN REGULATIONS:
WHMIS CLASSIFICATION: D2

NATIONAL INVENTORY STATUS:
U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDSL): Not determined.

16. OTHER INFORMATION

MATHESON TRI-GAS, INC. MAKES NO EXPRESS OR IMPLIED WARRANTIES, GUARANTEES OR REPRESENTATIONS REGARDING THE PRODUCT OR THE INFORMATION HEREIN, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR USE. MATHESON TRI-GAS, INC. SHALL NOT BE LIABLE FOR ANY PERSONAL INJURY, PROPERTY OR OTHER DAMAGES OF ANY NATURE, WHETHER COMPENSATORY, CONSEQUENTIAL, EXEMPLARY, OR OTHERWISE, RESULTING FROM ANY PUBLICATION, USE OR RELIANCE UPON THE INFORMATION HEREIN.

Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Antimony MSDS

Section 1: Chemical Product and Company Identification

Product Name: Antimony

Catalog Codes: SLA1453, SLA4462

CAS#: 7440-36-0

RTECS: CC4025000

TSCA: TSCA 8(b) inventory: Antimony

CI#: Not available.

Synonym: Stibium

Chemical Name: Not available.

Chemical Formula: Sb

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Antimony	7440-36-0	100

Toxicological Data on Ingredients: Antimony: ORAL (LD50): Acute: 7000 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to blood, kidneys, lungs, the nervous system, liver, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In

case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.5 Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 121.75 g/mole

Color: Not available.

pH (1% soln/water): Not applicable.

Boiling Point: 1635°C (2975°F)

Melting Point: 630°C (1166°F)

Critical Temperature: Not available.

Specific Gravity: 6.691 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 7000 mg/kg [Rat].

Chronic Effects on Humans: Causes damage to the following organs: blood, kidneys, lungs, the nervous system, liver, mucous membranes.

Other Toxic Effects on Humans:
Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Human: passes through the placenta, excreted in maternal milk.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Antimony powder UNNA: UN2871 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Antimony Massachusetts RTK: Antimony TSCA 8(b) inventory: Antimony

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R36/38- Irritating to eyes and skin.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/11/2005 11:19 AM

Last Updated: 05/21/2013 12:00 PM

APPENDIX D

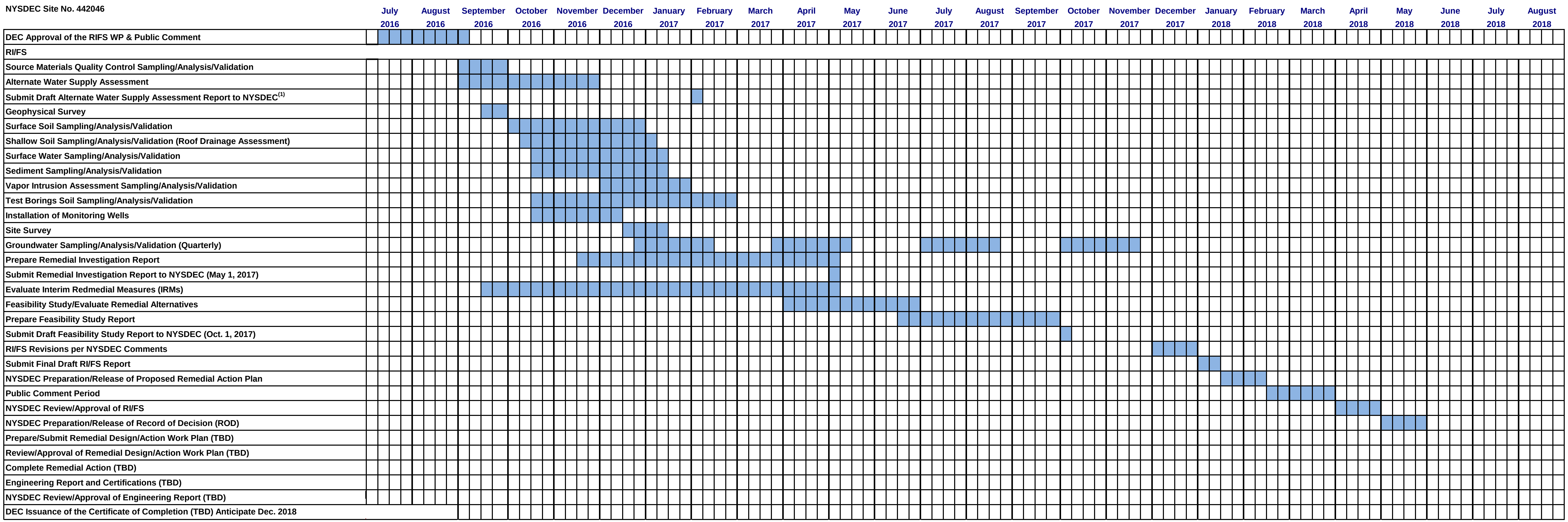
PROJECT SCHEDULE

Preliminary Project Schedule -September 2, 2016

McCaffrey Street Site

Village of Hoosick Falls, Rensselaer County

NYSDEC Site No. 442046



NOTES:

This preliminary schedule is subject to revision, as approved by NYSDEC, based upon: the potential need for supplemental field sampling bwork and/or engineering evaluations beyond that currently approved; the actual duration of field work; and further direction from NYSDEC, as appropriate.

TBD: denotes To Be Determined

(1) Noted submission date is subject to the date on which the results for ongoing AWS field work being conducted by NYSDEC is received.

EXHIBIT 1

1996 PARSONS PHASE I & PHASE II ESA REPORTS & 2016 RAMBOLL SITE SAMPLING RESULTS REPORT

FINAL PHASE I

ENVIRONMENTAL SITE ASSESSMENT

ALLIEDSIGNAL FLUORGLAS

MC CAFFREY STREET MANUFACTURING FACILITY
HOOSICK FALLS, NEW YORK 12090

PREPARED FOR

FURON

MARCH 1996

PREPARED BY

PARSONS ENGINEERING SCIENCE, INC.

PRUDENTIAL CENTER
BOSTON, MASSACHUSETTS 02199

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LIST OF ACRONYMS

AOC	Area of Concern
ASTM	American Society for Testing Materials
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
ERNS	Emergency Response Notification System
FINDS	Facility Index Data System
HAZMAT	Harzardous Material
HMIRS	Hazardous Materials Incident Report System Information System
kg	Kilograms
lbs	pounds
LUST	Leaking Underground Storage Tank
NPL	National Priorities List
NYSDEC	New York State Department of Environmental Conservation
PADS	PCB Activity Database
PCBs	Polychlorinated Biphenyls
RAATS	RCRA Administrative Action Tracking System
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Information System
SWMU	Solid Waste Management Unit
TRIS	Toxic release Inventory System
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage and Disposal
TSDF	Treatment, Storage and Disposal Facility
USEPA	United States Enviornmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank

1.0 SUMMARY

A Phase I Environmental Site Assessment (ESA) was conducted in accordance with ASTM Standard E 1527-94 at the AlliedSignal Fluorglas McCaffrey Street facility (McCaffrey Street) in Hoosick Falls, NY between July 24-27, 1995 by Parsons Engineering Science, Inc. (Parsons ES). The site visit and reconnaissance was conducted by Ken Brownell and P. J. Beaumont of AlliedSignal, Inc. Fluorglas and Robert M. Kane and Fernando O'Loughlin of Parsons ES.

In accordance with the scope of work dated July 17, 1995, Parsons ES performed the following tasks:

1. Site records review:

Parsons ES reviewed current and historical documents made available from the McCaffrey Street facility (environmental files for all Fluorglas operations are retained at this location).

Records were reviewed for information related to environmental activities conducted in or near the McCaffrey Street facility. Records reviewed included chemical usage or inventories, waste management records, air emissions and wastewater discharge activities and permits, Resource Conservation and Recovery Act (RCRA) or Comprehensive Environmental Response Compensation and Liability Act (CERCLA) activities and health and safety operations.

2. Site reconnaissance:

Parsons ES performed a site reconnaissance of the McCaffrey Street facility to visually and physically observe and document conditions on the property. This task included inspections of the interior and exterior of the facility structures.

3. Occupant and owner interviews:

Parsons ES interviewed AlliedSignal Inc. Fluorglas personnel concerning the history and current use of McCaffrey Street and surrounding areas.

4. File search and records review:

Parsons ES retained Environmental Data Resources (EDR) to perform a search of federal and state regulatory agency electronic databases. This database search identified locations that are regulated under various environmental laws. It also identifies locations where releases of hazardous substances or petroleum products has occurred or is suspected.

5. Historical aerial photographs review:

Where available, Parsons ES reviewed historical photographs available from Rensselaer County and local historical collections particularly for time periods prior to recorded development of the property up to the present. Parsons ES identified location of activities that may pose an environmental concern to the ownership and future use of the McCaffrey Street facility as well as present potential liabilities from, or to, neighboring properties. (At the time of this writing, aerial photographs ordered from the archive service had not been received).

6. Evaluation of data and report preparation:

Parsons ES summarized significant findings and made recommendations for additional site assessment activities, if needed.

Parsons ES evaluated all information collected concerning McCaffrey Street and its surroundings to identify "Recognized Environmental Conditions" (as defined by ASTM Standard E1527-94 and defined).

The following Recognized Environmental Conditions were identified for the McCaffrey Street facility:

1. The presence of one #2 fuel oil UST whose age and general condition are unknown presents a material threat of a release.

2. Floor drains and a sump in the vicinity of the mixing and coating operations on the first level of the facility present a material threat of a release.

Other conditions of concern identified specifically in relation to the McCaffrey Street facility include:

1. General housekeeping practices in the mixing and coating areas and in the extruder room.

2

2.0 INTRODUCTION

2.1 PURPOSE

A Phase I Environmental Site Assessment (ESA) was conducted by Parsons Engineering Science Inc., (Parsons ES) of the AlliedSignal Fluorglas McCaffrey Street facility in Hoosick Falls, New York for the purpose of identifying "Recognized Environmental Conditions". The term Recognized Environmental Conditions, is defined in ASTM Standard Practice E 1527-94, as: "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property." The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimus* conditions that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. The purpose of this study is the provision of preacquisition due diligence to the prospective purchasers.

This ESA was conducted by Parsons under contract to Furon Company. The law firm of O'Melveny & Myers of Newport Beach, California is acting on behalf of Furon during pre-acquisition proceedings of AlliedSignal, Inc. Fluorglas products.

This report documents our investigations and presents our findings following the format of the American Society Testing Materials (ASTM) Standards on Environmental Site Assessments for Commercial Real Estate, E-1527-94. Section and subsection headings of this report reflect, with only minor variation, the headings of sections within the ASTM standard to facilitate cross-referencing.

2.2 SPECIAL TERMS AND CONDITIONS

The information and conclusions presented in this report are valid only for the circumstances of the site investigated as described in this report, as they existed during the July 1995 time period of the investigation.

This report does not constitute a warranty, guaranty, or representation of the absolute absence of hazardous or otherwise harmful substances or conditions found or, if such substances and conditions are on the site, that the investigation accurately defined the degree and extent of possible contamination of the site.

Parsons ES evaluated the reasonableness and completeness of available relevant information, but does not assume responsibility for the truth or accuracy of any information provided to Parsons ES by others or for the lack of information that is intentionally, unintentionally, or negligently withheld from Parsons ES by others.

After acceptance of this report, if Parsons ES obtains information that it believes warrants further exploration and development, Parsons ES will endeavor to provide that information to Furon Company, but Parsons ES will not be liable for not doing so.

This report is not a legal opinion. Only legal counsel retained by Furon is competent to determine the legal implications of information or conclusions contained in this report.

Parsons ES is not responsible for the occurrence or non-occurrence of any transaction involving the property based upon the information stated in this report, except as expressly provided for in the engineering services agreement between Parsons ES and Furon Company.

2.3 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

To achieve the study objectives, Parsons ES based its conclusions on the best information available during the period of the investigation. No investigative method con completely eliminate the possibility of obtaining partial, imprecise or incomplete information. Professional judgement was exercised in gathering and evaluating the information obtained, and Parsons ES is committed to the standard of care and competence of the engineering profession.

2.4 LIMITING CONDITIONS AND METHODOLOGY USED

The ESA was limited to a records review (federal/state environmental databases, aerial photographs, and records available on-site), site reconnaissance, and property occupant and personnel interviews. The site Phase 1 investigation did not include electrical transformer inspections, a radon gas survey, an asbestos survey, a test for lead-based paint, analysis of potable water, a wetlands study, or soil and groundwater sampling and analysis.

3

3.0 SITE DESCRIPTION

3.1 LOCATION AND DESCRIPTION OF SITE

The AlliedSignal Fluorglas McCaffrey Street site is located in the County of Rensselaer in Hoosick Falls, New York. **Figure 3-1** shows the Site Location Map for the McCaffrey Street facility. The site is a light industrial manufacturing facility occupying a parcel of land encompassing 6.471 acres (source: Map of Lands Of McCaffrey Street Plant, surveyed by David F. Barrass, April 1995).

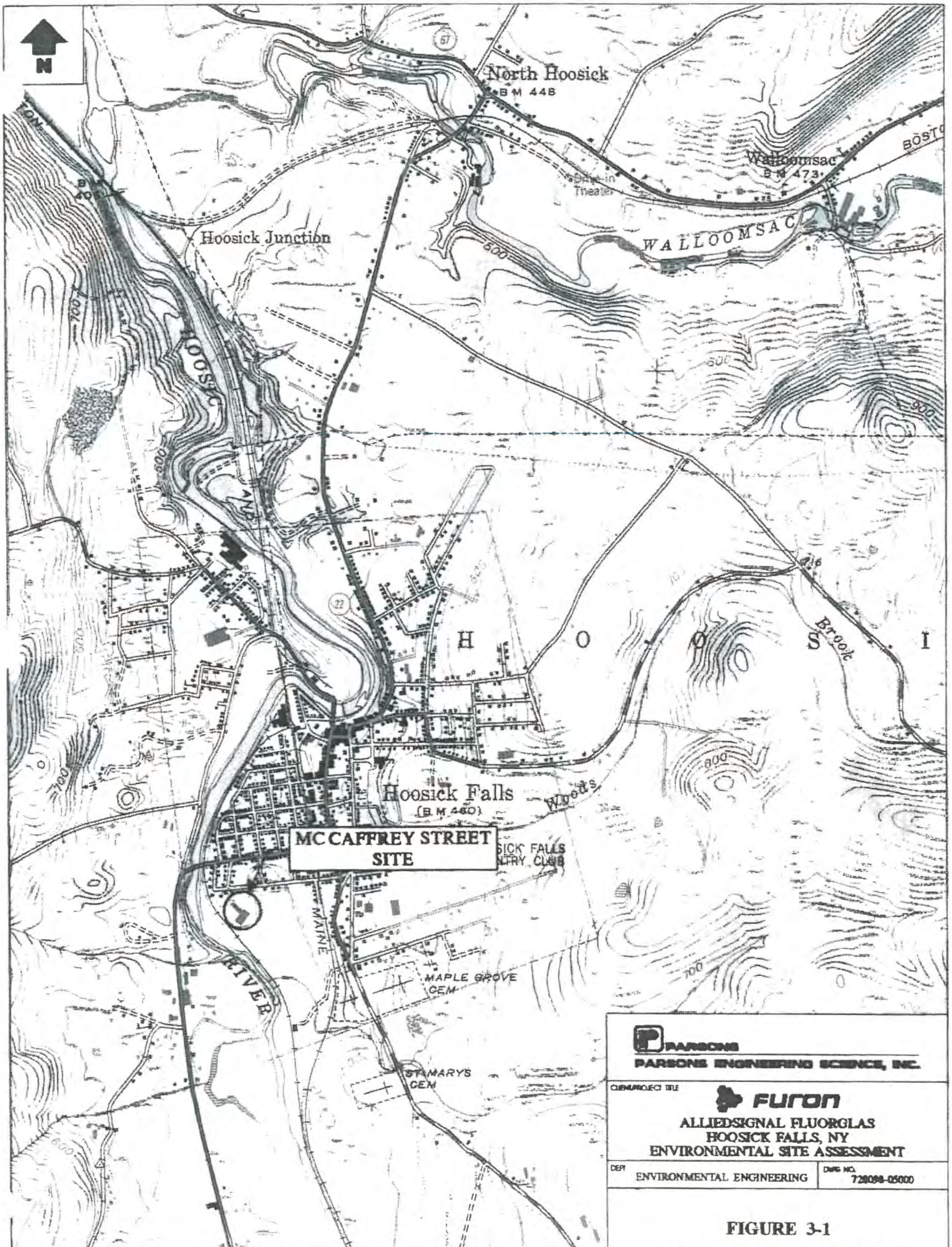
The facility building contains all manufacturing operations as well as general administrative offices and a small research and development department. The original building was constructed in 1961. According to P.J. Beaumont, additions were added in 1966 and 1975. The facility as it exists has a total area of approximately 60,000 square feet. The coating and mixing operations are located on the first floor of the building. The floor is slab-on-grade with floor drains present in several areas.

The second floor consists mainly of administrative offices and small laboratories. The extruding and molding operations are located on the third floor. The fourth level is used for research and development and general storage.

Utilities provided to the facility are electric, water, and sewer. Electricity to the facility is provided by Niagara Mowhawk. Water and sewer are provided by the Village of Hoosick Falls. The pad-mounted transformer is owned by Niagara Mohawk.

3.2 SITE AND VICINITY CHARACTERISTICS

The McCaffrey Street site is located in the southeast corner of the Village of Hoosick Falls. The area directly north of the facility is residential. The areas directly to the east, south and west are largely undeveloped. The facility is located on flat terrain in the floodplain of the Hoosic River. A former railine (Boston & Maine) is located on the western boundary of the property. The Hoosic River, west of the railine, is approximately 250 feet from the property boundary at its nearest point. The AlliedSignal, Inc. Fluorglas John



PARSONS

PARSONS ENGINEERING SCIENCE, INC.

CLIENT/PROJECT TITLE

Furon

ALLIEDSIGNAL FLUORGLAS
HOOSICK FALLS, NY
ENVIRONMENTAL SITE ASSESSMENT

DEPT: ENVIRONMENTAL ENGINEERING | DWG NO. 728098-05000

FIGURE 3-1

SITE LOCATION MAP

SCALE: 1" = 2000' | DATE: AUGUST 1995

SOURCE: U.S.G.S. HOOSICK FALLS, N.Y.-VT. QUADRANGLE
7.5 MINUTE SERIES

R:\GRAPHICS\ALLIEDS\\FURON\SITELOCA.CDR(RCS)

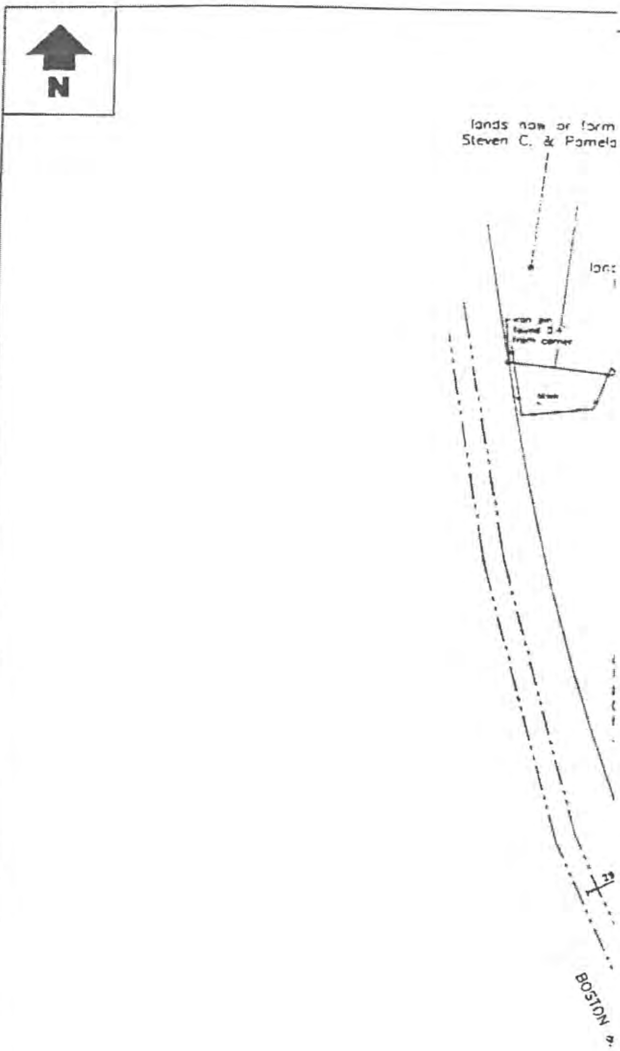
Street, Liberty Street and River Road facilities are located within a one-mile radius of the McCaffrey Street facility.

3.3 DESCRIPTIONS OF STRUCTURES, ROADS, OTHER ON-SITE IMPROVEMENTS

Aboveground structures present on the property other than the main facility building are an 18,000 gallon propane storage tank, a pad-mounted transformer and a metal storage shed. A smaller propane storage tank is present adjacent to the metal storage shed and is scheduled for removal by the facility. The remainder of the property is paved and gravel parking areas and gently sloped grassy areas. Underground structures present are a 10,000 underground storage fuel oil tank with a visible vent fill pipe, two separate septic lines shown on facility drawings running from the facility to the town sewer at Carey Avenue, and the propane distribution line running from the propane vaporizer to warehouse 2. **Figure 3-2** shows the locations of these structures and the surveyed property lines.

The main facility building as it exists today was constructed in three phases. The original facility building was built in 1961 on one level using a wooden frame construction. This area is currently occupied by the extrusion and molding process areas and is now considered the third level.

The second phase of construction was the addition of four levels attached to the original wood frame structure in 1966. This addition was a concrete block steel reinforced with a slab-on-grade foundation which contains the coating operations and administrative offices. The third phase of construction was the addition of warehouses #1 and #2 which are constructed of corrugated metal with a slab-on-grade foundation. One septic line serves the original facility building and is gravity feed. A new septic line was added around 1966 to serve the building additions added during the second phase of construction. Septic and floor drain discharges are fed by a pump to the newer septic line from the first level of the facility.



NOTES

1. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209. SUBDIVISION 2. OF THE NEW YORK STATE EDUCATION LAW

2. ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

3. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE OR TITLE REPORT AND IS, THEREFORE, SUBJECT TO ANY EASEMENTS, COVENANTS, OR RESTRICTIONS OF RECORD OR ANY STATEMENT OF FACTS SUCH DOCUMENTS WOULD DISCLOSE.

4. BOUNDARY LINES SHOWN ON THIS MAP ARE BASED ON RECOVERED CORNER MONUMENTATION AS SHOWN ON MAP REFERENCE #1.

5. THE SECOND PIECE OF PROPERTY CONVEYED BY DEED REFERENCE #1 PARCEL II IS DESCRIBED AS A 15' STRIP OF PROPERTY AND AN ADDITIONAL 27' STRIP OF PROPERTY BOTH OFF THE WESTERLY END OF THE LANDS OF HAYES AND BORDERING ON THE EASTERLY LINE OF BRENENSTUHL. THIS LINE IS SHOWN BY THE HEAVY SOLID LINE. THE REPUTED LOCATION OF THE BRENENSTUHL DEED LINE IS SHOWN BY THE HEAVY DOTTED LINE. THERE IS AN APPARENT OVERLAP OF THE CONVEYANCE FROM HAYES AND THE LANDS OF BRENENSTUHL. THE PARCEL SURVEYED MAY ALSO BE SUBJECT TO RIGHTS OF THE ADJOINERS AND THE RIGHTS OF THE PUBLIC ESTABLISHED THROUGH USAGE OF THE STREET PRESENTLY BEING MAINTAINED BY THE VILLAGE OF HOOSICK FALLS. A BOUNDARY LINE AGREEMENT BETWEEN ALL INVOLVED PARTIES IS RECOMMENDED TO ESTABLISH THIS LINE

6. NO UNDERGROUND UTILITIES ARE SHOWN ON THIS MAP.

DEED REFERENCE

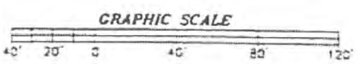
1. OAK MATERIALS GROUP, INC., SUCCESSOR IN INTEREST TO O/E/N ACQUISITIONS INC. TO OAK MATERIALS GROUP, INC. DATED APRIL 2, 1986 AND RECORDED IN THE RENSSELAER COUNTY CLERK'S OFFICE ON APRIL 10, 1986 IN LIBER 1404 OF DEEDS AT PAGE 181.

MAP REFERENCE

1. SURVEY OF A PORTION OF LANDS OF OAK MATERIALS GROUP INC. PREPARED BY CHARLES E. HARTNETT & HAROLD A. BEHRENS, DATED JULY 31, 1980.

TAX MAP REFERENCE

VILLAGE OF HOOSICK FALLS 37.6 – 3 – 1



SOURCE OF SURVEY MAP: SURVEYED BY DAVID F. BARRASS LAN
9 MAPLE STREET, CORINTH, NEW YOR

PARSONS
PARSONS ENGINEERING SCIENCE, INC.

CLIENT/PROJECT TITLE
Furon
ALLIEDSIGNAL FLUORGLAS
HOOSICK FALLS, NY
ENVIRONMENTAL SITE ASSESSMENT

DEPT	DWG NO
ENVIRONMENTAL ENGINEERING	728098-02000

FIGURE 3-2

MAP OF LANDS OF ALLIEDSIGNAL FLUORGLAS PRODUCTS MC CAFFREY STREET FACILITY

SCALE	DATE
	AUGUST 1995

R:\GRAPHICS\ALLIEDS\FURON\MAPLANDS.CDR(RCS)

3.4 INFORMATION REPORTED BY USER REGARDINGENVIRONMENTAL LIENS OR SPECIALIZED KNOWLEDGE OR EXPERIENCE

3.4.1 Environmental Liens

There were no environmental liens on the property either reported or identified through the property title search and interviews.

3.4.2 Specialized Knowledge or Experience

A disclosure document (AlliedSignal, Inc. Fluorglas Products, 1995) contained a summary of health, safety and environmental issues for the McCaffrey Street site. The disclosure document indicated that the facility is a large quantity generator of hazardous waste. Hazardous wastes generated by the facility include chromium bearing wastes from the coating operations and "off-spec" wastes from the R&D laboratory. The facility reportedly (Ken Brownell) ships all hazardous wastes off-site for disposal. The facility has one transformer which is owned by Niagara Mowhawk and has been confirmed through testing by Niagara Mowhawk to contain PCBs. The disclosure document did not indicate any known environmental violations or permitting issues. The facility has several permitted air emission sources associated with the coating towers which emit Triton X which is used as a dispersant in the coating process.

3.5 CURRENT USES OF THE PROPERTY

The McCaffrey Street site manufactures Polytetrafluoroethylene (PTFE) coated fiberglass and molded and extruded PTFE intermediates (SIC codes 2295, 3089). According to the disclosure document, the facility operates 365 days, 8,760 hours per year. The facility is also used as administrative offices and for research and development and employs approximately 95 people.

Coated fiberglass is produced by coating woven fiberglass with a dispersion of premixed liquid Teflon and an organic liquid surfactant (Triton). The mixture is then fed from a drum into a coating dip pan. The coating is then cured in an oven and collected on a web. Teflon molding is produced by adding virgin or reprocessed teflon to a molding press under pressure where the mold is formed. The mold is then transferred to the curing oven for sintering. Teflon is extruded by adding granular teflon in metered doses to a continuous heated extruder. Coating operations are located on the first floor and extrusion and molding operations are located on the third floor of the building.

Hazardous wastes generated from the manufacturing operations consist primarily of various coating formulations used in the mixing and coating areas and from research and development conducted on the fourth level. An area on the first level of the building is marked as the hazardous waste accumulation area and is equipped with a spill containment system. Wastes are accumulated in marked drums and disposed of within 90 days. The facility is designated as a large quantity generator (EPA I.D. No. NYD 004986741). Wastes generated from R&D are accumulated in lab packs prior to disposal. Non-hazardous solid wastes are accumulated in the trash compactor adjacent to the loading dock.

There are several floor drains present in the manufacturing area on the first floor. According to P.J. Beaumont, the drains are connected to the sanitary sewer system for the facility. The facility has two sanitary sewer discharge points from the facility to the town sewer system. One discharge point is associated with the older part of the manufacturing building and is a gravity flow system. The second discharge point is associated with the newer addition and is pumped to the city sewer line from the "sump pit" located on the first level adjacent to the tower room. No drawings or other evidence to support this were made available to Parsons ES. The local POTW does not require McCaffrey Street to permit these discharges.

3.6 PAST USES OF THE PROPERTY

According to P.J. Beaumont and Bob Grobuski, the facility was originally built in 1961 for Dodge Fibers Corp. and was used first for producing extruded tapes and then circuit board laminates. Oak Materials Group (Oak Electronetics) purchased the property from Dodge Fibers between 1969 and 1971. Oak Electronetics (Oak Industries) operated the facility until 1987 when it was sold to AlliedSignal Fluorglas. Prior to 1961 the property was vacant land.

3.7 CURRENT AND PAST USES OF THE ADJOINING PROPERTIES

The adjoining properties to the McCaffrey Street property are mixed residential and undeveloped land. There were no indications of any processes or practices currently in use at the adjoining properties to indicate that they are, or may potentially contribute to "recognized environmental conditions" at the McCaffrey Street site. There is a history of residential and small commercial properties north of the McCaffrey Street property.

4.0 RECORDS REVIEW

This section presents information concerning the McCaffrey Street site and its surroundings from various recorded sources. Electronic databases representing standard environmental record sources, physical setting sources, and available historical records were reviewed. Information pertinent to McCaffrey Street property is summarized in this section.

4.1 STANDARD ENVIRONMENTAL RECORD SOURCES, FEDERAL AND STATE

Parsons ES retained the services of Environmental Data Resources Inc. (EDR), an environmental database company, to search applicable regulatory agency lists and standard environmental record sources to identify locations of potential environmental concern within the ASTM Standard E1527-94 minimum search distances. The following is a summary of the database search results from the EDR Report, dated July 31, 1995. The complete EDR report is presented in **Appendix A**.

4.1.1 United States Environmental Protection Agency (USEPA) - National Priorities List (NPL)

The National Priorities List, also known as the Superfund list, is an EPA listing of uncontrolled or abandoned hazardous waste sites. The list is primarily based on a score that a site receives from the EPA hazardous ranking system. These sites are targeted for possible long-term remedial action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

There are no NPL sites located within ASTM E 1527-94 specification's one-mile minimum search distance from the property. This one-mile search distance is measured from the nearest property boundary.

4.1.2 USEPA-Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)

The CERCLIS is a compilation of known or suspected uncontrolled or abandoned hazardous waste sites. These sites have either been investigated, or are currently under investigation by the EPA for the release, or threatened release of hazardous substances. Once a site is placed on CERCLIS, it may be subjected to several levels of review and evaluation and ultimately placed on the National Priorities List.

There are no CERCLIS sites located within the standard's one-half mile minimum search distance from the property.

4.1.3 USEPA - Resource Conservation and Recovery Act Information System (RCRIS)/ Treatment, Storage, and/or Disposal (TDS) Facilities

The RCRIS TSD list identifies those facilities or locations that have notified the EPA and/or NYSDEC of their activities relative to their on-site treatment, storage and/or disposal of hazardous wastes. A listed site does not necessarily indicate environmental problems at the site, but rather that the site is (or was) engaged in hazardous waste activities and, therefore, may have the potential to cause environmental degradation if hazardous wastes have been mishandled or otherwise released in an uncontrolled manner.

The are no TSDF facilities located within the standard's one-mile minimum search distance from the subject property.

4.1.4 USEPA-RCRIS/Large Quantity Generators

The RCRIS/Large Quantity Generators list identifies those facilities or locations that have notified the EPA and/or the NYSDEC that they generate (or have generated) at least 1,000 kilograms (kgs) or 2,200 pounds (lbs) of non-acutely hazardous wastes and/or 1 kg or 2.2 pounds of acutely hazardous waste, monthly. A listed site does not necessarily indicate environmental problems on the site, but rather that the site is (or was) engaged in hazardous waste activities and, therefore, may have the potential to cause environmental degradation if hazardous wastes have been mishandled or otherwise released in an uncontrolled manner.

There is one listed large quantity generator of hazardous waste within the standard's one-eighth mile minimum search distance from the subject property. This property is identified as a Fluorglas facility owned by Oak Industries Inc. located at the junction of River Street and Rt. 22, approximately 1/8 to 1/4 miles from the McCaffrey Street facility. There are several other LQGs identified on the "orphaned sites" list including an AlliedSignal Laminates facility. These sites were not mapped due to insufficient information and may or may not be located within a one-mile radius of the McCaffrey Street site.

4.1.5 USEPA - RCRIS/Small Quantity Generators

The RCRIS/Small Quantity Generators list identifies those facilities or locations that have notified the EPA and/or NYSDEC that they generate (or have generated) more than 100 kg (220 lbs) and less than 1,000 (2,200 lbs) of non-acutely hazardous wastes and/or 1 kg (2.2) lbs of acutely hazardous waste, monthly. A listed site does not necessarily indicate environmental problems on the site, but rather that the site is (or was) engaged in hazardous waste activities and, therefore, may have the potential to cause environmental degradation if hazardous wastes have been mishandled or otherwise released in an uncontrolled manner.

There are no listed small quantity generators of hazardous waste within the ASTM standard's one-eighth mile minimum search distance from the property.

4.1.6 USEPA - Emergency Response Notification System (ERNS)

ERNS is a national computer database system that is used to store information on the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS reporting system contains preliminary information on specific releases, including the spill location, the substance released, and the responsible party. The ERNS report only includes releases from 1988 to the last quarterly update.

The standard's ERNS minimum search distance is limited to the property itself. The McCaffrey Street facility, is not listed in the ERNS database.

4.1.7 USEPA - RCRA Administrative Action Tracking System (RAATS)

The RAATS list identifies those facilities that are currently, or at one time were, subject to EPA enforcement for activities relative to their handling of hazardous wastes. A listed site does not necessarily indicate environmental degradation on the site, but rather that the facility was cited by the EPA for violation of laws regarding the potential to cause environmental degradation if hazardous wastes have been mishandled or otherwise released in an uncontrolled manner.

ASTM E 1527-94 specification's RAATS minimum search distance is limited to the property itself. The McCaffrey Street facility is not listed in the RAATS database.

4.1.8 USEPA - Facility Index Data System (FINDS)

The FINDS list identifies facilities and/or locations that are subject to regulation under certain EPA programs, due to operations conducted at these sites. A listed site does not necessarily indicate environmental problems on the site, but rather that the site conducts operations that may have the potential to cause environmental degradation if hazardous compounds are released in an uncontrolled manner.

The standard's FINDS minimum search distance is limited to the property itself. The McCaffrey Street facility is not listed in the FINDS database.

4.1.9 USEPA - Toxic Release Inventory System (TRIS)

The TRIS list identifies those facilities that are required to submit annual reports relative to the estimated release of toxic chemicals to the environment, as stipulated under Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA, or Title III of the Superfund Amendments and Reauthorization Act of 1986). This reporting is required to provide the public with information on the release of listed toxic chemicals in their communities and to provide the EPA with release information to assist the Agency in determining the need for future regulations. Facilities subject to these provisions must report the quantities of both routine and accidental releases of listed toxic chemicals.

The standard's TRIS minimum search distance is limited to the property itself. The McCaffrey Street facility is not listed in the TRIS database. AlliedSignal Fluorglas, however, submitted Form R reports to the EPA in 1987 and 1988.

4.1.10 USEPA - PCB Activity Database (PADS)

This database identifies generators, transporters, commercial stores and/or brokers and disposers of PCBs who are required to notify the USEPA of such activities.

The standard's PADS minimum search distance is limited to the property itself. The McCaffrey Street site is not listed in the PADS database.

4.1.11 Department of Transportation (DOT) - Hazardous Materials Incident Report System (HMIRS)

This list contains hazardous materials spill incidents reported to the Department of Transportation.

The ASTM standard's HMIRS minimum search distance is limited to the property itself. The McCaffrey Street site is not listed in the HMIRS database.

4.1.12 New York State Registered Underground Storage Tanks (USTs)

The New York State Department of Environmental Conservation maintains a database for all registered underground storage tanks in the state. Under RCRA, USTs must be registered with the NYSDEC Petroleum Bulk Storage Facility database.

The McCaffrey Street site is listed under this database as containing one, 8,000 gallon, single-walled steel UST storing #1,2 or 4 fuel oil. Several "orphaned sites" which were not mapped due to insufficient information and were therefore not considered in the analysis, are listed as containing USTs. These sites may or may not be located within a one-mile radius of the McCaffrey Street site. The AlliedSignal Fluorglas River Road #3 and Laminates facilities are listed on this database as containing USTs.

4.1.13 New York State Underground Storage Tank Program - Leaking Underground Storage Tanks (LUST)

The New York State Department of Environmental Conservation maintains a database for reported leaking underground storage tank (LUST) incidents.

There is one listed LUST within the ASTM standard's one-half mile minimum search distance from the property. This site is the Lovejoy Chaplet Corp. located on 12 River Street approximately 1/4-1/2 mile east-northeast of the McCaffrey Street facility. The database lists this site as reporting a spill of fuel oil in March 1989. This incident is listed as resolved with the state indicating that the spill was contained and cleaned-up to the states' satisfaction. Several "orphaned sites" which were not mapped due to insufficient information and therefore were not considered in the analysis, are listed as containing LUSTs. A Norplex Oak facility on River Road was listed on the orphaned sites list as containing a LUST.

4.1.14 State Solid Waste Facilities/Landfill Sites (SWF/LS)

This database contains an inventory of solid waste disposal facilities or landfills which may be active or inactive facilities or open dumps that failed to meet RCRA criteria for solid waste landfills or disposal sites.

There were no sites listed within the 0.5 mile standard radius search from the subject property.

4.1.15 State Hazardous Waste Sites (SHWS)

NYSDEC maintains a database of priority sites planned for cleanup using state funds and sites in which the cleanup will be funded by PRP groups. These sites may or may not be listed on the CERCLIS list.

There were no sites listed within the 1.0 mile standard radius search from the subject property.

4.1.16 NPL Liens Sites

The USEPA maintains a listing of filed notices of Superfund Liens against properties for recovery of expenditures for remedial actions or when the property owner receives notification of potential liability.

The search distance is limited to the property itself. The McCaffrey Street facility is not listed in the NPL Liens database.

4.1.17 Toxic Substances Control Act Sites (TSCA)

The USEPA maintains a list of importers of chemical substances included on the TSCA chemical inventory list.

The search distance is limited to the property itself. The McCaffrey Street facility is not listed in the TSCA database.

4.1.18 Material Licensing Tracking System (MLTS)

The Nuclear Regulatory Commission maintains a list of sites which process or use radioactive materials and which are subject to NRC licensing requirements.

The search distance is limited to the property itself. The McCaffrey Street facility is not listed in the MLTS database.

4.1.19 Record of Decision Sites (ROD)

The National Technical Information Service (NTIS) contains a list for which ROD documents mandate a permanent remedy at NPL (Superfund) sites.

The search distance is limited to the property itself. The McCaffrey Street facility is not listed in the ROD database.

4.1.20 Superfund (CERCLA) Consent Decrees

The EPA maintains a list of consent decrees issued by the United States District Courts which establish responsibility and standards for cleanup at NPL (Superfund) sites.

The search distance is limited to the property itself. The McCaffrey Street facility is not listed in the Consent Decrees database.

4.1.21 Manufactured Coal Gas Sites

Real Property Scan, Inc. provides a list of existing coal gas sites. Prior to the widespread use of natural gas, manufactured gas was produced at thousands of plant sites throughout the U.S. Along with the production of gas, these plants produced large quantities of by-products including complex mixtures of coal tars, sludges, oils and other chemicals. Coal tar was the principle by-product from the gasification process.

There is one site listed within the 1.0 mile standard radius search from the subject property. The site is listed as Fidelity Gas Light Co. which is mapped approximately 1/2 mile to the north of the McCaffrey Street property. This site is not expected to have an environmental impact on the McCaffrey Street site due to the distance from the site as well as the nature of the by-products produced from coal gasification (i.e. not mobile in soils and groundwater).

4.2 PHYSICAL SETTING SOURCE(S)

4.2.1 U.S.G.S. 7.5 Minute Topographic Map

Figure 3-1 presents the McCaffrey Street Facility on a U.S.G.S. 7.5 minute series topographic map.

4.2.2 Geologic and Hydrologic Review

Based upon information supplied in the EDR-Radius Map Report, the subsurface stratigraphy is characterized by sand and gravel formations within a 0.5-1.0 mile radius to the north and south and till within 1.0-2.0 miles east. The report also identifies the general topographic gradient as east-northeast. Even though the hydrogeological gradient information is not given due to insufficient data, groundwater flow generally conforms to the surface topography; meaning that the likely regional groundwater flow would also be east-northeast. Localized influences such as the Hoosic River may affect groundwater flow in the immediate vicinity of the McCaffrey Street site. Based upon the topographic relief at the McCaffrey Street property, groundwater flow is expected to be generally to the west towards the Hoosic River. Depth to groundwater was listed as 28 feet in a well located in a sand and gravel aquifer approximately 1/2-1.0 mile to the north.

4.3 HISTORICAL USE INFORMATION

4.3.1 Aerial Photographs

National Aerial Resources of Troy, NY was contracted by Parsons ES to locate and supply copies of aerial photographs of the subject property. Two photographs, one taken on May 8, 1960 and the other on April 29, 1992 were located and reviewed. The 1960 aerial photo reveals the property was undeveloped. No buildings are evident. The 1992 aerial photograph reveals conditions little changed from those observed in the 1995 site reconnaisance reported herein.

4.3.2 Fire Insurance maps

Parson ES used EDR to conduct a search of available fire insurance maps for the McCaffrey Street site. The EDR-Fire Insurance Map Abstract includes a review of fire insurance maps available through the Library of Congress, University Publications of America, and various public local sources. The full EDR-Fire Insurance Map Abstract report is included in **Appendix A**.

The EDR-Fire Insurance Map Abstract identified fire insurance maps for 1910 and 1945 for the McCaffrey Street site and surrounding properties.This information was used to develop the site history chronology shown below.

4.3.3 Property Tax Files

(see following section)

4.3.4 Recorded Land Title Records

Parsons ES obtained Land Title Records from AlliedSignal Fluorglas for the McCaffrey Street facility. The records consist of a mortgage search, deed search, title search, tax search, and description of easements by Lawyers Title Insurance Corporation dated April 17, 1995. A copy of the records are shown in **Appendix C**.

4.3.5 Building Department Records

The community offices of the Village of Hoosick Falls were contacted for building information and records relative to the McCaffrey Street property. No records or files were located.

4.3.6 Zoning/Land Use Records

Parsons ES obtained a copy of a zoning map from the Village of Hoosick Falls Town Clerk's Office indicating general zoning in the Village of Hoosick Falls. According to this map, the McCaffrey Street facility is located in an area zoned as industrial.

4.4 SITE HISTORY CHRONOLOGY

Based upon the information obtained from the above sources, a historical chronology for the site was developed:

Date	Source/Interpretation
1860	Map of Hoosick Falls indicates the McCaffrey Street property is undeveloped south of River Street. Area north of River Street is residential.
1874	Map of Hoosick Falls shows the McCaffrey Street property as undeveloped.

1908	E.M. Parker & E.B.& L. Bentley sell lot to A.E. Jones. No reference to development of property or existing buildings.
1910	Sanborn Fire Insurance Map indicates residential development on properties adjoining Carey Street and north of property.
1927	Neighboring property of the late M. Fitzgerald "known as the Brewery Property". Potential for dump on neighboring property (primarily glass). No indication that a large brewery operated here.
1927	G. A. Parker & E.M. Parker sell lands between B&M rail line and river to Hoosick Iron Works.
1945	Sanborn Fire Insurance maps indicate residential and one small, light industrial (unidentified) building within approximately three blocks north of property.
1955	Cleeve Dodge founds manufacturing company.
1960	Aerial photograph: McCaffrey Street property is undeveloped.
1961	Cleeve Dodge occupies McCaffrey Street operating a fabric coating process similar to the process in operation today (actual knowledge P.J. Beaumont).
1967	Oak Industries acquires facility.
1986	AlliedSignal acquires facility.

5.0 INFORMATION FROM SITE RECONNAISSANCE AND INTERVIEWS

A site reconnaissance of the McCaffrey Street site was conducted by Parsons ES personnel during the week of July 24-28, 1995. Representatives of AlliedSignal, Inc. Fluorglas Products were interviewed during this period for information related to current and past uses of hazardous materials, site history, waste disposal practices, manufacturing processes, and property development. Photographs taken during the site reconnaissance were retained by representatives of AlliedSignal. The following sections summarize the pertinent information gained from the site reconnaissance and interviews.

5.1 HAZARDOUS SUBSTANCES IN CONNECTION WITH IDENTIFIED USES

Various hazardous materials are used for the manufacturing and research and development activities conducted.at the McCaffrey Street facility. The facility is registered as a large quantity generator due to the generation of chromium bearing wastes from the coating and mixing operations located on the first level of the facility. The facility also uses small quantities of solvents in the research and development lab which are stored in marked storage cabinets and disposed of in various sized lab packs for off-site disposal. **Appendix B** contains a listing of hazardous materials and quantities used at the McCaffrey Street facility under Form 209-U for the Office of Fire Prevention and Control. These include ammonia hydroxide (110 gal.), various lab packs (1 and 50 gal.), PTFE resins and dispersants (1000 gals. ea.), acids (60 gal.), green dispersion (60 gal.), various aerosols (5 gal.).

5.2 HAZARDOUS SUBSTANCE CONTAINERS AND UNIDENTIFIED SUBSTANCE CONTAINERS

The facility stores reprocessed and virgin PTFE resins used in the molding and extruding processes in 100 lb containers on the third level of the facility. A 55 gallon drum of hydraulic oil was observed adjacent to the extruder room on the third level. The drum was intact however, leakage of hydraulic oil from overhead process machinery onto the concrete floor was observed in this area during the site visit. The leakage appeared to be contained to a small area. There were no floor drains observed in this area. Green dispersant (OC605) is also stored in the molding room. All storage containers appearance intact and there were no signs of visible leakage. A floor drain trough was present in this area of the facility and appeared to be dry during the site visit. General housekeeping in this area appeared to be good.

The mixing and coating area on the first level stores and uses various teflon dispersants and chromium containing dyes which are recycled in satellite stations prior to disposal. General housekeeping in this area was poor with staining on walls and floors around the various satellite stations noted. Floor drains are present in several locations in this area of the facility. A "sump pit" is also present in the teflon storage room on this level. According to P.J. Beaumont, this sump pit acts as a common collection point for all septic and floor drain discharges from this part of the building (1966 additions) prior to being pumped to the local POTW. The hazardous waste storage area is also located on this level adjacent to the mixing and coating rooms. This area is clearly marked as the hazardous waste storage area and is situated on concrete flooring equipped with spill containment trenches. There were no drums present in this area during the site visit. Wastes are accumulated and disposed off-site every 90 days. The facility uses Ross Incineration Services for waste disposal services.

Hazardous wastes generated from "off-spec" materials in the R&D laboratory are stored in one and 50 gallon lab packs for off-site disposal by either Ross Incineration Services or Clean Harbors.

5.3 STORAGE TANKS

The McCaffrey Street facility has one 18,000 gallon aboveground storage tank for propane and one 8,000 gallon underground storage tank (UST) for #2 fuel oil. The UST is registered with NYSDEC (Registration # 4-120685) and was last leak tested in 1992. **Appendix D** contains leak test results for the UST. The UST is a single-walled, steel, non-cathodically protected tank whose age is unknown, but most likely dates back to 1961 when the facility was originally constructed. The only other bulk storage tanks that were noted during the site visit were a temporary storage tank for propane and a 1000 gallon oil storage tank lying on grade. Both of these tanks are believed to be empty and are scheduled to be removed by the facility. There were no other bulk storage tanks or piping observed during the site visit. There was no visual evidence of staining, spillage or other releases associated with these tanks and aboveground piping. The facility has plans to remove the existing 8,000 gallon UST as soon as August 1995 as part of AlliedSignal's program to remove all existing USTs at the Fluorglas Hoosick Falls facilities.

5.4 INDICATIONS OF PCBs

There is one exterior pad-mounted transformer located on the facility property. The transformer is owned and operated by Niagara Mohawk. They have informed AlliedSignal that the transformer fluid has been tested and 237 ppm of PCBs found. No spill containment was observed for this transformer. Mr. Ken Brownell indicated that AlliedSignal was attempting to obtain an agreement with Niagara Mohawk to replace the transformer with one owned and operated by AlliedSignal.

There was no other visual or physical evidence of PCB containing equipment observed during the site visit or from interviews and records.

5.5 INDICATIONS OF ASBESTOS

According to Ken Brownell, no asbestos material has been identified in the McCaffrey Street facility. There was no visual or physical evidence of asbestos materials noted during the site reconnaissance.

5.6 INDICATIONS OF SOLID WASTE DISPOSAL

Non-hazardous solid waste is collected in a dumpster located adjacent to the loading dock area. AlliedSignal, Inc. Fluorglas Products uses Browning Ferris Industries (BFI) as their solid waste haulers. There was no visual or physical evidence suggesting other solid waste disposal at the facility including filling and grading, mounds or depressions, pits, or debris on exterior portions of the property.

5.7 PHYSICAL SETTING ANALYSIS, IF MIGRATING HAZARDOUS SUBSTANCES ARE AN ISSUE

A potential source of migrating hazardous or petroleum substances is the #2 fuel oil UST. The UST is located at the top of a gradual slope approximately 300 feet from the expected downgradient property boundary with respect to groundwater flow. The tank is adjacent to the original facility building foundation and is buried under uncovered soils.

There was no evidence of groundwater wells on the property or within the property bounds during the site reconnaissance. The EDR-Radius Map Report supplied information on number and locations of wells in the vicinity of the McCaffrey Street facility from federal, state and public water supply sources. The closest well identified is located to the south of the facility within a 1/8 mile radius in a sand and gravel aquifer. The next closest well identified is located east of the facility within a 1/2 mile radius. The closest public water supply well identified is located to the south approximately 1/4-1/2 mile from the facility. No past or present violations were noted for this public water supply well.

5.8 OTHER CONDITIONS OF CONCERN

Housekeeping

Although general housekeeping was noted to be good, staining and spillage of pigments and dyes were noted in areas of the mixing room. Improvement of storage, handling and disposal of these materials would minimize the potential for discharges to existing floor drains. The facility should also consider sealing floor drains which are in the vicinity of the mixing and coating operations to eliminate potential releases to the site drainage system.

Sump Pit

According to P.J. Beaumont and Ken Brownell, the floor drains and septic discharges associated with the newer building additions in 1966 discharge to a common sump pit in the first level of the facility, adjacent to the coating tower room. These discharges are then pumped to the local sewer system. No drawings were made available to Parson ES to confirm the as-built design of this system or any studies which traced discharges from this location or to document the integrity of the sump pit.

6.0 FINDINGS AND CONCLUSIONS

6.1 SUMMARY

There were two "Recognized Environmental Conditions" identified with the McCaffrey Street property:

1. The presence of one #2 fuel oil UST whose age and general condition are unknown presents a material threat of a release.

2. Floor drains and a sump in the vicinity of the mixing and coating operations on the first level of the facility present a material threat of a release.

6.2 GENERAL CONCLUSIONS

1. Hazardous substances and petroleum products are used in the manufacturing processes at the McCaffrey Street facility. The majority of the hazardous waste generated is chromium containing dyes from the mixing and coating operations. Petroleum products are associated with the existing UST which is used to fire the one facility boiler (rated @ 300,000 Btu/hr). The facility is planning to remove the one UST. The facilities hazardous and solid waste handling and disposal practices appear to be satisfactory.

2. The existing UST used to store #2 fuel oil represents a potential environmental liability due to its age (undocumented, but likely installed when the facility was originally built in 1961) and construction (non-cathodic, single walled, carbon steel, no leak detection or protection). Phase II investigations are recommended if AlliedSignal does not proceed with removal and closure in accordance with existing NYSDEC guidelines.

3. General housekeeping practices were poor in the mixing and coating areas which represents a potential liability due to the presence of floor drains in this area of the facility.

4. Further investigations of the sump pit and associated floor drains may be warranted. Site drawings (as-built), tracer studies, sampling or other investigations of these structures should be obtained from either Fluorglas or Laminates systems if available. Additional interviews of facility personnel familiar with the construction of these structures is advisable.

5. There were no pits, ponds, lagoons, drums, stained soil or pavement, stressed vegetation, wells, solid wastes or septic systems observed in the exterior of the facility during the site reconnaissance.

6. Stormwater runoff does not appear to contact any industrial processes or storage facilities and tje facility is exempt from permitting requirements due to its SIC codes (see letter to NYSDEC in **Appendix D**).

7. Historical records do not indicate that the McCaffrey property or surrounding properties may have resulted in "recognized environmental conditions" at the facility from past usage.

8. The McCaffrey Street facility has not conducted any environmental studies of the groundwater or soils in or around the property.

9. Testing for the potential presence of asbestos, radon and mercury/PCB lighting ballasts has not been conducted at the facility.

Based upon the Recognized Environmental Conditions and concerns, Phase II activities are recommended. These Phase II activities would involve the testing of soil and/or groundwater in the vicinity of the #2 fuel oil UST if the facility does not proceed with its planned removal.

7.0 REFERENCES, PROJECT PERSONNEL, AND INFORMATION SOURCES

7.1 REFERENCES

AlliedSignal Inc. Fluorglas Products, 1995. Health, Safety and Environmental Disclosure Schedule, April 1995.

American Standard Testing Materials, 1993. ASTM Standards on Environmental Site Assessments for Commercial Real Estate, E1527-93 and E1528-93, Philadelphia, PA. PCN: 03-550093-65.

7.2 PARSONS ENGINEERING SCIENCE PROJECT PERSONNEL

Name	Degree	Years of Experience	Project Responsibilities
Jeffrey W. Adams	B.S. Chemical Engineering	21	Program Manager Report Review
Robert M. Kane	M.S. Environmental Engineering	11	Site Reconnaissance, Interviews and Report Preparation
Sam Nejame	B.S. Chemical Engineering	10	Site Reconnaissance, Interview and Report Preparation
Fernando O'Loughlin	B.S. Geology	7	Site Reconnaissance, Interviews and Report
Thomas B. Ford	M.A. Anthropology	18	Site Reconnaissance, Interviews and Report preparation

7.3 ALLIEDSIGNAL FLUORGLAS PROJECT PERSONNEL

Name	Work Location	Assignment
William E. Noonan	McCaffrey Street	Vice President/General Manager
Ken Brownell	McCaffrey Street	Manager Safety/Environmental Assurance
Bob Grobuski	McCaffrey Street	Facility Personnel
P.J. Beaumont	John Street/River Road #2	Manufacturing Manager
Mark Merrell	Liberty Street/River Road	Manufacturing Manager

7.4 OTHER INFORMATION SOURCES

Name	Affiliation
Edith Beaumont	Hoosick Township Historical Society Louis Miller Museum 166 Main Street Hoosick Falls, N.Y. 12090 (518) 686-4682
Barbara Miller	U.S. Soil Conservation Services 7th and State Troy, N.Y. (518) 271-1740
Susan Smith	New York State Department of Environmental Conservation (NYSDEC) (518) 457-0532
	Bennington Museum Library Route 7 Bennington, VT.
N/A	Village of Hoosick Falls Water Co. (518) 686-7071
N/A	Niagara Mowhawk Corp. (518) 773-4212

Theresa Reinfurt	Village of Hoosick Falls Clerks Office (518) 686-7072
Victor Santo	New York Historic Preservation Agency (518) 237-8643

FINAL PHASE II

ENVIRONMENTAL SITE ASSESSMENT

FURON COMPANY

McCAFFREY STREET MANUFACTURING FACILITY
HOOSICK FALLS, NEW YORK 12090

PREPARED FOR

Furon

MAY 1996

PREPARED BY

PARSONS ENGINEERING SCIENCE, INC.

PRUDENTIAL CENTER
BOSTON, MASSACHUSETTS 02199

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Appendix B Site Photographs
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Appendix D Chemical Analysis Results for Soils
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List of Acronyms

ASTM	-	American Society for Testing and Materials
BTEX	-	Benzene, toluene, ethylbenzene, xylene (total)
CEC	-	Condition of Concern
CLP	-	Contact Laboratory Protocol
ESA	-	Environmental Site Assessment
I.D.	-	Inside Diameter
MCL	-	Maximum Contaminant Level
Mg/Kg	-	Milligrams per Kilogram
Mg/L	-	Milligrams per Liter
NTU	-	Nephelometric Turbidity Unit
NYSDEC	-	New York State Department of Environmental Conservation
OVM	-	Organic Vapor Meter
PCB	-	Polychlorinated Biphenyls
POTW	-	Publicly Owned Treatment Works
PSAT	-	Pressure Sensitive Adhesive Tape
PTFE	-	Polytetrafluoroethylene
QA/QC	-	Quality Assurance/Quality Control
REC	-	Recognized Environmental Condition
SVOC	-	Semivolatile Organic Compound
TAGM	-	Technical and Administration Guidance Memorandum
TAL	-	Target Analyte List
TCE	-	Trichloroethene
TCL	-	Target Compound List
TPH	-	Total Petroleum Hydrocarbons
ug/kg	-	Micrograms per Kilogram
ug/L	-	Micrograms per Liter
USCS	-	Unified Soil Classification System
USEPA	-	United States Environmental Protection Agency
UST	-	Underground Storage Tank
VOC	-	Volatile Organic Compound

1.0 INTRODUCTION

A limited Phase II Environmental Site Assessment (ESA) was conducted by Parsons Engineering Science, Inc. (Parsons ES) at the request of Furon Company and O'Melveny and Myers who are outside counsel for Furon Company. The Phase II investigation plan was developed to focus specifically on the findings and conclusions of a prior Phase I ESA, completed for the site in July and August 1995. As such, the Phase II ESA was designed to develop data relevant to:

- Areas of "recognized environmental conditions,"
- Other conditions of environmental concern, and
- "Baseline environmental conditions" at the site.

The objective of the Phase II investigation was to identify, to the extent feasbile through limited sampling and analysis, whether any evidence of contamination existed due to historic site operations. The investigation process would also yield a limited data set that could be used by Furon Company to define "baseline environmental conditions" at the time of their initial occupancy and ownership of the property.

The Phase II ESA was conducted by Parsons ES in accordance with Title 6 of the New York State Compilation of Rules and Regulations, 6 NYCRR Part 360, April 1995, except as otherwise specified. The Phase II ESA was begun on Februay 20, 1996, and reported on May 2, 1996.

1.1 FINDINGS OF THE PHASE I ESA

Parsons ES performed a Phase I ESA at the McCaffrey Street facility between July 24 and July 27, 1995, for Furon Company. The results of the Phase I ESA were presented to Furon Company in a Final Phase I Environmental Site Assessment Report on April 9, 1996. The Phase I ESA identified two "recognized environmental conditions," (RECs) as defined in American Society of Testing and Materials (ASTMs) Standard Practice E 1527:

1. A former 8000-10000 gallon #2 fuel oil underground storage tank (UST), which was removed in August 1995, presented a material threat of a release.

2. Floor drains and a sump in the vicinity of the mixing and coating operations on the first level of the facility presented a material threat of a release. The integrity of the sump pit sidewalls and bottom could not be verified through a visual inspection.

The UST (Henceforth, REC #1) was removed in August of 1995, subsequent to the performance of the Phase I ESA for the site. AlliedSignal Fluorglas contracted Clean Harbors Environmental Services to close and remove the UST in accordance with New York State Department of Environmental Conservation (NYSDEC) guidance. The excavated hole at the UST location reportedly evidenced no visual staining of the soil. Screening of the excavation by photoionization detector failed to detect volatile organic compounds. Confirmatory soil samples were collected from the side walls and the bottom of the excavation and analyzed by EPA Method 8260 for volatile organics and EPA Method 8270 for semi-volatile organics. No contamination was detected in these samples. The excavation was backfilled. The source of the backfill material was not identified.

Based on the Clean Harbors letter report and analytical data package, the UST appears to have been closed in accordance with state regulations and no evidence of fuel oil release from the tank or fill pipes was noted.

According to P.J. Beaumont, the sump in the vicinity of the mixing and coating operations (Henceforth, REC #2) continue in active use, receiving sanitary wastewater, process wastewater and drainage from the floor drains in the manufacturing area on the first floor. The wastewater captured is pumped to the city sanitary sewer lines. No drawings or other evidence to support this were made available to Parsons ES. The local Publically Owned Treatment Works (POTW) does not require the McCaffrey Street facility to permit these discharges. During the Phase I ESA, the integrity of the sump pit sidewalls and bottom could not be verified through a visual inspection.

The Phase I ESA also identified two other conditions of environmental concern (CEC). One was the "old" transformer mounted on a concrete pad in the rear of the property which was known to contain Polychlorinated Biphenyls (PCBs) (Henceforth, CEC #1). During the Phase I ESA, the transformer appeared to be at least as old as the original facility building, which was built around 1961, and was not contained within any bermed area. The transformer was removed in December 1995. No visible signs of spillage or stressed vegetation around the transformer or transformer pad were noted during the Phase I and Phase II ESAs. However, spillage may have occurred during filling or replacement of transformer oils in the past. PCBs are relatively immobile in soils and do not degrade readily.

The second condition of environmental concern reported is the past practice of spreading oils in the former gravel driveways for dust suppression. This practice no longer occurs, and the former gravel driveways are now paved (Henceforth, CEC #2).

1.2 SCOPE OF WORK

The scope of the Phase II ESA was designed to address the recognized environmental conditions associated with the sump pit and the former UST, to evaluate two other conditions of environmental concern identified in the Phase I ESA and to establish the "baseline environmental conditions" for the property.

The scope of the Phase II investigations was as follows:

- Install five soil borings/monitoring wells to determine the "baseline groundwater quality" at the McCaffrey Street property.

- Develop five monitoring wells, and collect and analyze groundwater samples from all five monitoring wells for volatile organics, semi-volatile organics, and metals. Analyze two of the five monitoring well samples for total petroleum hydrocarbons (TPH).

- Collect three surface soil samples from around the "old" transformer and analyze for TPH and PCBs (CEC #1).

- Collect two surface soil samples from the former gravel driveway for PCB and TPH analysis to determine potential impacts from the spreading of oils for dust suppression practiced in the past (CEC #2).

1.3 SUMMARY OF THE PHASE II ESA FINDINGS

The soil sample results from the Phase II ESA indicate that five metal compounds (beryllium, chromium, nickel, selenium and zinc) were detected at concentrations above their respective NYSDEC soil cleanup levels. Total petroleum hydrocarbons were also detected at elevated concentrations in the soil samples collected from the paved driveway (formerly a gravel driveway). The groundwater sample results detected trichloroethene, antimony, iron and manganese at concentrations above the Federal Maximum Contaminant Level (MCL) and New York State Groundwater Quality Standards.

The Federal MCL is the maximum permissible level of a contaminant in water which is delivered to any user of a public water system. The New York State Groundwater Quality Standards are the maximum permissible levels of a contaminant in fresh groundwater.

2.0 SITE DESCRIPTION

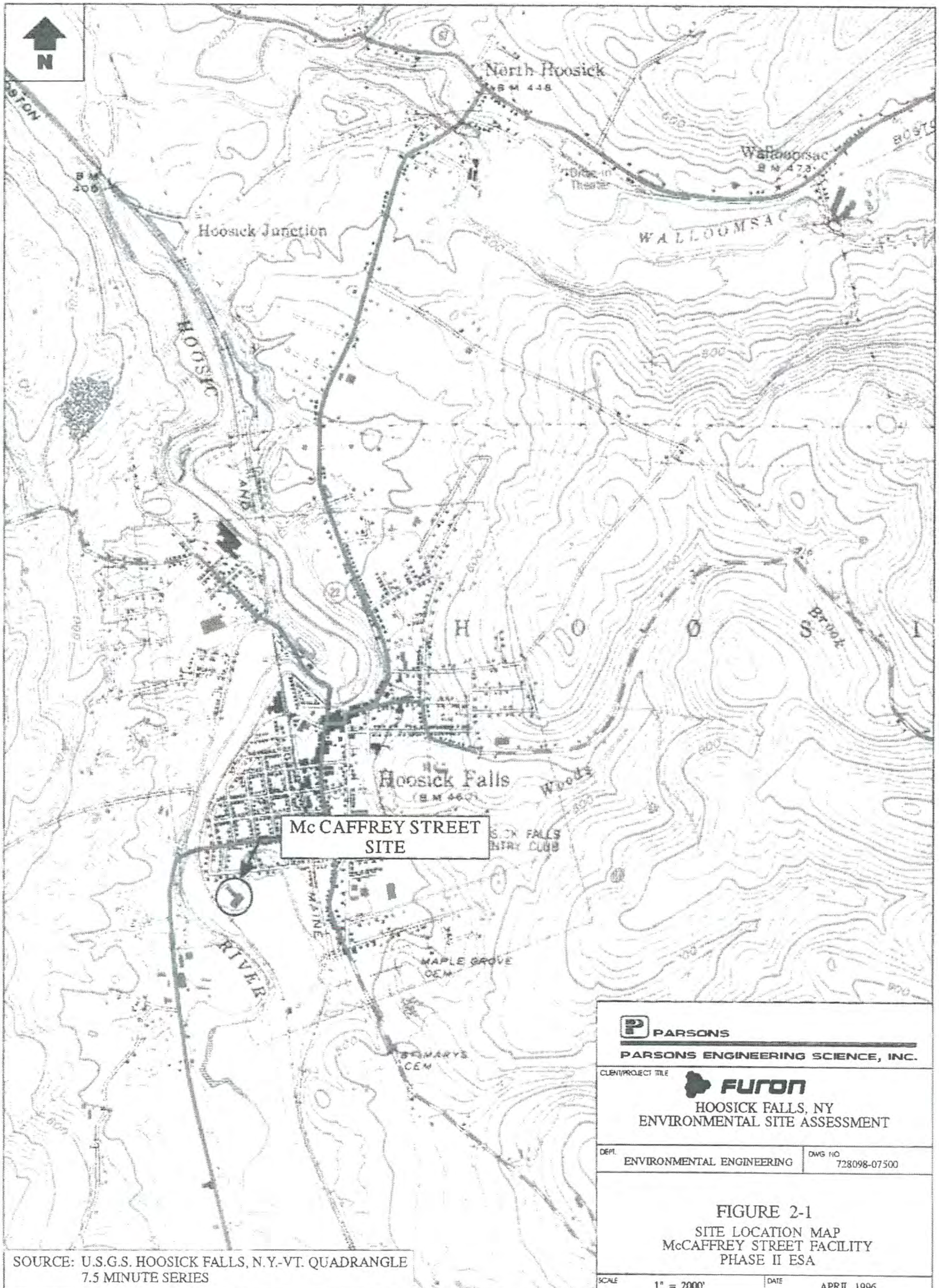
2.1 LOCATION AND DESCRIPTION OF SITE

The Furon Company McCaffrey Street site is located in the County of Rensselaer in the Village of Hoosick Falls, New York. **Figure 2-1** shows the Site Location Map for the McCaffrey Street facility. The site is a light industrial manufacturing facility occupying a parcel of land encompassing 6.471 acres. **Figure 2-2** presents the Map of Lands of the McCaffrey Street facility.

