US Army Corps
of Engineers
BALTIMORE DISTRICT

DRAFT FINAL PROJECT REPORT

SITE WIDE
PFC SCREENING LEVEL
INVESTIGATION
FORT DRUM, NEW YORK

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Acronyms and Abbreviation

AFFF	Aqueous Film-Forming Foams
ASL	Airfield Sanitary Landfill
AST	Above Ground Storage Tank
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
COE	Corps of Engineers
EPA	Environmental Protection Agency
FEU	Field Exploration Unit
FTA	Fire Training Area
HA	Health Advisory
IRP	Installation Restoration Program
LADS	Laundry Advanced System
NYSDEC	New York State Department of Environmental Conservation
OSL	Old Sanitary Landfill
PFAS	Perfluoroalkyl Substances
PFC	Perfluorinated Compounds
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctyl Sulfonate
POLS	Petroleum, Oil, & Lubricants
RCRA	Resource Conservation and Recovery Act
USACE	United States Army Corps of Engineers

1.0 Project Description

The United States Army Corps of Engineers (USACE) has been tasked by Ft. Drum to complete a Base-wide assessment of areas potentially impacted by Perfluorinated Compounds (PFCs) and areas of potential exposure risk to end users of water systems. Impact assessment was carried out by conducting interviews of Ft. Drum employees, research of records, and site investigation. Due to the nature of the assessment some sites would be actively investigated and tested once they have been identified during these reporting activities. As such, some results have been provided within this document while others areas will require further investigation.

1.1 Purpose

Perfluorooctanoic acid (PFOA) and perfluorooctyl sulfonate (PFOS) are manmade chemicals in a large family of chemicals called perfluoroalkyl substances (PFASs) (Buck et al. 2011). PFOA has been used in a variety of consumer products and in the production of fluoropolymers, and is generated as a degradation product of other perfluorinated compounds. PFOA and PFOS are very persistent in the environment and the human body; it has been detected in water, wildlife, and humans worldwide.

In May of 2016 the United States Environmental Protection Agency (EPA) issued Health Advisory Levels (HA) for PFOA & PFOS in drinking water. For each of these two compounds a 0.07 µg/L lifetime HA has been set by the EPA. The reference dose for both PFOA and PFOS are based on similar developmental effects and are numerically identical; when these two chemicals co-occur at the same time and location in a drinking water source, a conservative and health-protective approach that EPA recommends would be to compare the sum of the concentrations ([PFOA] + [PFOS]) to the HA (0.07 µg/L)(EPA).

New York Department of Environmental Conservation as part of its commitment to safe drinking water in the state filed a Notice of Adoption for amendments to 6 NYCRR Part 597, Hazardous Substances Identification, Release Prohibition, and Release Reporting on March 3, 2017 to include PFOA and PFOS.

With these new regulations Ft. Drum and the Army have taken an active approach in identifying potential contaminations in soil and groundwater around the installation and accessing the level of contamination. In response to these new advisories Ft. Drum was also ordered by the U.S. Army Installation Management Command under Fragmentary Order 01 to Operations Order 16-088: PFC Contaminations Assessment (U) dated August 29,2016 to: (1) assess PFOS and PFOA concentrations in drinking water systems serving Army Soldiers, Families, and Civilians and (2) evaluate current or former restoration sites as well as new sites where past or current use of PFOS/PFOA-containing products may have resulted in a Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) release to the environment. This document outlines the results of this task.

1.2 Site Description

Fort Drum encompasses approximately 168 square miles and is located approximately 10 miles northeast of Watertown, 80 miles north of Syracuse, and 25 miles southeast of the United States and Canadian border. Fort Drum occupies a large portion of northeastern Jefferson County, a portion of western Lewis County, and abuts the southern edge of St. Lawrence County. Identified sites around Ft. Drum to screen for PFCs includes the Fire

Training Area (FTA), the Old Sanitary Landfill (OSL), the Airfield Sanitary Landfill (ASL), the Former Fire House, the Laundry Pad Sites, the Non-Regulated/Non-Public Water Systems, and Drinking Water Wells (Figures 1-1, 1-2, 1-3, & 1-4).

1.2.1 Physiography and Geology

Fort Drum lies within two physiographic areas; the Adirondack Highlands to the northeast, and the Erie-Ontario Lowlands to the southwest. Precambrian high-grade metamorphic rocks are the prominent rock type within the Adirondack Highland area. These consist of gneisses, granites, and marbles. Paleozoic sandstones, dolomitic sandstones, and limestone are the prominent rock types in the Erie-Ontario Lowland area. A thin coverage of glacial deposits is found throughout the area.

1.2.2 Sites of interest

1.2.2.1 Fire Training Area

The Training Pit within the Fire Training Area consisted of an 80 foot diameter concrete basin with a drainage system and underground storage tank. Historically fuel was poured into the pit and ignited, fire fighters would practice extinguishing the fires. One such practice for extinguishing the fires was to employ the use of Aqueous Film-Forming Foams (AFFF) which contained PFCs as a principle compound. Fuels used included waste Petroleum, Oil, & Lubricants (POL) products, POL contaminated materials, JP-4, gasoline and diesel fuels. An investigation conducted in 1990 as part of the Resource Conservation and Recovery Act (RCRA), the Facility Assessment (RFA) did not indicate impacts to the environment from operations POLs or related constituents. PFCs that may have been present in the fire-fighting foam were not identified (and not known) as potential constituents of concern during the 1990 investigation.

“The Fire Training Pit is located along the southern margin of Fort Drum south of Wheeler Sack Army Airfield. This area is underlain by approximately 50 feet of silty sand. These sands are deltaic deposits from the Black River delta, and consist of fine to medium grained sand that is variably silty. Thin veneers of lacustrine clay and silt or till deposits underlie these sands.

The uppermost bedrock units in this area are the limestone formations (from top to bottom, Chaumont, Lowville, and Pamelia Formations) of the Black River Group. The Chaumont Foundation consists of massive gray, finely textured cherty limestone. The middle unit, Lowville Formation, consists of medium gray fossiliferous, thick to thinly bedded limestone with shale partings. The lower unit, Pamelia Formation, consists of dolomite limestone with limestone beds, and grades to dolomitic sandstone near the installation.

Near the Fire Training Pit, the land surface is drained by the Black River, which empties into Lake Ontario. Both surface water and groundwater in the vicinity of the Fire Training Pit discharge into the Black River.

The surficial sand aquifer in the vicinity of the Fire Training Pit is recharged by precipitation. Studies by Reynolds indicate that the underlying bedrock aquifer is hydraulically connected to and recharged by the surficial aquifer in the vicinity of the contaminant area, north-west of the Fire Training Pit, as indicated by similarities in groundwater flow direction and

location of groundwater divides in these two aquifers. Water levels in the surficial water-table aquifer and confined limestone units show that the water table is approximately 50 feet above the potentiometric surface in the fire training pit area." (Radian Corp, 1991)

According to Reynolds, regional groundwater flow in the vicinity of the Fire Training Pit is predominantly east-southeast, toward the Black River, and groundwater occurs approximately 30 feet below ground surface in silty sand deposits (Radian Corp, 1991).

1.2.2.2 Old Sanitary Landfill

"The OSL is located in the southern portion of Fort Drum, north of the intersection of Route 26 (Great Bend Road) and Oneida Avenue. The OSL occupies approximately 40 to 50 acres and is comprised of two major cells identified as OSL Cell 1 and OSL Cell 2. There is an unnamed stream that is located immediately between OSL Cell 1 and OSL Cell 2 which originates as a seep, groundwater discharge, or a combination of the two. Subsequently, the unnamed tributary of Pleasant Creek stream flows into the OSL Creek, which is approximately 2.5 miles long.

Operation of the OSL began in 1940 and continued through 1973. During the period of operation, most of the waste generated on the installation was disposed in the landfill (including, but not limited to materials such as, general refuse, containers with residual pesticides and herbicides, unused ammunition, chlorinated solvents, and industrial wastes). The OSL was formally closed in 1981 following placement of a 20-mil polyvinyl chloride (PVC) membrane cap and soil cover over approximately 38 acres to reduce infiltration and minimize leachate generation."(2016 Basewide Monitoring Report)

1.2.2.3 Airfield Sanitary Landfill

"The ASL is located adjacent to Wheeler Sack Airfield's northeast boundary and approximately 1,000 feet northwest of the Black River. The landfill occupies approximately 37 acres and is covered with vegetation. The topography of the landfill and the surrounding area is nearly flat.

The ASL began operating in 1973 after closure of the OSL. Solid wastes generated from various locations were placed into trenches in the sandy soil until the landfill was closed in 1987. The types of wastes placed in the ASL included municipal solid waste, paint wastes, solvent containers, triple-rinsed pesticide containers, and petroleum, oil, and lubricant (POL) saturated wastes. The trenches were oriented northwest to southeast approximately 300 feet wide with a maximum length of 1,900 feet. The trenches were approximately 20 feet deep and were unlined. They were covered with native sandy soil and some areas were grassed. The northeast 14 acres of the site (referred to as "Phase I") were covered with an impermeable 20-millimeter PVC liner, 6 inches of soil cover, and re-vegetated. Solid waste was also disposed of on the 23 acres southwest of, and adjacent to, the Phase I area until October 1987 (referred to as "Phase II"). In 1990, Phase II was closed by installing a 40-millimeiter PVC cover, 18 PVC gas vents, 12 inches of soil cover, and vegetation." (2016 Basewide Monitoring Report)

1.2.2.4 Laundry Pads

The Shower/Laundry Pads are located in the training area north-northeast of the Airfield and south-southwest of the Main Impact Area. The downrange area is heavily wooded and has remote access from the rest of the installation.

A Laundry Pad is a simple structure that is nothing more than a rimmed square concrete slab with one or two sumps for waste water to drain out into a small leachate field. These pads were temporary working areas for the LADS. A single LADS can launder 500 sets of laundry a day. To support a Brigade Combat Team during 14-day training exercise two LADS could be utilized, allowing soldiers to receive clean laundry every four days. The LADS is a highly efficient system, recycling more than 98% of its 1,300 gallon tank with every cycle, but by the end of the exercise the LADS will produce nearly 1,500 gallons of wastewater, assuming no clothing would be laundered the first three or last three days of the exercise. This wastewater contained detergents, dirt, and oils, as well as a Teflon-based additive to restore water repellency to Gore-Tex material.

1.2.2.5 Former Fire House

Former building 2061, once located on the grounds at Wheeler Sacks Army Airfield just inside the main airfield gate off of now Munns Corner Road, the Former Fire House was where the Ft. Drum Fire Department was stationed by Wheeler Sack Airfield prior to moving its current location at FOB Road by the Airfield Base Operations building. The Fire House was part of the emergency response system at the airfield. The fire department may have used and stored AFFF for firefighting purposes at this location.

1.2.2.6 Non-Regulated/Non-Public Water Systems

The Non-Regulated/Non-Public Water Systems consist of a group of non-potable water supply wells used for field showers, sinks, and sanitary systems than service fewer than 25 people at any well location. All wells with the exception of one are located in the Training Area which lies to the north-northeast of the airfield.

1.2.2.7 Water Supply Wells

The Water Supply Wells are a group of wells installed for potable water consumption and are all located near the airfield side on Ft. Drum. The well field consists of a number of older wells (Wells 2 through 12) and newer wells, termed New Well Field (Wells 13 through 18, though 13 is non-productive). Currently none of the older wells are actively used because of operational issues or the presence of contamination. In some instances, the source of the contamination may not be well understood and is being evaluated under a separate scope titled, Fort Drum Well Field Evaluation Scope of Work, dated February 2017. Wells 7, 11, and 12 are impacted by PFCs presumably from the nearby FTA. Of the older wells only 2,3,7,9, 10, 11, and 12 have operating pumps to allow for sampling or operation. As of this report the New Well Field is in a phased start-up plan and not all wells are currently active.

1.2.2.8 Fire Suppression Systems

Fire suppression systems in this assessment included any devices which have or had the means of employing the use of AFFF, including stationary suppression systems located in Hangers at Wheeler Sack Airfield (2072, 2049,

2050, 2060, 2070, 2074, 19710, 20470, & 20471), Building 19855 and non-stationary systems including five crash trucks and one DES Trailer.

2.0 Methods

As part of the Screening Level Investigation a base-wide assessment was conducted in order to better ascertain a clear image of areas that could have been impacted by PFC contamination and to what level of concern. Data collection for the assessment was completed by conducting research into sites with higher known potential risk to exposure, targeting known groundwater supply resources, and by completing interviews with personnel who would have knowledge of the use of chemical uses around the installation such as AFFF. Sites that could be rapidly accessed for field investigation and sampling were completed during this assessment in order to gain a clear picture of total overall actual risk sooner and to meet Army requirements. Sampling for PFCs followed USACE-Baltimore District Standard Operating Procedure for Sampling of PFCs.

3.0 Site Assessments

The base wide site assessment was conducted by the following methods in order to determine the risk and need to investigate for PFCs; review of current and former IRP sites, internal interviews, research into the use of AFFF, and following authority under Fragmentary Order 01 to Operations Order 16-088.

A review of existing Installation Restoration Program (IRP) sites was conducted to determine potential for PFC contamination based off of historical knowledge of the sites and current reporting data. Of these sites, three were selected for investigation; the OSL, ASL, and FTA. The OSL and ASL were selected for investigation because of the potential for refuse containing PFCs. These sites were also a reasonable targets to get data quickly as they are currently part of a Long Term Monitoring Program (LTM) under the IRP and have monitoring points already in place. The FTA is a closed IRP site, but at the time of closure PFCs were not a chemical of concern (CoC). Due to the known use of AFFF in the area for training purposes and PFCs being detected from nearby production wells (Well 7, 11, and 12) it was determined that additional sampling for PFCs was needed. It was decided that both soil and groundwater samples would be collected around the FTA pit area. A preliminary site assessment was conducted at the FTA documented in Field Summary Report – Old Fire Training Pit to determine the existence of PFC contamination in groundwater around the Fire Training Pit Area due to the use of AFFF as a result of fire training purposes.

At the request of the New York State Department of Environmental Conservation (NYSDEC), a Class B Fire Suppression Foam Usage Survey was completed. The purpose of this survey and associated interviews was to determine the period of use, storage practices and locations, brands, and instances of use to best determine areas subjected to PFCs through the use of AFFF. Interviews were conducted and determined that there were no onsite spills or discharge of AFFF other than the FTA that would warrant further investigation. However, AFFF was utilized in fire suppression systems around the base where there were no hazardous discharges.

Through a “White Paper” written by a soldier requesting for the use of the laundry pads for use in training purposes, the laundry pads were identified as an area of interest for this investigation. Further collected data through interviews and research indicated for the potential use of laundry

detergents at LADSs that contained a Teflon based additive to restore water repellency to Gore-Tex materials which contain Perfluoroacrylate. Laundry Pad Sites 1, 2 and 3 in the Down Range area of the installation were identified as areas of potential areas of concern. These areas were sampled for PFCs, as well as, VOCs and Metals.

Another area identified during the interview process was the former fire station. The possibility that AFFF may have been discharged around the area due to historical cleaning and disposal practices. As a result the former fire house area has been identified for further investigation.

Under direction of Fragmentary Order 01 to Operations Order 16-088 Ft. Drum and the USACE also conducted PFOS and PFOA sampling for all Army-owned and operated water systems that have not previously sampled for PFOS and PFOA. These sites included potable and non-potable water supply systems that are both active and inactive which had a method of delivering water supplies. This means that all wells which had running electricity and functioning pumps were sampled. Wells that were identified as meeting these criteria were Water Wells 002, 003, 007, 009, 010, 011, 012, 014, 015, 016, 017, & 018. Additionally, the non-regulated/non-public water systems that were identified for investigation were located at locations; Hillside Lodge, Ammo Supply Point Admin, Ammo Supply Point Turn-In, Ammo Supply Point Inspection, Shower Points 14G, 13A & 17D, and Ranges 13A, 23, 35, 39, 44 & 48.

4.0 **Field Activities**

After the initial site assessment, investigations of the potentially impacted sites were ordered immediately after identification if time, accessibility, and resources aloud. In some cases areas that could not be investigated at the time of this report are in the planning process for investigation. Additionally, sites like the FTA it was determined that a more aggressively proactive approach was warranted due to the impact of nearby water supply wells and the Black River.

4.1 Fire Training Area

Ft. Drum Directorate of Public Works conducted a soil sampling event on 9-June-2016 at the project site as part of a spill response in which a petroleum odor was detected during a site walk-through. Field samples that were collected for analysis during this effort were from various locations around and immediately under the eastern concrete rim of the Fire Training Pit, all matrices were soil. Samples of the sludge and water perched in the pit were also collected for analysis. Based off of the returned results the facility took action to reduce the risk of further exposure to ground by demolishing and disposal of the Fire Training Pit materials and removal of soil to five feet below grade.

During the Month of August 2016 the USACE Field Exploration Unit (FEU) completed the installation of four groundwater monitoring wells in the area immediately up gradient and downgradient of former fire pit for characterization of PFCs in groundwater. Details of this event are outlined in Appendix A.

During the Month of October 2016 the Ft. Drum Directorate of Public Works conducted the removal of the Fire Pit Drainage System. The systems piping was plumbed from a floor drain in the fire pit to about four feet below top of ground and extended about one hundred feet to the west ending at an

underground storage tank and oil water separator. The tanks were placed at a bottom depth of around 12 feet. During the excavation it was noted that the piping from the pit to the tanks was braking during removal efforts, as such the remaining piping fragments were abandoned in place. A series of grab samples were taken at the base of the piping at different intervals along its length. Grab samples were also taken at the base of each of the tanks.

4.1.1 Results

The results for the June-2016 soil sampling event showed high levels of PFOS in the range of 150 ng/g to 11000 ng/g and low to high levels of PFOA in the range of 1.3 ng/g to 200 ng/g. The results from this sampling event show that concentrations are highest immediately at and to the northeast edge of the fire pit with concentrations decreasing rotating around the pit to the east southeastern edge and outward to Pit #1. The surface water that was perched within the pit had detections of PFOS at 280,000 and PFOA at 30,000.

The PFC results from the August-2016 groundwater sampling event showed that nearly all concentrations are very high. The dilution factor for many of the samples were extremely high due to the high concentrations, particularly for PFOS and PFOA. With dilution factors of 90 to 100 the data is reported in table 1 below as greater than the result, as the actual result exceeds the instrument range even with the dilutions. The range of results for PFOS is >1500 ng/L to >4800 ng/L. The range of results for PFOA is 150 ng/L (MW-4) to >2100 ng/L.

The October-2016 soil samples that were collected during the removal of the fire training pit drainage system in generally showed low levels of PFC contamination. Only two samples showed somewhat elevated concentrations of PFOS and PFOA, the ground immediately under the oil water separator with PFOS at 100 ng/L and PFOA at 0.74 ng/L and Line Pit 2 (center of the drainage pipe) had levels of PFOS at 68 ng/L and PFOA at 5.6 ng/L.

4.2 Old Sanitary Landfill

Three groundwater monitoring wells at the OSL were sampled for PFCs; OSL-MW10, OSL-MW9A, and OSL-MW08. These three wells were chosen for sampling because of their positions to the edge of the landfills and the local groundwater flow directions at this site. Groundwater flows generally to the North and Northwest. OSL-MW-10 and OSL-MW9A were sampled due to their downgradient position to each cell of the OSL and OSL-MW08 was chosen because of the upgradient relationship to both OSL Cells. It was decided that if contamination were to occur it would be likely that it would be detected at these locations.

During the sampling event there was high level of construction activities located at OSL-MW08. Due to the construction activities a field blank was taken at this location to check for any background interference.

4.2.1 Results

All levels of PFCs were either non-detect or detected in very low concentrations, < 7.6 ng/L (PFOA+PFOS) in any one well. Construction activities showed no signs of negatively impacting the results.

Based on test results indicating no or very low level PFC detections, no additional investigations for PFCs at the Old Sanitary Landfill are recommended at this time.

4.3 Airfield Sanitary Landfill

Three groundwater monitoring wells at the ASL were sampled for PFCs; ASL-MW12A, ASL-MW14, and ASL-MW961. These three wells were chosen for sampling because of their positions to the edge of the landfills and the local groundwater flow directions at this site. Groundwater flows generally to the south-southeast over the majority of the ASL. Towards the North end of the ASL groundwater flows more towards the east. MW12A and ASL-MW14 were sampled because of their downgradient position relative to the ASL and ASL-MW961 was chosen because of the upgradient relationship. It was decided that if contamination were to occur it would be likely that it would be detected at these locations.

It was observed during sampling that these monitoring wells had dedicated Teflon lined sample tubing installed in each well. This was noted during sampling as Teflon lined tubing is not recommended for PFC sampling. Prior to sampling the tubing was removed and each well was purged according to low flow sampling guidelines.

4.3.1 Results

All levels of PFCs were either non-detect or detected in very low concentrations, < 4.3 ng/L (PFOA+PFOS) in any one well.

Based on test results indicating no or very low level PFC detections, no additional investigations for PFCs at the Airfield Sanitary Landfill are recommended at this time.

4.4 Laundry Pads

The laundry pads consist of three separate sites with nearly identical infrastructure and were believed to have been operated similarly. At each pad a sump drain and a leachate field sample were taken. Laundry Pad 3 had two sump drains so there was a sample taken from each in this case. In addition to PFC analysis, metals and sVOCs were analyzed as well.

The sump samples were taken by driving a decontaminated standard split spoon sampler through the bottom of each sump to a depth of two feet. A composite soil sample was collected for analysis.
While exact construction of the leachate field was not known prior to investigation, it was surmised that the four inch corrugated pipe that drained each sump lead directly out from the laundry pads to a below grade gravel bed leachate field. During field investigation this was found to be true. In order to identify the location for sampling a Schonstedt metal detector was used to define the linear extent of the drainage pipe from the sump that it drained. Once the end of the pipe was determined a CME750 drill rig was used to auger near the end of the pipe to a depth just below the piping as determined from the sump drainage measurement from top of ground. A split spoon sampler was driven through the augers until through the gravel bed. Once through the gravel bed a second split spoon sampler was driven for a length of two feet. The resulting soil sample was composited and jarred for analysis.

4.4.1 Results

All levels of PFCs were non-detect with the exception of a low level detect of < 1.6 ng/g PFOS at SB-3 Sump A.

There were no significant level of metals or sVOCs detected during this investigation. Based on test results indicating no or very low level detections of PFC, metals, or sVOCs, no additional investigations at the laundry pads are recommended at this time.

4.5 Former Firehouse

The Former Firehouse is no longer standing and has been replaced by new infrastructure. Future investigation to be conducted at this site has been identified and is expected to occur in calendar year(s) 2017/2018. Research will be conducted into what the exact footprint of the building and lot boundaries were. Once further research has been conducted a small series of soil and groundwater samples will be collected through temporary borings and an addendum in the form of a memo to this Preliminary Assessment will be issued.

4.6 Non-Regulated/Non-Public Water Systems

All water supply wells outside of the normal potable water distribution network which had operational pumps were sampled for PFCs by Ft. Drum Directorate of Public Works during July-2016. As these wells are operational no purge time was required and samples were collected directly from the supply lines.

4.6.1 Results

All levels of PFCs at each tested well were non-detect.

4.7 Water Supply Wells

All water supply wells that are part of the installation’s potable water supply distribution network which had operational pumps were sampled for PFCs in joint effort by Ft. Drum Directorate of Public Works and the COE Baltimore District. At the time of the wells being sampled none of the wells were actively producing water.

Wells 2, 3, 9, 10, 14, 15, 16, 17, & 18 were sampled in April of 2017 exclusively by Fort Drum Directorate of Public Works. It is unclear the specific sampling methodology used at the time of sample collection for this event. What is known is that, no wells were operational at the time of sampling. Each well had to be turned on prior to sampling and samples were collected directly from the supply lines for that well prior to entering the main water supply network.

Wells 7 and 11 were sampled for PFCs during June-2016, along with the resampling of wells 14, 15, 16, 17, and 18. This sampling event was conducted jointly by the Fort Drum Directorate of Public Works and the USACE Baltimore District, where the USACE was the task lead. Sampling protocols followed the USACE Baltimore District standard operating procedures for sampling of PFCs. At the time of sampling none of the wells were in operation. Each well was turned on and three calculated well volumes were purged into an onsite vacuum

truck from either a hydrant or a valved bypass. Once purging was completed standard water quality parameters were collected and the purged water was discharged to the Ft. Drum sanitary sewer system for treatment. All samples were collected from either the hydrants or the bypasses.

In July-2016 Well 12 was sampled for PFCs. This well is situated between wells 7 and 11 and was not initially tested during the June event due to not having power to the system for operation. Once power was connected the same personnel and protocols were used for sampling of this well as was during the June event.

4.7.1 Results

Of the wells not associated with the New Well Field (Wells 14, 15, 16, 17, & 18) there were no detects of any PFCs in wells 9 and 10. Wells 2 and 3 had no detections of PFOS or PFOA but did have low levels of both PFHpA and PFHxS which there is no Health Advisory (HA) values associated. Wells 7, 11, and 12 did have detections of PFOS as well as detections of PFHpA and PFHxS, but did not exceed the HA levels of 70 ng/L. Well 7 was the only well with detections of PFOA and was the only well tested that exceeded HA levels for both PFOA and PFAS at a combined total of 101 ng/L, with PFOA being the largest constituent at 90 ng/L.

Of the wells associated with the New Well Field there were no detections of any PFCs that were tested.

4.8 Fire Suppression Systems

A total of ten fire suppression systems (9 hangers and 1 building), five DES crash trucks, and one DES trailer were investigated under this assessment for the use of AFFF and compliance with NYDEC's emergency and chemical bulk storage rules. Storage locations for fire suppressing foams exist at hanger locations 2072, 2060, 2074, 20470, and 20471 where the foaming agents are contained in 55 gallon drums. Under the chemical bulk storage rule registration is required only if the concentrations of PFOA and PFOS exceeds 1% or more by volume of one or more of the PFOA/S hazardous substances and the stationary device stores more than 185 gallons or 2200 lbs. in non-stationary devices. Additionally, all of the fixed fire suppression systems utilize entirely indoor and above ground infrastructure such as above ground storage tanks (AST) and above ground piping. The emergency rule sets in place guidelines for the prohibition and phase-out of PFOA and PFOS containing AFFF that would release more than one pound of the chemicals when used.

The Class B Fire Suppression Foam Usage Survey (***Appendix E***) as stated previously was completed at the request of NYSDEC. In completing this survey the NYSDEC requested further details on the use of specific manufacture products of AFFF being used by the suppression systems, specifically in response to questions 7a and 7e of this form. ***Appendix G*** contains volumes and manufacturer information for each type of foam used at each one of these systems. To ensure manufacture provided data was accurate, collection and testing of foam from the suppression systems to confirm. Data for this testing can be found in ***Appendix C.*** It has been noted that historical data of types of foams used 5 years or greater in the past has not been located after exhaustively searching of facility records, as provided to the Division of Environmental Remediation – NYSDEC.

4.8.1 Results

None of the investigated locations require chemical bulk storage registration as no foam used contains 1% or more by volume of PFOA and PFOS.

Of the stationary systems checked only Hanger 2072 and Building 19855 employ the use of AFFF containing PFOA and PFOS all other buildings fire suppression systems have been replaced. Likewise, all newer buildings constructed have no known history of deployment of AFFF for fire suppression uses. In one case there was an accidental discharges of AFFF from a fire suppression systems in a newer building which was not released to the environment, waste from this particular deployment was drained into the sanitary sewer system via floor drains in the building. To this point, the fixed suppression systems being indoors and above ground would protect the environment as equally to this case since any release would be contained to building and the sanitary sewer drainage system. Otherwise, the discharge of AFFF in aircraft hangers is inherently rare due to the infrequency of aircraft fires, and fiscal loss incurred by the need to recharge the foam in the event of an accidental discharge. Because of the use of ASTs and above ground piping over underground systems there inherently is a lower risk to the environment from any potential leaks.

All non-stationary systems, five of the crash trucks and the trailer employ the use of AFFF which contains PFOA and PFOS. In each case there would be less than 0.5 lbs. of PFOA + PFOS discharged in any single event from any one of these systems which is well under the 1.0 lb. limit, meaning that a one-time release in the case of an emergency would not require an investigation. It may be the case however if there were to be multiple releases in one specific area over time, such as the FTA. The <0.5 lb. value was derived from the data of the confirmatory testing that was completed by Ft. Drum as described in section 4.8 using:

Equation

$$\frac{\text{(Vol. liquid)*(specific gravity)*(8.3lb/gal)*(concentration in PPM PFOA/S)}}{1{,}000{,}000.}$$

This value is up dated from the previously reported value of 0.003 lbs. maximum release as depicted in ***Appendix G***. Using the calculation above, crash truck #2 with a volume of 1.7042 mg/L (PFOA+PFOS) came in at the highest tested concentration by volume stored at 0.45 lbs. and crash truck #4 came in <0.003 lbs. per volume stored. These system's foams also should be expected to contain other PFCs aside from PFOA and PFOS.

Fort Drum takes maintenance to ensure the safest operation possible of the fire systems seriously and as such are some of the best maintained systems in its inventory. This is especially true in the high profile areas as the aircraft hangers.

5.0 Discussion

In general there were no exceedances of PFOA + PFAS at any of the tested locations with the exception of the FTA and the water wells nearby the FTA. All other locations sampled were below the HA values and do not pose a risk

to any users. This lends to the point that PFCs should not be expected in any exceedances except for those areas where there was repetitive and definitive use or exposure to chemicals such as those found in AFFF.

Based off of the results taken from this assessment there are no anticipated impacts of PFCs to the new well field and Ft. Drums water supply distribution system.

The FTA has shown that the usage of AFFF largely contributes to the known contamination of PFCs in soil and groundwater, even in the case when using perceived appropriate precautionary measures. The level of detections at the FTA warrant further investigation at the FTA, which is currently under way at the time of this report. The contamination at the FTA stands to impact nearby water wells 7, 11, & 12 which has been seen from this assessment and could potentially lead to downgradient impacts to surface water bodies and future groundwater usage. It is believed at this time that the PFC contamination has been held largely in place locally to the FTA and slightly upgradient towards wells 7, 11, & 12 as wells 7 and 11 were operational up until the end of March-2016.

Due to the operation of Wells 7 and 11 until March-2016, the detection of PFCs at both the wells and the FTA, and analysis of hydrogeological models it is believed that the source of contamination at these wells can be attributed to the contamination at the FTA. As well 7 is the closest well to the FTA it stands to reason that its influence of the groundwater table would be largest thusly show higher detections of PFCs, which it does. There is also a noticeable decrease in concentrations moving further away towards well 12 and then well 11.

Under directive by the Department of Defense, the base has discontinued the use of any Class B firefighting foams for training purposes.

References

2016 Annual Basewide Monitoring Report Fort Drum Installation Restoration Program Fort Drum, New York (Rep. No. W912DR-12-D-0007-0003). (2017). Stafford, Texas: PIKA-MP JV LLC.

Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA) (Rep. No. EPA 822-R-16-005). (2016). Washington, DC: U.S. Environmental Protection Agency Office of Water (4304T) Health and Ecological Criteria Division.

Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS) (Rep. No. EPA 822-R-16-004). (2016). Washington, DC: U.S. Environmental Protection Agency Office of Water (4304T) Health and Ecological Criteria Division.

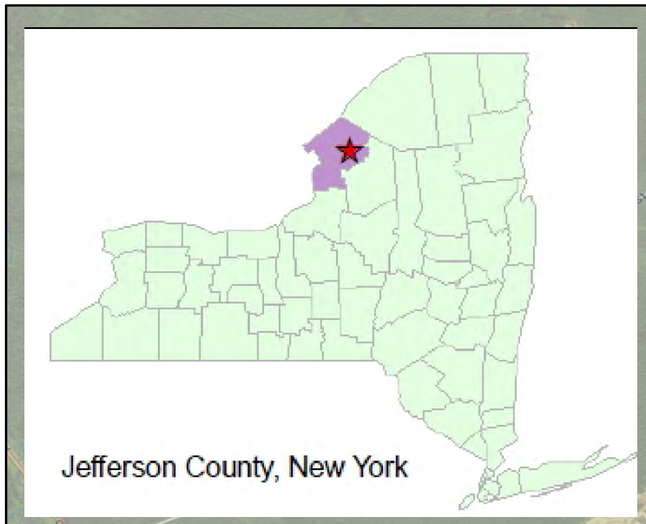
Reynolds, R.J. Hydrogeology of the Fort Drum Area. Jefferson. Lewis. and St. Lawrence Counties. New York (maps).

Final Engineering Report Phase I Confirmation Study of the Old Fire Training Pit at Fort Drum, New York Volume I Text and Appendices (Rep. No. Project Ref NO. FIDR-016). (1991). Rochester, NY: Radian Corporation.