Aboveground structures present on the property are the main facility building, an 18,000 gallon propane storage tank, a metal storage shed and a newly installed transformer. The cement pad where the "old" transformer was located remains onsite. A smaller propane storage tank is present adjacent to the metal storage shed and is scheduled for removal by the facility. The remainder of the property consists of paved and gravel parking areas and roads, and gently sloped grassy areas. Underground utilities include two separate septic lines, shown on facility drawings as running from the facility to the town sewer at Carey Avenue, and the propane distribution line that runs from the propane vaporizer to warehouse 2. **Figure 2-2** shows the locations of these structures and the surveyed property lines. Underground utilities are not presented on **Figure 2-2**.

The facility building contains manufacturing operations as well as general administrative offices and a small research and development department. The original building was constructed in 1961. According to P.J. Beaumont, the McCaffrey Street facility manufacturing manager, additions were added in 1966 and 1975. The facility, as it exists, has a total area of approximately 60,000 square feet. The floor is a slab-on-grade with floor drains present in several areas.

The coating and mixing operations are located on the first floor of the building. The second floor consists mainly of administrative offices and small laboratories. The extruding and molding operations are located on the third floor. The fourth level is used for research and development and general storage.



PARSONS

PARSONS ENGINEERING SCIENCE, INC.

CLIENT/PROJECT TITLE: FURON

HOOSICK FALLS, NY
ENVIRONMENTAL SITE ASSESSMENT

DEPT. ENVIRONMENTAL ENGINEERING — DWG NO 728098-07500

FIGURE 2-1

SITE LOCATION MAP
McCAFFREY STREET FACILITY
PHASE II ESA

SCALE 1" = 2000' — DATE APRIL 1996

SOURCE: U.S.G.S. HOOSICK FALLS, N.Y.-VT. QUADRANGLE
7.5 MINUTE SERIES

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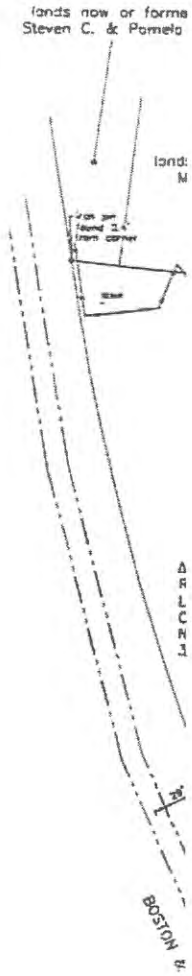

NOTES

1. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

2. ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

3. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE OR TITLE REPORT AND IS, THEREFORE, SUBJECT TO ANY EASEMENTS, COVENANTS, OR RESTRICTIONS OF RECORD OR ANY STATEMENT OF FACTS SUCH DOCUMENTS WOULD DISCLOSE.

4. BOUNDARY LINES SHOWN ON THIS MAP ARE BASED ON RECOVERED CORNER MONUMENTATION AS SHOWN ON MAP REFERENCE #1.

5. THE SECOND PIECE OF PROPERTY CONVEYED BY DEED REFERENCE #1 PARCEL II IS DESCRIBED AS A 15' STRIP OF PROPERTY AND AN ADDITIONAL 27' STRIP OF PROPERTY BOTH OFF THE WESTERLY END OF THE LANDS OF HAYES AND BORDERING ON THE EASTERLY LINE OF BRENENSTUHL. THIS LINE IS SHOWN BY THE HEAVY SOLID LINE. THE REPUTED LOCATION OF THE BRENENSTUHL DEED LINE IS SHOWN BY THE HEAVY DOTTED LINE. THERE IS AN APPARENT OVERLAP OF THE CONVEYANCE FROM HAYES AND THE LANDS OF BRENENSTUHL. THE PARCEL SURVEYED MAY ALSO BE SUBJECT TO RIGHTS OF THE ADJOINERS AND THE RIGHTS OF THE PUBLIC ESTABLISHED THROUGH USAGE OF THE STREET PRESENTLY BEING MAINTAINED BY THE VILLAGE OF HOOSICK FALLS. A BOUNDARY LINE AGREEMENT BETWEEN ALL INVOLVED PARTIES IS RECOMMENDED TO ESTABLISH THIS LINE.

6. NO UNDERGROUND UTILITIES ARE SHOWN ON THIS MAP.

DEED REFERENCE

1. OAK MATERIALS GROUP, INC., SUCCESSOR IN INTEREST TO O/E/N ACQUISITIONS INC. TO OAK MATERIALS GROUP, INC. DATED APRIL 2, 1986 AND RECORDED IN THE RENSSELAER COUNTY CLERK'S OFFICE ON APRIL 10, 1986 IN LIBER 1404 OF DEEDS AT PAGE 181

MAP REFERENCE

1. SURVEY OF A PORTION OF LANDS OF OAK MATERIALS GROUP INC. PREPARED BY CHARLES E. HARTNETT & HAROLD A. BEHRENS, DATED JULY 31, 1980.

TAX MAP REFERENCE

VILLAGE OF HOOSICK FALLS 37.6 – 3 – 1

GRAPHIC SCALE

40' 20' 0 40' 80' 120'

SOURCE OF SURVEY MAP: SURVEYED BY DAVID F. BARRASS LAND SURVE'
9 MAPLE STREET, CORINTH, NEW YORK

PARSONS
PARSONS ENGINEERING SCIENCE, INC.

CLIENT/PROJECT TITLE
Furon
HOOSICK FALLS, NY
ENVIRONMENTAL SITE ASSESSMENT

DEPT.	DWG NO.
ENVIRONMENTAL ENGINEERING	728098-07500

FIGURE 2-2
MAP OF LANDS
McCAFFREY STREET FACILITY
PHASE II ESA

SCALE	DATE
	APRIL 1996

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Utilities provided to the facility are electric, water, and sewer. Electricity to the facility is provided by Niagara Mohawk. Water and sewer are provided by the Village of Hoosick Falls. The "old" pad-mounted transformer was owned by Niagara Mohawk and was removed in December 1995. A new transformer was installed in December 1995 and it is owned by Furon Company.

2.2 SITE AND VICINITY CHARACTERISTICS

The McCaffrey Street site is located in the southwest corner of the Village of Hoosick Falls. The ground surface topography of the facility slopes away to the east, south and west, towards the floodplain of the Hoosic River. The area to the north side of the site is residential. The areas directly to the east, south, and west are largely undeveloped. A former rail line (Boston & Maine) is located near the western boundary of the property. The Hoosic River, which is located to the west of the rail line, is approximately 250 feet from the property boundary at its nearest point.

Surface water drainage at the facility is controlled by the local topography, which slopes moderately to the south-southeast. There are no sustained surface water bodies at the facility.

2.3 PHYSICAL SETTING

2.3.1 Regional Geologic Setting

Hoosick Falls lies in the New England Upland (Taconic Range) physiographic province. Bedrock outcrops are found at the surface throughout the New England Upland area. The bedding planes of the bedrock are often inclined, and other distortions from the horizontal are evident. These are the result of thrust and folding pressures exerted from the east as a landmass (actually an arc of volcanic islands) moved gradually westward during the Middle Ordovician Taconic mountain-building episode. This westward movement stacked and displaced large deposits of clay, sand, gravel and carbonates, which had accumulated on the floor of a deep ancient sea, moving them westward along faults as slices of rock, that became intermixed and stratigraphically disordered. As a result, the older rock graywacke, that forms the cap of the Rensselaer Plateau became perched on top of younger rock. Localized exposures of limestone and dolomite, found in association with thrust faults here and there in the area, were dragged westward as blocks of carbonate-rich rock. Shales in the area were altered (metamorphosis) into phyllites and slates during this period of mountain building.

Glacial sediment deposits overlay the bedrock, resulting in deposits of sands, gravels, clays, and glacial till.

Most of Hoosick Falls lies along the Hoosic River flood plain. The area is relatively flat with some hills, except along the eastern town boundary where the topography slopes moderately to the west, towards the Hoosic River. The average elevation of Hoosick Falls is approximately 500 feet above sea level.

2.3.2 Site Geologic Setting

Six soil borings (one of the five soil borings was re-drilled) were advanced during the Phase II ESA at the McCaffrey Street facility to total depths ranging from 8.5 feet to 17.5 feet below ground surface. During the advancement of these borings, three geologic materials were encountered: artificial fill, glacial till, and bedrock. The Overburden Boring Reports are presented in **Appendix A**.

The fill material was encountered at all soil borings and was observed to be up to 2.7 feet thick at location MW-5M. The fill material generally consists of brown silt and sand, with little fine gravel and trace amounts of clay.

The glacial till was encountered beneath the fill. The till generally consists of grey-brown silt, with some sand and fine gravel, and trace amounts of clay, and its consistency is loose to medium dense. In addition, a very dense till unit was encountered at MW-4M and MW-4MA from 8 feet to 15 feet below ground surface.

Bedrock was encountered below the till at three of the six soil borings: MW-1M at 8.5 feet, MW-2M at 17.0 feet, and MW-5M at 6.5 feet below ground surface. Bedrock fragments from the soil boring advanced at MW-2M shows the bedrock to be a light grey graywacke.

2.3.3 Site Hydrogeologic Setting

During the advancement of the soil borings, groundwater was encountered at the following depths below ground surface:

Location	Depth (feet below grade)
MW-1M	1.0
MW-2M	11.2
MW-3M	6.6
MW-4M	5.0
MW-5M	2.0

Table 2-1 presents the monitoring well water level summary at the McCaffrey Street facility. **Figure 2-3** shows the relative groundwater elevations and groundwater flow direction at the McCaffrey Street facility. Elevations of the monitoring wells were obtained with a level and a graduated surveying rod, after establishing an arbitrary datum. The arbitrary datum control point was located adjacent to the northeastern corner of the facility. The arbitrary elevation assigned to it was 10 feet. The groundwater flow direction in the overburden was determined to be radially towards the southeast, south and southwest, based on the ground water elevations measured in the five monitoring wells on February 26-27, 1996, and March 7, 1996. The groundwater flow direction also concurs with the general site topography which slopes to the south-southeast.

Recharge to the monitoring wells during well development and sampling was poor (recharge rate of less than 0.2 gallons per hour) at monitoring wells MW-1M and MW-4M, fair (recharge rate of 0.4 gallons per hour) at well MW-5M, and good (recharge rate of 0.3 gallons per hour) at wells MW-2M and MW-3M. The shallow groundwater encountered at MW-1M is believed to be perched water.

TABLE 2-1

FURON COMPANY - PHASE II ESA
McCAFFREY STREET
MONITORING WELL WATER LEVEL SUMMARY

Location	Top of PVC Casing Elevation (feet)[1]	Date of Water Level Measurement	Depth to Groundwater (feet)[2]	Groundwater Elevation (feet)[1]
MW-1M	34.49	2/26/96 2/27/96 3/07/96	9.40 9.70 6.75	25.05 24.79 27.74
MW-2M	10.45	2/26/96 2/27/96 3/07/96	9.72 9.67 10.04	0.73 0.78 0.41
MW-3M	10.48	2/26/96 2/27/96 3/07/96	8.81 8.70 9.33	1.67 1.78 1.15
MW-4M	20.97	2/26/96 2/27/96 3/07/96	11.35 14.80 15.10	9.62 6.17 5.87
MW-5M	8.53	2/26/96 2/27/96 3/07/96	4.44 4.95 4.96	4.09 3.58 3.57

Notes:

1) All elevations are based upon an assumed elevation of 10 feet set for the arbitrary reference point located adjacent to the northeastern corner of the facility.

2) Distance to groundwater referenced to top of well casing.

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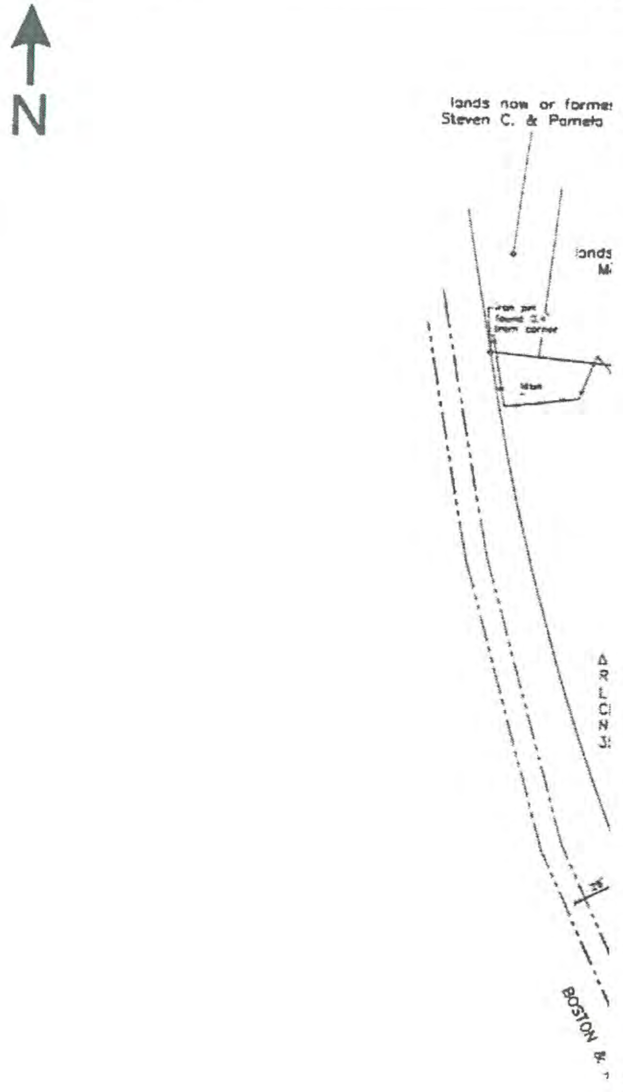

LEGEND

MW-2M (0.41) — MONITORING WELL/SOIL BORING WITH WATER TABLE ELEVATION (FT.)

25 — GROUNDWATER ELEVATION CONTOUR (ARROW INDICATES DIRECTION OF FLOW) GROUNDWATER LEVEL MEASUREMENTS MADE ON 3/7/96.

GRAPHIC SCALE

40' 20' 0 40' 80' 120'

PARSONS
PARSONS ENGINEERING SCIENCE, INC.

CLIENT/PROJECT TITLE
Furon
HOOSICK FALLS, NY
ENVIRONMENTAL SITE ASSESSMENT

DEPT. ENVIRONMENTAL ENGINEERING | DWG NO. 728098-07500

FIGURE 2-3
GROUNDWATER ELEVATIONS AND GROUNDWATER FLOW DIRECTION
McCAFFREY STREET FACILITY
PHASE II ESA

SCALE | DATE APRIL 1996

SOURCE OF SURVEY MAP: SURVEYED BY DAVID F. BARRASS LAND SURVE
9 MAPLE STREET, CORINTH, NEW YORK

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3.0 SITE HISTORY

3.1 PAST SITE USE

According to P.J. Beaumont and Bob Grobuski, the shipping coordinator at the McCaffrey Street facility, prior to 1961 the property was vacant land. The facility was originally built in 1961 for Dodge Fibers Corp. and was used first for producing extruded tapes, and then, circuit board laminates. Oak Materials Group (Oak Electronetics) purchased the property from Dodge Fibers between 1969 and 1971. Oak Electronetics (Oak Industries) operated the facility until 1987 when it was sold to AlliedSignal Fluorglas. The property was sold to Furon Company in February 1996.

3.2 CURRENT SITE USE

The McCaffrey Street site manufactures Polytetrafluoroethylene (PTFE) coated fiberglass and molded and extruded PTFE intermediates (Standard Industrial Classification codes 2295, 3089). According to the AlliedSignal Health and Safety Environmental Disclosure Document, the facility operates 365 days, 8,760 hours per year. The facility is also used for administrative offices and for research and development. The facility employs approximately 95 people.

Coated fiberglass is produced by coating woven fiberglass with a dispersion of premixed liquid Teflon® and an organic liquid surfactant (Triton®). The mixture is fed from a drum into a coating dip pan. The coating is then cured in an oven and collected on a web. Teflon® molding is produced by adding virgin or reprocessed Teflon® to a molding press under pressure where the mold is formed. The mold is then transferred to the curing oven for sintering. Teflon® is extruded by adding granular Teflon® in metered doses to a continuous heated extruder. Coating operations are located on the first floor and extrusion and molding operations are located on the third floor of the building.

Hazardous wastes generated from the manufacturing operations consist primarily of various coating formulations used in the mixing and coating areas and from research and development conducted on the fourth level. An area on the first level of the building is marked as the hazardous waste accumulation area and is equipped with a spill containment system. Wastes are accumulated in marked drums and disposed of within 90 days. The facility is designated as a large quantity generator (EPA I.D. No. NYD 004986741). Wastes generated from research and development are accumulated in lab packs prior to disposal. Non-hazardous solid wastes are accumulated in the trash compactor adjacent to the loading dock.

4.0 FIELD INVESTIGATION METHODOLOGY

4.1 SOIL BORINGS

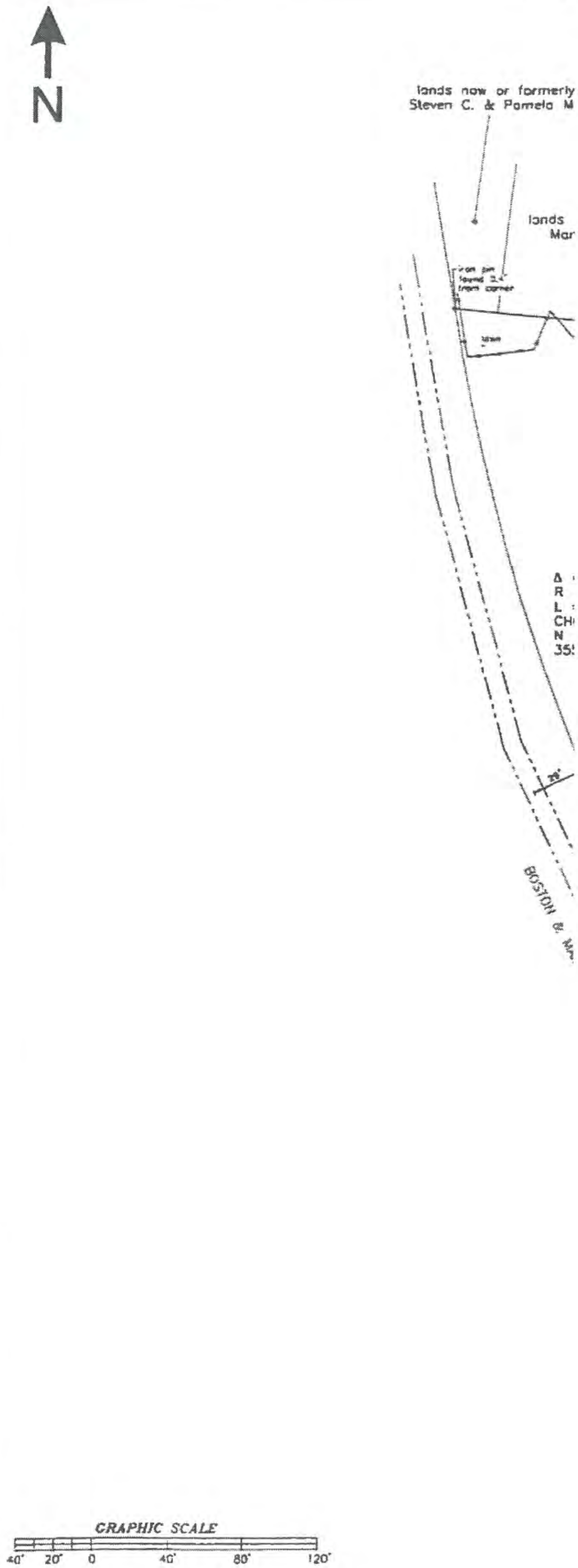
The objective of the soil boring program was to identify, through limited sampling and analysis, the possible presence of contamination in subsurface soils.

The soil borings were completed in accordance with the workplan. The only deviation in the soil boring program from that described in the work plan was the relocation of monitoring well MW-4M.

The location of monitoring well MW-4M was proposed in a wooded area where access to set up and drill would have been difficult. Therefore, MW-4M was relocated closer to the site, approximately 100 feet east of its proposed location. In addition, two soil borings (MW-4M and MW-4MA) were advanced at soil boring location MW-4M. During the first attempt to advance MW-4MA, a very dense till was encountered. The soil boring was drilled and left open overnite. The next morning no water was observed in the boring, therefore, the boring was abandoned. The second boring, MW-4M, was then advanced approximately 2.5 feet south of MW-4MA. Water was encountered at MW-4M and a monitoring well was installed. **Figure 4-1** presents the locations of the soil borings. Photographs were taken of all soil borings/monitoring well locations and are presented in **Appendix B**. The Overburden Boring Reports are included in **Appendix A**. Maxim Technologies Inc. of Ballston Spa, New York performed the drilling under the direction of Parsons ES personnel.

4.1.1 Sampling Methods

The soil borings were advanced using an Acker Soil Max drilling rig, equipped with 4.25-inch inside diameter (I.D.) hollow stem augers. During drilling, soil samples were collected at the surface (0-2 feet below grade) and at 5 foot intervals or at each stratigraphic change to the total depth of the boring. The soil samples were collected using a decontaminated 2-inch by 2-foot long carbon steel split spoon sampler. The split spoon was driven into undisturbed soil with a rig-mounted 140 lb hammer. Once the sample was collected, the augers were advanced to the top of the next sample interval. Samples were collected until split spoon refusal on bedrock or until a sufficient depth was drilled to install a 10 foot



SOURCE OF SURVEY MAP: SURVEYED BY DAVID F. BARRASS LAND SURVEY
9 MAPLE STREET, CORINTH, NEW YORK

LEGEND

- MONITORING WELL/SOIL BORING LOCATION
- SURFACE SOIL SAMPLE LOCATION

PARSONS
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CLIENT/PROJECT TITLE
Furon
HOOSICK FALLS, NY
ENVIRONMENTAL SITE ASSESSMENT

DEPT.	DWG NO.
ENVIRONMENTAL ENGINEERING	728098-07500

FIGURE 4-1
SAMPLE LOCATION MAP
McCAFFREY STREET FACILITY
PHASE II ESA

SCALE	DATE
	APRIL 1996

R:\GRAPHICS\ALLIEDSI\FURON\MAPLANDS.CDR(RCS)

screen, in order to monitor the upper groundwater aquifer. Soil samples were classified according to the Unified Soil Classification System (USCS).

Once the split spoon was driven and removed from the soil boring, the split spoon was opened and immediately screened for volatile organics compounds (VOCs) using an Organic Vapor Meter (OVM) Model 580B. No elevated OVM readings were observed during the drilling program.

In addition to screening the split spoon, a soil sample was also collected and placed into a 16 ounce mason jar for headspace screening. Sufficient sample was placed in the mason jar to fill it half full. The mason jar was then sealed with aluminum foil and placed in a vehicle for approximately 20 minutes, allowing the temperature of the sample to equilibrate. Afterwards, a small hole (1/4-inch) was made in the aluminum foil and a headspace reading was taken with the OVM. No elevated OVM readings were observed during the headspace screenings. Since no elevated OVM readings were observed during the screening process, five of the six soil boring samples collected for chemical analysis were collected at the groundwater table as per the workplan. The remaining sample was collected because of a change in lithology, encountered in MW-4M at a depth of 6.1 feet, where the lithology changed from fine sand and some silt to coarse sand and gravel. Samples to be analyzed for volatile organic compounds were collected first. The remaining soil from the split spoon was then homogenized in a decontaminated stainless steel bowl with a decontaminated stainless steel utensil, and placed in the appropriate sample containers. The six soil samples collected during the soil boring program were analyzed for Target Compound List (TCL) volatiles and Total Petroleum Hydrocarbons (TPH). Two of the six samples (i.e., MW-1M-0 and MW-3M-05) were also analyzed for TCL semivolatiles and Target Analyte List (TAL) metals.

The soil cuttings generated from the soil borings were placed into 55-gallon drums and labeled as non-hazardous. A total of six soil drums were generated and staged in a central location. After the soil boring was completed, a monitoring well was installed at each location. Section 4.3 discusses the monitoring well installation procedures.

4.2 SURFACE SOILS

The objective for the collection of surface soil samples was to identify, through limited sampling and analysis to the extent feasible, the possible presence of contamination in surface soils around the old transformer pad and the gravel driveway.

4.2.1 Sampling Methods

Three (3) surface soil samples, TF-1M-13, TF-2
document soil conditions around the old transform
had no spill prevention or controls present. The old transformer pad contained 1.5 feet of gravel, which was removed before sample collection. All three samples were collected beneath the gravel, 1.5 feet to 3.5 feet below ground surface. No visible signs of leaks or stains were observed in the gravel or soil. **Figure 4-1** presents the locations of the surface soil samples. Photographs were taken of all surface soil sampling locations and are presented in **Appendix B**.

Two (2) surface soil samples, GD-1M-1 and GD-1M-2, were collected beneath the asphalt driveway (formerly a gravel driveway) to determine potential impacts from the past spreading of oils for dust suppression. The first soil sample, GD-1M-1, was collected from 0.25 to 1.0 feet below ground surface. The asphalt at this location was approximately 0.25 feet thick. The surface soils had an oily stained zone from 0.25 to 0.5 feet below grade. The second soil sample, GD-1M-2, was collected from 1.25 to 2 feet below ground surface. At this location an oily stained zone was encountered at a depth of 1.25 to 1.5 feet below ground surface.

The five (5) surface soil samples collected at the McCaffrey Street facility were collected by driving a decontaminated 3-inch by 2-foot long carbon steel split spoon sampler. The split spoon was driven into undisturbed soil with a rig mounted 140 lb hammer. Upon retrieval, the split spoon was opened and immediately screened for VOCs. Afterwards, the soil sample was mixed in decontaminated stainless steel bowl with a decontaminated stainless steel utensil, and placed in the appropriate sample containers. Although oily stains were observed in the two asphalt driveway samples, no elevated OVM readings were recorded from the five surface soil samples collected at the McCaffrey Street facility. The five surface soil samples, TF-1M-12, TF-2M-13, TF-3M-13, GM-1M-1 and GD-1M-2, were analyzed for PCBs and TPH.

4.3 MONITORING WELL INSTALLATION

Five monitoring wells (MW-1M, MW-2M, MW-3M, MW-4M, and MW-5M) were installed at the McCaffrey Street facility to identify and characterize potential releases of hazardous materials or chemicals from areas of environmental concern, and to establish baseline groundwater quality at the site. The monitoring wells were installed in accordance with NYSDEC guidelines.

The monitoring wells MW-2M, MW-3M, and MW-4M contained 10-foot well screens with the top of the screens extending 2 feet to 4 feet above the water table. MW-1M was installed on top of the bedrock, which was encountered at approximately 8.5 feet below ground surface. MW-1M was installed with a 5-foot well screen. MW-5M was installed approximately 2 feet into the bedrock in order to install a 5 foot screen. Bedrock at MW-5M was encountered at 6.5 feet below ground surface.

All five monitoring wells were constructed of new 2-inch schedule 40 Polyvinyl Chloride (PVC) with a screen slot size of 0.010 inch, threaded flush joints and an expandable cap. A coarse grained sand pack (morie #0 sand) was poured in the annular space between the well screen and the hollow stem augers, at least to the top of the screen and not more than 6 inches below the bottom of the screen. The augers were removed as the annular space was filled with sand. At all wells except MW-1M and MW-2M, 0.3 feet to 0.6 feet of a finer grained sand (morie #00) was placed on top of the coarser grained sand. At MW-1M and MW-2M the fine grain sand was not installed due to the limited depth of these wells. The total length of sand placed above the top of the screen did not exceed 2.3 feet. Bentonite pellets were then placed on top of the sand to approximately 1 to 2 feet below ground surface, and then hydrated. Afterward, a protective steel casing, 4 inches in diameter by 5 feet long, was placed over the monitoring well pipe. The protective steel casing extended at least 1.5 feet below the ground surface, but not in contact with the sandpack. The protective steel casing was then held in place, by pouring bentonite pellets or chips around the steel casing, up to the ground surface. A padlock was placed on the protective steel casing. The monitoring well completion diagrams are presented in **Appendix C**.

After well installation was completed, the downhole drilling tools (i.e., hollow stem augers, drilling rods, split spoons, etc.) were decontaminated in accordance with the workplan. All liquids generated from the decontamination process were placed in 55-gallon drums and staged in a central location. A total of six drums of decontamination water were generated.

4.4 MONITORING WELL DEVELOPMENT

The five monitoring wells installed at the McCaffrey Street facility were developed a minimum of two days after well installation. The following is the procedure used for the development of these wells:

- Measure depth to groundwater and well depth with an electronic water level meter.
- Calculate volume of water within the well and the sand pack.
- Using a PVC bailer, surge the well for up to five minutes to remove any silt and clay "skin" that may have formed on the borehole wall while drilling.
- Measure the conductivity, pH, temperature, and turbidity of the surge water.
- Purge up to five well volumes or to dryness. If the well recharges, take conductivity, pH, temperature, and turbidity readings after each volume of water that is evacuated.

Only two of the five monitoring wells (MW-2M and MW-3M) had sufficient recharge to support removal of five well volumes during development. One monitoring well (MW-5M) had fair to poor recharge and after purging one volume with a hand bailer, the well bailed dry. The water level at MW-5M recovered to its static water level after approximately 3 hours. The two remaining monitoring wells (MW-1M and MW-4M) had poor recharge. After purging one volume these wells were also dry. These two wells recovered to their static water levels within approximately 8 hours.

At the monitoring wells with good recharge, i.e., MW-2M and MW-3M, the pH, conductivity, and temperature measurements stabilized after five well volumes were evacuated. The final turbidity values measured in all wells after development were all greater than 100 NTUs. The groundwater generated during monitoring well development was placed in 55-gallon drums. A total of two drums were generated and labeled as non-hazardous waste. These drums were staged in a central location.

4.5 GROUNDWATER SAMPLING

4.5.1 Monitoring Well Purging

The five monitoring wells at the McCaffrey Street facility were sampled on March 7-8, 1996. All monitoring wells were purged on March 7 prior to sampling. Before sampling the wells, the following well purging procedure was followed:

- Measure depth to groundwater and well depth with a decontaminated electronic water level meter.
- Calculate the standing water volume in the well.
- Using a dedicated disposable teflon bailer, purge three to five well volumes or to dryness, until the indicator parameters (conductivity, pH, temperature, and turbidity stabilize. Take Conductivity, pH, temperature, and turbidity measurements were taken at the start of purging and every volume thereafter. MW-3M was purged using a peristaltic pump and teflon tubing.
- After purging the well, leave the teflon bailer in the monitoring well to be used for sampling.

Due to their slow recharge rate and limited quantities of water in the wells, monitoring wells MW-1M and MW-4M were allowed to recharge approximately 6 hours before they were sampled. The turbidity values recorded after purging the wells were as follows:

- MW-1M >1000 NTUs
- MW-2M >1000 NTUs
- MW-3M 8 NTUs
- MW-4M >1000 NTUs
- MW-5M >1000 NTUs

4.5.2 Monitoring Well Sampling

The monitoring wells at the McCaffrey Street facility were sampled using dedicated disposable teflon bailers. Groundwater samples collected for volatile analyses were collected first, before any of the other parameters, in a manner that would minimize the loss of volatile compounds. At MW-3M, the VOCs were collected with a teflon bailer. The remaining parameters were collected using a peristaltic pump. Sampling for the remaining parameters was carried out in the following sequence: metals, semivolatiles, and TPH. Only two of the five wells (MW-1M and MW-3M) were analyzed for TPH. The turbidity values recorded during sampling, after the samples for metals were collected, were as follows:

- MW-1M 34 NTUs
- MW-2M 20 NTUs
- MW-3M 17 NTUs
- MW-4M 79 NTUs
- MW-5M 59 NTUs

Groundwater samples were collected with the required quality assurance/quality control (QA/QC) samples, and transported to the laboratory for chemical analysis following NYSDEC-CLP methodology.

5.0 RESULTS

5.1 ANALYTICAL METHODS

The six soil boring samples, five surface soil samples, and five groundwater samples collected during the Phase II ESA were package and transported to the laboratory, IEA, Inc., located in Monroe, Connecticut. IEA, Inc., is a Contract Laboratory Protocol (CLP) certified laboratory by the New York State Department of Health. The samples were analyzed for one or more of the following parameter suites: TCL volatile organics per NYSDEC-CLP, TCL semivolatiles per NYSDEC-CLP, PCBs and TAL metals per NYSDEC-CLP, and TPH by USEPA Method 418.1 (SW-846).

5.2 Soil Sampling Results

NYSDEC Technical and Administrative Guidance Memorandum (TAGM) HWR-94-4046 (revised January 24, 1994) values were used as a basis of comparison for the soil sample results. For metals, the soil cleanup objective concentration which was used for comparison, was the NYSDEC TAGM value or the background concentration determined from the sample, whichever was higher. These concentrations are presented in **Table 5-1**. Soil sample MW-1M-0 was collected at the topographic high elevation at the facility, and was designated as the background soil location. Soil sample MW-3M-05 which was located at a topographic low elevation at the facility was designated as the downgradient soil sample location.

The full chemical analysis results for the soils are presented in **Appendix D**.

Four VOCs were detected in the six soil samples. None of the four compounds exceeded their respective TAGM value. One of the four compounds, acetone, which is a common laboratory contaminant, was detected in all samples including the field blank sample. Another compound, methylene chloride, which is also a common laboratory contaminant, was detected at estimated concentrations in four of the six samples. The third compound detected, 2-butanone, which is a common laboratory contaminant, and a contaminant in acetone, was detected in only one of the soil samples (MW-2M-10). Trichloroethene was also detected at an estimated concentration of 4.0 ug/kg at MW-1M-0.

TABLE 5-1

FURON COMPANY PHASE II ESA
McCAFFREY STREET FACILITY
RECOMMENDED SOIL CLEANUP OBJECTIVE CONCENTRATIONS

Metal Compound	NYSDEC TAGM Value (mg/kg) (*Source)	Site Background Concentration (mg/kg)	Recommended Soil Cleanup Objective Concentration (mg/kg) (*Source)
Aluminum	SB	1590	1590
Antimony	SB	ND	ND
Arsenic	7.5 or SB	0.78	7.5
Barium	300 or SB	46.9	300
Beryllium	0.16 or SB	0.32	0.32
Cadmium	1 or SB	0.19	1
Calcium	SB	3340	3340
Chromium	10 or SB	1.7	10
Cobalt	30 or SB	1.6	30
Copper	25 or SB	3.2	25
Iron	2000 or SB	2180	2180
Lead	4-61	0.48	**61
Magnesium	SB	712	712
Manganese	SB	37.4	37.4
Mercury	0.1	ND	0.1
Nickel	13 or SB	4	13
Potassium	SB	67	67
Selenium	2 or SB	ND	2
Silver	SB	ND	ND
Sodium	SB	424	424
Thallium	SB	ND	ND
Vanadium	150 or SB	2.1	150
Zinc	20 or SB	7.6	20

Notes:

SB - Site Background
ND - Not Detected
* Source: Division Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels.
** Special Condition (see text)

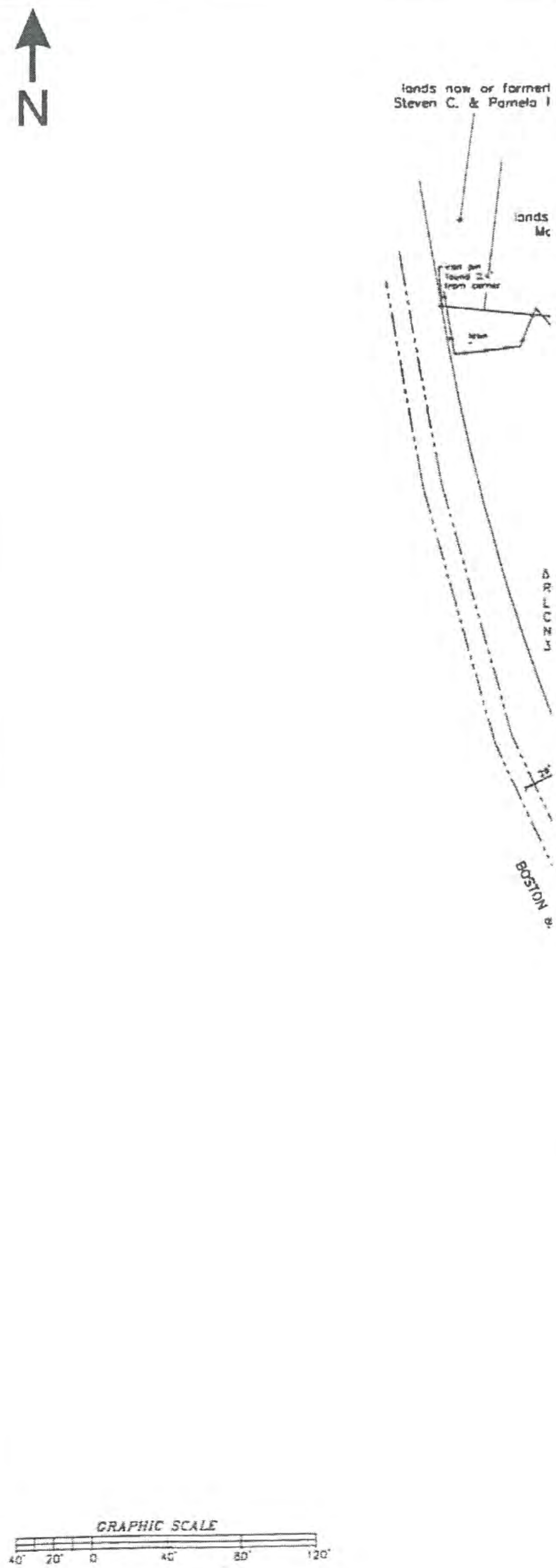
Four semivolatile compounds were detected in the two soil samples, MW-1M-0 and MW-3M-05, analyzed for semivolatiles at concentrations below their respective TAGM value. The compounds detected were di-n-butylphthalate, bis(2-Ethylhexyl)phthalate, benzo(a)pyrene, and benzo(g,h,i)perylene. The compounds di-n-butylphthalate and bis(2-Ethylhexyl)phalate were also reported at estimated concentrations in the field blank sample. Benzo(a)pyrene and benzo(g,h,i)perylene were also detected as estimated values at MW-1M-0.

TPHs were detected in four of the eleven soil samples analyzed for TPHs. The highest TPH levels were detected in the paved driveway samples (CEC #2) GD-1M-1 and GD-1M-2 at concentrations of 3760 mg/kg and 831 mg/kg, respectively. The other two soil samples MW-1M-0 and TF-1M-13 (CEC #1) reported low concentrations of 136 mg/kg and 50.7 mg/kg, respectively. **Figure 5-1** presents the concentrations of TPHs in soils and the metals of concern detected above the TAGM values.

Two PCB compounds, Aroclor-1254 and Aroclor-1260, were detected at estimated concentrations well below their respective TAGM values. The two compounds were detected in the following three soil samples: TF-1M-13, GD-1M-1, and GD-1M-2.

Nineteen metals were detected in the two soil samples MW-1M-0 and MW-3M-05 analyzed for metals. Eleven of the 19 compounds exceeded their respective recommended soil cleanup objective concentration. These compounds were aluminum, beryllium, calcium, chromium, iron, magnesium, manganese, nickel, potassium, selenium, and zinc. While all of the metals can occur naturally in soil, several of them are more common constituents of soil (i.e., aluminum, calcium, iron, magnesium, manganese, and potassium) and are generally considered to be less toxic than the others listed. The other metals listed, which are more of a concern, are discussed below. **Figure 5-1** presents the concentrations of the metals of concern in soils.

Beryllium was detected in both soil samples. The recommended soil cleanup objective concentration for beryllium, is 0.32 mg/kg which was detected in the background soil sample, MW-1M-0. The compound was detected in MW-3M-05 at a concentration of 0.53 mg/kg.



LEGEND

COMPOUND	CONCENTRATION(mg/kg)
TPHs	3760

MW-2M (0.41) — MONITORING WELL/SOIL BORING WITH WATER TABLE ELEVATION (FT.)

25 — GROUNDWATER ELEVATION CONTOUR (ARROW INDICATES DIRECTION OF FLOW) GROUNDWATER LEVEL MEASUREMENTS MADE ON 3/7/96.

GD-1M-1 — SURFACE SOIL SAMPLE LOCATION

NA — NOT ANALYZED

ND — NOT DETECTED

PARSONS

PARSONS ENGINEERING SCIENCE, INC.

CLIENT/PROJECT TITLE

Furon

HOOSICK FALLS, NY
ENVIRONMENTAL SITE ASSESSMENT

DEPT. ENVIRONMENTAL ENGINEERING

DWG NO. 728098-07500

FIGURE 5-1

CONCENTRATIONS OF TPHs AND METALS OF CONCERN IN SOILS McCAFFERY STREET FACILITY PHASE II ESA

SCALE

DATE APRIL 1996

SOURCE OF SURVEY MAP: SURVEYED BY DAVID F. BARRASS LAND SURV
9 MAPLE STREET, CORINTH, NEW YORK

R:\GRAPHICS\ALLIEDS\FURON\MAPLANDS.CDR(RCS)

Chromium was detected in MW-1M-0 at a concentration of 1.7 mg/kg and in MW-3M-05 at a concentration of 11.6 mg/kg. The recommended soil cleanup objective concentration for chromium is 10 mg/kg.

Nickel was detected in both soil samples at concentrations of 4.0 mg/kg in MW-1M-0, and 19.3 mg/kg in MW-3M-05. The recommended soil cleanup objective concentration for nickel is 13.0 mg/kg.

Selenium was only detected in the soil sample MW-3M-05, at a concentration equal to the recommended soil cleanup objective concentration of 2.0 mg/kg.

The TAGM value for zinc is 20.0 mg/kg. It was exceeded in soil sample MW-3M-05, which had a concentration of 60.5 mg/kg.

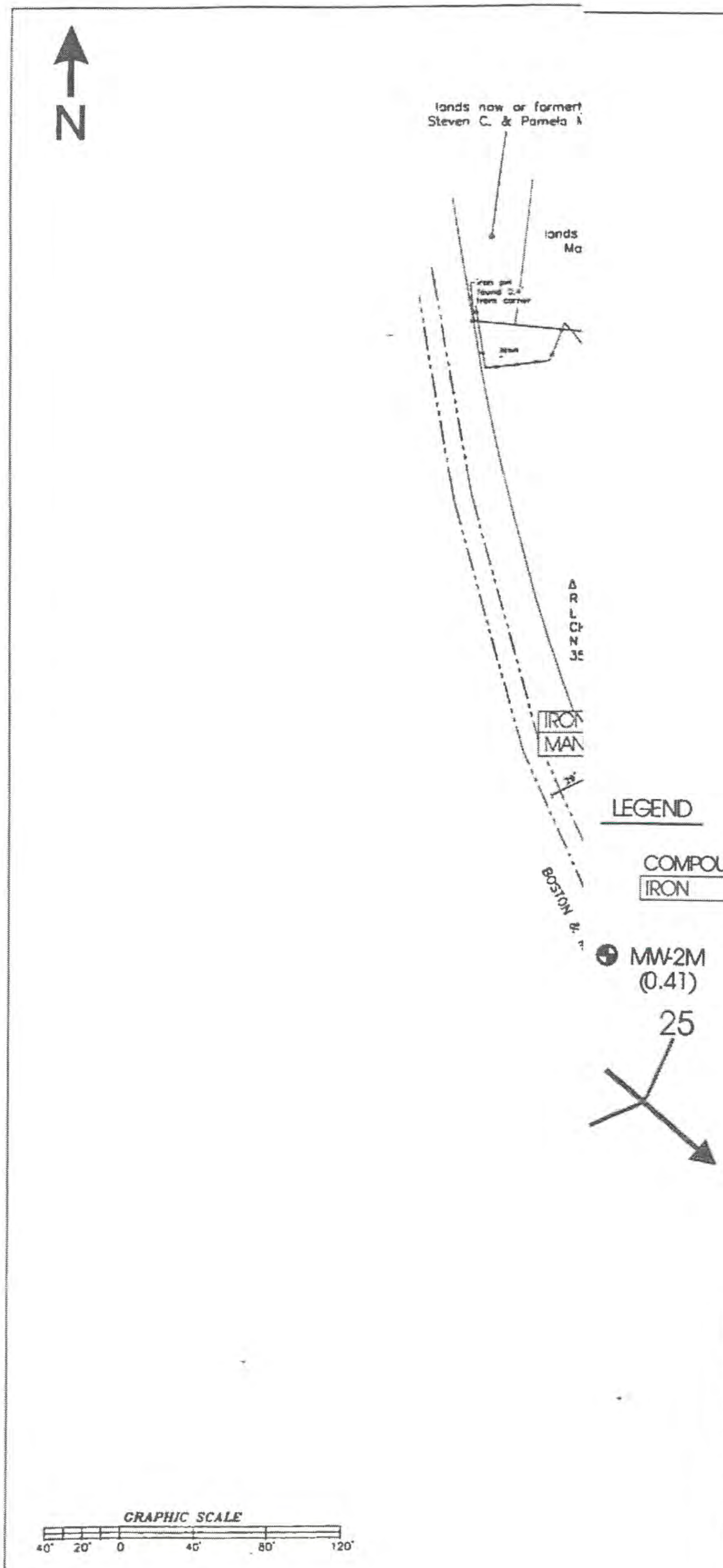
The lead results were viewed as a special condition. The background TAGM value for lead in soils varies widely. The average levels in undeveloped, rural areas may range from 4-61 mg/kg, and in metropolitan or suburban areas or near highways the average levels may range from 200-500 mg/kg. Lead was detected in soil sample MW-1M-0 at 0.48 mg/kg and in soil sample MW-3M-05 at 12 mg/kg. Therefore the recommended soil cleanup objective concentration for lead at the McCaffrey Street facility is considered to be 61 mg/kg.

5.3 GROUNDWATER SAMPLING RESULTS

Groundwater sampling results were compared to the New York State Groundwater Class GA standards, the New York State Primary Drinking Water Quality standards, and the Federal Safe Drinking Water Act (MCLs).

The chemical analysis results for the groundwater samples are presented in **Appendix E. Figure 5-2** presents the Concentrations of Compounds Exceeding Groundwater Quality Standards or MCLs.

Two VOCs, trichloroethene and 1,2-dichloroethene(total), were detected in the groundwater samples collected from the five monitoring wells. Trichloroethene was detected in two wells MW-2M and MW-5M at concentrations above the Federal and New York State standards which is 5 ug/l. The highest concentration of 13 ug/l was detected in MW-2M.



LEGEND

COMPOUND	CONCENTRATION(ug/l)
IRON	1390

MW-2M (0.41) MONITORING WELL/SOIL BORING WITH WATER TABLE ELEVATION (FT.)

25 GROUNDWATER ELEVATION CONTOUR (ARROW INDICATES DIRECTION OF FLOW) GROUNDWATER LEVEL MEASUREMENTS MADE ON 3/7/96.

PARSONS
PARSONS ENGINEERING SCIENCE, INC.

CLIENT/PROJECT TITLE
FURON
HOOSICK FALLS, NY
ENVIRONMENTAL SITE ASSESSMENT

DEPT. ENVIRONMENTAL ENGINEERING
DWG NO. 728098-07500

FIGURE 5-2

CONCENTRATIONS OF COMPOUNDS EXCEEDING NEW YORK STATE GROUNDWATER QUALITY STANDARDS OR FEDERAL MCLS. McCAFFERY STREET FACILITY PHASE II ESA

SCALE
DATE APRIL 1996

SOURCE OF SURVEY MAP: SURVEYED BY DAVID F. BARRASS LAND SURVE
9 MAPLE STREET, CORINTH, NEW YORK

R:\GRAPHICS\ALLIEDSI\FURON\MAPLANDS.CDR(RCS)

Trichloroethene was also detected in MW-5M at an estimated concentration of 6.0 ug/l. In the duplicate sample of monitoring well MW-5M, which is identified as MW-15M, trichloroethene was detected at an estimated concentration of 7.0 ug/l. The compound 1,2-dichloroethene(total), which is a breakdown product of trichloroethene, was detected in MW-5M and the duplicate (MW-15M) at estimated concentrations of 2.0 ug/l each.

Chloroform was detected in the trip blank and field blank samples at estimated concentrations of 3.0 ug/l and 2.0 ug/l, respectively. These values are also below the Federal MCLs and the New York State Groundwater Quality Standards.

Three semivolatiles, diethylphthatlate, di-n-butylphthatlate, and bis(2-Ethylhexyl)phthalate were detected. The three compounds were estimated at low concentrations ranging from 0.3 ug/l to 6.0 ug/l. All three compounds were also detected in the field blank sample, and are common laboratory contaminants.

No TPHs were detected in any of the groundwater samples collected from the five monitoring wells.

Metals were detected in the five monitoring wells. Five metals which were not detected include arsenic, beryllium, copper, mercury and thallium. Three of the 18 compounds detected exceeded their respective Federal MCLs or New York State Class GA Standards. Antimony, which has a Federal MCL is 6.0 ug/l, was detected at a maximum concentration of 16.0 ug/l in monitoring well MW-2M. Iron was detected at a maximum concentration of 3060 ug/l in monitoring well MW-4M, and exceeded the New York State Standard of 300 ug/l in 4 of the 5 wells sampled. Manganese, with a maximum concentration of 343 ug/l in MW-4M, exceeded the New York State standard of 300 ug/l in two of the five wells. Other compounds detected included aluminum, calcium, cobalt, magnesium, potassium, sodium and vanadium and zinc. Some of these metals (aluminum, calcium, magnesium, potassium and sodium) along with iron, manganese and zinc are commonly found in the groundwater. These compounds are generally considered to be less toxic. Metals that are generally considered to be more toxic (chromium, lead, and nickel) were also detected, but at concentrations below the Federal and State groundwater standards. In addition, the maximum concentrations of iron and manganese were found in MW-4M. The groundwater sample collected at MW-4M reported an elevated turbidity of 79 NTUs.

6.0 FINDINGS, CONCLUSIONS and RECOMMENDATIONS

6.1 FINDINGS

The soil analysis results of the Phase II ESA conducted at the McCaffrey Street facility, indicate that metals were detected above the recommended soil cleanup objective concentration in the topographically downgradient soil boring sample MW-3M-05. Non-inclusive of those compounds which are common constituents in soil (i.e., aluminum, calcium, iron, manganese, magnesium, and potassium), the metal compounds of concern and their concentrations are as follows: beryllium - 0.53 mg/kg, chromium - 11.6 mg/kg, nickel - 19.3 mg/kg, selenium - 2 mg/kg and zinc 60.5 mg/kg. These compounds, except for zinc, were detected at concentrations at or just above their respective recommended soil cleanup objective concentration. Zinc was detected at a concentration which is three times above its recommended soil cleanup objective concentration of 20.0 mg/kg.

The soil analysis results also revealed elevated concentrations of TPH in the soil samples collected in the paved driveway (formerly a gravel driveway) (CEC #2). The sample collected near the surface GD-1M-1 (beneath the asphalt) had an oily stained zone and had a TPH concentration of 3760 mg/kg. The soil sample GD-1M-2, collected beneath GD-1M-1 also contained an oily stained zone and had a concentration of 831 mg/kg. There is no TAGM value for TPH in soils. No volatile organic compounds, semivolatiles, or PCBs were detected at concentrations above their respective soil cleanup concentration.

The groundwater analysis results indicate that TCE was detected in the groundwater. The TCE concentration detected in MW-2M was 13 ug/l. The TCE concentrations detected in well MW-5M and its duplicate MW-15M were estimated at 6 ug/l and 7 ug/l, respectively. The Federal Safe Drinking Water Act MCL and the New York State Groundwater Quality Standards for TCE is 5 ug/l. In addition, trace concentrations (2J ug/l) of 1,2-dichloroethene were reported in monitoring well MW-5M and the duplicate. Three metal compounds antimony, iron, and manganese, were also detected above the Federal MCLs or New York State Groundwater Standards. Antimony was detected at a concentration of 16 ug/l in MW-2M; its Federal MCL is 6 ug/l. Iron was detected in all monitoring wells except MW-2M. Iron was detected at a maximum concentration of 3060 ug/l in MW-4M; its New York State Groundwater standard is 300 ug/l. Manganese, which has a New York State standard of 300 ug/l, was detected in MW-4M at a concentration of 343 ug/l. Other metal compounds such as aluminum, calcium, cobalt, magnesium, potassium, sodium and vanadium were also detected, but have no Federal MCLs or New York State Groundwater Quality Standards. No semivolatile organic compounds were detected at concentrations above their respective Federal MCL or the New York State Groundwater Quality Standard.

6.2 CONCLUSIONS

The Phase II ESA was conducted to address two recognized environmental conditions, and two conditions of environmental concern to establish "baseline environmental conditions" of the property. The two recognized environmental conditions were the former UST which presented a material threat of a past release (REC #1), and the floor drains and sump in the vicinity of the mixing and coating operations on the first level of the facility (REC #2). Other conditions of environmental concern included the "old" transformer which was known to contain PCBs (CEC #1), and the historic practice of spreading oils in the former gravel driveways for dust suppression (CEC #2). Through limited sampling and analysis, the Phase II ESA identified the presence of five metals in site soils at concentrations above their respective TAGM value. Two soil boring samples were analyzed for metals. One sample was collected at the topographically high elevation of the site, the other sample was collected at a topographically low elevation of the site. The former was considered as the background soil sample location, and the latter was considered as the downgradient soil sample location. One of the five metals, chromium, is presently used in the facility's manufacturing process.

The two surface soil samples collected in the paved driveway (formerly a gravel driveway) to investigate the historic practice of spreading oils on the gravel driveways for dust suppression (CEC #2), detected elevated concentrations of TPHs. Both soil samples also evidenced oily stained zones.

Three surface soil samples were collected adjacent to the "old" transformer pad and analyzed for TPHs and PCBs (CEC #1). TPHs were detected in only one of the three soil samples at a concentration of 50.7 mg/kg. No PCBs were detected in the three samples. Although several metal compounds and TPHs were detected in site soils at the McCaffrey Street facility, the detected concentration of the compounds are considered minor.

The results of the groundwater analysis indicate that two monitoring wells topographically downgradient of the facility have been impacted by trichloroethene (TCE), as detected in monitoring wells MW-2M and MW-5M. The metal compounds, antimony, iron, and manganese, were also detected at concentrations above their respective Federal MCL and/or the New York State Groundwater Standards.

The facility uses small quantities of solvents in the research and development lab, located on the fourth level of the facility, which are presently stored in marked storage cabinets and disposed of in various sized lab packs (1 and 50 gallons) for off-site disposal. The facility also maintains floor drains and a sump in the vicinity of the mixing and coating operations on the first level of the facility. The integrity of the sump pit sidewalls and bottom have not been verified (REC #2).

The source for TCE may be related to the sump pit. According to P.J. Beaumont, TCE is not currently stored or generated at the facility.

No TPHs or Aromatic Volatile Organic Compounds (i.e., BTEXs) were detected in the groundwater samples. Therefore, it does not appear that the former UST presented a material threat of a release at the facility (REC #1).

6.3 RECOMMENDATIONS

Due to the TCE concentrations detected in the two topographically downgradient monitoring wells MW-2M and MW-5M, it is recommended that a second round of groundwater sampling be conducted at the five newly installed monitoring wells at the McCaffrey Street facility to verify the VOC groundwater analysis results reported during the Phase II ESA.

Additionally, filtered and unfiltered groundwater samples should be collected from the wells to verify the presence of metals and to define if it is associated with soil fines present in the well.

In addition to collecting and characterizing a second set of groundwater data from all wells, Parsons ES recommends that Furon Company begin record searches to determine if past evidence of TCE usage at the facility can be found. Information available to Parsons ES does not provide any evidence that TCE was used at this facility in the past.

7.0 REFERENCES

40 Code of Federal Regulations (CFR), Parts 141 and 142, May 1995.

Goldsmith R. Ratcliffe, N.M., Robinson P., and Stanley, R.S. 1983.
Bedrock Geologic Map of Massachusetts, Department of Public Works, and Joseph A. Sinnot.

Miller, Norton G. 1987. Natural History of Rensselaer County, pp 6 and 8j.
Landmarks of Rensselaer County New York.

New York State Department of Environmental Conservation. Revised January 24, 1994.
Technical and Administrative Guidance Memorandum (TAGM) HWR-94-4046.

Official Compilation of Codes, Rules, and Regulations of the State of New York, Title 6, Part 360, April 1995 and Parts 701-705, June 1995. Class GA Groundwater.

Parsons Engineering Science 1995. Draft Phase I Environmental Site Assessment, McCaffrey Street Facility.

Saint Gobain Performance Plastics
McCaffrey Street Facility
Hoosick Falls, NY

Site Sampling Results

Prepared for

Saint Gobain Performance Plastics
Hoosick Falls, NY

Prepared by

Ramboll Environ
Princeton, NJ

February 4, 2016

RAMBOLL ENVIRON

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I. Data Summary Tables

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TABLE 1
Summary of Soil Sampling Results
SGPP Hoosick Falls

Location	USEPA Region 4 Residential Screening Levels [2]	MW-1		MW-2		
Field Sample ID		SG1-MW01D-00.0	SG1-MW01D-02.0	SG1-MW02D-00.0	SG1-DS01-150805	SG1-MW02D-02.0
Collection Depth (ft bgs)		0 - 2	2 - 4	0 - 2	0 - 2	2 - 4
Sampling Date		8/10/2015	8/10/2015	8/5/2015	8/5/2015	8/5/2015
Comments					Field Duplicate	
PFCS						
Perfluorobutane Sulfonate (PFBS)		U (0.014)	U (0.014)	U (0.014)	U (0.014)	U (0.014)
Perfluoroheptanoic Acid (PFHpA)		U (0.015)	U (0.015)	U (0.015)	U (0.015)	U (0.015)
Perfluorohexane Sulfonate (PFHxS)		U (0.015)	U (0.015)	U (0.015)	U (0.015)	U (0.015)
Perfluoro-n-Octanoic Acid (PFOA)	16000	1.0	2.4	1.3	1.5	0.35
Perfluorononanoic Acid (PFNA)		U (0.01)	U (0.01)	0.01	0.02	U (0.01)
Perfluorooctane Sulfonate (PFOS)	6000	U (0.015)	U (0.015)	0.028	0.035	U (0.015)

Notes:

1 All units in ug/kg (ppb).

2 USEPA Region 4. 2009. "Soil Screening Levels for Perfluorooctanoic Acid (PFOA) and Perluorooctyl Sulfonate (PFOS)."

Abbreviations:

U -- Not Detected

( ) -- Method Detection Limit

TABLE 1
Summary of Soil Sampling Results
SGPP Hoosick Falls

Location	USEPA Region 4 Residential Screening Levels [2]	MW-3		MW-4		MW-5	
Field Sample ID		SG1-MW03S-00.0	SG1-MW03S-02.0	SG1-MW04S-00.0	SG1-MW04S-02.0	SG1-MW05S-00.0	SG1-MW05S-02.0
Collection Depth (ft bgs)		0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4
Sampling Date		8/13/2015	8/13/2015	8/5/2015	8/5/2015	8/11/2015	8/11/2015
Comments							
PFCS							
Perfluorobutane Sulfonate (PFBS)		U (0.014)	U (0.014)	0.039	U (0.014)	U (0.14)	U (0.014)
Perfluoroheptanoic Acid (PFHpA)		0.11	U (0.015)	0.17	0.080	U (0.15)	0.038
Perfluorohexane Sulfonate (PFHxS)		U (0.015)	U (0.015)	0.15	U (0.015)	U (0.15)	U (0.015)
Perfluoro-n-Octanoic Acid (PFOA)	16000	2.5	0.67	4.1	1.8	1.4	1.2
Perfluorononanoic Acid (PFNA)		0.11	0.03	0.14	0.07	U (0.1)	0.06
Perfluorooctane Sulfonate (PFOS)	6000	0.19	0.018	0.63	0.28	0.25	0.099

Notes:

1 All units in ug/kg (ppb).

2 USEPA Region 4. 2009. "Soil Screening Levels for Perfluorooctanoic Acid (PFOA) and Perluorooctyl Sulfonate (PFOS)."

Abbreviations:

U -- Not Detected

( ) -- Method Detection Limit

TABLE 2
Summary of Groundwater Sampling Results
SGPP Hoosick Falls

Location	USEPA Drinking Water Provisional Health Advisory Levels (3)	NYSDOH Unspecified Organic Contaminant Criteria (4)	MW-1		MW-1S	
Field Sample ID			SG1-MW01-150903	SG1-MW01-151001	SG1-MW01S-150903	SG1-MW01S-151001
Sample Date			9/3/2015	10/1/2015	9/3/2015	10/1/2015
Comments						
PFCS						
Perfluorobutane Sulfonate (PFBS)		50000	U (8.5)	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)		50000	U (2.2)	U (2.2)	20 (2.2)	60 (2.2)
Perfluorohexane Sulfonate (PFHxS)		50000	U (2.9)	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	400	50000	U (1.6)	U (1.6)	U (1.6)	60 (1.6)
Perfluorononanoic Acid (PFNA)		50000	U (2.3)	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	200	50000	U (2.1)	U (2.1)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

2 Detected concentrations exceeding a comparison criterion are shown in **bold text**.

3 USEPA. Provisional Health Advisories for perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS). 2009.

4 NYSDOH, 2011. Table 3 – Organic Chemicals, Maximum Contaminant Level Determination. Part 5, Subpart 5-1 Public Water Systems. November. https://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm

5 A split sample from MW-02 was submitted for laboratory analysis to Maxxam Analytics of Mississauga, Ontario, Canada. All other samples were submitted for laboratory analysis to Eurofins/Eaton Analytical of South Bend, IN.

Abbreviations:

U -- Not Detected.
J -- Estimated Concentration.
( ) -- Method Detection Limit.

TABLE 2
Summary of Groundwater Sampling Results
SGPP Hoosick Falls

Location	USEPA Drinking Water Provisional Health Advisory Levels (3)	NYSDOH Unspecified Organic Contaminant Criteria (4)	MW-2			MW-2S	
Field Sample ID			SG1-MW02-150902	SG1-MW02-150930		SG1-MW02S-150902	SG1-MW02S-151001
Sample Date			9/2/2015	9/30/2015		9/2/2015	10/1/2015
Comments					Split (5)		
PFCS							
Perfluorobutane Sulfonate (PFBS)		50000	U (8.5)	U (8.5)	U (4.7)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)		50000	340 (2.2)	310 (2.2)	390 J (5.4)	20 (2.2)	30 (2.2)
Perfluorohexane Sulfonate (PFHxS)		50000	U (2.9)	U (2.9)	U (5.4)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	400	50000	**18000 (1.6)**	**17000 (1.6)**	**16000 J (180)**	**1100 (1.6)**	**750 (1.6)**
Perfluorononanoic Acid (PFNA)		50000	U (2.3)	U (2.3)	U (6.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	200	50000	U (2.1)	U (2.1)	U (3.7)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

2 Detected concentrations exceeding a comparison criterion are shown in **bold text**.

3 USEPA. Provisional Health Advisories for perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS). 2009.

4 NYSDOH, 2011. Table 3 – Organic Chemicals, Maximum Contaminant Level Determination. Part 5, Subpart 5-1 Public Water Systems. November. https://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm

5 A split sample from MW-02 was submitted for laboratory analysis to Maxxam Analytics of Mississauga, Ontario, Canada. All other samples were submitted for laboratory analysis to Eurofins/Eaton Analytical of South Bend, IN.

Abbreviations:

U -- Not Detected.
J -- Estimated Concentration.
( ) -- Method Detection Limit.

TABLE 2
Summary of Groundwater Sampling Results
SGPP Hoosick Falls

Location	USEPA Drinking Water Provisional Health Advisory Levels (3)	NYSDOH Unspecified Organic Contaminant Criteria (4)	MW-3			MW-4		
Field Sample ID			SG1-MW03-150903	SG1-DS01-150903	SG1-MW03-151001	SG1-MW04-150903	SG1-MW04-151001	SG1-DS01-151001
Sample Date			9/3/2015	9/3/2015	10/1/2015	9/3/2015	10/1/2015	10/1/2015
Comments				Field Duplicate				Field Duplicate
PFCS								
Perfluorobutane Sulfonate (PFBS)		50000	U (8.5)	U (8.5)	U (8.5)	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)		50000	130 (2.2)	130 (2.2)	120 (2.2)	40 (2.2)	40 (2.2)	40 (2.2)
Perfluorohexane Sulfonate (PFHxS)		50000	U (2.9)	U (2.9)	U (2.9)	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	400	50000	**5300 (1.6)**	**4200 (1.6)**	**4300 (1.6)**	**1700 (1.6)**	**1400 (1.6)**	**1400 (1.6)**
Perfluorononanoic Acid (PFNA)		50000	U (2.3)	U (2.3)	U (2.3)	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	200	50000	U (2.1)	U (2.1)	U (2.1)	U (2.1)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

2 Detected concentrations exceeding a comparison criterion are shown in **bold text**.

3 USEPA. Provisional Health Advisories for perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS). 2009.

4 NYSDOH, 2011. Table 3 – Organic Chemicals, Maximum Contaminant Level Determination. Part 5, Subpart 5-1 Public Water Systems. November. https://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm

5 A split sample from MW-02 was submitted for laboratory analysis to Maxxam Analytics of Mississauga, Ontario, Canada. All other samples were submitted for laboratory analysis to Eurofins/Eaton Analytical of South Bend, IN.

Abbreviations:

U -- Not Detected.
J -- Estimated Concentration.
( ) -- Method Detection Limit.

TABLE 2
Summary of Groundwater Sampling Results
SGPP Hoosick Falls

Location	USEPA Drinking Water Provisional Health Advisory Levels (3)	NYSDOH Unspecified Organic Contaminant Criteria (4)	MW-5	
Field Sample ID			SG1-MW05-150903	SG1-MW05-151001
Sample Date			9/3/2015	10/1/2015
Comments				
PFCS				
Perfluorobutane Sulfonate (PFBS)		50000	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)		50000	10 (2.2)	10 (2.2)
Perfluorohexane Sulfonate (PFHxS)		50000	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	400	50000	**580 (1.6)**	**570 (1.6)**
Perfluorononanoic Acid (PFNA)		50000	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	200	50000	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

2 Detected concentrations exceeding a comparison criterion are shown in **bold text**.

3 USEPA. Provisional Health Advisories for perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS). 2009.

4 NYSDOH, 2011. Table 3 – Organic Chemicals, Maximum Contaminant Level Determination. Part 5, Subpart 5-1 Public Water Systems. November. https://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm

5 A split sample from MW-02 was submitted for laboratory analysis to Maxxam Analytics of Mississauga, Ontario, Canada. All other samples were submitted for laboratory analysis to Eurofins/Eaton Analytical of South Bend, IN.