Fragmentary Order 01 to Operations Order 16-088, Perfluorochemical (PFC) Contamination Assessment (U), 19-September-2016

Figures

FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
SITE MAP



ASL

OSL CELL 2

OSL CELL 1

Old Fire Station

FTA Fire Pit

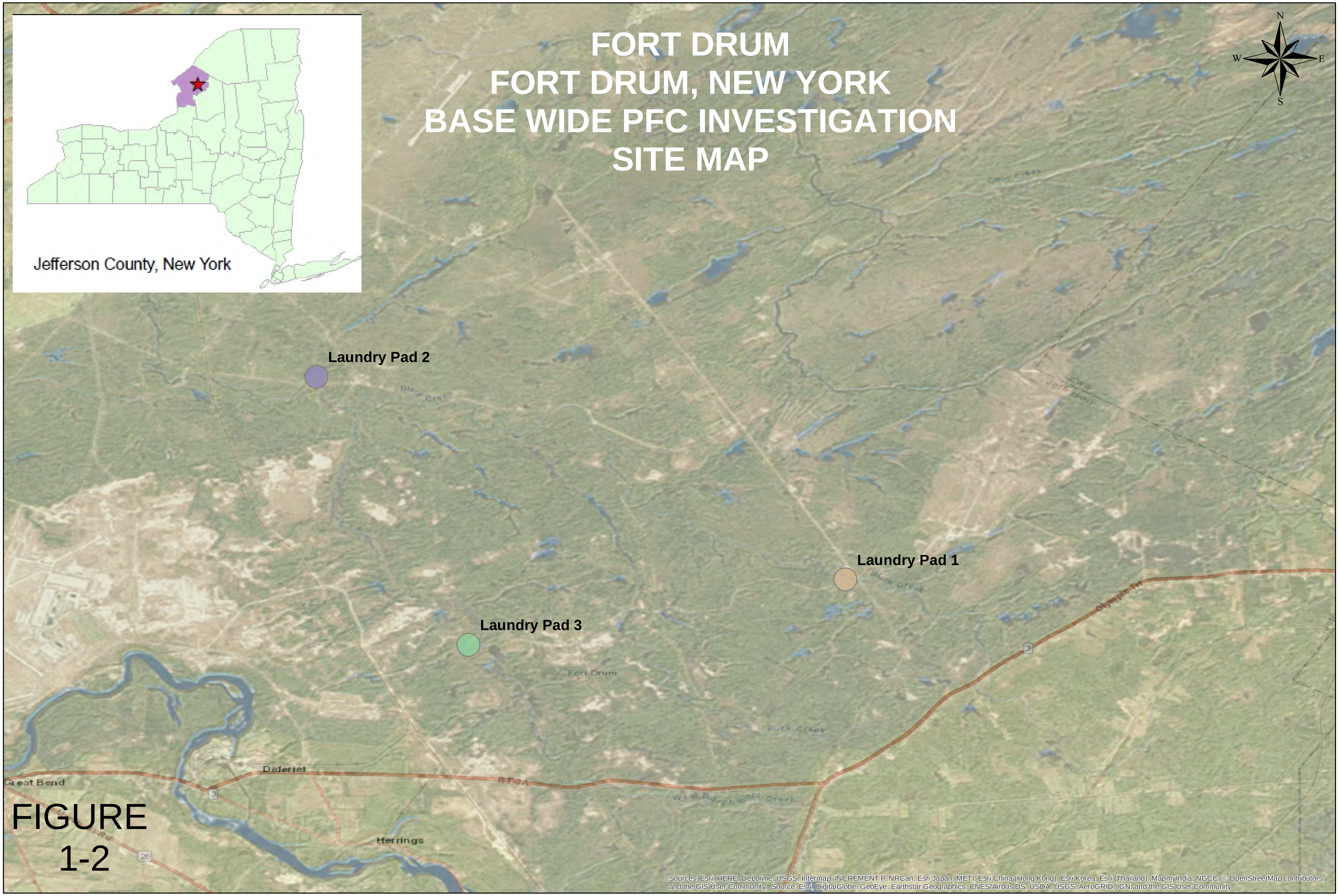
FIGURE
1-1

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

ASL | FTA Fire Pit | OSL CELL 1 | OSL CELL 2 | Old Fire Station

0 0.25 0.5 1 1.5 2 Miles



FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
SITE MAP
Jefferson County, New York
N
S
E
W
Laundry Pad 2
Laundry Pad 1
Laundry Pad 3
Black Creek
Cold Creek
Lewis
Jefferson
Fort Drum
Olympic Trl
Deferiet
Great Bend
RT-3A
West Branch Black Creek
Herrings
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

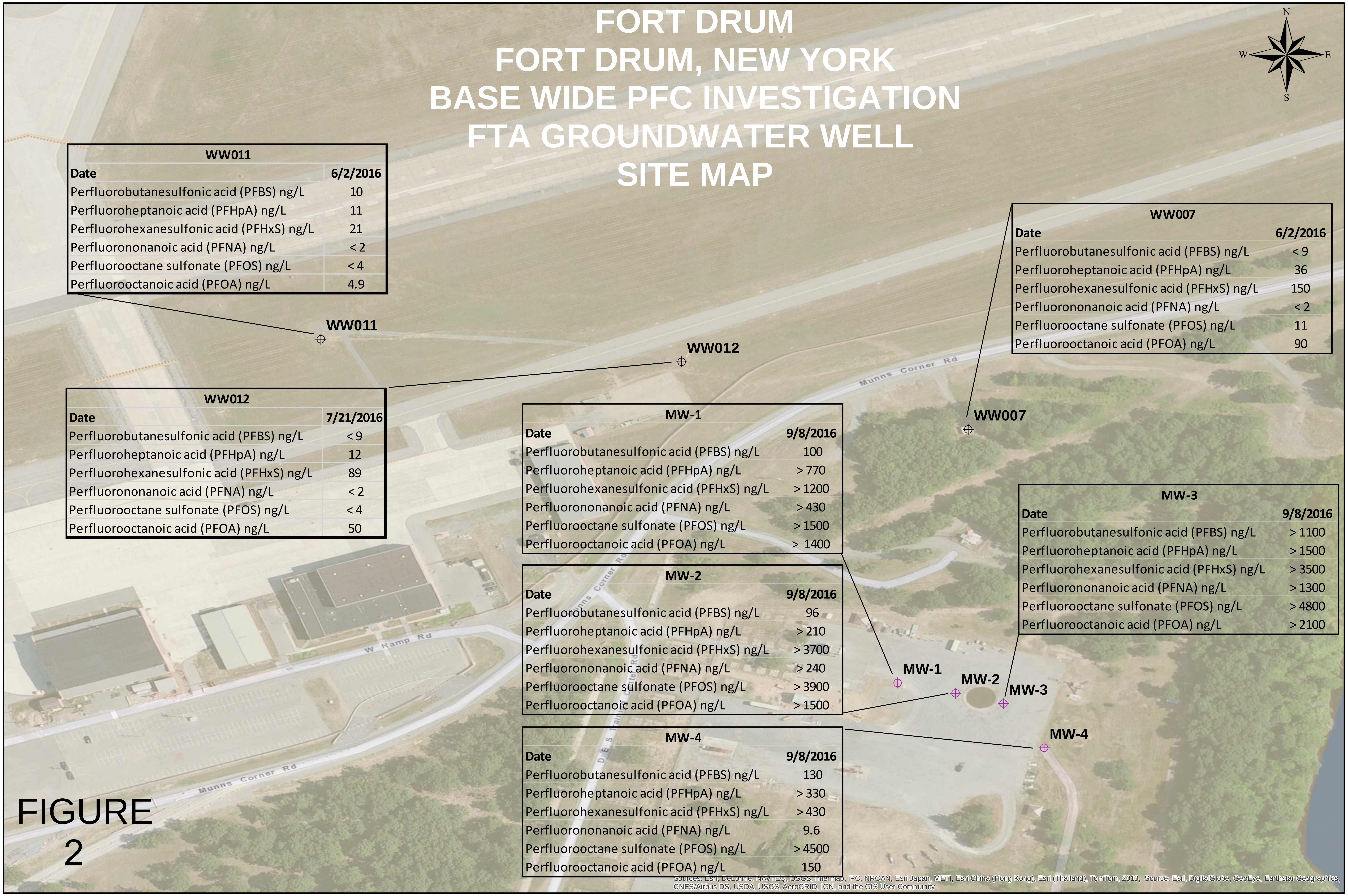
FIGURE 1-2

Legend

Laundry Pad 1 Laundry Pad 2 Laundry Pad 3

0 0.75 1.5 3 4.5 6 Miles

FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
FTA GROUNDWATER WELL
SITE MAP



WW011

Date	6/2/2016
Perfluorobutanesulfonic acid (PFBS) ng/L	10
Perfluoroheptanoic acid (PFHpA) ng/L	11
Perfluorohexanesulfonic acid (PFHxS) ng/L	21
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	4.9

WW012

Date	7/21/2016
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	12
Perfluorohexanesulfonic acid (PFHxS) ng/L	89
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	50

WW007

Date	6/2/2016
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	36
Perfluorohexanesulfonic acid (PFHxS) ng/L	150
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	11
Perfluorooctanoic acid (PFOA) ng/L	90

MW-1

Date	9/8/2016
Perfluorobutanesulfonic acid (PFBS) ng/L	100
Perfluoroheptanoic acid (PFHpA) ng/L	> 770
Perfluorohexanesulfonic acid (PFHxS) ng/L	> 1200
Perfluorononanoic acid (PFNA) ng/L	> 430
Perfluorooctane sulfonate (PFOS) ng/L	> 1500
Perfluorooctanoic acid (PFOA) ng/L	> 1400

MW-2

Date	9/8/2016
Perfluorobutanesulfonic acid (PFBS) ng/L	96
Perfluoroheptanoic acid (PFHpA) ng/L	> 210
Perfluorohexanesulfonic acid (PFHxS) ng/L	> 3700
Perfluorononanoic acid (PFNA) ng/L	> 240
Perfluorooctane sulfonate (PFOS) ng/L	> 3900
Perfluorooctanoic acid (PFOA) ng/L	> 1500

MW-3

Date	9/8/2016
Perfluorobutanesulfonic acid (PFBS) ng/L	> 1100
Perfluoroheptanoic acid (PFHpA) ng/L	> 1500
Perfluorohexanesulfonic acid (PFHxS) ng/L	> 3500
Perfluorononanoic acid (PFNA) ng/L	> 1300
Perfluorooctane sulfonate (PFOS) ng/L	> 4800
Perfluorooctanoic acid (PFOA) ng/L	> 2100

MW-4

Date	9/8/2016
Perfluorobutanesulfonic acid (PFBS) ng/L	130
Perfluoroheptanoic acid (PFHpA) ng/L	> 330
Perfluorohexanesulfonic acid (PFHxS) ng/L	> 430
Perfluorononanoic acid (PFNA) ng/L	9.6
Perfluorooctane sulfonate (PFOS) ng/L	> 4500
Perfluorooctanoic acid (PFOA) ng/L	150

FIGURE 2

Date: 1/24/2017 Time: 10:43:23 AM

Legend

Monitoring Well   Supply Well

0 150 300 600 900 1,200 Feet

FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
FTA SOIL AND PIT SAMPLES
SITE MAP

N
W E
S

Line Pit 3	
Date	**10/26/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.49
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.29
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.49
Perfluorononanoic acid (PFNA) ng/g	< 0.20
Perfluorooctane sulfonate (PFOS) ng/g	< 0.69
Perfluorooctanoic acid (PFOA) ng/g	< 0.29

Oil Tank	
Date	**10/26/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.52
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.31
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.52
Perfluorononanoic acid (PFNA) ng/g	0.60
Perfluorooctane sulfonate (PFOS) ng/g	20
Perfluorooctanoic acid (PFOA) ng/g	< 0.31

Water Tank	
Date	**10/26/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.52
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.31 J
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.52
Perfluorononanoic acid (PFNA) ng/g	< 0.21
Perfluorooctane sulfonate (PFOS) ng/g	13
Perfluorooctanoic acid (PFOA) ng/g	< 0.43 J

OWS	
Date	**10/26/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.51
Perfluoroheptanoic acid (PFHpA) ng/g	0.34 J
Perfluorohexanesulfonic acid (PFHxS) ng/g	0.87 J
Perfluorononanoic acid (PFNA) ng/g	0.77
Perfluorooctane sulfonate (PFOS) ng/g	100
Perfluorooctanoic acid (PFOA) ng/g	0.74

Fire Pit Surface Water	
Date	**6/9/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	10000
Perfluoroheptanoic acid (PFHpA) ng/g	28000
Perfluorohexanesulfonic acid (PFHxS) ng/g	90000
Perfluorononanoic acid (PFNA) ng/g	2100
Perfluorooctane sulfonate (PFOS) ng/g	280000
Perfluorooctanoic acid (PFOA) ng/g	30000

Sludge	
Date	**6/9/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	38
Perfluoroheptanoic acid (PFHpA) ng/g	95
Perfluorohexanesulfonic acid (PFHxS) ng/g	330
Perfluorononanoic acid (PFNA) ng/g	34
Perfluorooctane sulfonate (PFOS) ng/g	11000
Perfluorooctanoic acid (PFOA) ng/g	200

Overhang #1	
Date	**6/9/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	ND
Perfluoroheptanoic acid (PFHpA) ng/g	0.38
Perfluorohexanesulfonic acid (PFHxS) ng/g	12
Perfluorononanoic acid (PFNA) ng/g	7.3
Perfluorooctane sulfonate (PFOS) ng/g	350
Perfluorooctanoic acid (PFOA) ng/g	1.3

Overhang #2	
Date	**6/9/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	0.53
Perfluoroheptanoic acid (PFHpA) ng/g	2.2
Perfluorohexanesulfonic acid (PFHxS) ng/g	18
Perfluorononanoic acid (PFNA) ng/g	73
Perfluorooctane sulfonate (PFOS) ng/g	2600
Perfluorooctanoic acid (PFOA) ng/g	2.6

Overhang #3	
Date	**6/9/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	ND
Perfluoroheptanoic acid (PFHpA) ng/g	0.38
Perfluorohexanesulfonic acid (PFHxS) ng/g	8.5
Perfluorononanoic acid (PFNA) ng/g	4.2
Perfluorooctane sulfonate (PFOS) ng/g	150
Perfluorooctanoic acid (PFOA) ng/g	1.1

Line Pit 2	
Date	**10/26/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.49
Perfluoroheptanoic acid (PFHpA) ng/g	0.63
Perfluorohexanesulfonic acid (PFHxS) ng/g	1.8
Perfluorononanoic acid (PFNA) ng/g	6.6
Perfluorooctane sulfonate (PFOS) ng/g	68
Perfluorooctanoic acid (PFOA) ng/g	5.6

Line Pit 1	
Date	**10/26/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.51
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.31
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.51
Perfluorononanoic acid (PFNA) ng/g	< 0.21
Perfluorooctane sulfonate (PFOS) ng/g	< 0.72
Perfluorooctanoic acid (PFOA) ng/g	< 0.31

Pit #1	
Date	**6/9/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	ND
Perfluoroheptanoic acid (PFHpA) ng/g	ND
Perfluorohexanesulfonic acid (PFHxS) ng/g	8.4
Perfluorononanoic acid (PFNA) ng/g	7.4
Perfluorooctane sulfonate (PFOS) ng/g	210
Perfluorooctanoic acid (PFOA) ng/g	12

Oil Tank
Water Tank
Oil Water Separator
Line Pit 3
Line Pit 2
Line Pit 1
Surface Water
Sludge
Overhang 1
Overhang 2
Overhang 3
Pit 1

FIGURE 3

Date: 5/8/2017 Time: 4:35:54 PM

Legend

Grab Samples

0 30 60 120 180 240 Feet

FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
OSL GROUNDWATER WELL
SITE MAP

OSL-MW10	
Date	**7/21/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	1.5
Perfluorohexanesulfonic acid (PFHxS) ng/L	3
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	4.2

OSL-MW10

OSL-MW9A	
Date	**7/21/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	4.2
Perfluorohexanesulfonic acid (PFHxS) ng/L	11
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	6.6

OSL-MW9A

OSL-MW08	
Date	**7/21/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	1.3
Perfluorohexanesulfonic acid (PFHxS) ng/L	6.9
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	7.6
Perfluorooctanoic acid (PFOA) ng/L	< 2

OSL-MW08

FIGURE 4

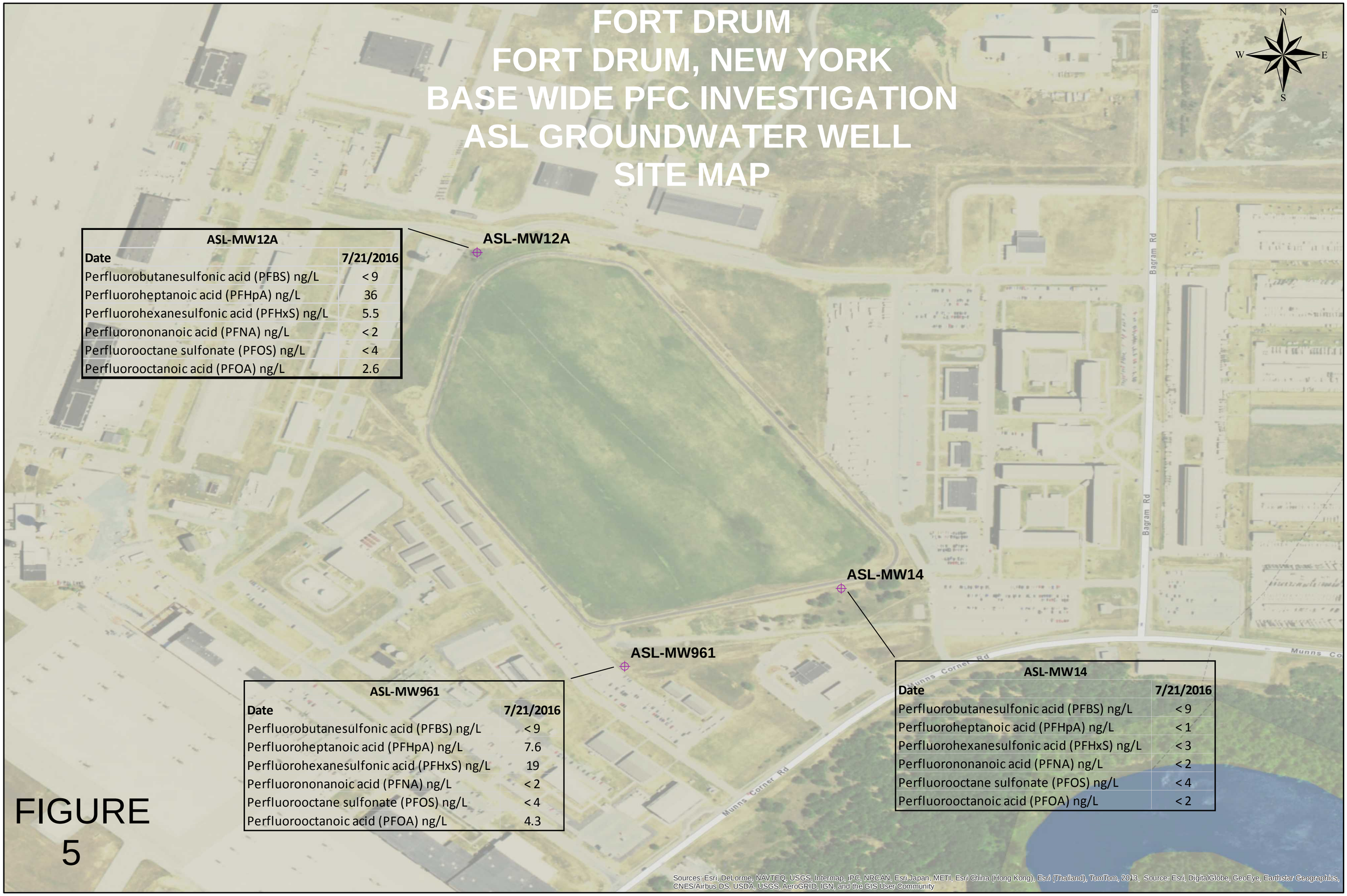
Date: 1/24/2017 Time: 11:00:26 AM

Legend

Monitoring Well Supply Well

0 250 500 1,000 1,500 2,000 Feet

FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
ASL GROUNDWATER WELL
SITE MAP



ASL-MW12A	
Date	**7/21/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	36
Perfluorohexanesulfonic acid (PFHxS) ng/L	5.5
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	2.6

ASL-MW961	
Date	**7/21/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	7.6
Perfluorohexanesulfonic acid (PFHxS) ng/L	19
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	4.3

ASL-MW14	
Date	**7/21/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	< 1
Perfluorohexanesulfonic acid (PFHxS) ng/L	< 3
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	< 2

FIGURE 5

Date: 1/24/2017 Time: 11:06:14 AM

Legend

Monitoring Well

0 315 630 1,260 1,890 2,520 Feet

FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
LAUNDRY PAD 1 SOIL BORINGS
SITE MAP

N
W E
S

SB-1-Sump
SB-1-Drain

SB-1 Sump	
Date	**11/1/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.62
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.37
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.62
Perfluorononanoic acid (PFNA) ng/g	< 0.25
Perfluorooctane sulfonate (PFOS) ng/g	< 0.87
Perfluorooctanoic acid (PFOA) ng/g	< 0.37

SB-1 Drain	
Date	**11/1/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.56
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.34
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.56
Perfluorononanoic acid (PFNA) ng/g	< 0.22
Perfluorooctane sulfonate (PFOS) ng/g	< 0.79
Perfluorooctanoic acid (PFOA) ng/g	< 0.34

S Tank Trl
4906

FIGURE
6

Date: 1/24/2017 Time: 12:00:25 PM

Legend

Soil Boring

0 30 60 120 180 240
Feet

FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
LAUNDRY PAD 2 SOIL BORINGS
SITE MAP

N
W E
S

SB-2 Sump	
Date	**11/2/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.59
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.36
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.59
Perfluorononanoic acid (PFNA) ng/g	< 0.24
Perfluorooctane sulfonate (PFOS) ng/g	< 0.83
Perfluorooctanoic acid (PFOA) ng/g	< 0.36

SB-2-Sump

SB-2-Drain

SB-2 Drain	
Date	**11/2/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.57
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.34
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.57
Perfluorononanoic acid (PFNA) ng/g	< 0.23
Perfluorooctane sulfonate (PFOS) ng/g	< 0.80
Perfluorooctanoic acid (PFOA) ng/g	< 0.34

FIGURE
7

Date: 1/24/2017 Time: 11:29:29 AM

Legend

Soil Boring

0 30 60 120 180 240 Feet

FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
LAUNDRY PAD 3 SOIL BORINGS
SITE MAP

N
W E
S

SB-3 SumpA	
Date	**11/2/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.54
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.33
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.54
Perfluorononanoic acid (PFNA) ng/g	< 0.22
Perfluorooctane sulfonate (PFOS) ng/g	1.6 J
Perfluorooctanoic acid (PFOA) ng/g	< 0.33

SB-3-Drain

SB-3-SumpA

SB-3-SumpB

SB-3 SumpB	
Date	**11/2/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.55
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.33
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.55
Perfluorononanoic acid (PFNA) ng/g	< 0.22
Perfluorooctane sulfonate (PFOS) ng/g	< 0.76
Perfluorooctanoic acid (PFOA) ng/g	< 0.33

SB-3 Drain	
Date	**11/2/2016**
Perfluorobutanesulfonic acid (PFBS) ng/g	< 0.50
Perfluoroheptanoic acid (PFHpA) ng/g	< 0.30
Perfluorohexanesulfonic acid (PFHxS) ng/g	< 0.50
Perfluorononanoic acid (PFNA) ng/g	< 0.20
Perfluorooctane sulfonate (PFOS) ng/g	< 0.70
Perfluorooctanoic acid (PFOA) ng/g	< 0.30

FIGURE
8

Date: 1/24/2017 Time: 11:56:48 AM

Legend

Soil Boring

0 30 60 120 180 240 Feet

FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
WATER SUPPLY - RANGE WELLS
SITE MAP

FIGURE 9

Date: 2/9/2017 Time: 9:58:30 AM

Legend

Range Wells

0 1 2 4 6 8 Miles

FORT DRUM
FORT DRUM, NEW YORK
BASE WIDE PFC INVESTIGATION
WATER SUPPLY -DRINKING WATER WELLS
SITE MAP

Well 10

Well 9

Well 14

Well 18

Well 15

Well 17

Well 16

Well 3

Well 2

Well 11

Well 12

Well 7

WW003	
Date	**4/13/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	7.3
Perfluorohexanesulfonic acid (PFHxS) ng/L	7.4
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	< 2

WW012	
Date	**7/21/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	12
Perfluorohexanesulfonic acid (PFHxS) ng/L	89
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	50

WW002	
Date	**4/13/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	14
Perfluorohexanesulfonic acid (PFHxS) ng/L	19
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	2.4

WW011	
Date	**6/2/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	10
Perfluoroheptanoic acid (PFHpA) ng/L	11
Perfluorohexanesulfonic acid (PFHxS) ng/L	21
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	< 4
Perfluorooctanoic acid (PFOA) ng/L	4.9

WW007	
Date	**6/2/2016**
Perfluorobutanesulfonic acid (PFBS) ng/L	< 9
Perfluoroheptanoic acid (PFHpA) ng/L	36
Perfluorohexanesulfonic acid (PFHxS) ng/L	150
Perfluorononanoic acid (PFNA) ng/L	< 2
Perfluorooctane sulfonate (PFOS) ng/L	11
Perfluorooctanoic acid (PFOA) ng/L	90

FIGURE
10

Date: 2/9/2017 Time: 10:21:25 AM

Legend

Drinking Water Wells

0 0.275 0.55 1.1 1.65 2.2 Miles

Tables

TABLE 1: PFC Concentrations by Site - Groundwater

Site	FTA	FTA	FTA	FTA	WF	WF	WF	WF	WF
Sample ID	**MW-1**	**MW-2**	**MW-3**	**MW-4**	**WW002**	**WW003**	**WW007**	**WW009**	**WW010**
Date Sampled	8-Sep-16	8-Sep-16	8-Sep-16	8-Sep-16	13-Apr-16	13-Apr-16	2-Jun-16	13-Apr-16	13-Apr-16
	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
Perfluorobutanesulfonic acid (PFBS)	100	96	> 1100	130	< 9	< 9	< 9	< 9	< 9
Perfluoroheptanoic acid (PFHpA)	> 770	> 210	> 1500	> 330	14	7.3	36	< 1	< 1
Perfluorohexanesulfonic acid (PFHxS)	> 1200	> 3700	> 3500	> 430	19	7.4	150	< 3	< 3
Perfluorononanoic acid (PFNA)	> 430	> 240	> 1300	9.6	< 2	< 2	< 2	< 2	< 2
Perfluorooctane sulfonate (PFOS)	**> 1500**	**> 3900**	**> 4800**	**> 4500**	< 4	< 4	**11**	< 4	< 4
Perfluorooctanoic acid (PFOA)	**> 1400**	**> 1500**	**> 2100**	**150**	**2.4**	< 2	**90**	< 2	< 2

Site	WF	WF	WF	WF	WF	WF	WF	OSL	OSL
Sample ID	**WW011**	**WW012**	**WW0014**	**WW015**	**WW016**	**WW017**	**WW018**	**MW08**	**MW9A**
Date Sampled	2-Jun-16	21-Jul-16	12-Apr-16	13-Apr-16	13-Apr-16	13-Apr-16	12-Apr-16	21-Jul-16	21-Jul-16
	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
Perfluorobutanesulfonic acid (PFBS)	< 9	< 9	< 9	< 9	< 9	< 9	< 9	< 9	< 9
Perfluoroheptanoic acid (PFHpA)	36	12	< 1	< 1	< 1	< 1	< 1	1.3	4.2
Perfluorohexanesulfonic acid (PFHxS)	150	89	< 3	< 3	< 3	< 3	< 3	6.9	11
Perfluorononanoic acid (PFNA)	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Perfluorooctane sulfonate (PFOS)	**11**	< 4	< 4	< 4	< 4	< 4	< 4	**7.6**	< 4
Perfluorooctanoic acid (PFOA)	**90**	**50**	< 2	< 2	< 2	< 2	< 2	< 2	**6.6**

Site	OSL	ASL	ASL	ASL
Sample ID	**MW10**	**MW12A**	**MW14**	**MW961**
Date Sampled	21-Jul-16	21-Jul-16	21-Jul-16	21-Jul-16
	ng/L	ng/L	ng/L	ng/L
Perfluorobutanesulfonic acid (PFBS)	< 9	< 9	< 9	< 9
Perfluoroheptanoic acid (PFHpA)	1.5	36	< 1	7.6
Perfluorohexanesulfonic acid (PFHxS)	3	5.5	< 3	19
Perfluorononanoic acid (PFNA)	< 2	< 2	< 2	< 2
Perfluorooctane sulfonate (PFOS)	< 4	< 4	< 4	< 4
Perfluorooctanoic acid (PFOA)	**4.2**	**2.6**	< 2	**4.3**

BOLD TEXT INDICATE DETECTIONS PFOA & PFAS

TABLE 2: PFC Concentrations by Site - Soils

Site	FTA	FTA	FTA	FTA	FTA	FTA	FTA	FTA	FTA
Sample ID	**SLUDGE**	**PIT#1**	**OH #1**	**OH #2**	**OH #3**	**OWS**	**OIL TANK**	**LP #1**	**LP #2**
Date Sampled	9-Jun-16	9-Jun-16	9-Jun-16	9-Jun-16	9-Jun-16	26-Oct-16	26-Oct-16	26-Oct-16	26-Oct-16
	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g
Perfluorobutanesulfonic acid (PFBS)	38	ND	ND	0.53	ND	< 0.51	< 0.52	< 0.51	< 0.49
Perfluoroheptanoic acid (PFHpA)	95	ND	0.38	2.2	0.38	0.34 J	< 0.31	< 0.31	0.63
Perfluorohexanesulfonic acid (PFHxS)	330	8.4	12	18	8.5	0.87 J	< 0.52	< 0.51	1.8
Perfluorononanoic acid (PFNA)	34	7.4	7.3	73	4.2	0.77	0.60	< 0.21	6.6
Perfluorooctane sulfonate (PFOS)	**11000**	**210**	**350**	**2600**	**150**	**100**	**20**	< 0.72	**68**
Perfluorooctanoic acid (PFOA)	**200**	**12**	**1.3**	**2.6**	**1.1**	**0.74**	< 0.31	< 0.31	**5.6**
Site	FTA	FTA	LP1	LP1	LP2	LP2	LP3	LP3	LP3
Sample ID	**LP #3**	**WTR TANK**	**SB1Drain**	**SB1Sump**	**SB2Drain**	**SB2Sump**	**SB3Drain**	**SB3SumpA**	**SB3SumpB**
Date Sampled	26-Oct-16	26-Oct-16	1-Nov-16	1-Nov-16	2-Nov-16	2-Nov-16	2-Nov-16	2-Nov-16	2-Nov-16
	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g
Perfluorobutanesulfonic acid (PFBS)	< 0.51	< 0.52	< 0.56	< 0.62	< 0.57	< 0.59	< 0.50	< 0.54	< 0.55
Perfluoroheptanoic acid (PFHpA)	< 0.31	< 0.31 J	< 0.34	< 0.37	< 0.34	< 0.36	< 0.30	< 0.33	< 0.33
Perfluorohexanesulfonic acid (PFHxS)	< 0.51	< 0.52	< 0.56	< 0.62	< 0.57	< 0.59	< 0.50	< 0.54	< 0.55
Perfluorononanoic acid (PFNA)	< 0.21	< 0.21	< 0.22	< 0.25	< 0.23	< 0.24	< 0.20	< 0.22	< 0.22
Perfluorooctane sulfonate (PFOS)	< 0.72	**13**	< 0.79	< 0.87	< 0.80	< 0.83	< 0.70	**1.6 J**	< 0.76
Perfluorooctanoic acid (PFOA)	< 0.31	< 0.43 J	< 0.34	< 0.37	< 0.34	< 0.36	< 0.30	< 0.33	< 0.33

BOLD TEXT INDICATE DETECTIONS PFOA & PFAS

APPENDICES

APPENDIX A

Fire Training Pit July Investigation

Figure 1 - Fire Training Pit - Test Pit 1 to the Right of Pit Just Out of Photo

Figure 2 - Fire Training Pit Test Pit 1

Figure 3 - Fire Training Pit - Overhang Sample Locations

Fire Training Pit Drainage System Removal

Figure 4 - 5,000 Gallon Steel Storage Tank

Figure 5 - 300 Gallon Steel Storage Tank

Figure 6 - Oil Water Separator

Figure 7 - Drainage Line Pits

APPENDIX B

3M

Light Water™ 3% AFFF FC-203CF

Product Information

Post-It® Fax Note 7671	Date 3/4/98	# of pages ▸ 18
To Ray Pierson	From Ron Stoll	
Co./Dept.	Co.	
Phone #	Phone # 612/733-0444	
Fax #	Fax #	

Description

3M™ Light Water FC-203CF 3% Aqueous Film Forming Foam (AFFF) is a synthetic firefighting foam concentrate designed for use on non-polar, hydrocarbon hazards. When proportioned with water and applied with conventional foam or water/fog equipment, Light Water 3% AFFF provides excellent control and extinguishment of Class B fires by spreading a vapor-sealing film over the liquid fuel. This vapor seal inhibits reflash even when the foam blanket is ruptured and also allows the product to be used to secure non-ignited spills. Light Water 3% AFFF provides excellent penetrating and wetting qualities when used on Class A fires. This is important when extinguishing deep-seated fires in wood, paper, rubber tires and other ordinary combustibles.

Typical Properties

(Not for Specification Purposes)

Nominal use concentration	3%
Specific gravity	@ 77°F (25°C): 1.027
Density	8.56 lbs./gal.
Viscosity	@ 77°F (25°C): 3.5 centistokes @ 40°F (4.4°C): 5.3 centistokes
Minimum use temperature	35°F (1.7°C)
Storage temperature	35° - 120°F (1.7° - 49°C)
Freeze point	25°F (-4°C)
pH	@ 77°F (25°C): 8
Appearance	Amber liquid

Applications

Light Water FC-203CF 3% AFFF can be used with conventional foam equipment with fresh, sea or brackish water. Self-educting foam nozzles and foam nozzles with in-line eductors are among the most common types of hardware for application.

In addition to its use in aspirating foam equipment, Light Water 3% AFFF can be dispensed effectively through non-aspirating equipment including fog nozzles, water spray devices and standard sprinklers. Light Water 3% AFFF exceeds U.S. Military specification MIL F24385F, supersedes E(SH) and is listed on the U.S. Military Q.P.L. (Qualified Product List). Light Water FC-203CF 3% AFFF is listed by UL and approved by Factory Mutual Research Corporation (FM).

Light Water 3% AFFF may be applied to fires simultaneously with dry chemical firefighting agents because the two are compatible.

Features

Effective: Rapid extinguishment reduces the chances of dangerous incidents and reduces the risk to property and equipment. Light Water 3% AFFF also prevents reflash and burnback, which are major causes of injuries. The securing action of Light Water 3% AFFF minimizes the fire hazard during clean up of flammable liquid spills.

Reliable: Light Water 3% AFFF can be stored for virtually an indefinite period of time in approved equipment and systems. NFPA 11 recommends annual inspection of all foam systems.

Features (cont.)

Economical: Light Water™ FC-203CF 3% AFFF offers faster extinguishment than protein based foams, so less agent is required in training and actual fire emergencies. Its wide range of applications reduces or eliminates the need to inventory other special type agents.

Environmental/ Toxicological Properties

Light Water FC-203CF 3% AFFF concentrates undergo a program of ongoing testing to assess the impact of 3M firefighting foam on the natural environment. Data indicate that:

3M™ AFFF products are low in toxicity to tested aquatic organisms. (Toxicity information is available from Product Environmental Data Sheets, Material Safety Data Sheets and Toxicity Summary Sheets for individual products.)

Aquatic life is not adversely affected when 3M AFFF products are used and disposed of properly.

3M AFFF products can be successfully treated in biological waste water treatment systems. (Request Product Environmental Data Sheets and Disposal Recommendations from your 3M representative.)

Storage

Light Water FC-203CF 3% AFFF may be stored in its shipping container without change in its original physical or chemical characteristics. It does not show significant sedimentation or precipitation in storage or after temperature cycling. Freezing and thawing have no effect on performance and the concentrate proportions satisfactorily in ordinary equipment at temperatures above 32°F. Freeze-thaw cycling may cause slight stratification which may be overcome with moderate agitation. Premix solutions in fresh water may be stored long-term for ready use at temperatures above freezing.

Packaging

Light Water 3% AFFF is available in 5 gallon pails or 55 gallon drums.