Abbreviations:

U -- Not Detected.
J -- Estimated Concentration.
( ) -- Method Detection Limit.

TABLE 3
Summary of Wastewater Sampling Results
SGPP Hoosick Falls

Location	USEPA Drinking Water Provisional Health Advisory Levels (3)	NYSDOH Unspecified Organic Contaminant Criteria (4)	Manhole #1	Sewage Ejector Pit	
Field Sample ID			SG1-NORTH MANHOLE-151027	SG1-SUMP PIT-151027	SG1-DS01-151027
Sample Date			10/27/2015	10/27/2015	10/27/2015
Comments					Field Duplicate
PFCS					
Perfluorobutane Sulfonate (PFBS)		50000	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)		50000	20 J (2.2)	10 (2.2)	10 (2.2)
Perfluorohexane Sulfonate (PFHxS)		50000	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	400	50000	**1000 (1.6)**	**850 (1.6)**	**470 (1.6)**
Perfluorononanoic Acid (PFNA)		50000	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	200	50000	U (2.1)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.
2 Detected concentrations exceeding a comparison criterion are shown in **bold text**.
3 USEPA. Provisional Health Advisories for perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS). 2009.
4 NYSDOH, 2011. Table 3 – Organic Chemicals, Maximum Contaminant Level Determination. Part 5, Subpart 5-1 Public Water Systems. November. https://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm

Abbreviations:

U -- Not Detected.
J -- Estimated Concentration.
( ) -- Method Detection Limit.

TABLE 4
Summary of QAQC Sampling Results
SGPP Hoosick Falls

Location	QAQC	QAQC	QAQC	QAQC	QAQC
Field Sample ID	SG1-FB01-150729	SG1-RB01-150729	SG1-RB02-150729	SG1-RB03-150729	SG1-RB04-150729
Sample Date	7/29/2015	7/29/2015	7/29/2015	7/29/2015	7/29/2015
Comments	Field Blank	Rinsate Blank	Rinsate Blank	Rinsate Blank	Rinsate Blank
PFCS					
Perfluorobutane Sulfonate (PFBS)	U (8.5)	U (8.5)	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)	U (2.2)	U (2.2)	340 (2.2)	U (2.2)	U (2.2)
Perfluorohexane Sulfonate (PFHxS)	U (2.9)	U (2.9)	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	U (1.6)	U (1.6)	U (1.6)	U (1.6)	U (1.6)
Perfluorononanoic Acid (PFNA)	U (2.3)	U (2.3)	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	U (2.1)	U (2.1)	U (2.1)	U (2.1)	U (2.1)

Notes:
1 All concentrations are presented in ng/L.

Abbreviations:
U -- Not Detected.
( ) -- Method Detection Limit.

TABLE 4
Summary of QAQC Sampling Results
SGPP Hoosick Falls

Location	QAQC	QAQC	QAQC	QAQC	QAQC
Field Sample ID	**SG1-RB05-150729**	**SG1-RB06-150729**	**SG1-TB01-150729**	**SG1-FB01-150731**	**SG1-FB02-150731**
Sample Date	**7/29/2015**	**7/29/2015**	**7/29/2015**	**7/31/2015**	**7/31/2015**
Comments	**Rinsate Blank**	**Rinsate Blank**	**Trip Blank**	**Field Blank**	**Field Blank**
PFCS					
Perfluorobutane Sulfonate (PFBS)	U (8.5)	U (8.5)	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)	U (2.2)	U (2.2)	U (2.2)	U (2.2)	U (2.2)
Perfluorohexane Sulfonate (PFHxS)	U (2.9)	U (2.9)	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	U (1.6)	U (1.6)	U (1.6)	U (1.6)	U (1.6)
Perfluorononanoic Acid (PFNA)	U (2.3)	U (2.3)	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	U (2.1)	U (2.1)	U (2.1)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

Abbreviations:

U -- Not Detected.
( ) -- Method Detection Limit.

TABLE 4
Summary of QAQC Sampling Results
SGPP Hoosick Falls

Location	QAQC	QAQC	QAQC	QAQC	QAQC
Field Sample ID	**SG1-TB01-150731**	**SG1-RB01-150807**	**SG1-TB01-150807**	**SG1-FB01-150810**	**SG1-RB01-150810**
Sample Date	**7/31/2015**	**8/7/2015**	**8/7/2015**	**8/10/2015**	**8/10/2015**
Comments	**Trip Blank**	**Rinsate Blank**	**Trip Blank**	**Field Blank**	**Rinsate Blank**
PFCS					
Perfluorobutane Sulfonate (PFBS)	U (8.5)	U (8.5)	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)	U (2.2)	U (2.2)	U (2.2)	U (2.2)	U (2.2)
Perfluorohexane Sulfonate (PFHxS)	U (2.9)	U (2.9)	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	U (1.6)	U (1.6)	U (1.6)	U (1.6)	U (1.6)
Perfluorononanoic Acid (PFNA)	U (2.3)	U (2.3)	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	U (2.1)	U (2.1)	U (2.1)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

Abbreviations:

U -- Not Detected.

( ) -- Method Detection Limit.

TABLE 4
Summary of QAQC Sampling Results
SGPP Hoosick Falls

Location	QAQC	QAQC	QAQC	QAQC	QAQC
Field Sample ID	**SG1-RB02-150810**	**SG1-RB03-150810**	**SG1-RB01-150811**	**SG1-RB02-150811**	**SG1-RB03-150811**
Sample Date	**8/10/2015**	**8/10/2015**	**8/11/2015**	**8/11/2015**	**8/11/2015**
Comments	**Rinsate Blank**	**Rinsate Blank**	**Rinsate Blank**	**Rinsate Blank**	**Rinsate Blank**
PFCS					
Perfluorobutane Sulfonate (PFBS)	U (8.5)	U (8.5)	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)	U (2.2)	U (2.2)	U (2.2)	U (2.2)	U (2.2)
Perfluorohexane Sulfonate (PFHxS)	U (2.9)	U (2.9)	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	U (1.6)	U (1.6)	U (1.6)	U (1.6)	U (1.6)
Perfluorononanoic Acid (PFNA)	U (2.3)	U (2.3)	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	U (2.1)	U (2.1)	U (2.1)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

Abbreviations:

U -- Not Detected.

( ) -- Method Detection Limit.

TABLE 4
Summary of QAQC Sampling Results
SGPP Hoosick Falls

Location	QAQC	QAQC	QAQC	QAQC	QAQC
Field Sample ID	**SG1-RB01-150812**	**SG1-RB01-150813**	**SG1-RB02-150813**	**SG1-RB03-150813**	**SG1-FB01-150902**
Sample Date	**8/12/2015**	**8/13/2015**	**8/13/2015**	**8/13/2015**	**9/2/2015**
Comments	**Rinsate Blank**	**Rinsate Blank**	**Rinsate Blank**	**Rinsate Blank**	**Field Blank**
PFCS					
Perfluorobutane Sulfonate (PFBS)	U (8.5)	U (8.5)	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)	U (2.2)	U (2.2)	U (2.2)	U (2.2)	U (2.2)
Perfluorohexane Sulfonate (PFHxS)	U (2.9)	U (2.9)	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	U (1.6)	U (1.6)	U (1.6)	U (1.6)	U (1.6)
Perfluorononanoic Acid (PFNA)	U (2.3)	U (2.3)	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	U (2.1)	U (2.1)	U (2.1)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

Abbreviations:

U -- Not Detected.
( ) -- Method Detection Limit.

TABLE 4
Summary of QAQC Sampling Results
SGPP Hoosick Falls

Location	QAQC	QAQC	QAQC	QAQC	QAQC
Field Sample ID	SG1-RB01-150902	SG1-RB02-150902	SG1-RB03-150902	SG1-RB04-150902	SG1-RB05-150902
Sample Date	9/2/2015	9/2/2015	9/2/2015	9/2/2015	9/2/2015
Comments	Rinsate Blank	Rinsate Blank	Rinsate Blank	Rinsate Blank	Rinsate Blank
PFCS					
Perfluorobutane Sulfonate (PFBS)	U (8.5)	U (8.5)	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)	U (2.2)	U (2.2)	U (2.2)	U (2.2)	U (2.2)
Perfluorohexane Sulfonate (PFHxS)	U (2.9)	U (2.9)	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	U (1.6)	U (1.6)	U (1.6)	U (1.6)	U (1.6)
Perfluorononanoic Acid (PFNA)	U (2.3)	U (2.3)	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	U (2.1)	U (2.1)	U (2.1)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

Abbreviations:

U -- Not Detected.

( ) -- Method Detection Limit.

TABLE 4
Summary of QAQC Sampling Results
SGPP Hoosick Falls

Location	QAQC	QAQC	QAQC	QAQC	QAQC
Field Sample ID	**SG1-RB06-150902**	**SG1-TB01-150902**	**SG1-TB02-150903**	**SG1-RB01-150930**	**SG1-TB01-150930**
Sample Date	**9/2/2015**	**9/2/2015**	**9/3/2015**	**9/30/2015**	**9/30/2015**
Comments	**Rinsate Blank**	**Trip Blank**	**Trip Blank**	**Rinsate Blank**	**Trip Blank**
PFCS					
Perfluorobutane Sulfonate (PFBS)	U (8.5)	U (8.5)	U (8.5)	U (8.5)	U (4.7)
Perfluoroheptanoic Acid (PFHpA)	U (2.2)	U (2.2)	U (2.2)	U (2.2)	U (5.4)
Perfluorohexane Sulfonate (PFHxS)	U (2.9)	U (2.9)	U (2.9)	U (2.9)	U (5.4)
Perfluoro-n-Octanoic Acid (PFOA)	U (1.6)	U (1.6)	U (1.6)	U (1.6)	U (4.4)
Perfluorononanoic Acid (PFNA)	U (2.3)	U (2.3)	U (2.3)	U (2.3)	U (6.3)
Perfluorooctane Sulfonate (PFOS)	U (2.1)	U (2.1)	U (2.1)	U (2.1)	U (3.7)

Notes:

1 All concentrations are presented in ng/L.

Abbreviations:

U -- Not Detected.

( ) -- Method Detection Limit.

TABLE 4
Summary of QAQC Sampling Results
SGPP Hoosick Falls

Location	QAQC	QAQC	QAQC	QAQC	QAQC
Field Sample ID	SG1-TB02-150930	SG1-FB01-151001	SG1-RB01-151001	SG1-TB03-151001	SG1-FB01-151027
Sample Date	9/30/2015	10/1/2015	10/1/2015	10/1/2015	10/27/2015
Comments	Trip Blank	Field Blank	Rinsate Blank	Trip Blank	Field Blank
PFCS					
Perfluorobutane Sulfonate (PFBS)	U (8.5)	U (8.5)	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)	U (2.2)	U (2.2)	U (2.2)	U (2.2)	U (2.2)
Perfluorohexane Sulfonate (PFHxS)	U (2.9)	U (2.9)	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	U (1.6)	U (1.6)	U (1.6)	U (1.6)	U (1.6)
Perfluorononanoic Acid (PFNA)	U (2.3)	U (2.3)	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	U (2.1)	U (2.1)	U (2.1)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

Abbreviations:

U -- Not Detected.

( ) -- Method Detection Limit.

TABLE 4
Summary of QAQC Sampling Results
SGPP Hoosick Falls

Location	QAQC	QAQC	QAQC
Field Sample ID	SG1-RB01-151027	SG1-RB02-151027	SG1-TP01-151027
Sample Date	10/27/2015	10/27/2015	10/27/2015
Comments	Rinsate Blank	Rinsate Blank	Trip Blank
PFCS			
Perfluorobutane Sulfonate (PFBS)	U (8.5)	U (8.5)	U (8.5)
Perfluoroheptanoic Acid (PFHpA)	U (2.2)	U (2.2)	U (2.2)
Perfluorohexane Sulfonate (PFHxS)	U (2.9)	U (2.9)	U (2.9)
Perfluoro-n-Octanoic Acid (PFOA)	U (1.6)	U (1.6)	U (1.6)
Perfluorononanoic Acid (PFNA)	U (2.3)	U (2.3)	U (2.3)
Perfluorooctane Sulfonate (PFOS)	U (2.1)	U (2.1)	U (2.1)

Notes:

1 All concentrations are presented in ng/L.

Abbreviations:

U -- Not Detected.

( ) -- Method Detection Limit.

TABLE 5
Groundwater Elevation Data
SGPP Hoosick Falls

Well ID	Top of Casing Elevation (ft AMSL)	8/27/2015			9/2/2015		
		Depth to Water (feet below TOC)	Depth of Well (feet below TOC)	Water Elevation (ft AMSL)	Depth to Water (feet below TOC)	Depth of Well (feet below TOC)	Water Elevation (ft AMSL)
MW-1S*	455.01	5.57	14.73	449.44	10.44	14.73	444.57
MW-1	455.46	21.19	26.72	434.27	23.60	26.72	431.86
MW-2S*	460.21	13.63	19.03	446.58	13.10	19.03	447.11
MW-2	460.11	31.26	44.42	428.85	31.24	44.42	428.87
MW-3	436.33	12.13	18.51	424.2	12.46	18.51	423.87
MW-4	430.86	12.50	25.77	418.36	12.66	25.77	418.20
MW-5	433.50	11.72	21.42	421.78	12.02	21.42	421.48

Notes:
* = shallow monitoring well with perched groundwater
ft AMSL = feet above mean sea level
TOC = top of casing at monitoring well

II. Figures

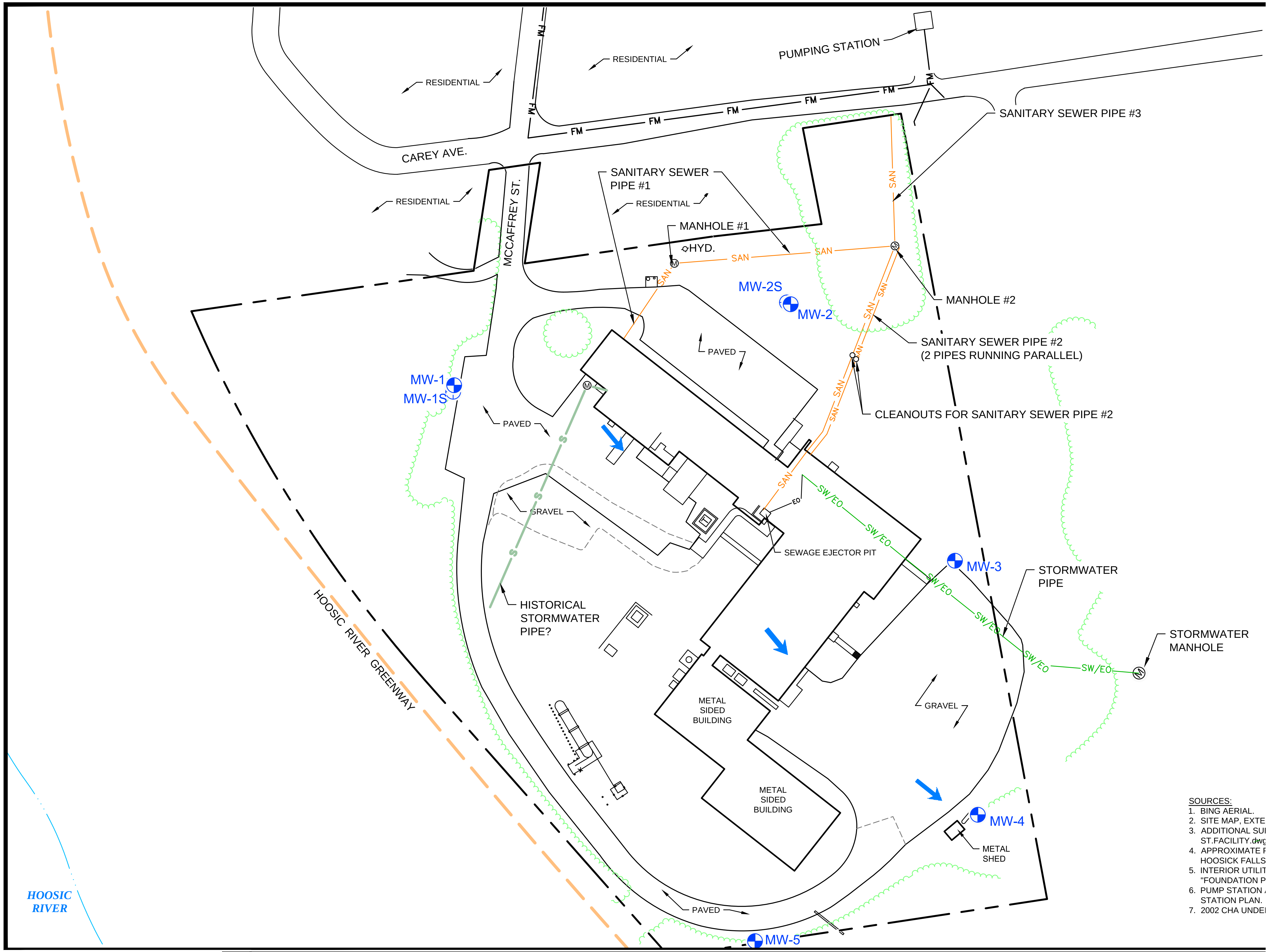
Figure 1: Site Location Map

Figure 2: Site Plan

SOURCE:
USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLES:
2013 EAGLE BRIDGE, HOOSICK FALLS, GRAFTON, NY AND 2011 NORTH POWNAL, VT. MAP SCALE: 1:24,000. SITE LOCATION: N: 42.893771° W: 73.357085° WGS84.

	SITE LOCATION MAP SAINT GOBAIN PERFORMANCE PLASTICS McCAFFREY STREET PLANT HOOSICK FALLS, NY	FIGURE **1**
DRAFTED BY: KPM — DATE: 02/03/2016		PROJECT: 0237128B

KMAUGHAN 2/3/16 F:\0237128_SGPP_CLIENT_REVIEW_JAN 2016 < SLM_HOOSICK FALLS NY_0237128 >



SITE PLAN

SAINT GOBAIN PERFORMANCE PLASTICS
McCAFFREY STREET PLANT
HOOSICK FALLS, NY

DRAFTED BY: KPM | DATE: 02/03/2016

KMAUGHAN 2/3/16 F:\0237128_SGPP_CLIENT_REVIEW_JAN 2016 < SITE PLAN_HOOSICK FALLS NY_0237128 >

III. Data Validation Reports

LEVEL II DATA VALIDATION REVIEW
Field Sampling Event
Saint Gobain Facility
14 McCaffrey Street
Hoosick Falls, New York

Laboratory Sample Delivery Groups (SDGs): 345165

Laboratory: Eurofins│Eaton Analytical, South Bend, Indiana

Reviewer: Wendy Stonestreet **Date Reviewed: September 17, 2015**

This data validation report has been prepared by Ramboll Environ US Corporation (Ramboll Environ) to assess the validity and usability of laboratory analytical data generated from samples collected during the field sampling event at the Saint Gobain Facility in Hoosick Falls, New York on July 29, 2015.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following documents:

- Field Sampling Plan, Saint Gobain Facility (July 2015);
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008); and
- DER-10/Technical Guidance for Site Investigation and Remediation (May 2010).

Analytical services for determination of selected perfluorinated alkyl acids (PFAAs) was provided by Eurofins│Eaton Analytical (Eurofins) of South Bend, Indiana.

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness and comparability relative to the project data quality objectives. This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability of the data.

Eight (8) aqueous samples were submitted to the laboratory for PFAA analysis and are evaluated in this data validation report. The following table lists the samples identification and analysis associated with this SDG.

Field ID	Sample Type	Lab ID	Matrix	Analyses
				PFAAs
SG1-RB01-150729	RB	3289462	Aqueous	X
SG1-RB02-150729	RB	3289463	Aqueous	X
SG1-RB03-150729	RB	3289464	Aqueous	X
SG1-RB04-150729	RB	3289465	Aqueous	X
SG1-RB05-150729	RB	3289466	Aqueous	X
SG1-RB06-150729	RB	3289467	Aqueous	X
SG1-FB01-150729	SA	3289468	Aqueous	X
SG1-TB01-150729	TB	3289469	Aqueous	X

Sample Type: SA = Sample TB = Trip Blank FD = Field Duplicate RB = Rinsate Blank
MS =Matrix Spike MSD = Matrix Spike Duplicate
PFAAs = Perfluorinated alkyl acids by USEPA Method SW-846 537 by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).

The following components of the laboratory report were evaluated as part of this Tier II Data Validation Review:

- Data Package Completeness,
- Sample Preservation and Holding Times,
- Blanks,
- Surrogate Compound Recoveries
- Laboratory Control Samples,
- Matrix Spike/Matrix Spike Duplicates,
- Laboratory and Field Precision,
- Overall Assessment of Data.

Based on the results of the Tier II Data Validation Review, the following conclusion was determined regarding data usability.

General Overall Assessment:

___X___ Data are usable without qualification.

_______ Data are usable with qualification (noted below).

_______ Some or all data are unusable for any purpose (detailed below).

More analysis of specific data quality topics and parameters are discussed below.

Case Narrative Comments: Any case narrative comments concerning data qualification are noted below.

1.0 Data Package Completeness

Q: *Were all items delivered as specified on the Chain of Custody (COC) and is the data package complete?*

A: Yes, the analysis was performed as requested on the chain-of-custody records. All sample ID's noted on the COC were revised by the laboratory per Rob Huening of Ramboll Environ on July 30, 2015. All samples were received by the laboratory and analyzed properly with appropriate corrective actions taken when appropriate. No data points were rejected. The data completeness measure for this data package is 100% and is acceptable.

2.0 Laboratory Case Narrative, Sample Preservation and Cooler Receipt Form

Q: *Were problems noted in the laboratory case narrative or cooler receipt form?*

A: Samples were received by the laboratory in good condition and at proper temperature. However, the laboratory case narrative did indicate the following notation regarding sample volume:

> *The laboratory noted that two samples were evaluated at an elevated reporting limit due to smaller sample volume analyzed.*

These elevated detection limits represent a small loss of sensitivity but do not affect overall usability of the data.

3.0 Technical Holding Times

Q: *Were samples extracted/analyzed within method specific holding time requirements?*

A: Yes. All samples were prepared and/or analyzed within the method specific required holding time.

4.0 Blank Contamination

Q: *Were any analytes detected in the associated laboratory or field blanks?*

A: No. All blanks results were reported as non-detect.

5.0 Surrogate Recoveries

Q: *Were surrogate recoveries within evaluation criteria?*

A: Yes. Surrogates are added to all samples prior to purging to evaluate the laboratory performance on individual samples. Two surrogates (SS-PFDA-13C2 and SS-PFHxA-13C2) were added to each sample. Percent recoveries (%R) for all surrogates in all samples were within the method acceptance limits of 70-130%. No analytical data were qualified based on the recoveries of the surrogate compounds.

6.0 Internal Standards

Q: *Were the internal standard areas within control limits and was the retention time criteria met?*

A: Yes. Internal standards indicate whether MS sensitivity and response were stable during each analysis. The laboratory reported that all criteria were within method requirements. No analytical data were qualified based on the results of internal standard recovery.

7.0 Fortified Blank Samples

Q: *Were fortified blank sample recoveries within evaluation criteria?*

A: Yes. Per the method, the laboratory ran a fortified blank (FB) at low, medium and high concentrations. All recoveries were within laboratory control limits and no analytical data were qualified based on the results of the fortified blanks.

8.0 Matrix Spike and Matrix Spike Duplicate (MS/MSD) Recoveries

Q: *Were MS/MSD samples reported as part of these SDGs?*

A: No. Matrix spike recoveries were not submitted for analysis and the accuracy evaluation was determined to be satisfactory based on the results of the FB samples.

9.0 Laboratory Duplicate Results

Q: *Were laboratory duplicate samples performed as part of this SDG?*

A: No. This is due to the small size of the sample batch. Since all samples were used for QC purposes, the lack of precision metrics does not affect usability.

10.0 Field Duplicate Results (Field Precision)

Q: *Were field duplicate samples collected as part of the evaluated SDGs?*

A: No

11.0 Detects and Calibration Range

Q: *For samples that were diluted and nondetect, were undiluted results also reported?*

A: Not Applicable. Samples were not diluted. However, two reporting limits were elevated due to reduced sample volume. While this non-conformance to established reporting limits does not affect the usability of the data, it does reduce the sensitivity of the instrument.

Q: *For samples that were not diluted and detected, were the results within calibration range?*

A: Yes

12.0 Additional Qualifications

Q: *Were additional qualifications applied?*

A: No

13.0 Overall Data Assessment

The data are usable for its intended purpose based on an evaluation of the QC parameters discussed in this report.

LEVEL II DATA VALIDATION REVIEW
Field Sampling Event
Saint Gobain Facility
14 McCaffrey Street
Hoosick Falls, New York

Laboratory Sample Delivery Groups (SDGs): 345317

Laboratory: Eurofins│Eaton Analytical, South Bend, Indiana

Reviewer: Wendy Stonestreet **Date Reviewed: September 18, 2015**

This data validation report has been prepared by Ramboll Environ US Corporation (Ramboll Environ) to assess the validity and usability of laboratory analytical data generated from samples collected during the field sampling event at the Saint Gobain Facility in Hoosick Falls, New York on July 31, 2015.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following documents:

- Field Sampling Plan, Saint Gobain Facility (July 2015);
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008); and
- DER-10/Technical Guidance for Site Investigation and Remediation (May 2010).

Analytical services for determination of selected perfluorinated alkyl acids (PFAAs) was provided by Eurofins│Eaton Analytical (Eurofins) of South Bend, Indiana.

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness and comparability relative to the project data quality objectives. This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability of the data.

Three (3) aqueous samples were submitted to the laboratory for PFAA analysis and are evaluated in this data validation report. The following table lists the samples identification and analysis associated with this SDG.

Field ID	Sample Type	Lab ID	Matrix	Analyses
				PFAAs
SG1-FB01-150731	FB	3290665	Aqueous	X
SG1-FB02-150731	FB	3290666	Aqueous	X
SG1-TB01-150731	TB	3290667	Aqueous	X

Sample Type: SA = Sample TB = Trip Blank FB = Field Blank RB = Rinsate Blank
MS =Matrix Spike MSD = Matrix Spike Duplicate
PFAAs = Perfluorinated alkyl acids by USEPA Method SW-846 537 by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).

The following components of the laboratory report were evaluated as part of this Tier II Data Validation Review:

- Data Package Completeness,
- Sample Preservation and Holding Times,
- Blanks,
- Surrogate Compound Recoveries
- Laboratory Control Samples,
- Matrix Spike/Matrix Spike Duplicates,
- Laboratory and Field Precision,
- Overall Assessment of Data.

Based on the results of the Tier II Data Validation Review, the following conclusion was determined regarding data usability.

General Overall Assessment:

___X__ Data are usable without qualification.

_______ Data are usable with qualification (noted below).

_______ Some or all data are unusable for any purpose (detailed below).

Case Narrative Comments: Any case narrative comments concerning data qualification are noted below.

1.0 Data Package Completeness

Q: *Were all items delivered as specified on the Chain of Custody (COC) and is the data package complete?*

A: Yes, the analysis was performed as requested on the chain-of-custody records. All samples were received by the laboratory and analyzed properly with appropriate corrective actions taken when applicable. No data points were rejected. The data completeness measure for this data package is 100% and is acceptable.

2.0 Laboratory Case Narrative, Sample Preservation and Cooler Receipt Form

Q: *Were problems noted in the laboratory case narrative or cooler receipt form?*

A: No. The laboratory did not note any problems in the laboratory case narrative or cooler receipt form.

3.0 Technical Holding Times

Q: Were samples extracted/analysed within method specific holding time requirements?

A: Yes. All samples were prepared and/or analyzed within the method specific required holding time.

4.0 Blank Contamination

Q: Were any analytes detected in the associated laboratory or field blanks?

A: No. All blanks results were reported as non-detect.

5.0 Surrogate Recoveries

Q: *Were surrogate recoveries within evaluation criteria?*

A: Yes. Surrogates are added to all samples prior to purging to evaluate the laboratory performance on individual samples. Two surrogates (SS-PFDA-13C2 and SS-PFHxA-13C2) were added to each sample. Percent recoveries (%R) for all surrogates in all samples were within the method acceptance limits of 70-130%.

No analytical data were qualified based on the recoveries of the surrogate compounds.

6.0 Internal Standards

Q: Were the internal standard areas within control limits and was the retention time criteria met?

A: Yes. Internal standards indicate whether MS sensitivity and response were stable during each analysis. The laboratory reported that all criteria were within method requirements.

No analytical data were qualified based on the results of internal standard recovery.

7.0 Fortified Blank Samples

Q: *Were fortified blank sample recoveries within evaluation criteria?*

A: Yes. Per the method, the laboratory ran a fortified blank (FB) at low, medium and high concentrations. All recoveries were within laboratory control limits and no analytical data were qualified based on the results of the fortified blanks.

8.0 Matrix Spike and Matrix Spike Duplicate (MS/MSD) Recoveries

Q: *Were MS/MSD samples reported as part of these SDGs?*

A: No. Matrix spike recoveries were not submitted for analysis and the accuracy evaluation was determined to be satisfactory based on the results of the FB samples.

9.0 Laboratory Duplicate Results

Q: Were laboratory duplicate samples performed as part of this SDG?

A: No. Since all samples were used for QC purposes, the lack of precision metrics does not affect usability.

10.0 Field Duplicate Results (Field Precision)

Q: *Were field duplicate samples collected as part of the evaluated SDGs?*

A: No. This is due to the small size of the sample batch.

11.0 Detects and Calibration Range

Q: For samples that were diluted and nondetect, were undiluted results also reported?

A: Not Applicable. Samples were not diluted.

Q: For samples that were not diluted and detected, were the results within calibration range?

A: Not Applicable. No detections were reported.

12.0 Additional Qualifications

Q: *Were additional qualifications applied?*

A: No

13.0 Overall Data Assessment

The data are usable for its intended purpose based on an evaluation of the QC parameters discussed in this report.

LEVEL II DATA VALIDATION REVIEW
Field Sampling Event
Saint Gobain Facility
14 McCaffrey Street
Hoosick Falls, New York

Laboratory Sample Delivery Groups (SDGs): 346703

Laboratory: Eurofins | Eaton Analytical, South Bend, Indiana

Reviewer: Wendy Stonestreet **Date Reviewed:** **September 18, 2015**

This data validation report has been prepared by Ramboll Environ US Corporation (Ramboll Environ) to assess the validity and usability of laboratory analytical data generated from samples collected during the field sampling event at the Saint Gobain Facility in Hoosick Falls, New York on August 7, 2015 and August 10^{th} through August 13^{th}, 2015.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following documents:

- Field Sampling Plan, Saint Gobain Facility (July 2015);
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008); and
- DER-10/Technical Guidance for Site Investigation and Remediation (May 2010).

Analytical services for determination of selected perfluorinated alkyl acids (PFAAs) was provided by Eurofins | Eaton Analytical (Eurofins) of South Bend, Indiana.

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness and comparability relative to the project data quality objectives. This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability of the data.

Thirteen (13) aqueous samples were submitted to the laboratory for PFAA analysis and are evaluated in this data validation report. The following table lists the samples identification and analysis associated with this SDG.

Field ID	Sample Type	Lab ID	Matrix	Analyses
				PFAAs
SG1-TB01-150807	TB	3301316	Aqueous	X
SG1-RB01-150807	RB	3301317	Aqueous	X
SG1-FB01-150810	SA	3301318	Aqueous	X
SG1-RB01-150810	RB	3301319	Aqueous	X
SG1-RB02-150810	RB	3301320	Aqueous	X
SG1-RB03-150810	RB	3301321	Aqueous	X
SG1-RB01-150811	RB	3301322	Aqueous	X
SG1-RB02-150811	RB	3301323	Aqueous	X
SG1-RB03-150811	RB	3301324	Aqueous	X
SG1-RB01-150812	RB	3301325	Aqueous	X

SG1-RB01-150813	RB	3301326	Aqueous	X
SG1-RB02-150813	RB	3301327	Aqueous	X
SG1-RB03-150813	RB	3301328	Aqueous	X

Sample Type: SA = Sample TB = Trip Blank FB = Field Blank RB = Rinsate Blank
MS =Matrix Spike MSD = Matrix Spike Duplicate
PFAAs = Perfluorinated alkyl acids by USEPA Method SW-846 537 by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).

The following components of the laboratory report were evaluated as part of this Tier II Data Validation Review:

- Data Package Completeness,
- Sample Preservation and Holding Times,
- Blanks,
- Surrogate Compound Recoveries
- Laboratory Control Samples,
- Matrix Spike/Matrix Spike Duplicates,
- Laboratory and Field Precision,
- Overall Assessment of Data.

Based on the results of the Tier II Data Validation Review, the following conclusion was determined regarding data usability.

General Overall Assessment:

___X__ Data are usable without qualification.

_______ Data are usable with qualification (noted below).

_______ Some or all data are unusable for any purpose (detailed below).

More analysis of specific data quality topics and parameters are discussed below.

Case Narrative Comments: Any case narrative comments concerning data qualification were noted below.

1.0 Data Package Completeness

Q: *Were all items delivered as specified on the Chain of Custody (COC) and is the data package complete?*

A: Yes, the analysis was performed as requested on the chain-of-custody records. All samples were received by the laboratory and analyzed properly with appropriate corrective actions taken when applicable. No data points were rejected. The data completeness measure for this data package is 100% and is acceptable.

2.0 Laboratory Case Narrative, Sample Preservation and Cooler Receipt Form

Q: *Were problems noted in the laboratory case narrative or cooler receipt form?*

A: No. The laboratory did not note any problems in the laboratory case narrative or cooler receipt form.

3.0 Technical Holding Times

Q: Were samples extracted/analyzed within method specific holding time requirements?

A: Yes. All samples were prepared and/or analyzed within the method specific required holding time.

4.0 Blank Contamination

Q: Were any analytes detected in the associated laboratory or field blanks?

A: No. All blanks results were reported as non-detect.

5.0 Surrogate Recoveries

Q: *Were surrogate recoveries within evaluation criteria?*

A: Yes. Surrogates are added to all samples prior to purging to evaluate the laboratory performance on individual samples. Two surrogates (SS-PFDA-13C2 and SS-PFHxA-13C2) were added to each sample. Percent recoveries (%R) for all surrogates in all samples were within the method acceptance limits of 70-130%.

No analytical data were qualified based on the recoveries of the surrogate compounds.

6.0 Internal Standards

Q: Were the internal standard areas within control limits and was the retention time criteria met?

A: Yes. Internal standards indicate whether MS sensitivity and response were stable during each analysis. The laboratory reported that all criteria were within method requirements.

No analytical data were qualified based on the results of internal standard recovery.

7.0 Fortified Blank Samples

Q: *Were fortified blank sample recoveries within evaluation criteria?*

A: Yes. Per the method, the laboratory ran a fortified blank (FB) at low, medium and high concentrations. All recoveries were within laboratory control limits and no analytical data were qualified based on the results of the fortified blanks.

8.0 Matrix Spike and Matrix Spike Duplicate (MS/MSD) Recoveries

Q:*Were MS/MSD samples reported as part of these SDGs?*

A: No. Matrix spike recoveries were not submitted for analysis and the accuracy evaluation was determined to be satisfactory based on the results of the FB samples.

9.0 Laboratory Duplicate Results

Q: *Were laboratory duplicate samples performed as part of this SDG?*

A: No. This is due to the small size of the sample batch. Since all samples were used for QC purposes, the lack of precision metrics does not affect usability.

10.0 Field Duplicate Results (Field Precision)

Q: *Were field duplicate samples collected as part of the evaluated SDGs?*

A: No

11.0 Detects and Calibration Range

Q: For samples that were diluted and nondetect, were undiluted results also reported?

A: Not Applicable. Samples were not diluted.

Q: For samples that were not diluted and detected, were the results within calibration range?

A: Not Applicable. No detections were reported.

12.0 Additional Qualifications

Q: *Were additional qualifications applied?*

A: No

13.0 Overall Data Assessment

The data are usable for its intended purpose based on an evaluation of the QC parameters discussed in this report.

LEVEL II DATA VALIDATION REVIEW
Field Sampling Event
Saint Gobain Facility
14 McCaffrey Street
Hoosick Falls, New York

Laboratory Sample Delivery Groups (SDGs): 348249

Laboratory: Eurofins|Eaton Analytical, South Bend, Indiana

Reviewer: Wendy Stonestreet **Date Reviewed: September 18, 2015**

This data validation report has been prepared by Ramboll Environ US Corporation (Ramboll Environ) to assess the validity and usability of laboratory analytical data generated from samples collected during the field sampling event at the Saint Gobain Facility in Hoosick Falls, New York on September 2 and September 3, 2015.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following documents:

- Field Sampling Plan, Saint Gobain Facility (July 2015);
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008); and
- DER-10/Technical Guidance for Site Investigation and Remediation (May 2010).

Analytical services for determination of selected perfluorinated alkyl acids (PFAAs) was provided by Eurofins|Eaton Analytical (Eurofins) of South Bend, Indiana.

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness and comparability relative to the project data quality objectives. This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability of the data.

Seventeen (17) aqueous samples were submitted to the laboratory for PFAA analysis and are evaluated in this data validation report. The following table lists the samples identification and analysis associated with this SDG.

Field ID	Sample Type	Lab ID	Matrix	Analyses
				PFAAs
SG1-TB01-150902	TB	3315941	Aqueous	X
SG1-RB01-150902	SA	3315942	Aqueous	X
SG1-RB02-150902	SA	3315943	Aqueous	X
SG1-RB03-150902	SA	3315944	Aqueous	X
SG1-RB04-150902	SA	3315945	Aqueous	X
SG1-MW02-150902	SA	3315946	Aqueous	X
SG1-RB05-150902	SA	3315947	Aqueous	X
SG1-RB06-150902	SA	3315948	Aqueous	X
SG1-FB01-150902	SA	3315949	Aqueous	X
SG1-MW02S-150902	SA	3315950	Aqueous	X

SG1-MW01D-150903	SA	3315951	Aqueous	X
SG1-MW01S-150903	SA	3315952	Aqueous	X
SG1-MW05-150903	SA/MS/ MSD	3315953, 3315954, 3315955	Aqueous	X
SG1-TB01-150903	TB	3315956	Aqueous	X
SG1-MW04-150903	SA	3315957	Aqueous	X
SG1-DS01-150903	FD	3315958	Aqueous	X
SG1-MW03-150903	SA	3315959	Aqueous	X

Sample Type: SA = Sample TB = Trip Blank FD = Field Duplicate RB = Rinsate Blank
MS =Matrix Spike MSD = Matrix Spike Duplicate
PFAAs = Perfluorinated alkyl acids by USEPA Method SW-846 537 by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).

The following components of the laboratory report were evaluated as part of this Tier II Data Validation Review:

- Data Package Completeness,
- Sample Preservation and Holding Times,
- Blanks,
- Surrogate Compound Recoveries
- Laboratory Control Samples,
- Matrix Spike/Matrix Spike Duplicates,
- Laboratory and Field Precision,
- Overall Assessment of Data.

Based on the results of the Tier II Data Validation Review, the following conclusion was determined regarding data usability.

General Overall Assessment:

___X__ Data are usable without qualification.

_______ Data are usable with qualification (noted below).

_______ Some or all data are unusable for any purpose (detailed below).

More analysis of specific data quality topics and parameters are discussed below.

Case Narrative Comments: Any case narrative comments concerning data qualification were noted below.

1.0 Data Package Completeness

Q: *Were all items delivered as specified on the Chain of Custody (COC) and is the data package complete?*

A: Yes, the analysis was performed as requested on the chain-of-custody records. All samples were received by the laboratory and analyzed properly with appropriate corrective actions taken when appropriate. No data points were rejected. The data completeness measure for this data package is 100% and is acceptable.

2.0 Laboratory Case Narrative, Sample Preservation and Cooler Receipt Form

Q: *Were problems noted in the laboratory case narrative or cooler receipt form?*

A: Yes, a deviation from EPA Method 537 was noted on the chain of custody (cooler receipt form), as described below. Samples were received at the Eurofins, South Bend, Indiana laboratory in good condition. Two coolers were received at 1.4˚C and 0.2˚C which were below the proper temperature range 4˚C ± 2˚C. However, given that the temperature was taken using an Infrared thermometer, which has an error tolerance of +/-1.0 degrees Celsius, and the laboratory did not note any freezing of the samples, this non-conformance does not affect the usability of the data.

3.0 Technical Holding Times

Q: Were samples extracted/analyzed within method specific holding time requirements?

A: Yes. All samples were prepared and/or analyzed within the method specific required holding time.

4.0 Blank Contamination

Q: Were any analytes detected in the associated laboratory or field blanks?

A: No. All blanks results were reported as non-detect.

5.0 Surrogate Recoveries

Q: *Were surrogate recoveries within evaluation criteria?*

A: Yes. Surrogates are added to all samples prior to purging to evaluate the laboratory performance on individual samples. Two surrogates (SS-PFDA-13C2 and SS-PFHxA-13C2) were added to each sample. Percent recoveries (%R) for all surrogates in all samples were within the method acceptance limits of 70-130%.

No analytical data were qualified based on the recoveries of the surrogate compounds.

6.0 Internal Standards

Q: Were the internal standard areas within control limits and was the retention time criteria met?

A: Yes. Internal standards indicate whether MS sensitivity and response were stable during each analysis. The laboratory reported that all criteria were within method requirements.

No analytical data were qualified based on the results of internal standard recovery.

7.0 Fortified Blank Samples

Q: *Were fortified blank sample recoveries within evaluation criteria?*

A: Yes. Per the method, the laboratory ran a fortified blank (FB) at low, medium and high concentrations. All recoveries were within laboratory control limits and no analytical data were qualified based on the results of the fortified blanks.

8.0 Matrix Spike and Matrix Spike Duplicate (MS/MSD) Recoveries

Q: *Were MS/MSD samples reported as part of these SDGs?*

A: Yes. A matrix spike and matrix spike duplicate was submitted to the laboratory for analysis. All MS/MSD recoveries were reported within the laboratory acceptance limits of 50-150% indicating satisfactory analytical accuracy. In addition all MS/MSD relative percent differences (RPDs) were reported within laboratory acceptance limits indicating satisfactory analytical precision.

9.0 Laboratory Duplicate Results

Q: *Were laboratory duplicate samples performed as part of this SDG?*

A: Yes. All duplicate RPDs were within control limits.

10.0 Field Duplicate Results (Field Precision)

Q: *Were field duplicate samples collected as part of the evaluated SDGs?*

A: Yes, the evaluated relative percent differences (RPDs) between the reported results are indicated in the following table.

Analyte	SG1-MW03-150903 (ng/L)	SG1-DS01-150903 (ng/L)	RPD (%)
Perfluorooctanoic Acid (PFOA)	4200	5300	23.2%

ng/L = nanograms/Liter RPD = Relative Percent Difference

11.0 Detects and Calibration Range

Q: For samples that were diluted and nondetect, were undiluted results also reported?

A: Not Applicable. Samples were not diluted.

Q: For samples that were not diluted and detected, were the results within calibration range?

A: Yes

12.0 Additional Qualifications

Q: *Were additional qualifications applied?*

A: No

13.0 Overall Data Assessment

The data are usable for its intended purpose based on an evaluation of the QC parameters discussed in this report.

LEVEL II DATA VALIDATION REVIEW
Field Sampling Event
Saint Gobain Facility
14 McCaffrey Street
Hoosick Falls, New York

Laboratory Sample Delivery Groups (SDGs): 350056 (Eurofins) and B5J9607 (Maxxam)

Laboratory: Eurofins│Eaton Analytical, South Bend, Indiana and Maxxam Analytics, Mississauga, Ontario

Reviewer: Wendy Stonestreet **Date Reviewed: October 13, 2015**

This data validation report has been prepared by Ramboll Environ US Corporation (Ramboll Environ) to assess the validity and usability of laboratory analytical data generated from samples collected during the field sampling event at the Saint Gobain Facility in Hoosick Falls, New York on September 30, 2015.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following documents:

- Field Sampling Plan, Saint Gobain Facility (July 2015);
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008); and
- DER-10/Technical Guidance for Site Investigation and Remediation (May 2010).

Analytical services for determination of selected perfluorinated alkyl acids (PFAAs) was provided by Eurofins│Eaton Analytical (Eurofins) of South Bend, Indiana and split samples were sent to Maxxam Analytics (Maxxam) in Mississauga, Ontario.

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness and comparability relative to the project data quality objectives. This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability of the data.

Three (3) aqueous samples were submitted to the Eurofins and Maxxam laboratories for PFAA analysis and evaluated in this data validation report. The following table lists the samples identification and analysis associated with this SDG.

Field ID	Sample Type	Lab ID Eurofins/Maxxam	Matrix	Analyses
				PFAAs
SG1-MW02-150930	SA	3332984 (Eurofins), BBX430 (Maxxam)	Aqueous	X
SG1-TB01-150930	TB	BBX431 (Maxxam)	Aqueous	X
SG1-TB02-150930	TB	3332985 (Eurofins)	Aqueous	X

Sample Type: SA = Sample TB = Trip Blank FD = Field Duplicate RB = Rinsate Blank
MS =Matrix Spike MSD = Matrix Spike Duplicate
PFAAs = Perfluorinated alkyl acids by USEPA Method SW-846 537 by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).

The following components of the laboratory report were evaluated as part of this Tier II Data Validation Review:

- Data Package Completeness,
- Sample Preservation and Holding Times,
- Blanks,
- Surrogate Compound Recoveries
- Laboratory Control Samples,
- Matrix Spike/Matrix Spike Duplicates,
- Laboratory and Field Precision,
- Overall Assessment of Data.

Based on the results of the Tier II Data Validation Review, the following conclusion was determined regarding data usability.

General Overall Assessment:

_______ Data are usable without qualification.

___X___ Data are usable with qualification (noted below).

_______ Some or all data are unusable for any purpose (detailed below).

More analysis of specific data quality topics and parameters are discussed below.

Case Narrative Comments: Any case narrative comments concerning data qualification were noted below.

1.0 Data Package Completeness

Q: *Were all items delivered as specified on the Chain of Custody (COC) and is the data package complete?*

A: Yes, the analysis was performed as requested on the chain-of-custody records. All samples were received by the laboratory and analyzed properly with appropriate corrective actions taken when appropriate. No data points were rejected. The data completeness measure for this data package is 100% and is acceptable.

2.0 Laboratory Case Narrative, Sample Preservation and Cooler Receipt Form

Q: *Were problems noted in the laboratory case narrative or cooler receipt form?*

A: Yes, a deviation from EPA Method 537 was noted on the chain of custody (cooler receipt form) from Eurofins. Samples were received at the Eurofins, South Bend, Indiana laboratory in good condition. One cooler was received at 1.2˚C which was below the proper temperature range 4˚C ± 2˚C. However, given that the temperature was taken using an Infrared thermometer, which has an error tolerance of +/-1.0 degrees Celsius, and the laboratory did not note any freezing of the samples, this non-conformance does not affect the usability of the data.

The Maxxam data package case narrative indicated that one sample required dilution. See Section 11.0 for further discussion and resultant data qualification. The samples were received at the Maxxam laboratory in Mississauga, Ontario in good condition and proper temperature range (4˚C ± 2˚C).

3.0 Technical Holding Times

Q: Were samples extracted/analyzed within method specific holding time requirements?

A: Yes. All samples were prepared and/or analyzed within the method specific required holding time.

4.0 Blank Contamination

Q: Were any analytes detected in the associated laboratory or field blanks?

A: No. All blanks results were reported as non-detect.

5.0 Surrogate Recoveries

Q: *Were surrogate recoveries within evaluation criteria?*

A: Yes. Surrogates are added to all samples prior to purging to evaluate the laboratory performance on individual samples. Two surrogates (SS-PFDA-13C2 and SS-PFHxA-13C2) were added to each Eurofins evaluated sample. Percent recoveries (%R) for all surrogates in all samples were within the method acceptance limits of 70-130%.

Two surrogates (13C4-Perfluorooctanesulfonate and 13C4-Perfluorooctanoic acid) were added to each Maxxam evaluated sample. The recovery of 13C4-Perfluorooctanoic acid was reported at 136% which was slightly above the method acceptance limits of 70-130% for sample SG1-MW02-150930 indicating possible high analytical bias. All other surrogate recoveries were reported within laboratory control limits.

Data qualification of sample results due to surrogate recovery is summarized in the table below.

SDG	Field ID	Parameter	Analyte	Qualification
B5J9607	SG1-MW02-150930	PFAAs	Perfluoroheptanoic Acid (PFHpA)	**J**
			Perfluorooctanoic Acid (PFOA)	**J**

6.0 Internal Standards

Q: Were the internal standard areas within control limits and was the retention time criteria met?

A: Yes. Internal standards indicate whether MS sensitivity and response were stable during each analysis. The laboratory reported that all criteria were within method requirements.

No analytical data were qualified based on the results of internal standard recovery.

7.0 Fortified Blank Samples

Q: *Were fortified blank sample recoveries within evaluation criteria?*

A: Yes. Per the method, the laboratory ran a fortified blank (FB) at low, medium and high concentrations. All recoveries were within laboratory control limits and no analytical data were qualified based on the results of the fortified blanks.

8.0 Matrix Spike and Matrix Spike Duplicate (MS/MSD) Recoveries

Q: *Were MS/MSD samples reported as part of these SDGs?*

A: No. Matrix spike recoveries were not submitted for analysis and the accuracy evaluation was determined to be satisfactory based on the results of the FB samples.

9.0 Laboratory Duplicate Results

Q: *Were laboratory duplicate samples performed as part of this SDG?*

A: Yes. All duplicate RPDs were within laboratory control limits.

10.0 Field Duplicate Results (Field Precision)

Q: *Were field duplicate samples collected as part of the evaluated SDGs?*

A: No, however the results evaluated in these data packages were duplicate split samples. The evaluated relative percent differences (RPDs) between each laboratory's reported results are indicated in the following table.

Sample ID	Analyte	Eurofins SDG: 350056 (ug/L)	Maxxam SDG: B5J9607 (ug/L)	RPD (%)
SG1-MW02-150930	Perfluoroheptanoic Acid (PFHpA)	0.31	0.39	22.9%
	Perfluorooctanoic Acid (PFOA)	17.0	16.0	6.0%

ug/L = micrograms/Liter   RPD = Relative Percent Difference

11.0 Detects and Calibration Range

Q: For samples that were diluted and nondetect, were undiluted results also reported?

A: Not Applicable. Samples which required dilution had reported results.

Q: For samples that were not diluted and detected, were the results within calibration range?

A: Yes

12.0 Additional Qualifications

Q: *Were additional qualifications applied?*

A: No

13.0 Overall Data Assessment

The data are usable for its intended purpose based on an evaluation of the QC parameters discussed in this report. Some data are qualified as estimated due to the inability to meet all QC criteria. The table below summarizes the final qualifications for the analytical data.

SDG	Field ID	Parameter	Analyte	Qualification	Reason Code
B5J9607	SG1-MW02-150930	PFAAs	Perfluoroheptanoic Acid (PFHpA)	**J**	**1**
B5J9607	SG1-MW02-150930	PFAAs	Perfluorooctanoic Acid (PFOA)	**J**	**1**

Data Validation Qualifier Codes:

U = Non-detect. The compound was analyzed for, but not detected.
J = Estimated. The associated numerical value is an estimated quantity. The analyte was detected but the reported value may not be accurate or precise.
UJ = Estimated Non-detect. The analyte was not detected above the method detection limit. However, it is an estimated quantity due to poor accuracy or precision. This qualification is also used to flag possible false negative results in the case where low bias in the analytical system is indicated by low calibration response, surrogate or other spike recovery.
R = Rejected. The sample results are unusable due to the quality of the data generated.

Data Qualifier Reason Codes:

1 Samples were qualified as estimated due to possible high analytical bias.

LEVEL II DATA VALIDATION REVIEW
Field Sampling Event
Saint Gobain Facility
14 McCaffrey Street
Hoosick Falls, New York

Laboratory Sample Delivery Groups (SDGs): 350168

Laboratory: Eurofins|Eaton Analytical, South Bend, Indiana

Reviewer: Wendy Stonestreet **Date Reviewed: October 13, 2015**

This data validation report has been prepared by Ramboll Environ US Corporation (Ramboll Environ) to assess the validity and usability of laboratory analytical data generated from samples collected during the field sampling event at the Saint Gobain Facility in Hoosick Falls, New York on September 30, 2015 and October 1, 2015.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following documents:

- Field Sampling Plan, Saint Gobain Facility (July 2015);
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008); and
- DER-10/Technical Guidance for Site Investigation and Remediation (May 2010).

Analytical services for determination of selected perfluorinated alkyl acids (PFAAs) was provided by Eurofins|Eaton Analytical (Eurofins) of South Bend, Indiana.

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness and comparability relative to the project data quality objectives. This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability of the data.

Eleven (11) aqueous samples were submitted to the laboratory for PFAA analysis and are evaluated in this data validation report. The following table lists the samples identification and analysis associated with this SDG.

Field ID	Sample Type	Lab ID	Matrix	Analyses
				PFAAs
SG1-TB03-151001	TB	3333953	Aqueous	X
SG1-MW02S-151001	SA	3333954	Aqueous	X
SG1-MW05-151001	SA, MS, MSD	3333955, 3333956, 3333957	Aqueous	X
SG1-MW03-151001	SA	3333958	Aqueous	X
SG1-MW04-151001	SA	3333959	Aqueous	X
SG1-DS01-151001	FD	3333960	Aqueous	X
SG1-MW01-151001	SA	3333961	Aqueous	X
SG1-MW01S-151001	SA	3333962	Aqueous	X
SG1-RB01-151001	RB	3333963	Aqueous	X

Field ID	Sample Type	Lab ID	Matrix	Analyses
				PFAAs
SG1-RB01-150930	RB	3333964	Aqueous	X
SG1-FB01-151001	FB	3333965	Aqueous	X

Sample Type: SA = Sample TB = Trip Blank FD = Field Duplicate RB = Rinsate Blank
MS =Matrix Spike MSD = Matrix Spike Duplicate
PFAAs = Perfluorinated alkyl acids by USEPA Method SW-846 537 by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).

The following components of the laboratory report were evaluated as part of this Tier II Data Validation Review:

- Data Package Completeness,
- Sample Preservation and Holding Times,
- Blanks,
- Surrogate Compound Recoveries
- Laboratory Control Samples,
- Matrix Spike/Matrix Spike Duplicates,
- Laboratory and Field Precision,
- Overall Assessment of Data.

Based on the results of the Tier II Data Validation Review, the following conclusion was determined regarding data usability.

General Overall Assessment:

___X__ Data are usable without qualification.

_______ Data are usable with qualification (noted below).

_______ Some or all data are unusable for any purpose (detailed below).

More analysis of specific data quality topics and parameters are discussed below.

Case Narrative Comments: Any case narrative comments concerning data qualification were noted below.

1.0 Data Package Completeness

Q: *Were all items delivered as specified on the Chain of Custody (COC) and is the data package complete?*

A: Yes, the analysis was performed as requested on the chain-of-custody records. All samples were received by the laboratory and analyzed properly with appropriate corrective actions taken when appropriate. No data points were rejected. The data completeness measure for this data package is 100% and is acceptable.

2.0 Laboratory Case Narrative, Sample Preservation and Cooler Receipt Form

Q: *Were problems noted in the laboratory case narrative or cooler receipt form?*

A: Yes, a deviation from EPA Method 537 was noted on the chain of custody (cooler receipt form). One cooler was received at 1.0˚C which was below the proper temperature range 4˚C ± 2˚C. However, given that the temperature was taken using an Infrared thermometer, which has an error tolerance of +/-1.0 degrees Celsius, and the laboratory did not note any freezing of the samples, this non-conformance does not affect the usability of the data.

3.0 Technical Holding Times

Q: Were samples extracted/analyzed within method specific holding time requirements?

A: Yes. All samples were prepared and/or analyzed within the method specific required holding time.

4.0 Blank Contamination

Q: Were any analytes detected in the associated laboratory or field blanks?

A: No. All blanks results were reported as non-detect.

5.0 Surrogate Recoveries

Q: *Were surrogate recoveries within evaluation criteria?*

A: Yes. Surrogates are added to all samples prior to purging to evaluate the laboratory performance on individual samples. Two surrogates (SS-PFDA-13C2 and SS-PFHxA-13C2) were added to each sample. Percent recoveries (%R) for all surrogates in all samples were within the method acceptance limits of 70-130%.

No analytical data were qualified based on the recoveries of the surrogate compounds.

6.0 Internal Standards

Q: Were the internal standard areas within control limits and was the retention time criteria met?

A: Yes. Internal standards indicate whether MS sensitivity and response were stable during each analysis. The laboratory reported that all criteria were within method requirements.

No analytical data were qualified based on the results of internal standard recovery.

7.0 Fortified Blank Samples

Q: *Were fortified blank sample recoveries within evaluation criteria?*

A: Yes. Per the method, the laboratory ran a fortified blank (FB) at low, medium and high concentrations. All recoveries were within laboratory control limits and no analytical data were qualified based on the results of the fortified blanks.

8.0 Matrix Spike and Matrix Spike Duplicate (MS/MSD) Recoveries

Q: *Were MS/MSD samples reported as part of these SDGs?*

A: Yes. Matrix spike recoveries were submitted for analysis and the accuracy evaluation was determined to be satisfactory based on reported recoveries. All relative percent differences (RPDs) evaluated from MS/MSD recoveries were reported within laboratory control limits indicating acceptable analytical precision.

9.0 Laboratory Duplicate Results

Q: *Were laboratory duplicate samples performed as part of this SDG?*

A: Yes. All duplicate RPDs were within laboratory control limits.

10.0 Field Duplicate Results (Field Precision)

Q: *Were field duplicate samples collected as part of the evaluated SDGs?*

A: Yes, the evaluated relative percent differences (RPDs) between the reported results are indicated in the following table.

Analyte	SG1-MW04-151001 (ng/L)	SG1-DS01-151001 (ng/L)	RPD (%)
Perfluorooctanoic Acid (PFOA)	1400	1400	0%

ng/L = nanograms/Liter   RPD = Relative Percent Difference

11.0 Detects and Calibration Range

Q: For samples that were diluted and nondetect, were undiluted results also reported?

A: Not Applicable. Samples were not diluted.

Q: For samples that were not diluted and detected, were the results within calibration range?

A: Yes

12.0 Additional Qualifications

Q: *Were additional qualifications applied?*

A: No

13.0 Overall Data Assessment

The data are usable for its intended purpose based on an evaluation of the QC parameters discussed in this report.

LEVEL II DATA VALIDATION REVIEW
Field Sampling Event
Saint Gobain Facility
14 McCaffrey Street
Hoosick Falls, New York

Laboratory Sample Delivery Groups (SDGs): 351818

Laboratory: Eurofins|Eaton Analytical, South Bend, Indiana

Reviewer: Wendy Stonestreet **Date Reviewed: November 8, 2015**

This data validation report has been prepared by Ramboll Environ US Corporation (Ramboll Environ) to assess the validity and usability of laboratory analytical data generated from samples collected during the field sampling event at the Saint Gobain Facility in Hoosick Falls, New York on October 27, 2015.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following documents:

- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008); and
- DER-10/Technical Guidance for Site Investigation and Remediation (May 2010).

Analytical services for determination of selected perfluorinated alkyl acids (PFAAs) were provided by Eurofins|Eaton Analytical (Eurofins) of South Bend, Indiana.

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness and comparability relative to the project data quality objectives. This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability of the data.

Seven (7) aqueous samples were submitted to the laboratory for PFAA analysis and evaluated in this data validation report. The following table lists the samples identification and analysis associated with this SDG.

Field ID	Sample Type	Lab ID	Matrix	Analyses
				PFAAs
SG1-FB01-151027	FB	3348699	Aqueous	X
SG1-RB01-151027	RB	3348700	Aqueous	X
SG1-North Manhole-151027	SA	3348701	Aqueous	X
SG1-TB01-151027	TB	3348702	Aqueous	X
SG1-Sump Pit-151027	SA	3348703	Aqueous	X
SG1-DS01-151027	FD	3348704	Aqueous	X
SG1-RB02-151027	RB	3348705	Aqueous	X

Sample Type: SA = Sample TB = Trip Blank FD = Field Duplicate RB = Rinsate Blank FB = Field Blank
MS =Matrix Spike MSD = Matrix Spike Duplicate
PFAAs = Perfluorinated alkyl acids by USEPA Method SW-846 537 by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).

The following components of the laboratory report were evaluated as part of this Tier II Data Validation

Review:

- Data Package Completeness,
- Sample Preservation and Holding Times,
- Blanks,
- Surrogate Compound Recoveries
- Laboratory Control Samples,
- Matrix Spike/Matrix Spike Duplicates,
- Laboratory and Field Precision,
- Overall Assessment of Data.

Based on the results of the Tier II Data Validation Review, the following conclusion was determined regarding data usability.

General Overall Assessment:

___ Data are usable without qualification.

___X___ Data are usable with qualification (noted below).

_______ Some or all data are unusable for any purpose (detailed below).

More analysis of specific data quality topics and parameters are discussed below.

Case Narrative Comments: Any case narrative comments concerning data qualification were noted below.

1.0 Data Package Completeness

Q: *Were all items delivered as specified on the Chain of Custody (COC) and is the data package complete?*

A: Yes, the analysis was performed as requested on the chain-of-custody records. All samples were received by the laboratory and analyzed properly with appropriate corrective actions taken when appropriate. No data points were rejected. The data completeness measure for this data package is 100% and is acceptable.

2.0 Laboratory Case Narrative, Sample Preservation and Cooler Receipt Form

Q: *Were problems noted in the laboratory case narrative or cooler receipt form?*

A: Yes. The laboratory indicated in the laboratory case narrative that the surrogate standard recovery was outside of the laboratory control limits for sample SG1-North Manhole-151027.

In addition, the laboratory indicated on the chain of custody (cooler receipt form) that sample SG1-North Manhole-151027 had a very poor sample matrix which may have been attributed to poor surrogate recovery in the sample. See Section 5.0 for further discussion and resultant data qualification.

Moreover, the laboratory indicated very poor sample matrix for samples SG1-Sump Pit-151027 and SG1-DS01-151027 chain of custody (cooler receipt form); however no additional quality control non-conformances were discussed in the laboratory report related to these samples. See Section 10.0 for further discussion and resultant data qualification.

Samples were received at the Eurofins, South Bend, Indiana laboratory in good condition and at proper temperature range 4˚C ± 2˚C (one cooler at 2.8 ˚C).

3.0 Technical Holding Times

Q: Were samples extracted/analysed within method specific holding time requirements?

A: Yes. All samples were prepared and/or analysed within the method specific required holding time.

4.0 Blank Contamination

Q: Were any analytes detected in the associated laboratory or field blanks?

A: No. All blanks results were reported as non-detect.

5.0 Surrogate Recoveries

Q: *Were surrogate recoveries within evaluation criteria?*

A: No. Surrogates are added to all samples prior to purging to evaluate the laboratory performance on individual samples. Two surrogates (SS-PFDA-13C2 and SS-PFHxA-13C2) were added to each sample. Percent recoveries (%R) for all surrogates in all samples were within the method acceptance limits of 70-130% with the exception of SS-PFHxA in sample SG1-North Manhole-151027 at 58%.

Data qualification of sample results due to surrogate recovery non-conformances are summarized in the table below due to possible low analytical bias.

Field ID	Parameter	Analyte	Qualification
SG1-North Manhole-151027	SW-846 537	Perfluorobutanesulfonic acid (PFBS)	**U**
SG1-North Manhole-151027	SW-846 537	Perfluoroheptanoic acid (PFHpA)	**J**
SG1-North Manhole-151027	SW-846 537	Perfluorohexanesulfonic acid (PFHxS)	**U**
SG1-North Manhole-151027	SW-846 537	Perfluorononanoic acid (PFNA)	**U**
SG1-North Manhole-151027	SW-846 537	Perfluorooctane sulfonate (PFOS)	**U**

6.0 Internal Standards

Q: Were the internal standard areas within control limits and was the retention time criteria met?

A: Yes. Internal standards indicate whether MS sensitivity and response were stable during each analysis. The laboratory reported that all criteria were within method requirements.

No analytical data were qualified based on the results of internal standard recovery.

7.0 Fortified Blank Samples

Q: *Were fortified blank sample recoveries within evaluation criteria?*

A: Yes. Per the method, the laboratory ran a fortified blank (FB) at low, medium and high concentrations. All recoveries were within laboratory control limits and no analytical data were qualified based on the results of the fortified blanks.

8.0 Matrix Spike and Matrix Spike Duplicate (MS/MSD) Recoveries

Q: *Were MS/MSD samples reported as part of these SDGs?*

A: No.

9.0 Laboratory Duplicate Results

Q: *Were laboratory duplicate samples performed as part of this SDG?*

A: No

10.0 Field Duplicate Results (Field Precision)

Q: *Were field duplicate samples collected as part of the evaluated SDGs?*

A: Yes the table below summarizes field duplicate pairs.

Field ID	Field Duplicate ID
SG1-Sump Pit-151027	SG1-DS01-151027

Q: Were field duplicates within evaluation criteria?

A: No. RPD values were less than the control limit of <30% for all compounds with concentrations greater than the reporting limit with the exception of the duplicate of PFOA at 57.6%. The following table summarizes sample and duplicate result concentrations and their relative percent difference.

Field ID	Duplicate ID	Analyte	Sample Result (ng/L)	Duplicate Result (ng/L)	RPD (%)
SG1-Sump Pit-151027	SG1-DS01-151027	Perfluoroheptanoic acid (PFHpA)	10	10	0
		Perfluoro-n-octanoic acid (PFOA)	850	470	**57.6**

ng/L = nanograms per Liter RPD = Relative Percent Difference % = Percent

The RPD for PFOA at 57.6% was above the acceptable control limit for aqueous samples of 30%. The laboratory noted in the sample acknowledgement form that the sample matrix was very poor. The laboratory indicated during a phone call on 11/11/2015 that the sample matrix was sludge which is a difficult matrix to evaluate for this method. Therefore the high RPD may be attributed to a non-homogenous sample matrix.

11.0 Detects and Calibration Range

Q: For samples that were diluted and nondetect, were undiluted results also reported?

A: Not Applicable, all samples results which were reported at dilution had detectable concentrations above the method reporting limit (MRL).

Q: For samples that were not diluted and detected, were the results within calibration range?

A: Yes

12.0 Additional Qualifications

Q: *Were additional qualifications applied?*

A: No

13.0 Overall Data Assessment

The data are usable for its intended purpose based on an evaluation of the QC parameters discussed in this report. Some data are qualified as estimated due to the inability to meet all QC criteria. The table below summarizes the final qualifications for the analytical data.

Field ID	Parameter	Analyte	Qualification	Reason Code
SG1-North Manhole-151027	SW-846 537	Perfluorobutanesulfonic acid (PFBS)	**U**	**1**
SG1-North Manhole-151027	SW-846 537	Perfluoroheptanoic acid (PFHpA)	**J**	**1**
SG1-North Manhole-151027	SW-846 537	Perfluorohexanesulfonic acid (PFHxS)	**U**	**1**
SG1-North Manhole-151027	SW-846 537	Perfluorononanoic acid (PFNA)	**U**	**1**
SG1-North Manhole-151027	SW-846 537	Perfluorooctane sulfonate (PFOS)	**U**	**1**

Data Validation Qualifier Codes:

U = Non-detect. The compound was analyzed for, but not detected.

J = Estimated. The associated numerical value is an estimated quantity. The analyte was detected but the reported value may not be accurate or precise.

UJ = Estimated Non-detect. The analyte was not detected above the method detection limit. However, it is an estimated quantity due to poor accuracy or precision. This qualification is also used to flag possible false negative results in the case where low bias in the analytical system is indicated by low calibration response, surrogate or other spike recovery.

R = Rejected. The sample results are unusable due to the quality of the data generated.

Data Qualifier Reason Codes:

1 Samples were qualified as estimated due to possible low analytical bias.

LEVEL II DATA VALIDATION REVIEW
Field Sampling Event
Saint Gobain Facility
14 McCaffrey Street
Hoosick Falls, New York

Laboratory Sample Delivery Groups (SDGs): B5F6982

Laboratory: Maxxam Analytics, Mississauga, Ontario

Reviewer: Wendy Stonestreet **Date Reviewed: September 17, 2015**

This data validation report has been prepared by Ramboll Environ US Corporation (Ramboll Environ) to assess the validity and usability of laboratory analytical data generated from samples collected during the field sampling event at the Saint Gobain Facility in Hoosick Falls, New York on August 5, August 6 and August 10, 2015.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following documents:

- Field Sampling Plan, Saint Gobain Facility (July 2015);
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008); and
- DER-10/Technical Guidance for Site Investigation and Remediation (May 2010).

Analytical services for determination of selected perfluorinated alkyl acids (PFAAs) and TOC were provided by Maxxam Analytics (Maxxam) of Mississauga, Ontario.

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness and comparability relative to the project data quality objectives. This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability of the data.

Twenty-three (23) solid samples were submitted to the laboratory for PFAA and TOC analysis and evaluated in this data validation report. The following table lists the samples identification and analysis associated with this SDG.

Field ID	Sample Type	Lab ID	Matrix	Analyses	
				PFAAs	TOC
SG1-MW04S-00.0	SA	ATN765	Solid	X	---
SG1-MW04S-02.0	SA	ATN766	Solid	X	---
SG1-MW04S-15.0	SA	ATN767	Solid	---	X
SG1-MW04S-21.0	SA	ATN768	Solid	---	X
SG1-MW04S-24.0	SA	ATN769	Solid	---	X
SG1-DS01-150805	FD	ATN770	Solid	X	---
SG1-MW02D-00.0	SA	ATN771	Solid	X	---
SG1-MW02D-02.0	SA, MS, MSD	ATN772	Solid	X	---
SG1-MW02D-42.0	SA	ATN773	Solid	---	X
SG1-MW02D-24.0	SA	ATN774	Solid	---	X

Field ID	Sample Type	Lab ID	Matrix	Analyses	
				PFAAs	TOC
SG1-MW01D-00.0	SA	AUP457	Solid	X	---
SG1-MW01D-02.0	SA	AUP458	Solid	X	---
SG1-MW01D-13.0	SA	AUP459	Solid	---	X
SG1-MW01S-06.0	SA	AUP460	Solid	---	X
SG1-MW05S-00.0	SA	AUP461	Solid	X	---
SG1-MW05S-02.0	SA	AUP462	Solid	X	---
SG1-MW05S-17.0	SA	AUP463	Solid	---	X
SG1-MW01D-12.0	SA	AUP464	Solid	---	X
SG1-MW01D-23.0	SA	AUP465	Solid	---	X
SG1-DS01-150812	FD	AUP466	Solid	---	X
SG1-MW03S-00.0	SA	AUP467	Solid	X	---
SG1-MW03S-02.0	SA	AUP468	Solid	X	---
SG1-MW03S-13.0	SA	AUP469	Solid	---	X

Sample Type: SA = Sample TB = Trip Blank FD = Field Duplicate RB = Rinsate Blank
MS =Matrix Spike MSD = Matrix Spike Duplicate
PFAAs = Perfluorinated alkyl acids by USEPA Method SW-846 537 Modified by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS).
TOC = Total Organic Carbon by Method LECO 203-601-224

The following components of the laboratory report were evaluated as part of this Tier II Data Validation Review:

- Data Package Completeness,
- Sample Preservation and Holding Times,
- Blanks,
- Surrogate Compound Recoveries
- Laboratory Control Samples,
- Matrix Spike/Matrix Spike Duplicates,
- Laboratory and Field Precision,
- Overall Assessment of Data.

Based on the results of the Tier II Data Validation Review, the following conclusion was determined regarding data usability.

General Overall Assessment:

___X__ Data are usable without qualification.

_______ Data are usable with qualification (noted below).

_______ Some or all data are unusable for any purpose (detailed below).

More analysis of specific data quality topics and parameters are discussed below.

Case Narrative Comments: Any case narrative comments concerning data qualification were noted below.

RAMBOLL ENVIRON

1.0 Data Package Completeness

Q: Were all items delivered as specified on the Chain of Custody (COC) and is the data package complete?

A: Yes, the analysis was performed as requested on the chain-of-custody records. All samples were received by the laboratory and analyzed properly with appropriate corrective actions taken when appropriate. No data points were rejected. The data completeness measure for this data package is 100% and is acceptable.

2.0 Laboratory Case Narrative, Sample Preservation and Cooler Receipt Form

Q: *Were problems noted in the laboratory case narrative or cooler receipt form?*

A: Yes, the laboratory case narrative indicated the following:

The laboratory noted that two samples evaluated for perfluorinated compounds at elevated detection limits due to matrix interferences. See Section 11.0 for further discussion and resultant data qualification.

3.0 Technical Holding Times

Q: Were samples extracted/analyzed within method specific holding time requirements?

A: Yes. All samples were prepared and/or analyzed within the method specific required holding time.

4.0 Blank Contamination

Q: Were any analytes detected in the associated laboratory or field blanks?

A: No. All blanks results were reported as non-detect.

5.0 Surrogate Recoveries

Q: *Were surrogate recoveries within evaluation criteria?*

A: Yes. Surrogates are added to all samples prior to purging to evaluate the laboratory performance on individual samples. Two surrogates (SS-PFDA-13C2 and SS-PFHxA-13C2) were added to each sample. Percent recoveries (%R) for all surrogates in all samples were within the method acceptance limits of 70-130%.

No analytical data were qualified based on the recoveries of the surrogate compounds.

6.0 Internal Standards

Q: Were the internal standard areas within control limits and was the retention time criteria met?

A: Yes. Internal standards indicate whether MS sensitivity and response were stable during each analysis. The laboratory reported that all criteria were within method requirements.

No analytical data were qualified based on the results of internal standard recovery.

7.0 Fortified Blank Samples

Q: *Were fortified blank sample recoveries within evaluation criteria?*

A: Yes. Per the method, the laboratory ran a fortified blank (FB) or spiked blank with each batch. All recoveries were within laboratory control limits and no analytical data were qualified based on the results of the fortified blanks.

8.0 Matrix Spike and Matrix Spike Duplicate (MS/MSD) Recoveries

Q: *Were MS/MSD samples reported as part of these SDGs?*

A: Yes. All Matrix Spike recoveries were reported within the laboratory control limits of 70-130% for perfluorinated compounds and 75-125% for TOC.

9.0 Laboratory Duplicate Results

Q: *Were laboratory duplicate samples performed as part of this SDG?*

A: Yes. All laboratory duplicate sample relative percent differences (RPDs) were reported within laboratory acceptance criteria of less than 30%.

10.0 Field Duplicate Results (Field Precision)

Q: *Were field duplicate samples collected as part of the evaluated SDGs?*

A: Yes, the evaluated relative percent differences (RPDs) between the reported results are indicated in the following tables.

Analyte	SG1-MW02D-00.0 (ug/kg)	SG1-DS01-150805 (ug/kg)	RPD (%)
Perfluoro-n-octanoic Acid (PFOA)	1.3	1.5	14.3%
Perfluorononanoic Acid (PFNA)	0.01	0.02	66.7%
Perfluorooctane Sulfonate (PFOS)	0.028	0.035	19.4%

Analyte	SG1-MW01D-23.0 (mg/kg)	SG1-DS01-150812 (mg/kg)	RPD (%)
Total Organic Carbon	4700	4300	8.9%

ug/kg = micrograms per kilogram mg/kg = milligrams per kilogram RPD = Relative Percent Difference

The RPD for PFNA at 66.7% was above the acceptable control limit for solid samples of 50%. However, as the original and duplicate sample values are less than five times the reporting limit, the RPD is not statistically relevant and qualification of data is not required.

11.0 Detects and Calibration Range

Q: For samples that were diluted and nondetect, were undiluted results also reported?

A: Not Applicable. Samples did not require dilution. However, two sample results SG1-MW04S-00.0 and SG1-MW05S-00.0 were reported at elevated detection limits due to matrix interferences. While this non-conformance to established reporting limits does not affect the usability of the data, it does reduce the sensitivity of the instrument.

Q: For samples that were not diluted and detected, were the results within calibration range?

A: Yes

12.0 Additional Qualifications

Q: *Were additional qualifications applied?*

A: No

13.0 Overall Data Assessment

The data are usable for its intended purpose based on an evaluation of the QC parameters discussed in this report.

IV. Laboratory Data Reports

eurofins | Eaton Analytical

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

eurofins | Eaton Analytical

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN000352015-1
Arkansas	IN035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	IN200001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00241
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-14-7
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA150003	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	00127
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies

eurofins | Eaton Analytical

110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: Ramboll Environ

Attn: Valerie Turner
3 Carlisle Road
Suite 210
Westford, MA 01886

Copies to: Rob Huening

Report: 345165
Priority: Immediate Verbal
Status: Final
PWS ID: Not Supplied

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3289462	SG1-RB01-150729	537	07/29/15 15:30	Client	07/30/15 09:00
3289463	SG1-RB02-150729	537	07/29/15 15:35	Client	07/30/15 09:00
3289464	SG1-RB03-150729	537	07/29/15 15:40	Client	07/30/15 09:00
3289465	SG1-RB04-150729	537	07/29/15 15:45	Client	07/30/15 09:00
3289466	SG1-RB05-150729	537	07/29/15 15:50	Client	07/30/15 09:00
3289467	SG1-RB06-150729	537	07/29/15 16:00	Client	07/30/15 09:00
3289468	SG1-FB01-150729	537	07/29/15 16:05	Client	07/30/15 09:00
3289469	SG1-TB01-150729	537	07/29/15 00:00	Client	07/30/15 09:00

Report Summary

Note: Method 537 results for sites SG1-RB02-150729 and SG1-RB03-150729 are based on a correction factor due to sample volume analyzed.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Jim Vernon at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Jim Vernon ASM

Authorized Signature | Title | Date 08/11/2015

Client Name: Ramboll Environ
Report #: 345165

Client Name: Ramboll Environ Report #: 345165

Sampling Point: SG1-RB01-150729 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	07/30/15 09:30	07/30/15 20:24	3289462
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	07/30/15 09:30	07/30/15 20:24	3289462
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	07/30/15 09:30	07/30/15 20:24	3289462
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 20:24	3289462
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	07/30/15 09:30	07/30/15 20:24	3289462
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 20:24	3289462

Sampling Point: SG1-RB02-150729 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 100	ng/L	07/30/15 09:30	07/30/15 20:55	3289463
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**340**	ng/L	07/30/15 09:30	08/02/15 11:36	3289463
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	07/30/15 09:30	07/30/15 20:55	3289463
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 20:55	3289463
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	07/30/15 09:30	07/30/15 20:55	3289463
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 20:55	3289463

Sampling Point: SG1-RB03-150729 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 110	ng/L	07/30/15 09:30	07/30/15 21:26	3289464
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	07/30/15 09:30	07/30/15 21:26	3289464
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 40	ng/L	07/30/15 09:30	07/30/15 21:26	3289464
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 21:26	3289464
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 50	ng/L	07/30/15 09:30	07/30/15 21:26	3289464
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 21:26	3289464

Client Name: Ramboll Environ Report #: 345165

Sampling Point: SG1-RB04-150729 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	07/30/15 09:30	07/30/15 21:57	3289465
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	07/30/15 09:30	07/30/15 21:57	3289465
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	07/30/15 09:30	07/30/15 21:57	3289465
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 21:57	3289465
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	07/30/15 09:30	07/30/15 21:57	3289465
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 21:57	3289465

Sampling Point: SG1-RB05-150729 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	07/30/15 09:30	07/30/15 22:28	3289466
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	07/30/15 09:30	07/30/15 22:28	3289466
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	07/30/15 09:30	07/30/15 22:28	3289466
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 22:28	3289466
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	07/30/15 09:30	07/30/15 22:28	3289466
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 22:28	3289466

Sampling Point: SG1-RB06-150729 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	07/30/15 09:30	07/30/15 22:59	3289467
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	07/30/15 09:30	07/30/15 22:59	3289467
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	07/30/15 09:30	07/30/15 22:59	3289467
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 22:59	3289467
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	07/30/15 09:30	07/30/15 22:59	3289467
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 22:59	3289467

Sampling Point: SG1-FB01-150729   PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	07/30/15 09:30	07/30/15 23:30	3289468
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	07/30/15 09:30	07/30/15 23:30	3289468
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	07/30/15 09:30	07/30/15 23:30	3289468
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 23:30	3289468
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	07/30/15 09:30	07/30/15 23:30	3289468
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/30/15 23:30	3289468

Sampling Point: SG1-TB01-150729   PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	07/30/15 09:30	07/31/15 00:00	3289469
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	07/30/15 09:30	07/31/15 00:00	3289469
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	07/30/15 09:30	07/31/15 00:00	3289469
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/31/15 00:00	3289469
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	07/30/15 09:30	07/31/15 00:00	3289469
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	07/30/15 09:30	07/31/15 00:00	3289469

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

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110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 280821
Batch # 345164 7-30-2015KD

www.eatonanalytical.com

Shaded area for EEA use only

CHAIN OF CUSTODY RECORD

345165

Page 1 of 1

REPORT TO:	SAMPLER (Signature)	PWS ID #	STATE (sample origin)	PROJECT NAME	PO#
Jason Wilkinson, Ramboll Environ Westford, MA	[signature]	-	MA	SG-Hoosick Falls	02-37 1248

BILL TO:	COMPLIANCE MONITORING Yes	No	POPULATION SERVED	SOURCE WATER
Same		X	-	-

	LAB Number	COLLECTION DATE	COLLECTION TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3289462	7/29/15	1530		X	SGPP-EB01-20150729	PFCs by EPA 537 (6 PFCs only)	ALL Sample		X	1	W	IV
2	463		1535			SGPP-EB02-20150729		Report only			1		
3	464		1540			SGPP-EB03-20150729 - LOW	Volume KD	PFBS			1		
4	465		1545			SGPP-EB04-20150729		PFHpA			1		
5	466		1550			SGPP-EB05-20150729		PFHxA			1		
6	467		1600			SGPP-EB06-20150729		PFNA			2		
7	468		1605			SGPP-FB01-20150729		PFOS			1		
8	469		-		-	SGPP-TB01-20150729		PFOA			1		
9													
10													
11						Immediate Verbal							
12													
13													
14													

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
R Thuening Ramboll-Environ	7/29/15	1645 PM			AM PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
		AM PM			AM PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY:	DATE	TIME
		AM PM	K Dupuis	7-30-15	0900 AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS

See attached email for Revised site Descriptions ss 7-30-15 logbook has been updated ss 7-30-15

CONDITIONS UPON RECEIPT (check one):
X Iced: Wet/Blue ____ Ambient 5.6 °C Upon Receipt____ N/A

MATRIX CODES:

DW-DRINKING WATER
RW-REAGENT WATER
GW-GROUND WATER
EW-EXPOSURE WATER
SW-SURFACE WATER
PW-POOL WATER
WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%	IV* = Immediate Verbal: (3 working days)	100%
RV* = Rush Verbal: (5 working days)	50%	IW* = Immediate Written: (3 working days)	125%
RW* = Rush Written: (5 working days)	75%	SP* = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

* Please call, expedited service not available for all testing

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

06-LO-F0435 Issue 4.0 Effective Date: 2014-05-01

Sample analysis will be provided according to the standard EEA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agree to in writing by EEA.

Sheri Spurgeon

From: Nathan Trowbridge
Sent: Thursday, July 30, 2015 3:05 PM
To: Sheri Spurgeon
Subject: RE: Requested Revisions to COC #345165

345165

Nathan Trowbridge

Phone: +1 574 472 5528
Mobile: +1 574 302 2590

From: Sheri Spurgeon
Sent: Thursday, July 30, 2015 3:01 PM
To: Nathan Trowbridge
Cc: Kellie DePriest
Subject: RE: Requested Revisions to COC #345165

OK, if you can give me the batch numbers, I'll take care of it ☺

Sheri Spurgeon

Phone: +1 574 472 5505

From: Nathan Trowbridge
Sent: Thursday, July 30, 2015 3:01 PM
To: Sheri Spurgeon; Kellie DePriest
Subject: RE: Requested Revisions to COC #345165

Probably should rescan to include the email with the change request.

Thanks,

Nathan Trowbridge

Phone: +1 574 472 5528
Mobile: +1 574 302 2590

From: Sheri Spurgeon
Sent: Thursday, July 30, 2015 3:00 PM
To: Nathan Trowbridge; Kellie DePriest
Subject: RE: Requested Revisions to COC #345165

This can be done either in Logbook or HG since they are single site changes we can go ahead and do it in logbook to get it done ☺ do you have the batch #s?? I'll take care of it... do we need to rescan the cocs?

Sheri Spurgeon

Phone: +1 574 472 5505

From: Nathan Trowbridge
Sent: Thursday, July 30, 2015 2:23 PM
To: Sheri Spurgeon; Kellie DePriest
Subject: FW: Requested Revisions to COC #345165

Is this something that can be done in Receiving or should it wait for HG?

Thanks,

Nathan Trowbridge

Phone: +1 574 472 5528
Mobile: +1 574 302 2590

From: Rob Huening [mailto:rhuening@environcorp.com]
Sent: Thursday, July 30, 2015 2:21 PM
To: Nathan Trowbridge
Cc: Jason Wilkinson
Subject: Requested Revisions to COC #345165

Nathan,

As discussed we would like to make some revisions to the Sample ID's on the COC. (COC #345165 from order #280821) Our plan was to mark-up the original pdf of the chain but there is not enough room to clearly make changes. Therefore I have listed the changes in the table below. Could you please make the following changes to the sample ID's?

Original Sample ID	Requested Revised Sample ID
SGPP-EB01-20150729	SG1-RB01-150729
SGPP-EB02-20150729	SG1-RB02-150729
SGPP-EB03-20150729	SG1-RB03-150729
SGPP-EB04-20150729	SG1-RB04-150729
SGPP-EB05-20150729	SG1-RB05-150729
SGPP-EB06-20150729	SG1-RB06-150729
SGPP-FB01-20150729	SG1-FB01-150729
SGPP-TB01-20150729	SG1-TB01-150729

Please let me know if anything is unclear.

-Rob

Rob Huening

Associate

D 9784490309
M 8478946598
rhuening@environcorp.com

Ramboll Environ
3 Carlisle Road
Suite 210
Westford, MA 01886
USA
www.ramboll-environ.com

RAMBOLL ENVIRON

Eurofins Eaton Analytical
Run Log

Run ID: **205797** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3289657		OS	CY	07/30/2015 16:47	073015M537a.mdb
LRB	3290036		RW	CY	07/30/2015 18:20	073015M537a.mdb
FBL	3290037		RW	CY	07/30/2015 18:51	073015M537a.mdb
FBM	3290038		RW	CY	07/30/2015 19:22	073015M537a.mdb
FS	3289462	SG1-RB01-150729	DW	CY	07/30/2015 20:24	073015M537a.mdb
FS	3289463	SG1-RB02-150729	DW	CY	07/30/2015 20:55	073015M537a.mdb
FS	3289464	SG1-RB03-150729	DW	CY	07/30/2015 21:26	073015M537a.mdb
FS	3289465	SG1-RB04-150729	DW	CY	07/30/2015 21:57	073015M537a.mdb
FS	3289466	SG1-RB05-150729	DW	CY	07/30/2015 22:28	073015M537a.mdb
FS	3289467	SG1-RB06-150729	DW	CY	07/30/2015 22:59	073015M537a.mdb
FS	3289468	SG1-FB01-150729	DW	CY	07/30/2015 23:30	073015M537a.mdb
FS	3289469	SG1-TB01-150729	DW	CY	07/31/2015 00:00	073015M537a.mdb
CCM	3289658		OS	CY	07/31/2015 02:04	073015M537a.mdb

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	IS-PFOA-13C2	537	N/A	---		4315.61	4315.61	ng/L	100	70 - 140	---	---	1.0	07/27/2015 09:53	07/30/2015 16:47	3289657
CCL	IS-PFOS-13C4	537	N/A	---		5030.37	5030.37	ng/L	100	70 - 140	---	---	1.0	07/27/2015 09:53	07/30/2015 16:47	3289657
CCL	SS-PFDA-13C2	537	N/A	---		101.2420	100	ng/L	101	70 - 130	---	---	1.0	07/27/2015 09:53	07/30/2015 16:47	3289657
CCL	SS-PFHxA-13C2	537	N/A	---		50.9124	50.0	ng/L	102	70 - 130	---	---	1.0	07/27/2015 09:53	07/30/2015 16:47	3289657
CCL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		93.8840	90.0	ng/L	104	50 - 150	---	---	1.0	07/27/2015 09:53	07/30/2015 16:47	3289657
CCL	Perfluoroheptanoic acid (PFHpA)	537	10	---		10.4889	10.0	ng/L	105	50 - 150	---	---	1.0	07/27/2015 09:53	07/30/2015 16:47	3289657
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		30.6208	30.0	ng/L	102	50 - 150	---	---	1.0	07/27/2015 09:53	07/30/2015 16:47	3289657
CCL	Perfluorononanoic acid (PFNA)	537	20	---		21.0728	20.0	ng/L	105	50 - 150	---	---	1.0	07/27/2015 09:53	07/30/2015 16:47	3289657
CCL	Perfluorooctane sulfonate (PFOS)	537	40	---		41.0658	40.0	ng/L	103	50 - 150	---	---	1.0	07/27/2015 09:53	07/30/2015 16:47	3289657
CCL	Perfluorooctanoic acid (PFOA)	537	20	---		20.8768	20.0	ng/L	104	50 - 150	---	---	1.0	07/27/2015 09:53	07/30/2015 16:47	3289657
LRB	IS-PFOA-13C2	537	N/A	---		4349.45	4315.61	ng/L	101	70 - 140	---	---	1.0	07/30/2015 09:30	07/30/2015 18:20	3290036
LRB	IS-PFOS-13C4	537	N/A	---		5151.06	5030.37	ng/L	102	70 - 140	---	---	1.0	07/30/2015 09:30	07/30/2015 18:20	3290036
LRB	SS-PFDA-13C2	537	N/A	---		98.2499	100	ng/L	98	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 18:20	3290036
LRB	SS-PFHxA-13C2	537	N/A	---		48.7229	50.0	ng/L	97	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 18:20	3290036
LRB	Perfluorobutanesulfonic acid (PFBS)	537	90	---	<	90		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 18:20	3290036
LRB	Perfluoroheptanoic acid (PFHpA)	537	10	---	<	10		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 18:20	3290036
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	30	---	<	30		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 18:20	3290036
LRB	Perfluorononanoic acid (PFNA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 18:20	3290036
LRB	Perfluorooctane sulfonate (PFOS)	537	40	---	<	40		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 18:20	3290036
LRB	Perfluorooctanoic acid (PFOA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 18:20	3290036
FBL	IS-PFOA-13C2	537	N/A	---		4427.14	4315.61	ng/L	103	70 - 140	---	---	1.0	07/30/2015 09:30	07/30/2015 18:51	3290037
FBL	IS-PFOS-13C4	537	N/A	---		5057.35	5030.37	ng/L	101	70 - 140	---	---	1.0	07/30/2015 09:30	07/30/2015 18:51	3290037
FBL	SS-PFDA-13C2	537	N/A	---		96.5667	100	ng/L	97	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 18:51	3290037
FBL	SS-PFHxA-13C2	537	N/A	---		47.7919	50.0	ng/L	96	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 18:51	3290037
FBL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		93.4057	90.0	ng/L	104	50 - 150	---	---	1.0	07/30/2015 09:30	07/30/2015 18:51	3290037
FBL	Perfluoroheptanoic acid (PFHpA)	537	10	---		10.0561	10.0	ng/L	101	50 - 150	---	---	1.0	07/30/2015 09:30	07/30/2015 18:51	3290037
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		30.2129	30.0	ng/L	101	50 - 150	---	---	1.0	07/30/2015 09:30	07/30/2015 18:51	3290037
FBL	Perfluorononanoic acid (PFNA)	537	20	---		20.2709	20.0	ng/L	101	50 - 150	---	---	1.0	07/30/2015 09:30	07/30/2015 18:51	3290037
FBL	Perfluorooctane sulfonate (PFOS)	537	40	---		39.7392	40.0	ng/L	99	50 - 150	---	---	1.0	07/30/2015 09:30	07/30/2015 18:51	3290037
FBL	Perfluorooctanoic acid (PFOA)	537	20	---		20.6095	20.0	ng/L	103	50 - 150	---	---	1.0	07/30/2015 09:30	07/30/2015 18:51	3290037
FBM	IS-PFOA-13C2	537	N/A	---		4428.44	4315.61	ng/L	103	70 - 140	---	---	1.0	07/30/2015 09:30	07/30/2015 19:22	3290038
FBM	IS-PFOS-13C4	537	N/A	---		5216.15	5030.37	ng/L	104	70 - 140	---	---	1.0	07/30/2015 09:30	07/30/2015 19:22	3290038
FBM	SS-PFDA-13C2	537	N/A	---		99.4112	100	ng/L	99	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 19:22	3290038
FBM	SS-PFHxA-13C2	537	N/A	---		49.2243	50.0	ng/L	98	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 19:22	3290038
FBM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		675.6810	675	ng/L	100	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 19:22	3290038
FBM	Perfluoroheptanoic acid (PFHpA)	537	10	---		74.5057	75.0	ng/L	99	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 19:22	3290038
FBM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		219.7720	225	ng/L	98	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 19:22	3290038
FBM	Perfluorononanoic acid (PFNA)	537	20	---		148.7970	150	ng/L	99	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 19:22	3290038
FBM	Perfluorooctane sulfonate (PFOS)	537	40	---		289.1260	300	ng/L	96	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 19:22	3290038
FBM	Perfluorooctanoic acid (PFOA)	537	20	---		150.0380	150	ng/L	100	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 19:22	3290038

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	IS-PFOA-13C2	537	N/A	SG1-RB01-150729		4483.00	4315.61	ng/L	104	70 - 140	---	---	0.98	07/30/2015 09:30	07/30/2015 20:24	3289462
FS	IS-PFOS-13C4	537	N/A	SG1-RB01-150729		5361.69	5030.37	ng/L	107	70 - 140	---	---	0.98	07/30/2015 09:30	07/30/2015 20:24	3289462
FS	SS-PFDA-13C2	537	N/A	SG1-RB01-150729		107.1280	100	ng/L	109	70 - 130	---	---	0.98	07/30/2015 09:30	07/30/2015 20:24	3289462
FS	SS-PFHxA-13C2	537	N/A	SG1-RB01-150729		46.3924	50.0	ng/L	95	70 - 130	---	---	0.98	07/30/2015 09:30	07/30/2015 20:24	3289462
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB01-150729	<	90		ng/L	---	---	---	---	0.98	07/30/2015 09:30	07/30/2015 20:24	3289462
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB01-150729	<	10		ng/L	---	---	---	---	0.98	07/30/2015 09:30	07/30/2015 20:24	3289462
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB01-150729	<	30		ng/L	---	---	---	---	0.98	07/30/2015 09:30	07/30/2015 20:24	3289462
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB01-150729	<	20		ng/L	---	---	---	---	0.98	07/30/2015 09:30	07/30/2015 20:24	3289462
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB01-150729	<	40		ng/L	---	---	---	---	0.98	07/30/2015 09:30	07/30/2015 20:24	3289462
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB01-150729	<	20		ng/L	---	---	---	---	0.98	07/30/2015 09:30	07/30/2015 20:24	3289462
FS	IS-PFOA-13C2	537	N/A	SG1-RB02-150729		4855.10	4315.61	ng/L	113	70 - 140	---	---	1.1	07/30/2015 09:30	07/30/2015 20:55	3289463
FS	IS-PFOS-13C4	537	N/A	SG1-RB02-150729		5238.05	5030.37	ng/L	104	70 - 140	---	---	1.1	07/30/2015 09:30	07/30/2015 20:55	3289463
FS	SS-PFDA-13C2	537	N/A	SG1-RB02-150729		128.9010	100	ng/L	117	70 - 130	---	---	1.1	07/30/2015 09:30	07/30/2015 20:55	3289463
FS	SS-PFHxA-13C2	537	N/A	SG1-RB02-150729		47.8621	50.0	ng/L	87	70 - 130	---	---	1.1	07/30/2015 09:30	07/30/2015 20:55	3289463
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB02-150729	<	100		ng/L	---	---	---	---	1.1	07/30/2015 09:30	07/30/2015 20:55	3289463
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB02-150729	<	30		ng/L	---	---	---	---	1.1	07/30/2015 09:30	07/30/2015 20:55	3289463
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB02-150729	<	20		ng/L	---	---	---	---	1.1	07/30/2015 09:30	07/30/2015 20:55	3289463
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB02-150729	<	40		ng/L	---	---	---	---	1.1	07/30/2015 09:30	07/30/2015 20:55	3289463
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB02-150729	<	20		ng/L	---	---	---	---	1.1	07/30/2015 09:30	07/30/2015 20:55	3289463
FS	IS-PFOA-13C2	537	N/A	SG1-RB03-150729		3703.38	4315.61	ng/L	86	70 - 140	---	---	1.18	07/30/2015 09:30	07/30/2015 21:26	3289464
FS	IS-PFOS-13C4	537	N/A	SG1-RB03-150729		4385.60	5030.37	ng/L	87	70 - 140	---	---	1.18	07/30/2015 09:30	07/30/2015 21:26	3289464
FS	SS-PFDA-13C2	537	N/A	SG1-RB03-150729		131.2690	100	ng/L	111	70 - 130	---	---	1.18	07/30/2015 09:30	07/30/2015 21:26	3289464
FS	SS-PFHxA-13C2	537	N/A	SG1-RB03-150729		56.7593	50.0	ng/L	96	70 - 130	---	---	1.18	07/30/2015 09:30	07/30/2015 21:26	3289464
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB03-150729	<	110		ng/L	---	---	---	---	1.18	07/30/2015 09:30	07/30/2015 21:26	3289464
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB03-150729	<	10		ng/L	---	---	---	---	1.18	07/30/2015 09:30	07/30/2015 21:26	3289464
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB03-150729	<	40		ng/L	---	---	---	---	1.18	07/30/2015 09:30	07/30/2015 21:26	3289464
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB03-150729	<	20		ng/L	---	---	---	---	1.18	07/30/2015 09:30	07/30/2015 21:26	3289464
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB03-150729	<	50		ng/L	---	---	---	---	1.18	07/30/2015 09:30	07/30/2015 21:26	3289464
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB03-150729	<	20		ng/L	---	---	---	---	1.18	07/30/2015 09:30	07/30/2015 21:26	3289464
FS	IS-PFOA-13C2	537	N/A	SG1-RB04-150729		3359.66	4315.61	ng/L	78	70 - 140	---	---	0.97	07/30/2015 09:30	07/30/2015 21:57	3289465
FS	IS-PFOS-13C4	537	N/A	SG1-RB04-150729		4011.00	5030.37	ng/L	80	70 - 140	---	---	0.97	07/30/2015 09:30	07/30/2015 21:57	3289465
FS	SS-PFDA-13C2	537	N/A	SG1-RB04-150729		90.9222	100	ng/L	94	70 - 130	---	---	0.97	07/30/2015 09:30	07/30/2015 21:57	3289465
FS	SS-PFHxA-13C2	537	N/A	SG1-RB04-150729		44.0784	50.0	ng/L	91	70 - 130	---	---	0.97	07/30/2015 09:30	07/30/2015 21:57	3289465
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB04-150729	<	90		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 21:57	3289465
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB04-150729	<	10		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 21:57	3289465
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB04-150729	<	30		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 21:57	3289465
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB04-150729	<	20		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 21:57	3289465
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB04-150729	<	40		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 21:57	3289465
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB04-150729	<	20		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 21:57	3289465
FS	IS-PFOA-13C2	537	N/A	SG1-RB05-150729		3146.54	4315.61	ng/L	73	70 - 140	---	---	0.94	07/30/2015 09:30	07/30/2015 22:28	3289466
FS	IS-PFOS-13C4	537	N/A	SG1-RB05-150729		3936.51	5030.37	ng/L	78	70 - 140	---	---	0.94	07/30/2015 09:30	07/30/2015 22:28	3289466

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	SS-PFDA-13C2	537	N/A	SG1-RB05-150729		90.4774	100	ng/L	96	70 - 130	---	---	0.94	07/30/2015 09:30	07/30/2015 22:28	3289466
FS	SS-PFHxA-13C2	537	N/A	SG1-RB05-150729		42.9796	50.0	ng/L	91	70 - 130	---	---	0.94	07/30/2015 09:30	07/30/2015 22:28	3289466
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB05-150729	<	90		ng/L	---	---	---	---	0.94	07/30/2015 09:30	07/30/2015 22:28	3289466
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB05-150729	<	10		ng/L	---	---	---	---	0.94	07/30/2015 09:30	07/30/2015 22:28	3289466
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB05-150729	<	30		ng/L	---	---	---	---	0.94	07/30/2015 09:30	07/30/2015 22:28	3289466
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB05-150729	<	20		ng/L	---	---	---	---	0.94	07/30/2015 09:30	07/30/2015 22:28	3289466
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB05-150729	<	40		ng/L	---	---	---	---	0.94	07/30/2015 09:30	07/30/2015 22:28	3289466
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB05-150729	<	20		ng/L	---	---	---	---	0.94	07/30/2015 09:30	07/30/2015 22:28	3289466
FS	IS-PFOA-13C2	537	N/A	SG1-RB06-150729		3172.60	4315.61	ng/L	74	70 - 140	---	---	0.97	07/30/2015 09:30	07/30/2015 22:59	3289467
FS	IS-PFOS-13C4	537	N/A	SG1-RB06-150729		3927.46	5030.37	ng/L	78	70 - 140	---	---	0.97	07/30/2015 09:30	07/30/2015 22:59	3289467
FS	SS-PFDA-13C2	537	N/A	SG1-RB06-150729		89.6939	100	ng/L	92	70 - 130	---	---	0.97	07/30/2015 09:30	07/30/2015 22:59	3289467
FS	SS-PFHxA-13C2	537	N/A	SG1-RB06-150729		46.9763	50.0	ng/L	97	70 - 130	---	---	0.97	07/30/2015 09:30	07/30/2015 22:59	3289467
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB06-150729	<	90		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 22:59	3289467
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB06-150729	<	10		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 22:59	3289467
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB06-150729	<	30		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 22:59	3289467
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB06-150729	<	20		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 22:59	3289467
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB06-150729	<	40		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 22:59	3289467
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB06-150729	<	20		ng/L	---	---	---	---	0.97	07/30/2015 09:30	07/30/2015 22:59	3289467
FS	IS-PFOA-13C2	537	N/A	SG1-FB01-150729		3149.98	4315.61	ng/L	73	70 - 140	---	---	1.0	07/30/2015 09:30	07/30/2015 23:30	3289468
FS	IS-PFOS-13C4	537	N/A	SG1-FB01-150729		3953.19	5030.37	ng/L	79	70 - 140	---	---	1.0	07/30/2015 09:30	07/30/2015 23:30	3289468
FS	SS-PFDA-13C2	537	N/A	SG1-FB01-150729		96.8721	100	ng/L	97	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 23:30	3289468
FS	SS-PFHxA-13C2	537	N/A	SG1-FB01-150729		46.6364	50.0	ng/L	93	70 - 130	---	---	1.0	07/30/2015 09:30	07/30/2015 23:30	3289468
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-FB01-150729	<	90		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 23:30	3289468
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-FB01-150729	<	10		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 23:30	3289468
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-FB01-150729	<	30		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 23:30	3289468
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-FB01-150729	<	20		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 23:30	3289468
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-FB01-150729	<	40		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 23:30	3289468
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-FB01-150729	<	20		ng/L	---	---	---	---	1.0	07/30/2015 09:30	07/30/2015 23:30	3289468
FS	IS-PFOA-13C2	537	N/A	SG1-TB01-150729		3339.67	4315.61	ng/L	77	70 - 140	---	---	0.96	07/30/2015 09:30	07/31/2015 00:00	3289469
FS	IS-PFOS-13C4	537	N/A	SG1-TB01-150729		4258.08	5030.37	ng/L	85	70 - 140	---	---	0.96	07/30/2015 09:30	07/31/2015 00:00	3289469
FS	SS-PFDA-13C2	537	N/A	SG1-TB01-150729		96.6316	100	ng/L	101	70 - 130	---	---	0.96	07/30/2015 09:30	07/31/2015 00:00	3289469
FS	SS-PFHxA-13C2	537	N/A	SG1-TB01-150729		45.9283	50.0	ng/L	96	70 - 130	---	---	0.96	07/30/2015 09:30	07/31/2015 00:00	3289469
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-TB01-150729	<	90		ng/L	---	---	---	---	0.96	07/30/2015 09:30	07/31/2015 00:00	3289469
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-TB01-150729	<	10		ng/L	---	---	---	---	0.96	07/30/2015 09:30	07/31/2015 00:00	3289469
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-TB01-150729	<	30		ng/L	---	---	---	---	0.96	07/30/2015 09:30	07/31/2015 00:00	3289469
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-TB01-150729	<	20		ng/L	---	---	---	---	0.96	07/30/2015 09:30	07/31/2015 00:00	3289469
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-TB01-150729	<	40		ng/L	---	---	---	---	0.96	07/30/2015 09:30	07/31/2015 00:00	3289469
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-TB01-150729	<	20		ng/L	---	---	---	---	0.96	07/30/2015 09:30	07/31/2015 00:00	3289469
CCM	IS-PFOA-13C2	537	N/A	---		3261.81	3261.81	ng/L	100	70 - 140	---	---	1.0	07/27/2015 09:53	07/31/2015 02:04	3289658
CCM	IS-PFOS-13C4	537	N/A	---		4081.63	4081.63	ng/L	100	70 - 140	---	---	1.0	07/27/2015 09:53	07/31/2015 02:04	3289658
CCM	SS-PFDA-13C2	537	N/A	---		102.7790	100	ng/L	103	70 - 130	---	---	1.0	07/27/2015 09:53	07/31/2015 02:04	3289658

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCM	SS-PFHxA-13C2	537	N/A	---		52.1822	50.0	ng/L	104	70 - 130	---	---	1.0	07/27/2015 09:53	07/31/2015 02:04	3289658
CCM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		700.0260	675	ng/L	104	70 - 130	---	---	1.0	07/27/2015 09:53	07/31/2015 02:04	3289658
CCM	Perfluoroheptanoic acid (PFHpA)	537	10	---		78.1038	75.0	ng/L	104	70 - 130	---	---	1.0	07/27/2015 09:53	07/31/2015 02:04	3289658
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		227.9070	225	ng/L	101	70 - 130	---	---	1.0	07/27/2015 09:53	07/31/2015 02:04	3289658
CCM	Perfluorononanoic acid (PFNA)	537	20	---		158.6200	150	ng/L	106	70 - 130	---	---	1.0	07/27/2015 09:53	07/31/2015 02:04	3289658
CCM	Perfluorooctane sulfonate (PFOS)	537	40	---		305.4140	300	ng/L	102	70 - 130	---	---	1.0	07/27/2015 09:53	07/31/2015 02:04	3289658
CCM	Perfluorooctanoic acid (PFOA)	537	20	---		156.9030	150	ng/L	105	70 - 130	---	---	1.0	07/27/2015 09:53	07/31/2015 02:04	3289658

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Run Log

Run ID: **205815** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3290766		OS	CY	08/02/2015 01:48	080115M537a.mdb
CCL	3290766		OS	CY	08/02/2015 01:48	080115M537a.mdb
LRB	3290770		RW	CY	08/02/2015 03:21	080115M537a.mdb
LRB	3290770		RW	CY	08/02/2015 03:21	080115M537a.mdb
FBL	3290771		RW	CY	08/02/2015 03:52	080115M537a.mdb
FBL	3290771		RW	CY	08/02/2015 03:52	080115M537a.mdb
FBH	3290772		RW	CY	08/02/2015 04:23	080115M537a.mdb
FBH	3290772		RW	CY	08/02/2015 04:23	080115M537a.mdb
FS	3289463	SG1-RB02-150729	DW	CY	08/02/2015 11:36	080115M537a.mdb
CCM	3290767		OS	CY	08/02/2015 12:07	080115M537a.mdb
CCM	3290767		OS	CY	08/02/2015 12:07	080115M537a.mdb

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	Perfluoroheptanoic acid (PFHpA)	537	10	---		11.1155	10.0	ng/L	111	50 - 150	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	IS-PFOA-13C2	537	N/A	---		5649.39	5649.39	ng/L	100	70 - 140	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	IS-PFOS-13C4	537	N/A	---		6452.10	6452.1	ng/L	100	70 - 140	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	SS-PFDA-13C2	537	N/A	---		100.0680	100	ng/L	100	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	SS-PFHxA-13C2	537	N/A	---		49.6788	50.0	ng/L	99	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
LRB	Perfluoroheptanoic acid (PFHpA)	537	10	---	<	10		ng/L	---	---	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	IS-PFOA-13C2	537	N/A	---		5845.46	5649.39	ng/L	103	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	IS-PFOS-13C4	537	N/A	---		6691.20	6452.1	ng/L	104	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	SS-PFDA-13C2	537	N/A	---		92.3315	100	ng/L	92	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	SS-PFHxA-13C2	537	N/A	---		44.5620	50.0	ng/L	89	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
FBL	Perfluoroheptanoic acid (PFHpA)	537	10	---		9.9279	10.0	ng/L	99	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	IS-PFOA-13C2	537	N/A	---		5835.35	5649.39	ng/L	103	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	IS-PFOS-13C4	537	N/A	---		6673.02	6452.1	ng/L	103	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	SS-PFDA-13C2	537	N/A	---		94.4827	100	ng/L	94	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	SS-PFHxA-13C2	537	N/A	---		45.0501	50.0	ng/L	90	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBH	Perfluoroheptanoic acid (PFHpA)	537	10	---		112.8280	125	ng/L	90	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	IS-PFOA-13C2	537	N/A	---		5615.35	5649.39	ng/L	99	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	IS-PFOS-13C4	537	N/A	---		6527.86	6452.1	ng/L	101	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	SS-PFDA-13C2	537	N/A	---		95.6187	100	ng/L	96	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	SS-PFHxA-13C2	537	N/A	---		46.9235	50.0	ng/L	94	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB02-150729		340		ng/L	---	---	---	---	11	07/30/2015 09:30	08/02/2015 11:36	3289463
CCM	Perfluoroheptanoic acid (PFHpA)	537	10	---		74.1616	75.0	ng/L	99	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	IS-PFOA-13C2	537	N/A	---		5395.91	5395.91	ng/L	100	70 - 140	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	IS-PFOS-13C4	537	N/A	---		6516.90	6516.9	ng/L	100	70 - 140	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	SS-PFDA-13C2	537	N/A	---		107.3480	100	ng/L	107	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	SS-PFHxA-13C2	537	N/A	---		50.7742	50.0	ng/L	102	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767

Sample Type Key

Type (Abbr.)	Sample Type	Type (Abbr.)	Sample Type
CCL	Continuing Calibration Low		
CCM	Continuing Calibration Mid		
FS	Field Sample		
FBH	Fortified Blank High		
FBL	Fortified Blank Low		
FBM	Fortified Blank Mid		
LRB	Laboratory Reagent Blank		

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN000352015-1
Arkansas	IN035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	IN200001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00241
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-14-7
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA150003	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	00127
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies

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110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: Ramboll Environ

Attn: Valerie Turner
3 Carlisle Road
Suite 210
Westford, MA 01886

Copies to: Rob Huening

Report: 345317
Priority: Weekend or Holiday
Status: Final
PWS ID: Not Supplied
Lab ELAP #: 11398

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3290665	SG1-FB01-150731	537	07/31/15 08:40	Client	08/01/15 08:45
3290666	SG1-FB02-150731	537	07/31/15 09:13	Client	08/01/15 08:45

Report Summary

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Nathan Trowbridge at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

C.S. Manager

Authorized Signature | Title | 08/03/2015 Date

Client Name: Ramboll Environ Report #: 345317

Sampling Point: SG1-FB01-150731 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/01/15 09:00	08/02/15 06:58	3290665
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/01/15 09:00	08/02/15 06:58	3290665
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/01/15 09:00	08/02/15 06:58	3290665
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/01/15 09:00	08/02/15 06:58	3290665
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/01/15 09:00	08/02/15 06:58	3290665
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/01/15 09:00	08/02/15 06:58	3290665

Sampling Point: SG1-FB02-150731 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/01/15 09:00	08/02/15 07:28	3290666
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/01/15 09:00	08/02/15 07:28	3290666
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/01/15 09:00	08/02/15 07:28	3290666
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/01/15 09:00	08/02/15 07:28	3290666
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/01/15 09:00	08/02/15 07:28	3290666
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/01/15 09:00	08/02/15 07:28	3290666

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

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Run Log

Run ID: **205815** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3290766		OS	CY	08/02/2015 01:48	080115M537a.mdb
LRB	3290770		RW	CY	08/02/2015 03:21	080115M537a.mdb
FBL	3290771		RW	CY	08/02/2015 03:52	080115M537a.mdb
FBH	3290772		RW	CY	08/02/2015 04:23	080115M537a.mdb
FTB	3290667	SG1-TB01-150731	RW	CY	08/02/2015 05:25	080115M537a.mdb
FS	3290665	SG1-FB01-150731	DW	CY	08/02/2015 06:58	080115M537a.mdb
FS	3290666	SG1-FB02-150731	DW	CY	08/02/2015 07:28	080115M537a.mdb
LFSML	3290773	SG1-FB02-150731	DW	CY	08/02/2015 07:59	080115M537a.mdb
LFSMDL	3290774	SG1-FB02-150731	DW	CY	08/02/2015 08:30	080115M537a.mdb
CCM	3290767		OS	CY	08/02/2015 12:07	080115M537a.mdb

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	IS-PFOA-13C2	537	N/A	---		5649.39	5649.39	ng/L	100	70 - 140	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	IS-PFOS-13C4	537	N/A	---		6452.10	6452.1	ng/L	100	70 - 140	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	SS-PFDA-13C2	537	N/A	---		100.0680	100	ng/L	100	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	SS-PFHxA-13C2	537	N/A	---		49.6788	50.0	ng/L	99	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		98.6508	90.0	ng/L	110	50 - 150	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	Perfluoroheptanoic acid (PFHpA)	537	10	---		11.1155	10.0	ng/L	111	50 - 150	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		33.0395	30.0	ng/L	110	50 - 150	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	Perfluorononanoic acid (PFNA)	537	20	---		22.3134	20.0	ng/L	112	50 - 150	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	Perfluorooctane sulfonate (PFOS)	537	40	---		43.4649	40.0	ng/L	109	50 - 150	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
CCL	Perfluorooctanoic acid (PFOA)	537	20	---		21.6583	20.0	ng/L	108	50 - 150	---	---	1.0	08/01/2015 13:00	08/02/2015 01:48	3290766
LRB	IS-PFOA-13C2	537	N/A	---		5845.46	5649.39	ng/L	103	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	IS-PFOS-13C4	537	N/A	---		6691.20	6452.1	ng/L	104	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	SS-PFDA-13C2	537	N/A	---		92.3315	100	ng/L	92	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	SS-PFHxA-13C2	537	N/A	---		44.5620	50.0	ng/L	89	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	Perfluorobutanesulfonic acid (PFBS)	537	90	---	<	90		ng/L	---	---	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	Perfluoroheptanoic acid (PFHpA)	537	10	---	<	10		ng/L	---	---	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	30	---	<	30		ng/L	---	---	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	Perfluorononanoic acid (PFNA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	Perfluorooctane sulfonate (PFOS)	537	40	---	<	40		ng/L	---	---	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
LRB	Perfluorooctanoic acid (PFOA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	08/01/2015 09:00	08/02/2015 03:21	3290770
FBL	IS-PFOA-13C2	537	N/A	---		5835.35	5649.39	ng/L	103	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	IS-PFOS-13C4	537	N/A	---		6673.02	6452.1	ng/L	103	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	SS-PFDA-13C2	537	N/A	---		94.4827	100	ng/L	94	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	SS-PFHxA-13C2	537	N/A	---		45.0501	50.0	ng/L	90	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		89.8462	90.0	ng/L	100	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	Perfluoroheptanoic acid (PFHpA)	537	10	---		9.9279	10.0	ng/L	99	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		31.0229	30.0	ng/L	103	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	Perfluorononanoic acid (PFNA)	537	20	---		20.0196	20.0	ng/L	100	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	Perfluorooctane sulfonate (PFOS)	537	40	---		41.9104	40.0	ng/L	105	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBL	Perfluorooctanoic acid (PFOA)	537	20	---		20.1715	20.0	ng/L	101	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 03:52	3290771
FBH	IS-PFOA-13C2	537	N/A	---		5615.35	5649.39	ng/L	99	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	IS-PFOS-13C4	537	N/A	---		6527.86	6452.1	ng/L	101	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	SS-PFDA-13C2	537	N/A	---		95.6187	100	ng/L	96	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	SS-PFHxA-13C2	537	N/A	---		46.9235	50.0	ng/L	94	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	Perfluorobutanesulfonic acid (PFBS)	537	90	---		1039.3800	1125	ng/L	92	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	Perfluoroheptanoic acid (PFHpA)	537	10	---		112.8280	125	ng/L	90	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		350.8900	375	ng/L	94	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	Perfluorononanoic acid (PFNA)	537	20	---		235.2200	250	ng/L	94	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	Perfluorooctane sulfonate (PFOS)	537	40	---		481.1070	500	ng/L	96	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772
FBH	Perfluorooctanoic acid (PFOA)	537	20	---		232.1750	250	ng/L	93	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 04:23	3290772

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FTB	IS-PFOA-13C2	537	N/A	SG1-TB01-150731		6141.95	5649.39	ng/L	109	70 - 140	---	---	0.96	08/01/2015 09:00	08/02/2015 05:25	3290667
FTB	IS-PFOS-13C4	537	N/A	SG1-TB01-150731		7030.27	6452.1	ng/L	109	70 - 140	---	---	0.96	08/01/2015 09:00	08/02/2015 05:25	3290667
FTB	SS-PFDA-13C2	537	N/A	SG1-TB01-150731		92.4080	100	ng/L	96	70 - 130	---	---	0.96	08/01/2015 09:00	08/02/2015 05:25	3290667
FTB	SS-PFHxA-13C2	537	N/A	SG1-TB01-150731		44.1600	50.0	ng/L	92	70 - 130	---	---	0.96	08/01/2015 09:00	08/02/2015 05:25	3290667
FTB	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-TB01-150731	<	90		ng/L	---	---	---	---	0.96	08/01/2015 09:00	08/02/2015 05:25	3290667
FTB	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-TB01-150731	<	10		ng/L	---	---	---	---	0.96	08/01/2015 09:00	08/02/2015 05:25	3290667
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-TB01-150731	<	30		ng/L	---	---	---	---	0.96	08/01/2015 09:00	08/02/2015 05:25	3290667
FTB	Perfluorononanoic acid (PFNA)	537	20	SG1-TB01-150731	<	20		ng/L	---	---	---	---	0.96	08/01/2015 09:00	08/02/2015 05:25	3290667
FTB	Perfluorooctane sulfonate (PFOS)	537	40	SG1-TB01-150731	<	40		ng/L	---	---	---	---	0.96	08/01/2015 09:00	08/02/2015 05:25	3290667
FTB	Perfluorooctanoic acid (PFOA)	537	20	SG1-TB01-150731	<	20		ng/L	---	---	---	---	0.96	08/01/2015 09:00	08/02/2015 05:25	3290667
FS	IS-PFOA-13C2	537	N/A	SG1-FB01-150731		5971.47	5649.39	ng/L	106	70 - 140	---	---	0.98	08/01/2015 09:00	08/02/2015 06:58	3290665
FS	IS-PFOS-13C4	537	N/A	SG1-FB01-150731		6896.64	6452.1	ng/L	107	70 - 140	---	---	0.98	08/01/2015 09:00	08/02/2015 06:58	3290665
FS	SS-PFDA-13C2	537	N/A	SG1-FB01-150731		95.8449	100	ng/L	98	70 - 130	---	---	0.98	08/01/2015 09:00	08/02/2015 06:58	3290665
FS	SS-PFHxA-13C2	537	N/A	SG1-FB01-150731		48.2167	50.0	ng/L	98	70 - 130	---	---	0.98	08/01/2015 09:00	08/02/2015 06:58	3290665
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-FB01-150731	<	90		ng/L	---	---	---	---	0.98	08/01/2015 09:00	08/02/2015 06:58	3290665
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-FB01-150731	<	10		ng/L	---	---	---	---	0.98	08/01/2015 09:00	08/02/2015 06:58	3290665
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-FB01-150731	<	30		ng/L	---	---	---	---	0.98	08/01/2015 09:00	08/02/2015 06:58	3290665
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-FB01-150731	<	20		ng/L	---	---	---	---	0.98	08/01/2015 09:00	08/02/2015 06:58	3290665
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-FB01-150731	<	40		ng/L	---	---	---	---	0.98	08/01/2015 09:00	08/02/2015 06:58	3290665
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-FB01-150731	<	20		ng/L	---	---	---	---	0.98	08/01/2015 09:00	08/02/2015 06:58	3290665
FS	IS-PFOA-13C2	537	N/A	SG1-FB02-150731		5830.62	5649.39	ng/L	103	70 - 140	---	---	0.94	08/01/2015 09:00	08/02/2015 07:28	3290666
FS	IS-PFOS-13C4	537	N/A	SG1-FB02-150731		6748.51	6452.1	ng/L	105	70 - 140	---	---	0.94	08/01/2015 09:00	08/02/2015 07:28	3290666
FS	SS-PFDA-13C2	537	N/A	SG1-FB02-150731		86.8260	100	ng/L	92	70 - 130	---	---	0.94	08/01/2015 09:00	08/02/2015 07:28	3290666
FS	SS-PFHxA-13C2	537	N/A	SG1-FB02-150731		43.8692	50.0	ng/L	93	70 - 130	---	---	0.94	08/01/2015 09:00	08/02/2015 07:28	3290666
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-FB02-150731	<	90		ng/L	---	---	---	---	0.94	08/01/2015 09:00	08/02/2015 07:28	3290666
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-FB02-150731	<	10		ng/L	---	---	---	---	0.94	08/01/2015 09:00	08/02/2015 07:28	3290666
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-FB02-150731	<	30		ng/L	---	---	---	---	0.94	08/01/2015 09:00	08/02/2015 07:28	3290666
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-FB02-150731	<	20		ng/L	---	---	---	---	0.94	08/01/2015 09:00	08/02/2015 07:28	3290666
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-FB02-150731	<	40		ng/L	---	---	---	---	0.94	08/01/2015 09:00	08/02/2015 07:28	3290666
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-FB02-150731	<	20		ng/L	---	---	---	---	0.94	08/01/2015 09:00	08/02/2015 07:28	3290666
LFSML	IS-PFOA-13C2	537	N/A	SG1-FB02-150731		5980.60	5649.39	ng/L	106	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 07:59	3290773
LFSML	IS-PFOS-13C4	537	N/A	SG1-FB02-150731		7029.19	6452.1	ng/L	109	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 07:59	3290773
LFSML	SS-PFDA-13C2	537	N/A	SG1-FB02-150731		91.2824	100	ng/L	91	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 07:59	3290773
LFSML	SS-PFHxA-13C2	537	N/A	SG1-FB02-150731		42.3373	50.0	ng/L	85	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 07:59	3290773
LFSML	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-FB02-150731		91.9178	90.0	ng/L	102	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 07:59	3290773
LFSML	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-FB02-150731		9.6946	10.0	ng/L	97	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 07:59	3290773
LFSML	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-FB02-150731		30.8931	30.0	ng/L	103	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 07:59	3290773
LFSML	Perfluorononanoic acid (PFNA)	537	20	SG1-FB02-150731		20.6167	20.0	ng/L	103	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 07:59	3290773
LFSML	Perfluorooctane sulfonate (PFOS)	537	40	SG1-FB02-150731		41.0394	40.0	ng/L	103	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 07:59	3290773
LFSML	Perfluorooctanoic acid (PFOA)	537	20	SG1-FB02-150731		20.1454	20.0	ng/L	101	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 07:59	3290773
LFSMDL	IS-PFOA-13C2	537	N/A	SG1-FB02-150731		6273.78	5649.39	ng/L	111	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 08:30	3290774

QC Summary Report (cont.)																
Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
LFSMDL	IS-PFOS-13C4	537	N/A	SG1-FB02-150731		7279.08	6452.1	ng/L	113	70 - 140	---	---	1.0	08/01/2015 09:00	08/02/2015 08:30	3290774
LFSMDL	SS-PFDA-13C2	537	N/A	SG1-FB02-150731		93.6744	100	ng/L	94	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 08:30	3290774
LFSMDL	SS-PFHxA-13C2	537	N/A	SG1-FB02-150731		45.6649	50.0	ng/L	91	70 - 130	---	---	1.0	08/01/2015 09:00	08/02/2015 08:30	3290774
LFSMDL	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-FB02-150731		92.0015	90.0	ng/L	102	50 - 150	0.1	---	1.0	08/01/2015 09:00	08/02/2015 08:30	3290774
LFSMDL	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-FB02-150731		10.2661	10.0	ng/L	103	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 08:30	3290774
LFSMDL	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-FB02-150731		30.1298	30.0	ng/L	100	50 - 150	2.5	---	1.0	08/01/2015 09:00	08/02/2015 08:30	3290774
LFSMDL	Perfluorononanoic acid (PFNA)	537	20	SG1-FB02-150731		20.3950	20.0	ng/L	102	50 - 150	1.1	---	1.0	08/01/2015 09:00	08/02/2015 08:30	3290774
LFSMDL	Perfluorooctane sulfonate (PFOS)	537	40	SG1-FB02-150731		41.1795	40.0	ng/L	103	50 - 150	0.3	---	1.0	08/01/2015 09:00	08/02/2015 08:30	3290774
LFSMDL	Perfluorooctanoic acid (PFOA)	537	20	SG1-FB02-150731		19.8882	20.0	ng/L	99	50 - 150	---	---	1.0	08/01/2015 09:00	08/02/2015 08:30	3290774
CCM	IS-PFOA-13C2	537	N/A	---		5395.91	5395.91	ng/L	100	70 - 140	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	IS-PFOS-13C4	537	N/A	---		6516.90	6516.9	ng/L	100	70 - 140	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	SS-PFDA-13C2	537	N/A	---		107.3480	100	ng/L	107	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	SS-PFHxA-13C2	537	N/A	---		50.7742	50.0	ng/L	102	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		672.7620	675	ng/L	100	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	Perfluoroheptanoic acid (PFHpA)	537	10	---		74.1616	75.0	ng/L	99	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		220.4270	225	ng/L	98	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	Perfluorononanoic acid (PFNA)	537	20	---		151.8440	150	ng/L	101	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	Perfluorooctane sulfonate (PFOS)	537	40	---		304.2380	300	ng/L	101	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767
CCM	Perfluorooctanoic acid (PFOA)	537	20	---		150.6320	150	ng/L	100	70 - 130	---	---	1.0	08/01/2015 13:00	08/02/2015 12:07	3290767

Sample Type Key

Type (Abbr.)	Sample Type	Type (Abbr.)	Sample Type
CCL	Continuing Calibration Low		
CCM	Continuing Calibration Mid		
FS	Field Sample		
FTB	Field Trip Blank		
FBH	Fortified Blank High		
FBL	Fortified Blank Low		
LFSMDL	LFSM Duplicate Low		
LFSML	LFSM Low		
LRB	Laboratory Reagent Blank		

281032

eurofins | Eaton Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # ~~280858~~ CS 8-1-15
Batch # 345317

www.eatonanalytical.com

Shaded area for EEA use only

CHAIN OF CUSTODY RECORD

Page 1 of 1

REPORT TO: Jason W. Kinson
Ramboll Environ
3 Carlisle Road, Suite 210
Westford, MA 01886

BILL TO: Same as: "Report To"

SAMPLER (Signature) Kirk Moline

COMPLIANCE MONITORING: Yes | No X

PWS ID #:
POPULATION SERVED:
STATE (sample origin): NY
SOURCE WATER:
PROJECT NAME: SGPP Hoosick Falls
PO#:

	LAB Number	DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3290665	7-31-15	0840	X		SG1 - FB01 - 150731	EPA Method 537*	Cl-A	X		3	DW	SP
2	666	7-31-15	0913	X		SG1 - FB02 - 150731	EPA Method 537*			X	3	DW	SP
3	667	7-31-15	0824	X		SG1 - TB01 - 150731	EPA Method 537*			X	1	RW	IV
4								CS					
5													
6						* EPA Method 537 for the following PFCs: PFOA							
7						PFBS							
8						PFHpA							
9						PFHxS							
10						PFNA							
11						PFOS							
12						No other PFC's should be reported.							
13													
14													

RUSH

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
[signature]	7-31-15	1350 PM			AM / PM
RELINQUISHED BY:(Signature)		AM / PM	RECEIVED BY:(Signature)		AM / PM
RELINQUISHED BY:(Signature)		AM / PM	RECEIVED FOR LABORATORY BY: [signature]	8-1-15	0845 AM / PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS

CONDITIONS UPON RECEIPT (check one): X Iced/Wet/Blue ____ Ambient 5.8 °C Upon Receipt____ N/A

MATRIX CODES:

DW-DRINKING WATER
RW-REAGENT WATER
GW-GROUND WATER
EW-EXPOSURE WATER
SW-SURFACE WATER
PW-POOL WATER
WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%	IV* = Immediate Verbal: (3 working days)	100%
RV* = Rush Verbal: (5 working days)	50%	IW* =Immediate Written: (3 working days)	125%
RW* = Rush Written: (5 working days)	75%	SP* = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

* Please call, expedited service not available for all testing

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

06-LO-F0435 Issue 4.0 Effective Date: 2014-05-01

Sample analysis will be provided according to the standard EEA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agree to in writing by EEA.

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN000352015-1
Arkansas	IN035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	IN200001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00241
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-14-7
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA150003	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	00127
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies

eurofins Eaton Analytical

110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: Ramboll Environ

Attn: Valerie Turner
3 Carlisle Road
Suite 210
Westford, MA 01886

Copies to: Rob Huening

Report: 346703
Priority: Standard Written
Status: Final
PWS ID: Not Supplied

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3301317	SG1-RB01-150807	537	08/07/15 09:35	Client	08/14/15 10:00
3301318	SG1-FB01-150810	537	08/10/15 09:35	Client	08/14/15 10:00
3301319	SG1-RB01-150810	537	08/10/15 12:10	Client	08/14/15 10:00
3301320	SG1-RB02-150810	537	08/10/15 12:30	Client	08/14/15 10:00
3301321	SG1-RB03-150810	537	08/10/15 16:05	Client	08/14/15 10:00
3301322	SG1-RB01-150811	537	08/11/15 07:55	Client	08/14/15 10:00
3301323	SG1-RB02-150811	537	08/11/15 08:00	Client	08/14/15 10:00
3301324	SG1-RB03-150811	537	08/11/15 11:30	Client	08/14/15 10:00
3301325	SG1-RB01-150812	537	08/12/15 10:20	Client	08/14/15 10:00
3301326	SG1-RB01-150813	537	08/13/15 08:10	Client	08/14/15 10:00
3301327	SG1-RB02-150813	537	08/13/15 11:00	Client	08/14/15 10:00
3301328	SG1-RB03-150813	537	08/13/15 16:10	Client	08/14/15 10:00

Report Summary

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Nathan Trowbridge at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

C.S. Manager | 08/24/2015
Authorized Signature | Title | Date

Client Name: Ramboll Environ
Report #: 346703

Client Name: Ramboll Environ Report #: 346703

Sampling Point: SG1-RB01-150807 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/18/15 23:45	3301317
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/18/15 23:45	3301317
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/18/15 23:45	3301317
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/18/15 23:45	3301317
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/18/15 23:45	3301317
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/18/15 23:45	3301317

Sampling Point: SG1-FB01-150810 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 00:16	3301318
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 00:16	3301318
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 00:16	3301318
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 00:16	3301318
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 00:16	3301318
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 00:16	3301318

Sampling Point: SG1-RB01-150810 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 00:47	3301319
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 00:47	3301319
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 00:47	3301319
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 00:47	3301319
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 00:47	3301319
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 00:47	3301319

Sampling Point: SG1-RB02-150810 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 02:19	3301320
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 02:19	3301320
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 02:19	3301320
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 02:19	3301320
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 02:19	3301320
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 02:19	3301320

Sampling Point: SG1-RB03-150810 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 02:50	3301321
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 02:50	3301321
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 02:50	3301321
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 02:50	3301321
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 02:50	3301321
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 02:50	3301321

Sampling Point: SG1-RB01-150811 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 03:21	3301322
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 03:21	3301322
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 03:21	3301322
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 03:21	3301322
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 03:21	3301322
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 03:21	3301322

Sampling Point: SG1-RB02-150811 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 03:52	3301323
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 03:52	3301323
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 03:52	3301323
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 03:52	3301323
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 03:52	3301323
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 03:52	3301323

Sampling Point: SG1-RB03-150811 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 04:23	3301324
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 04:23	3301324
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 04:23	3301324
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 04:23	3301324
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 04:23	3301324
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 04:23	3301324

Sampling Point: SG1-RB01-150812 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 04:54	3301325
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 04:54	3301325
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 04:54	3301325
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 04:54	3301325
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 04:54	3301325
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 04:54	3301325

Sampling Point: SG1-RB01-150813 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 05:25	3301326
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 05:25	3301326
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 05:25	3301326
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 05:25	3301326
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 05:25	3301326
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 05:25	3301326

Sampling Point: SG1-RB02-150813 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 05:56	3301327
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 05:56	3301327
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 05:56	3301327
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 05:56	3301327
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 05:56	3301327
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 05:56	3301327

Sampling Point: SG1-RB03-150813 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	08/18/15 06:45	08/19/15 06:27	3301328
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	08/18/15 06:45	08/19/15 06:27	3301328
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	08/18/15 06:45	08/19/15 06:27	3301328
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 06:27	3301328
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	08/18/15 06:45	08/19/15 06:27	3301328
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	08/18/15 06:45	08/19/15 06:27	3301328

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

eurofins | Eaton Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 280808
Batch # 346703

www.eatonanalytical.com

CHAIN OF CUSTODY RECORD

Shaded area for EEA use only

REPORT TO: Jason Wilkinson Ramboll Environ 3 Carlisle Rd, Suite 210 Westford, MA 01886	SAMPLER (Signature) Jonathan Dippert		PWS ID #	STATE (sample origin) NY	PROJECT NAME SGPP Hoosick Falls	PO#
BILL TO: Same As Report	COMPLIANCE MONITORING	Yes / No	POPULATION SERVED	SOURCE WATER		

	LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3301316	8/7/15	0930	X		SG1-TB01-150807	EPA Method 537*			X	1	~~DW~~ RW	SW
2	317	8/7/15	0935	X		SG1-RB01-150807	EPA Method 537*			X	3	DW	SW
3	318	8/10/15	0935	X		SG1-FB01-150810	EPA Method 537*		X	~~X~~	3	DW	SW
4	319	8/10/15	1210		X	SG1-RB01-150810	EPA Method 537*			X	3	DW	SW
5	320	8/10/15	1230		X	SG1-RB02-150810	EPA Method 537*			X	3	DW	SW
6	321	8/10/15	1605		X	SG1-RB03-150810	EPA Method 537*			X	3	DW	SW
7	322	8/11/15	0755	X		SG1-RB01-150811	EPA Method 537*			X	3	DW	SW
8	323	8/11/15	0800	X		SG1-RB02-150811	EPA Method 537*			X	3	DW	SW
9	324	8/11/15	1130	X		SG1-RB03-150811	EPA Method 537*			X	3	DW	SW
10	325	8/12/15	1020	X		SG1-RB01-150812	EPA Method 537*			X	3	DW	SW
11						*EPA Method 537 for the following	PFCs: PFOA, PFBS,						
12							PFHpA, PFHxS,						
13							PFNA, PFOS						
14						No other PFCs should be reported.							