Representative Locations

3M Corporate Headquarters
Fire Protection Systems
3M Center, Building 223-6S-04
St. Paul, MN 55144-1000
1 800 360 6777
612 733 6791 (FAX – Orders Only)

Anchorage
11151 Calaska Circle
Anchorage, AK 99515
907 522 5200

Honolulu
4443 Malaai Street (96818)
PO Box 30048
Honolulu, HI 96820
808 422 2721

Canada
3M Canada Inc.
1840 Oxford Street
PO Box 5757
London, Ontario, Canada N6A 4T1
519 451 2500
519 452 6262 (FAX)

24 Hour Emergency Service
612 733 1110

3M

Fire Protection Systems
3M Specialty Chemicals Division
3M Center, Building 223-6S-04
St. Paul, MN 55144-1000

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MATERIAL SAFETY
DATA SHEET

3M
3M Center
St. Paul, Minnesota
55144-1000
1-800-364-3577 or (612) 737-6501 (24 hours)

DIVISION: SPECIALTY CHEMICALS DIVISION
TRADE NAME:
FC-203CF LIGHT WATER(TM) Brand Aqueous Film Forming Foam
ID NUMBER/U.P.C.:

98-0211-5617-3	00-51135-10152-0	98-0211-5618-1	00-51135-10153-7
98-0211-5619-9	00-51135-10154-4	98-0211-5620-7	00-51135-10155-1
98-0211-5621-5	00-51135-10156-8	98-0211-5622-3	00-51135-10157-5
98-0211-5623-1	- - -	98-0211-9304-4	00-51135-11130-7
ZF-0002-0554-0	- - -	ZF-0002-0620-9	- - -
ZF-0002-0789-2	- - -		

ISSUED: November 05, 1997
SUPERSEDES: February 19, 1997
DOCUMENT: 10-4322-3

1. INGREDIENT	C.A.S. NO.	PERCENT	
WATER	7732-18-5	69.0	- 71.0
DIETHYLENE GLYCOL BUTYL ETHER	112-34-5		20.0
AMPHOTERIC FLUOROALKYLAMIDE DERIVATIVE +(5803P)	TradeSecret	1	- 5
ALKYL SULFATE SALTS(2) +(5805P, 5806P)	TradeSecret	1.0	- 5.0
TRIETHANOLAMINE	102-71-6	0.5	- 1.5
PERFLUOROALKYL SULFONATE SALTS(5) +(5804P)	TradeSecret	0.5	- 1.5
TOLYL TRIAZOLE	29385-43-1		0.05

New Jersey Trade Secret Registry Number (EIN) 04499600-+

This product contains the following toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR Part 372:
DIETHYLENE GLYCOL BUTYL ETHER

2. PHYSICAL DATA

BOILING POINT:	100 C (Typical)
VAPOR PRESSURE:	ca. 17.4 mmHg Calc @ 20C
VAPOR DENSITY:	ca. 0.77 Air=1 Calc @ 20C
EVAPORATION RATE:	< 1 BuOAc=1
SOLUBILITY IN WATER:	Miscible
SPECIFIC GRAVITY:	1.0 Water=1
PERCENT VOLATILE:	90 % by wt
pH:	8.5
VISCOSITY:	N/D
MELTING POINT:	N/A

APPEARANCE AND ODOR:
Clear, amber colored liquid.

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	None (Setaflash CC)
FLAMMABLE LIMITS - LEL:	N/A
FLAMMABLE LIMITS - UEL:	N/A
AUTOIGNITION TEMPERATURE:	N/A

EXTINGUISHING MEDIA:
Product is a fire-extinguishing agent.

SPECIAL FIRE FIGHTING PROCEDURES:
Not applicable

UNUSUAL FIRE AND EXPLOSION HAZARDS:
See Hazardous Decomposition section for products of combustion.

4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:
Not applicable.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

4. REACTIVITY DATA (continued)

HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon Monoxide and Carbon Dioxide, Oxides of Nitrogen, Oxides of Sulfur, Hydrogen Fluoride

Thermal decomposition of usage concentrations does not present a hazard.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:
Observe precautions from other sections. Ventilate area. Contain spill. Cover with absorbent material. Collect spilled material. Clean up residue with water. Place in an approved metal container. Seal the container.

RECOMMENDED DISPOSAL:
Discharge spent solutions to a wastewater treatment system. Reduce discharge rate if foaming occurs. Large quantities may adversely affect biological wastewater treatment systems. Incinerate in an industrial or commercial facility in the presence of a combustible material. Combustion products will include HF.

ENVIRONMENTAL DATA:
A Product Environmental Data Sheet (PED) is available.

5-Day Biochemical Oxygen Demand (BOD5): 0.35 g/g; 20-Day Biochemical Oxygen Demand (BOD20): 0.75 g/g; 20-Day BOD/COD: 0.96; Chemical Oxygen Demand (COD): 0.75 g/g; 96-Hr LC50, Fathead minnow (Pimephales promelas): >1,000 mg/L; 48-Hr EC50, Water flea,(Daphnia magna): >1,000 mg/L; 96-Hr EC50, Algae (Selenastrum capricornutum): 143 mg/L (130-156); 30-Min EC50, Photobacterium phosphoreum (Microtox System): 280 mg/L (260-300); 3-Hr, 20C EC50, Activated Sludge Respiration (OECD Method #209): >1,000 mg/L.

REGULATORY INFORMATION:
Volatile Organic Compounds: 200 gms/liter South Coast Air Quality Mgmt Dist Method Calc. @ 20 C..
VOC Less H2O & Exempt Solvents: N/A.

Since regulations vary, consult applicable regulations or authorities before disposal. In the event of an uncontrolled release of this material, the user should determine if the release qualifies as a reportable quantity. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

The components of this product are in compliance with the chemical registration requirements of: TSCA, EINECS, CDSL, AICS, MITI.

5. ENVIRONMENTAL INFORMATION (continued)

EPCRA HAZARD CLASS:**
FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

6. SUGGESTED FIRST AID

EYE CONTACT:
Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

SKIN CONTACT:
Flush skin with large amounts of water. If irritation persists, get medical attention.

INHALATION:
If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician.

IF SWALLOWED:
Drink two glasses of water. Call a physician.

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:
Avoid eye contact with vapor, spray, or mist. Wear vented goggles.

SKIN PROTECTION:
Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: butyl rubber.

RECOMMENDED VENTILATION:
Use with adequate dilution ventilation.

RESPIRATORY PROTECTION:
Avoid breathing of vapors, mists or spray. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half-mask organic vapor respirator with dust/mist prefilter.

PREVENTION OF ACCIDENTAL INGESTION:
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Wash hands after handling and before eating.

7. PRECAUTIONARY INFORMATION (continued)

RECOMMENDED STORAGE:
Store away from heat. Keep container closed when not in use.

FIRE AND EXPLOSION AVOIDANCE:
Not applicable.

HMIS HAZARD RATINGS: HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0
PERSONAL PROTECTION: X (See precautions, section 7.)

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
WATER	NONE	NONE	NONE	NONE	
DIETHYLENE GLYCOL BUTYL ETHER	35	PPM	TWA	CMRG	
AMPHOTERIC FLUOROALKYLAMIDE DERIVATIVE +(5803P)	NONE	NONE	NONE	NONE	
ALKYL SULFATE SALTS(2) +(5805P, 5806P)	NONE	NONE	NONE	NONE	
TRIETHANOLAMINE	5	MG/M3	TWA	ACGIH	
PERFLUOROALKYL SULFONATE SALTS(5) +(5804P)	0.1	MG/M3	TWA	3M	Y
TOLYL TRIAZOLE	NONE	NONE	NONE	NONE	

* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:
- ACGIH: American Conference of Governmental Industrial Hygienists
- 3M: 3M Recommended Exposure Guidelines
- CMRG: Chemical Manufacturer Recommended Exposure Guidelines
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:
Moderate Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, and hazy vision.

SKIN CONTACT:
Moderate Skin Irritation (after prolonged or repeated contact): signs/symptoms can include redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

May be absorbed through the skin in harmful amounts.

8. HEALTH HAZARD DATA (continued)

INHALATION:
Single overexposure, above recommended guidelines, may cause:

Central Nervous System Depression: signs/symptoms can include headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Prolonged or repeated overexposure, above recommended guidelines, may cause:

Blood disorders: signs/symptoms can include prolonged weakness and fatigue.

Bone Marrow Depression: signs/symptoms can include prolonged weakness and fatigue.

Kidney Effects: signs/symptoms can include reduced urine volume, blood in urine and back pain.

Liver Effects: signs/symptoms can include yellow skin(jaundice) and tenderness of upper abdomen.

Pulmonary Edema: signs/symptoms can include coughing, congestion, difficulty breathing, which can result in respiratory failure and death.

IF SWALLOWED:
Ingestion is not a likely route of exposure to this product.

OTHER HEALTH HAZARD INFORMATION:
This product is not known to contain any substances regulated under California Proposition 65.

A 3M Product Toxicity Summary Sheet is available.

SECTION CHANGE DATES

HEALTH HAZARD DATA SECTION CHANGED SINCE February 19, 1997 ISSUE

The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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MATERIAL SAFETY DATA SHEET

CHEMGUARD 3% AFFF C-303

Revision Date: 1/25/2006

1. PRODUCT IDENTIFICATION

Chemical Family: Surfactant mixture; fire fighting foam concentrate
Aqueous Film Forming Foam

Product name: Chemguard 3% AFFF C-303

Manufacturer: Chemguard, Inc.
204 South 6th Ave.
Mansfield, TX 76063
emergency phone: 817-473-9964

2. COMPOSITION / INFORMATION ON INGREDIENTS

		ACGIH/PPM		OSHA/PPM	
CAS NO.	Common Name	TWA	STEL	PEL	% by wt
7732-18-5	water				85% - 90%
57018-52-7	propylene glycol t-butyl ether	not established			2% - 4%
7487-88-9	magnesium sulfate	N/A	N/A	N/A	1% - 2%
proprietary mixture	proprietary hydrocarbon surfactant	N/A	N/A	N/A	proprietary
proprietary mixture	proprietary fluorosurfactant	N/A	N/A	N/A	proprietary

3. HAZARDS IDENTIFICATION

Routes of entry: Dermal, inhalation and ingestion
Potential Health Effects: May cause skin and eye irritation.

Carcinogenicity: Not a carcinogen.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Call a physician.
Inhalation: Remove to fresh air.
Skin: Rinse with water. Wash with soap and water. Contaminated clothing should be washed before re-use.
Eyes: Rinse with water. Call a physician.

5. FIRE FIGHTING MEASURES

Flash Point:	>150°F
Flammable Limits in air (lower % by volume):	not evaluated
Flammable Limits in air (upper % by volume):	not evaluated
Auto-ignition Temperature:	not evaluated

General Hazards: None known.
Fire Fighting Equipment: Self contained breathing apparatus
Fire Extinguishing Media: Water, Foam, Carbon Dioxide, Dry Chemical, Halon
Fire and Explosion Hazards: Decomposition products may be toxic.
Hazardous Combustion Products: oxides of nitrogen, sulfur and carbon

6. ACCIDENTAL RELEASE

Contain spills. Vacuum or pump into storage containers, absorb smaller quantities with absorbent materials, and dispose of properly. Washing area with water will create large amounts of foam.

Dispose of released and contained material in accordance with local, state, and federal regulations. Release to local waste treatment plant only with permission.

7. HANDLING AND STORAGE

Store in original container, or appropriate end-use device. Store at temperatures of 35 - 120 degrees F. If the material freezes, it may be thawed without loss of performance.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye Protection: Wear side-shield safety glasses.
Skin Protection: Wear latex gloves.
Respiratory Protection: Use organic vapor respirator if needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	205° - 212°F
Melting Point:	30° F
Specific Gravity:	1.012 g/ml
Vapor Pressure (mm Hg):	N/A
pH	7.0 - 8.5
Flash Point (PMCC):	>150°F
Vapor Density (air = 1)	N/A
Solubility in water:	100%
Appearance:	clear amber liquid
Odor:	slight solvent odor

10. STABILITY AND REACTIVITY

Stability: Stable
Incompatibility: Strong oxidizers
Hazardous Polymerization: Will not occur.
Decomposition Products: Oxides of nitrogen, sulfur, carbon.

11. TOXICOLOGICAL INFORMATION

Eye Irritation: (Rabbits) mild irritant
Skin Irritation: (Rabbits) minimal irritant

Inhalation Toxicity:	not evaluated
Sensitization:	not evaluated
Teratology:	not evaluated
Mutagenicity:	not evaluated
Reproduction:	not evaluated
Acute Oral Effects (Rats):	not evaluated

12. ECOLOGICAL INFORMATION

	CONCENTRATE	SOLUTION (AS USED)
Chemical Oxygen Demand:	210,000 mg/l	6,300 mg/l
Biological Oxygen Demand (20 day):	79,800 mg/l	2,394 mg/l
Biodegradability (B.O.D./C.O.D.)	38%	38%
Total Organic Carbon:	33,600 mg/l	1008 mg/l
LC50 (96 hour pimephales promelas)	233 ppm	7767 ppm
LC50 (48 hour, daphnia magna)	1110 ppm	37,000 ppm

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state, and federal regulations. Discharge to waste treatment plants only with permission. Anti-foam agents may be used to reduce foaming in waste streams.

14. TRANSPORTATION INFORMATION

Department of Transportation proper shipping name: not regulated

15. REGULATORY INFORMATION

All ingredients are on the TSCA inventory.
No components are reportable under SARA Title III, sec. 313
No components are priority pollutants listed under the U.S. Clean Water Act Section 307 (2)(1) Priority Pollutant List (40 CFR 401.15).
No components are reportable under **CERCLA**.

16. OTHER INFORMATION

NFPA Hazard Ratings		**HMIS Identification System**
1	Health Hazard Rating	1
1	Flammability Rating	1
0	Instability/Reactivity Rating	0

CHANGE LOG:

Revision 2 - Revision date changed.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the preparation

Product Name:	"SILV-EX Foam Concentrate"
Chemical Name:	N/A – This is a mixture/preparation.
CAS No.:	N/A – This is a mixture/preparation.
Chemical Formula:	N/A – This is a mixture/preparation.
EINECS Number:	N/A – This is a mixture/preparation.

1.2. Use of the preparation

The intended or recommended use of this preparation is as a FIRE EXTINGUISHING AGENT.

1.3. Company identification

Manufacturer/Supplier:	ANSUL INCORPORATED
Address:	One Stanton Street, Marinette, WI 54143-2542
Prepared by:	Safety and Health Department
Phone:	715-735-7411
Internet/Home Page:	http://www.ansul.com
Date of Issue:	September, 2003

1.4. Emergency telephone

CHEMTREC 800-424-9300 or 703-527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

2.1.

Ingredient Name:	Proprietary mixture consisting of sodium and ammonium salts of fatty alcohol ether sulfates (C8-C18), higher alcohols, and water. Not otherwise specified.
Chemical Formula:	N/A – This is a mixture/preparation.
CAS No.:	N/A – This is a mixture/preparation.
EINECS Number:	N/A – This is a mixture/preparation.
Concentration, Wt %:	>70 %.
Hazard Identification:	See Heading 3.

Ingredient Name:	Diethylene Glycol Monobutyl Ether (a).
Chemical Formula:	$C_4H_9O(CH_2CH_2O)_2H$.
CAS No.:	112-34-5.
EINECS Number:	203-961-6.
Concentration, Wt %:	18 %.
Hazard Identification:	See Heading 3.

Ingredient Name:	Ethanol (Ethyl Alcohol).
Chemical Formula:	CH_3CH_2OH.
CAS No.:	64-17-5.
EINECS Number:	200-578-6
Concentration, Wt %:	8 %.
Hazard Identification:	See Heading 3.

(a) This chemical is subject to reporting requirements of SARA Title III Section 313 and 40 CFR Section 372.

3. HAZARDS IDENTIFICATION

FOR HUMANS:
Product:

EU Classification:		Irritant – Xi; Flammable – F.
R Phrases:	11	Highly flammable.
	36	Irritating to eyes.
S Phrases	2	Keep out of the reach of children.
	7	Keep container tightly closed.
	16	Keep away from sources of ignition – No smoking.
	24	Avoid contact with skin.
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Components:
Diethylene Glycol Monobutyl Ether:

EU Classification:		Irritant – Xi.
R Phrases:	36	Irritating to eyes.
S Phrases:	2	Keep out of the reach of children.
	24	Avoid contact with skin.
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ethanol (Ethyl Alcohol):

EU Classification:		Flammable – F.
R Phrases:	11	Highly flammable.
S Phrases:	2	Keep out of the reach of children.
	7	Keep container tightly closed.
	16	Keep away from sources of ignition – No smoking.

Limit Values for Exposure:
Diethylene Glycol Monobutyl Ether:

OSHA PEL (General Industry) 8 hour TWA:	None established.
MAK (DE) Limit value:	100 mg/m^3.
Short term exposure limit value (8 times, 5 minutes):	200 mg/m^3.

Ethanol (Ethyl Alcohol):

ACGIH TLV-TWA:	1000 ppm.
OSHA PEL (General Industry) 8 hour TWA:	1000 ppm (1900 mg/m^3).

Neither this preparation nor the substances contained in it have been listed as carcinogenic by National Toxicology Program, I.A.R.C., or OSHA.

AS PART OF GOOD INDUSTRIAL AND PERSONAL HYGIENE AND SAFETY PROCEDURE, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes, and clothing.

SIGNS AND SYMPTOMS:
Acute Exposure:

Eye Contact:	May cause mild to moderate transient irritation.
Skin Contact:	May cause mild transient irritation and/or dermatitis.
Inhalation:	Not an expected route of entry.
Ingestion:	Irritating to mucous membranes. Large oral doses could produce narcosis.
Chronic Overexposure:	Possible problems with kidneys, lungs, gastrointestinal, spleen, behavioral (sleep, motor, headache), lungs, gastrointestinal, liver, endocrine, blood, developmental.

Diethylene Glycol Monobutyl Ether did not interfere with reproduction. However, body weights of newborn animals were decreased.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Diseases of the kidney and liver.

FOR ENVIRONMENT:
As much as possible, keep from being washed into surface waters.

4. FIRST AID MEASURES

Eye Contact:	Wash with water for a minimum of 15 minutes. If irritation persists, seek medical attention.
Skin Contact:	Wash affected area with soap and water. If irritation persists, seek medical attention.
Inhalation:	Remove from exposure. If irritation persists, seek medical attention.
Ingestion:	Dilute by drinking large quantities of water.

5. FIRE-FIGHTING MEASURES

This preparation is an extinguishing media.
There are NO extinguishing media which must not be used for safety reasons.
NO special protective equipment is needed for fire-fighters.

6. ACCIDENTAL RELEASE MEASURES

For personal protection: Prevent skin and eye contact, see Heading 8.
Clean up: Use an absorbent material such as diatomaceous earth, sawdust, etc., and sweep up, see Heading 13.
As much as possible, keep from being washed into surface waters.

7. HANDLING AND STORAGE

7.1. Handling

Care should be taken in handling all chemical substances and preparations.
See incompatibility information in Heading 10.

7.2. Storage

NO special conditions are needed for safe storage.
See incompatibility information in Heading 10.
Store in original container. Keep tightly closed until used.
As much as possible, keep from being washed into surface waters.

7.3. Specific use

The intended or recommended use of this preparation is as a FIRE EXTINGUISHING AGENT.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure limit values

Limit Values for Exposure:

Diethylene Glycol Monobutyl Ether:

OSHA PEL (General Industry) 8 hour TWA:	None established.
MAK (DE) Limit value:	100 mg/m^3.
Short term exposure limit value (8 times, 5 minutes):	200 mg/m^3.

Ethanol (Ethyl Alcohol):

ACGIH TLV-TWA:	1000 ppm.
OSHA PEL (General Industry) 8 hour TWA:	1000 ppm (1900 mg/m^3).

8.2. Exposure controls

8.2.1. Occupational exposure controls

8.2.1.1. Respiratory protection

None expected to be needed. Mechanical ventilation is recommended.

8.2.1.2. Hand protection

Use chemical resistant gloves when handling the preparation.

8.2.1.3. Eye protection

Chemical goggles are recommended.

8.2.1.4. Skin protection

Standard fire fighting safety equipment should provide all protection which is necessary.

8.2.2. Environmental exposure controls

As much as possible, keep from being washed into surface waters.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Appearance:	Pale straw yellow, clear liquid.
Odor:	Mild, sweet odor.

9.2. Important health, safety, and environmental information

pH:	7.0-8.5.
Boiling point/boiling range:	65-70 °C (initial boiling).
Flash point:	40 °C PMCC.
Flammability (solid/gas):	Flammable.
Explosive properties:	Not explosive.
Oxidizing properties:	Not an oxidizer.
Vapor Pressure:	Not determined.
Relative Density (Water = 1):	About 1.
Solubility:	
-- Water solubility:	Completely soluble.
-- Fat solubility:	Not soluble.
Partition coefficient, n-octanol/water:	Not determined.
Viscosity:	2-10 Cs.
Vapor density (Air = 1):	Not determined, but <1.
Evaporation rate (Butyl acetate = 1):	Approx. 0.005.

9.3. Other information

Auto-ignition temperature:	Does not ignite.

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid

There are NO known conditions such as temperature, pressure, light, shock, etc., which may cause a dangerous reaction.

10.2. Materials to avoid

Reactive metals, electrically energized equipment, any material reactive with water, or strong oxidizers.

10.3. Hazardous decomposition products

Normally stable.

Hazardous polymerization will NOT occur.

Not known, however, carbon monoxide and oxides of nitrogen and sulfur may be produced during fire conditions.

Hydrogen sulfide may be produced during bacterial decomposition under anaerobic conditions.

11. TOXICOLOGICAL INFORMATION

Product: The toxicity of the product mixture has not been determined.

Components:

Diethylene glycol monobutyl ether:

Toxicity Data:	Oral (rat) LD_{50}	5,660 mg/kg.	[Dow Chemical Co.].
	Oral (rat) LD_{50}	9,623 mg/kg.	[EINICS ESIS].
	Dermal (rabbit) LD_{50}	4,000 mg/kg.	[Dow Chemical Co.].
	Dermal (rabbit) LD_{50}	2,764 mg/kg.	[EINICS ESIS].
Irritation Data:	Eye (rabbit)	20 mg/24 hrs. Moderate.	[EINICS ESIS].
	Eye (rabbit) Draize test	Highly irritating.	[EINICS ESIS].
	Skin (rabbit)	1000 mg/kg/day Moderate with edema, fissuring, and leathery appearance.	[EINICS ESIS].
Target organs:	Kidney, blood, liver, lungs, gastrointestinal, spleen.		

Ethanol:

Toxicity Data:	Oral (rat) LD_{50}	7,060 mg/kg
	Inhalation (rat) LC_{50}	20,000 ppm/10 hrs
Irritation Data:	Skin (rabbit)	400 mg open Mild
	Eye (rabbit)	500 mg/24 hrs Moderate
Target organs:	Behavioral (sleep, motor, headache), lungs, gastrointestinal, liver, endocrine, blood, developmental.	

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity

Components:

Diethylene glycol monobutyl ether:

Fish,	Lepomis marcrochinus:	LC_{50} (96 hrs)	1,300 mg/L.
	Carrassius auratus:	LC_{50} (24 hrs)	2,700 mg/L.
Daphnids,	Daphnia magna:	EC_{50} (24 hrs)	3,184 mg/L.
Algae,	Scenedesmus subspicatus:	EC_{50} (96 hrs)	>100 mg/L.

Ethanol:

Fish,	Oncorhynchus mykiss:	LC_{50} (24 hrs)	11,200 mg/L.
	Alburnus alburnus:	LC_{50} (96 hrs)	11,000 mg/L.
Daphnids,	Daphnia magna:	EC_{50} (24 hrs)	10,800 mg/L.

12.2. Mobility

Diethylene glycol monobutyl ether:

Should not partition from a water column to organic matter contained in sediments and suspended solids.

Ethanol:

Its low octanol/water partition coefficient indicates that its absorption to soil will be low.

12.3. Persistence and degradability

Diethylene glycol monobutyl ether:

Indirect photodegradation is about 50% in 3.5 hours.
Aerobic degradation with adapted activated sludge is 60% after 28 days.
COD = 2080 mg/g substance.
BOD5 = 250 mg O_2/g substance.
Theoretical oxygen demand = 2.17 mg/mg.

Ethanol:

Indirect photodegradation is about 50 % in 6 hours.
Aerobic degradation with adapted activated sludge is 74% after 5 days.
COD = 1700 mg/g substance.
BOD5 = 0.8 kg/L.

12.4. Bioaccumulative potential

Diethylene glycol monobutyl ether:

Should not bioaccumulate. Estimated bioaccumulation factor (log BCF) = 0.46.

Ethanol:

Will not bioaccumulate.

12.5. Other adverse effects

Ozone depletion potential:	None.
Photochemical ozone creation potential:	None.
Global warming potential:	None.

13. DISPOSAL CONSIDERATIONS

As much as possible, keep from being washed into surface waters.

Dispose of in compliance with national, regional, and local provisions that may be in force.

14. TRANSPORT INFORMATION

Hazard Class or Division: Not hazardous.

For additional transport information, contact Ansul Incorporated.

As much as possible, keep from being washed into surface waters.

15. REGULATORY INFORMATION

EU Classification: Irritant – Xi; Flammable – F.

R Phrases:
- 11 Highly flammable.
- 36 Irritating to eyes.

S Phrases:
- 2 Keep out of the reach of children.
- 7 Keep container tightly closed.
- 16 Keep away from sources of ignition – No smoking.
- 24 Avoid contact with skin.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Limit Values for Exposure:

Diethylene Glycol Monobutyl Ether:
- OSHA PEL (General Industry) 8 hour TWA: None established.
- MAK (DE) Limit value: 100 mg/m^3.
- Short term exposure limit value (8 times, 5 minutes): 200 mg/m^3.

Ethanol (Ethyl Alcohol):
- ACGIH TLV-TWA: 1000 ppm.
- OSHA PEL (General Industry) 8 hour TWA: 1000 ppm (1900 mg/m^3).

EINECS Status: All components are included in EINECS inventories or are exempt from listing.

EPA TSCA Status: All components are included in TSCA inventories or are exempt from listing.

Canadian DSL (Domestic Substances List): All components are included in the DSL or are exempt from listing.

Environmental restrictions: None are known.

Restrictions on Marketing and Use: None are known.

Refer to any other national measures that may be relevant.

16. OTHER INFORMATION

(HMIS) HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:

HEALTH:	1	4. Severe Hazard
FLAMMABILITY:	2	3. Serious Hazard
REACTIVITY:	0	2. Moderate Hazard
		1. Slight Hazard
		0. Minimal Hazard

(WHMIS) CANADIAN WORKPLACE HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:

This product is rated **D2B – Product may irritate eyes, skin or mucous membranes.**

Format is from directive 2001/58/EC.
EINECS data is from http://exb.jrc.it/existing-chemicals/
Data used to compile the data sheet is from Ansul Material Safety Data Sheet, February, 2002.

The EU Classification has been changed in accordance with Directive 1999/45/EC and information in the EINICS ESIS files (Existing Substances Information System).
Toxicological information added from the EINICS ESIS (Existing Substances Information System) and from Dow Chemical Company.
A rating under WHMIS has been added, following the Canadian guidelines.
Limit values for exposure for diethylene glycol monobutyl ether were changed, based on EINICS ESIS data.

17. DISCLAIMER

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT, BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ANSUL SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.

N/A = Not Applicable NDA = No Data Available

MSDS available at http://www.ansul.com

APPENDIX C

Fire Training Area

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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.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN00035
Arkansas	IN00035	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*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon (Primary AB)*	4074-001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA160002	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
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

Revision date: 04/14/2016

eurofins | Eaton Analytical

NELAC NARRATIVE PAGE

Client: United States Army Corp of Engineers Report #: 372298NP

Eurofins Eaton Analytical, Inc. is a NELAP accredited laboratory. All reported results meet the requirements of the NELAC standards, unless otherwise noted.

EEA contact person: Jessie Brasch

NELAP requires complete reporting of deviations from method requirements, regardless of the suspected impact on the data. Quality control failures not reported within the report summary are noted here.

Note: There were quality control issues with this report for Method 537. See Report Summary.

There were no additional quality control failures.

Jessie Brasch Analytical Services Manager 09/26/2016

Authorized Signature Title Date

110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: United States Army Corp of Engineers

Attn: Scott Forbes
10 South Howard St
9250-V
Baltimore, MD 21201

Report: 372298
Priority: Standard 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
3541652	FDFT-MW-1-Sept-2016	537	09/08/16 10:48	Client	09/09/16 08:45
3541653	FDFT-MW-2-Sept-2016	537	09/08/16 13:50	Client	09/09/16 08:45
3541656	FDFT-MW-3-Sept-2016	537	09/08/16 15:45	Client	09/09/16 08:45
3541657	FTB	537	09/08/16 13:50	Client	09/09/16 08:45
3541658	FDFT-MW-4-Sept-2016	537	09/08/16 17:24	Client	09/09/16 08:45
3541659	FDFT-MW-4-Sept-2016 Dup	537	09/08/16 08:00	Client	09/09/16 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 Jessie Brasch at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA. EEA is accredited by the National Environmental Laboratory Accreditation Program (NELAP).

Jessie Brasch — Analytical Services Manager — 09/26/2016

Authorized Signature — Title — Date

Client Name: United States Army Corp of Engineers
Report #: 372298

Client Name: United States Army Corp of Engineers Report #: 372298

Sampling Point: FDFT-MW-1-Sept-2016 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	---	2.0	**100**	ng/L	09/13/16 08:13	09/14/16 03:52	3541652
375-85-9	Perfluoroheptanoic acid (PFHpA) $	537	---	2.0	**770**	ng/L	09/13/16 08:13	09/14/16 23:53	3541652
355-46-4	Perfluorohexanesulfonic acid (PFHxS) $	537	---	2.0	**1200**	ng/L	09/13/16 08:13	09/14/16 23:53	3541652
375-95-1	Perfluorononanoic acid (PFNA) $	537	---	2.0	**430**	ng/L	09/13/16 08:13	09/14/16 23:53	3541652
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.0	**1500**	ng/L	09/13/16 08:13	09/14/16 23:53	3541652
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**1400**	ng/L	09/13/16 08:13	09/14/16 23:53	3541652

$ The state of origin does not offer certification for this parameter.

Sampling Point: FDFT-MW-2-Sept-2016 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	---	2.0	**96**	ng/L	09/13/16 08:13	09/14/16 04:09	3541653
375-85-9	Perfluoroheptanoic acid (PFHpA) $	537	---	2.0	**210**	ng/L	09/13/16 08:13	09/15/16 00:09	3541653
355-46-4	Perfluorohexanesulfonic acid (PFHxS) $	537	---	2.0	**3700**	ng/L	09/13/16 08:13	09/15/16 00:09	3541653
375-95-1	Perfluorononanoic acid (PFNA) $	537	---	2.0	**240**	ng/L	09/13/16 08:13	09/15/16 00:09	3541653
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.0	**3900**	ng/L	09/13/16 08:13	09/15/16 00:09	3541653
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**1500**	ng/L	09/13/16 08:13	09/15/16 00:09	3541653

$ The state of origin does not offer certification for this parameter.

Sampling Point: FDFT-MW-3-Sept-2016 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	---	2.0	**1100**	ng/L	09/13/16 08:13	09/15/16 00:26	3541656
375-85-9	Perfluoroheptanoic acid (PFHpA) $	537	---	2.0	**1500**	ng/L	09/13/16 08:13	09/15/16 00:26	3541656
355-46-4	Perfluorohexanesulfonic acid (PFHxS) $	537	---	2.0	**3500**	ng/L	09/13/16 08:13	09/15/16 00:26	3541656
375-95-1	Perfluorononanoic acid (PFNA) $	537	---	2.0	**1300**	ng/L	09/13/16 08:13	09/15/16 00:26	3541656
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.0	**4800**	ng/L	09/13/16 08:13	09/15/16 00:26	3541656
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**2100**	ng/L	09/13/16 08:13	09/15/16 00:26	3541656

$ The state of origin does not offer certification for this parameter.

Client Name: United States Army Corp of Engineers Report #: 372298

Sampling Point: 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	---	2.0	< 2.0	ng/L	09/13/16 08:13	09/14/16 05:16	3541657
375-85-9	Perfluoroheptanoic acid (PFHpA) $	537	---	2.0	< 2.0	ng/L	09/13/16 08:13	09/14/16 05:16	3541657
355-46-4	Perfluorohexanesulfonic acid (PFHxS) $	537	---	2.0	< 2.0	ng/L	09/13/16 08:13	09/14/16 05:16	3541657
375-95-1	Perfluorononanoic acid (PFNA) $	537	---	2.0	< 2.0	ng/L	09/13/16 08:13	09/14/16 05:16	3541657
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.0	< 2.0	ng/L	09/13/16 08:13	09/14/16 05:16	3541657
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	09/13/16 08:13	09/14/16 05:16	3541657

$ The state of origin does not offer certification for this parameter.

Sampling Point: FDFT-MW-4-Sept-2016 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	---	2.0	**130**	ng/L	09/13/16 08:13	09/14/16 05:32	3541658
375-85-9	Perfluoroheptanoic acid (PFHpA) $	537	---	2.0	**330**	ng/L	09/13/16 08:13	09/15/16 00:43	3541658
355-46-4	Perfluorohexanesulfonic acid (PFHxS) $	537	---	2.0	**430**	ng/L	09/13/16 08:13	09/15/16 00:43	3541658
375-95-1	Perfluorononanoic acid (PFNA) $	537	---	2.0	**9.6**	ng/L	09/13/16 08:13	09/14/16 05:32	3541658
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.0	**4500**	ng/L	09/13/16 08:13	09/15/16 00:43	3541658
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**150**	ng/L	09/13/16 08:13	09/14/16 05:32	3541658

$ The state of origin does not offer certification for this parameter.

Sampling Point: FDFT-MW-4-Sept-2016 Dup 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	---	2.0	**140**	ng/L	09/13/16 08:13	09/14/16 05:49	3541659
375-85-9	Perfluoroheptanoic acid (PFHpA) $	537	---	2.0	**340**	ng/L	09/13/16 08:13	09/15/16 01:00	3541659
355-46-4	Perfluorohexanesulfonic acid (PFHxS) $	537	---	2.0	**460**	ng/L	09/13/16 08:13	09/15/16 01:00	3541659
375-95-1	Perfluorononanoic acid (PFNA) $	537	---	2.0	**9.0**	ng/L	09/13/16 08:13	09/14/16 05:49	3541659
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.0	**4600**	ng/L	09/13/16 08:13	09/15/16 01:00	3541659
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**150**	ng/L	09/13/16 08:13	09/14/16 05:49	3541659

$ The state of origin does not offer certification for this parameter.

† 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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CHAIN OF CUSTODY RECORD

Page 1 of 1

REPORT TO: Scott Forbes 410 336 2567
105. Howard St.
Baltimore, MD Scott.e.forbes@usace.army.mil

BILL TO: Scott Forbes
Scott.e.forbes@usace.army.mil

SAMPLER (Signature): Kaitlyn Nelson

COMPLIANCE MONITORING: Yes ___ No X

PWS ID #:

POPULATION SERVED:

STATE (sample origin): NY

SOURCE WATER:

PROJECT NAME: Ft. Drum Fire Training Site Investigation

PO#: NA

	LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3541652	8-Sept-16	1048	X		FDFT - MW-1 - Sept 2016	Method 537			X	2	GW	
2	653	8-Sept-16	1350		X	FDFT - MW-2 - Sept. 2016	Method 537			X	2	GW	
3	654	8-Sept 16	1350		X	MS - MW-2 - Sept 2016	Method 537			X	2	GW	
4	655	8-Sept 16	1350		X	MSD MW-2 - Sept. 2016	Method 537			X	2	GW	
5	656	8-Sep-16	1545		X	FDFT - MW-3 - Sept. 2016	" 537			X	2	GW	
6	657	8-Sep-16	1350		X	Field Blank	Method 537			NA	2	GW	
7	658	8-Sep-16	1724		X	FDFT - MW-4 - Sept. 2016	Method 537			X	2	GW	
8	659	8-Sep-16	0800	X		FDFT - MW-4 - Sept. 2016 - DUP	" 537			X	2	GW	
9													
10													
11													
12													
13													
14													

RELINQUISHED BY:(Signature): Kaitlyn Nelson	DATE: 8-Sept 2016	TIME: 1830 AM PM	RECEIVED BY:(Signature):	DATE:	TIME: 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: KDmw	DATE: 9-9-16	TIME: 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 1 °C Upon Receipt 4.8 N/A

X Iced

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.

Eurofins Eaton Analytical
Run Log

Run ID: **220661** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3543764		OS	CY	09/13/2016 22:34	091316M537b-PFC12.mdb
LRB	3543752		RW	CY	09/13/2016 23:07	091316M537b-PFC12.mdb
FBM	3543754		RW	CY	09/13/2016 23:41	091316M537b-PFC12.mdb
FS	3541652	FDFT-MW-1-Sept-2016	GW	CY	09/14/2016 03:52	091316M537b-PFC12.mdb
FS	3541653	FDFT-MW-2-Sept-2016	GW	CY	09/14/2016 04:09	091316M537b-PFC12.mdb
LFSML	3541654	FDFT-MW-2-Sept-2016	GW	CY	09/14/2016 04:25	091316M537b-PFC12.mdb
LFSMDL	3541655	FDFT-MW-2-Sept-2016	GW	CY	09/14/2016 04:42	091316M537b-PFC12.mdb
FS	3541656	FDFT-MW-3-Sept-2016	GW	CY	09/14/2016 04:59	091316M537b-PFC12.mdb
FTB	3541657	FTB	RW	CY	09/14/2016 05:16	091316M537b-PFC12.mdb
FS	3541658	FDFT-MW-4-Sept-2016	GW	CY	09/14/2016 05:32	091316M537b-PFC12.mdb
FS	3541659	FDFT-MW-4-Sept-2016 Dup	DW	CY	09/14/2016 05:49	091316M537b-PFC12.mdb
CCM	3543765		OS	CY	09/14/2016 06:06	091316M537b-PFC12.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	---		8128.60	8128.6	ng/L	100	50 - 150	---	---	1.0	09/06/2016 16:00	09/13/2016 22:34	3543764
CCL	IS-PFOS-13C4	537	N/A	---		7134.95	7134.95	ng/L	100	50 - 150	---	---	1.0	09/06/2016 16:00	09/13/2016 22:34	3543764
CCL	SS-PFDA-13C2	537	N/A	---		97.1467	100	ng/L	97	70 - 130	---	---	1.0	09/06/2016 16:00	09/13/2016 22:34	3543764
CCL	SS-PFHxA-13C2	537	N/A	---		51.1297	50.0	ng/L	102	70 - 130	---	---	1.0	09/06/2016 16:00	09/13/2016 22:34	3543764
CCL	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		1.6525	2.0	ng/L	83	50 - 150	---	---	1.0	09/06/2016 16:00	09/13/2016 22:34	3543764
CCL	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		1.8997	2.0	ng/L	95	50 - 150	---	---	1.0	09/06/2016 16:00	09/13/2016 22:34	3543764
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		1.7229	2.0	ng/L	86	50 - 150	---	---	1.0	09/06/2016 16:00	09/13/2016 22:34	3543764
CCL	Perfluorononanoic acid (PFNA)	537	2.0	---		1.9425	2.0	ng/L	97	50 - 150	---	---	1.0	09/06/2016 16:00	09/13/2016 22:34	3543764
CCL	Perfluorooctane sulfonate (PFOS)	537	2.0	---		1.6746	2.0	ng/L	84	50 - 150	---	---	1.0	09/06/2016 16:00	09/13/2016 22:34	3543764
CCL	Perfluorooctanoic acid (PFOA)	537	2.0	---		1.9436	2.0	ng/L	97	50 - 150	---	---	1.0	09/06/2016 16:00	09/13/2016 22:34	3543764
LRB	IS-PFOA-13C2	537	N/A	---		8259.79	8128.6	ng/L	102	50 - 150	---	---	0.94	09/13/2016 08:13	09/13/2016 23:07	3543752
LRB	IS-PFOS-13C4	537	N/A	---		6564.48	7134.95	ng/L	92	50 - 150	---	---	0.94	09/13/2016 08:13	09/13/2016 23:07	3543752
LRB	SS-PFDA-13C2	537	N/A	---		96.5058	100	ng/L	103	70 - 130	---	---	0.94	09/13/2016 08:13	09/13/2016 23:07	3543752
LRB	SS-PFHxA-13C2	537	N/A	---		47.2133	50.0	ng/L	100	70 - 130	---	---	0.94	09/13/2016 08:13	09/13/2016 23:07	3543752
LRB	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.94	09/13/2016 08:13	09/13/2016 23:07	3543752
LRB	Perfluoroheptanoic acid (PFHpA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.94	09/13/2016 08:13	09/13/2016 23:07	3543752
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.94	09/13/2016 08:13	09/13/2016 23:07	3543752
LRB	Perfluorononanoic acid (PFNA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.94	09/13/2016 08:13	09/13/2016 23:07	3543752
LRB	Perfluorooctane sulfonate (PFOS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.94	09/13/2016 08:13	09/13/2016 23:07	3543752
LRB	Perfluorooctanoic acid (PFOA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.94	09/13/2016 08:13	09/13/2016 23:07	3543752
FBM	IS-PFOA-13C2	537	N/A	---		8337.80	8128.6	ng/L	103	50 - 150	---	---	1.0	09/13/2016 08:13	09/13/2016 23:41	3543754
FBM	IS-PFOS-13C4	537	N/A	---		6748.48	7134.95	ng/L	95	50 - 150	---	---	1.0	09/13/2016 08:13	09/13/2016 23:41	3543754
FBM	SS-PFDA-13C2	537	N/A	---		108.1300	100	ng/L	108	70 - 130	---	---	1.0	09/13/2016 08:13	09/13/2016 23:41	3543754
FBM	SS-PFHxA-13C2	537	N/A	---		51.3039	50.0	ng/L	103	70 - 130	---	---	1.0	09/13/2016 08:13	09/13/2016 23:41	3543754
FBM	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		102.6360	100	ng/L	103	70 - 130	---	---	1.0	09/13/2016 08:13	09/13/2016 23:41	3543754
FBM	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		101.1180	100	ng/L	101	70 - 130	---	---	1.0	09/13/2016 08:13	09/13/2016 23:41	3543754
FBM	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		102.4000	100	ng/L	102	70 - 130	---	---	1.0	09/13/2016 08:13	09/13/2016 23:41	3543754
FBM	Perfluorononanoic acid (PFNA)	537	2.0	---		98.1199	100	ng/L	98	70 - 130	---	---	1.0	09/13/2016 08:13	09/13/2016 23:41	3543754
FBM	Perfluorooctane sulfonate (PFOS)	537	2.0	---		97.8346	100	ng/L	98	70 - 130	---	---	1.0	09/13/2016 08:13	09/13/2016 23:41	3543754
FBM	Perfluorooctanoic acid (PFOA)	537	2.0	---		99.4424	100	ng/L	99	70 - 130	---	---	1.0	09/13/2016 08:13	09/13/2016 23:41	3543754
FS	IS-PFOA-13C2	537	N/A	FDFT-MW-1-Sept-2016		1889.66	8128.6	ng/L	**23**	50 - 150	---	---	0.91	09/13/2016 08:13	09/14/2016 03:52	3541652
FS	IS-PFOS-13C4	537	N/A	FDFT-MW-1-Sept-2016		5670.38	7134.95	ng/L	79	50 - 150	---	---	0.91	09/13/2016 08:13	09/14/2016 03:52	3541652
FS	SS-PFDA-13C2	537	N/A	FDFT-MW-1-Sept-2016		422.2660	100	ng/L	**464**	70 - 130	---	---	0.91	09/13/2016 08:13	09/14/2016 03:52	3541652
FS	SS-PFHxA-13C2	537	N/A	FDFT-MW-1-Sept-2016		153.7830	50.0	ng/L	**338**	70 - 130	---	---	0.91	09/13/2016 08:13	09/14/2016 03:52	3541652
FS	Perfluorobutanesulfonic acid (PFBS)	537	2.0	FDFT-MW-1-Sept-2016		100		ng/L	---	---	---	---	0.91	09/13/2016 08:13	09/14/2016 03:52	3541652
FS	IS-PFOA-13C2	537	N/A	FDFT-MW-2-Sept-2016		4533.90	8128.6	ng/L	56	50 - 150	---	---	0.9	09/13/2016 08:13	09/14/2016 04:09	3541653
FS	IS-PFOS-13C4	537	N/A	FDFT-MW-2-Sept-2016		4494.31	7134.95	ng/L	63	50 - 150	---	---	0.9	09/13/2016 08:13	09/14/2016 04:09	3541653
FS	SS-PFDA-13C2	537	N/A	FDFT-MW-2-Sept-2016		184.2180	100	ng/L	**205**	70 - 130	---	---	0.9	09/13/2016 08:13	09/14/2016 04:09	3541653
FS	SS-PFHxA-13C2	537	N/A	FDFT-MW-2-Sept-2016		72.2102	50.0	ng/L	**160**	70 - 130	---	---	0.9	09/13/2016 08:13	09/14/2016 04:09	3541653
FS	Perfluorobutanesulfonic acid (PFBS)	537	2.0	FDFT-MW-2-Sept-2016		96		ng/L	---	---	---	---	0.9	09/13/2016 08:13	09/14/2016 04:09	3541653

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 #
LFSML	IS-PFOA-13C2	537	N/A	FDFT-MW-2-Sept-2016		4613.70	8128.6	ng/L	57	50 - 150	---	---	1.0	09/13/2016 08:13	09/14/2016 04:25	3541654
LFSML	IS-PFOS-13C4	537	N/A	FDFT-MW-2-Sept-2016		4627.37	7134.95	ng/L	65	50 - 150	---	---	1.0	09/13/2016 08:13	09/14/2016 04:25	3541654
LFSML	SS-PFDA-13C2	537	N/A	FDFT-MW-2-Sept-2016		197.7510	100	ng/L	**198**	70 - 130	---	---	1.0	09/13/2016 08:13	09/14/2016 04:25	3541654
LFSML	SS-PFHxA-13C2	537	N/A	FDFT-MW-2-Sept-2016		73.2229	50.0	ng/L	**146**	70 - 130	---	---	1.0	09/13/2016 08:13	09/14/2016 04:25	3541654
LFSML	Perfluorobutanesulfonic acid (PFBS)	537	2.0	FDFT-MW-2-Sept-2016		105.0750	98.3429	ng/L	**437**	50 - 150	---	---	1.0	09/13/2016 08:13	09/14/2016 04:25	3541654
LFSMDL	IS-PFOA-13C2	537	N/A	FDFT-MW-2-Sept-2016		4620.42	8128.6	ng/L	57	50 - 150	---	---	1.0	09/13/2016 08:13	09/14/2016 04:42	3541655
LFSMDL	IS-PFOS-13C4	537	N/A	FDFT-MW-2-Sept-2016		4786.05	7134.95	ng/L	67	50 - 150	---	---	1.0	09/13/2016 08:13	09/14/2016 04:42	3541655
LFSMDL	SS-PFDA-13C2	537	N/A	FDFT-MW-2-Sept-2016		189.3260	100	ng/L	**189**	70 - 130	---	---	1.0	09/13/2016 08:13	09/14/2016 04:42	3541655
LFSMDL	SS-PFHxA-13C2	537	N/A	FDFT-MW-2-Sept-2016		75.3031	50.0	ng/L	**151**	70 - 130	---	---	1.0	09/13/2016 08:13	09/14/2016 04:42	3541655
LFSMDL	Perfluorobutanesulfonic acid (PFBS)	537	2.0	FDFT-MW-2-Sept-2016		95.0668	98.3429	ng/L	**-64**	50 - 150	10	50	1.0	09/13/2016 08:13	09/14/2016 04:42	3541655
FS	IS-PFOA-13C2	537	N/A	FDFT-MW-3-Sept-2016		4736.10	8128.6	ng/L	58	50 - 150	---	---	1.0	09/13/2016 08:13	09/14/2016 04:59	3541656
FS	IS-PFOS-13C4	537	N/A	FDFT-MW-3-Sept-2016		4646.08	7134.95	ng/L	65	50 - 150	---	---	1.0	09/13/2016 08:13	09/14/2016 04:59	3541656
FTB	IS-PFOA-13C2	537	N/A	FTB		8585.70	8128.6	ng/L	106	50 - 150	---	---	0.9	09/13/2016 08:13	09/14/2016 05:16	3541657
FTB	IS-PFOS-13C4	537	N/A	FTB		6970.06	7134.95	ng/L	98	50 - 150	---	---	0.9	09/13/2016 08:13	09/14/2016 05:16	3541657
FTB	SS-PFDA-13C2	537	N/A	FTB		100.8080	100	ng/L	112	70 - 130	---	---	0.9	09/13/2016 08:13	09/14/2016 05:16	3541657
FTB	SS-PFHxA-13C2	537	N/A	FTB		44.5691	50.0	ng/L	99	70 - 130	---	---	0.9	09/13/2016 08:13	09/14/2016 05:16	3541657
FTB	Perfluorobutanesulfonic acid (PFBS)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	09/13/2016 08:13	09/14/2016 05:16	3541657
FTB	Perfluoroheptanoic acid (PFHpA)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	09/13/2016 08:13	09/14/2016 05:16	3541657
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	09/13/2016 08:13	09/14/2016 05:16	3541657
FTB	Perfluorononanoic acid (PFNA)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	09/13/2016 08:13	09/14/2016 05:16	3541657
FTB	Perfluorooctane sulfonate (PFOS)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	09/13/2016 08:13	09/14/2016 05:16	3541657
FTB	Perfluorooctanoic acid (PFOA)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	09/13/2016 08:13	09/14/2016 05:16	3541657
FS	IS-PFOA-13C2	537	N/A	FDFT-MW-4-Sept-2016		7730.47	8128.6	ng/L	95	50 - 150	---	---	0.93	09/13/2016 08:13	09/14/2016 05:32	3541658
FS	IS-PFOS-13C4	537	N/A	FDFT-MW-4-Sept-2016		4080.80	7134.95	ng/L	57	50 - 150	---	---	0.93	09/13/2016 08:13	09/14/2016 05:32	3541658
FS	SS-PFDA-13C2	537	N/A	FDFT-MW-4-Sept-2016		102.5210	100	ng/L	110	70 - 130	---	---	0.93	09/13/2016 08:13	09/14/2016 05:32	3541658
FS	SS-PFHxA-13C2	537	N/A	FDFT-MW-4-Sept-2016		43.0484	50.0	ng/L	93	70 - 130	---	---	0.93	09/13/2016 08:13	09/14/2016 05:32	3541658
FS	Perfluorobutanesulfonic acid (PFBS)	537	2.0	FDFT-MW-4-Sept-2016		130		ng/L	---	---	---	---	0.93	09/13/2016 08:13	09/14/2016 05:32	3541658
FS	Perfluorononanoic acid (PFNA)	537	2.0	FDFT-MW-4-Sept-2016		9.6		ng/L	---	---	---	---	0.93	09/13/2016 08:13	09/14/2016 05:32	3541658
FS	Perfluorooctanoic acid (PFOA)	537	2.0	FDFT-MW-4-Sept-2016		150		ng/L	---	---	---	---	0.93	09/13/2016 08:13	09/14/2016 05:32	3541658
FS	IS-PFOA-13C2	537	N/A	FDFT-MW-4-Sept-2016 Dup		7846.90	8128.6	ng/L	97	50 - 150	---	---	0.9	09/13/2016 08:13	09/14/2016 05:49	3541659
FS	IS-PFOS-13C4	537	N/A	FDFT-MW-4-Sept-2016 Dup		3989.09	7134.95	ng/L	56	50 - 150	---	---	0.9	09/13/2016 08:13	09/14/2016 05:49	3541659
FS	SS-PFDA-13C2	537	N/A	FDFT-MW-4-Sept-2016 Dup		95.4026	100	ng/L	106	70 - 130	---	---	0.9	09/13/2016 08:13	09/14/2016 05:49	3541659
FS	SS-PFHxA-13C2	537	N/A	FDFT-MW-4-Sept-2016 Dup		41.9985	50.0	ng/L	93	70 - 130	---	---	0.9	09/13/2016 08:13	09/14/2016 05:49	3541659
FS	Perfluorobutanesulfonic acid (PFBS)	537	2.0	FDFT-MW-4-Sept-2016 Dup		140		ng/L	---	---	---	---	0.9	09/13/2016 08:13	09/14/2016 05:49	3541659
FS	Perfluorononanoic acid (PFNA)	537	2.0	FDFT-MW-4-Sept-2016 Dup		9.0		ng/L	---	---	---	---	0.9	09/13/2016 08:13	09/14/2016 05:49	3541659
FS	Perfluorooctanoic acid (PFOA)	537	2.0	FDFT-MW-4-Sept-2016 Dup		150		ng/L	---	---	---	---	0.9	09/13/2016 08:13	09/14/2016 05:49	3541659
CCM	IS-PFOA-13C2	537	N/A	---		8208.56	8208.56	ng/L	100	50 - 150	---	---	1.0	09/06/2016 16:00	09/14/2016 06:06	3543765
CCM	IS-PFOS-13C4	537	N/A	---		6965.58	6965.58	ng/L	100	50 - 150	---	---	1.0	09/06/2016 16:00	09/14/2016 06:06	3543765
CCM	SS-PFDA-13C2	537	N/A	---		95.0483	100	ng/L	95	70 - 130	---	---	1.0	09/06/2016 16:00	09/14/2016 06:06	3543765
CCM	SS-PFHxA-13C2	537	N/A	---		50.7427	50.0	ng/L	101	70 - 130	---	---	1.0	09/06/2016 16:00	09/14/2016 06:06	3543765
CCM	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		103.0630	100	ng/L	103	70 - 130	---	---	1.0	09/06/2016 16:00	09/14/2016 06:06	3543765

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	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		102.3470	100	ng/L	102	70 - 130	---	---	1.0	09/06/2016 16:00	09/14/2016 06:06	3543765
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		98.3792	100	ng/L	98	70 - 130	---	---	1.0	09/06/2016 16:00	09/14/2016 06:06	3543765
CCM	Perfluorononanoic acid (PFNA)	537	2.0	---		103.7240	100	ng/L	104	70 - 130	---	---	1.0	09/06/2016 16:00	09/14/2016 06:06	3543765
CCM	Perfluorooctane sulfonate (PFOS)	537	2.0	---		97.4273	100	ng/L	97	70 - 130	---	---	1.0	09/06/2016 16:00	09/14/2016 06:06	3543765
CCM	Perfluorooctanoic acid (PFOA)	537	2.0	---		98.4397	100	ng/L	98	70 - 130	---	---	1.0	09/06/2016 16:00	09/14/2016 06:06	3543765

Eurofins Eaton Analytical
Run Log

Run ID: **220690** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3544357		OS	CY	09/14/2016 18:01	091416M537a-PFC12.mdb
CCL	3544357		OS	CY	09/14/2016 18:01	091416M537a-PFC12.mdb
LRB	3544344		RW	CY	09/14/2016 18:34	091416M537a-PFC12.mdb
LRB	3544344		RW	CY	09/14/2016 18:34	091416M537a-PFC12.mdb
FBH	3544345		RW	CY	09/14/2016 19:08	091416M537a-PFC12.mdb
FBH	3544345		RW	CY	09/14/2016 19:08	091416M537a-PFC12.mdb
FS	3541652	FDFT-MW-1-Sept-2016	GW	CY	09/14/2016 23:53	091416M537a-PFC12.mdb
FS	3541653	FDFT-MW-2-Sept-2016	GW	CY	09/15/2016 00:09	091416M537a-PFC12.mdb
FS	3541656	FDFT-MW-3-Sept-2016	GW	CY	09/15/2016 00:26	091416M537a-PFC12.mdb
FS	3541658	FDFT-MW-4-Sept-2016	GW	CY	09/15/2016 00:43	091416M537a-PFC12.mdb
FS	3541659	FDFT-MW-4-Sept-2016 Dup	DW	CY	09/15/2016 01:00	091416M537a-PFC12.mdb
CCM	3544358		OS	CY	09/15/2016 02:57	091416M537a-PFC12.mdb
CCM	3544358		OS	CY	09/15/2016 02:57	091416M537a-PFC12.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	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		1.6348	2.0	ng/L	82	50 - 150	---	---	1.0	09/14/2016 13:21	09/14/2016 18:01	3544357
CCL	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		1.7427	2.0	ng/L	87	50 - 150	---	---	1.0	09/14/2016 13:21	09/14/2016 18:01	3544357
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		1.7341	2.0	ng/L	87	50 - 150	---	---	1.0	09/14/2016 13:21	09/14/2016 18:01	3544357
CCL	Perfluorononanoic acid (PFNA)	537	2.0	---		1.6924	2.0	ng/L	85	50 - 150	---	---	1.0	09/14/2016 13:21	09/14/2016 18:01	3544357
CCL	Perfluorooctane sulfonate (PFOS)	537	2.0	---		1.6996	2.0	ng/L	85	50 - 150	---	---	1.0	09/14/2016 13:21	09/14/2016 18:01	3544357
CCL	Perfluorooctanoic acid (PFOA)	537	2.0	---		1.7814	2.0	ng/L	89	50 - 150	---	---	1.0	09/14/2016 13:21	09/14/2016 18:01	3544357
CCL	IS-PFOA-13C2	537	N/A	---		8840.86	8840.86	ng/L	100	50 - 150	---	---	1.0	09/14/2016 13:21	09/14/2016 18:01	3544357
CCL	IS-PFOS-13C4	537	N/A	---		7299.45	7299.45	ng/L	100	50 - 150	---	---	1.0	09/14/2016 13:21	09/14/2016 18:01	3544357
CCL	SS-PFDA-13C2	537	N/A	---		96.8320	100	ng/L	97	70 - 130	---	---	1.0	09/14/2016 13:21	09/14/2016 18:01	3544357
CCL	SS-PFHxA-13C2	537	N/A	---		49.1382	50.0	ng/L	98	70 - 130	---	---	1.0	09/14/2016 13:21	09/14/2016 18:01	3544357
LRB	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.92	09/14/2016 07:35	09/14/2016 18:34	3544344
LRB	Perfluoroheptanoic acid (PFHpA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.92	09/14/2016 07:35	09/14/2016 18:34	3544344
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.92	09/14/2016 07:35	09/14/2016 18:34	3544344
LRB	Perfluorononanoic acid (PFNA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.92	09/14/2016 07:35	09/14/2016 18:34	3544344
LRB	Perfluorooctane sulfonate (PFOS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.92	09/14/2016 07:35	09/14/2016 18:34	3544344
LRB	Perfluorooctanoic acid (PFOA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.92	09/14/2016 07:35	09/14/2016 18:34	3544344
LRB	IS-PFOA-13C2	537	N/A	---		8838.99	8840.86	ng/L	100	50 - 150	---	---	0.92	09/14/2016 07:35	09/14/2016 18:34	3544344
LRB	IS-PFOS-13C4	537	N/A	---		7302.11	7299.45	ng/L	100	50 - 150	---	---	0.92	09/14/2016 07:35	09/14/2016 18:34	3544344
LRB	SS-PFDA-13C2	537	N/A	---		86.3773	100	ng/L	94	70 - 130	---	---	0.92	09/14/2016 07:35	09/14/2016 18:34	3544344
LRB	SS-PFHxA-13C2	537	N/A	---		44.4030	50.0	ng/L	97	70 - 130	---	---	0.92	09/14/2016 07:35	09/14/2016 18:34	3544344
FBH	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		182.1980	200	ng/L	91	70 - 130	---	---	1.0	09/14/2016 07:35	09/14/2016 19:08	3544345
FBH	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		177.5130	200	ng/L	89	70 - 130	---	---	1.0	09/14/2016 07:35	09/14/2016 19:08	3544345
FBH	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		193.0950	200	ng/L	97	70 - 130	---	---	1.0	09/14/2016 07:35	09/14/2016 19:08	3544345
FBH	Perfluorononanoic acid (PFNA)	537	2.0	---		182.8420	200	ng/L	91	70 - 130	---	---	1.0	09/14/2016 07:35	09/14/2016 19:08	3544345
FBH	Perfluorooctane sulfonate (PFOS)	537	2.0	---		184.0080	200	ng/L	92	70 - 130	---	---	1.0	09/14/2016 07:35	09/14/2016 19:08	3544345
FBH	Perfluorooctanoic acid (PFOA)	537	2.0	---		187.5680	200	ng/L	94	70 - 130	---	---	1.0	09/14/2016 07:35	09/14/2016 19:08	3544345
FBH	IS-PFOA-13C2	537	N/A	---		8496.25	8840.86	ng/L	96	50 - 150	---	---	1.0	09/14/2016 07:35	09/14/2016 19:08	3544345
FBH	IS-PFOS-13C4	537	N/A	---		6871.66	7299.45	ng/L	94	50 - 150	---	---	1.0	09/14/2016 07:35	09/14/2016 19:08	3544345
FBH	SS-PFDA-13C2	537	N/A	---		95.2342	100	ng/L	95	70 - 130	---	---	1.0	09/14/2016 07:35	09/14/2016 19:08	3544345
FBH	SS-PFHxA-13C2	537	N/A	---		43.6649	50.0	ng/L	87	70 - 130	---	---	1.0	09/14/2016 07:35	09/14/2016 19:08	3544345
FS	Perfluoroheptanoic acid (PFHpA)	537	2.0	FDFT-MW-1-Sept-2016		770		ng/L	---	---	---	---	91	09/13/2016 08:13	09/14/2016 23:53	3541652
FS	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	FDFT-MW-1-Sept-2016		1200		ng/L	---	---	---	---	91	09/13/2016 08:13	09/14/2016 23:53	3541652
FS	Perfluorononanoic acid (PFNA)	537	2.0	FDFT-MW-1-Sept-2016		430		ng/L	---	---	---	---	91	09/13/2016 08:13	09/14/2016 23:53	3541652
FS	Perfluorooctane sulfonate (PFOS)	537	2.0	FDFT-MW-1-Sept-2016		1500		ng/L	---	---	---	---	91	09/13/2016 08:13	09/14/2016 23:53	3541652
FS	Perfluorooctanoic acid (PFOA)	537	2.0	FDFT-MW-1-Sept-2016		1400		ng/L	---	---	---	---	91	09/13/2016 08:13	09/14/2016 23:53	3541652
FS	Perfluoroheptanoic acid (PFHpA)	537	2.0	FDFT-MW-2-Sept-2016		210		ng/L	---	---	---	---	90	09/13/2016 08:13	09/15/2016 00:09	3541653
FS	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	FDFT-MW-2-Sept-2016		3700		ng/L	---	---	---	---	90	09/13/2016 08:13	09/15/2016 00:09	3541653
FS	Perfluorononanoic acid (PFNA)	537	2.0	FDFT-MW-2-Sept-2016		240		ng/L	---	---	---	---	90	09/13/2016 08:13	09/15/2016 00:09	3541653
FS	Perfluorooctane sulfonate (PFOS)	537	2.0	FDFT-MW-2-Sept-2016		3900		ng/L	---	---	---	---	90	09/13/2016 08:13	09/15/2016 00:09	3541653
FS	Perfluorooctanoic acid (PFOA)	537	2.0	FDFT-MW-2-Sept-2016		1500		ng/L	---	---	---	---	90	09/13/2016 08:13	09/15/2016 00:09	3541653

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	Perfluorobutanesulfonic acid (PFBS)	537	2.0	FDFT-MW-3-Sept-2016		1100		ng/L	---	---	---	---	100	09/13/2016 08:13	09/15/2016 00:26	3541656
FS	Perfluoroheptanoic acid (PFHpA)	537	2.0	FDFT-MW-3-Sept-2016		1500		ng/L	---	---	---	---	100	09/13/2016 08:13	09/15/2016 00:26	3541656
FS	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	FDFT-MW-3-Sept-2016		3500		ng/L	---	---	---	---	100	09/13/2016 08:13	09/15/2016 00:26	3541656
FS	Perfluorononanoic acid (PFNA)	537	2.0	FDFT-MW-3-Sept-2016		1300		ng/L	---	---	---	---	100	09/13/2016 08:13	09/15/2016 00:26	3541656
FS	Perfluorooctane sulfonate (PFOS)	537	2.0	FDFT-MW-3-Sept-2016		4800		ng/L	---	---	---	---	100	09/13/2016 08:13	09/15/2016 00:26	3541656
FS	Perfluorooctanoic acid (PFOA)	537	2.0	FDFT-MW-3-Sept-2016		2100		ng/L	---	---	---	---	100	09/13/2016 08:13	09/15/2016 00:26	3541656
FS	Perfluoroheptanoic acid (PFHpA)	537	2.0	FDFT-MW-4-Sept-2016		330		ng/L	---	---	---	---	93	09/13/2016 08:13	09/15/2016 00:43	3541658
FS	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	FDFT-MW-4-Sept-2016		430		ng/L	---	---	---	---	93	09/13/2016 08:13	09/15/2016 00:43	3541658
FS	Perfluorooctane sulfonate (PFOS)	537	2.0	FDFT-MW-4-Sept-2016		4500		ng/L	---	---	---	---	93	09/13/2016 08:13	09/15/2016 00:43	3541658
FS	Perfluoroheptanoic acid (PFHpA)	537	2.0	FDFT-MW-4-Sept-2016 Dup		340		ng/L	---	---	---	---	90	09/13/2016 08:13	09/15/2016 01:00	3541659
FS	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	FDFT-MW-4-Sept-2016 Dup		460		ng/L	---	---	---	---	90	09/13/2016 08:13	09/15/2016 01:00	3541659
FS	Perfluorooctane sulfonate (PFOS)	537	2.0	FDFT-MW-4-Sept-2016 Dup		4600		ng/L	---	---	---	---	90	09/13/2016 08:13	09/15/2016 01:00	3541659
CCM	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		100.7630	100	ng/L	101	70 - 130	---	---	1.0	09/14/2016 13:21	09/15/2016 02:57	3544358
CCM	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		101.6390	100	ng/L	102	70 - 130	---	---	1.0	09/14/2016 13:21	09/15/2016 02:57	3544358
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		101.8080	100	ng/L	102	70 - 130	---	---	1.0	09/14/2016 13:21	09/15/2016 02:57	3544358
CCM	Perfluorononanoic acid (PFNA)	537	2.0	---		101.8050	100	ng/L	102	70 - 130	---	---	1.0	09/14/2016 13:21	09/15/2016 02:57	3544358
CCM	Perfluorooctane sulfonate (PFOS)	537	2.0	---		97.9633	100	ng/L	98	70 - 130	---	---	1.0	09/14/2016 13:21	09/15/2016 02:57	3544358
CCM	Perfluorooctanoic acid (PFOA)	537	2.0	---		102.4210	100	ng/L	102	70 - 130	---	---	1.0	09/14/2016 13:21	09/15/2016 02:57	3544358
CCM	IS-PFOA-13C2	537	N/A	---		8777.80	8777.8	ng/L	100	50 - 150	---	---	1.0	09/14/2016 13:21	09/15/2016 02:57	3544358
CCM	IS-PFOS-13C4	537	N/A	---		7295.37	7295.37	ng/L	100	50 - 150	---	---	1.0	09/14/2016 13:21	09/15/2016 02:57	3544358
CCM	SS-PFDA-13C2	537	N/A	---		94.4863	100	ng/L	94	70 - 130	---	---	1.0	09/14/2016 13:21	09/15/2016 02:57	3544358
CCM	SS-PFHxA-13C2	537	N/A	---		50.3603	50.0	ng/L	101	70 - 130	---	---	1.0	09/14/2016 13:21	09/15/2016 02:57	3544358

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		
FBM	Fortified Blank Mid		
LFSMDL	LFSM Duplicate Low		
LFSML	LFSM Low		
LRB	Laboratory Reagent Blank		

END OF REPORT

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Analysis Report

Sample Description: OWS-001 Composite Soil
FORT DRUM

LL Sample # SW 8670110
LL Group # 1726839
Account # 38055

Project Name: Fort Drum

Collected: 10/26/2016 14:09

Submitted: 10/29/2016 09:20
Reported: 12/08/2016 10:36

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/g**		**ng/g**	**ng/g**	
14027	NEtFOSAA	2991-50-6	N.D.		1.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA	2355-31-9	N.D.		1.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonate	375-73-5	N.D.		0.51	1.6	1
14027	Perfluorodecanoic acid	335-76-2	0.26	J	0.20	0.41	1
14027	Perfluorododecanoic acid	307-55-1	N.D.		0.41	0.81	1
14027	Perfluoroheptanoic acid	375-85-9	0.34	J	0.30	0.61	1
14027	Perfluorohexanesulfonate	355-46-4	0.87	J	0.51	1.6	1
14027	Perfluorohexanoic acid	307-24-4	0.36	J	0.20	0.41	1
14027	Perfluorononanoic acid	375-95-1	0.77		0.20	0.41	1
14027	Perfluoro-octanesulfonate	1763-23-1	100		0.71	1.6	1
14027	Perfluorooctanoic acid	335-67-1	0.74		0.30	0.61	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.		0.30	0.81	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.		0.61	1.2	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.		0.30	0.61	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	5.7		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/15/2016 21:16	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16321820005A	11/16/2016 13:15	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: 003-OIL TANK Composite Soil
FORT DRUM