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME	
[signature]	8/13/15	1650 PM			AM PM	LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT LAB COMMENTS
RELINQUISHED BY:(Signature)	DATE	TIME AM PM	RECEIVED BY:(Signature)	DATE	TIME AM PM	
RELINQUISHED BY:(Signature)	DATE	TIME AM PM	RECEIVED FOR LABORATORY BY: Rhonda Day	8/14/15	1000 AM PM	CONDITIONS UPON RECEIPT (check one): ___ Iced: Wet/Blue ___ Ambient 2.2 °C Upon Receipt___ N/A

MATRIX CODES:

DW-DRINKING WATER
RW-REAGENT WATER
GW-GROUND WATER
EW-EXPOSURE WATER
SW-SURFACE WATER
PW-POOL WATER
WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%	IV* = Immediate Verbal: (3 working days)	100%
RV* = Rush Verbal: (5 working days)	50%	IW* = Immediate Written: (3 working days)	125%
RW* = Rush Written: (5 working days)	75%	SP* = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

* Please call, expedited service not available for all testing

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

06-LO-F0435 Issue 4.0 Effective Date: 2014-05-01

Sample analysis will be provided according to the standard EEA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agree to in writing by EEA.

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110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 280838

Batch # ____________

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CHAIN OF CUSTODY RECORD

Page 2 of 2

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REPORT TO: Jason Wilkinson	SAMPLER (Signature) Jonathan Dippert	PWS ID #	STATE (sample origin)	PROJECT NAME	PO#
Ramboll Environ 3 Carlisle Rd, Suite 210 Westfield, MA 01886	[signature]		NY	SGPP Hoosick Falls	
BILL TO: SAME AS REPORT	COMPLIANCE MONITORING Yes / No	POPULATION SERVED	SOURCE WATER		

	LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3301326	8/13/15	0810	X		SG1-RB01-150813	EPA Method 537*			X	3	DW	SW
2	327	8/13/15	1100	X		SG1-RB02-150813	EPA Method 537*			X	3	DW	SW
3	328	8/13/15	1610		X	SG1-RB03-150813	EPA Method 537*			X	3	DW	SW
4													
5													
6													
7													
8													
9													
10													
11						*EPA Method 537 for the following	PFCs: PFOA, PFBS, PFHpA,						
12							~~PFHpA~~ PFHxS, PFNA,	PFOS					
13													
14						No other PFCs should be reported.							

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
[signature]	8/13/15	1650 PM			AM / PM
RELINQUISHED BY:(Signature)	DATE	TIME AM / PM	RECEIVED BY:(Signature)	DATE	TIME AM / PM
RELINQUISHED BY:(Signature)	DATE	TIME AM / PM	RECEIVED FOR LABORATORY BY: Rhonda Day	8/14/15	1000 AM / PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS

CONDITIONS UPON RECEIPT (check one): ✓ Iced: Wet/Blue ____ Ambient ____ 2.2 °C Upon Receipt ____ N/A

MATRIX CODES:

DW-DRINKING WATER
RW-REAGENT WATER
GW-GROUND WATER
EW-EXPOSURE WATER
SW-SURFACE WATER
PW-POOL WATER
WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%	IV* = Immediate Verbal: (3 working days)	100%
RV* = Rush Verbal: (5 working days)	50%	IW* = Immediate Written: (3 working days)	125%
RW* = Rush Written: (5 working days)	75%	SP* = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

* Please call, expedited service not available for all testing

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

06-LO-F0435 Issue 4.0 Effective Date: 2014-05-01

Sample analysis will be provided according to the standard EEA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agree to in writing by EEA.

Eurofins Eaton Analytical
Run Log

Run ID: **206459** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3302235		OS	CY	08/18/2015 15:30	081815M537a.mdb
LRB	3302268		RW	CY	08/18/2015 17:03	081815M537a.mdb
FBL	3302269		RW	CY	08/18/2015 17:34	081815M537a.mdb
FTB	3301316	FTB-SG1-TB01-150807	RW	CY	08/18/2015 18:36	081815M537a.mdb
FS	3301317	SG1-RB01-150807	DW	CY	08/18/2015 23:45	081815M537a.mdb
FS	3301318	SG1-FB01-150810	DW	CY	08/19/2015 00:16	081815M537a.mdb
FS	3301319	SG1-RB01-150810	DW	CY	08/19/2015 00:47	081815M537a.mdb
CCM	3302236		OS	CY	08/19/2015 01:18	081815M537a.mdb
FS	3301320	SG1-RB02-150810	DW	CY	08/19/2015 02:19	081815M537a.mdb
FS	3301321	SG1-RB03-150810	DW	CY	08/19/2015 02:50	081815M537a.mdb
FS	3301322	SG1-RB01-150811	DW	CY	08/19/2015 03:21	081815M537a.mdb
FS	3301323	SG1-RB02-150811	DW	CY	08/19/2015 03:52	081815M537a.mdb
FS	3301324	SG1-RB03-150811	DW	CY	08/19/2015 04:23	081815M537a.mdb
FS	3301325	SG1-RB01-150812	DW	CY	08/19/2015 04:54	081815M537a.mdb
FS	3301326	SG1-RB01-150813	DW	CY	08/19/2015 05:25	081815M537a.mdb
FS	3301327	SG1-RB02-150813	DW	CY	08/19/2015 05:56	081815M537a.mdb
FS	3301328	SG1-RB03-150813	DW	CY	08/19/2015 06:27	081815M537a.mdb
CCH	3302237		OS	CY	08/19/2015 06:58	081815M537a.mdb

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	IS-PFOA-13C2	537	N/A	---		2794.38	2794.38	ng/L	100	70 - 140	---	---	1.0	08/17/2015 10:40	08/18/2015 15:30	3302235
CCL	IS-PFOS-13C4	537	N/A	---		4089.96	4089.96	ng/L	100	70 - 140	---	---	1.0	08/17/2015 10:40	08/18/2015 15:30	3302235
CCL	SS-PFDA-13C2	537	N/A	---		93.1916	100	ng/L	93	70 - 130	---	---	1.0	08/17/2015 10:40	08/18/2015 15:30	3302235
CCL	SS-PFHxA-13C2	537	N/A	---		49.2576	50.0	ng/L	99	70 - 130	---	---	1.0	08/17/2015 10:40	08/18/2015 15:30	3302235
CCL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		93.4664	90.0	ng/L	104	50 - 150	---	---	1.0	08/17/2015 10:40	08/18/2015 15:30	3302235
CCL	Perfluoroheptanoic acid (PFHpA)	537	10	---		11.3430	10.0	ng/L	113	50 - 150	---	---	1.0	08/17/2015 10:40	08/18/2015 15:30	3302235
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		29.6187	30.0	ng/L	99	50 - 150	---	---	1.0	08/17/2015 10:40	08/18/2015 15:30	3302235
CCL	Perfluorononanoic acid (PFNA)	537	20	---		21.3240	20.0	ng/L	107	50 - 150	---	---	1.0	08/17/2015 10:40	08/18/2015 15:30	3302235
CCL	Perfluorooctane sulfonate (PFOS)	537	40	---		41.5466	40.0	ng/L	104	50 - 150	---	---	1.0	08/17/2015 10:40	08/18/2015 15:30	3302235
CCL	Perfluorooctanoic acid (PFOA)	537	20	---		21.0560	20.0	ng/L	105	50 - 150	---	---	1.0	08/17/2015 10:40	08/18/2015 15:30	3302235
LRB	IS-PFOA-13C2	537	N/A	---		2985.30	2794.38	ng/L	107	70 - 140	---	---	1.0	08/18/2015 06:45	08/18/2015 17:03	3302268
LRB	IS-PFOS-13C4	537	N/A	---		4131.74	4089.96	ng/L	101	70 - 140	---	---	1.0	08/18/2015 06:45	08/18/2015 17:03	3302268
LRB	SS-PFDA-13C2	537	N/A	---		89.2434	100	ng/L	89	70 - 130	---	---	1.0	08/18/2015 06:45	08/18/2015 17:03	3302268
LRB	SS-PFHxA-13C2	537	N/A	---		44.9372	50.0	ng/L	90	70 - 130	---	---	1.0	08/18/2015 06:45	08/18/2015 17:03	3302268
LRB	Perfluorobutanesulfonic acid (PFBS)	537	90	---	<	90		ng/L	---	---	---	---	1.0	08/18/2015 06:45	08/18/2015 17:03	3302268
LRB	Perfluoroheptanoic acid (PFHpA)	537	10	---	<	10		ng/L	---	---	---	---	1.0	08/18/2015 06:45	08/18/2015 17:03	3302268
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	30	---	<	30		ng/L	---	---	---	---	1.0	08/18/2015 06:45	08/18/2015 17:03	3302268
LRB	Perfluorononanoic acid (PFNA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	08/18/2015 06:45	08/18/2015 17:03	3302268
LRB	Perfluorooctane sulfonate (PFOS)	537	40	---	<	40		ng/L	---	---	---	---	1.0	08/18/2015 06:45	08/18/2015 17:03	3302268
LRB	Perfluorooctanoic acid (PFOA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	08/18/2015 06:45	08/18/2015 17:03	3302268
FBL	IS-PFOA-13C2	537	N/A	---		3057.40	2794.38	ng/L	109	70 - 140	---	---	1.0	08/18/2015 06:45	08/18/2015 17:34	3302269
FBL	IS-PFOS-13C4	537	N/A	---		4304.42	4089.96	ng/L	105	70 - 140	---	---	1.0	08/18/2015 06:45	08/18/2015 17:34	3302269
FBL	SS-PFDA-13C2	537	N/A	---		89.6341	100	ng/L	90	70 - 130	---	---	1.0	08/18/2015 06:45	08/18/2015 17:34	3302269
FBL	SS-PFHxA-13C2	537	N/A	---		47.0657	50.0	ng/L	94	70 - 130	---	---	1.0	08/18/2015 06:45	08/18/2015 17:34	3302269
FBL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		92.8462	90.0	ng/L	103	50 - 150	---	---	1.0	08/18/2015 06:45	08/18/2015 17:34	3302269
FBL	Perfluoroheptanoic acid (PFHpA)	537	10	---		10.1934	10.0	ng/L	102	50 - 150	---	---	1.0	08/18/2015 06:45	08/18/2015 17:34	3302269
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		30.7762	30.0	ng/L	103	50 - 150	---	---	1.0	08/18/2015 06:45	08/18/2015 17:34	3302269
FBL	Perfluorononanoic acid (PFNA)	537	20	---		20.2344	20.0	ng/L	101	50 - 150	---	---	1.0	08/18/2015 06:45	08/18/2015 17:34	3302269
FBL	Perfluorooctane sulfonate (PFOS)	537	40	---		40.9056	40.0	ng/L	102	50 - 150	---	---	1.0	08/18/2015 06:45	08/18/2015 17:34	3302269
FBL	Perfluorooctanoic acid (PFOA)	537	20	---		20.5419	20.0	ng/L	103	50 - 150	---	---	1.0	08/18/2015 06:45	08/18/2015 17:34	3302269
FTB	IS-PFOA-13C2	537	N/A	FTB-SG1-TB01-150807		3125.95	2794.38	ng/L	112	70 - 140	---	---	1.02	08/18/2015 06:45	08/18/2015 18:36	3301316
FTB	IS-PFOS-13C4	537	N/A	FTB-SG1-TB01-150807		4450.23	4089.96	ng/L	109	70 - 140	---	---	1.02	08/18/2015 06:45	08/18/2015 18:36	3301316
FTB	SS-PFDA-13C2	537	N/A	FTB-SG1-TB01-150807		95.0385	100	ng/L	93	70 - 130	---	---	1.02	08/18/2015 06:45	08/18/2015 18:36	3301316
FTB	SS-PFHxA-13C2	537	N/A	FTB-SG1-TB01-150807		48.4528	50.0	ng/L	95	70 - 130	---	---	1.02	08/18/2015 06:45	08/18/2015 18:36	3301316
FTB	Perfluorobutanesulfonic acid (PFBS)	537	90	FTB-SG1-TB01-150807	<	90		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/18/2015 18:36	3301316
FTB	Perfluoroheptanoic acid (PFHpA)	537	10	FTB-SG1-TB01-150807	<	10		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/18/2015 18:36	3301316
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	30	FTB-SG1-TB01-150807	<	30		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/18/2015 18:36	3301316
FTB	Perfluorononanoic acid (PFNA)	537	20	FTB-SG1-TB01-150807	<	20		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/18/2015 18:36	3301316
FTB	Perfluorooctane sulfonate (PFOS)	537	40	FTB-SG1-TB01-150807	<	40		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/18/2015 18:36	3301316
FTB	Perfluorooctanoic acid (PFOA)	537	20	FTB-SG1-TB01-150807	<	20		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/18/2015 18:36	3301316

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	IS-PFOA-13C2	537	N/A	SG1-RB01-150807		3251.05	2794.38	ng/L	116	70 - 140	---	---	0.96	08/18/2015 06:45	08/18/2015 23:45	3301317
FS	IS-PFOS-13C4	537	N/A	SG1-RB01-150807		4536.96	4089.96	ng/L	111	70 - 140	---	---	0.96	08/18/2015 06:45	08/18/2015 23:45	3301317
FS	SS-PFDA-13C2	537	N/A	SG1-RB01-150807		86.0775	100	ng/L	90	70 - 130	---	---	0.96	08/18/2015 06:45	08/18/2015 23:45	3301317
FS	SS-PFHxA-13C2	537	N/A	SG1-RB01-150807		46.3623	50.0	ng/L	97	70 - 130	---	---	0.96	08/18/2015 06:45	08/18/2015 23:45	3301317
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB01-150807	<	90		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/18/2015 23:45	3301317
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB01-150807	<	10		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/18/2015 23:45	3301317
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB01-150807	<	30		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/18/2015 23:45	3301317
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB01-150807	<	20		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/18/2015 23:45	3301317
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB01-150807	<	40		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/18/2015 23:45	3301317
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB01-150807	<	20		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/18/2015 23:45	3301317
FS	IS-PFOA-13C2	537	N/A	SG1-FB01-150810		3159.05	2794.38	ng/L	113	70 - 140	---	---	0.97	08/18/2015 06:45	08/19/2015 00:16	3301318
FS	IS-PFOS-13C4	537	N/A	SG1-FB01-150810		4485.56	4089.96	ng/L	110	70 - 140	---	---	0.97	08/18/2015 06:45	08/19/2015 00:16	3301318
FS	SS-PFDA-13C2	537	N/A	SG1-FB01-150810		88.4014	100	ng/L	91	70 - 130	---	---	0.97	08/18/2015 06:45	08/19/2015 00:16	3301318
FS	SS-PFHxA-13C2	537	N/A	SG1-FB01-150810		47.9550	50.0	ng/L	99	70 - 130	---	---	0.97	08/18/2015 06:45	08/19/2015 00:16	3301318
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-FB01-150810	<	90		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 00:16	3301318
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-FB01-150810	<	10		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 00:16	3301318
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-FB01-150810	<	30		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 00:16	3301318
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-FB01-150810	<	20		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 00:16	3301318
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-FB01-150810	<	40		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 00:16	3301318
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-FB01-150810	<	20		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 00:16	3301318
FS	IS-PFOA-13C2	537	N/A	SG1-RB01-150810		3185.26	2794.38	ng/L	114	70 - 140	---	---	0.99	08/18/2015 06:45	08/19/2015 00:47	3301319
FS	IS-PFOS-13C4	537	N/A	SG1-RB01-150810		4402.67	4089.96	ng/L	108	70 - 140	---	---	0.99	08/18/2015 06:45	08/19/2015 00:47	3301319
FS	SS-PFDA-13C2	537	N/A	SG1-RB01-150810		88.5595	100	ng/L	89	70 - 130	---	---	0.99	08/18/2015 06:45	08/19/2015 00:47	3301319
FS	SS-PFHxA-13C2	537	N/A	SG1-RB01-150810		46.6574	50.0	ng/L	94	70 - 130	---	---	0.99	08/18/2015 06:45	08/19/2015 00:47	3301319
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB01-150810	<	90		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 00:47	3301319
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB01-150810	<	10		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 00:47	3301319
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB01-150810	<	30		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 00:47	3301319
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB01-150810	<	20		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 00:47	3301319
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB01-150810	<	40		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 00:47	3301319
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB01-150810	<	20		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 00:47	3301319
CCM	IS-PFOA-13C2	537	N/A	---		3019.19	3019.19	ng/L	100	70 - 140	---	---	1.0	08/17/2015 10:40	08/19/2015 01:18	3302236
CCM	IS-PFOS-13C4	537	N/A	---		4119.97	4119.97	ng/L	100	70 - 140	---	---	1.0	08/17/2015 10:40	08/19/2015 01:18	3302236
CCM	SS-PFDA-13C2	537	N/A	---		101.2040	100	ng/L	101	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 01:18	3302236
CCM	SS-PFHxA-13C2	537	N/A	---		51.1846	50.0	ng/L	102	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 01:18	3302236
CCM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		704.6730	675	ng/L	104	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 01:18	3302236
CCM	Perfluoroheptanoic acid (PFHpA)	537	10	---		75.9843	75.0	ng/L	101	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 01:18	3302236
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		227.7280	225	ng/L	101	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 01:18	3302236
CCM	Perfluorononanoic acid (PFNA)	537	20	---		149.8760	150	ng/L	100	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 01:18	3302236
CCM	Perfluorooctane sulfonate (PFOS)	537	40	---		297.6560	300	ng/L	99	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 01:18	3302236
CCM	Perfluorooctanoic acid (PFOA)	537	20	---		150.8680	150	ng/L	101	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 01:18	3302236
FS	IS-PFOA-13C2	537	N/A	SG1-RB02-150810		3279.24	3019.19	ng/L	109	70 - 140	---	---	0.98	08/18/2015 06:45	08/19/2015 02:19	3301320

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	IS-PFOS-13C4	537	N/A	SG1-RB02-150810		4583.12	4119.97	ng/L	111	70 - 140	---	---	0.98	08/18/2015 06:45	08/19/2015 02:19	3301320
FS	SS-PFDA-13C2	537	N/A	SG1-RB02-150810		94.7991	100	ng/L	97	70 - 130	---	---	0.98	08/18/2015 06:45	08/19/2015 02:19	3301320
FS	SS-PFHxA-13C2	537	N/A	SG1-RB02-150810		49.7427	50.0	ng/L	102	70 - 130	---	---	0.98	08/18/2015 06:45	08/19/2015 02:19	3301320
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB02-150810	<	90		ng/L	---	---	---	---	0.98	08/18/2015 06:45	08/19/2015 02:19	3301320
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB02-150810	<	10		ng/L	---	---	---	---	0.98	08/18/2015 06:45	08/19/2015 02:19	3301320
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB02-150810	<	30		ng/L	---	---	---	---	0.98	08/18/2015 06:45	08/19/2015 02:19	3301320
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB02-150810	<	20		ng/L	---	---	---	---	0.98	08/18/2015 06:45	08/19/2015 02:19	3301320
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB02-150810	<	40		ng/L	---	---	---	---	0.98	08/18/2015 06:45	08/19/2015 02:19	3301320
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB02-150810	<	20		ng/L	---	---	---	---	0.98	08/18/2015 06:45	08/19/2015 02:19	3301320
FS	IS-PFOA-13C2	537	N/A	SG1-RB03-150810		3216.36	3019.19	ng/L	107	70 - 140	---	---	0.99	08/18/2015 06:45	08/19/2015 02:50	3301321
FS	IS-PFOS-13C4	537	N/A	SG1-RB03-150810		4436.41	4119.97	ng/L	108	70 - 140	---	---	0.99	08/18/2015 06:45	08/19/2015 02:50	3301321
FS	SS-PFDA-13C2	537	N/A	SG1-RB03-150810		98.7243	100	ng/L	100	70 - 130	---	---	0.99	08/18/2015 06:45	08/19/2015 02:50	3301321
FS	SS-PFHxA-13C2	537	N/A	SG1-RB03-150810		49.4912	50.0	ng/L	100	70 - 130	---	---	0.99	08/18/2015 06:45	08/19/2015 02:50	3301321
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB03-150810	<	90		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 02:50	3301321
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB03-150810	<	10		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 02:50	3301321
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB03-150810	<	30		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 02:50	3301321
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB03-150810	<	20		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 02:50	3301321
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB03-150810	<	40		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 02:50	3301321
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB03-150810	<	20		ng/L	---	---	---	---	0.99	08/18/2015 06:45	08/19/2015 02:50	3301321
FS	IS-PFOA-13C2	537	N/A	SG1-RB01-150811		3266.17	3019.19	ng/L	108	70 - 140	---	---	1.02	08/18/2015 06:45	08/19/2015 03:21	3301322
FS	IS-PFOS-13C4	537	N/A	SG1-RB01-150811		4412.45	4119.97	ng/L	107	70 - 140	---	---	1.02	08/18/2015 06:45	08/19/2015 03:21	3301322
FS	SS-PFDA-13C2	537	N/A	SG1-RB01-150811		94.2269	100	ng/L	92	70 - 130	---	---	1.02	08/18/2015 06:45	08/19/2015 03:21	3301322
FS	SS-PFHxA-13C2	537	N/A	SG1-RB01-150811		51.1220	50.0	ng/L	100	70 - 130	---	---	1.02	08/18/2015 06:45	08/19/2015 03:21	3301322
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB01-150811	<	90		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:21	3301322
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB01-150811	<	10		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:21	3301322
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB01-150811	<	30		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:21	3301322
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB01-150811	<	20		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:21	3301322
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB01-150811	<	40		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:21	3301322
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB01-150811	<	20		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:21	3301322
FS	IS-PFOA-13C2	537	N/A	SG1-RB02-150811		3453.18	3019.19	ng/L	114	70 - 140	---	---	1.02	08/18/2015 06:45	08/19/2015 03:52	3301323
FS	IS-PFOS-13C4	537	N/A	SG1-RB02-150811		4735.23	4119.97	ng/L	115	70 - 140	---	---	1.02	08/18/2015 06:45	08/19/2015 03:52	3301323
FS	SS-PFDA-13C2	537	N/A	SG1-RB02-150811		94.1744	100	ng/L	92	70 - 130	---	---	1.02	08/18/2015 06:45	08/19/2015 03:52	3301323
FS	SS-PFHxA-13C2	537	N/A	SG1-RB02-150811		48.1354	50.0	ng/L	94	70 - 130	---	---	1.02	08/18/2015 06:45	08/19/2015 03:52	3301323
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB02-150811	<	90		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:52	3301323
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB02-150811	<	10		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:52	3301323
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB02-150811	<	30		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:52	3301323
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB02-150811	<	20		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:52	3301323
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB02-150811	<	40		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:52	3301323
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB02-150811	<	20		ng/L	---	---	---	---	1.02	08/18/2015 06:45	08/19/2015 03:52	3301323
FS	IS-PFOA-13C2	537	N/A	SG1-RB03-150811		3323.45	3019.19	ng/L	110	70 - 140	---	---	0.96	08/18/2015 06:45	08/19/2015 04:23	3301324
FS	IS-PFOS-13C4	537	N/A	SG1-RB03-150811		4470.79	4119.97	ng/L	109	70 - 140	---	---	0.96	08/18/2015 06:45	08/19/2015 04:23	3301324

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	SS-PFDA-13C2	537	N/A	SG1-RB03-150811		88.4150	100	ng/L	92	70 - 130	---	---	0.96	08/18/2015 06:45	08/19/2015 04:23	3301324
FS	SS-PFHxA-13C2	537	N/A	SG1-RB03-150811		46.3135	50.0	ng/L	96	70 - 130	---	---	0.96	08/18/2015 06:45	08/19/2015 04:23	3301324
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB03-150811	<	90		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/19/2015 04:23	3301324
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB03-150811	<	10		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/19/2015 04:23	3301324
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB03-150811	<	30		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/19/2015 04:23	3301324
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB03-150811	<	20		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/19/2015 04:23	3301324
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB03-150811	<	40		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/19/2015 04:23	3301324
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB03-150811	<	20		ng/L	---	---	---	---	0.96	08/18/2015 06:45	08/19/2015 04:23	3301324
FS	IS-PFOA-13C2	537	N/A	SG1-RB01-150812		3263.22	3019.19	ng/L	108	70 - 140	---	---	0.97	08/18/2015 06:45	08/19/2015 04:54	3301325
FS	IS-PFOS-13C4	537	N/A	SG1-RB01-150812		4592.10	4119.97	ng/L	111	70 - 140	---	---	0.97	08/18/2015 06:45	08/19/2015 04:54	3301325
FS	SS-PFDA-13C2	537	N/A	SG1-RB01-150812		91.8197	100	ng/L	95	70 - 130	---	---	0.97	08/18/2015 06:45	08/19/2015 04:54	3301325
FS	SS-PFHxA-13C2	537	N/A	SG1-RB01-150812		46.4646	50.0	ng/L	96	70 - 130	---	---	0.97	08/18/2015 06:45	08/19/2015 04:54	3301325
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB01-150812	<	90		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 04:54	3301325
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB01-150812	<	10		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 04:54	3301325
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB01-150812	<	30		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 04:54	3301325
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB01-150812	<	20		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 04:54	3301325
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB01-150812	<	40		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 04:54	3301325
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB01-150812	<	20		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 04:54	3301325
FS	IS-PFOA-13C2	537	N/A	SG1-RB01-150813		3103.59	3019.19	ng/L	103	70 - 140	---	---	0.97	08/18/2015 06:45	08/19/2015 05:25	3301326
FS	IS-PFOS-13C4	537	N/A	SG1-RB01-150813		4397.68	4119.97	ng/L	107	70 - 140	---	---	0.97	08/18/2015 06:45	08/19/2015 05:25	3301326
FS	SS-PFDA-13C2	537	N/A	SG1-RB01-150813		91.1637	100	ng/L	94	70 - 130	---	---	0.97	08/18/2015 06:45	08/19/2015 05:25	3301326
FS	SS-PFHxA-13C2	537	N/A	SG1-RB01-150813		47.9029	50.0	ng/L	99	70 - 130	---	---	0.97	08/18/2015 06:45	08/19/2015 05:25	3301326
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB01-150813	<	90		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 05:25	3301326
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB01-150813	<	10		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 05:25	3301326
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB01-150813	<	30		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 05:25	3301326
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB01-150813	<	20		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 05:25	3301326
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB01-150813	<	40		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 05:25	3301326
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB01-150813	<	20		ng/L	---	---	---	---	0.97	08/18/2015 06:45	08/19/2015 05:25	3301326
FS	IS-PFOA-13C2	537	N/A	SG1-RB02-150813		3027.38	3019.19	ng/L	100	70 - 140	---	---	1.01	08/18/2015 06:45	08/19/2015 05:56	3301327
FS	IS-PFOS-13C4	537	N/A	SG1-RB02-150813		4319.07	4119.97	ng/L	105	70 - 140	---	---	1.01	08/18/2015 06:45	08/19/2015 05:56	3301327
FS	SS-PFDA-13C2	537	N/A	SG1-RB02-150813		95.7697	100	ng/L	95	70 - 130	---	---	1.01	08/18/2015 06:45	08/19/2015 05:56	3301327
FS	SS-PFHxA-13C2	537	N/A	SG1-RB02-150813		51.0353	50.0	ng/L	101	70 - 130	---	---	1.01	08/18/2015 06:45	08/19/2015 05:56	3301327
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB02-150813	<	90		ng/L	---	---	---	---	1.01	08/18/2015 06:45	08/19/2015 05:56	3301327
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB02-150813	<	10		ng/L	---	---	---	---	1.01	08/18/2015 06:45	08/19/2015 05:56	3301327
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB02-150813	<	30		ng/L	---	---	---	---	1.01	08/18/2015 06:45	08/19/2015 05:56	3301327
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB02-150813	<	20		ng/L	---	---	---	---	1.01	08/18/2015 06:45	08/19/2015 05:56	3301327
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB02-150813	<	40		ng/L	---	---	---	---	1.01	08/18/2015 06:45	08/19/2015 05:56	3301327
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB02-150813	<	20		ng/L	---	---	---	---	1.01	08/18/2015 06:45	08/19/2015 05:56	3301327
FS	IS-PFOA-13C2	537	N/A	SG1-RB03-150813		3213.67	3019.19	ng/L	106	70 - 140	---	---	0.95	08/18/2015 06:45	08/19/2015 06:27	3301328
FS	IS-PFOS-13C4	537	N/A	SG1-RB03-150813		4472.90	4119.97	ng/L	109	70 - 140	---	---	0.95	08/18/2015 06:45	08/19/2015 06:27	3301328
FS	SS-PFDA-13C2	537	N/A	SG1-RB03-150813		80.3936	100	ng/L	85	70 - 130	---	---	0.95	08/18/2015 06:45	08/19/2015 06:27	3301328

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	SS-PFHxA-13C2	537	N/A	SG1-RB03-150813		38.6814	50.0	ng/L	81	70 - 130	---	---	0.95	08/18/2015 06:45	08/19/2015 06:27	3301328
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB03-150813	<	90		ng/L	---	---	---	---	0.95	08/18/2015 06:45	08/19/2015 06:27	3301328
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB03-150813	<	10		ng/L	---	---	---	---	0.95	08/18/2015 06:45	08/19/2015 06:27	3301328
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB03-150813	<	30		ng/L	---	---	---	---	0.95	08/18/2015 06:45	08/19/2015 06:27	3301328
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB03-150813	<	20		ng/L	---	---	---	---	0.95	08/18/2015 06:45	08/19/2015 06:27	3301328
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB03-150813	<	40		ng/L	---	---	---	---	0.95	08/18/2015 06:45	08/19/2015 06:27	3301328
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB03-150813	<	20		ng/L	---	---	---	---	0.95	08/18/2015 06:45	08/19/2015 06:27	3301328
CCH	IS-PFOA-13C2	537	N/A	---		2831.18	2831.18	ng/L	100	70 - 140	---	---	1.0	08/17/2015 10:40	08/19/2015 06:58	3302237
CCH	IS-PFOS-13C4	537	N/A	---		3977.45	3977.45	ng/L	100	70 - 140	---	---	1.0	08/17/2015 10:40	08/19/2015 06:58	3302237
CCH	SS-PFDA-13C2	537	N/A	---		94.7125	100	ng/L	95	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 06:58	3302237
CCH	SS-PFHxA-13C2	537	N/A	---		50.8567	50.0	ng/L	102	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 06:58	3302237
CCH	Perfluorobutanesulfonic acid (PFBS)	537	90	---		1141.0100	1125	ng/L	101	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 06:58	3302237
CCH	Perfluoroheptanoic acid (PFHpA)	537	10	---		123.5540	125	ng/L	99	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 06:58	3302237
CCH	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		368.9330	375	ng/L	98	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 06:58	3302237
CCH	Perfluorononanoic acid (PFNA)	537	20	---		248.8910	250	ng/L	100	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 06:58	3302237
CCH	Perfluorooctane sulfonate (PFOS)	537	40	---		483.9230	500	ng/L	97	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 06:58	3302237
CCH	Perfluorooctanoic acid (PFOA)	537	20	---		242.9730	250	ng/L	97	70 - 130	---	---	1.0	08/17/2015 10:40	08/19/2015 06:58	3302237

Sample Type Key

Type (Abbr.)	Sample Type
CCH	Continuing Calibration High
CCL	Continuing Calibration Low
CCM	Continuing Calibration Mid
FS	Field Sample
FTB	Field Trip Blank
FBL	Fortified Blank Low
LRB	Laboratory Reagent Blank

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: 02-37128B(RE) 15-5133 (CTM)
Site Location: SGPP HOOSICK FALLS
Your C.O.C. #: 524261-01-01, N/A

Attention:
Jason Wilkinson/ Kirk Moline
Ramboll Environ
3 Carlisle Rd.
Westford, MA
USA 01886

Report Date: 2015/09/10
Report #: R3656817
Version: 3R

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B5F6982
Received: 2015/08/14, 14:25

Sample Matrix: Soil
Samples Received: 23

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Moisture	5	N/A	2015/08/17	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	6	N/A	2015/08/18	CAM SOP-00445	Carter 2nd ed 51.2 m
PFOS and PFOA in soil	5	2015/08/26	2015/08/28	CAM SOP-00894	EPA537 m
PFOS and PFOA in soil	6	2015/08/27	2015/08/28	CAM SOP-00894	EPA537 m
Total Organic Carbon in Soil	5	N/A	2015/08/19	CAM SOP-00468	LECO 203-601-224
Total Organic Carbon in Soil	7	N/A	2015/08/21	CAM SOP-00468	LECO 203-601-224

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Melissa DiGrazia, Project Manager - ATUT
Email: MDiGrazia@maxxam.ca
Phone# (905) 817-5700

==
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Job #: B5F6982
Report Date: 2015/09/10

Ramboll Environ
Client Project #: 02-37128B(RE) 15-5133 (CTM)
Site Location: SGPP HOOSICK FALLS
Sampler Initials: JD

RESULTS OF ANALYSES OF SOIL

Maxxam ID		ATN765		ATN766	ATN767			
Sampling Date		2015/08/05 08:25		2015/08/05 08:30	2015/08/05 12:30			
COC Number		524261-01-01		524261-01-01	524261-01-01			
	Units	**SG1-MW04S-00.0**	**RDL**	**SG1-MW04S-02.0**	**SG1-MW04S-15.0**	**RDL**	**MDL**	**QC Batch**
Moisture	%	22	1.0	25	N/A	1.0	0.50	4151642
Total Organic Carbon	mg/kg	N/A	N/A	N/A	1300	500	100	4152610
Perfluorobutane Sulfonate (PFBS)	ug/kg	0.039	1	<0.014	N/A	0.1	0.014	4167364
Perfluoroheptanoic Acid (PFHpA)	ug/kg	0.17	1	0.080	N/A	0.1	0.015	4167364
Perfluorohexane Sulfonate (PFHxS)	ug/kg	0.15	1	<0.015	N/A	0.1	0.015	4167364
Perfluoro-n-Octanoic Acid (PFOA)	ug/kg	4.1	1	1.8	N/A	0.1	0.023	4167364
Perfluorononanoic Acid (PFNA)	ug/kg	0.14	1	0.07	N/A	0.1	0.01	4167364
Perfluorooctane Sulfonate (PFOS)	ug/kg	0.63	1	0.28	N/A	0.1	0.015	4167364

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		ATN768	ATN769	ATN770	ATN771			
Sampling Date		2015/08/05 12:35	2015/08/05 12:40	2015/08/05 14:45	2015/08/05 15:00			
COC Number		524261-01-01	524261-01-01	524261-01-01	524261-01-01			
	Units	**SG1-MW04S-21.0**	**SG1-MW04S-24.0**	**SG1-DS01-150805**	**SG1-MW02D-00.0**	**RDL**	**MDL**	**QC Batch**
Moisture	%	N/A	N/A	11	11	1.0	0.50	4151642
Total Organic Carbon	mg/kg	1900	2200	N/A	N/A	500	100	4152610
Perfluorobutane Sulfonate (PFBS)	ug/kg	N/A	N/A	<0.014	<0.014	0.1	0.014	4167364
Perfluoroheptanoic Acid (PFHpA)	ug/kg	N/A	N/A	<0.015	<0.015	0.1	0.015	4167364
Perfluorohexane Sulfonate (PFHxS)	ug/kg	N/A	N/A	<0.015	<0.015	0.1	0.015	4167364
Perfluoro-n-Octanoic Acid (PFOA)	ug/kg	N/A	N/A	1.5	1.3	0.1	0.023	4167364
Perfluorononanoic Acid (PFNA)	ug/kg	N/A	N/A	0.02	0.01	0.1	0.01	4167364
Perfluorooctane Sulfonate (PFOS)	ug/kg	N/A	N/A	0.035	0.028	0.1	0.015	4167364

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B5F6982
Report Date: 2015/09/10

Ramboll Environ
Client Project #: 02-37128B(RE) 15-5133 (CTM)
Site Location: SGPP HOOSICK FALLS
Sampler Initials: JD

RESULTS OF ANALYSES OF SOIL

Maxxam ID		ATN772	ATN772	ATN773	ATN774			
Sampling Date		2015/08/05 15:10	2015/08/05 15:10	2015/08/06 12:30	2015/08/06 12:55			
COC Number		524261-01-01	524261-01-01	524261-01-01	524261-01-01			
	Units	**SG1-MW02D-02.0**	**SG1-MW02D-02.0 Lab-Dup**	**SG1-MW02D-42.0**	**SG1-MW02D-24.0**	**RDL**	**MDL**	**QC Batch**
Moisture	%	11	N/A	N/A	N/A	1.0	0.50	4151642
Total Organic Carbon	mg/kg	N/A	N/A	<500	1100	500	100	4152610
Perfluorobutane Sulfonate (PFBS)	ug/kg	<0.014	<0.014	N/A	N/A	0.1	0.014	4167364
Perfluoroheptanoic Acid (PFHpA)	ug/kg	<0.015	<0.015	N/A	N/A	0.1	0.015	4167364
Perfluorohexane Sulfonate (PFHxS)	ug/kg	<0.015	<0.015	N/A	N/A	0.1	0.015	4167364
Perfluoro-n-Octanoic Acid (PFOA)	ug/kg	0.35	0.41	N/A	N/A	0.1	0.023	4167364
Perfluorononanoic Acid (PFNA)	ug/kg	<0.01	<0.01	N/A	N/A	0.1	0.01	4167364
Perfluorooctane Sulfonate (PFOS)	ug/kg	<0.015	<0.015	N/A	N/A	0.1	0.015	4167364

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		AUP457	AUP458	AUP459	AUP459			
Sampling Date		2015/08/10 13:10	2015/08/10 13:15	2015/08/10 15:50	2015/08/10 15:50			
COC Number		N/A	N/A	N/A	N/A			
	Units	**SG1-MW01D-00.0**	**SG1-MW01D-02.0**	**SG1-MW01D-13.0**	**SG1-MW01D-13.0 Lab-Dup**	**RDL**	**MDL**	**QC Batch**
Moisture	%	11	9.6	N/A	N/A	1.0	0.50	4153056
Total Organic Carbon	mg/kg	N/A	N/A	2400	2500	500	100	4156837
Perfluorobutane Sulfonate (PFBS)	ug/kg	<0.014	<0.014	N/A	N/A	0.1	0.014	4167364
Perfluoroheptanoic Acid (PFHpA)	ug/kg	<0.015	<0.015	N/A	N/A	0.1	0.015	4167364
Perfluorohexane Sulfonate (PFHxS)	ug/kg	<0.015	<0.015	N/A	N/A	0.1	0.015	4167364
Perfluoro-n-Octanoic Acid (PFOA)	ug/kg	1.0	2.4	N/A	N/A	0.1	0.023	4167364
Perfluorononanoic Acid (PFNA)	ug/kg	<0.01	<0.01	N/A	N/A	0.1	0.01	4167364
Perfluorooctane Sulfonate (PFOS)	ug/kg	<0.015	<0.015	N/A	N/A	0.1	0.015	4167364

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B5F6982
Report Date: 2015/09/10

Ramboll Environ
Client Project #: 02-37128B(RE) 15-5133 (CTM)
Site Location: SGPP HOOSICK FALLS
Sampler Initials: JD

RESULTS OF ANALYSES OF SOIL

Maxxam ID		AUP460			AUP461			
Sampling Date		2015/08/11 09:30			2015/08/11 12:10			
COC Number		N/A			N/A			
	Units	**SG1-MW01S-06.0**	**RDL**	**MDL**	**SG1-MW05S-00.0**	**RDL**	**MDL**	**QC Batch**
Moisture	%	N/A	1.0	0.50	12	1.0	0.50	4153056
Total Organic Carbon	mg/kg	2000	500	100	N/A	500	100	4156837
Perfluorobutane Sulfonate (PFBS)	ug/kg	N/A	0.1	0.014	<0.14	1	0.14	4167364
Perfluoroheptanoic Acid (PFHpA)	ug/kg	N/A	0.1	0.015	<0.15	1	0.15	4167364
Perfluorohexane Sulfonate (PFHxS)	ug/kg	N/A	0.1	0.015	<0.15	1	0.15	4167364
Perfluoro-n-Octanoic Acid (PFOA)	ug/kg	N/A	0.1	0.023	1.4	1	0.23	4167364
Perfluorononanoic Acid (PFNA)	ug/kg	N/A	0.1	0.01	<0.1	1	0.1	4167364
Perfluorooctane Sulfonate (PFOS)	ug/kg	N/A	0.1	0.015	0.25	1	0.15	4167364

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		AUP462	AUP463	AUP464	AUP465			
Sampling Date		2015/08/11 12:12	2015/08/11 13:00	2015/08/10 09:10	2015/08/12 12:00			
COC Number		N/A	N/A	N/A	N/A			
	Units	**SG1-MW05S-02.0**	**SG1-MW05S-17.0**	**SG1-MW02S-12.0**	**SG1-MW01D-23.0**	**RDL**	**MDL**	**QC Batch**
Moisture	%	15	N/A	N/A	N/A	1.0	0.50	4153056
Total Organic Carbon	mg/kg	N/A	1600	930	4700	500	100	4156837
Perfluorobutane Sulfonate (PFBS)	ug/kg	<0.014	N/A	N/A	N/A	0.1	0.014	4167364
Perfluoroheptanoic Acid (PFHpA)	ug/kg	0.038	N/A	N/A	N/A	0.1	0.015	4167364
Perfluorohexane Sulfonate (PFHxS)	ug/kg	<0.015	N/A	N/A	N/A	0.1	0.015	4167364
Perfluoro-n-Octanoic Acid (PFOA)	ug/kg	1.2	N/A	N/A	N/A	0.1	0.023	4167364
Perfluorononanoic Acid (PFNA)	ug/kg	0.06	N/A	N/A	N/A	0.1	0.01	4167364
Perfluorooctane Sulfonate (PFOS)	ug/kg	0.099	N/A	N/A	N/A	0.1	0.015	4167364

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B5F6982
Report Date: 2015/09/10

Ramboll Environ
Client Project #: 02-37128B(RE) 15-5133 (CTM)
Site Location: SGPP HOOSICK FALLS
Sampler Initials: JD

RESULTS OF ANALYSES OF SOIL

Maxxam ID		AUP466	AUP467	AUP468	AUP469			
Sampling Date		2015/08/12 13:00	2015/08/13 08:40	2015/08/13 08:42	2015/08/13 10:20			
COC Number		N/A	N/A	N/A	N/A			
	Units	**SG1-DS01-150812**	**SG1-MW03S-00.0**	**SG1-MW03S-02.0**	**SG1-MW03S-13.0**	**RDL**	**MDL**	**QC Batch**
Moisture	%	N/A	14	16	N/A	1.0	0.50	4153056
Total Organic Carbon	mg/kg	4300	N/A	N/A	1100	500	100	4156837
Perfluorobutane Sulfonate (PFBS)	ug/kg	N/A	<0.014	<0.014	N/A	0.1	0.014	4167364
Perfluoroheptanoic Acid (PFHpA)	ug/kg	N/A	0.11	<0.015	N/A	0.1	0.015	4167364
Perfluorohexane Sulfonate (PFHxS)	ug/kg	N/A	<0.015	<0.015	N/A	0.1	0.015	4167364
Perfluoro-n-Octanoic Acid (PFOA)	ug/kg	N/A	2.5	0.67	N/A	0.1	0.023	4167364
Perfluorononanoic Acid (PFNA)	ug/kg	N/A	0.11	0.03	N/A	0.1	0.01	4167364
Perfluorooctane Sulfonate (PFOS)	ug/kg	N/A	0.19	0.018	N/A	0.1	0.015	4167364

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		AUP469			
Sampling Date		2015/08/13 10:20			
COC Number		N/A			
	Units	**SG1-MW03S-13.0 Lab-Dup**	**RDL**	**MDL**	**QC Batch**
Total Organic Carbon	mg/kg	1900	500	100	4156837

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B5F6982
Report Date: 2015/09/10

Ramboll Environ
Client Project #: 02-37128B(RE) 15-5133 (CTM)
Site Location: SGPP HOOSICK FALLS
Sampler Initials: JD

Test Summary

Maxxam ID ATN765
Sample ID SG1-MW04S-00.0
Matrix Soil

Collected 2015/08/05
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4151642	N/A	2015/08/17	Shivani Desai
PFOS and PFOA in soil	LCMS	4167364	2015/08/26	2015/08/28	Colm McNamara

Maxxam ID ATN766
Sample ID SG1-MW04S-02.0
Matrix Soil

Collected 2015/08/05
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4151642	N/A	2015/08/17	Shivani Desai
PFOS and PFOA in soil	LCMS	4167364	2015/08/26	2015/08/28	Colm McNamara

Maxxam ID ATN767
Sample ID SG1-MW04S-15.0
Matrix Soil

Collected 2015/08/05
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4152610	N/A	2015/08/19	Birenkumar Patel

Maxxam ID ATN768
Sample ID SG1-MW04S-21.0
Matrix Soil

Collected 2015/08/05
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4152610	N/A	2015/08/19	Birenkumar Patel

Maxxam ID ATN769
Sample ID SG1-MW04S-24.0
Matrix Soil

Collected 2015/08/05
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4152610	N/A	2015/08/19	Birenkumar Patel

Maxxam ID ATN770
Sample ID SG1-DS01-150805
Matrix Soil

Collected 2015/08/05
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4151642	N/A	2015/08/17	Shivani Desai
PFOS and PFOA in soil	LCMS	4167364	2015/08/26	2015/08/28	Colm McNamara

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Maxxam Job #: B5F6982
Report Date: 2015/09/10

Ramboll Environ
Client Project #: 02-37128B(RE) 15-5133 (CTM)
Site Location: SGPP HOOSICK FALLS
Sampler Initials: JD

Test Summary

Maxxam ID ATN771 **Collected** 2015/08/05
Sample ID SG1-MW02D-00.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4151642	N/A	2015/08/17	Shivani Desai
PFOS and PFOA in soil	LCMS	4167364	2015/08/26	2015/08/28	Colm McNamara

Maxxam ID ATN772 **Collected** 2015/08/05
Sample ID SG1-MW02D-02.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4151642	N/A	2015/08/17	Shivani Desai
PFOS and PFOA in soil	LCMS	4167364	2015/08/26	2015/08/28	Colm McNamara

Maxxam ID ATN772 Dup **Collected** 2015/08/05
Sample ID SG1-MW02D-02.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PFOS and PFOA in soil	LCMS	4167364	2015/08/27	2015/08/28	Colm McNamara

Maxxam ID ATN773 **Collected** 2015/08/06
Sample ID SG1-MW02D-42.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4152610	N/A	2015/08/19	Birenkumar Patel

Maxxam ID ATN774 **Collected** 2015/08/06
Sample ID SG1-MW02D-24.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4152610	N/A	2015/08/19	Birenkumar Patel

Maxxam ID AUP457 **Collected** 2015/08/10
Sample ID SG1-MW01D-00.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4153056	N/A	2015/08/18	Valentina Kaftani
PFOS and PFOA in soil	LCMS	4167364	2015/08/27	2015/08/28	Colm McNamara

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Maxxam Job #: B5F6982
Report Date: 2015/09/10

Ramboll Environ
Client Project #: 02-37128B(RE) 15-5133 (CTM)
Site Location: SGPP HOOSICK FALLS
Sampler Initials: JD

Test Summary

Maxxam ID AUP458
Sample ID SG1-MW01D-02.0
Matrix Soil

Collected 2015/08/10
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4153056	N/A	2015/08/18	Valentina Kaftani
PFOS and PFOA in soil	LCMS	4167364	2015/08/27	2015/08/28	Colm McNamara

Maxxam ID AUP459
Sample ID SG1-MW01D-13.0
Matrix Soil

Collected 2015/08/10
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4156837	N/A	2015/08/21	Birenkumar Patel

Maxxam ID AUP459 Dup
Sample ID SG1-MW01D-13.0
Matrix Soil

Collected 2015/08/10
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4156837	N/A	2015/08/21	Birenkumar Patel

Maxxam ID AUP460
Sample ID SG1-MW01S-06.0
Matrix Soil

Collected 2015/08/11
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4156837	N/A	2015/08/21	Birenkumar Patel

Maxxam ID AUP461
Sample ID SG1-MW05S-00.0
Matrix Soil

Collected 2015/08/11
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4153056	N/A	2015/08/18	Valentina Kaftani
PFOS and PFOA in soil	LCMS	4167364	2015/08/27	2015/08/28	Colm McNamara

Maxxam ID AUP462
Sample ID SG1-MW05S-02.0
Matrix Soil

Collected 2015/08/11
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4153056	N/A	2015/08/18	Valentina Kaftani
PFOS and PFOA in soil	LCMS	4167364	2015/08/27	2015/08/28	Colm McNamara

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Maxxam Job #: B5F6982
Report Date: 2015/09/10

Ramboll Environ
Client Project #: 02-37128B(RE) 15-5133 (CTM)
Site Location: SGPP HOOSICK FALLS
Sampler Initials: JD

Test Summary

Maxxam ID AUP463 **Collected** 2015/08/11
Sample ID SG1-MW05S-17.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4156837	N/A	2015/08/21	Birenkumar Patel

Maxxam ID AUP464 **Collected** 2015/08/10
Sample ID SG1-MW02S-12.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4156837	N/A	2015/08/21	Birenkumar Patel

Maxxam ID AUP465 **Collected** 2015/08/12
Sample ID SG1-MW01D-23.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4156837	N/A	2015/08/21	Birenkumar Patel

Maxxam ID AUP466 **Collected** 2015/08/12
Sample ID SG1-DS01-150812 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4156837	N/A	2015/08/21	Birenkumar Patel

Maxxam ID AUP467 **Collected** 2015/08/13
Sample ID SG1-MW03S-00.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4153056	N/A	2015/08/18	Valentina Kaftani
PFOS and PFOA in soil	LCMS	4167364	2015/08/27	2015/08/28	Colm McNamara

Maxxam ID AUP468 **Collected** 2015/08/13
Sample ID SG1-MW03S-02.0 **Shipped**
Matrix Soil **Received** 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	4153056	N/A	2015/08/18	Valentina Kaftani
PFOS and PFOA in soil	LCMS	4167364	2015/08/27	2015/08/28	Colm McNamara

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Maxxam Job #: B5F6982
Report Date: 2015/09/10

Ramboll Environ
Client Project #: 02-37128B(RE) 15-5133 (CTM)
Site Location: SGPP HOOSICK FALLS
Sampler Initials: JD

Test Summary

Maxxam ID AUP469
Sample ID SG1-MW03S-13.0
Matrix Soil

Collected 2015/08/13
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4156837	N/A	2015/08/21	Birenkumar Patel

Maxxam ID AUP469 Dup
Sample ID SG1-MW03S-13.0
Matrix Soil

Collected 2015/08/13
Shipped
Received 2015/08/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Organic Carbon in Soil	COMB	4156837	N/A	2015/08/21	Birenkumar Patel

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GENERAL COMMENTS

Revision reflects change to APU466-01 sample ID
Revision reflects change to MDLs

Sample ATN765-01: Perfluorinated Compounds (PFCs): Elevated detection limits due to matrix interference(s).

Sample AUP461-01: Perfluorinated Compounds (PFCs): Elevated detection limits due to matrix interference(s).

Sample AUP469-01: Spike Expected value = 33000mg/kg
Spike recovery = 92.68% and 90.24%

Results relate only to the items tested.

Ramboll Environ
Attention: Jason Wilkinson/ Kirk Moline
Client Project #: 02-37128B(RE) 15-5133 (CTM)
P.O. #:
Site Location: SGPP HOOSICK FALLS

Quality Assurance Report

Maxxam Job Number: GB5F6982

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
4151642 BOP	RPD - Sample/Sample Dup	Moisture	2015/08/17	1.3		%	20
4152610 BIP	QC Standard	Total Organic Carbon	2015/08/19		101	%	75 - 125
	Method Blank	Total Organic Carbon	2015/08/19	<500		mg/kg	
4153056 NS3	RPD - Sample/Sample Dup	Moisture	2015/08/18	NC		%	20
4156837 BIP	Matrix Spike (AUP469)	Total Organic Carbon	2015/08/27		105	%	75 - 125
	Matrix Spike DUP (AUP469)	Total Organic Carbon	2015/08/27		96	%	75 - 125
	MS/MSD RPD	Total Organic Carbon	2015/08/27	8.4		%	35
	QC Standard	Total Organic Carbon	2015/08/21		99	%	75 - 125
	Method Blank	Total Organic Carbon	2015/08/21	<500		mg/kg	
	RPD - Sample/Sample Dup	Total Organic Carbon	2015/08/21	NC		%	35
	RPD - Sample/Sample Dup	Total Organic Carbon	2015/08/21	NC		%	35
4167364 CM5	Matrix Spike (ATN772)	Perfluorobutane Sulfonate (PFBS)	2015/08/28		92	%	70 - 130
	Matrix Spike DUP (ATN772)	Perfluorobutane Sulfonate (PFBS)	2015/08/28		97	%	70 - 130
	MS/MSD RPD	Perfluorobutane Sulfonate (PFBS)	2015/08/28	4.6		%	30
	Matrix Spike (ATN772)	Perfluoroheptanoic Acid (PFHpA)	2015/08/28		92	%	70 - 130
	Matrix Spike DUP (ATN772)	Perfluoroheptanoic Acid (PFHpA)	2015/08/28		95	%	70 - 130
	MS/MSD RPD	Perfluoroheptanoic Acid (PFHpA)	2015/08/28	3.9		%	30
	Matrix Spike (ATN772)	Perfluorohexane Sulfonate (PFHxS)	2015/08/28		97	%	70 - 130
	Matrix Spike DUP (ATN772)	Perfluorohexane Sulfonate (PFHxS)	2015/08/28		101	%	70 - 130
	MS/MSD RPD	Perfluorohexane Sulfonate (PFHxS)	2015/08/28	3.6		%	30
	Matrix Spike (ATN772)	Perfluoro-n-Octanoic Acid (PFOA)	2015/08/28		95	%	70 - 130
	Matrix Spike DUP (ATN772)	Perfluoro-n-Octanoic Acid (PFOA)	2015/08/28		95	%	70 - 130
	MS/MSD RPD	Perfluoro-n-Octanoic Acid (PFOA)	2015/08/28	0.42		%	30
	Matrix Spike (ATN772)	Perfluorononanoic Acid (PFNA)	2015/08/28		104	%	70 - 130
	Matrix Spike DUP (ATN772)	Perfluorononanoic Acid (PFNA)	2015/08/28		112	%	70 - 130
	MS/MSD RPD	Perfluorononanoic Acid (PFNA)	2015/08/28	7.8		%	30
	Matrix Spike (ATN772)	Perfluorooctane Sulfonate (PFOS)	2015/08/28		98	%	70 - 130
	Matrix Spike DUP (ATN772)	Perfluorooctane Sulfonate (PFOS)	2015/08/28		101	%	70 - 130
	MS/MSD RPD	Perfluorooctane Sulfonate (PFOS)	2015/08/28	2.8		%	30
	Spiked Blank	Perfluorobutane Sulfonate (PFBS)	2015/08/28		96	%	70 - 130
		Perfluoroheptanoic Acid (PFHpA)	2015/08/28		96	%	70 - 130
		Perfluorohexane Sulfonate (PFHxS)	2015/08/28		99	%	70 - 130
		Perfluoro-n-Octanoic Acid (PFOA)	2015/08/28		100	%	70 - 130

Ramboll Environ
Attention: Jason Wilkinson/ Kirk Moline
Client Project #: 02-37128B(RE) 15-5133 (CTM)
P.O. #:
Site Location: SGPP HOOSICK FALLS

Quality Assurance Report (Continued)

Maxxam Job Number: GB5F6982

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
4167364 CM5	Spiked Blank	Perfluorononanoic Acid (PFNA)	2015/08/28		103	%	70 - 130
		Perfluorooctane Sulfonate (PFOS)	2015/08/28		98	%	70 - 130
	Method Blank	Perfluorobutane Sulfonate (PFBS)	2015/08/28	<0.014, MDL=0.014		ug/kg	
		Perfluoroheptanoic Acid (PFHpA)	2015/08/28	<0.015, MDL=0.015		ug/kg	
		Perfluorohexane Sulfonate (PFHxS)	2015/08/28	<0.015, MDL=0.015		ug/kg	
		Perfluoro-n-Octanoic Acid (PFOA)	2015/08/28	<0.023, MDL=0.023		ug/kg	
		Perfluorononanoic Acid (PFNA)	2015/08/28	<0.01, MDL=0.01		ug/kg	
		Perfluorooctane Sulfonate (PFOS)	2015/08/28	<0.015, MDL=0.015		ug/kg	
	RPD - Sample/Sample Dup	Perfluorobutane Sulfonate (PFBS)	2015/08/28	NC		%	30
		Perfluoroheptanoic Acid (PFHpA)	2015/08/28	NC		%	30
		Perfluorohexane Sulfonate (PFHxS)	2015/08/28	NC		%	30
		Perfluoro-n-Octanoic Acid (PFOA)	2015/08/28	NC		%	30
		Perfluorononanoic Acid (PFNA)	2015/08/28	NC		%	30
		Perfluorooctane Sulfonate (PFOS)	2015/08/28	NC		%	30

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Validation Signature Page

Maxxam Job #: B5F6982

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

==
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN000352015-1
Arkansas	IN035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	IN200001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00241
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-14-7
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA150003	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	00127
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies

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110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client:	Ramboll Environ	Report:	348249
Attn:	Jason Wilkinson 3 Carlisle Road Suite 210 Westford, MA 01886	Priority:	Standard Written
		Status:	Final
		PWS ID:	Not Supplied
		Lab ELAP #:	11398
Copies to:	Rob Huening,Valerie Turner		

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3315941	SG1-TB01-150902	537	09/02/15 12:15	Client	09/04/15 08:00
3315942	SG1-RB01-150902	537	09/02/15 12:20	Client	09/04/15 08:00
3315943	SG1-RB02-150902	537	09/02/15 12:25	Client	09/04/15 08:00
3315944	SG1-RB03-150902	537	09/02/15 12:35	Client	09/04/15 08:00
3315945	SG1-RB04-150902	537	09/02/15 12:45	Client	09/04/15 08:00
3315946	SG1-MW02D-150902	537	09/02/15 14:30	Client	09/04/15 08:00
3315947	SG1-RB05-150902	537	09/02/15 15:50	Client	09/04/15 08:00
3315948	SG1-RB06-150902	537	09/02/15 15:55	Client	09/04/15 08:00
3315949	SG1-FB01-150902	537	09/02/15 16:30	Client	09/04/15 08:00
3315950	SG1-MW02S-150902	537	09/02/15 17:05	Client	09/04/15 08:00
3315951	SG1-MW01D-150903	537	09/03/15 07:45	Client	09/04/15 08:00
3315952	SG1-MW01S-150903	537	09/03/15 08:00	Client	09/04/15 08:00
3315953	SG1-MW05S-150903	537	09/03/15 09:00	Client	09/04/15 08:00
3315956	SG1-TB02-150903	537	09/03/15 09:35	Client	09/04/15 08:00
3315957	SG1-MW04S-150903	537	09/03/15 11:00	Client	09/04/15 08:00
3315958	SG1-DS01-150903	537	09/03/15 13:00	Client	09/04/15 08:00
3315959	SG1-MW03S-150903	537	09/03/15 14:05	Client	09/04/15 08:00

Report Summary

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Nathan Trowbridge at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

C.S. Manager | 09/18/2015

Authorized Signature | Title | Date

Client Name: Ramboll Environ
Report #: 348249

Sampling Point: SG1-TB01-150902 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 02:55	3315941
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	09/09/15 07:30	09/11/15 02:55	3315941
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 02:55	3315941
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 02:55	3315941
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 02:55	3315941
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 02:55	3315941

Sampling Point: SG1-RB01-150902 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 04:59	3315942
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	09/09/15 07:30	09/11/15 04:59	3315942
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 04:59	3315942
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 04:59	3315942
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 04:59	3315942
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 04:59	3315942

Sampling Point: SG1-RB02-150902 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 05:30	3315943
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	09/09/15 07:30	09/11/15 05:30	3315943
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 05:30	3315943
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 05:30	3315943
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 05:30	3315943
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 05:30	3315943

Sampling Point: SG1-RB03-150902

PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 06:01	3315944
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	09/09/15 07:30	09/11/15 06:01	3315944
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 06:01	3315944
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 06:01	3315944
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 06:01	3315944
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 06:01	3315944

Sampling Point: SG1-RB04-150902

PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 06:31	3315945
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	09/09/15 07:30	09/11/15 06:31	3315945
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 06:31	3315945
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 06:31	3315945
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 06:31	3315945
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 06:31	3315945

Sampling Point: SG1-MW02D-150902

PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 07:02	3315946
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**340**	ng/L	09/09/15 07:30	09/11/15 16:51	3315946
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 07:02	3315946
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 07:02	3315946
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 07:02	3315946
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**18000**	ng/L	09/09/15 07:30	09/11/15 18:24	3315946

Sampling Point: SG1-RB05-150902   PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 07:33	3315947
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	09/09/15 07:30	09/11/15 07:33	3315947
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 07:33	3315947
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 07:33	3315947
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 07:33	3315947
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 07:33	3315947

Sampling Point: SG1-RB06-150902   PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 08:04	3315948
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	09/09/15 07:30	09/11/15 08:04	3315948
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 08:04	3315948
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 08:04	3315948
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 08:04	3315948
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 08:04	3315948

Sampling Point: SG1-FB01-150902   PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 08:35	3315949
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	09/09/15 07:30	09/11/15 08:35	3315949
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 08:35	3315949
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 08:35	3315949
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 08:35	3315949
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 08:35	3315949

Sampling Point: SG1-MW02S-150902 PWS ID: Not Supplied

EEA Methods

Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 10:08	3315950
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**20**	ng/L	09/09/15 07:30	09/11/15 10:08	3315950
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 10:08	3315950
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 10:08	3315950
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 10:08	3315950
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**1100**	ng/L	09/09/15 07:30	09/11/15 14:48	3315950

Sampling Point: SG1-MW01D-150903 PWS ID: Not Supplied

EEA Methods

Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 10:39	3315951
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	09/09/15 07:30	09/11/15 10:39	3315951
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 10:39	3315951
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 10:39	3315951
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 10:39	3315951
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 10:39	3315951

Sampling Point: SG1-MW01S-150903 PWS ID: Not Supplied

EEA Methods

Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 11:10	3315952
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**20**	ng/L	09/09/15 07:30	09/11/15 11:10	3315952
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 11:10	3315952
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 11:10	3315952
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 11:10	3315952
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 11:10	3315952

Client Name: Ramboll Environ Report #: 348249

Sampling Point: SG1-MW05S-150903 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 11:41	3315953
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**10**	ng/L	09/09/15 07:30	09/11/15 11:41	3315953
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 11:41	3315953
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 11:41	3315953
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 11:41	3315953
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**580**	ng/L	09/09/15 07:30	09/11/15 15:19	3315953

Sampling Point: SG1-TB02-150903 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 03:26	3315956
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	09/09/15 07:30	09/11/15 03:26	3315956
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 03:26	3315956
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 03:26	3315956
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 03:26	3315956
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 03:26	3315956

Sampling Point: SG1-MW04S-150903 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 13:13	3315957
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**40**	ng/L	09/09/15 07:30	09/11/15 13:13	3315957
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 13:13	3315957
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 13:13	3315957
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 13:13	3315957
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**1700**	ng/L	09/09/15 07:30	09/11/15 15:50	3315957

Client Name: Ramboll Environ   Report #: 348249

Sampling Point: SG1-DS01-150903   PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 13:44	3315958
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**130**	ng/L	09/09/15 07:30	09/11/15 13:44	3315958
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 13:44	3315958
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 13:44	3315958
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 13:44	3315958
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**4200**	ng/L	09/09/15 07:30	09/11/15 17:53	3315958

Sampling Point: SG1-MW03S-150903   PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	09/09/15 07:30	09/11/15 14:15	3315959
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**130**	ng/L	09/09/15 07:30	09/11/15 14:15	3315959
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	09/09/15 07:30	09/11/15 14:15	3315959
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	09/09/15 07:30	09/11/15 14:15	3315959
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	09/09/15 07:30	09/11/15 14:15	3315959
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**5300**	ng/L	09/09/15 07:30	09/11/15 17:22	3315959

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

281343

eurofins Eaton Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # ~~280858~~ 9-4-15
Batch # 348249

www.eatonanalytical.com

CHAIN OF CUSTODY RECORD

Page 1 of 2

Shaded area for EEA use only

REPORT TO: Jason Wilkinson
Ramboll Environ, Suite 210
3 Carlisle Road, Westford, MA 01886

BILL TO: Same As Report

SAMPLER (Signature): Jonathan Dippert

COMPLIANCE MONITORING: Yes ☐ No X

PWS ID #:
STATE (sample origin): NY
POPULATION SERVED:
SOURCE WATER:
PROJECT NAME: SGPP Hoosick Falls
PO#:

	LAB Number	DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3315941	9/2/15	1215		X	SG1-TB01-150902	EPA Method 537* Cl-Acc			X	1	RW	SW
2	942	9/2/15	1220		X	SG1-RB01-150902	↓			X	3	DW	↓
3	943	9/2/15	1225		X	SG1-RB02-150902				X	3	DW	
4	944	9/2/15	1235		X	SG1-RB03-150902				X	3	DW	
5	945	9/2/15	1245		X	SG1-RB04-150902				X	3	DW	
6	946	9/2/15	1430		X	SG1-MW02D-150902				X	3	GW	
7	947	9/2/15	1550		X	SG1-RB05-150902				X	3	DW	
8	948	9/2/15	1555		X	SG1-RB06-150902				X	3	DW	
9	949	9/2/15	1630		X	SG1-FB01-150902				X	3	DW	
10	950	9/2/15	1705		X	SG1-MW02S-150902				X	3	GW	
11	951	9/3/15	0745	X		SG1-MW01D-150903				X	3	GW	
12	952	9/3/15	0800	X		SG1-MW01S-150903				X	3	GW	
13	953*5	9/3/15	0900	X		SG1-MW05S-150903		MS/MSD		X	9	GW	
14	956	9/3/15	0935	X		SG1-TB02-150903	↓			X	1	RW	↓

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
[signature]	9/3/15	1630 PM			AM / PM
		AM / PM			AM / PM
		AM / PM	RECEIVED FOR LABORATORY BY: [signature]	9-4-15	0800 AM / PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS
*MS MW05S(3) 3315954
*MSD MW05S(3) 3315955

CONDITIONS UPON RECEIPT (check one): X Iced Wet/Blue ___ Ambient ___ 1.4, 0.2 °C Upon Receipt ___ N/A

MATRIX CODES:
DW-DRINKING WATER
RW-REAGENT WATER
GW-GROUND WATER
EW-EXPOSURE WATER
SW-SURFACE WATER
PW-POOL WATER
WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%	IV* = Immediate Verbal: (3 working days)	100%
RV* = Rush Verbal: (5 working days)	50%	IW* = Immediate Written: (3 working days)	125%
RW* = Rush Written: (5 working days)	75%	SP* = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

* Please call, expedited service not available for all testing

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

06-LO-F0435 Issue 4.0 Effective Date: 2014-05-01

Sample analysis will be provided according to the standard EEA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agree to in writing by EEA.

eurofins | Eaton Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 280838
Batch # ______

www.eatonanalytical.com

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CHAIN OF CUSTODY RECORD

Page 2 of 2

REPORT TO: Jason Wilkinson
RAMBOLL ENVIRON
3 Carlisle Rd, Suite 210
Westford, MA 01886

BILL TO: SAME AS REPORT

SAMPLER (Signature): Jonathan Dippert

COMPLIANCE MONITORING: Yes ___ No X

PWS ID #: ___ | STATE (sample origin): NY | PROJECT NAME: SGPP Hoosick Falls | PO#: ___

POPULATION SERVED: ___ | SOURCE WATER: ___

	LAB Number	COLLECTION DATE	COLLECTION TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3315957	9/3/15	1100	X		SG1-MW04S-150903	EPA Method 537*	Cl-A SS		X	3	GW	SW
2	958	9/3/15	1300		X	SG1-DS01-150903	↓	↓		X	3	GW	SW
3	959	9/3/15	1405		X	SG1-MW03S-150903				X	3	GW	SW
4													
5													
6													
7													
8													
9						*EPA Method 537 for the following	PFCs: PFOA, PFBS, PFHpA,						
10							PFHxS, PFNA, PFOS						
11						No other PFCs should be reported.							
12													
13													
14													

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
[signature]	9/3/15	1640 PM			AM / PM
		AM / PM			AM / PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY: [signature]	9-4-15	0800 AM / PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS

CONDITIONS UPON RECEIPT (check one): X Iced: Wet/Blue ___ Ambient 1.4, 0.2 °C Upon Receipt___ N/A

MATRIX CODES:

- DW-DRINKING WATER
- RW-REAGENT WATER
- GW-GROUND WATER
- EW-EXPOSURE WATER
- SW-SURFACE WATER
- PW-POOL WATER
- WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%	IV* = Immediate Verbal: (3 working days)	100%
RV* = Rush Verbal: (5 working days)	50%	IW* = Immediate Written: (3 working days)	125%
RW* = Rush Written: (5 working days)	75%	SP* = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

* Please call, expedited service not available for all testing

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

06-LO-F0435 Issue 4.0 Effective Date: 2014-05-01

Sample analysis will be provided according to the standard EEA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agree to in writing by EEA.

Eurofins Eaton Analytical

Eurofins Eaton Analytical
Run Log

Run ID: **207498** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3316483		OS	CY	09/10/2015 23:18	091015M537a.mdb
LRB	3316467		RW	CY	09/11/2015 00:51	091015M537a.mdb
FBL	3316469		RW	CY	09/11/2015 01:22	091015M537a.mdb
FTB	3315941	SG1-TB01-150902	RW	CY	09/11/2015 02:55	091015M537a.mdb
FTB	3315956	SG1-TB02-150903	RW	CY	09/11/2015 03:26	091015M537a.mdb
FS	3315942	SG1-RB01-150902	DW	CY	09/11/2015 04:59	091015M537a.mdb
FS	3315943	SG1-RB02-150902	DW	CY	09/11/2015 05:30	091015M537a.mdb
FS	3315944	SG1-RB03-150902	DW	CY	09/11/2015 06:01	091015M537a.mdb
FS	3315945	SG1-RB04-150902	DW	CY	09/11/2015 06:31	091015M537a.mdb
FS	3315946	SG1-MW02D-150902	GW	CY	09/11/2015 07:02	091015M537a.mdb
FS	3315947	SG1-RB05-150902	DW	CY	09/11/2015 07:33	091015M537a.mdb
FS	3315948	SG1-RB06-150902	DW	CY	09/11/2015 08:04	091015M537a.mdb
FS	3315949	SG1-FB01-150902	DW	CY	09/11/2015 08:35	091015M537a.mdb
CCM	3316484		OS	CY	09/11/2015 09:06	091015M537a.mdb
FS	3315950	SG1-MW02S-150902	GW	CY	09/11/2015 10:08	091015M537a.mdb
FS	3315951	SG1-MW01D-150903	GW	CY	09/11/2015 10:39	091015M537a.mdb
FS	3315952	SG1-MW01S-150903	GW	CY	09/11/2015 11:10	091015M537a.mdb
FS	3315953	SG1-MW05S-150903	GW	CY	09/11/2015 11:41	091015M537a.mdb
LFSML	3315954	SG1-MW05S-150903	GW	CY	09/11/2015 12:12	091015M537a.mdb
LFSMDL	3315955	SG1-MW05S-150903	GW	CY	09/11/2015 12:42	091015M537a.mdb
FS	3315957	SG1-MW04S-150903	GW	CY	09/11/2015 13:13	091015M537a.mdb
FS	3315958	SG1-DS01-150903	GW	CY	09/11/2015 13:44	091015M537a.mdb
FS	3315959	SG1-MW03S-150903	GW	CY	09/11/2015 14:15	091015M537a.mdb
FS	3315950	SG1-MW02S-150902	GW	CY	09/11/2015 14:48	091015M537a.mdb
FS	3315953	SG1-MW05S-150903	GW	CY	09/11/2015 15:19	091015M537a.mdb
FS	3315957	SG1-MW04S-150903	GW	CY	09/11/2015 15:50	091015M537a.mdb
CCH	3316485		OS	CY	09/11/2015 16:21	091015M537a.mdb
FS	3315946	SG1-MW02D-150902	GW	CY	09/11/2015 16:51	091015M537a.mdb
FS	3315959	SG1-MW03S-150903	GW	CY	09/11/2015 17:22	091015M537a.mdb
FS	3315958	SG1-DS01-150903	GW	CY	09/11/2015 17:53	091015M537a.mdb
FS	3315946	SG1-MW02D-150902	GW	CY	09/11/2015 18:24	091015M537a.mdb
CCM	3319308		OS	CY	09/11/2015 18:55	091015M537a.mdb
LRB	3319172		RW	CY	09/11/2015 19:26	091015M537a.mdb

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	IS-PFOA-13C2	537	N/A	---		6074.06	6074.06	ng/L	100	70 - 140	---	---	1.0	09/09/2015 09:56	09/10/2015 23:18	3316483
CCL	IS-PFOS-13C4	537	N/A	---		5143.50	5143.5	ng/L	100	70 - 140	---	---	1.0	09/09/2015 09:56	09/10/2015 23:18	3316483
CCL	SS-PFDA-13C2	537	N/A	---		98.8910	100	ng/L	99	70 - 130	---	---	1.0	09/09/2015 09:56	09/10/2015 23:18	3316483
CCL	SS-PFHxA-13C2	537	N/A	---		48.6467	50.0	ng/L	97	70 - 130	---	---	1.0	09/09/2015 09:56	09/10/2015 23:18	3316483
CCL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		91.9076	90.0	ng/L	102	50 - 150	---	---	1.0	09/09/2015 09:56	09/10/2015 23:18	3316483
CCL	Perfluoroheptanoic acid (PFHpA)	537	10	---		10.8147	10.0	ng/L	108	50 - 150	---	---	1.0	09/09/2015 09:56	09/10/2015 23:18	3316483
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		30.7755	30.0	ng/L	103	50 - 150	---	---	1.0	09/09/2015 09:56	09/10/2015 23:18	3316483
CCL	Perfluorononanoic acid (PFNA)	537	20	---		21.4759	20.0	ng/L	107	50 - 150	---	---	1.0	09/09/2015 09:56	09/10/2015 23:18	3316483
CCL	Perfluorooctane sulfonate (PFOS)	537	40	---		41.5940	40.0	ng/L	104	50 - 150	---	---	1.0	09/09/2015 09:56	09/10/2015 23:18	3316483
CCL	Perfluorooctanoic acid (PFOA)	537	20	---		21.2569	20.0	ng/L	106	50 - 150	---	---	1.0	09/09/2015 09:56	09/10/2015 23:18	3316483
LRB	IS-PFOA-13C2	537	N/A	---		6572.52	6074.06	ng/L	108	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 00:51	3316467
LRB	IS-PFOS-13C4	537	N/A	---		5361.38	5143.5	ng/L	104	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 00:51	3316467
LRB	SS-PFDA-13C2	537	N/A	---		93.0939	100	ng/L	93	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 00:51	3316467
LRB	SS-PFHxA-13C2	537	N/A	---		46.8308	50.0	ng/L	94	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 00:51	3316467
LRB	Perfluorobutanesulfonic acid (PFBS)	537	90	---	<	90		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 00:51	3316467
LRB	Perfluoroheptanoic acid (PFHpA)	537	10	---	<	10		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 00:51	3316467
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	30	---	<	30		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 00:51	3316467
LRB	Perfluorononanoic acid (PFNA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 00:51	3316467
LRB	Perfluorooctane sulfonate (PFOS)	537	40	---	<	40		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 00:51	3316467
LRB	Perfluorooctanoic acid (PFOA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 00:51	3316467
FBL	IS-PFOA-13C2	537	N/A	---		6443.45	6074.06	ng/L	106	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 01:22	3316469
FBL	IS-PFOS-13C4	537	N/A	---		5352.31	5143.5	ng/L	104	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 01:22	3316469
FBL	SS-PFDA-13C2	537	N/A	---		94.6122	100	ng/L	95	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 01:22	3316469
FBL	SS-PFHxA-13C2	537	N/A	---		49.0702	50.0	ng/L	98	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 01:22	3316469
FBL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		91.6035	90.0	ng/L	102	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 01:22	3316469
FBL	Perfluoroheptanoic acid (PFHpA)	537	10	---		10.0948	10.0	ng/L	101	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 01:22	3316469
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		30.3694	30.0	ng/L	101	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 01:22	3316469
FBL	Perfluorononanoic acid (PFNA)	537	20	---		20.2056	20.0	ng/L	101	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 01:22	3316469
FBL	Perfluorooctane sulfonate (PFOS)	537	40	---		40.1695	40.0	ng/L	100	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 01:22	3316469
FBL	Perfluorooctanoic acid (PFOA)	537	20	---		20.4671	20.0	ng/L	102	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 01:22	3316469
FTB	IS-PFOA-13C2	537	N/A	SG1-TB01-150902		6539.83	6074.06	ng/L	108	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 02:55	3315941
FTB	IS-PFOS-13C4	537	N/A	SG1-TB01-150902		5467.52	5143.5	ng/L	106	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 02:55	3315941
FTB	SS-PFDA-13C2	537	N/A	SG1-TB01-150902		98.5646	100	ng/L	99	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 02:55	3315941
FTB	SS-PFHxA-13C2	537	N/A	SG1-TB01-150902		50.1422	50.0	ng/L	100	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 02:55	3315941
FTB	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-TB01-150902	<	90		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 02:55	3315941
FTB	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-TB01-150902	<	10		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 02:55	3315941
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-TB01-150902	<	30		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 02:55	3315941
FTB	Perfluorononanoic acid (PFNA)	537	20	SG1-TB01-150902	<	20		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 02:55	3315941
FTB	Perfluorooctane sulfonate (PFOS)	537	40	SG1-TB01-150902	<	40		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 02:55	3315941
FTB	Perfluorooctanoic acid (PFOA)	537	20	SG1-TB01-150902	<	20		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 02:55	3315941

QC Summary Report (cont.)																
Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FTB	IS-PFOA-13C2	537	N/A	SG1-TB02-150903		6894.59	6074.06	ng/L	114	70 - 140	---	---	1.01	09/09/2015 07:30	09/11/2015 03:26	3315956
FTB	IS-PFOS-13C4	537	N/A	SG1-TB02-150903		5676.15	5143.5	ng/L	110	70 - 140	---	---	1.01	09/09/2015 07:30	09/11/2015 03:26	3315956
FTB	SS-PFDA-13C2	537	N/A	SG1-TB02-150903		95.2314	100	ng/L	94	70 - 130	---	---	1.01	09/09/2015 07:30	09/11/2015 03:26	3315956
FTB	SS-PFHxA-13C2	537	N/A	SG1-TB02-150903		48.8902	50.0	ng/L	97	70 - 130	---	---	1.01	09/09/2015 07:30	09/11/2015 03:26	3315956
FTB	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-TB02-150903	<	90		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 03:26	3315956
FTB	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-TB02-150903	<	10		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 03:26	3315956
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-TB02-150903	<	30		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 03:26	3315956
FTB	Perfluorononanoic acid (PFNA)	537	20	SG1-TB02-150903	<	20		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 03:26	3315956
FTB	Perfluorooctane sulfonate (PFOS)	537	40	SG1-TB02-150903	<	40		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 03:26	3315956
FTB	Perfluorooctanoic acid (PFOA)	537	20	SG1-TB02-150903	<	20		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 03:26	3315956
FS	IS-PFOA-13C2	537	N/A	SG1-RB01-150902		6565.10	6074.06	ng/L	108	70 - 140	---	---	0.95	09/09/2015 07:30	09/11/2015 04:59	3315942
FS	IS-PFOS-13C4	537	N/A	SG1-RB01-150902		5461.52	5143.5	ng/L	106	70 - 140	---	---	0.95	09/09/2015 07:30	09/11/2015 04:59	3315942
FS	SS-PFDA-13C2	537	N/A	SG1-RB01-150902		91.3494	100	ng/L	96	70 - 130	---	---	0.95	09/09/2015 07:30	09/11/2015 04:59	3315942
FS	SS-PFHxA-13C2	537	N/A	SG1-RB01-150902		47.8146	50.0	ng/L	101	70 - 130	---	---	0.95	09/09/2015 07:30	09/11/2015 04:59	3315942
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB01-150902	<	90		ng/L	---	---	---	---	0.95	09/09/2015 07:30	09/11/2015 04:59	3315942
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB01-150902	<	10		ng/L	---	---	---	---	0.95	09/09/2015 07:30	09/11/2015 04:59	3315942
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB01-150902	<	30		ng/L	---	---	---	---	0.95	09/09/2015 07:30	09/11/2015 04:59	3315942
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB01-150902	<	20		ng/L	---	---	---	---	0.95	09/09/2015 07:30	09/11/2015 04:59	3315942
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB01-150902	<	40		ng/L	---	---	---	---	0.95	09/09/2015 07:30	09/11/2015 04:59	3315942
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB01-150902	<	20		ng/L	---	---	---	---	0.95	09/09/2015 07:30	09/11/2015 04:59	3315942
FS	IS-PFOA-13C2	537	N/A	SG1-RB02-150902		6753.77	6074.06	ng/L	111	70 - 140	---	---	0.93	09/09/2015 07:30	09/11/2015 05:30	3315943
FS	IS-PFOS-13C4	537	N/A	SG1-RB02-150902		5405.79	5143.5	ng/L	105	70 - 140	---	---	0.93	09/09/2015 07:30	09/11/2015 05:30	3315943
FS	SS-PFDA-13C2	537	N/A	SG1-RB02-150902		88.2756	100	ng/L	95	70 - 130	---	---	0.93	09/09/2015 07:30	09/11/2015 05:30	3315943
FS	SS-PFHxA-13C2	537	N/A	SG1-RB02-150902		45.3973	50.0	ng/L	98	70 - 130	---	---	0.93	09/09/2015 07:30	09/11/2015 05:30	3315943
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB02-150902	<	90		ng/L	---	---	---	---	0.93	09/09/2015 07:30	09/11/2015 05:30	3315943
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB02-150902	<	10		ng/L	---	---	---	---	0.93	09/09/2015 07:30	09/11/2015 05:30	3315943
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB02-150902	<	30		ng/L	---	---	---	---	0.93	09/09/2015 07:30	09/11/2015 05:30	3315943
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB02-150902	<	20		ng/L	---	---	---	---	0.93	09/09/2015 07:30	09/11/2015 05:30	3315943
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB02-150902	<	40		ng/L	---	---	---	---	0.93	09/09/2015 07:30	09/11/2015 05:30	3315943
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB02-150902	<	20		ng/L	---	---	---	---	0.93	09/09/2015 07:30	09/11/2015 05:30	3315943
FS	IS-PFOA-13C2	537	N/A	SG1-RB03-150902		6658.59	6074.06	ng/L	110	70 - 140	---	---	0.97	09/09/2015 07:30	09/11/2015 06:01	3315944
FS	IS-PFOS-13C4	537	N/A	SG1-RB03-150902		5485.95	5143.5	ng/L	107	70 - 140	---	---	0.97	09/09/2015 07:30	09/11/2015 06:01	3315944
FS	SS-PFDA-13C2	537	N/A	SG1-RB03-150902		91.9972	100	ng/L	95	70 - 130	---	---	0.97	09/09/2015 07:30	09/11/2015 06:01	3315944
FS	SS-PFHxA-13C2	537	N/A	SG1-RB03-150902		47.3578	50.0	ng/L	98	70 - 130	---	---	0.97	09/09/2015 07:30	09/11/2015 06:01	3315944
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB03-150902	<	90		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 06:01	3315944
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB03-150902	<	10		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 06:01	3315944
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB03-150902	<	30		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 06:01	3315944
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB03-150902	<	20		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 06:01	3315944
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB03-150902	<	40		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 06:01	3315944
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB03-150902	<	20		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 06:01	3315944
FS	IS-PFOA-13C2	537	N/A	SG1-RB04-150902		6850.70	6074.06	ng/L	113	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 06:31	3315945

QC Summary Report (cont.)																
Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	IS-PFOS-13C4	537	N/A	SG1-RB04-150902		5528.20	5143.5	ng/L	107	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 06:31	3315945
FS	SS-PFDA-13C2	537	N/A	SG1-RB04-150902		92.7669	100	ng/L	93	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 06:31	3315945
FS	SS-PFHxA-13C2	537	N/A	SG1-RB04-150902		46.9083	50.0	ng/L	94	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 06:31	3315945
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB04-150902	<	90		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 06:31	3315945
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB04-150902	<	10		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 06:31	3315945
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB04-150902	<	30		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 06:31	3315945
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB04-150902	<	20		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 06:31	3315945
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB04-150902	<	40		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 06:31	3315945
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB04-150902	<	20		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 06:31	3315945
FS	IS-PFOA-13C2	537	N/A	SG1-MW02D-150902		5633.08	6074.06	ng/L	93	70 - 140	---	---	0.97	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	IS-PFOA-13C2	537	N/A	SG1-MW02D-150902		5633.08	6074.06	ng/L	93	70 - 140	---	---	9.7	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	IS-PFOA-13C2	537	N/A	SG1-MW02D-150902		5633.08	6074.06	ng/L	93	70 - 140	---	---	97	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	IS-PFOS-13C4	537	N/A	SG1-MW02D-150902		5458.87	5143.5	ng/L	103	70 - 140	---	---	0.97	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	IS-PFOS-13C4	537	N/A	SG1-MW02D-150902		5458.87	5143.5	ng/L	103	70 - 140	---	---	9.7	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	IS-PFOS-13C4	537	N/A	SG1-MW02D-150902		5458.87	5143.5	ng/L	103	70 - 140	---	---	97	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	SS-PFDA-13C2	537	N/A	SG1-MW02D-150902		117.0110	100	ng/L	121	70 - 130	---	---	0.97	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	SS-PFHxA-13C2	537	N/A	SG1-MW02D-150902		59.6464	50.0	ng/L	123	70 - 130	---	---	0.97	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW02D-150902	<	90		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW02D-150902	<	30		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW02D-150902	<	20		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW02D-150902	<	40		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 07:02	3315946
FS	IS-PFOA-13C2	537	N/A	SG1-RB05-150902		7059.70	6074.06	ng/L	116	70 - 140	---	---	0.99	09/09/2015 07:30	09/11/2015 07:33	3315947
FS	IS-PFOS-13C4	537	N/A	SG1-RB05-150902		5733.44	5143.5	ng/L	111	70 - 140	---	---	0.99	09/09/2015 07:30	09/11/2015 07:33	3315947
FS	SS-PFDA-13C2	537	N/A	SG1-RB05-150902		96.1442	100	ng/L	97	70 - 130	---	---	0.99	09/09/2015 07:30	09/11/2015 07:33	3315947
FS	SS-PFHxA-13C2	537	N/A	SG1-RB05-150902		54.7729	50.0	ng/L	111	70 - 130	---	---	0.99	09/09/2015 07:30	09/11/2015 07:33	3315947
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB05-150902	<	90		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 07:33	3315947
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB05-150902	<	10		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 07:33	3315947
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB05-150902	<	30		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 07:33	3315947
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB05-150902	<	20		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 07:33	3315947
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB05-150902	<	40		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 07:33	3315947
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB05-150902	<	20		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 07:33	3315947
FS	IS-PFOA-13C2	537	N/A	SG1-RB06-150902		6671.56	6074.06	ng/L	110	70 - 140	---	---	0.99	09/09/2015 07:30	09/11/2015 08:04	3315948
FS	IS-PFOS-13C4	537	N/A	SG1-RB06-150902		5459.51	5143.5	ng/L	106	70 - 140	---	---	0.99	09/09/2015 07:30	09/11/2015 08:04	3315948
FS	SS-PFDA-13C2	537	N/A	SG1-RB06-150902		97.6654	100	ng/L	99	70 - 130	---	---	0.99	09/09/2015 07:30	09/11/2015 08:04	3315948
FS	SS-PFHxA-13C2	537	N/A	SG1-RB06-150902		51.3371	50.0	ng/L	104	70 - 130	---	---	0.99	09/09/2015 07:30	09/11/2015 08:04	3315948
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB06-150902	<	90		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 08:04	3315948
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB06-150902	<	10		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 08:04	3315948
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB06-150902	<	30		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 08:04	3315948
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB06-150902	<	20		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 08:04	3315948
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB06-150902	<	40		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 08:04	3315948
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB06-150902	<	20		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 08:04	3315948

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	IS-PFOA-13C2	537	N/A	SG1-FB01-150902		6819.73	6074.06	ng/L	112	70 - 140	---	---	0.98	09/09/2015 07:30	09/11/2015 08:35	3315949
FS	IS-PFOS-13C4	537	N/A	SG1-FB01-150902		5671.17	5143.5	ng/L	110	70 - 140	---	---	0.98	09/09/2015 07:30	09/11/2015 08:35	3315949
FS	SS-PFDA-13C2	537	N/A	SG1-FB01-150902		87.2380	100	ng/L	89	70 - 130	---	---	0.98	09/09/2015 07:30	09/11/2015 08:35	3315949
FS	SS-PFHxA-13C2	537	N/A	SG1-FB01-150902		47.3226	50.0	ng/L	97	70 - 130	---	---	0.98	09/09/2015 07:30	09/11/2015 08:35	3315949
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-FB01-150902	<	90		ng/L	---	---	---	---	0.98	09/09/2015 07:30	09/11/2015 08:35	3315949
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-FB01-150902	<	10		ng/L	---	---	---	---	0.98	09/09/2015 07:30	09/11/2015 08:35	3315949
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-FB01-150902	<	30		ng/L	---	---	---	---	0.98	09/09/2015 07:30	09/11/2015 08:35	3315949
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-FB01-150902	<	20		ng/L	---	---	---	---	0.98	09/09/2015 07:30	09/11/2015 08:35	3315949
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-FB01-150902	<	40		ng/L	---	---	---	---	0.98	09/09/2015 07:30	09/11/2015 08:35	3315949
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-FB01-150902	<	20		ng/L	---	---	---	---	0.98	09/09/2015 07:30	09/11/2015 08:35	3315949
CCM	IS-PFOA-13C2	537	N/A	---		6500.01	6500.01	ng/L	100	70 - 140	---	---	1.0	09/09/2015 09:56	09/11/2015 09:06	3316484
CCM	IS-PFOS-13C4	537	N/A	---		5385.51	5385.51	ng/L	100	70 - 140	---	---	1.0	09/09/2015 09:56	09/11/2015 09:06	3316484
CCM	SS-PFDA-13C2	537	N/A	---		98.0876	100	ng/L	98	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 09:06	3316484
CCM	SS-PFHxA-13C2	537	N/A	---		52.3620	50.0	ng/L	105	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 09:06	3316484
CCM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		712.1910	675	ng/L	106	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 09:06	3316484
CCM	Perfluoroheptanoic acid (PFHpA)	537	10	---		78.7955	75.0	ng/L	105	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 09:06	3316484
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		229.6540	225	ng/L	102	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 09:06	3316484
CCM	Perfluorononanoic acid (PFNA)	537	20	---		154.0200	150	ng/L	103	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 09:06	3316484
CCM	Perfluorooctane sulfonate (PFOS)	537	40	---		300.1330	300	ng/L	100	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 09:06	3316484
CCM	Perfluorooctanoic acid (PFOA)	537	20	---		152.1490	150	ng/L	101	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 09:06	3316484
FS	IS-PFOA-13C2	537	N/A	SG1-MW02S-150902		6585.15	6500.01	ng/L	101	70 - 140	---	---	1.01	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	IS-PFOA-13C2	537	N/A	SG1-MW02S-150902		6585.15	6500.01	ng/L	101	70 - 140	---	---	10.1	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	IS-PFOS-13C4	537	N/A	SG1-MW02S-150902		5611.14	5385.51	ng/L	104	70 - 140	---	---	1.01	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	IS-PFOS-13C4	537	N/A	SG1-MW02S-150902		5611.14	5385.51	ng/L	104	70 - 140	---	---	10.1	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	SS-PFDA-13C2	537	N/A	SG1-MW02S-150902		99.8089	100	ng/L	99	70 - 130	---	---	1.01	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	SS-PFHxA-13C2	537	N/A	SG1-MW02S-150902		53.2177	50.0	ng/L	105	70 - 130	---	---	1.01	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW02S-150902	<	90		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW02S-150902		20		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW02S-150902	<	30		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW02S-150902	<	20		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW02S-150902	<	40		ng/L	---	---	---	---	1.01	09/09/2015 07:30	09/11/2015 10:08	3315950
FS	IS-PFOA-13C2	537	N/A	SG1-MW01D-150903		7390.33	6500.01	ng/L	114	70 - 140	---	---	1.03	09/09/2015 07:30	09/11/2015 10:39	3315951
FS	IS-PFOS-13C4	537	N/A	SG1-MW01D-150903		5931.02	5385.51	ng/L	110	70 - 140	---	---	1.03	09/09/2015 07:30	09/11/2015 10:39	3315951
FS	SS-PFDA-13C2	537	N/A	SG1-MW01D-150903		89.8131	100	ng/L	87	70 - 130	---	---	1.03	09/09/2015 07:30	09/11/2015 10:39	3315951
FS	SS-PFHxA-13C2	537	N/A	SG1-MW01D-150903		48.2862	50.0	ng/L	94	70 - 130	---	---	1.03	09/09/2015 07:30	09/11/2015 10:39	3315951
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW01D-150903	<	90		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 10:39	3315951
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW01D-150903	<	10		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 10:39	3315951
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW01D-150903	<	30		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 10:39	3315951
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW01D-150903	<	20		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 10:39	3315951
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW01D-150903	<	40		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 10:39	3315951
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW01D-150903	<	20		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 10:39	3315951

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	IS-PFOA-13C2	537	N/A	SG1-MW01S-150903		6757.22	6500.01	ng/L	104	70 - 140	---	---	1.03	09/09/2015 07:30	09/11/2015 11:10	3315952
FS	IS-PFOS-13C4	537	N/A	SG1-MW01S-150903		5488.58	5385.51	ng/L	102	70 - 140	---	---	1.03	09/09/2015 07:30	09/11/2015 11:10	3315952
FS	SS-PFDA-13C2	537	N/A	SG1-MW01S-150903		99.6958	100	ng/L	97	70 - 130	---	---	1.03	09/09/2015 07:30	09/11/2015 11:10	3315952
FS	SS-PFHxA-13C2	537	N/A	SG1-MW01S-150903		53.4706	50.0	ng/L	104	70 - 130	---	---	1.03	09/09/2015 07:30	09/11/2015 11:10	3315952
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW01S-150903	<	90		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 11:10	3315952
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW01S-150903		20		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 11:10	3315952
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW01S-150903	<	30		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 11:10	3315952
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW01S-150903	<	20		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 11:10	3315952
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW01S-150903	<	40		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 11:10	3315952
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW01S-150903	<	20		ng/L	---	---	---	---	1.03	09/09/2015 07:30	09/11/2015 11:10	3315952
FS	IS-PFOA-13C2	537	N/A	SG1-MW05S-150903		6685.73	6500.01	ng/L	103	70 - 140	---	---	1.02	09/09/2015 07:30	09/11/2015 11:41	3315953
FS	IS-PFOA-13C2	537	N/A	SG1-MW05S-150903		6685.73	6500.01	ng/L	103	70 - 140	---	---	10.2	09/09/2015 07:30	09/11/2015 11:41	3315953
FS	IS-PFOS-13C4	537	N/A	SG1-MW05S-150903		5784.61	5385.51	ng/L	107	70 - 140	---	---	1.02	09/09/2015 07:30	09/11/2015 11:41	3315953
FS	IS-PFOS-13C4	537	N/A	SG1-MW05S-150903		5784.61	5385.51	ng/L	107	70 - 140	---	---	10.2	09/09/2015 07:30	09/11/2015 11:41	3315953
FS	SS-PFDA-13C2	537	N/A	SG1-MW05S-150903		98.3674	100	ng/L	96	70 - 130	---	---	1.02	09/09/2015 07:30	09/11/2015 11:41	3315953
FS	SS-PFHxA-13C2	537	N/A	SG1-MW05S-150903		52.2571	50.0	ng/L	102	70 - 130	---	---	1.02	09/09/2015 07:30	09/11/2015 11:41	3315953
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW05S-150903	<	90		ng/L	---	---	---	---	1.02	09/09/2015 07:30	09/11/2015 11:41	3315953
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW05S-150903		10		ng/L	---	---	---	---	1.02	09/09/2015 07:30	09/11/2015 11:41	3315953
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW05S-150903	<	30		ng/L	---	---	---	---	1.02	09/09/2015 07:30	09/11/2015 11:41	3315953
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW05S-150903	<	20		ng/L	---	---	---	---	1.02	09/09/2015 07:30	09/11/2015 11:41	3315953
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW05S-150903	<	40		ng/L	---	---	---	---	1.02	09/09/2015 07:30	09/11/2015 11:41	3315953
LFSML	IS-PFOA-13C2	537	N/A	SG1-MW05S-150903		6309.11	6500.01	ng/L	97	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 12:12	3315954
LFSML	IS-PFOS-13C4	537	N/A	SG1-MW05S-150903		5449.82	5385.51	ng/L	101	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 12:12	3315954
LFSML	SS-PFDA-13C2	537	N/A	SG1-MW05S-150903		98.5926	100	ng/L	99	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 12:12	3315954
LFSML	SS-PFHxA-13C2	537	N/A	SG1-MW05S-150903		51.2521	50.0	ng/L	103	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 12:12	3315954
LFSML	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW05S-150903		97.2873	90.0	ng/L	108	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 12:12	3315954
LFSML	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW05S-150903		24.6431	23.6966	ng/L	109	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 12:12	3315954
LFSML	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW05S-150903		31.3810	30.0	ng/L	105	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 12:12	3315954
LFSML	Perfluorononanoic acid (PFNA)	537	20	SG1-MW05S-150903		21.9155	20.0	ng/L	110	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 12:12	3315954
LFSML	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW05S-150903		40.2077	40.0	ng/L	101	50 - 150	---	---	1.0	09/09/2015 07:30	09/11/2015 12:12	3315954
LFSMDL	IS-PFOA-13C2	537	N/A	SG1-MW05S-150903		6316.68	6500.01	ng/L	97	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 12:42	3315955
LFSMDL	IS-PFOS-13C4	537	N/A	SG1-MW05S-150903		5416.79	5385.51	ng/L	101	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 12:42	3315955
LFSMDL	SS-PFDA-13C2	537	N/A	SG1-MW05S-150903		97.6221	100	ng/L	98	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 12:42	3315955
LFSMDL	SS-PFHxA-13C2	537	N/A	SG1-MW05S-150903		49.9284	50.0	ng/L	100	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 12:42	3315955
LFSMDL	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW05S-150903		99.6473	90.0	ng/L	111	50 - 150	2.4	---	1.0	09/09/2015 07:30	09/11/2015 12:42	3315955
LFSMDL	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW05S-150903		24.4612	23.6966	ng/L	108	50 - 150	0.7	---	1.0	09/09/2015 07:30	09/11/2015 12:42	3315955
LFSMDL	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW05S-150903		32.0943	30.0	ng/L	107	50 - 150	2.2	---	1.0	09/09/2015 07:30	09/11/2015 12:42	3315955
LFSMDL	Perfluorononanoic acid (PFNA)	537	20	SG1-MW05S-150903		22.0522	20.0	ng/L	110	50 - 150	0.6	---	1.0	09/09/2015 07:30	09/11/2015 12:42	3315955
LFSMDL	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW05S-150903		41.6968	40.0	ng/L	104	50 - 150	3.6	---	1.0	09/09/2015 07:30	09/11/2015 12:42	3315955
FS	IS-PFOA-13C2	537	N/A	SG1-MW04S-150903		6170.11	6500.01	ng/L	95	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 13:13	3315957
FS	IS-PFOA-13C2	537	N/A	SG1-MW04S-150903		6170.11	6500.01	ng/L	95	70 - 140	---	---	10	09/09/2015 07:30	09/11/2015 13:13	3315957

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	IS-PFOS-13C4	537	N/A	SG1-MW04S-150903		5592.37	5385.51	ng/L	104	70 - 140	---	---	1.0	09/09/2015 07:30	09/11/2015 13:13	3315957
FS	IS-PFOS-13C4	537	N/A	SG1-MW04S-150903		5592.37	5385.51	ng/L	104	70 - 140	---	---	10	09/09/2015 07:30	09/11/2015 13:13	3315957
FS	SS-PFDA-13C2	537	N/A	SG1-MW04S-150903		102.6140	100	ng/L	103	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 13:13	3315957
FS	SS-PFHxA-13C2	537	N/A	SG1-MW04S-150903		54.1138	50.0	ng/L	108	70 - 130	---	---	1.0	09/09/2015 07:30	09/11/2015 13:13	3315957
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW04S-150903	<	90		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 13:13	3315957
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW04S-150903		40		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 13:13	3315957
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW04S-150903	<	30		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 13:13	3315957
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW04S-150903	<	20		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 13:13	3315957
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW04S-150903	<	40		ng/L	---	---	---	---	1.0	09/09/2015 07:30	09/11/2015 13:13	3315957
FS	IS-PFOA-13C2	537	N/A	SG1-DS01-150903		5842.25	6252.25	ng/L	90	70 - 140	---	---	0.99	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	IS-PFOA-13C2	537	N/A	SG1-DS01-150903		5842.25	6252.25	ng/L	90	70 - 140	---	---	19.8	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	IS-PFOS-13C4	537	N/A	SG1-DS01-150903		5382.74	5283.19	ng/L	100	70 - 140	---	---	0.99	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	IS-PFOS-13C4	537	N/A	SG1-DS01-150903		5382.74	5283.19	ng/L	100	70 - 140	---	---	19.8	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	SS-PFDA-13C2	537	N/A	SG1-DS01-150903		105.3310	100	ng/L	106	70 - 130	---	---	0.99	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	SS-PFHxA-13C2	537	N/A	SG1-DS01-150903		54.6863	50.0	ng/L	110	70 - 130	---	---	0.99	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-DS01-150903	<	90		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-DS01-150903		130		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-DS01-150903	<	30		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-DS01-150903	<	20		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-DS01-150903	<	40		ng/L	---	---	---	---	0.99	09/09/2015 07:30	09/11/2015 13:44	3315958
FS	IS-PFOA-13C2	537	N/A	SG1-MW03S-150903		5673.23	6252.25	ng/L	87	70 - 140	---	---	0.97	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	IS-PFOA-13C2	537	N/A	SG1-MW03S-150903		5673.23	6252.25	ng/L	87	70 - 140	---	---	48.5	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	IS-PFOS-13C4	537	N/A	SG1-MW03S-150903		5549.39	5283.19	ng/L	103	70 - 140	---	---	0.97	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	IS-PFOS-13C4	537	N/A	SG1-MW03S-150903		5549.39	5283.19	ng/L	103	70 - 140	---	---	48.5	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	SS-PFDA-13C2	537	N/A	SG1-MW03S-150903		109.3540	100	ng/L	113	70 - 130	---	---	0.97	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	SS-PFHxA-13C2	537	N/A	SG1-MW03S-150903		56.5407	50.0	ng/L	117	70 - 130	---	---	0.97	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW03S-150903	<	90		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW03S-150903		130		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW03S-150903	<	30		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW03S-150903	<	20		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW03S-150903	<	40		ng/L	---	---	---	---	0.97	09/09/2015 07:30	09/11/2015 14:15	3315959
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW02S-150902		1100		ng/L	---	---	---	---	10.1	09/09/2015 07:30	09/11/2015 14:48	3315950
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW05S-150903		580		ng/L	---	---	---	---	10.2	09/09/2015 07:30	09/11/2015 15:19	3315953
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW04S-150903		1700		ng/L	---	---	---	---	10	09/09/2015 07:30	09/11/2015 15:50	3315957
CCH	IS-PFOA-13C2	537	N/A	---		6252.25	6252.25	ng/L	100	70 - 140	---	---	1.0	09/09/2015 09:56	09/11/2015 16:21	3316485
CCH	IS-PFOS-13C4	537	N/A	---		5283.19	5283.19	ng/L	100	70 - 140	---	---	1.0	09/09/2015 09:56	09/11/2015 16:21	3316485
CCH	SS-PFDA-13C2	537	N/A	---		102.1540	100	ng/L	102	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 16:21	3316485
CCH	SS-PFHxA-13C2	537	N/A	---		53.1639	50.0	ng/L	106	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 16:21	3316485
CCH	Perfluorobutanesulfonic acid (PFBS)	537	90	---		1154.6400	1125	ng/L	103	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 16:21	3316485
CCH	Perfluoroheptanoic acid (PFHpA)	537	10	---		129.0860	125	ng/L	103	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 16:21	3316485
CCH	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		372.9960	375	ng/L	99	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 16:21	3316485

QC Summary Report (cont.)																
Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCH	Perfluorononanoic acid (PFNA)	537	20	---		254.8410	250	ng/L	102	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 16:21	3316485
CCH	Perfluorooctane sulfonate (PFOS)	537	40	---		498.1890	500	ng/L	100	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 16:21	3316485
CCH	Perfluorooctanoic acid (PFOA)	537	20	---		251.3240	250	ng/L	101	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 16:21	3316485
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW02D-150902		340		ng/L	---	---	---	---	9.7	09/09/2015 07:30	09/11/2015 16:51	3315946
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW03S-150903		5300		ng/L	---	---	---	---	48.5	09/09/2015 07:30	09/11/2015 17:22	3315959
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-DS01-150903		4200		ng/L	---	---	---	---	19.8	09/09/2015 07:30	09/11/2015 17:53	3315958
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW02D-150902		18000		ng/L	---	---	---	---	97	09/09/2015 07:30	09/11/2015 18:24	3315946
CCM	IS-PFOA-13C2	537	N/A	---		6659.52	6659.52	ng/L	100	70 - 140	---	---	1.0	09/09/2015 09:56	09/11/2015 18:55	3319308
CCM	IS-PFOS-13C4	537	N/A	---		5559.78	5559.78	ng/L	100	70 - 140	---	---	1.0	09/09/2015 09:56	09/11/2015 18:55	3319308
CCM	SS-PFDA-13C2	537	N/A	---		99.4288	100	ng/L	99	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 18:55	3319308
CCM	SS-PFHxA-13C2	537	N/A	---		52.0463	50.0	ng/L	104	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 18:55	3319308
CCM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		712.9780	675	ng/L	106	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 18:55	3319308
CCM	Perfluoroheptanoic acid (PFHpA)	537	10	---		78.9467	75.0	ng/L	105	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 18:55	3319308
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		227.4080	225	ng/L	101	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 18:55	3319308
CCM	Perfluorononanoic acid (PFNA)	537	20	---		154.3280	150	ng/L	103	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 18:55	3319308
CCM	Perfluorooctane sulfonate (PFOS)	537	40	---		304.7700	300	ng/L	102	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 18:55	3319308
CCM	Perfluorooctanoic acid (PFOA)	537	20	---		151.0350	150	ng/L	101	70 - 130	---	---	1.0	09/09/2015 09:56	09/11/2015 18:55	3319308
LRB	IS-PFOA-13C2	537	N/A	---		6374.36	6659.52	ng/L	96	70 - 140	---	---	1.0	09/11/2015 09:00	09/11/2015 19:26	3319172
LRB	IS-PFOS-13C4	537	N/A	---		5215.01	5559.78	ng/L	94	70 - 140	---	---	1.0	09/11/2015 09:00	09/11/2015 19:26	3319172
LRB	SS-PFDA-13C2	537	N/A	---		90.3777	100	ng/L	90	70 - 130	---	---	1.0	09/11/2015 09:00	09/11/2015 19:26	3319172
LRB	SS-PFHxA-13C2	537	N/A	---		46.9784	50.0	ng/L	94	70 - 130	---	---	1.0	09/11/2015 09:00	09/11/2015 19:26	3319172
LRB	Perfluorobutanesulfonic acid (PFBS)	537	90	---	<	90		ng/L	---	---	---	---	1.0	09/11/2015 09:00	09/11/2015 19:26	3319172
LRB	Perfluoroheptanoic acid (PFHpA)	537	10	---	<	10		ng/L	---	---	---	---	1.0	09/11/2015 09:00	09/11/2015 19:26	3319172
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	30	---	<	30		ng/L	---	---	---	---	1.0	09/11/2015 09:00	09/11/2015 19:26	3319172
LRB	Perfluorononanoic acid (PFNA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	09/11/2015 09:00	09/11/2015 19:26	3319172
LRB	Perfluorooctane sulfonate (PFOS)	537	40	---	<	40		ng/L	---	---	---	---	1.0	09/11/2015 09:00	09/11/2015 19:26	3319172
LRB	Perfluorooctanoic acid (PFOA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	09/11/2015 09:00	09/11/2015 19:26	3319172

Sample Type Key

Type (Abbr.)	Sample Type	Type (Abbr.)	Sample Type
CCH	CCH		
CCL	CCL		
CCM	CCM		
FBL	FBL		
FS	FS		
FTB	FTB		
LFSMDL	LFSMDL		
LFSML	LFSML		
LRB	LRB		

Maxxam Analytics International Corporation o/a Maxxam Analytics
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-Free:800-563-6266 Fax:(905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD

Page 1 of 1

INVOICE TO:		REPORT TO:			PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#29980 Ramboll Environ	Company Name:	Ramboll Environ	LT Mak Associates	Quotation #:		Maxxam Job #:	Bottle Order #: 524261
Attention:	~~Kirk Moline~~ Jason Wilkinson	Attention:	Jason Wilkinson	Kirk Moline	P.O. #:	02-37128B (RE) 15-5733 (CTM)		
Address:	3 Carlisle Rd.	Address:	3 Carlisle Rd	50 Century Hill Dr	Project:	SGPP Hoosick Falls	COC #:	Project Manager:
	Westford MA 01886		Westford MA 01886	Latham, NY 12110	Project Name:		C#524261-01-01	Melissa DiGrazia
Tel:	(978) 449-0390 x Fax:	Tel:	978-449-0390	Fax:	Site #:			
Email:	rhuening@environcorp.com	Email:	rhuening@environcorp.com	K.Moline@[illegible]	Sampled By:	Jonathan Dippert (CTM)		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine	☐ CCME ☐ Sanitary Sewer Bylaw	
☐ Table 2 ☐ Ind/Comm ☐ Coarse	☐ Reg 558 ☐ Storm Sewer Bylaw	
☐ Table 3 ☐ Agri/Other ☐ For RSC	☐ MISA Municipality ______	
☐ Table ___	☐ PWQO	
	☐ Other ______	

Include Criteria on Certificate of Analysis (Y/N)? ______

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ______ Time Required: ______ ☐
Rush Confirmation Number: ______ (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	EPA Method 537 for the following PFCs: PFOA, PFBS, PFHpA, PFHxS, PFNA, PFOS	TOC	# of Bottles	Comments
1		SG1-~~MH04D~~ MW04S-00.0	8/5/15	0825	Soil		X		1	7-Aug-15 14:25 Melissa DiGrazia B5F6982 FW ENV-572
2		SG1-~~MH04D~~ MW04S-02.0	8/5/15	0839	Soil		X		1	
3		SG1-MW04S-15.0	8/5/15	1230	Soil			X	1	
4		SG1-MW04S-21.0	8/5/15	1235	Soil			X	1	
5		SG1-MW04S-24.0	8/5/15	1240	Soil			X	1	International Solid Sample Heat Treat Required High Risk material Controlled Storage and Disposal
6		SG1-DS01-150805	8/5/15	1445	Soil		X		1	
7		SG1-MW02D-00.0	8/5/15	1500	Soil		X		1	
8		SG1-MW02D-02.0	8/5/15	1510	Soil		X		3	MS/MSD collected
9		SG1-MW02D-42.0	8/6/15	1230	Soil			X	1	
10		SG1-MW02D-24.0	8/6/15	1255	Soil			X	1	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
[signature]	15/08/06	1530	Ashitha Sukumar / ASHITHA SUKUMAR	2015/08/07	14:25			4.3 / 4.4 / 4.4	Present	✓	
									Intact		✓

Laboratory Use Only

White: Maxxam Yellow: Client

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

4.5 / 4.5 / 4.4 custody seal only on one side of lid

Eaton Analytical

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN000352015-1
Arkansas	IN035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	IN200001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00241
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-14-7
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA150003	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	00127
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies

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LABORATORY CASE NARRATIVE

Client: Ramboll Environ | Report #: 350056CN

All method QC was within acceptance limits.

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[signature]	C.S. Manager	10/07/2015
Authorized Signature	Title	Date

Page 1 of 1

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110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: Ramboll Environ

Attn: Jason Wilkinson
3 Carlisle Road
Suite 210
Westford, MA 01886

Copies to: None

Report: 350056
Priority: Rush Written
Status: Final
PWS ID: Not Supplied
Lab ELAP #: 11398

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3332984	SG1-MW02-150930	537	09/30/15 13:10	Client	10/01/15 09:15
3332985	SG1-TB02-150930	537	09/30/15 14:45	Client	10/01/15 09:15

Report Summary

Note: See attached page for additional comments.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Nathan Trowbridge at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

C.S. Manager   10/07/2015

Authorized Signature   Title   Date

Client Name: Ramboll Environ
Report #: 350056

Client Name: Ramboll Environ　　　　Report #: 350056

Sampling Point: SG1-MW02-150930　　　　PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/02/15 07:35	10/03/15 07:57	3332984
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**310**	ng/L	10/02/15 07:35	10/03/15 14:11	3332984
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/02/15 07:35	10/03/15 07:57	3332984
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/02/15 07:35	10/03/15 07:57	3332984
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/02/15 07:35	10/03/15 07:57	3332984
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**17000**	ng/L	10/02/15 07:35	10/03/15 13:40	3332984

Sampling Point: SG1-TB02-150930　　　　PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/02/15 07:35	10/03/15 01:46	3332985
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	10/02/15 07:35	10/03/15 01:46	3332985
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/02/15 07:35	10/03/15 01:46	3332985
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/02/15 07:35	10/03/15 01:46	3332985
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/02/15 07:35	10/03/15 01:46	3332985
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	10/02/15 07:35	10/03/15 01:46	3332985

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample al6iquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

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Order # 284272
Batch # 350056

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Shaded area for EEA use only

CHAIN OF CUSTODY RECORD

Page 1 of 1

REPORT TO:	SAMPLER (Signature)	PWS ID #	STATE (sample origin)	PROJECT NAME	PO#
Ramboll Environ 3 Carlisle Rd #210 Westford MA 01886	Vdl...		NY	SGPP-Hoosick Falls	
BILL TO: same.	COMPLIANCE MONITORING Yes / No	POPULATION SERVED	SOURCE WATER		

	LAB Number	COLLECTION DATE	COLLECTION TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3332984	9/30/15	1310		✓	SGI-MW020-150930	PFCs by EPA537*	Cl-A		X	3	GW	SW
2	3332985	093015	1445		✓	SGI-TB02-150930	PFCs by EPA 537*	✓		X	1	—	SW
3								SS					
4													
5						only received 2 bottles	for FS ss 10-1-15						
6													
7													
8													
9													
10						EPA Method for the following	PFCs: PFOA, PFBS, PFHpA,						
11							PFHxS, PFNA, PFOS						
12													
13						RUSH	WRITTEN						
14													

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
(signature)	9/30/15	1815 PM			AM PM
RELINQUISHED BY:(Signature)	DATE	TIME AM PM	RECEIVED BY:(Signature)	DATE	TIME AM PM
RELINQUISHED BY:(Signature)	DATE	TIME AM PM	RECEIVED FOR LABORATORY BY: (signature)	10-1-15	0915 AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS: RW per client TO N.T. 10-1-15 JL

CONDITIONS UPON RECEIPT (check one): X Iced: Wet/Blue ___ Ambient 1.2 °C Upon Receipt___ N/A

MATRIX CODES:

DW-DRINKING WATER
RW-REAGENT WATER
GW-GROUND WATER
EW-EXPOSURE WATER
SW-SURFACE WATER
PW-POOL WATER
WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%
RV* = Rush Verbal: (5 working days)	50%
RW* = Rush Written: (5 working days)	75%
IV* = Immediate Verbal: (3 working days)	100%
IW* = Immediate Written: (3 working days)	125%
SP* = Weekend, Holiday	CALL
STAT* = Less than 48 hours	CALL

* Please call, expedited service not available for all testing

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

06-LO-F0435 Issue 4.0 Effective Date: 2014-05-01

Sample analysis will be provided according to the standard EEA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agree to in writing by EEA.

Eurofins Eaton Analytical
Run Log

Run ID: **208267** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3333366		OS	CY	10/02/2015 22:09	100215M537a.mdb
LRB	3333324		RW	CY	10/02/2015 23:42	100215M537a.mdb
FBL	3333325		RW	CY	10/03/2015 00:13	100215M537a.mdb
FBM	3333326		RW	CY	10/03/2015 00:44	100215M537a.mdb
FTB	3332985	SG1-TB02-150930	RW	CY	10/03/2015 01:46	100215M537a.mdb
FS	3332984	SG1-MW02-150930	GW	CY	10/03/2015 07:57	100215M537a.mdb
CCM	3333367		OS	CY	10/03/2015 08:28	100215M537a.mdb
FS	3332984	SG1-MW02-150930	GW	CY	10/03/2015 14:11	100215M537a.mdb
CCH	3333368		OS	CY	10/03/2015 14:42	100215M537a.mdb

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	IS-PFOA-13C2	537	N/A	---		11656.40	11656.4	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/02/2015 22:09	3333366
CCL	IS-PFOS-13C4	537	N/A	---		6524.74	6524.74	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/02/2015 22:09	3333366
CCL	SS-PFDA-13C2	537	N/A	---		95.8643	100	ng/L	96	70 - 130	---	---	1.0	09/30/2015 09:59	10/02/2015 22:09	3333366
CCL	SS-PFHxA-13C2	537	N/A	---		49.6333	50.0	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/02/2015 22:09	3333366
CCL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		90.1888	90.0	ng/L	100	50 - 150	---	---	1.0	09/30/2015 09:59	10/02/2015 22:09	3333366
CCL	Perfluoroheptanoic acid (PFHpA)	537	10	---		9.9364	10.0	ng/L	99	50 - 150	---	---	1.0	09/30/2015 09:59	10/02/2015 22:09	3333366
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		30.3116	30.0	ng/L	101	50 - 150	---	---	1.0	09/30/2015 09:59	10/02/2015 22:09	3333366
CCL	Perfluorononanoic acid (PFNA)	537	20	---		19.9372	20.0	ng/L	100	50 - 150	---	---	1.0	09/30/2015 09:59	10/02/2015 22:09	3333366
CCL	Perfluorooctane sulfonate (PFOS)	537	40	---		41.1147	40.0	ng/L	103	50 - 150	---	---	1.0	09/30/2015 09:59	10/02/2015 22:09	3333366
CCL	Perfluorooctanoic acid (PFOA)	537	20	---		20.2689	20.0	ng/L	101	50 - 150	---	---	1.0	09/30/2015 09:59	10/02/2015 22:09	3333366
LRB	IS-PFOA-13C2	537	N/A	---		11266.50	11656.4	ng/L	97	70 - 140	---	---	1.0	10/02/2015 07:35	10/02/2015 23:42	3333324
LRB	IS-PFOS-13C4	537	N/A	---		6359.43	6524.74	ng/L	97	70 - 140	---	---	1.0	10/02/2015 07:35	10/02/2015 23:42	3333324
LRB	SS-PFDA-13C2	537	N/A	---		94.2210	100	ng/L	94	70 - 130	---	---	1.0	10/02/2015 07:35	10/02/2015 23:42	3333324
LRB	SS-PFHxA-13C2	537	N/A	---		48.0828	50.0	ng/L	96	70 - 130	---	---	1.0	10/02/2015 07:35	10/02/2015 23:42	3333324
LRB	Perfluorobutanesulfonic acid (PFBS)	537	90	---	<	90		ng/L	---	---	---	---	1.0	10/02/2015 07:35	10/02/2015 23:42	3333324
LRB	Perfluoroheptanoic acid (PFHpA)	537	10	---	<	10		ng/L	---	---	---	---	1.0	10/02/2015 07:35	10/02/2015 23:42	3333324
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	30	---	<	30		ng/L	---	---	---	---	1.0	10/02/2015 07:35	10/02/2015 23:42	3333324
LRB	Perfluorononanoic acid (PFNA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	10/02/2015 07:35	10/02/2015 23:42	3333324
LRB	Perfluorooctane sulfonate (PFOS)	537	40	---	<	40		ng/L	---	---	---	---	1.0	10/02/2015 07:35	10/02/2015 23:42	3333324
LRB	Perfluorooctanoic acid (PFOA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	10/02/2015 07:35	10/02/2015 23:42	3333324
FBL	IS-PFOA-13C2	537	N/A	---		11536.40	11656.4	ng/L	99	70 - 140	---	---	1.0	10/02/2015 07:35	10/03/2015 00:13	3333325
FBL	IS-PFOS-13C4	537	N/A	---		6414.15	6524.74	ng/L	98	70 - 140	---	---	1.0	10/02/2015 07:35	10/03/2015 00:13	3333325
FBL	SS-PFDA-13C2	537	N/A	---		95.1900	100	ng/L	95	70 - 130	---	---	1.0	10/02/2015 07:35	10/03/2015 00:13	3333325
FBL	SS-PFHxA-13C2	537	N/A	---		48.6870	50.0	ng/L	97	70 - 130	---	---	1.0	10/02/2015 07:35	10/03/2015 00:13	3333325
FBL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		92.8062	90.0	ng/L	103	50 - 150	---	---	1.0	10/02/2015 07:35	10/03/2015 00:13	3333325
FBL	Perfluoroheptanoic acid (PFHpA)	537	10	---		10.0059	10.0	ng/L	100	50 - 150	---	---	1.0	10/02/2015 07:35	10/03/2015 00:13	3333325
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		31.0605	30.0	ng/L	104	50 - 150	---	---	1.0	10/02/2015 07:35	10/03/2015 00:13	3333325
FBL	Perfluorononanoic acid (PFNA)	537	20	---		19.9685	20.0	ng/L	100	50 - 150	---	---	1.0	10/02/2015 07:35	10/03/2015 00:13	3333325
FBL	Perfluorooctane sulfonate (PFOS)	537	40	---		40.0339	40.0	ng/L	100	50 - 150	---	---	1.0	10/02/2015 07:35	10/03/2015 00:13	3333325
FBL	Perfluorooctanoic acid (PFOA)	537	20	---		20.2946	20.0	ng/L	101	50 - 150	---	---	1.0	10/02/2015 07:35	10/03/2015 00:13	3333325
FBM	IS-PFOA-13C2	537	N/A	---		11291.20	11656.4	ng/L	97	70 - 140	---	---	1.0	10/02/2015 07:35	10/03/2015 00:44	3333326
FBM	IS-PFOS-13C4	537	N/A	---		6290.25	6524.74	ng/L	96	70 - 140	---	---	1.0	10/02/2015 07:35	10/03/2015 00:44	3333326
FBM	SS-PFDA-13C2	537	N/A	---		94.8387	100	ng/L	95	70 - 130	---	---	1.0	10/02/2015 07:35	10/03/2015 00:44	3333326
FBM	SS-PFHxA-13C2	537	N/A	---		47.4344	50.0	ng/L	95	70 - 130	---	---	1.0	10/02/2015 07:35	10/03/2015 00:44	3333326
FBM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		656.3290	675	ng/L	97	70 - 130	---	---	1.0	10/02/2015 07:35	10/03/2015 00:44	3333326
FBM	Perfluoroheptanoic acid (PFHpA)	537	10	---		69.6195	75.0	ng/L	93	70 - 130	---	---	1.0	10/02/2015 07:35	10/03/2015 00:44	3333326
FBM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		217.5950	225	ng/L	97	70 - 130	---	---	1.0	10/02/2015 07:35	10/03/2015 00:44	3333326
FBM	Perfluorononanoic acid (PFNA)	537	20	---		136.0930	150	ng/L	91	70 - 130	---	---	1.0	10/02/2015 07:35	10/03/2015 00:44	3333326
FBM	Perfluorooctane sulfonate (PFOS)	537	40	---		284.2780	300	ng/L	95	70 - 130	---	---	1.0	10/02/2015 07:35	10/03/2015 00:44	3333326
FBM	Perfluorooctanoic acid (PFOA)	537	20	---		141.0900	150	ng/L	94	70 - 130	---	---	1.0	10/02/2015 07:35	10/03/2015 00:44	3333326

QC Summary Report (cont.)																
Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FTB	IS-PFOA-13C2	537	N/A	SG1-TB02-150930		11692.50	11656.4	ng/L	100	70 - 140	---	---	0.95	10/02/2015 07:35	10/03/2015 01:46	3332985
FTB	IS-PFOS-13C4	537	N/A	SG1-TB02-150930		6642.37	6524.74	ng/L	102	70 - 140	---	---	0.95	10/02/2015 07:35	10/03/2015 01:46	3332985
FTB	SS-PFDA-13C2	537	N/A	SG1-TB02-150930		88.5974	100	ng/L	93	70 - 130	---	---	0.95	10/02/2015 07:35	10/03/2015 01:46	3332985
FTB	SS-PFHxA-13C2	537	N/A	SG1-TB02-150930		43.8917	50.0	ng/L	92	70 - 130	---	---	0.95	10/02/2015 07:35	10/03/2015 01:46	3332985
FTB	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-TB02-150930	<	90		ng/L	---	---	---	---	0.95	10/02/2015 07:35	10/03/2015 01:46	3332985
FTB	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-TB02-150930	<	10		ng/L	---	---	---	---	0.95	10/02/2015 07:35	10/03/2015 01:46	3332985
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-TB02-150930	<	30		ng/L	---	---	---	---	0.95	10/02/2015 07:35	10/03/2015 01:46	3332985
FTB	Perfluorononanoic acid (PFNA)	537	20	SG1-TB02-150930	<	20		ng/L	---	---	---	---	0.95	10/02/2015 07:35	10/03/2015 01:46	3332985
FTB	Perfluorooctane sulfonate (PFOS)	537	40	SG1-TB02-150930	<	40		ng/L	---	---	---	---	0.95	10/02/2015 07:35	10/03/2015 01:46	3332985
FTB	Perfluorooctanoic acid (PFOA)	537	20	SG1-TB02-150930	<	20		ng/L	---	---	---	---	0.95	10/02/2015 07:35	10/03/2015 01:46	3332985
FS	IS-PFOA-13C2	537	N/A	SG1-MW02-150930		8358.16	10013.5	ng/L	72	70 - 140	---	---	0.93	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	IS-PFOA-13C2	537	N/A	SG1-MW02-150930		8358.16	10013.5	ng/L	72	70 - 140	---	---	9.3	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	IS-PFOA-13C2	537	N/A	SG1-MW02-150930		8358.16	10013.5	ng/L	72	70 - 140	---	---	93	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	IS-PFOS-13C4	537	N/A	SG1-MW02-150930		5422.67	5667.41	ng/L	90	70 - 140	---	---	0.93	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	IS-PFOS-13C4	537	N/A	SG1-MW02-150930		5422.67	5667.41	ng/L	90	70 - 140	---	---	9.3	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	IS-PFOS-13C4	537	N/A	SG1-MW02-150930		5422.67	5667.41	ng/L	90	70 - 140	---	---	93	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	SS-PFDA-13C2	537	N/A	SG1-MW02-150930		109.5460	100	ng/L	118	70 - 130	---	---	0.93	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	SS-PFHxA-13C2	537	N/A	SG1-MW02-150930		55.6631	50.0	ng/L	120	70 - 130	---	---	0.93	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW02-150930	<	90		ng/L	---	---	---	---	0.93	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW02-150930	<	30		ng/L	---	---	---	---	0.93	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW02-150930	<	20		ng/L	---	---	---	---	0.93	10/02/2015 07:35	10/03/2015 07:57	3332984
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW02-150930	<	40		ng/L	---	---	---	---	0.93	10/02/2015 07:35	10/03/2015 07:57	3332984
CCM	IS-PFOA-13C2	537	N/A	---		10013.50	10013.5	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/03/2015 08:28	3333367
CCM	IS-PFOS-13C4	537	N/A	---		5667.41	5667.41	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/03/2015 08:28	3333367
CCM	SS-PFDA-13C2	537	N/A	---		95.4073	100	ng/L	95	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 08:28	3333367
CCM	SS-PFHxA-13C2	537	N/A	---		48.6385	50.0	ng/L	97	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 08:28	3333367
CCM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		674.2860	675	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 08:28	3333367
CCM	Perfluoroheptanoic acid (PFHpA)	537	10	---		74.0983	75.0	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 08:28	3333367
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		219.9190	225	ng/L	98	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 08:28	3333367
CCM	Perfluorononanoic acid (PFNA)	537	20	---		147.4430	150	ng/L	98	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 08:28	3333367
CCM	Perfluorooctane sulfonate (PFOS)	537	40	---		296.6470	300	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 08:28	3333367
CCM	Perfluorooctanoic acid (PFOA)	537	20	---		150.0280	150	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 08:28	3333367
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW02-150930		17000		ng/L	---	---	---	---	93	10/02/2015 07:35	10/03/2015 13:40	3332984
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW02-150930		310		ng/L	---	---	---	---	9.3	10/02/2015 07:35	10/03/2015 14:11	3332984
CCH	IS-PFOA-13C2	537	N/A	---		9318.57	9318.57	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/03/2015 14:42	3333368
CCH	IS-PFOS-13C4	537	N/A	---		5241.66	5241.66	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/03/2015 14:42	3333368
CCH	SS-PFDA-13C2	537	N/A	---		99.5422	100	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 14:42	3333368
CCH	SS-PFHxA-13C2	537	N/A	---		49.7790	50.0	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 14:42	3333368
CCH	Perfluorobutanesulfonic acid (PFBS)	537	90	---		1127.6800	1125	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 14:42	3333368
CCH	Perfluoroheptanoic acid (PFHpA)	537	10	---		124.7560	125	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 14:42	3333368
CCH	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		380.9470	375	ng/L	102	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 14:42	3333368

QC Summary Report (cont.)																	
Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCH	Perfluorononanoic acid (PFNA)	537	20	---		248.5970	250	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 14:42	3333368
CCH	Perfluorooctane sulfonate (PFOS)	537	40	---		515.9240	500	ng/L	103	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 14:42	3333368
CCH	Perfluorooctanoic acid (PFOA)	537	20	---		252.2000	250	ng/L	101	70 - 130	---	---	1.0	09/30/2015 09:59	10/03/2015 14:42	3333368

Sample Type Key

Type (Abbr.)	Sample Type	Type (Abbr.)	Sample Type
CCH	Continuing Calibration High		
CCL	Continuing Calibration Low		
CCM	Continuing Calibration Mid		
FS	Field Sample		
FTB	Field Trip Blank		
FBL	Fortified Blank Low		
FBM	Fortified Blank Mid		
LRB	Laboratory Reagent Blank		

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN000352015-1
Arkansas	IN035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	IN200001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00241
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-14-7
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA150003	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	00127
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies

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LABORATORY CASE NARRATIVE

Client: Ramboll Environ

Report #: 350168CN

All method QC was within acceptance limits.