LL Sample # SW 8670111
LL Group # 1726839
Account # 38055

Project Name: Fort Drum

Collected: 10/26/2016 14:15

Submitted: 10/29/2016 09:20
Reported: 12/08/2016 10:36

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		ng/g	ng/g	ng/g	
14027	NEtFOSAA	2991-50-6	N.D.	1.0	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA	2355-31-9	N.D.	1.0	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonate	375-73-5	N.D.	0.52	1.7	1
14027	Perfluorodecanoic acid	335-76-2	2.0	0.21	0.41	1
14027	Perfluorododecanoic acid	307-55-1	N.D.	0.41	0.83	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.	0.31	0.62	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.	0.52	1.7	1
14027	Perfluorohexanoic acid	307-24-4	N.D.	0.21	0.41	1
14027	Perfluorononanoic acid	375-95-1	0.60	0.21	0.41	1
14027	Perfluoro-octanesulfonate	1763-23-1	20	0.72	1.7	1
14027	Perfluorooctanoic acid	335-67-1	N.D.	0.31	0.62	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.31	0.83	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.62	1.2	1
14027	Perfluoroundecanoic acid	2058-94-8	0.75	0.31	0.62	1
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	3.3	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/15/2016 21:32	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16321820005A	11/16/2016 13:15	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: 005-LINE PIT 3 Grab Soil
FORT DRUM

LL Sample # SW 8670112
LL Group # 1726839
Account # 38055

Project Name: Fort Drum

Collected: 10/26/2016 14:27

Submitted: 10/29/2016 09:20
Reported: 12/08/2016 10:36

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		ng/g	ng/g	ng/g	
14027	NEtFOSAA	2991-50-6	N.D.	0.98	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA	2355-31-9	N.D.	0.98	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonate	375-73-5	N.D.	0.49	1.6	1
14027	Perfluorodecanoic acid	335-76-2	N.D.	0.20	0.39	1
14027	Perfluorododecanoic acid	307-55-1	N.D.	0.39	0.79	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.	0.29	0.59	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.	0.49	1.6	1
14027	Perfluorohexanoic acid	307-24-4	0.59	0.20	0.39	1
14027	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.39	1
14027	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.69	1.6	1
14027	Perfluorooctanoic acid	335-67-1	N.D.	0.29	0.59	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.29	0.79	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.59	1.2	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.	0.29	0.59	1
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	3.6	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/15/2016 21:48	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16321820005A	11/16/2016 13:15	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: 007-LINE PIT 2 Grab Soil
FORT DRUM

Project Name: Fort Drum

Collected: 10/26/2016 14:25

Submitted: 10/29/2016 09:20
Reported: 12/08/2016 10:36

LL Sample # SW 8670113
LL Group # 1726839
Account # 38055

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		ng/g	ng/g	ng/g	
14027	NEtFOSAA	2991-50-6	N.D.	0.98	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA	2355-31-9	N.D.	0.98	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonate	375-73-5	N.D.	0.49	1.6	1
14027	Perfluorodecanoic acid	335-76-2	44	0.20	0.39	1
14027	Perfluorododecanoic acid	307-55-1	0.99	0.39	0.78	1
14027	Perfluoroheptanoic acid	375-85-9	0.63	0.29	0.59	1
14027	Perfluorohexanesulfonate	355-46-4	1.8	0.49	1.6	1
14027	Perfluorohexanoic acid	307-24-4	2.9	0.20	0.39	1
14027	Perfluorononanoic acid	375-95-1	6.6	0.20	0.39	1
14027	Perfluoro-octanesulfonate	1763-23-1	68	0.69	1.6	1
14027	Perfluorooctanoic acid	335-67-1	5.6	0.29	0.59	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.29	0.78	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.59	1.2	1
14027	Perfluoroundecanoic acid	2058-94-8	1.2	0.29	0.59	1
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	4.8	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/15/2016 22:05	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16321820005A	11/16/2016 13:15	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: 009-LINE PIT 1 Grab Soil
FORT DRUM

Project Name: Fort Drum

Collected: 10/26/2016 14:32

Submitted: 10/29/2016 09:20
Reported: 12/08/2016 10:36

LL Sample # SW 8670114
LL Group # 1726839
Account # 38055

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		ng/g	ng/g	ng/g	
14027	NEtFOSAA	2991-50-6	N.D.	1.0	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA	2355-31-9	N.D.	1.0	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonate	375-73-5	N.D.	0.51	1.6	1
14027	Perfluorodecanoic acid	335-76-2	N.D.	0.21	0.41	1
14027	Perfluorododecanoic acid	307-55-1	N.D.	0.41	0.82	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.	0.31	0.62	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.	0.51	1.6	1
14027	Perfluorohexanoic acid	307-24-4	1.9	0.21	0.41	1
14027	Perfluorononanoic acid	375-95-1	N.D.	0.21	0.41	1
14027	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.72	1.6	1
14027	Perfluorooctanoic acid	335-67-1	N.D.	0.31	0.62	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.31	0.82	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.62	1.2	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.	0.31	0.62	1
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	6.1	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/15/2016 22:21	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16321820005A	11/16/2016 13:15	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: 002 OWS Soil
FORT DRUM

Project Name: Fort Drum

Collected: 10/26/2016 14:11

Submitted: 10/29/2016 09:20
Reported: 12/08/2016 10:36

LL Sample # SW 8670115
LL Group # 1726839
Account # 38055

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/g**		**ng/g**	**ng/g**	
14027	NEtFOSAA	2991-50-6	N.D.		1.0	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA	2355-31-9	N.D.		1.0	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonate	375-73-5	N.D.		0.52	1.7	1
14027	Perfluorodecanoic acid	335-76-2	0.45		0.21	0.42	1
14027	Perfluorododecanoic acid	307-55-1	N.D.		0.42	0.83	1
14027	Perfluoroheptanoic acid	375-85-9	0.31	J	0.31	0.62	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.		0.52	1.7	1
14027	Perfluorohexanoic acid	307-24-4	0.29	J	0.21	0.42	1
14027	Perfluorononanoic acid	375-95-1	N.D.		0.21	0.42	1
14027	Perfluoro-octanesulfonate	1763-23-1	13		0.73	1.7	1
14027	Perfluorooctanoic acid	335-67-1	0.43	J	0.31	0.62	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.		0.31	0.83	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.		0.62	1.2	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.		0.31	0.62	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	4.4		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/15/2016 22:38	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16321820005A	11/16/2016 13:15	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

Report Date: December 08, 2016

Project: Fort Drum

Submittal Date: 10/29/2016
Group Number: 1726839
PO Number: EUL16-1650
State of Sample Origin: NY

Client Sample Description	Lancaster Labs (LL) #
OWS-001 Composite Soil	8670110
003-OIL TANK Composite Soil	8670111
005-LINE PIT 3 Grab Soil	8670112
007-LINE PIT 2 Grab Soil	8670113
009-LINE PIT 1 Grab Soil	8670114
002 OWS Soil	8670115

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Converse Laboratories, Inc.	Attn: Customer Service
Electronic Copy To	Converse Laboratories, Inc.	Attn: Donna K Zang

Respectfully Submitted,

Angela M. Miller
Specialist

(717) 556-7260

Quality Control Summary

Client Name: Converse Laboratories, Inc. Group Number: 1726839
Reported: 12/08/2016 10:36

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ng/g	ng/g	ng/g
Batch number: 16315006	Sample number(s): 8670110-8670115		
NEtFOSAA	N.D.	1.0	3.0
NMeFOSAA	N.D.	1.0	3.0
Perfluorobutanesulfonate	N.D.	0.50	1.6
Perfluorodecanoic acid	N.D.	0.20	0.40
Perfluorododecanoic acid	N.D.	0.40	0.80
Perfluoroheptanoic acid	N.D.	0.30	0.60
Perfluorohexanesulfonate	N.D.	0.50	1.6
Perfluorohexanoic acid	N.D.	0.20	0.40
Perfluorononanoic acid	N.D.	0.20	0.40
Perfluoro-octanesulfonate	N.D.	0.70	1.6
Perfluorooctanoic acid	N.D.	0.30	0.60
Perfluorotetradecanoic acid	N.D.	0.30	0.80
Perfluorotridecanoic acid	N.D.	0.60	1.2
Perfluoroundecanoic acid	N.D.	0.30	0.60

LCS/LCSD

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 16315006	Sample number(s): 8670110-8670115								
NEtFOSAA	20	21.21	20	20.6	106	103	70-130	3	30
NMeFOSAA	20	25.52	20	23.5	128	118	70-130	8	30
Perfluorobutanesulfonate	17.7	17.23	17.7	15.7	97	89	70-130	9	30
Perfluorodecanoic acid	20	19.67	20	19.43	98	97	70-130	1	30
Perfluorododecanoic acid	20	15.97	20	16.13	80	81	70-130	1	30
Perfluoroheptanoic acid	20	21.09	20	21.7	105	109	70-130	3	30
Perfluorohexanesulfonate	18.9	19.86	18.9	17.74	105	94	70-130	11	30
Perfluorohexanoic acid	20	20.01	20	18.74	100	94	70-130	7	30
Perfluorononanoic acid	20	16.02	20	17.22	80	86	70-130	7	30
Perfluoro-octanesulfonate	19.1	16.81	19.1	15.36	88	80	70-130	9	30
Perfluorooctanoic acid	20	18.37	20	17.29	92	86	70-130	6	30
Perfluorotetradecanoic acid	20	17.4	20	17.46	87	87	70-130	0	30
Perfluorotridecanoic acid	20	21.08	20	19.7	105	99	70-130	7	30
Perfluoroundecanoic acid	20	14.18	20	14.5	71	73	70-130	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Converse Laboratories, Inc. Group Number: 1726839
Reported: 12/08/2016 10:36

LCS/LCSD (continued)

Analysis Name	LCS Spike Added %	LCS Conc %	LCSD Spike Added %	LCSD Conc %	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 16321820005A	Sample number(s): 8670110-8670115								
Moisture	89.5	89.43			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 16315006	Sample number(s): 8670110-8670115 UNSPK: P680113									
NEtFOSAA	N.D.	19.12	21.54			113		70-130		
NMeFOSAA	N.D.	19.12	24.75			129		70-130		
Perfluorobutanesulfonate	N.D.	16.92	15.26			90		70-130		
Perfluorodecanoic acid	N.D.	19.12	17.65			92		70-130		
Perfluorododecanoic acid	N.D.	19.12	15.48			81		70-130		
Perfluoroheptanoic acid	N.D.	19.12	17.6			92		70-130		
Perfluorohexanesulfonate	N.D.	18.07	17.96			99		70-130		
Perfluorohexanoic acid	N.D.	19.12	17.22			90		70-130		
Perfluorononanoic acid	N.D.	19.12	16.81			88		70-130		
Perfluoro-octanesulfonate	N.D.	18.26	15.74			86		70-130		
Perfluorooctanoic acid	N.D.	19.12	17.57			92		70-130		
Perfluorotetradecanoic acid	N.D.	19.12	18.51			97		70-130		
Perfluorotridecanoic acid	N.D.	19.12	20.37			107		70-130		
Perfluoroundecanoic acid	N.D.	19.12	16.39			86		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 16321820005A	Sample number(s): 8670110-8670115 BKG: P691156			
Moisture	99.94	99.94	0	5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Environmental Analysis Request/Chain of Custody

Acct. # 9484 (3) KH 10/31/16 38055 Group # 1726839 Sample # 8670116-15

Client: Converse Laboratories, INC.			
Project Name/#: FORT DRUM	Site ID #:		
Project Manager:	P.O. #: EUL16-1650		
Sampler:	PWSID #:		
Phone #: 315-788-8388	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Matrix: Soil ☑ Sediment ☐ Tissue ☐ ; Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ ; Other:

Analyses Requested / Preservation Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil	Water	Other	Total # of Containers	PFC (All 14 Compounds)	Remarks
OWS-001	26-Oct	1409 P		X					x	
003-OIL TANK	26-Oct	1415 P		X					x	
005-LINE PIT 3	26-Oct	1427 P	X						x	
007-LINE PIT 2	26-Oct	1425 P	X						x	
009-LINE PIT 1	26-Oct	1432 P	X						x	
									x	

Client Provided Sample Container

Soil Surplus

Samples Returned to Lancaster SS 10-28-16

For Lab Use Only

SF #:

SCR #:

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 11/11/16

Rush results requested by (please check): E-Mail ☑ Phone ☐

E-mail Address: customerservice2@converselabs.com

Phone:

Relinquished by:	Date	Time	Received by:	Date	Time
KM Rizzo [signature]	10/27	1450	[signature]	10-28-16	0800
[signature]	10-28-16	1600			
			[signature]	10/28/16	0920

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 4.6 / 4.9 °C Blue

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☐ No ☐ If yes, format: ____

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Sample Administration Receipt Documentation Log

Doc Log ID: 166708

Group Number(s): 1726839

Client: CLI

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	10/29/2016 9:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	Yes		
Discrepancy in Container Qty on COC:	No		

Unpacked by Karen Diem (3060) at 09:47 on 10/29/2016

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	5.0	IR	Wet	Y	Loose	N

Extra Sample Details

Sample ID on Label	Number of Extra Containers	Date on Label	Comments
002 OWS	1	10/26/2016 14:11	

Sample ID Discrepancy Details

Sample ID on COC	Sample ID on Label	Comments
OWS-001	01 WATER TANK	
003-OIL TANK	004 OIL TANK	
005-LINE PIT 3	LINE PIT 3 006	
007-LINE PIT 2	LINE PIT 2 008	
009-LINE PIT	LINE PIT 2 010	

2425 New Holland Pike
Lancaster, PA 17605-2425

T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

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Lancaster Laboratories
Environmental

Sample Administration
Receipt Documentation Log

Doc Log ID: 166708

Group Number(s):

177859

Client: CLI

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
OWS-001	10/27/2016 11:10	
003-OIL TANK	10/26/2016 14:17	
005-LINE PIT 3	10/26/2016 14:28	
005-LINE PIT 3	10/26/2016 14:25	
010-LINE PIT 1	10/26/2016 14:34	
010-LINE PIT 1	10/26/2016 14:34	

General Comments: rcvd samples 01 Water Tank 11:10 10/27/16

2425 New Holland Pike
Lancaster, PA 17605-2425

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F 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	none detected
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...
W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

CONVERSE LABORATORIES, INC.
800 Starbuck Ave., Suite B101
Watertown, NY 13601
(315) 788-8388 www.converselabs.com

Chain of Custody

ELL16-1050

Page ____ of ____

Fort Drum

Client Address:

Client Project ID / PO# : Govt Credit Card

Matrix Codes
DW= Drinking Water GW= Ground Water
WW= Waste Water SL= Sludge
SW= Surface Water SO= Soil

Sample Information:
☐ Finished ☐ Raw
☐ Chlorinated ☐ UV
☐ OTHER: ____

Phone #: 315-523-2143 Fax#: 315-772-8050
E-Mail address: diane.h.covell.civ@mail.mil
Contact/Report to: Diane Covell
Sampler: Anthony Rambo

Preservative Codes
1= $Na_2S_2O_3$ 2= HCl 3= H_2SO_4
4= HNO_3 5= NaOH 6= Asorbic Acid
7= NH_4CL 8= NONE
9= ____ 10= ____

NOTES TO LABORATORY
☐ Normal TAT
☐ Rush TAT
Date Needed: ____ a.m. / p.m.

Date Collected	Time Collected	Sample Identification	G = Grab C = Composite	Matrix - see codes above	Chlorine Residual	Conductivity	List Preservative Code Below	ANALYSIS / TEST REQUESTED	SAMPLE ID # (lab use only)
10/26/16	1409	OWS - 001	C	SO	—	-	8	14P FC Soil/Sludge	
↓	1415	003 - oil tank	G	↓			↓	↓	
↓	1427	005 - Line Pit 3	G	↓			↓	↓	
↓	1425	007 - Line Pit 2	G	↓			↓	↓	
↓	1432	009 - Line Pit 1	G	↓			↓	↓	

Relinquished by:	Date	Time	Received by:	Date	Time	Temp°
Diane Covell	10/27/16	[illegible]	KM Rizzo	10/27/16	1245	

AUTHORIZED RECIPIENTS & CONTACT INFO:

SAMPLE(S) AS RECEIVED CONFORM TO NELAC STANDARDS
YES NO
IF NO, SEE ATTACHED SHEET

Amt. Due: ____
Amt. Paid: ____
Cash: ____ Check# ____
Credit: ____

Initial Review: ____
Transcriptual Rev.: ____
Final Review: ____

CONVERSE LABORATORIES, INC.
[illegible] Starbuck Ave., Suite B101
Watertown, NY 13601
(315) 788-8388 www.converselabs.com

Chain of Custody

Fort Drum

Client Address:

Client Project ID / PO# :
Govt Credit Card

Matrix Codes
DW= Drinking Water GW= Ground Water
WW= Waste Water SL= Sludge
SW= Surface Water SO= Soil

Sample Information:
☐ Finished ☐ Raw
☐ Chlorinated ☐ UV
☐ OTHER: _____

Phone #: 315-523-2143 Fax#: 315-772-8050
E-Mail address: diane.h.covell.civ@mail.mil
Contact/Report to: Diane Covell
Sampler: Anthony Rambone

Preservative Codes
1= $Na_2S_2O_3$ 2= HCl 3= H_2SO_4
4= HNO_3 5= NaOH 6= Asorbic Acid
7= NH_4CL 8= _____
9= _____ 10= _____

NOTES TO LABORATORY
☒ Normal TAT
☐ Rush TAT
Date Needed: _____ a.m. / p.m.

Date Collected	Time Collected	Sample Identification	G = Grab C = Composite	Matrix - see codes above	Chlorine Residual	Conductivity	List Preservative Code Below	ANALYSIS / TEST REQUESTED	SAMPLE ID # (lab use only)
10/27/16	1105	Ø2 WATER Tank	G	SO			✓	1Ø PFC Soil/sludge	

Relinquished by:	Date	Time	Received by:	Date	Time	Temp°	AUTHORIZED RECIPIENTS & CONTACT INFO:
Diane Covell	10/27/16	1415	KMRizzo	10/27/16	1415		
							SAMPLE(S) AS RECEIVED CONFORM TO NELAC STANDARDS
							YES NO
							IF NO, SEE ATTACHED SHEET

Amt. Due: _____
Amt. Paid: _____
Cash: _____ Check# _____
Credit:

Initial Review: _____
Transcriptual Rev.: _____
Final Review:

Environmental Analysis Request/Chain of Custody

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Acct. # _____ Group # _____ Sample # _____

Client: **Converse Laboratories, INC.**

Project Name/#: FORT DRUM | Site ID #:

Project Manager: | P.O. #: EUL16-1650

Sampler: | PWSID #:

Phone #: 315-788-8388 | Quote #:

State where samples were collected: ___ NY | For Compliance: Yes ☐ No ☐

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☑ Sediment ☐ Tissue	Water: Potable ☐ Ground ☐ Surface ☐ NPDES	Other:	Total # of Containers	Analyses Requested / Preservation Codes: PFC (All 14 Compounds)
OWS-001	26-Oct	1409 p		X					x
003-OIL TANK	26-Oct	1415 p		X					x
005-LINE PIT 3	26-Oct	1427 P	X						x
007-LINE PIT 2	26-Oct	1425 P	X						x
009-LINE PIT 1	26-Oct	1432 P	X						x
									x

For Lab Use Only

SF #: _____

SCR #: _____

Preservation Codes

H = HCl | T = Thiosulfate

N = HNO_3 | B = NaOH

S = H_2SO_4 | P = H_3PO_4

O = Other

Remarks

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 11/11/16

Rush results requested by (please check): E-Mail ☑ Phone ☐

E-mail Address: customerservice2@converselabs.com

Phone:

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☐ No ☐ If yes, format: _____

Relinquished by:	Date	Time	Received by:	Date	Time
KMR. 3Sv	10/27	1452			
Relinquished by: 3Sv	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other _____

Temperature upon receipt _____ °C

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

Report Date: August 08, 2016

Project: Fort Drum

Submittal Date: 06/10/2016
Group Number: 1670726
PO Number: EUL 16-0865
State of Sample Origin: NY

Client Sample Description	Lancaster Labs (LL) #
Fire Pit Sludge Grab Sediment	8420240
Pit #1 Grab Soil	8420241
Fire Pit Overhang #1 Grab Soil	8420242
Fire Pit Overhang #2 Grab Soil	8420243
Fire Pit Overhang #3 Grab Soil	8420244

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To	Converse Laboratories, Inc.	Attn: Customer Service
Electronic Copy To	Converse Laboratories, Inc.	Attn: Donna K Zang

Respectfully Submitted,

Angela M. Miller
Specialist

(717) 556-7260

Sample Description: Fire Pit Sludge Grab Sediment
Fort Drum

LL Sample # SW 8420240
LL Group # 1670726
Account # 38055

Project Name: Fort Drum

Collected: 06/09/2016 12:40 by DC

Submitted: 06/10/2016 09:25
Reported: 08/08/2016 10:47

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		ng/g	ng/g	ng/g	
14027	Perfluorobutanesulfonate	375-73-5	38	1.7	5.4	1
14027	Perfluorodecanoic acid	335-76-2	79	0.68	1.4	1
14027	Perfluorododecanoic acid	307-55-1	110	1.4	2.7	1
14027	Perfluoroheptanoic acid	375-85-9	95	1.0	2.0	1
14027	Perfluorohexanesulfonate	355-46-4	330	1.7	5.4	1
14027	Perfluorohexanoic acid	307-24-4	1,600	6.8	14	10
14027	Perfluorononanoic acid	375-95-1	34	0.68	1.4	1
14027	Perfluoro-octanesulfonate	1763-23-1	11,000	240	540	100
14027	Perfluorooctanoic acid	335-67-1	200	1.0	2.0	1
14027	Perfluorotetradecanoic acid	376-06-7	57	1.0	2.7	1
14027	Perfluorotridecanoic acid	72629-94-8	73	2.0	4.1	1
14027	Perfluoroundecanoic acid	2058-94-8	51	1.0	2.0	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Due to a preparation error, reextraction was required for this sample. The reanalysis was performed outside the holding time.

Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	70.5	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16204006	07/26/2016 21:11	Marissa C Drexinger	1
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16204006	08/03/2016 17:07	Marissa C Drexinger	10
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16204006	08/03/2016 18:10	Marissa C Drexinger	100
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	2	16204006	07/25/2016 10:55	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16181820002A	06/29/2016 23:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: Pit #1 Grab Soil
Fort Drum

LL Sample # SW 8420241
LL Group # 1670726
Account # 38055

Project Name: Fort Drum

Collected: 06/09/2016 13:10 by DC

Submitted: 06/10/2016 09:25
Reported: 08/08/2016 10:47

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		ng/g	ng/g	ng/g	
14027	Perfluorobutanesulfonate	375-73-5	N.D.	0.53	1.7	1
14027	Perfluorodecanoic acid	335-76-2	N.D.	0.21	0.42	1
14027	Perfluorododecanoic acid	307-55-1	N.D.	0.42	0.85	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.	0.32	0.64	1
14027	Perfluorohexanesulfonate	355-46-4	8.4	0.53	1.7	1
14027	Perfluorohexanoic acid	307-24-4	2.2	0.21	0.42	1
14027	Perfluorononanoic acid	375-95-1	7.4	0.21	0.42	1
14027	Perfluoro-octanesulfonate	1763-23-1	210	0.74	1.7	1
14027	Perfluorooctanoic acid	335-67-1	12	0.32	0.64	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.32	0.85	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.64	1.3	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.	0.32	0.64	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Due to a preparation error, reextraction was required for this sample. The reanalysis was performed outside the holding time.

Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	5.7	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16204006	07/26/2016 22:40	Marissa C Drexinger	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	2	16204006	06/28/2016 11:35	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16181820002A	06/29/2016 23:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: Fire Pit Overhang #1 Grab Soil
Fort Drum

Project Name: Fort Drum

Collected: 06/09/2016 12:50 by DC

Submitted: 06/10/2016 09:25
Reported: 08/08/2016 10:47

LL Sample # SW 8420242
LL Group # 1670726
Account # 38055

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		ng/g		ng/g	ng/g	
14027	Perfluorobutanesulfonate	375-73-5	N.D.		0.53	1.7	1
14027	Perfluorodecanoic acid	335-76-2	1.1		0.21	0.42	1
14027	Perfluorododecanoic acid	307-55-1	N.D.		0.42	0.84	1
14027	Perfluoroheptanoic acid	375-85-9	0.38	J	0.32	0.63	1
14027	Perfluorohexanesulfonate	355-46-4	12		0.53	1.7	1
14027	Perfluorohexanoic acid	307-24-4	9.1		0.21	0.42	1
14027	Perfluorononanoic acid	375-95-1	7.3		0.21	0.42	1
14027	Perfluoro-octanesulfonate	1763-23-1	350		0.74	1.7	1
14027	Perfluorooctanoic acid	335-67-1	1.3		0.32	0.63	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.		0.32	0.84	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.		0.63	1.3	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.		0.32	0.63	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Due to a preparation error, reextraction was required for this sample. The reanalysis was performed outside the holding time.

Metals	**SW-846 6010C**		mg/kg		mg/kg	mg/kg	
01643	Aluminum	7429-90-5	3,460		6.10	31.9	1
06935	Arsenic	7440-38-2	1.85	J	0.470	3.19	1
06946	Barium	7440-39-3	9.37		0.0956	0.797	1
06949	Cadmium	7440-43-9	0.0661	J	0.0390	0.797	1
06951	Chromium	7440-47-3	1.75	J	0.135	2.39	1
06953	Copper	7440-50-8	2.11		0.255	1.59	1
01654	Iron	7439-89-6	7,280		2.65	31.9	1
06955	Lead	7439-92-1	2.11	J	0.406	2.39	1
01657	Magnesium	7439-95-4	885		1.33	15.9	1
06936	Selenium	7782-49-2	N.D.		0.717	3.19	1
06966	Silver	7440-22-4	N.D.		0.143	0.797	1
06972	Zinc	7440-66-6	16.9		0.613	3.19	1
	SW-846 7471B		mg/kg		mg/kg	mg/kg	
00159	Mercury	7439-97-6	N.D.		0.0105	0.105	1
Wet Chemistry	**SM 2540 G-1997**		%		%	%	
00111	Moisture	n.a.	4.9		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: Fire Pit Overhang #1 Grab Soil
Fort Drum

LL Sample # SW 8420242
LL Group # 1670726
Account # 38055

Project Name: Fort Drum

Collected: 06/09/2016 12:50 by DC

Submitted: 06/10/2016 09:25
Reported: 08/08/2016 10:47

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16204006	07/26/2016 21:27	Marissa C Drexinger	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	2	16204006	06/28/2016 11:35	Devon M Whooley	1
01643	Aluminum	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
06935	Arsenic	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
06946	Barium	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
06949	Cadmium	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
06951	Chromium	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
06953	Copper	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
01654	Iron	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
06955	Lead	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
01657	Magnesium	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
06936	Selenium	SW-846 6010C	1	161720637003	06/23/2016 00:37	Matthew R Machtinger	1
06966	Silver	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
06972	Zinc	SW-846 6010C	1	161720637003	06/22/2016 03:14	Matthew R Machtinger	1
00159	Mercury	SW-846 7471B	1	161650638001	06/14/2016 12:24	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	161720637003	06/21/2016 06:10	Lisa J Cooke	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	161650638001	06/14/2016 09:25	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16181820002A	06/29/2016 23:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: Fire Pit Overhang #2 Grab Soil
Fort Drum

LL Sample # SW 8420243
LL Group # 1670726
Account # 38055

Project Name: Fort Drum

Collected: 06/09/2016 12:50 by DC

Submitted: 06/10/2016 09:25
Reported: 08/08/2016 10:47

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		ng/g	ng/g	ng/g	
14027	Perfluorobutanesulfonate	375-73-5	0.53 J	0.52	1.7	1
14027	Perfluorodecanoic acid	335-76-2	1.2	0.21	0.42	1
14027	Perfluorododecanoic acid	307-55-1	N.D.	0.42	0.83	1
14027	Perfluoroheptanoic acid	375-85-9	2.2	0.31	0.62	1
14027	Perfluorohexanesulfonate	355-46-4	18	0.52	1.7	1
14027	Perfluorohexanoic acid	307-24-4	9.9	0.21	0.42	1
14027	Perfluorononanoic acid	375-95-1	73	2.1	4.2	10
14027	Perfluoro-octanesulfonate	1763-23-1	2,600	73	170	100
14027	Perfluorooctanoic acid	335-67-1	2.6	0.31	0.62	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.31	0.83	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.62	1.2	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.	0.31	0.62	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Due to a preparation error, reextraction was required for this sample. The reanalysis was performed outside the holding time.

Metals	**SW-846 6010C**		mg/kg	mg/kg	mg/kg	
01643	Aluminum	7429-90-5	3,260	6.47	33.8	1
06935	Arsenic	7440-38-2	1.28 J	0.499	3.38	1
06946	Barium	7440-39-3	6.80	0.101	0.845	1
06949	Cadmium	7440-43-9	0.0625 J	0.0414	0.845	1
06951	Chromium	7440-47-3	1.76 J	0.144	2.54	1
06953	Copper	7440-50-8	1.60 J	0.270	1.69	1
01654	Iron	7439-89-6	5,130	2.81	33.8	1
06955	Lead	7439-92-1	1.24 J	0.431	2.54	1
01657	Magnesium	7439-95-4	562	1.41	16.9	1
06936	Selenium	7782-49-2	N.D.	0.761	3.38	1
06966	Silver	7440-22-4	N.D.	0.152	0.845	1
06972	Zinc	7440-66-6	13.3	0.651	3.38	1
	SW-846 7471B		mg/kg	mg/kg	mg/kg	
00159	Mercury	7439-97-6	N.D.	0.0098	0.0981	1
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	3.8	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: Fire Pit Overhang #2 Grab Soil
Fort Drum

LL Sample # SW 8420243
LL Group # 1670726
Account # 38055

Project Name: Fort Drum

Collected: 06/09/2016 12:50 by DC

Submitted: 06/10/2016 09:25
Reported: 08/08/2016 10:47

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16204006	07/26/2016 21:43	Marissa C Drexinger	1
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16204006	08/03/2016 17:39	Marissa C Drexinger	10
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16204006	08/03/2016 18:42	Marissa C Drexinger	100
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	2	16204006	07/25/2016 10:55	Devon M Whooley	1
01643	Aluminum	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
06935	Arsenic	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
06946	Barium	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
06949	Cadmium	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
06951	Chromium	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
06953	Copper	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
01654	Iron	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
06955	Lead	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
01657	Magnesium	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
06936	Selenium	SW-846 6010C	1	161720637003	06/23/2016 00:40	Matthew R Machtinger	1
06966	Silver	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
06972	Zinc	SW-846 6010C	1	161720637003	06/22/2016 03:17	Matthew R Machtinger	1
00159	Mercury	SW-846 7471B	1	161650638001	06/14/2016 12:55	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	161720637003	06/21/2016 06:10	Lisa J Cooke	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	161650638001	06/14/2016 09:25	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16181820002B	06/29/2016 23:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: Fire Pit Overhang #3 Grab Soil
Fort Drum

LL Sample # SW 8420244
LL Group # 1670726
Account # 38055

Project Name: Fort Drum

Collected: 06/09/2016 12:52 by DC

Submitted: 06/10/2016 09:25
Reported: 08/08/2016 10:47

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/g**		**ng/g**	**ng/g**	
14027	Perfluorobutanesulfonate	375-73-5	N.D.		0.52	1.7	1
14027	Perfluorodecanoic acid	335-76-2	N.D.		0.21	0.42	1
14027	Perfluorododecanoic acid	307-55-1	N.D.		0.42	0.84	1
14027	Perfluoroheptanoic acid	375-85-9	0.38	J	0.31	0.63	1
14027	Perfluorohexanesulfonate	355-46-4	8.5		0.52	1.7	1
14027	Perfluorohexanoic acid	307-24-4	4.7		0.21	0.42	1
14027	Perfluorononanoic acid	375-95-1	4.2		0.21	0.42	1
14027	Perfluoro-octanesulfonate	1763-23-1	150		0.73	1.7	1
14027	Perfluorooctanoic acid	335-67-1	1.1		0.31	0.63	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.		0.31	0.84	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.		0.63	1.3	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.		0.31	0.63	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Due to a preparation error, reextraction was required for this sample. The reanalysis was performed outside the holding time.