Note: There were no reportable LFSMM or LFSMDM results in the Perfluorooctanoic acid (PFOA) analysis for site SG1-MW05-151001 due to spiking level.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Authorized Signature	Title	Date
[signature]	C.S. Manager	10/07/2015

Page 1 of 1

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110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client:	Ramboll Environ	Report:	350168
		Priority:	Rush Written
Attn:	Jason Wilkinson 3 Carlisle Road Suite 210 Westford, MA 01886	Status:	Final
		PWS ID:	Not Supplied
		Lab ELAP #:	11398
Copies to:	None		

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3333953	SG1-TB03-151001	537	10/01/15 07:30	Client	10/02/15 09:15
3333954	SG1-MW02S-151001	537	10/01/15 08:00	Client	10/02/15 09:15
3333955	SG1-MW05-151001	537	10/01/15 09:00	Client	10/02/15 09:15
3333958	SG1-MW03-151001	537	10/01/15 10:20	Client	10/02/15 09:15
3333959	SG1-MW04-151001	537	10/01/15 09:30	Client	10/02/15 09:15
3333960	SG1-DS01-151001	537	10/01/15 00:00	Client	10/02/15 09:15
3333961	SG1-MW01-151001	537	10/01/15 08:05	Client	10/02/15 09:15
3333962	SG1-MW01S-151001	537	10/01/15 08:30	Client	10/02/15 09:15
3333963	SG1-RB01-151001	537	10/01/15 10:45	Client	10/02/15 09:15
3333964	SG1-RB01-150930	537	09/30/15 11:30	Client	10/02/15 09:15
3333965	SG1-FB01-151001	537	10/01/15 11:50	Client	10/02/15 09:15

Report Summary

Note: See attached page for additional comments.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Nathan Trowbridge at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

C.S. Manager — 10/07/2015

Authorized Signature | Title | Date

Client Name: Ramboll Environ
Report #: 350168

Sampling Point: SG1-TB03-151001 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 00:31	3333953
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	10/05/15 07:25	10/06/15 00:31	3333953
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 00:31	3333953
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 00:31	3333953
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 00:31	3333953
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 00:31	3333953

Sampling Point: SG1-MW02S-151001 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 04:38	3333954
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**30**	ng/L	10/05/15 07:25	10/06/15 04:38	3333954
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 04:38	3333954
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 04:38	3333954
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 04:38	3333954
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**750**	ng/L	10/05/15 07:25	10/06/15 12:23	3333954

Sampling Point: SG1-MW05-151001 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 05:40	3333955
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**10**	ng/L	10/05/15 07:25	10/06/15 05:40	3333955
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 05:40	3333955
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 05:40	3333955
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 05:40	3333955
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**570**	ng/L	10/05/15 07:25	10/06/15 12:54	3333955

Sampling Point: SG1-MW03-151001 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 05:09	3333958
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**120**	ng/L	10/05/15 07:25	10/06/15 05:09	3333958
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 05:09	3333958
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 05:09	3333958
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 05:09	3333958
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**4300**	ng/L	10/05/15 07:25	10/06/15 11:52	3333958

Sampling Point: SG1-MW04-151001 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 08:15	3333959
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**40**	ng/L	10/05/15 07:25	10/06/15 08:15	3333959
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 08:15	3333959
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 08:15	3333959
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 08:15	3333959
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**1400**	ng/L	10/05/15 07:25	10/06/15 13:55	3333959

Sampling Point: SG1-DS01-151001 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 08:46	3333960
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**40**	ng/L	10/05/15 07:25	10/06/15 08:46	3333960
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 08:46	3333960
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 08:46	3333960
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 08:46	3333960
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**1400**	ng/L	10/05/15 07:25	10/06/15 14:26	3333960

Sampling Point: SG1-MW01-151001 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 09:17	3333961
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	10/05/15 07:25	10/06/15 09:17	3333961
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 09:17	3333961
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 09:17	3333961
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 09:17	3333961
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 09:17	3333961

Sampling Point: SG1-MW01S-151001 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 09:48	3333962
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**60**	ng/L	10/05/15 07:25	10/06/15 09:48	3333962
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 09:48	3333962
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 09:48	3333962
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 09:48	3333962
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**60**	ng/L	10/05/15 07:25	10/06/15 09:48	3333962

Sampling Point: SG1-RB01-151001 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 10:19	3333963
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	10/05/15 07:25	10/06/15 10:19	3333963
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 10:19	3333963
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 10:19	3333963
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 10:19	3333963
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 10:19	3333963

Sampling Point: SG1-RB01-150930 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 10:50	3333964
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	10/05/15 07:25	10/06/15 10:50	3333964
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 10:50	3333964
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 10:50	3333964
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 10:50	3333964
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 10:50	3333964

Sampling Point: SG1-FB01-151001 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/05/15 07:25	10/06/15 11:21	3333965
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	10/05/15 07:25	10/06/15 11:21	3333965
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/05/15 07:25	10/06/15 11:21	3333965
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 11:21	3333965
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/05/15 07:25	10/06/15 11:21	3333965
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	10/05/15 07:25	10/06/15 11:21	3333965

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample al6iquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

RUSH WRITTEN

eurofins | Eaton Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 284272
Batch # 350168

www.eatonanalytical.com

Shaded area for EEA use only

CHAIN OF CUSTODY RECORD

Page 1 of 1

REPORT TO:	SAMPLER (Signature)	PWS ID #	STATE (sample origin)	PROJECT NAME	PO#
Ramboll Environ, 3 Carlisle Rd #210, Westford, MA	Van T...		NY	SGPP-Hoosick Falls	
BILL TO: Same.	COMPLIANCE MONITORING Yes / No	POPULATION SERVED	SOURCE WATER		

	LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3333 953	10-1-15	0730	X		SG1-TB03-151001	PFC, EPA Method 537 (PFOA,	Cl-A		✓	1	GW	SW
2	954		0800	X		SG1-MW02S-151001	PFBS, PFHpA, PFHxS, PFNA,	45		✓	3		
3	955 S		0900	X		SG1-MW05-151001	PFOS)	MS/MSD		✓	9		
4	958		1020	X		SG1-MW03-151001	SG1-MW04-151001 per client RP 10.7.15			✓	3		
5	959		0930	X		SG1-MW04-151001	Bottles show MW04S SS 10-2-15			✓	3		
6	960		—			SG1-DS01-151001	SG1-MW01-151001 per client RP 10.7.15			✓	3		
7	961		0805	X		SG1-MW01-151001	Bottles show MW01D SS 10-2-15			✓	3		
8	962		0830	X		SG1-MW01S-151001				✓	3		
9	963		1045	X		SG1-RB01-151001	@			✓	3		
10	964	9-30-15	1130	X		SG1-RB01-150930	@			✓	3		
11	965	~~10-1-15~~	1150	X		SG1-FB01-151001	@			✓	3		
12	956 MS	10-1-15	0900			~~SG1-MW05-151001~~							
13	957 MSD					SS 10-2-15							
14													

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
[signature]	10/1/15	1400 AM PM			AM PM
RELINQUISHED BY:(Signature)	DATE	TIME AM PM	RECEIVED BY:(Signature)	DATE	TIME AM PM
RELINQUISHED BY:(Signature)	DATE	TIME AM PM	RECEIVED FOR LABORATORY BY: [signature]	10-2-15	0815 AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS
*Use bottles for sample sites. LKt 10/2/15

Cross Offs on COC by Client

CONDITIONS UPON RECEIPT (check one): X Iced: Wet/Blue ____ Ambient ____ 1 °C Upon Receipt ____ N/A

MATRIX CODES:

DW-DRINKING WATER
RW-REAGENT WATER
GW-GROUND WATER
EW-EXPOSURE WATER
SW-SURFACE WATER
PW-POOL WATER
WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%	IV* = Immediate Verbal: (3 working days)	100%
RV* = Rush Verbal: (5 working days)	50%	IW* = Immediate Written: (3 working days)	125%
RW* = Rush Written: (5 working days)	75%	SP* = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

* Please call, expedited service not available for all testing

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

06-LO-F0435 Issue 4.0 Effective Date: 2014-05-01

Sample analysis will be provided according to the standard EEA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agree to in writing by EEA.

Eurofins Eaton Analytical
Run Log

Run ID: **208351** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3334078		OS	CY	10/05/2015 20:24	100515M537a.mdb
LRB	3334062		RW	CY	10/05/2015 21:56	100515M537a.mdb
FBL	3334063		RW	CY	10/05/2015 22:27	100515M537a.mdb
FBH	3334064		RW	CY	10/05/2015 22:58	100515M537a.mdb
FTB	3333953	SG1-TB03-151001	RW	CY	10/06/2015 00:31	100515M537a.mdb
FS	3333954	SG1-MW02S-151001	GW	CY	10/06/2015 04:38	100515M537a.mdb
FS	3333958	SG1-MW03-151001	GW	CY	10/06/2015 05:09	100515M537a.mdb
FS	3333955	SG1-MW05-151001	GW	CY	10/06/2015 05:40	100515M537a.mdb
LFSMM	3333956	SG1-MW05-151001	GW	CY	10/06/2015 06:11	100515M537a.mdb
LFSMDM	3333957	SG1-MW05-151001	GW	CY	10/06/2015 06:42	100515M537a.mdb
CCM	3334079		OS	CY	10/06/2015 07:13	100515M537a.mdb
FS	3333959	SG1-MW04-151001	GW	CY	10/06/2015 08:15	100515M537a.mdb
FS	3333960	SG1-DS01-151001	GW	CY	10/06/2015 08:46	100515M537a.mdb
FS	3333961	SG1-MW01-151001	GW	CY	10/06/2015 09:17	100515M537a.mdb
FS	3333962	SG1-MW01S-151001	GW	CY	10/06/2015 09:48	100515M537a.mdb
FS	3333963	SG1-RB01-151001	GW	CY	10/06/2015 10:19	100515M537a.mdb
FS	3333964	SG1-RB01-150930	GW	CY	10/06/2015 10:50	100515M537a.mdb
FS	3333965	SG1-FB01-151001	GW	CY	10/06/2015 11:21	100515M537a.mdb
FS	3333958	SG1-MW03-151001	GW	CY	10/06/2015 11:52	100515M537a.mdb
FS	3333954	SG1-MW02S-151001	GW	CY	10/06/2015 12:23	100515M537a.mdb
FS	3333955	SG1-MW05-151001	GW	CY	10/06/2015 12:54	100515M537a.mdb
CCH	3334080		OS	CY	10/06/2015 13:24	100515M537a.mdb
FS	3333959	SG1-MW04-151001	GW	CY	10/06/2015 13:55	100515M537a.mdb
FS	3333960	SG1-DS01-151001	GW	CY	10/06/2015 14:26	100515M537a.mdb
CCM	3335056		OS	CY	10/06/2015 14:57	100515M537a.mdb

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	IS-PFOA-13C2	537	N/A	---		11800.40	11800.4	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/05/2015 20:24	3334078
CCL	IS-PFOS-13C4	537	N/A	---		6324.13	6324.13	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/05/2015 20:24	3334078
CCL	SS-PFDA-13C2	537	N/A	---		96.6529	100	ng/L	97	70 - 130	---	---	1.0	09/30/2015 09:59	10/05/2015 20:24	3334078
CCL	SS-PFHxA-13C2	537	N/A	---		49.4984	50.0	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/05/2015 20:24	3334078
CCL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		91.4673	90.0	ng/L	102	50 - 150	---	---	1.0	09/30/2015 09:59	10/05/2015 20:24	3334078
CCL	Perfluoroheptanoic acid (PFHpA)	537	10	---		9.8147	10.0	ng/L	98	50 - 150	---	---	1.0	09/30/2015 09:59	10/05/2015 20:24	3334078
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		31.0623	30.0	ng/L	104	50 - 150	---	---	1.0	09/30/2015 09:59	10/05/2015 20:24	3334078
CCL	Perfluorononanoic acid (PFNA)	537	20	---		20.0750	20.0	ng/L	100	50 - 150	---	---	1.0	09/30/2015 09:59	10/05/2015 20:24	3334078
CCL	Perfluorooctane sulfonate (PFOS)	537	40	---		40.1864	40.0	ng/L	100	50 - 150	---	---	1.0	09/30/2015 09:59	10/05/2015 20:24	3334078
CCL	Perfluorooctanoic acid (PFOA)	537	20	---		19.8868	20.0	ng/L	99	50 - 150	---	---	1.0	09/30/2015 09:59	10/05/2015 20:24	3334078
LRB	IS-PFOA-13C2	537	N/A	---		11788.90	11800.4	ng/L	100	70 - 140	---	---	1.0	10/05/2015 07:25	10/05/2015 21:56	3334062
LRB	IS-PFOS-13C4	537	N/A	---		6572.86	6324.13	ng/L	104	70 - 140	---	---	1.0	10/05/2015 07:25	10/05/2015 21:56	3334062
LRB	SS-PFDA-13C2	537	N/A	---		94.9724	100	ng/L	95	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 21:56	3334062
LRB	SS-PFHxA-13C2	537	N/A	---		46.2050	50.0	ng/L	92	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 21:56	3334062
LRB	Perfluorobutanesulfonic acid (PFBS)	537	90	---	<	90		ng/L	---	---	---	---	1.0	10/05/2015 07:25	10/05/2015 21:56	3334062
LRB	Perfluoroheptanoic acid (PFHpA)	537	10	---	<	10		ng/L	---	---	---	---	1.0	10/05/2015 07:25	10/05/2015 21:56	3334062
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	30	---	<	30		ng/L	---	---	---	---	1.0	10/05/2015 07:25	10/05/2015 21:56	3334062
LRB	Perfluorononanoic acid (PFNA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	10/05/2015 07:25	10/05/2015 21:56	3334062
LRB	Perfluorooctane sulfonate (PFOS)	537	40	---	<	40		ng/L	---	---	---	---	1.0	10/05/2015 07:25	10/05/2015 21:56	3334062
LRB	Perfluorooctanoic acid (PFOA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	10/05/2015 07:25	10/05/2015 21:56	3334062
FBL	IS-PFOA-13C2	537	N/A	---		12010.60	11800.4	ng/L	102	70 - 140	---	---	1.0	10/05/2015 07:25	10/05/2015 22:27	3334063
FBL	IS-PFOS-13C4	537	N/A	---		6528.02	6324.13	ng/L	103	70 - 140	---	---	1.0	10/05/2015 07:25	10/05/2015 22:27	3334063
FBL	SS-PFDA-13C2	537	N/A	---		94.3781	100	ng/L	94	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 22:27	3334063
FBL	SS-PFHxA-13C2	537	N/A	---		46.9166	50.0	ng/L	94	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 22:27	3334063
FBL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		90.5719	90.0	ng/L	101	50 - 150	---	---	1.0	10/05/2015 07:25	10/05/2015 22:27	3334063
FBL	Perfluoroheptanoic acid (PFHpA)	537	10	---		9.5630	10.0	ng/L	96	50 - 150	---	---	1.0	10/05/2015 07:25	10/05/2015 22:27	3334063
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		30.0285	30.0	ng/L	100	50 - 150	---	---	1.0	10/05/2015 07:25	10/05/2015 22:27	3334063
FBL	Perfluorononanoic acid (PFNA)	537	20	---		20.0097	20.0	ng/L	100	50 - 150	---	---	1.0	10/05/2015 07:25	10/05/2015 22:27	3334063
FBL	Perfluorooctane sulfonate (PFOS)	537	40	---		39.9255	40.0	ng/L	100	50 - 150	---	---	1.0	10/05/2015 07:25	10/05/2015 22:27	3334063
FBL	Perfluorooctanoic acid (PFOA)	537	20	---		20.2444	20.0	ng/L	101	50 - 150	---	---	1.0	10/05/2015 07:25	10/05/2015 22:27	3334063
FBH	IS-PFOA-13C2	537	N/A	---		11135.80	11800.4	ng/L	94	70 - 140	---	---	1.0	10/05/2015 07:25	10/05/2015 22:58	3334064
FBH	IS-PFOS-13C4	537	N/A	---		6101.50	6324.13	ng/L	96	70 - 140	---	---	1.0	10/05/2015 07:25	10/05/2015 22:58	3334064
FBH	SS-PFDA-13C2	537	N/A	---		97.9034	100	ng/L	98	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 22:58	3334064
FBH	SS-PFHxA-13C2	537	N/A	---		47.8429	50.0	ng/L	96	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 22:58	3334064
FBH	Perfluorobutanesulfonic acid (PFBS)	537	90	---		1073.8000	1125	ng/L	95	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 22:58	3334064
FBH	Perfluoroheptanoic acid (PFHpA)	537	10	---		115.5070	125	ng/L	92	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 22:58	3334064
FBH	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		363.3290	375	ng/L	97	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 22:58	3334064
FBH	Perfluorononanoic acid (PFNA)	537	20	---		230.7970	250	ng/L	92	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 22:58	3334064
FBH	Perfluorooctane sulfonate (PFOS)	537	40	---		473.6320	500	ng/L	95	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 22:58	3334064
FBH	Perfluorooctanoic acid (PFOA)	537	20	---		235.8990	250	ng/L	94	70 - 130	---	---	1.0	10/05/2015 07:25	10/05/2015 22:58	3334064

QC Summary Report (cont.)																
Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FTB	IS-PFOA-13C2	537	N/A	SG1-TB03-151001		11652.60	11800.4	ng/L	99	70 - 140	---	---	0.98	10/05/2015 07:25	10/06/2015 00:31	3333953
FTB	IS-PFOS-13C4	537	N/A	SG1-TB03-151001		6566.74	6324.13	ng/L	104	70 - 140	---	---	0.98	10/05/2015 07:25	10/06/2015 00:31	3333953
FTB	SS-PFDA-13C2	537	N/A	SG1-TB03-151001		94.2624	100	ng/L	96	70 - 130	---	---	0.98	10/05/2015 07:25	10/06/2015 00:31	3333953
FTB	SS-PFHxA-13C2	537	N/A	SG1-TB03-151001		46.6573	50.0	ng/L	95	70 - 130	---	---	0.98	10/05/2015 07:25	10/06/2015 00:31	3333953
FTB	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-TB03-151001	<	90		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 00:31	3333953
FTB	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-TB03-151001	<	10		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 00:31	3333953
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-TB03-151001	<	30		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 00:31	3333953
FTB	Perfluorononanoic acid (PFNA)	537	20	SG1-TB03-151001	<	20		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 00:31	3333953
FTB	Perfluorooctane sulfonate (PFOS)	537	40	SG1-TB03-151001	<	40		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 00:31	3333953
FTB	Perfluorooctanoic acid (PFOA)	537	20	SG1-TB03-151001	<	20		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 00:31	3333953
FS	IS-PFOA-13C2	537	N/A	SG1-MW02S-151001		10658.00	10537.5	ng/L	90	70 - 140	---	---	0.95	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	IS-PFOA-13C2	537	N/A	SG1-MW02S-151001		10658.00	10537.5	ng/L	90	70 - 140	---	---	9.5	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	IS-PFOS-13C4	537	N/A	SG1-MW02S-151001		6269.66	5827.03	ng/L	99	70 - 140	---	---	0.95	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	IS-PFOS-13C4	537	N/A	SG1-MW02S-151001		6269.66	5827.03	ng/L	99	70 - 140	---	---	9.5	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	SS-PFDA-13C2	537	N/A	SG1-MW02S-151001		96.0232	100	ng/L	101	70 - 130	---	---	0.95	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	SS-PFHxA-13C2	537	N/A	SG1-MW02S-151001		49.4648	50.0	ng/L	104	70 - 130	---	---	0.95	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW02S-151001	<	90		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW02S-151001		30		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW02S-151001	<	30		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW02S-151001	<	20		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW02S-151001	<	40		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 04:38	3333954
FS	IS-PFOA-13C2	537	N/A	SG1-MW03-151001		10069.10	10537.5	ng/L	85	70 - 140	---	---	0.98	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	IS-PFOA-13C2	537	N/A	SG1-MW03-151001		10069.10	10537.5	ng/L	85	70 - 140	---	---	19.6	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	IS-PFOS-13C4	537	N/A	SG1-MW03-151001		6232.74	5827.03	ng/L	102	70 - 140	---	---	0.98	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	IS-PFOS-13C4	537	N/A	SG1-MW03-151001		6232.74	5827.03	ng/L	102	70 - 140	---	---	19.6	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	SS-PFDA-13C2	537	N/A	SG1-MW03-151001		107.5650	100	ng/L	110	70 - 130	---	---	0.98	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	SS-PFHxA-13C2	537	N/A	SG1-MW03-151001		54.2950	50.0	ng/L	111	70 - 130	---	---	0.98	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW03-151001	<	90		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW03-151001		120		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW03-151001	<	30		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW03-151001	<	20		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW03-151001	<	40		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 05:09	3333958
FS	IS-PFOA-13C2	537	N/A	SG1-MW05-151001		10833.60	10537.5	ng/L	92	70 - 140	---	---	0.94	10/05/2015 07:25	10/06/2015 05:40	3333955
FS	IS-PFOA-13C2	537	N/A	SG1-MW05-151001		10833.60	10537.5	ng/L	92	70 - 140	---	---	9.4	10/05/2015 07:25	10/06/2015 05:40	3333955
FS	IS-PFOS-13C4	537	N/A	SG1-MW05-151001		6258.43	5827.03	ng/L	100	70 - 140	---	---	0.94	10/05/2015 07:25	10/06/2015 05:40	3333955
FS	IS-PFOS-13C4	537	N/A	SG1-MW05-151001		6258.43	5827.03	ng/L	100	70 - 140	---	---	9.4	10/05/2015 07:25	10/06/2015 05:40	3333955
FS	SS-PFDA-13C2	537	N/A	SG1-MW05-151001		95.6626	100	ng/L	102	70 - 130	---	---	0.94	10/05/2015 07:25	10/06/2015 05:40	3333955
FS	SS-PFHxA-13C2	537	N/A	SG1-MW05-151001		47.0676	50.0	ng/L	100	70 - 130	---	---	0.94	10/05/2015 07:25	10/06/2015 05:40	3333955
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW05-151001	<	90		ng/L	---	---	---	---	0.94	10/05/2015 07:25	10/06/2015 05:40	3333955
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW05-151001		10		ng/L	---	---	---	---	0.94	10/05/2015 07:25	10/06/2015 05:40	3333955
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW05-151001	<	30		ng/L	---	---	---	---	0.94	10/05/2015 07:25	10/06/2015 05:40	3333955

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW05-151001	<	20		ng/L	---	---	---	---	0.94	10/05/2015 07:25	10/06/2015 05:40	3333955
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW05-151001	<	40		ng/L	---	---	---	---	0.94	10/05/2015 07:25	10/06/2015 05:40	3333955
LFSMM	IS-PFOA-13C2	537	N/A	SG1-MW05-151001		10613.70	11800.4	ng/L	90	70 - 140	---	---	1.0	10/05/2015 07:25	10/06/2015 06:11	3333956
LFSMM	IS-PFOS-13C4	537	N/A	SG1-MW05-151001		6046.24	6324.13	ng/L	96	70 - 140	---	---	1.0	10/05/2015 07:25	10/06/2015 06:11	3333956
LFSMM	SS-PFDA-13C2	537	N/A	SG1-MW05-151001		99.5265	100	ng/L	100	70 - 130	---	---	1.0	10/05/2015 07:25	10/06/2015 06:11	3333956
LFSMM	SS-PFHxA-13C2	537	N/A	SG1-MW05-151001		50.3942	50.0	ng/L	101	70 - 130	---	---	1.0	10/05/2015 07:25	10/06/2015 06:11	3333956
LFSMM	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW05-151001		634.0240	675	ng/L	94	70 - 130	---	---	1.0	10/05/2015 07:25	10/06/2015 06:11	3333956
LFSMM	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW05-151001		85.0425	87.8667	ng/L	96	70 - 130	---	---	1.0	10/05/2015 07:25	10/06/2015 06:11	3333956
LFSMM	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW05-151001		208.5660	225	ng/L	93	70 - 130	---	---	1.0	10/05/2015 07:25	10/06/2015 06:11	3333956
LFSMM	Perfluorononanoic acid (PFNA)	537	20	SG1-MW05-151001		146.5260	150	ng/L	98	70 - 130	---	---	1.0	10/05/2015 07:25	10/06/2015 06:11	3333956
LFSMM	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW05-151001		274.0950	300	ng/L	91	70 - 130	---	---	1.0	10/05/2015 07:25	10/06/2015 06:11	3333956
LFSMDM	IS-PFOA-13C2	537	N/A	SG1-MW05-151001		10513.10	11800.4	ng/L	89	70 - 140	---	---	1.0	10/05/2015 07:25	10/06/2015 06:42	3333957
LFSMDM	IS-PFOS-13C4	537	N/A	SG1-MW05-151001		6069.87	6324.13	ng/L	96	70 - 140	---	---	1.0	10/05/2015 07:25	10/06/2015 06:42	3333957
LFSMDM	SS-PFDA-13C2	537	N/A	SG1-MW05-151001		103.2360	100	ng/L	103	70 - 130	---	---	1.0	10/05/2015 07:25	10/06/2015 06:42	3333957
LFSMDM	SS-PFHxA-13C2	537	N/A	SG1-MW05-151001		51.0069	50.0	ng/L	102	70 - 130	---	---	1.0	10/05/2015 07:25	10/06/2015 06:42	3333957
LFSMDM	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW05-151001		667.6460	675	ng/L	99	70 - 130	5.2	---	1.0	10/05/2015 07:25	10/06/2015 06:42	3333957
LFSMDM	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW05-151001		89.3227	87.8667	ng/L	102	70 - 130	4.9	---	1.0	10/05/2015 07:25	10/06/2015 06:42	3333957
LFSMDM	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW05-151001		220.3660	225	ng/L	98	70 - 130	5.5	---	1.0	10/05/2015 07:25	10/06/2015 06:42	3333957
LFSMDM	Perfluorononanoic acid (PFNA)	537	20	SG1-MW05-151001		154.4270	150	ng/L	103	70 - 130	5.3	---	1.0	10/05/2015 07:25	10/06/2015 06:42	3333957
LFSMDM	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW05-151001		290.4310	300	ng/L	97	70 - 130	5.8	---	1.0	10/05/2015 07:25	10/06/2015 06:42	3333957
CCM	IS-PFOA-13C2	537	N/A	---		10537.50	10537.5	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/06/2015 07:13	3334079
CCM	IS-PFOS-13C4	537	N/A	---		5827.03	5827.03	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/06/2015 07:13	3334079
CCM	SS-PFDA-13C2	537	N/A	---		101.7620	100	ng/L	102	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 07:13	3334079
CCM	SS-PFHxA-13C2	537	N/A	---		48.6432	50.0	ng/L	97	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 07:13	3334079
CCM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		671.9200	675	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 07:13	3334079
CCM	Perfluoroheptanoic acid (PFHpA)	537	10	---		74.8401	75.0	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 07:13	3334079
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		218.7260	225	ng/L	97	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 07:13	3334079
CCM	Perfluorononanoic acid (PFNA)	537	20	---		148.8750	150	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 07:13	3334079
CCM	Perfluorooctane sulfonate (PFOS)	537	40	---		292.7440	300	ng/L	98	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 07:13	3334079
CCM	Perfluorooctanoic acid (PFOA)	537	20	---		145.8350	150	ng/L	97	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 07:13	3334079
FS	IS-PFOA-13C2	537	N/A	SG1-MW04-151001		10413.40	10537.5	ng/L	99	70 - 140	---	---	0.97	10/05/2015 07:25	10/06/2015 08:15	3333959
FS	IS-PFOA-13C2	537	N/A	SG1-MW04-151001		10413.40	10537.5	ng/L	99	70 - 140	---	---	9.7	10/05/2015 07:25	10/06/2015 08:15	3333959
FS	IS-PFOS-13C4	537	N/A	SG1-MW04-151001		6224.98	5921.9	ng/L	107	70 - 140	---	---	0.97	10/05/2015 07:25	10/06/2015 08:15	3333959
FS	IS-PFOS-13C4	537	N/A	SG1-MW04-151001		6224.98	5921.9	ng/L	107	70 - 140	---	---	9.7	10/05/2015 07:25	10/06/2015 08:15	3333959
FS	SS-PFDA-13C2	537	N/A	SG1-MW04-151001		99.1457	100	ng/L	102	70 - 130	---	---	0.97	10/05/2015 07:25	10/06/2015 08:15	3333959
FS	SS-PFHxA-13C2	537	N/A	SG1-MW04-151001		49.9328	50.0	ng/L	103	70 - 130	---	---	0.97	10/05/2015 07:25	10/06/2015 08:15	3333959
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW04-151001	<	90		ng/L	---	---	---	---	0.97	10/05/2015 07:25	10/06/2015 08:15	3333959
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW04-151001		40		ng/L	---	---	---	---	0.97	10/05/2015 07:25	10/06/2015 08:15	3333959
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW04-151001	<	30		ng/L	---	---	---	---	0.97	10/05/2015 07:25	10/06/2015 08:15	3333959
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW04-151001	<	20		ng/L	---	---	---	---	0.97	10/05/2015 07:25	10/06/2015 08:15	3333959
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW04-151001	<	40		ng/L	---	---	---	---	0.97	10/05/2015 07:25	10/06/2015 08:15	3333959

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	IS-PFOA-13C2	537	N/A	SG1-DS01-151001		10597.90	10537.5	ng/L	101	70 - 140	---	---	0.98	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	IS-PFOA-13C2	537	N/A	SG1-DS01-151001		10597.90	10537.5	ng/L	101	70 - 140	---	---	9.8	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	IS-PFOS-13C4	537	N/A	SG1-DS01-151001		6409.52	5921.9	ng/L	108	70 - 140	---	---	0.98	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	IS-PFOS-13C4	537	N/A	SG1-DS01-151001		6409.52	5921.9	ng/L	108	70 - 140	---	---	9.8	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	SS-PFDA-13C2	537	N/A	SG1-DS01-151001		100.5800	100	ng/L	103	70 - 130	---	---	0.98	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	SS-PFHxA-13C2	537	N/A	SG1-DS01-151001		51.4256	50.0	ng/L	105	70 - 130	---	---	0.98	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-DS01-151001	<	90		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-DS01-151001		40		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-DS01-151001	<	30		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-DS01-151001	<	20		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-DS01-151001	<	40		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 08:46	3333960
FS	IS-PFOA-13C2	537	N/A	SG1-MW01-151001		12100.70	10537.5	ng/L	115	70 - 140	---	---	1.02	10/05/2015 07:25	10/06/2015 09:17	3333961
FS	IS-PFOS-13C4	537	N/A	SG1-MW01-151001		6528.03	5827.03	ng/L	112	70 - 140	---	---	1.02	10/05/2015 07:25	10/06/2015 09:17	3333961
FS	SS-PFDA-13C2	537	N/A	SG1-MW01-151001		97.1533	100	ng/L	95	70 - 130	---	---	1.02	10/05/2015 07:25	10/06/2015 09:17	3333961
FS	SS-PFHxA-13C2	537	N/A	SG1-MW01-151001		50.5522	50.0	ng/L	99	70 - 130	---	---	1.02	10/05/2015 07:25	10/06/2015 09:17	3333961
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW01-151001	<	90		ng/L	---	---	---	---	1.02	10/05/2015 07:25	10/06/2015 09:17	3333961
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW01-151001	<	10		ng/L	---	---	---	---	1.02	10/05/2015 07:25	10/06/2015 09:17	3333961
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW01-151001	<	30		ng/L	---	---	---	---	1.02	10/05/2015 07:25	10/06/2015 09:17	3333961
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW01-151001	<	20		ng/L	---	---	---	---	1.02	10/05/2015 07:25	10/06/2015 09:17	3333961
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW01-151001	<	40		ng/L	---	---	---	---	1.02	10/05/2015 07:25	10/06/2015 09:17	3333961
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW01-151001	<	20		ng/L	---	---	---	---	1.02	10/05/2015 07:25	10/06/2015 09:17	3333961
FS	IS-PFOA-13C2	537	N/A	SG1-MW01S-151001		11341.90	10537.5	ng/L	108	70 - 140	---	---	1.01	10/05/2015 07:25	10/06/2015 09:48	3333962
FS	IS-PFOS-13C4	537	N/A	SG1-MW01S-151001		6551.94	5827.03	ng/L	112	70 - 140	---	---	1.01	10/05/2015 07:25	10/06/2015 09:48	3333962
FS	SS-PFDA-13C2	537	N/A	SG1-MW01S-151001		97.7437	100	ng/L	97	70 - 130	---	---	1.01	10/05/2015 07:25	10/06/2015 09:48	3333962
FS	SS-PFHxA-13C2	537	N/A	SG1-MW01S-151001		48.8399	50.0	ng/L	97	70 - 130	---	---	1.01	10/05/2015 07:25	10/06/2015 09:48	3333962
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-MW01S-151001	<	90		ng/L	---	---	---	---	1.01	10/05/2015 07:25	10/06/2015 09:48	3333962
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-MW01S-151001		60		ng/L	---	---	---	---	1.01	10/05/2015 07:25	10/06/2015 09:48	3333962
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-MW01S-151001	<	30		ng/L	---	---	---	---	1.01	10/05/2015 07:25	10/06/2015 09:48	3333962
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-MW01S-151001	<	20		ng/L	---	---	---	---	1.01	10/05/2015 07:25	10/06/2015 09:48	3333962
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-MW01S-151001	<	40		ng/L	---	---	---	---	1.01	10/05/2015 07:25	10/06/2015 09:48	3333962
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW01S-151001		60		ng/L	---	---	---	---	1.01	10/05/2015 07:25	10/06/2015 09:48	3333962
FS	IS-PFOA-13C2	537	N/A	SG1-RB01-151001		11227.70	10537.5	ng/L	107	70 - 140	---	---	0.98	10/05/2015 07:25	10/06/2015 10:19	3333963
FS	IS-PFOS-13C4	537	N/A	SG1-RB01-151001		6255.64	5827.03	ng/L	107	70 - 140	---	---	0.98	10/05/2015 07:25	10/06/2015 10:19	3333963
FS	SS-PFDA-13C2	537	N/A	SG1-RB01-151001		93.3658	100	ng/L	95	70 - 130	---	---	0.98	10/05/2015 07:25	10/06/2015 10:19	3333963
FS	SS-PFHxA-13C2	537	N/A	SG1-RB01-151001		46.1663	50.0	ng/L	94	70 - 130	---	---	0.98	10/05/2015 07:25	10/06/2015 10:19	3333963
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB01-151001	<	90		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 10:19	3333963
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB01-151001	<	10		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 10:19	3333963
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB01-151001	<	30		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 10:19	3333963
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB01-151001	<	20		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 10:19	3333963
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB01-151001	<	40		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 10:19	3333963
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB01-151001	<	20		ng/L	---	---	---	---	0.98	10/05/2015 07:25	10/06/2015 10:19	3333963

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	IS-PFOA-13C2	537	N/A	SG1-RB01-150930		11166.40	10537.5	ng/L	106	70 - 140	---	---	0.95	10/05/2015 07:25	10/06/2015 10:50	3333964
FS	IS-PFOS-13C4	537	N/A	SG1-RB01-150930		6192.94	5827.03	ng/L	106	70 - 140	---	---	0.95	10/05/2015 07:25	10/06/2015 10:50	3333964
FS	SS-PFDA-13C2	537	N/A	SG1-RB01-150930		92.0670	100	ng/L	97	70 - 130	---	---	0.95	10/05/2015 07:25	10/06/2015 10:50	3333964
FS	SS-PFHxA-13C2	537	N/A	SG1-RB01-150930		44.0563	50.0	ng/L	93	70 - 130	---	---	0.95	10/05/2015 07:25	10/06/2015 10:50	3333964
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB01-150930	<	90		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 10:50	3333964
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB01-150930	<	10		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 10:50	3333964
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB01-150930	<	30		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 10:50	3333964
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB01-150930	<	20		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 10:50	3333964
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB01-150930	<	40		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 10:50	3333964
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB01-150930	<	20		ng/L	---	---	---	---	0.95	10/05/2015 07:25	10/06/2015 10:50	3333964
FS	IS-PFOA-13C2	537	N/A	SG1-FB01-151001		11040.50	10537.5	ng/L	105	70 - 140	---	---	0.91	10/05/2015 07:25	10/06/2015 11:21	3333965
FS	IS-PFOS-13C4	537	N/A	SG1-FB01-151001		6109.93	5827.03	ng/L	105	70 - 140	---	---	0.91	10/05/2015 07:25	10/06/2015 11:21	3333965
FS	SS-PFDA-13C2	537	N/A	SG1-FB01-151001		86.8713	100	ng/L	95	70 - 130	---	---	0.91	10/05/2015 07:25	10/06/2015 11:21	3333965
FS	SS-PFHxA-13C2	537	N/A	SG1-FB01-151001		42.9741	50.0	ng/L	94	70 - 130	---	---	0.91	10/05/2015 07:25	10/06/2015 11:21	3333965
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-FB01-151001	<	90		ng/L	---	---	---	---	0.91	10/05/2015 07:25	10/06/2015 11:21	3333965
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-FB01-151001	<	10		ng/L	---	---	---	---	0.91	10/05/2015 07:25	10/06/2015 11:21	3333965
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-FB01-151001	<	30		ng/L	---	---	---	---	0.91	10/05/2015 07:25	10/06/2015 11:21	3333965
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-FB01-151001	<	20		ng/L	---	---	---	---	0.91	10/05/2015 07:25	10/06/2015 11:21	3333965
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-FB01-151001	<	40		ng/L	---	---	---	---	0.91	10/05/2015 07:25	10/06/2015 11:21	3333965
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-FB01-151001	<	20		ng/L	---	---	---	---	0.91	10/05/2015 07:25	10/06/2015 11:21	3333965
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW03-151001		4300		ng/L	---	---	---	---	19.6	10/05/2015 07:25	10/06/2015 11:52	3333958
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW02S-151001		750		ng/L	---	---	---	---	9.5	10/05/2015 07:25	10/06/2015 12:23	3333954
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW05-151001		570		ng/L	---	---	---	---	9.4	10/05/2015 07:25	10/06/2015 12:54	3333955
CCH	IS-PFOA-13C2	537	N/A	---		10543.60	10543.6	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/06/2015 13:24	3334080
CCH	IS-PFOS-13C4	537	N/A	---		5921.90	5921.9	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/06/2015 13:24	3334080
CCH	SS-PFDA-13C2	537	N/A	---		102.1290	100	ng/L	102	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 13:24	3334080
CCH	SS-PFHxA-13C2	537	N/A	---		51.0063	50.0	ng/L	102	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 13:24	3334080
CCH	Perfluorobutanesulfonic acid (PFBS)	537	90	---		1109.2600	1125	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 13:24	3334080
CCH	Perfluoroheptanoic acid (PFHpA)	537	10	---		123.1860	125	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 13:24	3334080
CCH	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		368.3800	375	ng/L	98	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 13:24	3334080
CCH	Perfluorononanoic acid (PFNA)	537	20	---		251.5370	250	ng/L	101	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 13:24	3334080
CCH	Perfluorooctane sulfonate (PFOS)	537	40	---		499.6820	500	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 13:24	3334080
CCH	Perfluorooctanoic acid (PFOA)	537	20	---		246.2870	250	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 13:24	3334080
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-MW04-151001		1400		ng/L	---	---	---	---	9.7	10/05/2015 07:25	10/06/2015 13:55	3333959
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-DS01-151001		1400		ng/L	---	---	---	---	9.8	10/05/2015 07:25	10/06/2015 14:26	3333960
CCM	IS-PFOA-13C2	537	N/A	---		10570.00	10570	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/06/2015 14:57	3335056
CCM	IS-PFOS-13C4	537	N/A	---		5882.67	5882.67	ng/L	100	70 - 140	---	---	1.0	09/30/2015 09:59	10/06/2015 14:57	3335056
CCM	SS-PFDA-13C2	537	N/A	---		102.8950	100	ng/L	103	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 14:57	3335056
CCM	SS-PFHxA-13C2	537	N/A	---		49.5403	50.0	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 14:57	3335056
CCM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		672.3070	675	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 14:57	3335056
CCM	Perfluoroheptanoic acid (PFHpA)	537	10	---		73.8815	75.0	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 14:57	3335056

QC Summary Report (cont.)																	
Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		222.6320	225	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 14:57	3335056
CCM	Perfluorononanoic acid (PFNA)	537	20	---		151.4210	150	ng/L	101	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 14:57	3335056
CCM	Perfluorooctane sulfonate (PFOS)	537	40	---		300.8010	300	ng/L	100	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 14:57	3335056
CCM	Perfluorooctanoic acid (PFOA)	537	20	---		148.3810	150	ng/L	99	70 - 130	---	---	1.0	09/30/2015 09:59	10/06/2015 14:57	3335056

Sample Type Key

Type (Abbr.)	Sample Type
CCH	Continuing Calibration High
CCL	Continuing Calibration Low
CCM	Continuing Calibration Mid
FS	Field Sample
FTB	Field Trip Blank
FBH	Fortified Blank High
FBL	Fortified Blank Low
LFSMDM	LFSM Duplicate Mid
LFSMM	LFSM Mid
LRB	Laboratory Reagent Blank

Type (Abbr.)	Sample Type

END OF REPORT

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LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN000352015-1
Arkansas	IN035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	IN200001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00241
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-14-7
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA150003	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	00127
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies

Eurofins Eaton Analytical

110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client:	Ramboll Environ	Report:	351818
Attn:	Jason Wilkinson 3 Carlisle Road Suite 210 Westford, MA 01886	Priority:	Rush Written
		Status:	Final
		PWS ID:	Not Supplied
Copies to:	None		

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3348699	SG1-FB01-151027	537	10/27/15 14:45	Client	10/29/15 09:45
3348700	SG1-RB01-151027	537	10/27/15 14:50	Client	10/29/15 09:45
3348701	SG1-North Manhole-151027	537	10/27/15 15:30	Client	10/29/15 09:45
3348702	SG1-TP01-151027/FTB	537	10/27/15 14:00	EEA	10/29/15 09:45
3348703	SG1-Sump Pit -151027	537	10/27/15 14:20	Client	10/29/15 09:45
3348704	SG1-DS01-151027	537	10/27/15 15:45	Client	10/29/15 09:45
3348705	SG1-RB02-151027	537	10/27/15 18:00	Client	10/29/15 09:45

Report Summary

Note: In the Method 537 analysis, the SS recovery in sample SG1-North Manhole-151027 was low (58%) outside the acceptance limits of 70-130% recovery. Any result is potentially low biased.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Nathan Trowbridge at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

C.S. Manager | 11/03/2015

Authorized Signature | Title | Date

Client Name: Ramboll Environ
Report #: 351818

Sampling Point: SG1-FB01-151027 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/30/15 07:20	10/31/15 23:07	3348699
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	10/30/15 07:20	10/31/15 23:07	3348699
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/30/15 07:20	10/31/15 23:07	3348699
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/30/15 07:20	10/31/15 23:07	3348699
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/30/15 07:20	10/31/15 23:07	3348699
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	10/30/15 07:20	10/31/15 23:07	3348699

Sampling Point: SG1-RB01-151027 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/30/15 07:20	10/31/15 23:38	3348700
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	10/30/15 07:20	10/31/15 23:38	3348700
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/30/15 07:20	10/31/15 23:38	3348700
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/30/15 07:20	10/31/15 23:38	3348700
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/30/15 07:20	10/31/15 23:38	3348700
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	10/30/15 07:20	10/31/15 23:38	3348700

Sampling Point: SG1-North Manhole-151027 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/30/15 07:20	11/01/15 06:52	3348701
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**20**	ng/L	10/30/15 07:20	11/01/15 06:52	3348701
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/30/15 07:20	11/01/15 06:52	3348701
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/30/15 07:20	11/01/15 06:52	3348701
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/30/15 07:20	11/01/15 06:52	3348701
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**1000**	ng/L	10/30/15 07:20	11/01/15 06:21	3348701

Sampling Point: SG1-TP01-151027/FTB PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/30/15 07:20	10/31/15 22:36	3348702
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	10/30/15 07:20	10/31/15 22:36	3348702
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/30/15 07:20	10/31/15 22:36	3348702
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/30/15 07:20	10/31/15 22:36	3348702
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/30/15 07:20	10/31/15 22:36	3348702
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	10/30/15 07:20	10/31/15 22:36	3348702

Sampling Point: SG1-Sump Pit -151027 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/30/15 07:20	11/01/15 00:09	3348703
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**10**	ng/L	10/30/15 07:20	11/01/15 00:09	3348703
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/30/15 07:20	11/01/15 00:09	3348703
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/30/15 07:20	11/01/15 00:09	3348703
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/30/15 07:20	11/01/15 00:09	3348703
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**850**	ng/L	10/30/15 07:20	11/01/15 05:20	3348703

Sampling Point: SG1-DS01-151027 PWS ID: Not Supplied

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/30/15 07:20	11/01/15 00:40	3348704
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	**10**	ng/L	10/30/15 07:20	11/01/15 00:40	3348704
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/30/15 07:20	11/01/15 00:40	3348704
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/30/15 07:20	11/01/15 00:40	3348704
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/30/15 07:20	11/01/15 00:40	3348704
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	**470**	ng/L	10/30/15 07:20	11/01/15 05:50	3348704

Client Name: Ramboll Environ Report #: 351818

Sampling Point: SG1-RB02-151027 PWS ID: Not Supplied

EEA Methods

Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	90	< 90	ng/L	10/30/15 07:20	11/01/15 01:10	3348705
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	10	< 10	ng/L	10/30/15 07:20	11/01/15 01:10	3348705
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	30	< 30	ng/L	10/30/15 07:20	11/01/15 01:10	3348705
375-95-1	Perfluorononanoic acid (PFNA)	537	---	20	< 20	ng/L	10/30/15 07:20	11/01/15 01:10	3348705
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	40	< 40	ng/L	10/30/15 07:20	11/01/15 01:10	3348705
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	20	< 20	ng/L	10/30/15 07:20	11/01/15 01:10	3348705

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample al6iquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

eurofins

110 S. Hill Street
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F: 1.574.233.8207

Order # 285679
Batch # 351818

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CHAIN OF CUSTODY RECORD

Page 1 of 2

Shaded area for EEA use only

REPORT TO: JASON WILKINSON, RAMBOLL ENVIRON, 3 CARLISLE RD, SUITE 210, WESTFORD, MA 01886

BILL TO: SAME AS REPORT

SAMPLER (Signature): Jason Wilkinson

COMPLIANCE MONITORING: Yes / No: X

STATE (of sample origin): NY

PWS ID#:

POPULATION SERVED:

SOURCE WATER:

PROJECT NAME: SGPP Hoosick Falls

PO#:

	LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	Receiving Checks	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3348699	10/27/15	14:45		X	SG1-FB01-151027	537 / Alkyl Acids *	A		X	3	DW	RW
2	700	10/27/15	14:50		X	SG1-RB01-151027	537 / Alkyl Acids *	A		X	3	DW	RW
3	701	10/27/15	15:30		X	SG1-NORTHMANHOLE-151027	537 / Alkyl Acids * *	A		X	3	WW	RW
4	702	10/27/15	14:00		X	SG1-TB01-151027	537 / Alkyl Acids * FTB Bottle - KD	A		X	1	RW	RW
5							537 / Alkyl Acids						
6							537 / Alkyl Acids						
7							537 / Alkyl Acids						
8						* EPA Method 537 for the	537 / Alkyl Acids						
9						following PFCs: PFOA, PFBS, PFHpA	537 / Alkyl Acids						
10						PFHxS, PFNA, PFOS	537 / Alkyl Acids						
11							537 / Alkyl Acids						
12						- No other PFCs should be reported	537 / Alkyl Acids						
13						Field Blank	537 / Alkyl Acids						
14													

RUSH WRITTEN

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
Jason Wilkinson	10/28/15	12:00 PM			

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS: * Sample has a very poor matrix. KD

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY	DATE	TIME
			KDynes	10-29-15	0945

CONDITIONS UPON RECEIPT (check one): X Iced: Wet Blue ____ Ambient 2.8 °C Upon Receipt ____ N/A

PRESERVATIVE CODES:
1= HNO₃ 6=Ascorbic Acid
2= H_2SO_4 7=MCAA Buffer
3= HCl 8= NaOH/NaBH
4= $Na_2S_2O_3$ 9= NH_4Cl
5= Na_2SO_3 10=EDA

MATRIX CODES:
DW=Drinking Water
PW=Reagent Water
GW=Ground Water
EW=Exposure Water
SW=Surface Water
PW=Pool Water
WW=Waste Water

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written (15 working days) 0%		IV* = Immediate Verbal (3 working days)	100%
RV* = Rush Verbal (5 working days)	50%	IW* = Immediate Written (3 working days)	125%
RW* = Rush Written (5 working days)	75%	SP* = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

* Please call, expedited service not available for all testing

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges

06-LO-F0436 Issue 3.0 Effective Date 2014-05-01

Sample analysis will be provided according to the standard EEA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agreed to in writing by EEA.

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Order # 285679
Batch # ____

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CHAIN OF CUSTODY RECORD

Page 1 of 1 / 2 of 2

REPORT TO: JASON WILKINSON, RAMBOLL ENVIRON, 3 CARLISLE RD, WESTFORD, MA SUITE 210 01886

BILL TO: SAME AS REPORT

SAMPLER (Signature): Jason Wilkinson

COMPLIANCE MONITORING: Yes ☐ No X

STATE (of sample origin): NY

PWS ID#:

POPULATION SERVED:

SOURCE WATER:

PROJECT NAME: SGPP Hoosick Falls

PO#:

	LAB Number	COLLECTION DATE	COLLECTION TIME	AM	PM	SAMPLING SITE	TEST NAME	Receiving Checks	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3348703	10/27/15	14:20		X	SG1-SUMPPIT-151027	537 / Alkyl Acids *	A		X	3	WW	RW
2	704	10/27/15	15:45		X	SG1-DS01-151027	537 / Alkyl Acids *	A		X	3	WW	RW
3	705	10/27/15	18:00		X	SG1-RB02-151027	537 / Alkyl Acids *	A		X	3	DW	RW
4							537 / Alkyl Acids						
5							537 / Alkyl Acids						
6							537 / Alkyl Acids						
7							537 / Alkyl Acids						
8							537 / Alkyl Acids						
9						*EPA method 537 for the following	537 / Alkyl Acids						
10						PFCs: PFOA, PFBS, PFHpA, PFHxS,	537 / Alkyl Acids						
11						PFNA, PFOS	537 / Alkyl Acids						
12						- No other PFCs should be reported	537 / Alkyl Acids						
13						Field Blank	537 / Alkyl Acids						
14													

RUSH WRITTEN

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
Jason Wilkinson	10/28/15	12:00 PM			AM PM
RELINQUISHED BY: (Signature)	DATE	TIME AM PM	RECEIVED BY: (Signature)	DATE	TIME AM PM
RELINQUISHED BY: (Signature)	DATE	TIME AM PM	RECEIVED FOR LABORATORY BY: K Dupuis	10-29-15	0915 AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS
* Sample has a very poor matrix. KP
Limbo pending result from the first set of samples per NT. KP 10-29-2015

CONDITIONS UPON RECEIPT (check one):
X Iced (Wet/Blue) ____ Ambient 2.8 °C Upon Receipt ____ N/A

PRESERVATIVE CODES:
1= HNO_3 6=Ascorbic Acid
2= H_2SO_4 7=MCAA Buffer
3= HCl 8= $NaOH/NaBH_4$
4= $Na_2S_2O_3$ 9= NH_4Cl
5= Na_2SO_3 10=EDA

MATRIX CODES:
DW=Drinking Water
RW=Reagent Water
GW=Ground Water
EW=Exposure Water
SW=Surface Water
PW=Pool Water
WW=Waste Water

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%	IV* = Immediate Verbal: (3 working days)	100%
RV* = Rush Verbal: (5 working days)	50%	IW* = Immediate Written: (3 working days)	125%
RW* = Rush Written: (5 working days)	75%	SP* = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

* Please call, expedited service not available for all testing

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges

06-LO-F0436 Issue 3.0 Effective Date: 2014-05-01

Eurofins Eaton Analytical
Run Log

Run ID: **209357** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3349685		OS	CY	10/31/2015 18:59	103115M537a.mdb
LRB	3349667		RW	CY	10/31/2015 20:32	103115M537a.mdb
FBL	3349668		RW	CY	10/31/2015 21:03	103115M537a.mdb
FBH	3349669		RW	CY	10/31/2015 21:34	103115M537a.mdb
FTB	3348702	SG1-TP01-151027/FTB	RW	CY	10/31/2015 22:36	103115M537a.mdb
FS	3348699	SG1-FB01-151027	GW	CY	10/31/2015 23:07	103115M537a.mdb
FS	3348700	SG1-RB01-151027	GW	CY	10/31/2015 23:38	103115M537a.mdb
FS	3348703	SG1-Sump Pit -151027	GW	CY	11/01/2015 00:09	103115M537a.mdb
FS	3348704	SG1-DS01-151027	GW	CY	11/01/2015 00:40	103115M537a.mdb
FS	3348705	SG1-RB02-151027	GW	CY	11/01/2015 01:10	103115M537a.mdb
CCM	3349686		OS	CY	11/01/2015 04:18	103115M537a.mdb
FS	3348703	SG1-Sump Pit -151027	GW	CY	11/01/2015 05:20	103115M537a.mdb
FS	3348704	SG1-DS01-151027	GW	CY	11/01/2015 05:50	103115M537a.mdb
FS	3348701	SG1-North Manhole-151027	GW	CY	11/01/2015 06:52	103115M537a.mdb
CCH	3349687		OS	CY	11/01/2015 07:23	103115M537a.mdb

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	IS-PFOA-13C2	537	N/A	---		2878.88	2878.88	ng/L	100	70 - 140	---	---	1.0	10/26/2015 09:55	10/31/2015 18:59	3349685
CCL	IS-PFOS-13C4	537	N/A	---		1993.48	1993.48	ng/L	100	70 - 140	---	---	1.0	10/26/2015 09:55	10/31/2015 18:59	3349685
CCL	SS-PFDA-13C2	537	N/A	---		97.4636	100	ng/L	97	70 - 130	---	---	1.0	10/26/2015 09:55	10/31/2015 18:59	3349685
CCL	SS-PFHxA-13C2	537	N/A	---		49.7726	50.0	ng/L	100	70 - 130	---	---	1.0	10/26/2015 09:55	10/31/2015 18:59	3349685
CCL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		88.7115	90.0	ng/L	99	50 - 150	---	---	1.0	10/26/2015 09:55	10/31/2015 18:59	3349685
CCL	Perfluoroheptanoic acid (PFHpA)	537	10	---		10.2213	10.0	ng/L	102	50 - 150	---	---	1.0	10/26/2015 09:55	10/31/2015 18:59	3349685
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		29.2905	30.0	ng/L	98	50 - 150	---	---	1.0	10/26/2015 09:55	10/31/2015 18:59	3349685
CCL	Perfluorononanoic acid (PFNA)	537	20	---		21.5712	20.0	ng/L	108	50 - 150	---	---	1.0	10/26/2015 09:55	10/31/2015 18:59	3349685
CCL	Perfluorooctane sulfonate (PFOS)	537	40	---		39.8476	40.0	ng/L	100	50 - 150	---	---	1.0	10/26/2015 09:55	10/31/2015 18:59	3349685
CCL	Perfluorooctanoic acid (PFOA)	537	20	---		19.8062	20.0	ng/L	99	50 - 150	---	---	1.0	10/26/2015 09:55	10/31/2015 18:59	3349685
LRB	IS-PFOA-13C2	537	N/A	---		2783.67	2878.88	ng/L	97	70 - 140	---	---	1.0	10/30/2015 07:20	10/31/2015 20:32	3349667
LRB	IS-PFOS-13C4	537	N/A	---		1979.71	1993.48	ng/L	99	70 - 140	---	---	1.0	10/30/2015 07:20	10/31/2015 20:32	3349667
LRB	SS-PFDA-13C2	537	N/A	---		96.4302	100	ng/L	96	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 20:32	3349667
LRB	SS-PFHxA-13C2	537	N/A	---		50.0773	50.0	ng/L	100	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 20:32	3349667
LRB	Perfluorobutanesulfonic acid (PFBS)	537	90	---	<	90		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 20:32	3349667
LRB	Perfluoroheptanoic acid (PFHpA)	537	10	---	<	10		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 20:32	3349667
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	30	---	<	30		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 20:32	3349667
LRB	Perfluorononanoic acid (PFNA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 20:32	3349667
LRB	Perfluorooctane sulfonate (PFOS)	537	40	---	<	40		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 20:32	3349667
LRB	Perfluorooctanoic acid (PFOA)	537	20	---	<	20		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 20:32	3349667
FBL	IS-PFOA-13C2	537	N/A	---		2847.51	2878.88	ng/L	99	70 - 140	---	---	1.0	10/30/2015 07:20	10/31/2015 21:03	3349668
FBL	IS-PFOS-13C4	537	N/A	---		2010.62	1993.48	ng/L	101	70 - 140	---	---	1.0	10/30/2015 07:20	10/31/2015 21:03	3349668
FBL	SS-PFDA-13C2	537	N/A	---		102.1850	100	ng/L	102	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 21:03	3349668
FBL	SS-PFHxA-13C2	537	N/A	---		50.3218	50.0	ng/L	101	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 21:03	3349668
FBL	Perfluorobutanesulfonic acid (PFBS)	537	90	---		88.6092	90.0	ng/L	98	50 - 150	---	---	1.0	10/30/2015 07:20	10/31/2015 21:03	3349668
FBL	Perfluoroheptanoic acid (PFHpA)	537	10	---		10.5579	10.0	ng/L	106	50 - 150	---	---	1.0	10/30/2015 07:20	10/31/2015 21:03	3349668
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		28.4623	30.0	ng/L	95	50 - 150	---	---	1.0	10/30/2015 07:20	10/31/2015 21:03	3349668
FBL	Perfluorononanoic acid (PFNA)	537	20	---		21.4138	20.0	ng/L	107	50 - 150	---	---	1.0	10/30/2015 07:20	10/31/2015 21:03	3349668
FBL	Perfluorooctane sulfonate (PFOS)	537	40	---		40.5209	40.0	ng/L	101	50 - 150	---	---	1.0	10/30/2015 07:20	10/31/2015 21:03	3349668
FBL	Perfluorooctanoic acid (PFOA)	537	20	---		19.9635	20.0	ng/L	100	50 - 150	---	---	1.0	10/30/2015 07:20	10/31/2015 21:03	3349668
FBH	IS-PFOA-13C2	537	N/A	---		2905.39	2878.88	ng/L	101	70 - 140	---	---	1.0	10/30/2015 07:20	10/31/2015 21:34	3349669
FBH	IS-PFOS-13C4	537	N/A	---		1965.85	1993.48	ng/L	99	70 - 140	---	---	1.0	10/30/2015 07:20	10/31/2015 21:34	3349669
FBH	SS-PFDA-13C2	537	N/A	---		102.8380	100	ng/L	103	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 21:34	3349669
FBH	SS-PFHxA-13C2	537	N/A	---		49.1113	50.0	ng/L	98	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 21:34	3349669
FBH	Perfluorobutanesulfonic acid (PFBS)	537	90	---		1056.7600	1125	ng/L	94	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 21:34	3349669
FBH	Perfluoroheptanoic acid (PFHpA)	537	10	---		124.7580	125	ng/L	100	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 21:34	3349669
FBH	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		358.1440	375	ng/L	96	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 21:34	3349669
FBH	Perfluorononanoic acid (PFNA)	537	20	---		243.7330	250	ng/L	97	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 21:34	3349669
FBH	Perfluorooctane sulfonate (PFOS)	537	40	---		478.9060	500	ng/L	96	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 21:34	3349669
FBH	Perfluorooctanoic acid (PFOA)	537	20	---		233.6850	250	ng/L	93	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 21:34	3349669

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FTB	IS-PFOA-13C2	537	N/A	SG1-TP01-151027/FTB		3018.28	2878.88	ng/L	105	70 - 140	---	---	0.99	10/30/2015 07:20	10/31/2015 22:36	3348702
FTB	IS-PFOS-13C4	537	N/A	SG1-TP01-151027/FTB		2118.90	1993.48	ng/L	106	70 - 140	---	---	0.99	10/30/2015 07:20	10/31/2015 22:36	3348702
FTB	SS-PFDA-13C2	537	N/A	SG1-TP01-151027/FTB		94.2769	100	ng/L	95	70 - 130	---	---	0.99	10/30/2015 07:20	10/31/2015 22:36	3348702
FTB	SS-PFHxA-13C2	537	N/A	SG1-TP01-151027/FTB		49.2332	50.0	ng/L	99	70 - 130	---	---	0.99	10/30/2015 07:20	10/31/2015 22:36	3348702
FTB	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-TP01-151027/FTB	<	90		ng/L	---	---	---	---	0.99	10/30/2015 07:20	10/31/2015 22:36	3348702
FTB	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-TP01-151027/FTB	<	10		ng/L	---	---	---	---	0.99	10/30/2015 07:20	10/31/2015 22:36	3348702
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-TP01-151027/FTB	<	30		ng/L	---	---	---	---	0.99	10/30/2015 07:20	10/31/2015 22:36	3348702
FTB	Perfluorononanoic acid (PFNA)	537	20	SG1-TP01-151027/FTB	<	20		ng/L	---	---	---	---	0.99	10/30/2015 07:20	10/31/2015 22:36	3348702
FTB	Perfluorooctane sulfonate (PFOS)	537	40	SG1-TP01-151027/FTB	<	40		ng/L	---	---	---	---	0.99	10/30/2015 07:20	10/31/2015 22:36	3348702
FTB	Perfluorooctanoic acid (PFOA)	537	20	SG1-TP01-151027/FTB	<	20		ng/L	---	---	---	---	0.99	10/30/2015 07:20	10/31/2015 22:36	3348702
FS	IS-PFOA-13C2	537	N/A	SG1-FB01-151027		2978.51	2878.88	ng/L	103	70 - 140	---	---	1.0	10/30/2015 07:20	10/31/2015 23:07	3348699
FS	IS-PFOS-13C4	537	N/A	SG1-FB01-151027		2106.11	1993.48	ng/L	106	70 - 140	---	---	1.0	10/30/2015 07:20	10/31/2015 23:07	3348699
FS	SS-PFDA-13C2	537	N/A	SG1-FB01-151027		94.0613	100	ng/L	94	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 23:07	3348699
FS	SS-PFHxA-13C2	537	N/A	SG1-FB01-151027		48.8766	50.0	ng/L	98	70 - 130	---	---	1.0	10/30/2015 07:20	10/31/2015 23:07	3348699
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-FB01-151027	<	90		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 23:07	3348699
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-FB01-151027	<	10		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 23:07	3348699
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-FB01-151027	<	30		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 23:07	3348699
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-FB01-151027	<	20		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 23:07	3348699
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-FB01-151027	<	40		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 23:07	3348699
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-FB01-151027	<	20		ng/L	---	---	---	---	1.0	10/30/2015 07:20	10/31/2015 23:07	3348699
FS	IS-PFOA-13C2	537	N/A	SG1-RB01-151027		3043.29	2878.88	ng/L	106	70 - 140	---	---	0.98	10/30/2015 07:20	10/31/2015 23:38	3348700
FS	IS-PFOS-13C4	537	N/A	SG1-RB01-151027		2097.91	1993.48	ng/L	105	70 - 140	---	---	0.98	10/30/2015 07:20	10/31/2015 23:38	3348700
FS	SS-PFDA-13C2	537	N/A	SG1-RB01-151027		95.1469	100	ng/L	97	70 - 130	---	---	0.98	10/30/2015 07:20	10/31/2015 23:38	3348700
FS	SS-PFHxA-13C2	537	N/A	SG1-RB01-151027		48.0039	50.0	ng/L	98	70 - 130	---	---	0.98	10/30/2015 07:20	10/31/2015 23:38	3348700
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB01-151027	<	90		ng/L	---	---	---	---	0.98	10/30/2015 07:20	10/31/2015 23:38	3348700
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB01-151027	<	10		ng/L	---	---	---	---	0.98	10/30/2015 07:20	10/31/2015 23:38	3348700
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB01-151027	<	30		ng/L	---	---	---	---	0.98	10/30/2015 07:20	10/31/2015 23:38	3348700
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB01-151027	<	20		ng/L	---	---	---	---	0.98	10/30/2015 07:20	10/31/2015 23:38	3348700
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB01-151027	<	40		ng/L	---	---	---	---	0.98	10/30/2015 07:20	10/31/2015 23:38	3348700
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB01-151027	<	20		ng/L	---	---	---	---	0.98	10/30/2015 07:20	10/31/2015 23:38	3348700
FS	IS-PFOA-13C2	537	N/A	SG1-Sump Pit -151027		2986.62	2878.88	ng/L	91	70 - 140	---	---	1.0	10/30/2015 07:20	11/01/2015 00:09	3348703
FS	IS-PFOA-13C2	537	N/A	SG1-Sump Pit -151027		2986.62	2878.88	ng/L	91	70 - 140	---	---	10	10/30/2015 07:20	11/01/2015 00:09	3348703
FS	IS-PFOS-13C4	537	N/A	SG1-Sump Pit -151027		2016.96	1993.48	ng/L	95	70 - 140	---	---	1.0	10/30/2015 07:20	11/01/2015 00:09	3348703
FS	IS-PFOS-13C4	537	N/A	SG1-Sump Pit -151027		2016.96	1993.48	ng/L	95	70 - 140	---	---	10	10/30/2015 07:20	11/01/2015 00:09	3348703
FS	SS-PFDA-13C2	537	N/A	SG1-Sump Pit -151027		91.9612	100	ng/L	92	70 - 130	---	---	1.0	10/30/2015 07:20	11/01/2015 00:09	3348703
FS	SS-PFHxA-13C2	537	N/A	SG1-Sump Pit -151027		49.3457	50.0	ng/L	99	70 - 130	---	---	1.0	10/30/2015 07:20	11/01/2015 00:09	3348703
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-Sump Pit -151027	<	90		ng/L	---	---	---	---	1.0	10/30/2015 07:20	11/01/2015 00:09	3348703
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-Sump Pit -151027		10		ng/L	---	---	---	---	1.0	10/30/2015 07:20	11/01/2015 00:09	3348703
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-Sump Pit -151027	<	30		ng/L	---	---	---	---	1.0	10/30/2015 07:20	11/01/2015 00:09	3348703
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-Sump Pit -151027	<	20		ng/L	---	---	---	---	1.0	10/30/2015 07:20	11/01/2015 00:09	3348703
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-Sump Pit -151027	<	40		ng/L	---	---	---	---	1.0	10/30/2015 07:20	11/01/2015 00:09	3348703

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	IS-PFOA-13C2	537	N/A	SG1-DS01-151027		3178.30	2878.88	ng/L	102	70 - 140	---	---	1.01	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	IS-PFOA-13C2	537	N/A	SG1-DS01-151027		3178.30	2878.88	ng/L	102	70 - 140	---	---	10.1	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	IS-PFOS-13C4	537	N/A	SG1-DS01-151027		2158.14	1993.48	ng/L	102	70 - 140	---	---	1.01	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	IS-PFOS-13C4	537	N/A	SG1-DS01-151027		2158.14	1993.48	ng/L	102	70 - 140	---	---	10.1	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	SS-PFDA-13C2	537	N/A	SG1-DS01-151027		100.0250	100	ng/L	99	70 - 130	---	---	1.01	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	SS-PFHxA-13C2	537	N/A	SG1-DS01-151027		50.1048	50.0	ng/L	99	70 - 130	---	---	1.01	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-DS01-151027	<	90		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-DS01-151027		10		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-DS01-151027	<	30		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-DS01-151027	<	20		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-DS01-151027	<	40		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 00:40	3348704
FS	IS-PFOA-13C2	537	N/A	SG1-RB02-151027		3213.00	2878.88	ng/L	112	70 - 140	---	---	1.01	10/30/2015 07:20	11/01/2015 01:10	3348705
FS	IS-PFOS-13C4	537	N/A	SG1-RB02-151027		2238.80	1993.48	ng/L	112	70 - 140	---	---	1.01	10/30/2015 07:20	11/01/2015 01:10	3348705
FS	SS-PFDA-13C2	537	N/A	SG1-RB02-151027		97.0013	100	ng/L	96	70 - 130	---	---	1.01	10/30/2015 07:20	11/01/2015 01:10	3348705
FS	SS-PFHxA-13C2	537	N/A	SG1-RB02-151027		48.3305	50.0	ng/L	96	70 - 130	---	---	1.01	10/30/2015 07:20	11/01/2015 01:10	3348705
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-RB02-151027	<	90		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 01:10	3348705
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-RB02-151027	<	10		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 01:10	3348705
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-RB02-151027	<	30		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 01:10	3348705
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-RB02-151027	<	20		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 01:10	3348705
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-RB02-151027	<	40		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 01:10	3348705
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-RB02-151027	<	20		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 01:10	3348705
CCM	IS-PFOA-13C2	537	N/A	---		3285.29	3285.29	ng/L	100	70 - 140	---	---	1.0	10/26/2015 09:55	11/01/2015 04:18	3349686
CCM	IS-PFOS-13C4	537	N/A	---		2112.29	2112.29	ng/L	100	70 - 140	---	---	1.0	10/26/2015 09:55	11/01/2015 04:18	3349686
CCM	SS-PFDA-13C2	537	N/A	---		97.9868	100	ng/L	98	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 04:18	3349686
CCM	SS-PFHxA-13C2	537	N/A	---		50.4448	50.0	ng/L	101	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 04:18	3349686
CCM	Perfluorobutanesulfonic acid (PFBS)	537	90	---		674.4950	675	ng/L	100	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 04:18	3349686
CCM	Perfluoroheptanoic acid (PFHpA)	537	10	---		77.9674	75.0	ng/L	104	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 04:18	3349686
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		217.9190	225	ng/L	97	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 04:18	3349686
CCM	Perfluorononanoic acid (PFNA)	537	20	---		155.6780	150	ng/L	104	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 04:18	3349686
CCM	Perfluorooctane sulfonate (PFOS)	537	40	---		303.8940	300	ng/L	101	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 04:18	3349686
CCM	Perfluorooctanoic acid (PFOA)	537	20	---		146.2130	150	ng/L	97	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 04:18	3349686
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-Sump Pit -151027		850		ng/L	---	---	---	---	10	10/30/2015 07:20	11/01/2015 05:20	3348703
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-DS01-151027		470		ng/L	---	---	---	---	10.1	10/30/2015 07:20	11/01/2015 05:50	3348704
FS	IS-PFOA-13C2	537	N/A	SG1-North Manhole-151027		3416.06	3285.29	ng/L	104	70 - 140	---	---	1.01	10/30/2015 07:20	11/01/2015 06:21	3348701
FS	IS-PFOA-13C2	537	N/A	SG1-North Manhole-151027		3416.06	3285.29	ng/L	104	70 - 140	---	---	10.1	10/30/2015 07:20	11/01/2015 06:21	3348701
FS	IS-PFOS-13C4	537	N/A	SG1-North Manhole-151027		2199.36	2112.29	ng/L	104	70 - 140	---	---	1.01	10/30/2015 07:20	11/01/2015 06:21	3348701
FS	IS-PFOS-13C4	537	N/A	SG1-North Manhole-151027		2199.36	2112.29	ng/L	104	70 - 140	---	---	10.1	10/30/2015 07:20	11/01/2015 06:21	3348701
FS	Perfluorooctanoic acid (PFOA)	537	20	SG1-North Manhole-151027		1000		ng/L	---	---	---	---	10.1	10/30/2015 07:20	11/01/2015 06:21	3348701
FS	SS-PFDA-13C2	537	N/A	SG1-North Manhole-151027		107.6520	100	ng/L	107	70 - 130	---	---	1.01	10/30/2015 07:20	11/01/2015 06:52	3348701
FS	SS-PFHxA-13C2	537	N/A	SG1-North Manhole-151027		29.1281	50.0	ng/L	**58**	70 - 130	---	---	1.01	10/30/2015 07:20	11/01/2015 06:52	3348701
FS	Perfluorobutanesulfonic acid (PFBS)	537	90	SG1-North Manhole-151027	<	90		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 06:52	3348701

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Perfluoroheptanoic acid (PFHpA)	537	10	SG1-North Manhole-151027		20		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 06:52	3348701
FS	Perfluorohexanesulfonic acid (PFHxS)	537	30	SG1-North Manhole-151027	<	30		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 06:52	3348701
FS	Perfluorononanoic acid (PFNA)	537	20	SG1-North Manhole-151027	<	20		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 06:52	3348701
FS	Perfluorooctane sulfonate (PFOS)	537	40	SG1-North Manhole-151027	<	40		ng/L	---	---	---	---	1.01	10/30/2015 07:20	11/01/2015 06:52	3348701
CCH	IS-PFOA-13C2	537	N/A	---		3877.96	3877.96	ng/L	100	70 - 140	---	---	1.0	10/26/2015 09:55	11/01/2015 07:23	3349687
CCH	IS-PFOS-13C4	537	N/A	---		2618.31	2618.31	ng/L	100	70 - 140	---	---	1.0	10/26/2015 09:55	11/01/2015 07:23	3349687
CCH	SS-PFDA-13C2	537	N/A	---		94.3381	100	ng/L	94	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 07:23	3349687
CCH	SS-PFHxA-13C2	537	N/A	---		50.0283	50.0	ng/L	100	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 07:23	3349687
CCH	Perfluorobutanesulfonic acid (PFBS)	537	90	---		1073.4900	1125	ng/L	95	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 07:23	3349687
CCH	Perfluoroheptanoic acid (PFHpA)	537	10	---		122.6270	125	ng/L	98	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 07:23	3349687
CCH	Perfluorohexanesulfonic acid (PFHxS)	537	30	---		361.6090	375	ng/L	96	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 07:23	3349687
CCH	Perfluorononanoic acid (PFNA)	537	20	---		238.6730	250	ng/L	95	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 07:23	3349687
CCH	Perfluorooctane sulfonate (PFOS)	537	40	---		475.3780	500	ng/L	95	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 07:23	3349687
CCH	Perfluorooctanoic acid (PFOA)	537	20	---		244.6290	250	ng/L	98	70 - 130	---	---	1.0	10/26/2015 09:55	11/01/2015 07:23	3349687

Sample Type Key

Type (Abbr.)	Sample Type	Type (Abbr.)	Sample Type
CCH	Continuing Calibration High		
CCL	Continuing Calibration Low		
CCM	Continuing Calibration Mid		
FS	Field Sample		
FTB	Field Trip Blank		
FBH	Fortified Blank High		
FBL	Fortified Blank Low		
LRB	Laboratory Reagent Blank		

END OF REPORT

Your Project #: S6PP-HOOSICK FALL-S
Your C.O.C. #: 532063-01-01

Attention:Jason Wilkinson

Ramboll Environ
3 Carlisle Rd.
Westford, MA
USA 01886

Report Date: 2015/10/07
Report #: R3712895
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B5J9607
Received: 2015/10/01, 14:05

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
PFOS and PFOA in water	2	2015/10/05	2015/10/05	CAM SOP-00894	EPA 537 m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Melissa DiGrazia, Project Manager - ATUT
Email: MDiGrazia@maxxam.ca
Phone# (905) 817-5700
==
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation is a NELAC accredited laboratory. Certificate # 04012. Use of the NELAC logo however does not insure that Maxxam is accredited for all of the methods indicated. This certificate shall not be reproduced except in full, without the written approval of Maxxam.

Total Cover Pages : 1

Maxxam Job #: B5J9607
Report Date: 2015/10/07

Ramboll Environ
Client Project #: S6PP-HOOSICK FALL-S
Sampler Initials: VT

RESULTS OF ANALYSES OF WATER

Maxxam ID		BBX430				BBX431			
Sampling Date		2015/09/30 13:10				2015/09/30 13:10			
COC Number		532063-01-01				532063-01-01			
	UNITS	SG1-MW02-150930	RDL	MDL	QC Batch	SG1-TB01-150930	RDL	MDL	QC Batch
Perfluorobutane Sulfonate (PFBS)	ug/L	<0.020	0.020	0.0047	4216610	<0.020	0.020	0.0047	4216610
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.39	0.020	0.0054	4216610	<0.020	0.020	0.0054	4216610
Perfluorohexane Sulfonate (PFHxS)	ug/L	<0.020	0.020	0.0054	4216610	<0.020	0.020	0.0054	4216610
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	16	0.80	0.18	4216651	<0.020	0.020	0.0044	4216610
Perfluorononanoic Acid (PFNA)	ug/L	<0.020	0.020	0.0063	4216610	<0.020	0.020	0.0063	4216610
Perfluorooctane Sulfonate (PFOS)	ug/L	<0.020	0.020	0.0037	4216610	<0.020	0.020	0.0037	4216610
Surrogate Recovery (%)									
13C4-Perfluorooctanesulfonate	%	94	N/A	N/A	4216610	101	N/A	N/A	4216610
13C4-Perfluorooctanoic acid	%	136 (1)	N/A	N/A	4216651	105	N/A	N/A	4216610

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

(1) Surrogate recovery was above the defined upper control limit (UCL). Laboratory spiked water resulted in satisfactory recovery of the surrogate. When considered together, these QC data suggest that matrix interferences may be biasing the data high. Because quantitation is performed using isotope dilution techniques, any apparent gains of the native compound that may occur during any of the sample preparation, extraction, cleanup or determinative steps will be mirrored by a similar gain of the labeled standard, and as such can be accounted for and corrected. Therefore, the quantification of this target compound is not affected by the high surrogate recovery.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

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A Bureau Veritas Group Company

Maxxam Job #: B5J9607
Report Date: 2015/10/07

Ramboll Environ
Client Project #: S6PP-HOOSICK FALL-S
Sampler Initials: VT

TEST SUMMARY

Maxxam ID: BBX430
Sample ID: SG1-MW02-150930
Matrix: Water

Collected: 2015/09/30
Shipped:
Received: 2015/10/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water	LCMS	4216610	2015/10/05	2015/10/05	Sin Chii Chia

Maxxam ID: BBX431
Sample ID: SG1-TB01-150930
Matrix: Water

Collected: 2015/09/30
Shipped:
Received: 2015/10/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water	LCMS	4216610	2015/10/05	2015/10/05	Sin Chii Chia

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Maxxam Job #: B5J9607
Report Date: 2015/10/07

Ramboll Environ
Client Project #: S6PP-HOOSICK FALL-S
Sampler Initials: VT

GENERAL COMMENTS

Revision reflects change to sample ID of BBX430-01

Sample BBX430-01 : Perfluorinated Compounds (PFCs): Due to high concentrations of the target analytes, sample required dilution. Detection limits were adjusted accordingly.

Sample BBX430, PFOS and PFOA in water: Test repeated.

Results relate only to the items tested.

Maxxam
A Bureau Veritas Group Company

Maxxam Job #: B5J9607
Report Date: 2015/10/07

Ramboll Environ
Client Project #: S6PP-HOOSICK FALL-S
Sampler Initials: VT

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4216610	SCH	Matrix Spike	13C4-Perfluorooctanesulfonate	2015/10/05		126	%	70 - 130
			13C4-Perfluorooctanoic acid	2015/10/05		119	%	70 - 130
			Perfluorobutane Sulfonate (PFBS)	2015/10/05		107	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2015/10/05		102	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2015/10/05		103	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2015/10/05		106	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2015/10/05		105	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2015/10/05		100	%	70 - 130
4216610	SCH	Spiked Blank	13C4-Perfluorooctanesulfonate	2015/10/05		106	%	70 - 130
			13C4-Perfluorooctanoic acid	2015/10/05		113	%	70 - 130
			Perfluorobutane Sulfonate (PFBS)	2015/10/05		101	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2015/10/05		106	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2015/10/05		101	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2015/10/05		105	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2015/10/05		104	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2015/10/05		107	%	70 - 130
4216610	SCH	Method Blank	13C4-Perfluorooctanesulfonate	2015/10/05		117	%	70 - 130
			13C4-Perfluorooctanoic acid	2015/10/05		120	%	70 - 130
			Perfluorobutane Sulfonate (PFBS)	2015/10/05	<0.020		ug/L	
			Perfluoroheptanoic Acid (PFHpA)	2015/10/05	<0.020		ug/L	
			Perfluorohexane Sulfonate (PFHxS)	2015/10/05	<0.020		ug/L	
			Perfluorononanoic Acid (PFNA)	2015/10/05	<0.020		ug/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2015/10/05	<0.020		ug/L	
			Perfluorooctane Sulfonate (PFOS)	2015/10/05	<0.020		ug/L	
4216610	SCH	RPD - Sample/Sample Dup	Perfluorobutane Sulfonate (PFBS)	2015/10/05	NC		%	30
			Perfluoroheptanoic Acid (PFHpA)	2015/10/05	NC		%	30
			Perfluorohexane Sulfonate (PFHxS)	2015/10/05	NC		%	30
			Perfluorononanoic Acid (PFNA)	2015/10/05	NC		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2015/10/05	NC		%	30
			Perfluorooctane Sulfonate (PFOS)	2015/10/05	NC		%	30
4216651	SCH	Matrix Spike	13C4-Perfluorooctanoic acid	2015/10/05		103	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2015/10/05		NC	%	70 - 130
4216651	SCH	Spiked Blank	13C4-Perfluorooctanoic acid	2015/10/05		106	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2015/10/05		102	%	70 - 130
4216651	SCH	Method Blank	13C4-Perfluorooctanoic acid	2015/10/05		103	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2015/10/05	<0.80		ug/L	

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Job #: B5J9607
Report Date: 2015/10/07

Ramboll Environ
Client Project #: S6PP-HOOSICK FALL-S
Sampler Initials: VT

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Adam Robinson, Technical Service

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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01-Oct-15 14:05
Melissa DiGrazia
B5J9607
ENV-910

Page of

Bottle Order #: 532063
COC #: C#532063-01-01
Project Manager: Melissa DiGrazia

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#29980 Ramboll Environ	Company Name:	Ramboll Environ	Quotation #:	
Attention:	Valerie Turner / Jason Wilkinson	Attention:	Jason Wilkinson	P.O. #:	
Address:	3 Carlisle Rd. Westford MA 01886	Address:	3 Carlisle Rd #210 Westford, MA 01886	Project:	
Tel:	(978) 449-0390 x	Tel:		Project Name:	SGPP-Hoosick Falls
Fax:		Fax:		Site #:	
Email:	vturner@environcorp.com	Email:	jwilkinson@environcorp.com	Sampled By:	VT

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): ☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Other ___

Special Instructions:

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC): Field Filtered (please circle): Metals / Hg / Cr VI; PFCs by 537 For the following PFCs: PFOA, PFBS, PFHpA, PFHxS, PFNA, PFOS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered	PFCs by 537	# of Bottles	Comments
1	300	SG1-MW020-150930	9-30-15	1310	GW		X	X2	
2	201	SG1-TB01-150930	09-30-15	—	—		X	1	
3									
4									
5									
6									
7									
8									
9									
10									

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ (call lab for #)

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Val (Ramboll Environ)	15/09/30	1515	Shipping			
			FATIMA SHAHID	2015/10/01	14:05	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
	4.2 / 3.8 / 3.9	Present	✓	
		Intact	✓	

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

V. Boring Logs and Well Construction Logs

C.T. MALE ASSOCIATES

SUBSURFACE EXPLORATION LOG

BORING NO.:	**MW-01S**		
ELEVATION:	**455.55**	**DATUM:**	**NAVD88**
LATITUDE:		**LONGITUDE:**	
START DATE:	**8/11/2015**	**FINISH DATE:**	**8/11/2015**
SHEET 1 OF 1			

PROJECT: SGPP CTM PROJECT NO.: 15.5133

LOCATION: Hoosick Falls, NY CTM OBSERVER: J.Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1						5'	Refer to MW-01 for soil classification	
5										
		2						5'		
10										
		3						5'		
15									±15.0'	
									Boring Terminated at ±15' bgs	
20										
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: Cascade Drilling

DRILL RIG TYPE: Mini Sonic

METHOD OF INVESTIGATION: 5' x 4" sample barrel.

GROUNDWATER LEVEL

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: Dippert

C.T. MALE ASSOCIATES

SUBSURFACE EXPLORATION LOG

BORING NO.:	MW-01		
ELEVATION:	455.77	DATUM:	NAVD88
LATITUDE:		LONGITUDE:	
START DATE:	8/10/2015	FINISH DATE:	8/12/2015
SHEET 1 OF 1			

PROJECT: SGPP — CTM PROJECT NO.: 15.5133

LOCATION: Hoosick Falls, NY — CTM OBSERVER: J.Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS 0/6	BLOWS 6/12	BLOWS 12/18	BLOWS 18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1						5'	Brown fine SAND and SILT, Some fine and medium Gravel, trace clay ±2.5'	moist
		2							Brown fine SAND, fine to coarse GRAVEL, Some medium Sand, little silt	
5										
		3						5'	grades to Gray and Brown at ±5' seam of fine and medium SAND, Some fine to coarse Gravel, little silt at ±6' ±7.0'	very moist to wet
		4								
10									Gray fine SAND and SILT, trace clay, interbedded with fine and medium SAND, fine to coarse GRAVEL (±1' layers) ±12.0'	very moist
		5						5'		
		6							Gray fine SAND and SILT, fine to coarse GRAVEL, little clay (TILL)	moist
15										
		7						5'		
		8								
20									COBBLE and BOULDER at ±19-21'	very moist
		9						5'		Set 6" casing and grout in place at ±20' bgs on 8/10/15. Continued drilling on 8/12/15.
		10								
25										
		11						5'	±27.0'	
		12							Black SLATE (Possible Bedrock)	Boring Terminated at ±30' bgs
30									±30.0'	

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: Cascade Drilling

DRILL RIG TYPE: Mini Sonic

METHOD OF INVESTIGATION: 5' x 8" sample barrel to 20',5' x 4" sample barrel to 30'.

GROUNDWATER LEVEL

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: Dippert

C.T. MALE ASSOCIATES

SUBSURFACE EXPLORATION LOG

BORING NO.:	MW-02S		
ELEVATION:	460.54	DATUM:	NAVD88
LATITUDE:		LONGITUDE:	
START DATE:	8/10/2015	FINISH DATE:	8/10/2015
SHEET 1 OF 1			

PROJECT: SGPP

CTM PROJECT NO.: 15.5133

LOCATION: Hoosick Falls, NY

CTM OBSERVER: J.Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1						5'	Refer to MW-02 for soil classification	
5		2						5'		
10		3						3'		
		4						2'		
15		5						4'		
									±19.0'	
20									Boring Terminated at ±19' bgs	
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: Cascade Drilling

DRILL RIG TYPE: Mini Sonic

METHOD OF INVESTIGATION: 5' x 4" sample barrel.

GROUNDWATER LEVEL

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: Dippert

C.T. MALE ASSOCIATES

SUBSURFACE EXPLORATION LOG

BORING NO.:	MW-02		
ELEVATION:	460.46	DATUM:	NAVD88
LATITUDE:		LONGITUDE:	
START DATE:	8/5/2015	FINISH DATE:	8/6/2015
SHEET 1 OF 2			

PROJECT: SGPP — CTM PROJECT NO.: 15.5133

LOCATION: Hoosick Falls, NY — CTM OBSERVER: J.Dippert

DEPTH (FT.)	SAMPLE TYPE	NO.	0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1						5'	Brown SILT, GRAVEL (angular), Some fine Sand	vegetation at surface moist to dry
		2								
5										
		3						2'	±7.0'	Refusal at ±7' bgs. Switched to core barrel.
		4						3'	BOULDER	
10									±10.0'	
									Dark Brown fine SAND and SILT, Some Gravel (sub-angular to angular)	very moist
		5						4'		
		6								Gravel layer at ±12-13' bgs (wet).
15									±15.0'	
		7						5'	Gray fine SAND and SILT, fine to coarse GRAVEL, trace clay (TILL)	moist
		8								
20										
		9						5'		
		10							±23.0'	
									Greenish Gray SILT, little fine sand, trace gravel	moist
25										
		11						5'		
		12							±28.0'	
									Brown SILT, Some fine to coarse Gravel, little fine sand, trace clay	moist
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: Cascade Drilling

DRILL RIG TYPE: Mini Sonic

METHOD OF INVESTIGATION: 5' x 4" sample barrel.

GROUNDWATER LEVEL

DATE	LEVEL	CASING	STABILIZATION TIME
8/5	20.5	26	10 min
6-Aug	20.5	26	15 hrs

SAMPLE CLASSIFICATION BY: Dippert

C.T. MALE ASSOCIATES

SUBSURFACE EXPLORATION LOG

BORING NO.: MW-02
ELEVATION: 460.46 **DATUM:** NAVD88
LATITUDE: **LONGITUDE:**
START DATE: 8/5/2015 **FINISH DATE:** 8/6/2015
SHEET 2 **OF** 2

PROJECT: SGPP CTM PROJECT NO.: 15.5133

LOCATION: Hoosick Falls, NY CTM OBSERVER: J.Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS 0/6	BLOWS 6/12	BLOWS 12/18	BLOWS 18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		13						4'	Brown SILT, fine to coarse GRAVEL, Some mottling with Gray fine Sand, trace clay ±34.0'	moist 4' sample due to barrel overfilling
		14								
35								5'	Gray and Brownish Gray fine SAND and SILT, fine to coarse GRAVEL (sub-rounded to rounded), trace orange brown fine and medium sand ±38.0'	±35-37' bgs - very moist
		15								
		16								
									WEATHERED ROCK, Brown fine SAND with laminated gray SILT ±40.0'	
40		17						5'		
									PULVERIZED ROCK ±42.0'	very moist
		18							Dark Brown fine to coarse SAND, fine to coarse GRAVEL, trace silt ±43.0'	wet
45		19						1'	WEATHERED ROCK, Some gray Silt ±45.0'	moist
									Boring Terminated at ±45' bgs	
50										
55										
60										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: Cascade Drilling

DRILL RIG TYPE: Mini Sonic

METHOD OF INVESTIGATION: 5' x 4" sample barrel.

GROUNDWATER LEVEL

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: Dippert

C.T. MALE ASSOCIATES

SUBSURFACE EXPLORATION LOG

BORING NO.: MW-03
ELEVATION: 436.69 **DATUM:** NAVD88
LATITUDE: **LONGITUDE:**
START DATE: 8/13/2015 **FINISH DATE:** 8/13/2015
SHEET 1 **OF** 1

PROJECT: SGPP CTM PROJECT NO.: 15.5133
LOCATION: Hoosick Falls, NY CTM OBSERVER: J.Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1						5'	Dark Brown SILT, fine and medium GRAVEL, trace organics ±0.5'	vegetation at surface; moist
		2							Brown SILT, Some fine Sand	
5										
		3						5'	±6.0'	
		4							Brown fine and medium SAND, Some fine and medium Gravel ±8.0'	very moist
10									Brown fine SAND, fine to coarse GRAVEL, Some Silt, little orange brown fine sand	
		5						5'	±12.0'	
		6							Brown fine SAND, fine to coarse GRAVEL, little medium sand, trace silt	wet
15									±15.0'	
		7						5'	Brown fine SAND and SILT, GRAVEL to COBBLE	
		8							grades to gray at ±17'	
									±19.0'	
20									WEATHERED ROCK, little gray silt and clay ±20.0'	moist
		Run 1						5'	Black SLATE (Possible Bedrock)	Run 1: recovery consisted of pulverized rock which appeared black coarse angular sand. Driller stated the interval drilled the same as 19-30'.
25										
		Run 2						5'		Run 2: recovery consisted of black slate disks with some coarse black angular sand at bottom of recovery.
30									Boring Terminated at ±30' bgs ±30.0'	

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: Cascade Drilling
DRILL RIG TYPE: Mini Sonic
METHOD OF INVESTIGATION: 5' x 4" sample barrel.

GROUNDWATER LEVEL

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: Dippert

C.T. MALE ASSOCIATES

SUBSURFACE EXPLORATION LOG

BORING NO.: MW-04
ELEVATION: 431.17 DATUM: NAVD88
LATITUDE: LONGITUDE:
START DATE: 8/5/2015 FINISH DATE: 8/5/2015
SHEET 1 OF 1

PROJECT: SGPP CTM PROJECT NO.: 15.5133
LOCATION: Hoosick Falls, NY CTM OBSERVER: J.Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1						2'	Dark Brown SILT, Some Organics, little clay ±0.5'	vegetation at surface
									Dark Brown fine SAND and SILT, fine to coarse	moist
		2						3'	GRAVEL, trace organics ±1.5'	
									Brown SILT, trace orange brown fine sand	very moist
5										
		3						5'		
									trace brown and gray mottling ±7.5'	
		4								
									Gray fine SAND, Some Silt, Some orange brown fine	
10									Sand Parting	
		5						2'	±11.0'	
									Orange Brown fine to coarse SAND, fine to	wet
		6							coarse GRAVEL (sub-rounded) ±12.0'	
									Gray fine SAND, Some Silt	
15									±15.0'	
		7						5'	Gray fine to coarse SAND	
									±17.0'	
		8							Gray fine to coarse SAND, fine to coarse GRAVEL	
20										
		9						5'		
		10								
25										
		11						1'	±26.0'	
		Run 1						4'	Black SLATE (Possible Bedrock)	Run 1: recovery consisted of black slate disks.
30									Boring Terminated at ±30' bgs ±30.0'	

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: Cascade Drilling
DRILL RIG TYPE: Mini Sonic
METHOD OF INVESTIGATION: 5' x 4" sample barrel.

GROUNDWATER LEVEL

DATE	LEVEL	CASING	STABILIZATION TIME
8/5	13.7	25	10 min

SAMPLE CLASSIFICATION BY: Dippert

C.T. MALE ASSOCIATES

SUBSURFACE EXPLORATION LOG

BORING NO.:	MW-05		
ELEVATION:	433.83	DATUM:	NAVD88
LATITUDE:		LONGITUDE:	
START DATE:	8/11/2015	FINISH DATE:	8/11/2015
SHEET 1 OF 1			

PROJECT: SGPP CTM PROJECT NO.: 15.5133

LOCATION: Hoosick Falls, NY CTM OBSERVER: J.Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1						5'	Brown SILT, Some fine Sand	vegetation at surface
										moist
		2								
5									±5.0'	
		3						5'	Brown fine and medium SAND, fine and medium GRAVEL	±6.0' very moist to wet ±6' bgs
									Grayish Brown fine SAND, Some Silt	±7.0' orange brown parting at ±7'
		4							Brown fine to coarse SAND, fine to coarse GRAVEL	±8.0' moist at ±7' bgs
									Brown fine SAND and SILT, Some fine and medium Gravel	±9.0' very moist to wet at ±8' bgs
10									Brown fine SAND, fine to coarse GRAVEL, little silt	
		5						5'	±11.0'	
									Gray fine SAND, Some fine to coarse Gravel, Some Silt	wet
		6								
										little weathered slate at ±14-14.5' bgs
15									±14.5'	
									Brown fine SAND, Some Silt ±15.0'	
		7						4'	Gray PULVARIZED ROCK ±16.5'	
									Gray and Brown Parting, fine SAND and SILT, Some Weathered Rock, Some fine to coarse Gravel ±17.0'	
		8								
20		9						1'	Brown fine to coarse GRAVEL, Some fine to coarse Sand ±19.0'	Saturated Gravel is angular to sub-angular and is similar to bedrock fragments
		10						3'	Gray and Brown Parting, fine SAND and SILT, Some Weathered Rock, Some fine to coarse Gravel ±21.0'	
		11						2'	Black SLATE (Possible Bedrock)	
25										
									±26.0'	
									Boring Terminated at ±26' bgs	
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: Cascade Drilling

DRILL RIG TYPE: Mini Sonic

METHOD OF INVESTIGATION: 5' x 4" sample barrel.

GROUNDWATER LEVEL

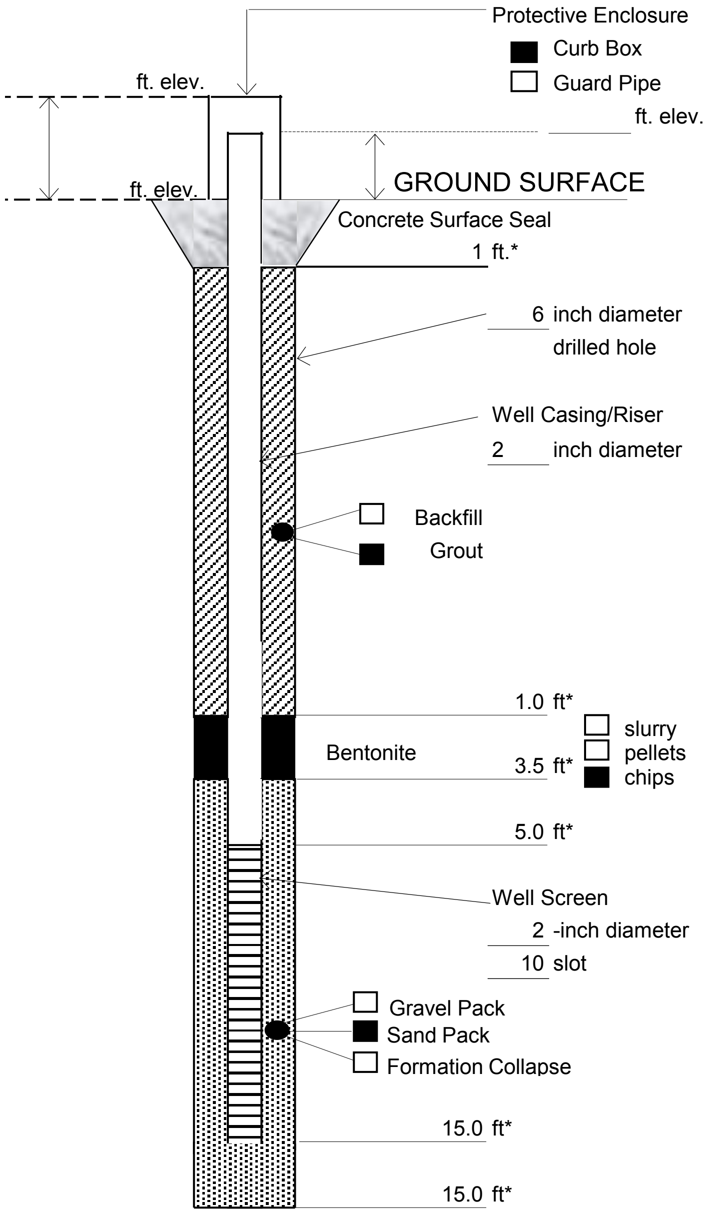
DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: Dippert

Well No. MW-01S

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: SGPP

Hoosick Falls

Project Number: 15.5133

Well No.: MW-01S Boring No.: MW-01S

Town/City: Hoosick Falls

County: Rensselaer State: New York

Installation Date(s): 8/11/2015

Drilling Contractor: Cascade Drilling

Drilling Method: Roto Sonic

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Jonathan Dippert

Materials Used:

3.75 Bags of Sand (50 lb. bags)
Sand Size: #0 Brand: FilPro
1/2 Bags of Bentonite (50 lb. bags)
Brand: Cetco Medium Chips
10 ft. of Schedule 40 PVC well screen
5 ft. of Schedule 40 PVC well riser
2 Bags of Cement/Concrete (60 lb. bags)
Brand: Quikrete

Grout Mixture:

____ Bags of Cement (____ lb. bags)
____ Lbs. of Bentonite
____ Gallons of Water
____ Grout Batches

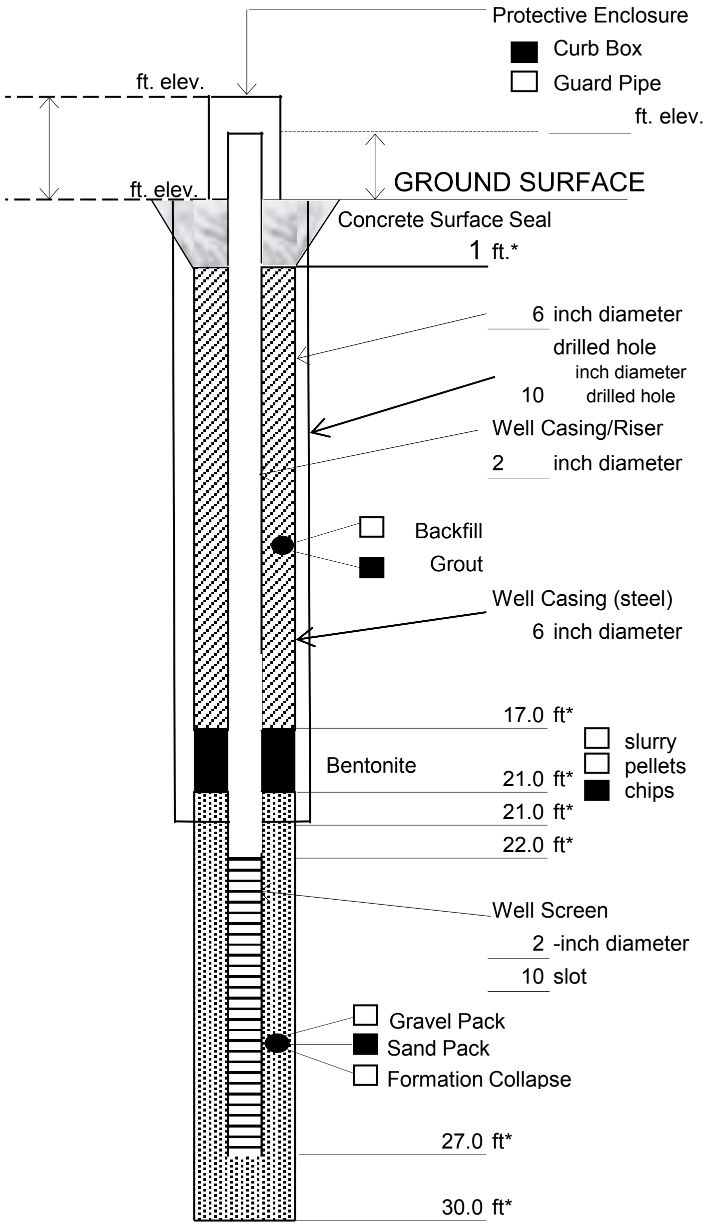
Notes:

#00 sand - 1/4 bag - FilPro - 50 lbs.

Well No. MW-01

C.T. MALE ASSOCIATES

MONITORING WELL CONSTRUCTION LOG



* Depth below ground surface.

Project Name: SGPP
Hoosick Falls

Project Number: 15.5133

Well No.: MW-01 Boring No.: MW-01

Town/City: Hoosick Falls

County: Rensselaer State: New York

Installation Date(s): 8/12/2015

Drilling Contractor: Cascade Drilling

Drilling Method: Roto Sonic

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Jonathan Dippert

Materials Used:

6	Bags of Sand		(50 lb. bags)
	Sand Size:	#0	Brand: FilPro
1/2	Bags of Bentonite		(50 lb. bags)
	Brand:	Cetco Medium Chips	
5	ft. of	Schedule 40 PVC	well screen
22	ft. of	Schedule 40 PVC	well riser
2	Bags of Cement/Concrete		(60 lb. bags)
	Brand:	Quikrete Concrete Mix	

Grout Mixture:

3	Bags of Cement	(94 lb. bags)
10	Lbs. of Bentonite	
20	Gallons of Water	
1	Grout Batches	

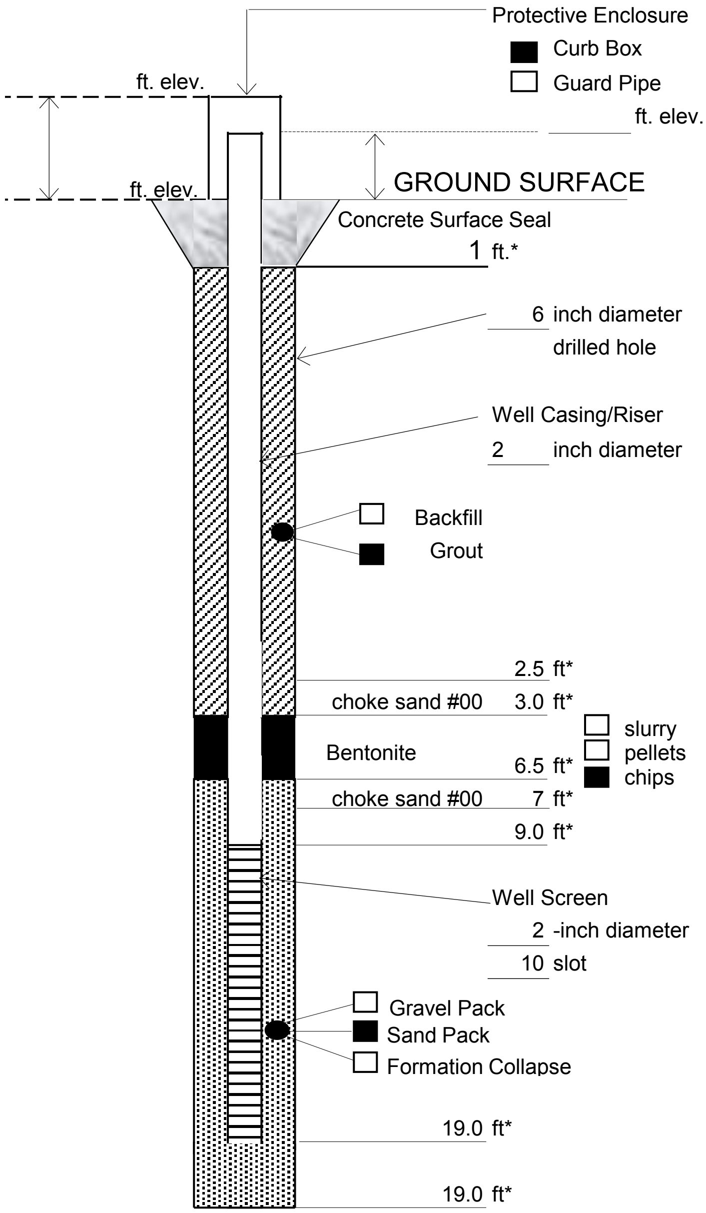
Notes:

#00 - 1/4 bag - FilPro - 50 lb. bag
20' = 6" Steel Casing

C.T. MALE ASSOCIATES

Well No. MW-02S

MONITORING WELL CONSTRUCTION LOG



* Depth below ground surface.

Project Name: SGPP
Hoosick Falls

Project Number: 15.5133

Well No.: MW-02S Boring No.: MW-02S

Town/City: Hoosick Falls

County: Rensselaer State: New York

Installation Date(s): 8/10/2015

Drilling Contractor: Cascade Drilling

Drilling Method: Roto Sonic

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Jonathan Dippert

Materials Used:

4.5	Bags of Sand		(50 lb. bags)
	Sand Size: #0	Brand: FilPro	
1/2	Bags of Bentonite		(50 lb. bags)
	Brand: Cetco Medium Chips		
10	ft. of	Schedule 40 PVC	well screen
9	ft. of	Schedule 40 PVC	well riser
2	Bags of Cement/Concrete		(60 lb. bags)
	Brand: Quikrete		

Grout Mixture:

	Bags of Cement	(lb. bags)
	Lbs. of Bentonite	
	Gallons of Water	
	Grout Batches	

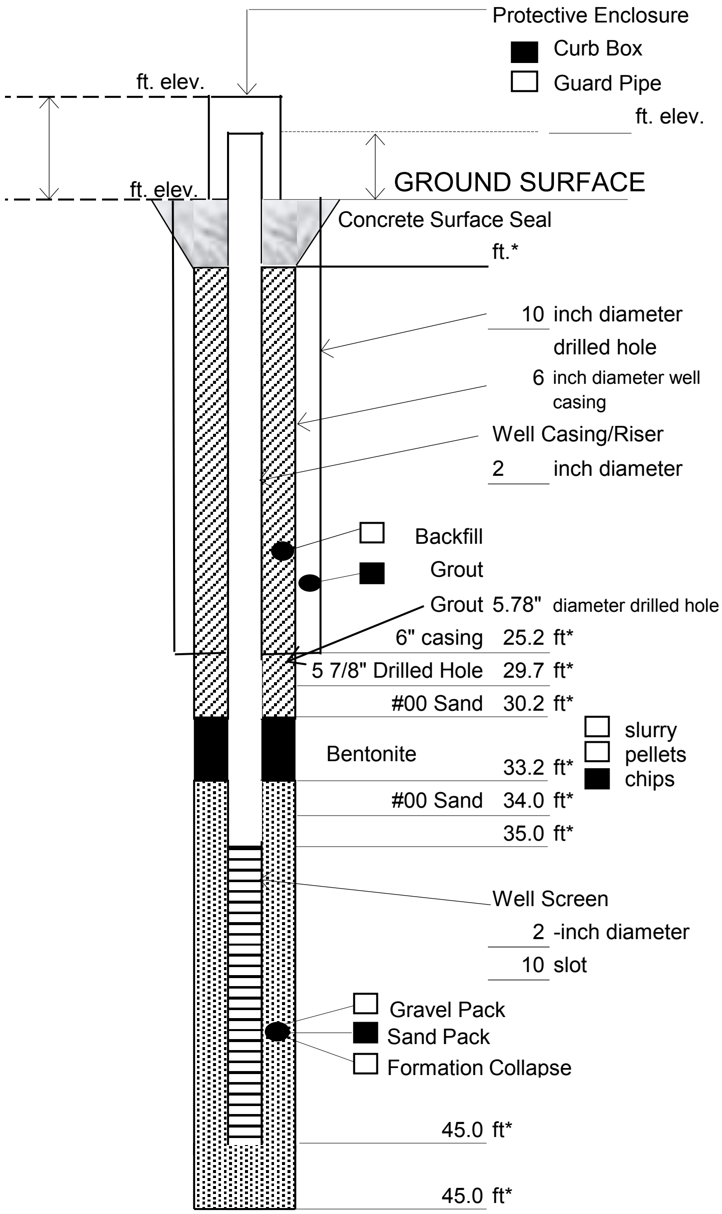
Notes:

#00 Sand - FilPro - 50 lb. bag - 1/2 bag
Grout from MW-02D used

C.T. MALE ASSOCIATES

Well No. MW-02

MONITORING WELL CONSTRUCTION LOG



* Depth below ground surface.

Project Name: SGPP

Hoosick Falls

Project Number: 15.5133

Well No.: MW-02 Boring No.: MW-02

Town/City: Hoosick Falls

County: Rensselaer State: New York

Installation Date(s): 8/6/2015-8/7/2015

Drilling Contractor: Cascade Drilling

Drilling Method: Roto Sonic

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Jonathan Dippert

Materials Used:

4.5	Bags of Sand		(50 lb. bags)
	Sand Size: #0	Brand: FilPro	
1	Bags of Bentonite		(50 lb. bags)
	Brand: Cetco Medium Chips		
35	ft. of	Schedule 40 PVC	well screen
10	ft. of	Schedule 40 PVC	well riser
2	Bags of Cement/Concrete		(60 lb. bags)
	Brand: Quikrete Concrete Mix		

Grout Mixture:

3	Bags of Cement-Quikrete Portland	(94 lb. bags)
10	Lbs. of Bentonite	
20	Gallons of Water	
1	Grout Batches	

Notes:

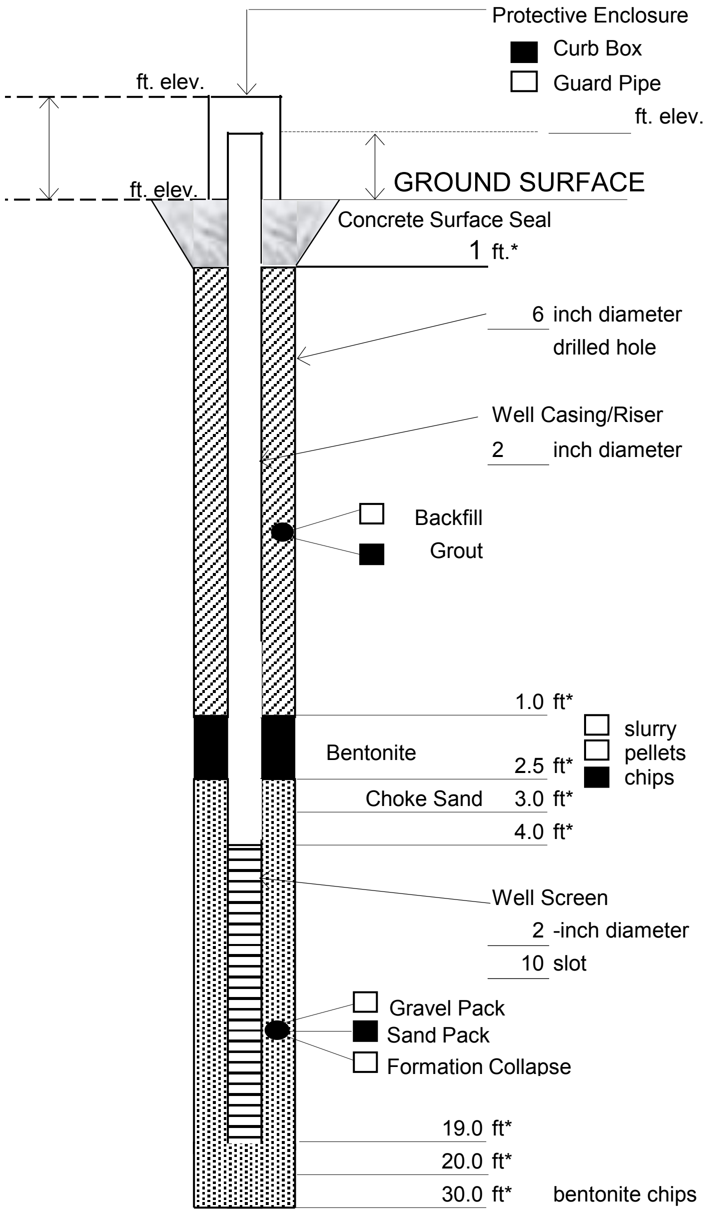
#00 - 1/2 bag - FilPro - 50 lb. bag

25' of 6" steel casing

Well No. MW-03

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: SGPP
Hoosick Falls

Project Number: 15.5133

Well No.: MW-03 Boring No.: MW-03

Town/City: Hoosick Falls

County: Rensselaer State: New York

Installation Date(s): 8/13/2015

Drilling Contractor: Cascade Drilling

Drilling Method: Roto Sonic

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Jonathan Dippert

Materials Used:

8 Bags of Sand (50 lb. bags)
Sand Size: #0 Brand: FilPro
2.25 Bags of Bentonite (50 lb. bags)
Brand: Cetco Medium Chips
15 ft. of Schedule 40 PVC well screen
4 ft. of Schedule 40 PVC well riser
2 Bags of Cement/Concrete (60 lb. bags)
Brand: Quikrete Concrete Mix

Grout Mixture:

____ Bags of Cement (____ lb. bags)
____ Lbs. of Bentonite
____ Gallons of Water
____ Grout Batches

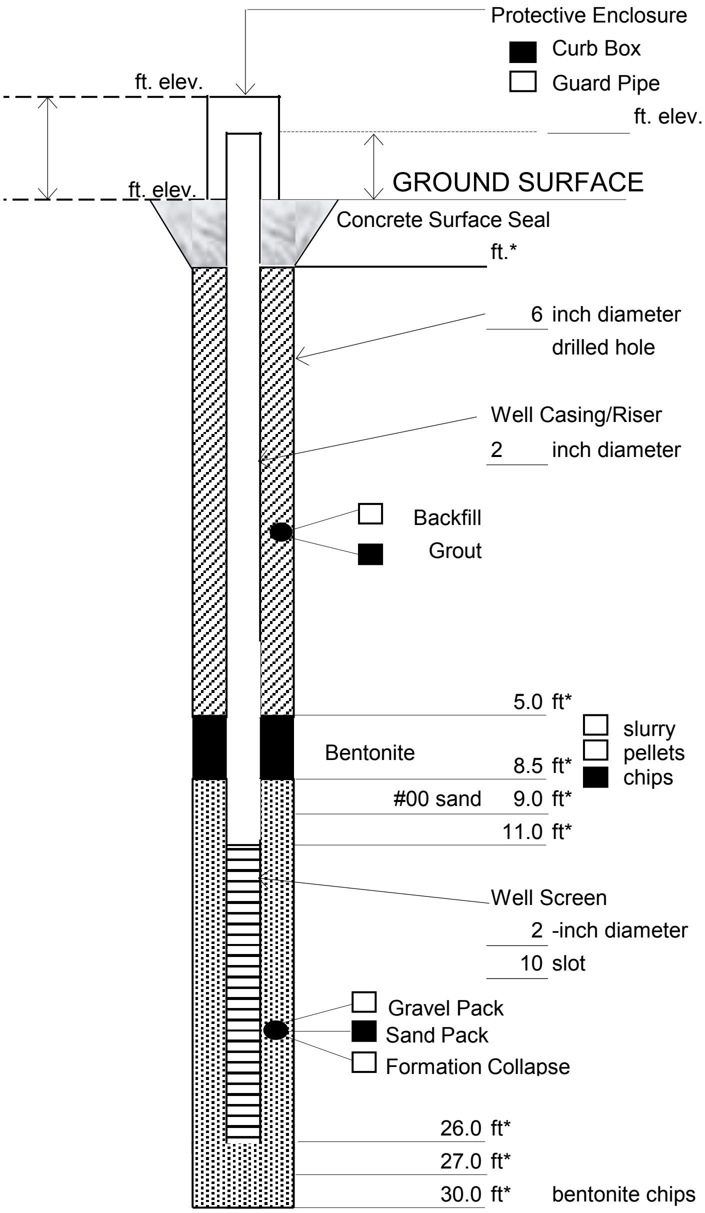
Notes:

#00 Sand - FilPro - 50 lbs. - 1/4 bag

Well No. MW-04

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: SGPP
Hoosick Falls

Project Number: 15.5133

Well No.: MW-04 Boring No.: MW-04

Town/City: Hoosick Falls

County: Rensselaer State: New York

Installation Date(s): 8/5/2015

Drilling Contractor: Cascade Drilling

Drilling Method: Roto Sonic

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Jonathan Dippert

Materials Used:

7 Bags of Sand (50 lb. bags)
Sand Size: #0 Brand: FilPro
3/4 Bags of Bentonite (50 lb. bags)
Brand: Cetco Medium Chips
15 ft. of Schedule 40 PVC well screen
10 ft. of Schedule 40 PVC well riser
2 Bags of Cement/Concrete (60 lb. bags)
Brand: Quikrete

Grout Mixture:

2 Bags of Cement-Quikrete Portland (94 lb. bags)
10 Lbs. of Bentonite - Cetco Super 50 lb. bags
8 Gallons of Water
1 Grout Batches

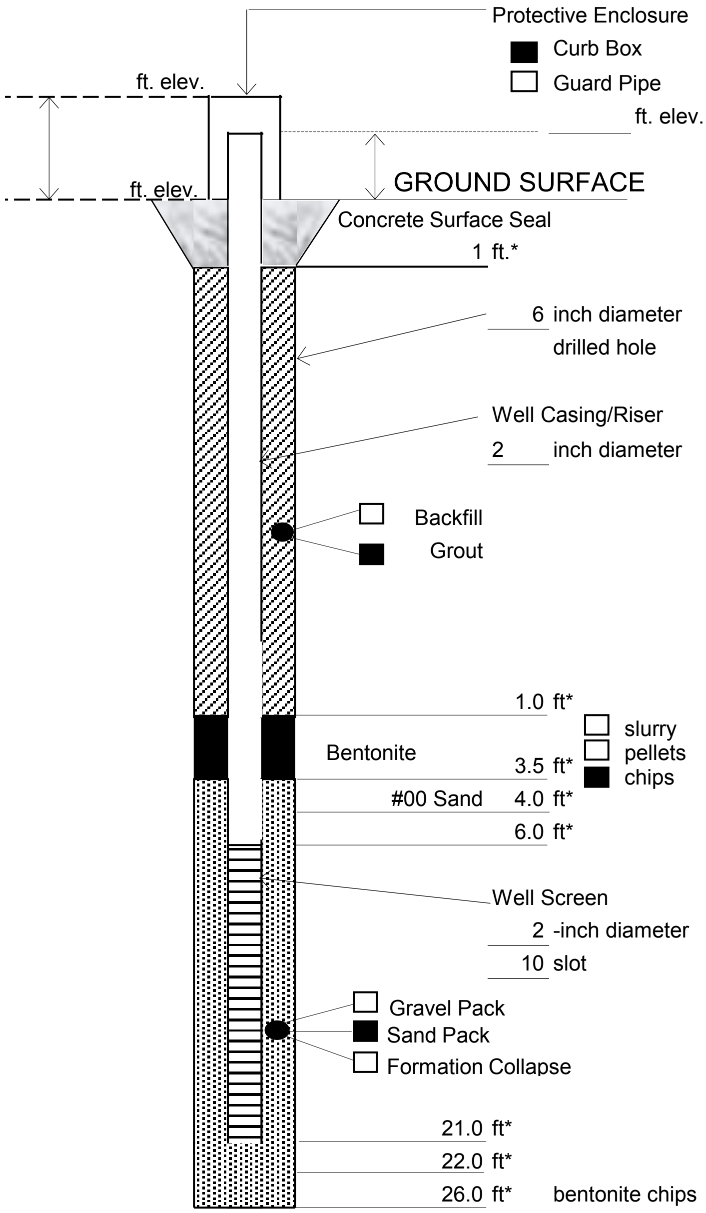
Notes:

1/2 bag #00 sand
50 lbs. - FilPro

Well No. MW-05

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: SGPP

Hoosick Falls

Project Number: 15.5133

Well No.: MW-05 Boring No.: MW-05

Town/City: Hoosick Falls

County: Rensselaer State: New York

Installation Date(s): 8/11/2015-8/12/2015

Drilling Contractor: Cascade Drilling

Drilling Method: Roto Sonic

Water Depth From Top of Riser: ____ ft ____

Date

C.T. Male Observer: Jonathan Dippert

Materials Used:

6.75 Bags of Sand (50 lb. bags)
Sand Size: 0 Brand: FilPro
1/2 Bags of Bentonite (50 lb. bags)
Brand: Cetco Medium Chips
15 ft. of Schedule 40 PVC well screen
6 ft. of Schedule 40 PVC well riser
2 Bags of Cement/Concrete (60 lb. bags)
Brand: Quikrete Concrete Mix

Grout Mixture:

Bags of Cement (lb. bags)
Lbs. of Bentonite
Gallons of Water
Grout Batches

Notes:

#00 Sand - 1/4 bag - FilPro - 50 lbs.

EXHIBIT 2

NYSDEC Comment Letter - June 26, 2016

NYSDEC Comment Letter – August 19, 2016

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau D
625 Broadway, 12th Floor, Albany, NY 12233-7013
P: (518) 402-9676 | F: (518) 402-9773
www.dec.ny.gov

June 10, 2016

Mr. Edward J. Canning
Director Environment, Health & Safety
Saint-Gobain Performance Plastics
14 McCaffrey Street
Hoosick Falls, NY 12090

Re: Draft Remedial Investigation Work Plan - Saint-Gobain McCaffrey Street Site – May 2016 (Site No. 4-42-046)

Dear Mr. Canning:

The New York State Department of Environmental Conservation (Department) has reviewed the May 2016 "Draft Remedial Investigation Work Plan, Saint-Gobain Performance Plastics Site" (Work Plan). The Work Plan must be revised before it can be approved. The following comments describe needed revisions for incorporation into the revised work plan.

1. The Work Plan should be revised to incorporate a section which discusses the FS scoping portion of the RI/FS process. Thus, the revised document should be an RI/FS Work Plan, as per the governing consent order.

2. Section 2.8.3 Environmental Orders, Decrees, and Violations associated with the Site: A previous spill # 9909741 was not listed in this section. Please include and reference it in this section.

3. Section 3.2 Scope and Rational: Dust wipe samples may be need to be collected since the emissions from the stacks may have affected the downwind structures more than the site buildings. Please map and locate all possible roof drain outlets and former floor drain outlets on the property.

4. Section 3.2.2 Soil Sampling at Test Borings: The text should be expanded to include the ability to adjust sample depths to include mottling zones within a boring. This adjustment would be made in the field with input from Department field-oversight staff.

5. Section 3.2.4 Surface Water Sampling: Surface water samples should also be analyzed for TCL/TAL parameters.

6. Section 3.2.6 Rooftop Wipe Samples: Dust wipe samples may be need to be collected since the emissions from the stacks may have affected the downwind structures more than the site buildings. Although the current processes in the site buildings are not using PFC's, a stack test may be needed to check to see if any residual leftover PFC's are being emitted.

7. Section 3.2.8 Sampling Quality Control: Please check with the laboratory and field equipment manufacturers to see if any of their sampling equipment contain any PFC's or any parts within the sampling equipment contain PFC's.

8. Section 5.2 Schedule: The current schedule only indicates when field work would commence. A full schedule for the RI/FS process should be provided.

9. Section 5.2 Schedule: The schedule revisions must address the Study of alternatives to eliminate or reduce PFOA in the Village municipal water supply. As you know, the Department has already commenced the portion of this study that will evaluate alternate water supply alternatives. The revised work plan should describe the transition of this work from DEC to Saint-Gobain/Honeywell.

10. Figure 2: Proposed Sampling Locations Plan: Two (2) additional wells should be located between MW-13 and MW-12, but significantly closer to the river (toward SED-7and SED-10). Final locations to be determined in the field with input from the DEC field oversight staff.

11. Figure 2: Proposed Sampling Location Plan: An additional soil boring (and soil sampling) should be located northeast of SED-14 within the 420 foot elevation area. An additional soil boring (and soil sampling) should be located between SED-3 and SED-4. Final locations to be determined in the field with input from the DEC field oversight staff.

12. Table 1: Proposed Sampling Schedule, Groundwater: The table discusses low-flow sampling using a peristaltic pump. Please ensure that the peristaltic sump does not have Teflon components. The Department has used mechanical pumps for PFOA sampling to eliminate Teflon components.

13. Appendix A, Field Sampling Plan, Section 3.6 Monitoring Well Development: In addition to the field parameters discussed in the section, dissolved oxygen should also be measured and recorded.

It is recommended we meet to discuss these comments and/or your corresponding proposed responses/plan revisions in advance of your submission of the revised work plan in order to help expedite development of an approvable document. The revised document should be submitted to the Department for review and approval by July 11, 2016.

If you have any questions regarding this letter and/or if you would like to arrange a meeting to discuss these comments, please contact feel free to contact me at 518-402-9788.

Sincerely,

Rick Musto

Richard A. Mustico, P.E.
Project Manager
Remedial Bureau D
Division of Environmental Remediation

ec: Bill Daigle – NYSDEC
Jim Quinn – NYSDEC, Schenectady
Dolores Tuohy, Esq. – NYSDEC
Krista Anders – NYSDOH
Justin Deming – NYSDOH
Albert DeMarco – NYSDOH
Lauren Alterman, Esq. – Saint-Gobain
Thomas Byrne, Esq. - Honeywell
John McAuliffe – Honeywell, Syracuse
Christopher Gibson, Esq. - Archer & Greiner
Dale Desnoyers, Esq. – Allen & Desnoyers

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau D
625 Broadway, 12th Floor, Albany, NY 12233-7013
P: (518) 402-9676 | F: (518) 402-9773
www.dec.ny.gov

August 19, 2016

Mr. Edward J. Canning
Director Environment, Health & Safety
Saint-Gobain Performance Plastics
14 McCaffrey Street
Hoosick Falls, NY 12090

Re: Remedial Investigation/Feasibility Study Work Plan dated May 2016 (Revised July 2016) for the Saint-Gobain McCaffrey Street Site (No. 442046)

Dear Mr. Canning:

The New York State Department of Environmental Conservation (Department) has completed review of the revised Remedial Investigation/Feasibility Study Work Plan, dated May 2016 (revised July 2016), for the Saint-Gobain McCaffrey Street Site (Site No. 442046). The proposed field sampling work, as described in Sections 3.2 and 4.1, is hereby conditionally approved, and Saint-Gobain/Honeywell is authorized to commence field work. This approval is conditioned upon the following four (4) work plan modifications:

1. Water chemistry calibration - For all surface water and groundwater samples, a calibrated YSI or equivalent electronic field parameter meter should be utilized to collect geochemical data. The field parameter meter should be calibrated at the start of each day and should also have documented calibration checks at the middle and end of each day. All calibration records and checks should be documented in field notes or on sampling records by recording the value of the calibration solution, what the instrument was reading prior to calibration, and a checkmark if re-calibration was needed. Select in-situ geochemical parameters including temperature, conductivity, pH, oxidation-reduction potential (ORP), and dissolved oxygen (DO) should be monitored and recorded to provide general geochemical data and evaluate groundwater stabilization criteria prior to sample collection. Fresh calibration solution shall be used each day, but may be re-used throughout the day. This comment should be incorporated into both the surface water and groundwater sections of the field sampling plan.

2. In order to achieve consistency between the Field Sampling Plan and the RI/FS Work Plan, all protocol regarding sample collection depth intervals, calibration instructions and protocols should be the same in both the field sampling plan and in the main section of the RI/FS Work Plan.

3. Consistent with the Liberty Street Site sampling, water samples, when available, should be collected from the within the off-site sewer manholes/catch basins in addition to the sediment samples called for in the work plan.

4. Subsurface soil sampling should be consistent with the soil sampling at the Liberty Street Site "Collection and laboratory analysis of soil samples from the soil test borings from major stratigraphic changes within the depth of the soil borings, and immediately above the water table. These potential samples are in addition to the samples already planned to be collected from the 0 -12"' depth interval, at soil mottling zones, at the fill/native soil interface, and of subjectively impacted subsurface materials. These samples should be analyzed for the same parameters as the planned soil samples from the soil test borings." If no stratigraphic changes are encountered then they should collect the 5-7' and 10-12' depth intervals as they proposed.

The remainder of the RI/FS work plan will be approved once the following review comments have been addressed with the submission of a revised work plan:

1. Section 3.3.1.1 Scope of Work - The initial meeting discussed in item #3 should be described as being with NYSDEC. Other parties may participate as appropriate and available in the initial and subsequent meetings. The text in the item should be revised accordingly.

2. Section 3.3.1.1 Scope of Work - What is the "area wide EDR Environmental Database Search Report" referenced in Item#4? What is involved with securing this report?

3. Section 3.3.1.2 Anticipated Alternatives for AWS Assessment and Appendix D-Preliminary Proposed Schedule - A feasibility study assessment of each of the AWS alternatives, with the exception of Alternative #4 (Remediating and/or treating the sources of PFOA to the groundwater and the MWS), should be completed in 2016, consistent with the project schedule provided in Appendix D. The feasibility of remediating the sources of PFOA that impact the MWS will likely not be able to be evaluated in 2016 since the remedial investigation will likely not have advanced sufficiently by the end of 2016. In this regard, the project schedule provided in Appendix D will need to be modified to indicate that a draft AWS feasibility study report will be submitted to NYSDEC by December 1, 2016. This report could indicate that the feasibility of alternative #4 has yet to be determined and that this will be done once the RI has produced sufficient information to enable such evaluation. It should be noted that this alternative would be required under the RI/FS for this site regardless of whether a study of alternative municipal water supply was included in the remedial program or not. Evaluation of alternatives for remediating sources of groundwater contamination are a basic remedial program component and regardless of which AWS alternative may be selected by NYSDEC, alternatives for the remediation of the source of groundwater contamination will need to be evaluated and may be a component of the selected remedy for the site.

   Also, is there a difference between alternative #5 (continuation of existing IRMs, including the full capacity GAC treatment system) and alternative #7 (no further action)? No further action would be the continuation of existing IRMs.

4. Section 3.3.1.3 Evaluation Factors for AWS Assessment: In the evaluation of AWS alternatives, all of the evaluation criteria set forth in 6 NYCRR 375-1.8 (f), in conjunction with the additional guidance provided for each criterion in subdivisions (b) through (j) of DER-10 Section 4.2 Remedy Selection Evaluation Criteria, should be used.

5. Appendix D- Preliminary Project Schedule: The schedule should be revised to indicate that a draft Alternate water supply assessment report will be submitted to NYSDEC by December 1, 2016.

6. Appendix D- Preliminary Project Schedule: The schedule should be revised to indicate that a draft Remedial Investigation Report will be submitted to NYSDEC by May 1, 2017.

7. Appendix D- Preliminary Project Schedule: The schedule should be revised to indicate that a draft Feasibility Study Report will be submitted to NYSDEC by October 1, 2017.

8. Appendix D- Preliminary Project Schedule: The evaluation of IRMs task should span from the start of field investigation work through completion of the remedial investigation. The need for and/or advantage of implementing IRMs could be realized very early during field investigations and continues through the collection and evaluation of field data.

9. Appendix D- Preliminary Project Schedule: General comment. It should be noted that the preliminary schedule is subject to revision, as approved by NYSDEC, based upon the potential need for supplemental field sampling work and/or engineering evaluations beyond that currently approved; the actual duration of field work; and further direction from NYSDEC, as appropriate.

The revised RI/FS Work plan, incorporating the comments above, should be submitted to the Department by September 2, 2016.

If you have any questions regarding this letter, please call me at 518-402-9676.

Sincerely,

Rick Musto

Richard A. Mustico, P.E.
Project Manager
Remedial Bureau D
Division of Environmental Remediation

Enclosure

ec:
Bill Daigle – NYSDEC
Dolores Tuohy, Esq. – NYSDEC
Rick Leone – NYSDEC, Region 4
Krista Anders – NYSDOH
Justin Deming – NYSDOH
Albert DeMarco – NYSDOH
Thomas Byrne, Esq. - Honeywell
John McAuliffe – Honeywell, Syracuse
Christopher Gibson, Esq. - Archer & Greiner
Dale Desnoyers, Esq. – Allen & Desnoyers