Metals		**SW-846 6010C**	**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	3,160		7.10	37.1	1
06935	Arsenic	7440-38-2	1.07	J	0.547	3.71	1
06946	Barium	7440-39-3	9.36		0.111	0.927	1
06949	Cadmium	7440-43-9	0.0667	J	0.0454	0.927	1
06951	Chromium	7440-47-3	1.50	J	0.158	2.78	1
06953	Copper	7440-50-8	1.55	J	0.297	1.85	1
01654	Iron	7439-89-6	5,750		3.09	37.1	1
06955	Lead	7439-92-1	1.63	J	0.473	2.78	1
01657	Magnesium	7439-95-4	639		1.55	18.5	1
06936	Selenium	7782-49-2	N.D.		0.834	3.71	1
06966	Silver	7440-22-4	N.D.		0.167	0.927	1
06972	Zinc	7440-66-6	15.8		0.714	3.71	1
		SW-846 7471B	**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	N.D.		0.0098	0.0985	1
Wet Chemistry		**SM 2540 G-1997**	**%**		**%**	**%**	
00111	Moisture	n.a.	4.5		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: Fire Pit Overhang #3 Grab Soil
Fort Drum

LL Sample # SW 8420244
LL Group # 1670726
Account # 38055

Project Name: Fort Drum

Collected: 06/09/2016 12:52 by DC

Submitted: 06/10/2016 09:25
Reported: 08/08/2016 10:47

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16204006	07/26/2016 21:58	Marissa C Drexinger	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	2	16204006	07/25/2016 10:55	Devon M Whooley	1
01643	Aluminum	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
06935	Arsenic	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
06946	Barium	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
06949	Cadmium	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
06951	Chromium	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
06953	Copper	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
01654	Iron	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
06955	Lead	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
01657	Magnesium	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
06936	Selenium	SW-846 6010C	1	161720637003	06/23/2016 00:50	Matthew R Machtinger	1
06966	Silver	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
06972	Zinc	SW-846 6010C	1	161720637003	06/22/2016 03:27	Matthew R Machtinger	1
00159	Mercury	SW-846 7471B	1	161650638001	06/14/2016 12:58	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	161720637003	06/21/2016 06:10	Lisa J Cooke	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	161650638001	06/14/2016 09:25	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16181820002B	06/29/2016 23:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Converse Laboratories, Inc. Group Number: 1670726
Reported: 08/08/2016 10:47

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ng/g	ng/g	ng/g
Batch number: 16204006	Sample number(s): 8420240-8420244		
Perfluorobutanesulfonate	N.D.	0.50	1.6
Perfluorodecanoic acid	N.D.	0.20	0.40
Perfluorododecanoic acid	N.D.	0.40	0.80
Perfluoroheptanoic acid	N.D.	0.30	0.60
Perfluorohexanesulfonate	N.D.	0.50	1.6
Perfluorohexanoic acid	N.D.	0.20	0.40
Perfluorononanoic acid	N.D.	0.20	0.40
Perfluoro-octanesulfonate	N.D.	0.70	1.6
Perfluorooctanoic acid	N.D.	0.30	0.60
Perfluorotetradecanoic acid	N.D.	0.30	0.80
Perfluorotridecanoic acid	N.D.	0.60	1.2
Perfluoroundecanoic acid	N.D.	0.30	0.60
	mg/kg	mg/kg	mg/kg
Batch number: 161650638001	Sample number(s): 8420242-8420244		
Mercury	N.D.	0.0100	0.100
Batch number: 161720637003	Sample number(s): 8420242-8420244		
Aluminum	N.D.	7.66	40.0
Arsenic	N.D.	0.590	4.00
Barium	N.D.	0.120	1.00
Cadmium	N.D.	0.0490	1.00
Chromium	N.D.	0.170	3.00
Copper	N.D.	0.320	2.00
Iron	N.D.	3.33	40.0
Lead	N.D.	0.510	3.00
Magnesium	N.D.	1.67	20.0
Selenium	N.D.	0.900	4.00
Silver	N.D.	0.180	1.00
Zinc	N.D.	0.770	4.00

LCS/LCSD

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 16204006	Sample number(s): 8420240-8420244								
Perfluorobutanesulfonate	17.68	18.61	17.68	17.42	105	99	70-130	7	30
Perfluorodecanoic acid	20	20.42	20	23.75	102	119	70-130	15	30
Perfluorododecanoic acid	20	22.76	20	22.81	114	114	70-130	0	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Converse Laboratories, Inc. Group Number: 1670726
Reported: 08/08/2016 10:47

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluoroheptanoic acid	20	20	20	22.48	100	112	70-130	12	30
Perfluorohexanesulfonate	18.92	18.68	18.92	18.15	99	96	70-130	3	30
Perfluorohexanoic acid	20	24.43	20	20.81	122	104	70-130	16	30
Perfluorononanoic acid	20	20.06	20	19.73	100	99	70-130	2	30
Perfluoro-octanesulfonate	19.12	17.82	19.12	20.9	93	109	70-130	16	30
Perfluorooctanoic acid	20	20.04	20	17.75	100	89	70-130	12	30
Perfluorotetradecanoic acid	20	21.26	20	26.64	106	133*	70-130	22	30
Perfluorotridecanoic acid	20	24.26	20	19.23	121	96	70-130	23	30
Perfluoroundecanoic acid	20	23.24	20	27.98	116	140*	70-130	19	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 161650638001	Sample number(s): 8420242-8420244								
Mercury	0.100	0.100			100		80-120		
Batch number: 161720637003	Sample number(s): 8420242-8420244								
Aluminum	200	217.41			109		80-120		
Arsenic	15	16.28			109		80-120		
Barium	200	215.57			108		80-120		
Cadmium	5.00	5.49			110		80-120		
Chromium	20	21.83			109		80-120		
Copper	25	27.9			112		80-120		
Iron	100	107.75			108		80-120		
Lead	15	16.11			107		80-120		
Magnesium	200	213.39			107		80-120		
Selenium	15	16.11			107		80-120		
Silver	5.00	4.40			88		80-120		
Zinc	50	53.58			107		80-120		
	%	%	%	%					
Batch number: 16181820002A	Sample number(s): 8420240-8420242								
Moisture	89.5	89.45			100		99-101		
Batch number: 16181820002B	Sample number(s): 8420243-8420244								
Moisture	89.5	89.45			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 16204006	Sample number(s): 8420240-8420244 UNSPK: 8420241									
Perfluorobutanesulfonate	N.D.	17.68	18.01			102		70-130		
Perfluorodecanoic acid	N.D.	20	35.41			177*		70-130		
Perfluorododecanoic acid	N.D.	20	24.55			123		70-130		
Perfluoroheptanoic acid	N.D.	20	22.95			115		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Converse Laboratories, Inc. Group Number: 1670726
Reported: 08/08/2016 10:47

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Perfluorohexanesulfonate	7.88	18.92	28.4			108		70-130		
Perfluorohexanoic acid	N.D.	20	25.64			128		70-130		
Perfluorononanoic acid	7.01	20	24.97			90		70-130		
Perfluoro-octanesulfonate	194.29	19.12	237.2			224 (2)		70-130		
Perfluorooctanoic acid	11.16	20	28.66			88		70-130		
Perfluorotetradecanoic acid	N.D.	20	20.7			103		70-130		
Perfluorotridecanoic acid	N.D.	20	20.43			102		70-130		
Perfluoroundecanoic acid	N.D.	20	23.9			119		70-130		
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 161650638001	Sample number(s): 8420242-8420244 UNSPK: 8420242									
Mercury	N.D.	0.157	0.151	0.163	0.160	96	98	80-120	6	20
Batch number: 161720637003	Sample number(s): 8420242-8420244 UNSPK: P421663									
Aluminum	1334.5	181.82	4035.73	188.68	5481.51	1486 (2)	2198 (2)	75-125	30*	20
Arsenic	1.03	13.64	15.99	14.15	17.25	110	115	75-125	8	20
Barium	8.68	181.82	208.64	188.68	222.68	110	113	75-125	7	20
Cadmium	0.312	4.55	5.35	4.72	5.73	111	115	75-125	7	20
Chromium	2.61	18.18	24.87	18.87	27.65	122	133*	75-125	11	20
Copper	1.08	22.73	26.89	23.58	28.71	114	117	75-125	7	20
Iron	1934.4	90.91	3361.27	94.34	4450.48	1570 (2)	2667 (2)	75-125	28*	20
Lead	2.03	13.64	17	14.15	18.53	110	117	75-125	9	20
Magnesium	139.73	181.82	480.61	188.68	602.54	187*	245*	75-125	23*	20
Selenium	N.D.	13.64	14.32	14.15	14.31	105	101	75-125	0	20
Silver	N.D.	4.55	3.94	4.72	4.12	87	87	75-125	4	20
Zinc	9.07	45.45	63.51	47.17	70.57	120	130*	75-125	11	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 161650638001	Sample number(s): 8420242-8420244 BKG: 8420242			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 161720637003	Sample number(s): 8420242-8420244 BKG: P421663			
Aluminum	1334.5	1741.76	26*	20
Arsenic	1.03	1.58	42* (1)	20
Barium	8.68	10.22	16	20
Cadmium	0.312	0.341	9 (1)	20
Chromium	2.61	3.31	23* (1)	20
Copper	1.08	1.30	19 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Converse Laboratories, Inc. Group Number: 1670726
Reported: 08/08/2016 10:47

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/kg	mg/kg		
Iron	1934.4	2263.19	16	20
Lead	2.03	2.09	3 (1)	20
Magnesium	139.73	186.98	29*	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Zinc	9.07	10.94	19 (1)	20
	%	%		
Batch number: 16181820002A	Sample number(s): 8420240-8420242		BKG: 8420241	
Moisture	5.69	5.65	1	5
Batch number: 16181820002B	Sample number(s): 8420243-8420244		BKG: 8420243	
Moisture	3.78	3.67	3	5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Environmental Analysis Request/Chain of Custody

Acct. # 38050 Group # 1670726 Sample # 8420240-45

Client: **Converse Laboratories Inc.**

Project Name/#:	Fort Drum	Site ID #:	
Project Manager:		P.O. #:	EUL16-0865
Sampler:	D.C.	PWSID #:	
Phone #:		Quote #:	
State where samples were collected:	NY	For Compliance: Yes ☐ No ☐	

Matrix: Soil ☑ Sediment ☑ Tissue ☐; Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐; Other:

Analyses Requested / Preservation Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix	Total # of Containers	Perfluorates	Zn,Cu,Pb,Cd,Fe,Mg,Al	As,Ba,Cr,Hg,Se,Ag	Remarks
Fire Pit Sludge	6/9/2016	1240P	X		Sed.	1	X			
Pit #1	6/9/2016	1310P	X		Soil	1	X			
Fire Pit Overhang #1	6/9/2016	1250P	X		Soil	1	X	X	X	
Fire Pit Overhang #2	6/9/2016	1250P	X		Soil	1	X	X	X	
Fire Pit Overhang #3	6/9/2016	1252P	X		Soil	1	X	X	X	

For Lab Use Only

SF #:

SCR #:

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☐ Rush ☑

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: As soon as possbile

Rush results requested by (please check): E-Mail ☑ Phone ☐

E-mail Address: customerservice2@converselabs.com

Phone: 315-788-8388

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type VI (Raw Data Only)	☐	TX TRRP-13	☐
NJ DKQP	☐	NYSDEC Category ☐ A or ☐ B	

EDD Required? Yes ☐ No ☐ If yes, format:

Relinquished by	Date	Time	Received by	Date	Time
KMRizzo	6/9/16	1520			
			[signature]	6-10-16	925

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 3.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 149812

Group Number(s): 1670726

Client: Converse Lab

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	06/10/2016 9:25
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Joseph Huber (7831) at 10:11 on 06/10/2016

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	3.4	IR	Ice Pack	Y	N/A	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

CONVERSE LABORATORIES, INC.
800 Starbuck Ave., Suite B101
Watertown, NY 13601
(315) 788-8388 www.converselabs.com

Chain of Custody

*Lancaster

ELLLE-08605

Page _____ of _____

Fort Drum

Client Address:

Client Project ID / PO# : Govt Credit Card

Matrix Codes

DW= Drinking Water GW= Ground Water
WW= Waste Water SL= Sludge
SW= Surface Water SO= Soil

Sample Information:

☐ Finished ☐ Raw
☐ Chlorinated ☐ UV
☐ OTHER: ______

Phone #: 315-523-2143 Fax#: 315-772-8050

E-Mail address: diane.h.covell.civ@mail.mil

Contact/Report to: Diane Covell

Sampler: Diane Covell

Preservative Codes

1= $Na_2S_2O_3$ 2= HCl 3= H_2SO_4
4= HNO_3 5= NaOH 6= Asorbic Acid
7= NH_4CL 8= ______
9= ______ 10= ______

NOTES TO LABORATORY

☐ Normal TAT
☐ Rush TAT
Date Needed: ______ a.m. / p.m.

Date Collected	Time Collected	Sample Identification	G = Grab C = Composite	Matrix - see codes above	Chlorine Residual	Conductivity	1	8							ANALYSIS / TEST REQUESTED	SAMPLE ID # (lab use only)
6/9/16	1240	Fire Pit Sludge	G	SL	–	–		✓							Perfluorates	
	1310	Pit #1	G	SO				✓							Perfluorates	
	1250	Fire Pit overhang #1	G	SO				✓							PFCs + Metals → Zn, Cu, Pb	
	1250	Fire Pit overhang #2	G	SO				✓							↓ ↓ Cd, Fe, Mg, Al	
	1252	Fire Pit overhang #3	G	SO				✓							As, Ba, Cr, Hg	
															Se, Ag	

Relinquished by:	Date	Time	Received by:	Date	Time	Temp°
Diane Covell	6/9/16	1404	KMRizzo	6/9/16	1404	

AUTHORIZED RECIPIENTS & CONTACT INFO:

SAMPLE(S) AS RECEIVED CONFORM TO NELAC STANDARDS
(YES) NO
IF NO, SEE ATTACHED SHEET

Doc. # 357
12/19/2013
Rev. # 12
Page 1 of 1

Amt. Due: ______
Amt. Paid: ______
Cash: ______ Check# ______
Credit: ______

Initial Review: ______
Transcriptual Rev.: ______
Final Review: ______

Environmental Analysis Request/Chain of Custody

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Acct. # ______ Group # ______ Sample # ______

Client: **Converse Laboratories Inc.**

Project Name/#:	Fort Drum	Site ID #:	
Project Manager:		P.O. #:	EUL16-0865
Sampler:	D.C.	PWSID #:	
Phone #:		Quote #:	
State where samples were collected:	NY	For Compliance: Yes ☐ No ☐	

Matrix: Soil ☑ Sediment ☑ Tissue ☐; Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐; Other:

Analyses Requested / Preservation Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil/Sediment/Tissue	Water	Other	Total # of Containers	Perfluorates	Zn,Cu,Pb,Cd,Fe,Mg,Al	As,Ba,Cr,Hg,Se,Ag							Remarks
Fire Pit Sludge	6/9/2016	1240P	X		Sed.			1	X									
Pit #1	6/9/2016	1310P	X		Soil			1	X									
Fire Pit Overhang #1	6/9/2016	1250P	X		Soil			1	X	X	X							
Fire Pit Overhang #2	6/9/2016	1250P	X		Soil			1	X	X	X							
Fire Pit Overhang #3	6/9/2016	1252P	X		Soil			1	X	X	X							

For Lab Use Only

SF #: ______

SCR #: ______

Preservation Codes

H = HCl T = Thiosulfate

N = HNO_3 B = NaOH

S = H_2SO_4 P = H_3PO_4

O = Other

Turnaround Time Requested (TAT) (please check): Standard ☐ Rush ☑

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: As soon as possbile

Rush results requested by (please check): E-Mail ☑ Phone ☐

E-mail Address: customerservice2@converselabs.com

Phone: 315-788-8388

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☐ No ☐ If yes, format: ______

Relinquished by:	Date	Time	Received by:	Date	Time
KM Rizzo	6/9/16	1520			

Relinquished by Commercial Carrier: UPS ______ FedEx ______ Other ______

Temperature upon receipt ______ °C

Old Sanitary Landfill

Airfield Sanitary Landfill

Water Well 12

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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.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN00035
Arkansas	IN00035	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*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon (Primary AB)*	4074-001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA160002	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
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

Revision date: 04/14/2016

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: United States Army Corp of Engineers

Attn: Scott Forbes
10 South Howard St
9250-V
Baltimore, MD 21201

Report: 368228
Priority: Standard 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
3500155	WW012-July2016	537	07/21/16 08:00	Client	07/22/16 07:50
3500156	OSL-MW08-July2016	537	07/21/16 09:20	Client	07/22/16 07:50
3500157	FTB	537	07/21/16 09:20	Client	07/22/16 07:50
3500158	Duplicate	537	07/21/16 08:00	Client	07/22/16 07:50
3500159	OSL-MW10-July2016	537	07/21/16 10:50	Client	07/22/16 07:50
3500162	OSL-MW9A-July2016	537	07/21/16 12:40	Client	07/22/16 07:50
3500163	ASL-MW961-July2016	537	07/21/16 14:25	Client	07/22/16 07:50
3500164	ASL-MW14-July2016	537	07/21/16 15:15	Client	07/22/16 07:50
3500165	ASL-MW12A-July2016	537	07/21/16 16:30	Client	07/22/16 07:50

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 Jessie Brasch at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Jessie Brasch — Analytical Services Manager — 08/18/2016

Authorized Signature | Title | Date

Client Name: United States Army Corp of Engineers
Report #: 368228

Client Name: United States Army Corp of Engineers Report #: 368228

Sampling Point: WW012-July2016 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	---	9.0	< 9.0	ng/L	08/03/16 08:10	08/06/16 02:15	3500155
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	**12**	ng/L	08/03/16 08:10	08/06/16 02:15	3500155
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	**89**	ng/L	08/03/16 08:10	08/06/16 02:15	3500155
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 02:15	3500155
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	08/03/16 08:10	08/06/16 02:15	3500155
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**50**	ng/L	08/03/16 08:10	08/06/16 02:15	3500155

Sampling Point: OSL-MW08-July2016 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	---	9.0	< 9.0	ng/L	08/03/16 08:10	08/06/16 03:16	3500156
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	**1.3**	ng/L	08/03/16 08:10	08/06/16 03:16	3500156
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	**6.9**	ng/L	08/03/16 08:10	08/06/16 03:16	3500156
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 03:16	3500156
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	**7.6**	ng/L	08/03/16 08:10	08/06/16 03:16	3500156
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 03:16	3500156

Sampling Point: 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	---	9.0	< 9.0	ng/L	08/03/16 08:10	08/06/16 08:24	3500157
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	08/03/16 08:10	08/06/16 08:24	3500157
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	08/03/16 08:10	08/06/16 08:24	3500157
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 08:24	3500157
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	08/03/16 08:10	08/06/16 08:24	3500157
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 08:24	3500157

Client Name: United States Army Corp of Engineers Report #: 368228

Sampling Point: Duplicate 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	---	9.0	< 9.0	ng/L	08/03/16 08:10	08/06/16 02:46	3500158
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	**1.5**	ng/L	08/03/16 08:10	08/06/16 02:46	3500158
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	08/03/16 08:10	08/06/16 02:46	3500158
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 02:46	3500158
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	08/03/16 08:10	08/06/16 02:46	3500158
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**4.0**	ng/L	08/03/16 08:10	08/06/16 02:46	3500158

Sampling Point: OSL-MW10-July2016 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	---	9.0	< 9.0	ng/L	08/03/16 08:10	08/06/16 03:47	3500159
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	**1.5**	ng/L	08/03/16 08:10	08/06/16 03:47	3500159
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	08/03/16 08:10	08/06/16 03:47	3500159
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 03:47	3500159
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	08/03/16 08:10	08/06/16 03:47	3500159
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**4.2**	ng/L	08/03/16 08:10	08/06/16 03:47	3500159

Sampling Point: OSL-MW9A-July2016 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	---	9.0	< 9.0	ng/L	08/03/16 08:10	08/06/16 05:19	3500162
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	**4.2**	ng/L	08/03/16 08:10	08/06/16 05:19	3500162
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	**11**	ng/L	08/03/16 08:10	08/06/16 05:19	3500162
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 05:19	3500162
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	08/03/16 08:10	08/06/16 05:19	3500162
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**6.6**	ng/L	08/03/16 08:10	08/06/16 05:19	3500162

Client Name: United States Army Corp of Engineers Report #: 368228

Sampling Point: ASL-MW961-July2016 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	---	9.0	< 9.0	ng/L	08/03/16 08:10	08/06/16 05:50	3500163
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	**7.6**	ng/L	08/03/16 08:10	08/06/16 05:50	3500163
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	**19**	ng/L	08/03/16 08:10	08/06/16 05:50	3500163
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 05:50	3500163
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	08/03/16 08:10	08/06/16 05:50	3500163
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**4.3**	ng/L	08/03/16 08:10	08/06/16 05:50	3500163

Sampling Point: ASL-MW14-July2016 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	---	9.0	< 9.0	ng/L	08/03/16 08:10	08/06/16 06:21	3500164
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	08/03/16 08:10	08/06/16 06:21	3500164
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	08/03/16 08:10	08/06/16 06:21	3500164
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 06:21	3500164
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	08/03/16 08:10	08/06/16 06:21	3500164
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 06:21	3500164

Sampling Point: ASL-MW12A-July2016 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	---	9.0	< 9.0	ng/L	08/03/16 08:10	08/06/16 06:52	3500165
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	**36**	ng/L	08/03/16 08:10	08/06/16 06:52	3500165
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	**5.5**	ng/L	08/03/16 08:10	08/06/16 06:52	3500165
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	08/03/16 08:10	08/06/16 06:52	3500165
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	08/03/16 08:10	08/06/16 06:52	3500165
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	**2.6**	ng/L	08/03/16 08:10	08/06/16 06:52	3500165

† 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 | Eaton Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 300219
Batch # 368228

www.EurofinsUS.com/Eaton

Shaded area for EEA use only

CHAIN OF CUSTODY RECORD

Page 1 of 1

REPORT TO: Scott Forbes 410 336 2567
10. S. Howard St.
Baltimore, MD scott.e.forbes@usace.army.mil

SAMPLER (Signature): Scott

PWS ID #:

STATE (sample origin): NY

PROJECT NAME: Ft. Drum PFC Investigation

PO#: NA

BILL TO: Scott Forbes
Scott.e.forbes@USACE.Army.mil

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	~~3500~~ 3500155	21-Jul-16	0800	X		GW012 - July 2016	Method 537 Cl-Ass			X	2	GW	SW
2	3500156	21-Jul-16	0920	X		OSL-MW08 - July 2016	Method 537			X		GW	
3	157	21-Jul-16	0920	X		Field Blank	Method 537						
4	158	21-Jul-16	0800	X		Duplicate	Method 537			X	2	GW	
5	159A	21-Jul-16	1050	X		OSL-MW10 - July 2016	Method 537	MS/MSD		X	4	GW	
6	162	21-Jul-16	1240		X	OSL-MW9A - July 2016	Method 537			X	2	GW	
7	163	21-Jul-16	1425		X	ASL-MW96I - July 2016	Method 537			X	2	GW	
8	164	21-Jul-16	1515		X	ASL-MW14 - July 2016	Method 537			X	2	GW	
9	165	21-Jul-16	1630		X	ASL-MW12A - July 2016	Method 537			X	2	GW	
10	160 *					MS OSL-MW10 - July 2016							
11	161 *					MSD							
12							7-22-16						
13													
14													

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
	21-Jul-16	1730 AM 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		7-22-16	0750 AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS

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 5.0 Effective Date: 2016-01-20

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: Jessie Brasch
Sent: Friday, July 22, 2016 10:44 AM
To: Sheri Spurgeon
Subject: RE: Order 300219

Ok, miscommunication when Ron Quoted the project... pricing was only provided for a FD and a MS, not the MSD. I spoke to Scott Forbes and he ok'd the addition of the MSD.
The sample site labeled Duplicate will be the sample type Field Duplicate with NO parent sample association; it will just be treated as a regular sample.

Please note my new email address is now JessieBrasch@EurofinsUS.com, please update your address book as JessieVarab@EurofinsUS.com will only be active for a short period of time.

Jessie Brasch

Phone: +1 574 472 5564
Mobile: +1 574 339 6418
Email: JessieBrasch@EurofinsUS.com

8-18-16 Per the laboratory Technical Manager, in order for a sample to be a true Field Duplicate within the EEA LIMS, there must be a parent sample associated and linked in our system. Since the addition of an MSD for this report group was approved by Scott Forbes the batch QC was met therefore the sample labeled Duplicate was changed to a sample type of Field Sample (FS) and was treated as a field sample. JB (EEA) Jessie Brasch Analytical Services Manager

Eurofins Eaton Analytical
Run Log

Run ID: **218890** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3510919		OS	CY	08/06/2016 00:12	080516M537a.mdb
LRB	3510862		RW	CY	08/06/2016 01:13	080516M537a.mdb
FBL	3510863		RW	CY	08/06/2016 01:44	080516M537a.mdb
FS	3500155	WW012-July2016	GW	CY	08/06/2016 02:15	080516M537a.mdb
FS	3500158	Duplicate	GW	CY	08/06/2016 02:46	080516M537a.mdb
FS	3500156	OSL-MW08-July2016	GW	CY	08/06/2016 03:16	080516M537a.mdb
FS	3500159	OSL-MW10-July2016	GW	CY	08/06/2016 03:47	080516M537a.mdb
LFSMM	3500160	OSL-MW10-July2016	GW	CY	08/06/2016 04:18	080516M537a.mdb
LFSMDM	3500161	OSL-MW10-July2016	GW	CY	08/06/2016 04:49	080516M537a.mdb
FS	3500162	OSL-MW9A-July2016	GW	CY	08/06/2016 05:19	080516M537a.mdb
FS	3500163	ASL-MW961-July2016	GW	CY	08/06/2016 05:50	080516M537a.mdb
FS	3500164	ASL-MW14-July2016	GW	CY	08/06/2016 06:21	080516M537a.mdb
FS	3500165	ASL-MW12A-July2016	GW	CY	08/06/2016 06:52	080516M537a.mdb
FTB	3500157	FTB	RW	CY	08/06/2016 08:24	080516M537a.mdb
CCM	3510920		OS	CY	08/06/2016 09:26	080516M537a.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	---		3548.20	3548.2	ng/L	100	50 - 150	---	---	1.0	08/01/2016 09:50	08/06/2016 00:12	3510919
CCL	IS-PFOS-13C4	537	N/A	---		1850.96	1850.96	ng/L	100	50 - 150	---	---	1.0	08/01/2016 09:50	08/06/2016 00:12	3510919
CCL	SS-PFDA-13C2	537	N/A	---		95.5758	100	ng/L	96	70 - 130	---	---	1.0	08/01/2016 09:50	08/06/2016 00:12	3510919
CCL	SS-PFHxA-13C2	537	N/A	---		48.7041	50.0	ng/L	97	70 - 130	---	---	1.0	08/01/2016 09:50	08/06/2016 00:12	3510919
CCL	Perfluorobutanesulfonic acid (PFBS)	537	9.0	---		10.0145	9.0	ng/L	111	50 - 150	---	---	1.0	08/01/2016 09:50	08/06/2016 00:12	3510919
CCL	Perfluoroheptanoic acid (PFHpA)	537	1.0	---		0.9758	1.0	ng/L	98	50 - 150	---	---	1.0	08/01/2016 09:50	08/06/2016 00:12	3510919
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	---		2.8156	3.0	ng/L	94	50 - 150	---	---	1.0	08/01/2016 09:50	08/06/2016 00:12	3510919
CCL	Perfluorononanoic acid (PFNA)	537	2.0	---		1.9703	2.0	ng/L	99	50 - 150	---	---	1.0	08/01/2016 09:50	08/06/2016 00:12	3510919
CCL	Perfluorooctane sulfonate (PFOS)	537	4.0	---		3.7191	4.0	ng/L	93	50 - 150	---	---	1.0	08/01/2016 09:50	08/06/2016 00:12	3510919
CCL	Perfluorooctanoic acid (PFOA)	537	2.0	---		2.0828	2.0	ng/L	104	50 - 150	---	---	1.0	08/01/2016 09:50	08/06/2016 00:12	3510919
LRB	IS-PFOA-13C2	537	N/A	---		3178.60	3548.2	ng/L	90	50 - 150	---	---	0.94	08/03/2016 08:10	08/06/2016 01:13	3510862
LRB	IS-PFOS-13C4	537	N/A	---		1708.80	1850.96	ng/L	92	50 - 150	---	---	0.94	08/03/2016 08:10	08/06/2016 01:13	3510862
LRB	SS-PFDA-13C2	537	N/A	---		97.3503	100	ng/L	104	70 - 130	---	---	0.94	08/03/2016 08:10	08/06/2016 01:13	3510862
LRB	SS-PFHxA-13C2	537	N/A	---		48.3139	50.0	ng/L	103	70 - 130	---	---	0.94	08/03/2016 08:10	08/06/2016 01:13	3510862
LRB	Perfluorobutanesulfonic acid (PFBS)	537	9.0	---	<	9.0		ng/L	---	---	---	---	0.94	08/03/2016 08:10	08/06/2016 01:13	3510862
LRB	Perfluoroheptanoic acid (PFHpA)	537	1.0	---	<	1.0		ng/L	---	---	---	---	0.94	08/03/2016 08:10	08/06/2016 01:13	3510862
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	---	<	3.0		ng/L	---	---	---	---	0.94	08/03/2016 08:10	08/06/2016 01:13	3510862
LRB	Perfluorononanoic acid (PFNA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.94	08/03/2016 08:10	08/06/2016 01:13	3510862
LRB	Perfluorooctane sulfonate (PFOS)	537	4.0	---	<	4.0		ng/L	---	---	---	---	0.94	08/03/2016 08:10	08/06/2016 01:13	3510862
LRB	Perfluorooctanoic acid (PFOA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.94	08/03/2016 08:10	08/06/2016 01:13	3510862
FBL	IS-PFOA-13C2	537	N/A	---		3318.92	3548.2	ng/L	94	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 01:44	3510863
FBL	IS-PFOS-13C4	537	N/A	---		1762.20	1850.96	ng/L	95	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 01:44	3510863
FBL	SS-PFDA-13C2	537	N/A	---		100.1940	100	ng/L	100	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 01:44	3510863
FBL	SS-PFHxA-13C2	537	N/A	---		49.1983	50.0	ng/L	98	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 01:44	3510863
FBL	Perfluorobutanesulfonic acid (PFBS)	537	9.0	---		9.6409	9.0	ng/L	107	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 01:44	3510863
FBL	Perfluoroheptanoic acid (PFHpA)	537	1.0	---		0.8551	1.0	ng/L	86	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 01:44	3510863
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	---		2.6269	3.0	ng/L	88	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 01:44	3510863
FBL	Perfluorononanoic acid (PFNA)	537	2.0	---		1.8160	2.0	ng/L	91	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 01:44	3510863
FBL	Perfluorooctane sulfonate (PFOS)	537	4.0	---		3.3268	4.0	ng/L	83	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 01:44	3510863
FBL	Perfluorooctanoic acid (PFOA)	537	2.0	---		2.0034	2.0	ng/L	100	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 01:44	3510863
FS	IS-PFOA-13C2	537	N/A	WW012-July2016		3570.81	3548.2	ng/L	101	50 - 150	---	---	0.96	08/03/2016 08:10	08/06/2016 02:15	3500155
FS	IS-PFOS-13C4	537	N/A	WW012-July2016		1835.74	1850.96	ng/L	99	50 - 150	---	---	0.96	08/03/2016 08:10	08/06/2016 02:15	3500155
FS	SS-PFDA-13C2	537	N/A	WW012-July2016		109.7650	100	ng/L	114	70 - 130	---	---	0.96	08/03/2016 08:10	08/06/2016 02:15	3500155
FS	SS-PFHxA-13C2	537	N/A	WW012-July2016		49.9336	50.0	ng/L	104	70 - 130	---	---	0.96	08/03/2016 08:10	08/06/2016 02:15	3500155
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	WW012-July2016	<	9.0		ng/L	---	---	---	---	0.96	08/03/2016 08:10	08/06/2016 02:15	3500155
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	WW012-July2016		12		ng/L	---	---	---	---	0.96	08/03/2016 08:10	08/06/2016 02:15	3500155
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	WW012-July2016		89		ng/L	---	---	---	---	0.96	08/03/2016 08:10	08/06/2016 02:15	3500155
FS	Perfluorononanoic acid (PFNA)	537	2.0	WW012-July2016	<	2.0		ng/L	---	---	---	---	0.96	08/03/2016 08:10	08/06/2016 02:15	3500155
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	WW012-July2016	<	4.0		ng/L	---	---	---	---	0.96	08/03/2016 08:10	08/06/2016 02:15	3500155
FS	Perfluorooctanoic acid (PFOA)	537	2.0	WW012-July2016		50		ng/L	---	---	---	---	0.96	08/03/2016 08:10	08/06/2016 02:15	3500155

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	Duplicate		3215.49	3548.2	ng/L	91	50 - 150	---	---	0.93	08/03/2016 08:10	08/06/2016 02:46	3500158
FS	IS-PFOS-13C4	537	N/A	Duplicate		1723.64	1850.96	ng/L	93	50 - 150	---	---	0.93	08/03/2016 08:10	08/06/2016 02:46	3500158
FS	SS-PFDA-13C2	537	N/A	Duplicate		92.5206	100	ng/L	99	70 - 130	---	---	0.93	08/03/2016 08:10	08/06/2016 02:46	3500158
FS	SS-PFHxA-13C2	537	N/A	Duplicate		48.1250	50.0	ng/L	103	70 - 130	---	---	0.93	08/03/2016 08:10	08/06/2016 02:46	3500158
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Duplicate	<	9.0		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 02:46	3500158
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	Duplicate		1.5		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 02:46	3500158
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Duplicate	<	3.0		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 02:46	3500158
FS	Perfluorononanoic acid (PFNA)	537	2.0	Duplicate	<	2.0		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 02:46	3500158
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	Duplicate	<	4.0		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 02:46	3500158
FS	Perfluorooctanoic acid (PFOA)	537	2.0	Duplicate		4.0		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 02:46	3500158
FS	IS-PFOA-13C2	537	N/A	OSL-MW08-July2016		3554.09	3548.2	ng/L	100	50 - 150	---	---	0.91	08/03/2016 08:10	08/06/2016 03:16	3500156
FS	IS-PFOS-13C4	537	N/A	OSL-MW08-July2016		1906.26	1850.96	ng/L	103	50 - 150	---	---	0.91	08/03/2016 08:10	08/06/2016 03:16	3500156
FS	SS-PFDA-13C2	537	N/A	OSL-MW08-July2016		88.0822	100	ng/L	97	70 - 130	---	---	0.91	08/03/2016 08:10	08/06/2016 03:16	3500156
FS	SS-PFHxA-13C2	537	N/A	OSL-MW08-July2016		45.0948	50.0	ng/L	99	70 - 130	---	---	0.91	08/03/2016 08:10	08/06/2016 03:16	3500156
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	OSL-MW08-July2016	<	9.0		ng/L	---	---	---	---	0.91	08/03/2016 08:10	08/06/2016 03:16	3500156
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	OSL-MW08-July2016		1.3		ng/L	---	---	---	---	0.91	08/03/2016 08:10	08/06/2016 03:16	3500156
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	OSL-MW08-July2016		6.9		ng/L	---	---	---	---	0.91	08/03/2016 08:10	08/06/2016 03:16	3500156
FS	Perfluorononanoic acid (PFNA)	537	2.0	OSL-MW08-July2016	<	2.0		ng/L	---	---	---	---	0.91	08/03/2016 08:10	08/06/2016 03:16	3500156
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	OSL-MW08-July2016		7.6		ng/L	---	---	---	---	0.91	08/03/2016 08:10	08/06/2016 03:16	3500156
FS	Perfluorooctanoic acid (PFOA)	537	2.0	OSL-MW08-July2016	<	2.0		ng/L	---	---	---	---	0.91	08/03/2016 08:10	08/06/2016 03:16	3500156
FS	IS-PFOA-13C2	537	N/A	OSL-MW10-July2016		3324.78	3548.2	ng/L	94	50 - 150	---	---	0.92	08/03/2016 08:10	08/06/2016 03:47	3500159
FS	IS-PFOS-13C4	537	N/A	OSL-MW10-July2016		1805.47	1850.96	ng/L	98	50 - 150	---	---	0.92	08/03/2016 08:10	08/06/2016 03:47	3500159
FS	SS-PFDA-13C2	537	N/A	OSL-MW10-July2016		91.2849	100	ng/L	99	70 - 130	---	---	0.92	08/03/2016 08:10	08/06/2016 03:47	3500159
FS	SS-PFHxA-13C2	537	N/A	OSL-MW10-July2016		45.7717	50.0	ng/L	100	70 - 130	---	---	0.92	08/03/2016 08:10	08/06/2016 03:47	3500159
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	OSL-MW10-July2016	<	9.0		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 03:47	3500159
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	OSL-MW10-July2016		1.5		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 03:47	3500159
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	OSL-MW10-July2016	<	3.0		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 03:47	3500159
FS	Perfluorononanoic acid (PFNA)	537	2.0	OSL-MW10-July2016	<	2.0		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 03:47	3500159
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	OSL-MW10-July2016	<	4.0		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 03:47	3500159
FS	Perfluorooctanoic acid (PFOA)	537	2.0	OSL-MW10-July2016		4.2		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 03:47	3500159
LFSMM	IS-PFOA-13C2	537	N/A	OSL-MW10-July2016		3365.24	3548.2	ng/L	95	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 04:18	3500160
LFSMM	IS-PFOS-13C4	537	N/A	OSL-MW10-July2016		1749.21	1850.96	ng/L	95	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 04:18	3500160
LFSMM	SS-PFDA-13C2	537	N/A	OSL-MW10-July2016		97.4978	100	ng/L	97	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 04:18	3500160
LFSMM	SS-PFHxA-13C2	537	N/A	OSL-MW10-July2016		49.4654	50.0	ng/L	99	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 04:18	3500160
LFSMM	Perfluorobutanesulfonic acid (PFBS)	537	9.0	OSL-MW10-July2016		663.7530	675	ng/L	98	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 04:18	3500160
LFSMM	Perfluoroheptanoic acid (PFHpA)	537	1.0	OSL-MW10-July2016		74.6872	76.51332	ng/L	98	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 04:18	3500160
LFSMM	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	OSL-MW10-July2016		221.4730	225	ng/L	98	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 04:18	3500160
LFSMM	Perfluorononanoic acid (PFNA)	537	2.0	OSL-MW10-July2016		142.5650	150	ng/L	95	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 04:18	3500160
LFSMM	Perfluorooctane sulfonate (PFOS)	537	4.0	OSL-MW10-July2016		280.6420	300	ng/L	94	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 04:18	3500160
LFSMM	Perfluorooctanoic acid (PFOA)	537	2.0	OSL-MW10-July2016		151.9220	154.23164	ng/L	98	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 04:18	3500160
LFSMDM	IS-PFOA-13C2	537	N/A	OSL-MW10-July2016		3448.69	3548.2	ng/L	97	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 04:49	3500161

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 #
LFSMDM	IS-PFOS-13C4	537	N/A	OSL-MW10-July2016		1772.25	1850.96	ng/L	96	50 - 150	---	---	1.0	08/03/2016 08:10	08/06/2016 04:49	3500161
LFSMDM	SS-PFDA-13C2	537	N/A	OSL-MW10-July2016		100.0230	100	ng/L	100	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 04:49	3500161
LFSMDM	SS-PFHxA-13C2	537	N/A	OSL-MW10-July2016		50.6036	50.0	ng/L	101	70 - 130	---	---	1.0	08/03/2016 08:10	08/06/2016 04:49	3500161
LFSMDM	Perfluorobutanesulfonic acid (PFBS)	537	9.0	OSL-MW10-July2016		684.5460	675	ng/L	101	70 - 130	3.1	30	1.0	08/03/2016 08:10	08/06/2016 04:49	3500161
LFSMDM	Perfluoroheptanoic acid (PFHpA)	537	1.0	OSL-MW10-July2016		75.9383	76.51332	ng/L	99	70 - 130	1.7	30	1.0	08/03/2016 08:10	08/06/2016 04:49	3500161
LFSMDM	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	OSL-MW10-July2016		231.3740	225	ng/L	103	70 - 130	4.4	30	1.0	08/03/2016 08:10	08/06/2016 04:49	3500161
LFSMDM	Perfluorononanoic acid (PFNA)	537	2.0	OSL-MW10-July2016		146.2960	150	ng/L	98	70 - 130	2.6	30	1.0	08/03/2016 08:10	08/06/2016 04:49	3500161
LFSMDM	Perfluorooctane sulfonate (PFOS)	537	4.0	OSL-MW10-July2016		286.9560	300	ng/L	96	70 - 130	2.2	30	1.0	08/03/2016 08:10	08/06/2016 04:49	3500161
LFSMDM	Perfluorooctanoic acid (PFOA)	537	2.0	OSL-MW10-July2016		152.8200	154.23164	ng/L	99	70 - 130	0.6	30	1.0	08/03/2016 08:10	08/06/2016 04:49	3500161
FS	IS-PFOA-13C2	537	N/A	OSL-MW9A-July2016		2998.45	3548.2	ng/L	85	50 - 150	---	---	0.93	08/03/2016 08:10	08/06/2016 05:19	3500162
FS	IS-PFOS-13C4	537	N/A	OSL-MW9A-July2016		1667.76	1850.96	ng/L	90	50 - 150	---	---	0.93	08/03/2016 08:10	08/06/2016 05:19	3500162
FS	SS-PFDA-13C2	537	N/A	OSL-MW9A-July2016		97.4791	100	ng/L	105	70 - 130	---	---	0.93	08/03/2016 08:10	08/06/2016 05:19	3500162
FS	SS-PFHxA-13C2	537	N/A	OSL-MW9A-July2016		47.6684	50.0	ng/L	103	70 - 130	---	---	0.93	08/03/2016 08:10	08/06/2016 05:19	3500162
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	OSL-MW9A-July2016	<	9.0		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 05:19	3500162
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	OSL-MW9A-July2016		4.2		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 05:19	3500162
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	OSL-MW9A-July2016		11		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 05:19	3500162
FS	Perfluorononanoic acid (PFNA)	537	2.0	OSL-MW9A-July2016	<	2.0		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 05:19	3500162
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	OSL-MW9A-July2016	<	4.0		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 05:19	3500162
FS	Perfluorooctanoic acid (PFOA)	537	2.0	OSL-MW9A-July2016		6.6		ng/L	---	---	---	---	0.93	08/03/2016 08:10	08/06/2016 05:19	3500162
FS	IS-PFOA-13C2	537	N/A	ASL-MW961-July2016		3288.18	3548.2	ng/L	93	50 - 150	---	---	0.9	08/03/2016 08:10	08/06/2016 05:50	3500163
FS	IS-PFOS-13C4	537	N/A	ASL-MW961-July2016		1771.06	1850.96	ng/L	96	50 - 150	---	---	0.9	08/03/2016 08:10	08/06/2016 05:50	3500163
FS	SS-PFDA-13C2	537	N/A	ASL-MW961-July2016		90.1573	100	ng/L	100	70 - 130	---	---	0.9	08/03/2016 08:10	08/06/2016 05:50	3500163
FS	SS-PFHxA-13C2	537	N/A	ASL-MW961-July2016		44.5197	50.0	ng/L	99	70 - 130	---	---	0.9	08/03/2016 08:10	08/06/2016 05:50	3500163
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	ASL-MW961-July2016	<	9.0		ng/L	---	---	---	---	0.9	08/03/2016 08:10	08/06/2016 05:50	3500163
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	ASL-MW961-July2016		7.6		ng/L	---	---	---	---	0.9	08/03/2016 08:10	08/06/2016 05:50	3500163
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	ASL-MW961-July2016		19		ng/L	---	---	---	---	0.9	08/03/2016 08:10	08/06/2016 05:50	3500163
FS	Perfluorononanoic acid (PFNA)	537	2.0	ASL-MW961-July2016	<	2.0		ng/L	---	---	---	---	0.9	08/03/2016 08:10	08/06/2016 05:50	3500163
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	ASL-MW961-July2016	<	4.0		ng/L	---	---	---	---	0.9	08/03/2016 08:10	08/06/2016 05:50	3500163
FS	Perfluorooctanoic acid (PFOA)	537	2.0	ASL-MW961-July2016		4.3		ng/L	---	---	---	---	0.9	08/03/2016 08:10	08/06/2016 05:50	3500163
FS	IS-PFOA-13C2	537	N/A	ASL-MW14-July2016		3485.21	3548.2	ng/L	98	50 - 150	---	---	0.95	08/03/2016 08:10	08/06/2016 06:21	3500164
FS	IS-PFOS-13C4	537	N/A	ASL-MW14-July2016		1919.80	1850.96	ng/L	104	50 - 150	---	---	0.95	08/03/2016 08:10	08/06/2016 06:21	3500164
FS	SS-PFDA-13C2	537	N/A	ASL-MW14-July2016		94.9126	100	ng/L	100	70 - 130	---	---	0.95	08/03/2016 08:10	08/06/2016 06:21	3500164
FS	SS-PFHxA-13C2	537	N/A	ASL-MW14-July2016		45.7603	50.0	ng/L	96	70 - 130	---	---	0.95	08/03/2016 08:10	08/06/2016 06:21	3500164
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	ASL-MW14-July2016	<	9.0		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:21	3500164
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	ASL-MW14-July2016	<	1.0		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:21	3500164
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	ASL-MW14-July2016	<	3.0		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:21	3500164
FS	Perfluorononanoic acid (PFNA)	537	2.0	ASL-MW14-July2016	<	2.0		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:21	3500164
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	ASL-MW14-July2016	<	4.0		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:21	3500164
FS	Perfluorooctanoic acid (PFOA)	537	2.0	ASL-MW14-July2016	<	2.0		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:21	3500164
FS	IS-PFOA-13C2	537	N/A	ASL-MW12A-July2016		3283.26	3548.2	ng/L	93	50 - 150	---	---	0.95	08/03/2016 08:10	08/06/2016 06:52	3500165
FS	IS-PFOS-13C4	537	N/A	ASL-MW12A-July2016		1793.43	1850.96	ng/L	97	50 - 150	---	---	0.95	08/03/2016 08:10	08/06/2016 06:52	3500165

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	ASL-MW12A-July2016		94.9356	100	ng/L	100	70 - 130	---	---	0.95	08/03/2016 08:10	08/06/2016 06:52	3500165
FS	SS-PFHxA-13C2	537	N/A	ASL-MW12A-July2016		47.6458	50.0	ng/L	100	70 - 130	---	---	0.95	08/03/2016 08:10	08/06/2016 06:52	3500165
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	ASL-MW12A-July2016	<	9.0		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:52	3500165
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	ASL-MW12A-July2016		36		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:52	3500165
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	ASL-MW12A-July2016		5.5		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:52	3500165
FS	Perfluorononanoic acid (PFNA)	537	2.0	ASL-MW12A-July2016	<	2.0		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:52	3500165
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	ASL-MW12A-July2016	<	4.0		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:52	3500165
FS	Perfluorooctanoic acid (PFOA)	537	2.0	ASL-MW12A-July2016		2.6		ng/L	---	---	---	---	0.95	08/03/2016 08:10	08/06/2016 06:52	3500165
FTB	IS-PFOA-13C2	537	N/A	FTB		3441.40	3548.2	ng/L	97	50 - 150	---	---	0.92	08/03/2016 08:10	08/06/2016 08:24	3500157
FTB	IS-PFOS-13C4	537	N/A	FTB		1866.00	1850.96	ng/L	101	50 - 150	---	---	0.92	08/03/2016 08:10	08/06/2016 08:24	3500157
FTB	SS-PFDA-13C2	537	N/A	FTB		96.0718	100	ng/L	104	70 - 130	---	---	0.92	08/03/2016 08:10	08/06/2016 08:24	3500157
FTB	SS-PFHxA-13C2	537	N/A	FTB		45.2274	50.0	ng/L	98	70 - 130	---	---	0.92	08/03/2016 08:10	08/06/2016 08:24	3500157
FTB	Perfluorobutanesulfonic acid (PFBS)	537	9.0	FTB	<	9.0		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 08:24	3500157
FTB	Perfluoroheptanoic acid (PFHpA)	537	1.0	FTB	<	1.0		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 08:24	3500157
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	FTB	<	3.0		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 08:24	3500157
FTB	Perfluorononanoic acid (PFNA)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 08:24	3500157
FTB	Perfluorooctane sulfonate (PFOS)	537	4.0	FTB	<	4.0		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 08:24	3500157
FTB	Perfluorooctanoic acid (PFOA)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.92	08/03/2016 08:10	08/06/2016 08:24	3500157
CCM	IS-PFOA-13C2	537	N/A	---		3192.00	3192	ng/L	100	50 - 150	---	---	1.0	08/01/2016 09:50	08/06/2016 09:26	3510920
CCM	IS-PFOS-13C4	537	N/A	---		1659.82	1659.82	ng/L	100	50 - 150	---	---	1.0	08/01/2016 09:50	08/06/2016 09:26	3510920
CCM	SS-PFDA-13C2	537	N/A	---		97.7816	100	ng/L	98	70 - 130	---	---	1.0	08/01/2016 09:50	08/06/2016 09:26	3510920
CCM	SS-PFHxA-13C2	537	N/A	---		50.5953	50.0	ng/L	101	70 - 130	---	---	1.0	08/01/2016 09:50	08/06/2016 09:26	3510920
CCM	Perfluorobutanesulfonic acid (PFBS)	537	9.0	---		702.0950	675	ng/L	104	70 - 130	---	---	1.0	08/01/2016 09:50	08/06/2016 09:26	3510920
CCM	Perfluoroheptanoic acid (PFHpA)	537	1.0	---		78.1974	75.0	ng/L	104	70 - 130	---	---	1.0	08/01/2016 09:50	08/06/2016 09:26	3510920
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	---		229.8610	225	ng/L	102	70 - 130	---	---	1.0	08/01/2016 09:50	08/06/2016 09:26	3510920
CCM	Perfluorononanoic acid (PFNA)	537	2.0	---		154.2820	150	ng/L	103	70 - 130	---	---	1.0	08/01/2016 09:50	08/06/2016 09:26	3510920
CCM	Perfluorooctane sulfonate (PFOS)	537	4.0	---		309.4890	300	ng/L	103	70 - 130	---	---	1.0	08/01/2016 09:50	08/06/2016 09:26	3510920
CCM	Perfluorooctanoic acid (PFOA)	537	2.0	---		153.7330	150	ng/L	102	70 - 130	---	---	1.0	08/01/2016 09:50	08/06/2016 09:26	3510920

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		
FBL	Fortified Blank Low		
LFSMDM	LFSM Duplicate Mid		
LFSMM	LFSM Mid		
LRB	Laboratory Reagent Blank		

END OF REPORT

Water Supply Wells

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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.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN00035
Arkansas	IN00035	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*	4074-001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA160002	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
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: Converse Laboratories

Report #: 361128CN

All method QC was within acceptance limits.

Kelly Scott Analytical Services Manager 05/03/2016

Authorized Signature | Title | Date

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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: Converse Laboratories

Attn: Donna Zang
800 Starbuck Ave, Suite B101
Watertown, NY 13601

Report: 361128
Priority: Standard 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
3430806	Well#18	537	04/12/16 11:00	Client	04/14/16 10:00
3430808	Well#14	537	04/12/16 12:20	Client	04/14/16 10:00
3430810	Well#15	537	04/13/16 09:40	Client	04/14/16 10:00
3430812	Well#16	537	04/13/16 10:55	Client	04/14/16 10:00
3430814	Well#17	537	04/13/16 11:45	Client	04/14/16 10:00
3430816	Well#2	537	04/13/16 13:50	Client	04/14/16 10:00
3430817	Well#2 Field Blank	537	04/13/16 13:50	Client	04/14/16 10:00
3430818	Well#3	537	04/13/16 13:45	Client	04/14/16 10:00
3430819	Well#3 Field Blank	537	04/13/16 13:45	Client	04/14/16 10:00
3430820	Well#9	537	04/13/16 14:20	Client	04/14/16 10:00
3430822	Well#10	537	04/13/16 14:30	Client	04/14/16 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 Kelly Trott at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Kelly Trott Analytical Services Manager
Authorized Signature — Title

05/03/2016
Date

Client Name: Converse Laboratories
Report #: 361128

Client Name: Converse Laboratories

Report #: 361128

Sampling Point: Well#18

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/26/16 22:19	3430806
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	04/26/16 08:28	04/26/16 22:19	3430806
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	04/26/16 08:28	04/26/16 22:19	3430806
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/26/16 22:19	3430806
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/26/16 22:19	3430806
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/26/16 22:19	3430806

Sampling Point: Well#14

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/26/16 22:50	3430808
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	04/26/16 08:28	04/26/16 22:50	3430808
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	04/26/16 08:28	04/26/16 22:50	3430808
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/26/16 22:50	3430808
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/26/16 22:50	3430808
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/26/16 22:50	3430808

Sampling Point: Well#15

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/26/16 23:52	3430810
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	04/26/16 08:28	04/26/16 23:52	3430810
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	04/26/16 08:28	04/26/16 23:52	3430810
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/26/16 23:52	3430810
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/26/16 23:52	3430810
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/26/16 23:52	3430810

Client Name: Converse Laboratories

Report #: 361128

Sampling Point: Well#16

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/27/16 00:22	3430812
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	04/26/16 08:28	04/27/16 00:22	3430812
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	04/26/16 08:28	04/27/16 00:22	3430812
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 00:22	3430812
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/27/16 00:22	3430812
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 00:22	3430812

Sampling Point: Well#17

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/27/16 00:53	3430814
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	04/26/16 08:28	04/27/16 00:53	3430814
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	04/26/16 08:28	04/27/16 00:53	3430814
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 00:53	3430814
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/27/16 00:53	3430814
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 00:53	3430814

Sampling Point: Well#2

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/27/16 01:24	3430816
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	**14**	ng/L	04/26/16 08:28	04/27/16 01:24	3430816
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	**19**	ng/L	04/26/16 08:28	04/27/16 01:24	3430816
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 01:24	3430816
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/27/16 01:24	3430816
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	**2.4**	ng/L	04/26/16 08:28	04/27/16 01:24	3430816

Client Name: Converse Laboratories

Report #: 361128

Sampling Point: Well#2 Field Blank

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/27/16 08:04	3430817
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	04/26/16 08:28	04/27/16 08:04	3430817
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	04/26/16 08:28	04/27/16 08:04	3430817
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 08:04	3430817
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/27/16 08:04	3430817
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 08:04	3430817

Sampling Point: Well#3

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/27/16 01:55	3430818
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	7.3	ng/L	04/26/16 08:28	04/27/16 01:55	3430818
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	7.4	ng/L	04/26/16 08:28	04/27/16 01:55	3430818
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 01:55	3430818
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/27/16 01:55	3430818
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 01:55	3430818

Sampling Point: Well#3 Field Blank

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/27/16 08:34	3430819
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	04/26/16 08:28	04/27/16 08:34	3430819
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	04/26/16 08:28	04/27/16 08:34	3430819
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 08:34	3430819
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/27/16 08:34	3430819
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 08:34	3430819

Client Name: Converse Laboratories

Report #: 361128

Sampling Point: Well#9

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/27/16 02:25	3430820
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	04/26/16 08:28	04/27/16 02:25	3430820
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	04/26/16 08:28	04/27/16 02:25	3430820
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 02:25	3430820
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/27/16 02:25	3430820
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 02:25	3430820

Sampling Point: Well#10

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	—	9.0	< 9.0	ng/L	04/26/16 08:28	04/27/16 03:27	3430822
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	04/26/16 08:28	04/27/16 03:27	3430822
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	04/26/16 08:28	04/27/16 03:27	3430822
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 03:27	3430822
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	04/26/16 08:28	04/27/16 03:27	3430822
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 03:27	3430822

† 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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110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: Converse Laboratories

Attn: Donna Zang
800 Starbuck Ave, Suite B101
Watertown, NY 13601

Report: 361128
Priority: Standard Written
Status: Final
PWS ID: Not Supplied

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3430807	Well#18 Field Blank	537	04/12/16 11:50	Client	04/14/16 10:00
3430809	Well#14 Field Blank	537	04/12/16 12:20	Client	04/14/16 10:00
3430811	Well#15 Field Blank	537	04/13/16 09:40	Client	04/14/16 10:00
3430813	Well#16 Field Blank	537	04/13/16 10:55	Client	04/14/16 10:00
3430815	Well#17 Field Blank	537	04/13/16 11:45	Client	04/14/16 10:00
3430821	Well#9 Field Blank	537	04/13/16 14:20	Client	04/14/16 10:00
3430823	Well#10 Field Blank	537	04/13/16 14:30	Client	04/14/16 10:00

Report Summary

Analysis was cancelled at the request of the client.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Kelly Trott at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Kelly Yeats Analytical Services Manager

Authorized Signature | Title | 05/03/2016 Date

eurofins | Eaton Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 294159
Batch # 361128

www.eurofinsus.com/eaton

CHAIN OF CUSTODY RECORD

Page 1 of 2

Shaded area for EEA use only

REPORT TO: Converse Labs

BILL TO: 500 Starbuck Ave Suite B-101 Converse Labs

SAMPLER (Signature): Diane Coveee

COMPLIANCE MONITORING: Yes / No ✓

PWS ID #:

STATE (sample origin): NY

POPULATION SERVED:

SOURCE WATER: DW/GW

PROJECT NAME: Ft. Drum

PO#: EA16-0414

SAMPLE REMARKS:

LAB Number	COLLECTION DATE	COLLECTION TIME	AM	PM	SAMPLING SITE	TEST NAME	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1 3430806	4/12/16	11:00	✓		Well #18	PFCs by EPA 537 (LL=A)		✓	2	DW	
2 807		11:00	✓		Well #18 Field Blank			✓	2	FB	
3 808		1220		✓	Well #14			✓	2	DW	
4 809		1220		✓	Well #14 Field Blank			✓	2	FB	
5 810	4/13/16	0940	✓		Well #15			✓	2	DW	
6 811		0940	✓		Well #15 Field Blank			✓	2	FB	
7 812		1055	✓		Well #16			✓	1	TB	
8 813		1055	✓		Well #16 Field Blank			✓	2	DW	
9 814		1145	✓		Well #17			✓	2	FB	
10 815		1145	✓		Well #17 Field Blank			-	2	DW	
11 816		1350		-	Well #2			-	2	FB	
12 817		1350		-	Well #2 Field Blank			-	2	DW	
13 818		1345	-	✓	Well #3			-	2	FB	
14 819		1345		✓	Well #3 Field Blank						

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
Diane Coveee	4/13/16	1525 AM PM		4/13/16	1525 AM PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
	4/13/16	1525 AM PM			AM PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY:	DATE	TIME
		AM PM	KPM 4-14-16		1000 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 ___ °C Upon Receipt 0.8 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

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 294159

Batch # ____

www.eurofinsus.com/eaton

Shaded area for EEA use only

CHAIN OF CUSTODY RECORD

Page 2 of 2

REPORT TO: Converse Bio Lab

BILL TO: Converse Lab - Water NY

SAMPLER (Signature): Diane Coveee

COMPLIANCE MONITORING: Yes ____ No ✓

PWS ID #: ____

POPULATION SERVED: ____

STATE (sample origin): NY

SOURCE WATER: DW/GW

PROJECT NAME: Ft. Drum

PO#: EA16-0474

	LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3430820	4/13/16	1420		✓	Well #9	PFC's by EPA 537	L = A		–	2	DW	
2	821	↓	1420		–	Well #9 Field Blank	↓	↓		–	2	FB	
3	822	↓	1430		–	Well #10	↓	↓		–	2	DW	
4	823	↓	1430		–	Well #10 Field Blank	↓	↓		–	2	FB	
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
Diane Coveee	4/13/16	1525 PM	[signature]	4/13/16	1525 PM
[signature]	4/13/16	1525	RECEIVED BY:(Signature)		
RELINQUISHED BY:(Signature)			RECEIVED FOR LABORATORY BY: KDms	4-14-16	1000

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 ____ 0.8 °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%
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.

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Eurofins Eaton Analytical
Run Log

Run ID: **215025** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3436371		OS	CY	04/26/2016 20:16	042616M537a.mdb
LRB	3436365		RW	CY	04/26/2016 21:18	042616M537a.mdb
FBL	3436366		RW	CY	04/26/2016 21:49	042616M537a.mdb
FS	3430806	Well#18	DW	CY	04/26/2016 22:19	042616M537a.mdb
FS	3430808	Well#14	DW	CY	04/26/2016 22:50	042616M537a.mdb
LFSML	3436363	Well#14	DW	CY	04/26/2016 23:21	042616M537a.mdb
FS	3430810	Well#15	DW	CY	04/26/2016 23:52	042616M537a.mdb
FS	3430812	Well#16	DW	CY	04/27/2016 00:22	042616M537a.mdb
FS	3430814	Well#17	DW	CY	04/27/2016 00:53	042616M537a.mdb
FS	3430816	Well#2	DW	CY	04/27/2016 01:24	042616M537a.mdb
FS	3430818	Well#3	DW	CY	04/27/2016 01:55	042616M537a.mdb
FS	3430820	Well#9	DW	CY	04/27/2016 02:25	042616M537a.mdb
FD	3436364	Well#9	DW	CY	04/27/2016 02:56	042616M537a.mdb
FS	3430822	Well#10	DW	CY	04/27/2016 03:27	042616M537a.mdb
CCM	3436372		OS	CY	04/27/2016 04:28	042616M537a.mdb
FTB	3430817	Well#2 Field Blank	RW	CY	04/27/2016 08:04	042616M537a.mdb
FTB	3430819	Well#3 Field Blank	RW	CY	04/27/2016 08:34	042616M537a.mdb
CCH	3436373		OS	CY	04/27/2016 10:07	042616M537a.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	—		9690.47	9690.47	ng/L	100	50 - 150	—	—	1.0	04/25/2016 10:34	04/26/2016 20:16	3436371
CCL	IS-PFOS-13C4	537	N/A	—		7789.49	7789.49	ng/L	100	50 - 150	—	—	1.0	04/25/2016 10:34	04/26/2016 20:16	3436371
CCL	SS-PFDA-13C2	537	N/A	—		104.4570	100	ng/L	104	70 - 130	—	—	1.0	04/25/2016 10:34	04/26/2016 20:16	3436371
CCL	SS-PFHxA-13C2	537	N/A	—		51.4471	50.0	ng/L	103	70 - 130	—	—	1.0	04/25/2016 10:34	04/26/2016 20:16	3436371
CCL	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		8.8737	9.0	ng/L	99	50 - 150	—	—	1.0	04/25/2016 10:34	04/26/2016 20:16	3436371
CCL	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		0.9362	1.0	ng/L	94	50 - 150	—	—	1.0	04/25/2016 10:34	04/26/2016 20:16	3436371
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		2.6365	3.0	ng/L	88	50 - 150	—	—	1.0	04/25/2016 10:34	04/26/2016 20:16	3436371
CCL	Perfluorononanoic acid (PFNA)	537	2.0	—		1.9272	2.0	ng/L	96	50 - 150	—	—	1.0	04/25/2016 10:34	04/26/2016 20:16	3436371
CCL	Perfluorooctane sulfonate (PFOS)	537	4.0	—		3.7878	4.0	ng/L	95	50 - 150	—	—	1.0	04/25/2016 10:34	04/26/2016 20:16	3436371
CCL	Perfluorooctanoic acid (PFOA)	537	2.0	—		1.8546	2.0	ng/L	93	50 - 150	—	—	1.0	04/25/2016 10:34	04/26/2016 20:16	3436371
LRB	IS-PFOA-13C2	537	N/A	—		10271.10	9690.47	ng/L	106	50 - 150	—	—	0.96	04/26/2016 08:28	04/26/2016 21:18	3436365
LRB	IS-PFOS-13C4	537	N/A	—		7931.83	7789.49	ng/L	102	50 - 150	—	—	0.96	04/26/2016 08:28	04/26/2016 21:18	3436365
LRB	SS-PFDA-13C2	537	N/A	—		91.2663	100	ng/L	95	70 - 130	—	—	0.96	04/26/2016 08:28	04/26/2016 21:18	3436365
LRB	SS-PFHxA-13C2	537	N/A	—		46.0052	50.0	ng/L	96	70 - 130	—	—	0.96	04/26/2016 08:28	04/26/2016 21:18	3436365
LRB	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—	<	9.0		ng/L	—	—	—	—	0.96	04/26/2016 08:28	04/26/2016 21:18	3436365
LRB	Perfluoroheptanoic acid (PFHpA)	537	1.0	—	<	1.0		ng/L	—	—	—	—	0.96	04/26/2016 08:28	04/26/2016 21:18	3436365
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—	<	3.0		ng/L	—	—	—	—	0.96	04/26/2016 08:28	04/26/2016 21:18	3436365
LRB	Perfluorononanoic acid (PFNA)	537	2.0	—	<	2.0		ng/L	—	—	—	—	0.96	04/26/2016 08:28	04/26/2016 21:18	3436365
LRB	Perfluorooctane sulfonate (PFOS)	537	4.0	—	<	4.0		ng/L	—	—	—	—	0.96	04/26/2016 08:28	04/26/2016 21:18	3436365
LRB	Perfluorooctanoic acid (PFOA)	537	2.0	—	<	2.0		ng/L	—	—	—	—	0.96	04/26/2016 08:28	04/26/2016 21:18	3436365
FBL	IS-PFOA-13C2	537	N/A	—		10474.20	9690.47	ng/L	108	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 21:49	3436366
FBL	IS-PFOS-13C4	537	N/A	—		8102.78	7789.49	ng/L	104	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 21:49	3436366
FBL	SS-PFDA-13C2	537	N/A	—		98.9412	100	ng/L	99	70 - 130	—	—	1.0	04/26/2016 08:28	04/26/2016 21:49	3436366
FBL	SS-PFHxA-13C2	537	N/A	—		49.2034	50.0	ng/L	98	70 - 130	—	—	1.0	04/26/2016 08:28	04/26/2016 21:49	3436366
FBL	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		8.5085	9.0	ng/L	95	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 21:49	3436366
FBL	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		0.9192	1.0	ng/L	92	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 21:49	3436366
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		2.5362	3.0	ng/L	85	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 21:49	3436366
FBL	Perfluorononanoic acid (PFNA)	537	2.0	—		1.8380	2.0	ng/L	92	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 21:49	3436366
FBL	Perfluorooctane sulfonate (PFOS)	537	4.0	—		3.5634	4.0	ng/L	89	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 21:49	3436366
FBL	Perfluorooctanoic acid (PFOA)	537	2.0	—		1.9395	2.0	ng/L	97	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 21:49	3436366
FS	IS-PFOA-13C2	537	N/A	Well#18		10495.00	9690.47	ng/L	108	50 - 150	—	—	0.9	04/26/2016 08:28	04/26/2016 22:19	3430806
FS	IS-PFOS-13C4	537	N/A	Well#18		8026.51	7789.49	ng/L	103	50 - 150	—	—	0.9	04/26/2016 08:28	04/26/2016 22:19	3430806
FS	SS-PFDA-13C2	537	N/A	Well#18		85.3808	100	ng/L	95	70 - 130	—	—	0.9	04/26/2016 08:28	04/26/2016 22:19	3430806
FS	SS-PFHxA-13C2	537	N/A	Well#18		43.6448	50.0	ng/L	97	70 - 130	—	—	0.9	04/26/2016 08:28	04/26/2016 22:19	3430806
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#18	<	9.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/26/2016 22:19	3430806
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#18	<	1.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/26/2016 22:19	3430806
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#18	<	3.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/26/2016 22:19	3430806
FS	Perfluorononanoic acid (PFNA)	537	2.0	Well#18	<	2.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/26/2016 22:19	3430806
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#18	<	4.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/26/2016 22:19	3430806
FS	Perfluorooctanoic acid (PFOA)	537	2.0	Well#18	<	2.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/26/2016 22:19	3430806

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	Well#14		10268.80	9690.47	ng/L	106	50 - 150	—	—	0.89	04/26/2016 08:28	04/26/2016 22:50	3430808
FS	IS-PFOS-13C4	537	N/A	Well#14		7989.61	7789.49	ng/L	103	50 - 150	—	—	0.89	04/26/2016 08:28	04/26/2016 22:50	3430808
FS	SS-PFDA-13C2	537	N/A	Well#14		85.4229	100	ng/L	96	70 - 130	—	—	0.89	04/26/2016 08:28	04/26/2016 22:50	3430808
FS	SS-PFHxA-13C2	537	N/A	Well#14		43.7267	50.0	ng/L	98	70 - 130	—	—	0.89	04/26/2016 08:28	04/26/2016 22:50	3430808
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#14	<	9.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/26/2016 22:50	3430808
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#14	<	1.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/26/2016 22:50	3430808
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#14	<	3.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/26/2016 22:50	3430808
FS	Perfluorononanoic acid (PFNA)	537	2.0	Well#14	<	2.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/26/2016 22:50	3430808
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#14	<	4.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/26/2016 22:50	3430808
FS	Perfluorooctanoic acid (PFOA)	537	2.0	Well#14	<	2.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/26/2016 22:50	3430808
LFSML	IS-PFOA-13C2	537	N/A	Well#14		10970.60	9690.47	ng/L	113	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 23:21	3436363
LFSML	IS-PFOS-13C4	537	N/A	Well#14		8431.93	7789.49	ng/L	108	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 23:21	3436363
LFSML	SS-PFDA-13C2	537	N/A	Well#14		94.7753	100	ng/L	95	70 - 130	—	—	1.0	04/26/2016 08:28	04/26/2016 23:21	3436363
LFSML	SS-PFHxA-13C2	537	N/A	Well#14		47.7157	50.0	ng/L	95	70 - 130	—	—	1.0	04/26/2016 08:28	04/26/2016 23:21	3436363
LFSML	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#14		8.4616	9.0	ng/L	94	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 23:21	3436363
LFSML	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#14		0.8990	1.0	ng/L	90	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 23:21	3436363
LFSML	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#14		2.5295	3.0	ng/L	84	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 23:21	3436363
LFSML	Perfluorononanoic acid (PFNA)	537	2.0	Well#14		1.7902	2.0	ng/L	90	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 23:21	3436363
LFSML	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#14		3.1848	4.0	ng/L	80	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 23:21	3436363
LFSML	Perfluorooctanoic acid (PFOA)	537	2.0	Well#14		1.8359	2.0	ng/L	92	50 - 150	—	—	1.0	04/26/2016 08:28	04/26/2016 23:21	3436363
FS	IS-PFOA-13C2	537	N/A	Well#15		10607.80	9690.47	ng/L	109	50 - 150	—	—	0.87	04/26/2016 08:28	04/26/2016 23:52	3430810
FS	IS-PFOS-13C4	537	N/A	Well#15		7944.55	7789.49	ng/L	102	50 - 150	—	—	0.87	04/26/2016 08:28	04/26/2016 23:52	3430810
FS	SS-PFDA-13C2	537	N/A	Well#15		83.7950	100	ng/L	96	70 - 130	—	—	0.87	04/26/2016 08:28	04/26/2016 23:52	3430810
FS	SS-PFHxA-13C2	537	N/A	Well#15		41.8527	50.0	ng/L	96	70 - 130	—	—	0.87	04/26/2016 08:28	04/26/2016 23:52	3430810
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#15	<	9.0		ng/L	—	—	—	—	0.87	04/26/2016 08:28	04/26/2016 23:52	3430810
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#15	<	1.0		ng/L	—	—	—	—	0.87	04/26/2016 08:28	04/26/2016 23:52	3430810
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#15	<	3.0		ng/L	—	—	—	—	0.87	04/26/2016 08:28	04/26/2016 23:52	3430810
FS	Perfluorononanoic acid (PFNA)	537	2.0	Well#15	<	2.0		ng/L	—	—	—	—	0.87	04/26/2016 08:28	04/26/2016 23:52	3430810
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#15	<	4.0		ng/L	—	—	—	—	0.87	04/26/2016 08:28	04/26/2016 23:52	3430810
FS	Perfluorooctanoic acid (PFOA)	537	2.0	Well#15	<	2.0		ng/L	—	—	—	—	0.87	04/26/2016 08:28	04/26/2016 23:52	3430810
FS	IS-PFOA-13C2	537	N/A	Well#16		10458.10	9690.47	ng/L	108	50 - 150	—	—	0.89	04/26/2016 08:28	04/27/2016 00:22	3430812
FS	IS-PFOS-13C4	537	N/A	Well#16		7966.59	7789.49	ng/L	102	50 - 150	—	—	0.89	04/26/2016 08:28	04/27/2016 00:22	3430812
FS	SS-PFDA-13C2	537	N/A	Well#16		83.5131	100	ng/L	94	70 - 130	—	—	0.89	04/26/2016 08:28	04/27/2016 00:22	3430812
FS	SS-PFHxA-13C2	537	N/A	Well#16		42.3610	50.0	ng/L	95	70 - 130	—	—	0.89	04/26/2016 08:28	04/27/2016 00:22	3430812
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#16	<	9.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/27/2016 00:22	3430812
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#16	<	1.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/27/2016 00:22	3430812
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#16	<	3.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/27/2016 00:22	3430812
FS	Perfluorononanoic acid (PFNA)	537	2.0	Well#16	<	2.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/27/2016 00:22	3430812
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#16	<	4.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/27/2016 00:22	3430812
FS	Perfluorooctanoic acid (PFOA)	537	2.0	Well#16	<	2.0		ng/L	—	—	—	—	0.89	04/26/2016 08:28	04/27/2016 00:22	3430812
FS	IS-PFOA-13C2	537	N/A	Well#17		10668.00	9690.47	ng/L	110	50 - 150	—	—	0.9	04/26/2016 08:28	04/27/2016 00:53	3430814

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	Well#17		8162.90	7789.49	ng/L	105	50 - 150	—	—	0.9	04/26/2016 08:28	04/27/2016 00:53	3430814
FS	SS-PFDA-13C2	537	N/A	Well#17		86.2390	100	ng/L	96	70 - 130	—	—	0.9	04/26/2016 08:28	04/27/2016 00:53	3430814
FS	SS-PFHxA-13C2	537	N/A	Well#17		42.7016	50.0	ng/L	95	70 - 130	—	—	0.9	04/26/2016 08:28	04/27/2016 00:53	3430814
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#17	<	9.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 00:53	3430814
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#17	<	1.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 00:53	3430814
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#17	<	3.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 00:53	3430814
FS	Perfluorononanoic acid (PFNA)	537	2.0	Well#17	<	2.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 00:53	3430814
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#17	<	4.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 00:53	3430814
FS	Perfluorooctanoic acid (PFOA)	537	2.0	Well#17	<	2.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 00:53	3430814
FS	IS-PFOA-13C2	537	N/A	Well#2		9982.39	9690.47	ng/L	103	50 - 150	—	—	0.98	04/26/2016 08:28	04/27/2016 01:24	3430816
FS	IS-PFOS-13C4	537	N/A	Well#2		7569.95	7789.49	ng/L	97	50 - 150	—	—	0.98	04/26/2016 08:28	04/27/2016 01:24	3430816
FS	SS-PFDA-13C2	537	N/A	Well#2		95.9270	100	ng/L	98	70 - 130	—	—	0.98	04/26/2016 08:28	04/27/2016 01:24	3430816
FS	SS-PFHxA-13C2	537	N/A	Well#2		47.0255	50.0	ng/L	96	70 - 130	—	—	0.98	04/26/2016 08:28	04/27/2016 01:24	3430816
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#2	<	9.0		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 01:24	3430816
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#2		14		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 01:24	3430816
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#2		19		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 01:24	3430816
FS	Perfluorononanoic acid (PFNA)	537	2.0	Well#2	<	2.0		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 01:24	3430816
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#2	<	4.0		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 01:24	3430816
FS	Perfluorooctanoic acid (PFOA)	537	2.0	Well#2		2.4		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 01:24	3430816
FS	IS-PFOA-13C2	537	N/A	Well#3		10469.30	9690.47	ng/L	108	50 - 150	—	—	0.92	04/26/2016 08:28	04/27/2016 01:55	3430818
FS	IS-PFOS-13C4	537	N/A	Well#3		8014.32	7789.49	ng/L	103	50 - 150	—	—	0.92	04/26/2016 08:28	04/27/2016 01:55	3430818
FS	SS-PFDA-13C2	537	N/A	Well#3		86.8525	100	ng/L	94	70 - 130	—	—	0.92	04/26/2016 08:28	04/27/2016 01:55	3430818
FS	SS-PFHxA-13C2	537	N/A	Well#3		43.6055	50.0	ng/L	95	70 - 130	—	—	0.92	04/26/2016 08:28	04/27/2016 01:55	3430818
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#3	<	9.0		ng/L	—	—	—	—	0.92	04/26/2016 08:28	04/27/2016 01:55	3430818
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#3		7.3		ng/L	—	—	—	—	0.92	04/26/2016 08:28	04/27/2016 01:55	3430818
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#3		7.4		ng/L	—	—	—	—	0.92	04/26/2016 08:28	04/27/2016 01:55	3430818
FS	Perfluorononanoic acid (PFNA)	537	2.0	Well#3	<	2.0		ng/L	—	—	—	—	0.92	04/26/2016 08:28	04/27/2016 01:55	3430818
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#3	<	4.0		ng/L	—	—	—	—	0.92	04/26/2016 08:28	04/27/2016 01:55	3430818
FS	Perfluorooctanoic acid (PFOA)	537	2.0	Well#3	<	2.0		ng/L	—	—	—	—	0.92	04/26/2016 08:28	04/27/2016 01:55	3430818
FS	IS-PFOA-13C2	537	N/A	Well#9		9913.64	9690.47	ng/L	102	50 - 150	—	—	0.95	04/26/2016 08:28	04/27/2016 02:25	3430820
FS	IS-PFOS-13C4	537	N/A	Well#9		7749.96	7789.49	ng/L	99	50 - 150	—	—	0.95	04/26/2016 08:28	04/27/2016 02:25	3430820
FS	SS-PFDA-13C2	537	N/A	Well#9		93.7169	100	ng/L	99	70 - 130	—	—	0.95	04/26/2016 08:28	04/27/2016 02:25	3430820
FS	SS-PFHxA-13C2	537	N/A	Well#9		46.1798	50.0	ng/L	97	70 - 130	—	—	0.95	04/26/2016 08:28	04/27/2016 02:25	3430820
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#9	<	9.0		ng/L	—	—	—	—	0.95	04/26/2016 08:28	04/27/2016 02:25	3430820
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#9	<	1.0		ng/L	—	—	—	—	0.95	04/26/2016 08:28	04/27/2016 02:25	3430820
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#9	<	3.0		ng/L	—	—	—	—	0.95	04/26/2016 08:28	04/27/2016 02:25	3430820
FS	Perfluorononanoic acid (PFNA)	537	2.0	Well#9	<	2.0		ng/L	—	—	—	—	0.95	04/26/2016 08:28	04/27/2016 02:25	3430820
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#9	<	4.0		ng/L	—	—	—	—	0.95	04/26/2016 08:28	04/27/2016 02:25	3430820
FS	Perfluorooctanoic acid (PFOA)	537	2.0	Well#9	<	2.0		ng/L	—	—	—	—	0.95	04/26/2016 08:28	04/27/2016 02:25	3430820
FD	IS-PFOA-13C2	537	N/A	Well#9		10402.60	9690.47	ng/L	107	50 - 150	—	—	0.98	04/26/2016 08:28	04/27/2016 02:56	3436364
FD	IS-PFOS-13C4	537	N/A	Well#9		8057.56	7789.49	ng/L	103	50 - 150	—	—	0.98	04/26/2016 08:28	04/27/2016 02:56	3436364

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 #
FD	SS-PFDA-13C2	537	N/A	Well#9		93.9786	100	ng/L	96	70 - 130	—	—	0.98	04/26/2016 08:28	04/27/2016 02:56	3436364
FD	SS-PFHxA-13C2	537	N/A	Well#9		47.6305	50.0	ng/L	97	70 - 130	—	—	0.98	04/26/2016 08:28	04/27/2016 02:56	3436364
FD	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#9	<	9.0		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 02:56	3436364
FD	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#9	<	1.0		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 02:56	3436364
FD	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#9	<	3.0		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 02:56	3436364
FD	Perfluorononanoic acid (PFNA)	537	2.0	Well#9	<	2.0		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 02:56	3436364
FD	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#9	<	4.0		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 02:56	3436364
FD	Perfluorooctanoic acid (PFOA)	537	2.0	Well#9	<	2.0		ng/L	—	—	—	—	0.98	04/26/2016 08:28	04/27/2016 02:56	3436364
FS	IS-PFOA-13C2	537	N/A	Well#10		9976.38	9690.47	ng/L	103	50 - 150	—	—	0.97	04/26/2016 08:28	04/27/2016 03:27	3430822
FS	IS-PFOS-13C4	537	N/A	Well#10		7783.60	7789.49	ng/L	100	50 - 150	—	—	0.97	04/26/2016 08:28	04/27/2016 03:27	3430822
FS	SS-PFDA-13C2	537	N/A	Well#10		95.8382	100	ng/L	99	70 - 130	—	—	0.97	04/26/2016 08:28	04/27/2016 03:27	3430822
FS	SS-PFHxA-13C2	537	N/A	Well#10		48.2362	50.0	ng/L	99	70 - 130	—	—	0.97	04/26/2016 08:28	04/27/2016 03:27	3430822
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#10	<	9.0		ng/L	—	—	—	—	0.97	04/26/2016 08:28	04/27/2016 03:27	3430822
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#10	<	1.0		ng/L	—	—	—	—	0.97	04/26/2016 08:28	04/27/2016 03:27	3430822
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#10	<	3.0		ng/L	—	—	—	—	0.97	04/26/2016 08:28	04/27/2016 03:27	3430822
FS	Perfluorononanoic acid (PFNA)	537	2.0	Well#10	<	2.0		ng/L	—	—	—	—	0.97	04/26/2016 08:28	04/27/2016 03:27	3430822
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#10	<	4.0		ng/L	—	—	—	—	0.97	04/26/2016 08:28	04/27/2016 03:27	3430822
FS	Perfluorooctanoic acid (PFOA)	537	2.0	Well#10	<	2.0		ng/L	—	—	—	—	0.97	04/26/2016 08:28	04/27/2016 03:27	3430822
CCM	IS-PFOA-13C2	537	N/A	—		10372.70	10372.7	ng/L	100	50 - 150	—	—	1.0	04/25/2016 10:34	04/27/2016 04:28	3436372
CCM	IS-PFOS-13C4	537	N/A	—		7826.45	7826.45	ng/L	100	50 - 150	—	—	1.0	04/25/2016 10:34	04/27/2016 04:28	3436372
CCM	SS-PFDA-13C2	537	N/A	—		97.6020	100	ng/L	98	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 04:28	3436372
CCM	SS-PFHxA-13C2	537	N/A	—		49.1894	50.0	ng/L	98	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 04:28	3436372
CCM	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		668.6460	675	ng/L	99	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 04:28	3436372
CCM	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		73.9002	75.0	ng/L	99	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 04:28	3436372
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		222.7210	225	ng/L	99	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 04:28	3436372
CCM	Perfluorononanoic acid (PFNA)	537	2.0	—		150.0150	150	ng/L	100	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 04:28	3436372
CCM	Perfluorooctane sulfonate (PFOS)	537	4.0	—		298.7450	300	ng/L	100	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 04:28	3436372
CCM	Perfluorooctanoic acid (PFOA)	537	2.0	—		148.7950	150	ng/L	99	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 04:28	3436372
FTB	IS-PFOA-13C2	537	N/A	Well#2 Field Blank		10556.50	10372.7	ng/L	102	50 - 150	—	—	0.9	04/26/2016 08:28	04/27/2016 08:04	3430817
FTB	IS-PFOS-13C4	537	N/A	Well#2 Field Blank		8062.50	7826.45	ng/L	103	50 - 150	—	—	0.9	04/26/2016 08:28	04/27/2016 08:04	3430817
FTB	SS-PFDA-13C2	537	N/A	Well#2 Field Blank		87.3998	100	ng/L	97	70 - 130	—	—	0.9	04/26/2016 08:28	04/27/2016 08:04	3430817
FTB	SS-PFHxA-13C2	537	N/A	Well#2 Field Blank		43.7487	50.0	ng/L	97	70 - 130	—	—	0.9	04/26/2016 08:28	04/27/2016 08:04	3430817
FTB	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#2 Field Blank	<	9.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:04	3430817
FTB	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#2 Field Blank	<	1.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:04	3430817
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#2 Field Blank	<	3.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:04	3430817
FTB	Perfluorononanoic acid (PFNA)	537	2.0	Well#2 Field Blank	<	2.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:04	3430817
FTB	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#2 Field Blank	<	4.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:04	3430817
FTB	Perfluorooctanoic acid (PFOA)	537	2.0	Well#2 Field Blank	<	2.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:04	3430817
FTB	IS-PFOA-13C2	537	N/A	Well#3 Field Blank		10181.60	10372.7	ng/L	98	50 - 150	—	—	0.9	04/26/2016 08:28	04/27/2016 08:34	3430819
FTB	IS-PFOS-13C4	537	N/A	Well#3 Field Blank		7944.13	7826.45	ng/L	102	50 - 150	—	—	0.9	04/26/2016 08:28	04/27/2016 08:34	3430819
FTB	SS-PFDA-13C2	537	N/A	Well#3 Field Blank		85.2446	100	ng/L	95	70 - 130	—	—	0.9	04/26/2016 08:28	04/27/2016 08:34	3430819

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	SS-PFHxA-13C2	537	N/A	Well#3 Field Blank		42.7188	50.0	ng/L	95	70 - 130	—	—	0.9	04/26/2016 08:28	04/27/2016 08:34	3430819
FTB	Perfluorobutanesulfonic acid (PFBS)	537	9.0	Well#3 Field Blank	<	9.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:34	3430819
FTB	Perfluoroheptanoic acid (PFHpA)	537	1.0	Well#3 Field Blank	<	1.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:34	3430819
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	Well#3 Field Blank	<	3.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:34	3430819
FTB	Perfluorononanoic acid (PFNA)	537	2.0	Well#3 Field Blank	<	2.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:34	3430819
FTB	Perfluorooctane sulfonate (PFOS)	537	4.0	Well#3 Field Blank	<	4.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:34	3430819
FTB	Perfluorooctanoic acid (PFOA)	537	2.0	Well#3 Field Blank	<	2.0		ng/L	—	—	—	—	0.9	04/26/2016 08:28	04/27/2016 08:34	3430819
CCH	IS-PFOA-13C2	537	N/A	—		10177.30	10177.3	ng/L	100	50 - 150	—	—	1.0	04/25/2016 10:34	04/27/2016 10:07	3436373
CCH	IS-PFOS-13C4	537	N/A	—		7405.06	7405.06	ng/L	100	50 - 150	—	—	1.0	04/25/2016 10:34	04/27/2016 10:07	3436373
CCH	SS-PFDA-13C2	537	N/A	—		98.6528	100	ng/L	99	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 10:07	3436373
CCH	SS-PFHxA-13C2	537	N/A	—		49.1070	50.0	ng/L	98	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 10:07	3436373
CCH	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		1133.4900	1125	ng/L	101	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 10:07	3436373
CCH	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		126.0430	125	ng/L	101	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 10:07	3436373
CCH	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		388.0360	375	ng/L	103	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 10:07	3436373
CCH	Perfluorononanoic acid (PFNA)	537	2.0	—		247.5700	250	ng/L	99	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 10:07	3436373
CCH	Perfluorooctane sulfonate (PFOS)	537	4.0	—		517.5250	500	ng/L	104	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 10:07	3436373
CCH	Perfluorooctanoic acid (PFOA)	537	2.0	—		254.3230	250	ng/L	102	70 - 130	—	—	1.0	04/25/2016 10:34	04/27/2016 10:07	3436373

Sample Type Key

Type (Abbr.)	Sample Type
CCH	Continuing Calibration High
CCL	Continuing Calibration Low
CCM	Continuing Calibration Mid
FD	Field Duplicate
FS	Field Sample
FTB	Field Trip Blank
FBL	Fortified Blank Low
LFSML	LFSM Low
LRB	Laboratory Reagent Blank

Type (Abbr.)	Sample Type

END OF REPORT

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Batch # _____

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CHAIN OF CUSTODY RECORD

Page 2 of 2

Shaded area for EEA use only

REPORT TO: Converse Bn Lab

SAMPLER (Signature): Diane Covell

PWS ID #:

STATE (sample origin): NY

PROJECT NAME: Ft. Drum

PO#: EA16-0474

BILL TO: Converse LAB - Watr Nqf

COMPLIANCE MONITORING: Yes ☐ No ✓

POPULATION SERVED:

SOURCE WATER: DW/GW

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	4/13/16	1420		✓	Well #9	PFC's by EPA 537			-	2	DW	
2		1420		-	Well #9 Field Blank				-	2	FB	
3		1430		-	Well #10				-	2	DW	
4	↓	1430		-	Well #10 Field Blank	↓			-	2	FB	
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

	DATE	TIME		RECEIVED BY:(Signature)	DATE	TIME	
RELINQUISHED BY:(Signature) Diane Covell	4/13/16	1525	AM PM		4/13/16	1525	AM PM
RELINQUISHED BY:(Signature)	DATE	TIME		RECEIVED BY:(Signature)	DATE	TIME	
	4/13/16	1525	AM PM				AM PM
RELINQUISHED BY:(Signature)	DATE	TIME		RECEIVED FOR LABORATORY BY:	DATE	TIME	
			AM PM				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_____ °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.

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110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 294159
Batch # _____

Page 1 of 2

CHAIN OF CUSTODY RECORD

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Shaded area for EEA use only

REPORT TO: Converse Labs

BILL TO: 500 Starbuck Ave Suite B101 Converse Labs

SAMPLER (Signature): Dave Coveee

COMPLIANCE MONITORING: Yes ____ No ✓

PWS ID #: ____

POPULATION SERVED: ____

STATE (sample origin): NY

SOURCE WATER: DW/GW

PROJECT NAME: Ft. Drum

PO#: EA16-0414

LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	4/12/16	11:00	✓		Well #18	PFCs by EPA 537			✓	2	DW	
2		11:00	✓		Well #18 Field Blank				✓	2	FB	
3		1220		✓	Well #14				✓	2	DW	
4		1220		✓	Well #14 Field Blank				✓	2	FB	
5	4/13/16	0940	✓		Well #15				✓	2	DW	
6		0940	✓		Well #15 Field Blank				✓	1	FB	
7		1055	✓		Well #16				✓	2	DW	
8		1055	✓		Well #16 Field Blank				✓	2	FB	
9		1145	✓		Well #17				✓	2	DW	
10		1145	✓		Well #17 Field Blank				✓	2	FB	
11		1350		✓	Well #2				✓	2	DW	
12		1350		✓	Well #2 Field Blank				✓	2	FB	
13		1345	✓		Well #3				✓	2	DW	
14		1345		✓	Well #3 Field Blank				✓	2	FB	

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
Dave Coveee	4/13/16	1525 AM PM		4/13/16	1525 AM PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
	4/13/16	1525 AM PM			AM PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY:	DATE	TIME
		AM PM			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 ____ °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.

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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: Converse Laboratories

Attn: Donna Zang
800 Starbuck Ave, Suite B101
Watertown, NY 13601

Report: 364607
Priority: Standard Written
Status: Amended
PWS ID: Not Supplied
Lab ELAP #: 11398

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3463547	WW007-0616	537	06/02/16 09:47	Client	06/03/16 10:00
3463548	WW007-0616/FTB	537	06/02/16 09:47	Client	06/03/16 10:00
3463549	WW011-0616	537	06/02/16 10:37	Client	06/03/16 10:00
3463550	WW011-0616/FTB	537	06/02/16 10:37	Client	06/03/16 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 Kelly Trott at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Kelly Scott Analytical Services Manager — 06/27/2016

Authorized Signature — Title — Date

Client Name: Converse Laboratories
Report #: 364607

Client Name: Converse Laboratories

Report #: 364607

Sampling Point: WW007-0616

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	—	9.0	< 9.0	ng/L	06/13/16 07:29	06/14/16 04:21	3463547
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	36	ng/L	06/13/16 07:29	06/14/16 04:21	3463547
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	150	ng/L	06/13/16 07:29	06/14/16 04:21	3463547
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	06/13/16 07:29	06/14/16 04:21	3463547
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	11	ng/L	06/13/16 07:29	06/14/16 04:21	3463547
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	90	ng/L	06/13/16 07:29	06/14/16 04:21	3463547

Sampling Point: WW007-0616/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	—	9.0	< 9.0	ng/L	06/13/16 07:29	06/14/16 07:58	3463548
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	06/13/16 07:29	06/14/16 07:58	3463548
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	06/13/16 07:29	06/14/16 07:58	3463548
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	06/13/16 07:29	06/14/16 07:58	3463548
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	06/13/16 07:29	06/14/16 07:58	3463548
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	06/13/16 07:29	06/14/16 07:58	3463548

Sampling Point: WW011-0616

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	—	9.0	10	ng/L	06/13/16 07:29	06/14/16 04:52	3463549
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	11	ng/L	06/13/16 07:29	06/14/16 04:52	3463549
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	21	ng/L	06/13/16 07:29	06/14/16 04:52	3463549
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	06/13/16 07:29	06/14/16 04:52	3463549
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	06/13/16 07:29	06/14/16 04:52	3463549
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	4.9	ng/L	06/13/16 07:29	06/14/16 04:52	3463549

Client Name: Converse Laboratories

Report #: 364607

Sampling Point: WW011-0616/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	—	9.0	< 9.0	ng/L	06/13/16 07:29	06/14/16 08:29	3463550
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	—	1.0	< 1.0	ng/L	06/13/16 07:29	06/14/16 08:29	3463550
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	—	3.0	< 3.0	ng/L	06/13/16 07:29	06/14/16 08:29	3463550
375-95-1	Perfluorononanoic acid (PFNA)	537	—	2.0	< 2.0	ng/L	06/13/16 07:29	06/14/16 08:29	3463550
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	—	4.0	< 4.0	ng/L	06/13/16 07:29	06/14/16 08:29	3463550
335-67-1	Perfluorooctanoic acid (PFOA)	537	—	2.0	< 2.0	ng/L	06/13/16 07:29	06/14/16 08:29	3463550

† 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:	*	^	!

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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.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN00035
Arkansas	IN00035	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*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon (Primary AB)*	4074-001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA160002	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
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

Revision date: 04/14/2016

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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South Bend, IN 46617
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F: 1.574.233.8207

Order # 298055
Batch # 364607

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CHAIN OF CUSTODY RECORD

Page 1 of 1

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REPORT TO:	SAMPLER (Signature)	PWS ID #	STATE (sample origin)	PROJECT NAME	PO#
Converse Labs (315) 788-8388	S.F.		NY	Ft Drum Wellfield Eval. well 17-11	

BILL TO:	COMPLIANCE MONITORING	Yes	No	POPULATION SERVED	SOURCE WATER
Converse Labs customerservice@converselabs.com					well

LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	34603547	6/2/16	0947	X		WW007 - 060116	PFCs method 537	A		✓	1	G	SW
2	34603549	6/2/16	1037	X		WW011 - 060116	PFCs method 537	A		✓	1	G	SW
3	34603550	6/2/16	1037	X		WW011 - 060116	PFCs method 537	FTB A		✓	1	G	SW
4	34603548	6/2/16	0947	X		WW007 - 060116	PFCs method 537	FTB A		✓	1	G	SW
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
KMcR13530	6/2/16	1515 AM 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	KDyer 6-3-16	1000	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 ___ 5.6 °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%
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.

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Eurofins Eaton Analytical
Run Log

Run ID: **216946** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3469584		OS	CY	06/13/2016 22:12	061316M537a.mdb
LRB	3469579		RW	CY	06/13/2016 23:13	061316M537a.mdb
FBL	3469580		RW	CY	06/13/2016 23:44	061316M537a.mdb
FBM	3469581		RW	CY	06/14/2016 00:15	061316M537a.mdb
FS	3463547	WW007-0616	DW	CY	06/14/2016 04:21	061316M537a.mdb
FS	3463549	WW011-0616	DW	CY	06/14/2016 04:52	061316M537a.mdb
FD	3469578	WW011-0616	DW	CY	06/14/2016 05:22	061316M537a.mdb
FTB	3463548	WW007-0616/FTB	RW	CY	06/14/2016 07:58	061316M537a.mdb
FTB	3463550	WW011-0616/FTB	RW	CY	06/14/2016 08:29	061316M537a.mdb
CCM	3469585		OS	CY	06/14/2016 10:32	061316M537a.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	---		9566.10	9566.1	ng/L	100	50 - 150	---	---	1.0	06/09/2016 10:36	06/13/2016 22:12	3469584
CCL	IS-PFOS-13C4	537	N/A	---		6489.64	6489.64	ng/L	100	50 - 150	---	---	1.0	06/09/2016 10:36	06/13/2016 22:12	3469584
CCL	SS-PFDA-13C2	537	N/A	---		98.8500	100	ng/L	99	70 - 130	---	---	1.0	06/09/2016 10:36	06/13/2016 22:12	3469584
CCL	SS-PFHxA-13C2	537	N/A	---		49.6929	50.0	ng/L	99	70 - 130	---	---	1.0	06/09/2016 10:36	06/13/2016 22:12	3469584
CCL	Perfluorobutanesulfonic acid (PFBS)	537	9.0	---		9.0939	9.0	ng/L	101	50 - 150	---	---	1.0	06/09/2016 10:36	06/13/2016 22:12	3469584
CCL	Perfluoroheptanoic acid (PFHpA)	537	1.0	---		0.9852	1.0	ng/L	99	50 - 150	---	---	1.0	06/09/2016 10:36	06/13/2016 22:12	3469584
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	---		2.7139	3.0	ng/L	90	50 - 150	---	---	1.0	06/09/2016 10:36	06/13/2016 22:12	3469584
CCL	Perfluorononanoic acid (PFNA)	537	2.0	---		1.8611	2.0	ng/L	93	50 - 150	---	---	1.0	06/09/2016 10:36	06/13/2016 22:12	3469584
CCL	Perfluorooctane sulfonate (PFOS)	537	4.0	---		3.6931	4.0	ng/L	92	50 - 150	---	---	1.0	06/09/2016 10:36	06/13/2016 22:12	3469584
CCL	Perfluorooctanoic acid (PFOA)	537	2.0	---		1.9016	2.0	ng/L	95	50 - 150	---	---	1.0	06/09/2016 10:36	06/13/2016 22:12	3469584
LRB	IS-PFOA-13C2	537	N/A	---		10187.10	9566.1	ng/L	106	50 - 150	---	---	0.99	06/13/2016 07:29	06/13/2016 23:13	3469579
LRB	IS-PFOS-13C4	537	N/A	---		7065.88	6489.64	ng/L	109	50 - 150	---	---	0.99	06/13/2016 07:29	06/13/2016 23:13	3469579
LRB	SS-PFDA-13C2	537	N/A	---		96.7936	100	ng/L	98	70 - 130	---	---	0.99	06/13/2016 07:29	06/13/2016 23:13	3469579
LRB	SS-PFHxA-13C2	537	N/A	---		49.3673	50.0	ng/L	100	70 - 130	---	---	0.99	06/13/2016 07:29	06/13/2016 23:13	3469579
LRB	Perfluorobutanesulfonic acid (PFBS)	537	9.0	---	<	9.0		ng/L	---	---	---	---	0.99	06/13/2016 07:29	06/13/2016 23:13	3469579
LRB	Perfluoroheptanoic acid (PFHpA)	537	1.0	---	<	1.0		ng/L	---	---	---	---	0.99	06/13/2016 07:29	06/13/2016 23:13	3469579
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	---	<	3.0		ng/L	---	---	---	---	0.99	06/13/2016 07:29	06/13/2016 23:13	3469579
LRB	Perfluorononanoic acid (PFNA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.99	06/13/2016 07:29	06/13/2016 23:13	3469579
LRB	Perfluorooctane sulfonate (PFOS)	537	4.0	---	<	4.0		ng/L	---	---	---	---	0.99	06/13/2016 07:29	06/13/2016 23:13	3469579
LRB	Perfluorooctanoic acid (PFOA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.99	06/13/2016 07:29	06/13/2016 23:13	3469579
FBL	IS-PFOA-13C2	537	N/A	---		9868.31	9566.1	ng/L	103	50 - 150	---	---	1.0	06/13/2016 07:29	06/13/2016 23:44	3469580
FBL	IS-PFOS-13C4	537	N/A	---		6842.60	6489.64	ng/L	105	50 - 150	---	---	1.0	06/13/2016 07:29	06/13/2016 23:44	3469580
FBL	SS-PFDA-13C2	537	N/A	---		97.4555	100	ng/L	97	70 - 130	---	---	1.0	06/13/2016 07:29	06/13/2016 23:44	3469580
FBL	SS-PFHxA-13C2	537	N/A	---		49.8676	50.0	ng/L	100	70 - 130	---	---	1.0	06/13/2016 07:29	06/13/2016 23:44	3469580
FBL	Perfluorobutanesulfonic acid (PFBS)	537	9.0	---		8.3654	9.0	ng/L	93	50 - 150	---	---	1.0	06/13/2016 07:29	06/13/2016 23:44	3469580
FBL	Perfluoroheptanoic acid (PFHpA)	537	1.0	---		0.7970	1.0	ng/L	80	50 - 150	---	---	1.0	06/13/2016 07:29	06/13/2016 23:44	3469580
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	---		2.4479	3.0	ng/L	82	50 - 150	---	---	1.0	06/13/2016 07:29	06/13/2016 23:44	3469580
FBL	Perfluorononanoic acid (PFNA)	537	2.0	---		1.8110	2.0	ng/L	91	50 - 150	---	---	1.0	06/13/2016 07:29	06/13/2016 23:44	3469580
FBL	Perfluorooctane sulfonate (PFOS)	537	4.0	---		3.4043	4.0	ng/L	85	50 - 150	---	---	1.0	06/13/2016 07:29	06/13/2016 23:44	3469580
FBL	Perfluorooctanoic acid (PFOA)	537	2.0	---		1.7845	2.0	ng/L	89	50 - 150	---	---	1.0	06/13/2016 07:29	06/13/2016 23:44	3469580
FBM	IS-PFOA-13C2	537	N/A	---		10290.20	9566.1	ng/L	108	50 - 150	---	---	1.0	06/13/2016 07:29	06/14/2016 00:15	3469581
FBM	IS-PFOS-13C4	537	N/A	---		6860.94	6489.64	ng/L	106	50 - 150	---	---	1.0	06/13/2016 07:29	06/14/2016 00:15	3469581
FBM	SS-PFDA-13C2	537	N/A	---		92.3820	100	ng/L	92	70 - 130	---	---	1.0	06/13/2016 07:29	06/14/2016 00:15	3469581
FBM	SS-PFHxA-13C2	537	N/A	---		47.1521	50.0	ng/L	94	70 - 130	---	---	1.0	06/13/2016 07:29	06/14/2016 00:15	3469581
FBM	Perfluorobutanesulfonic acid (PFBS)	537	9.0	---		638.9470	675	ng/L	95	70 - 130	---	---	1.0	06/13/2016 07:29	06/14/2016 00:15	3469581
FBM	Perfluoroheptanoic acid (PFHpA)	537	1.0	---		68.0589	75.0	ng/L	91	70 - 130	---	---	1.0	06/13/2016 07:29	06/14/2016 00:15	3469581
FBM	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	---		209.2560	225	ng/L	93	70 - 130	---	---	1.0	06/13/2016 07:29	06/14/2016 00:15	3469581
FBM	Perfluorononanoic acid (PFNA)	537	2.0	---		138.7810	150	ng/L	93	70 - 130	---	---	1.0	06/13/2016 07:29	06/14/2016 00:15	3469581
FBM	Perfluorooctane sulfonate (PFOS)	537	4.0	---		275.5740	300	ng/L	92	70 - 130	---	---	1.0	06/13/2016 07:29	06/14/2016 00:15	3469581
FBM	Perfluorooctanoic acid (PFOA)	537	2.0	---		140.5860	150	ng/L	94	70 - 130	---	---	1.0	06/13/2016 07:29	06/14/2016 00:15	3469581

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	WW007-0616		10369.80	9566.1	ng/L	108	50 - 150	---	---	0.96	06/13/2016 07:29	06/14/2016 04:21	3463547
FS	IS-PFOS-13C4	537	N/A	WW007-0616		6785.91	6489.64	ng/L	105	50 - 150	---	---	0.96	06/13/2016 07:29	06/14/2016 04:21	3463547
FS	SS-PFDA-13C2	537	N/A	WW007-0616		88.2257	100	ng/L	92	70 - 130	---	---	0.96	06/13/2016 07:29	06/14/2016 04:21	3463547
FS	SS-PFHxA-13C2	537	N/A	WW007-0616		45.0856	50.0	ng/L	94	70 - 130	---	---	0.96	06/13/2016 07:29	06/14/2016 04:21	3463547
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	WW007-0616	<	9.0		ng/L	---	---	---	---	0.96	06/13/2016 07:29	06/14/2016 04:21	3463547
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	WW007-0616		36		ng/L	---	---	---	---	0.96	06/13/2016 07:29	06/14/2016 04:21	3463547
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	WW007-0616		150		ng/L	---	---	---	---	0.96	06/13/2016 07:29	06/14/2016 04:21	3463547
FS	Perfluorononanoic acid (PFNA)	537	2.0	WW007-0616	<	2.0		ng/L	---	---	---	---	0.96	06/13/2016 07:29	06/14/2016 04:21	3463547
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	WW007-0616		11		ng/L	---	---	---	---	0.96	06/13/2016 07:29	06/14/2016 04:21	3463547
FS	Perfluorooctanoic acid (PFOA)	537	2.0	WW007-0616		90		ng/L	---	---	---	---	0.96	06/13/2016 07:29	06/14/2016 04:21	3463547
FS	IS-PFOA-13C2	537	N/A	WW011-0616		10048.40	9566.1	ng/L	105	50 - 150	---	---	0.94	06/13/2016 07:29	06/14/2016 04:52	3463549
FS	IS-PFOS-13C4	537	N/A	WW011-0616		6790.72	6489.64	ng/L	105	50 - 150	---	---	0.94	06/13/2016 07:29	06/14/2016 04:52	3463549
FS	SS-PFDA-13C2	537	N/A	WW011-0616		87.9710	100	ng/L	94	70 - 130	---	---	0.94	06/13/2016 07:29	06/14/2016 04:52	3463549
FS	SS-PFHxA-13C2	537	N/A	WW011-0616		46.3515	50.0	ng/L	99	70 - 130	---	---	0.94	06/13/2016 07:29	06/14/2016 04:52	3463549
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	WW011-0616		10		ng/L	---	---	---	---	0.94	06/13/2016 07:29	06/14/2016 04:52	3463549
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	WW011-0616		11		ng/L	---	---	---	---	0.94	06/13/2016 07:29	06/14/2016 04:52	3463549
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	WW011-0616		21		ng/L	---	---	---	---	0.94	06/13/2016 07:29	06/14/2016 04:52	3463549
FS	Perfluorononanoic acid (PFNA)	537	2.0	WW011-0616	<	2.0		ng/L	---	---	---	---	0.94	06/13/2016 07:29	06/14/2016 04:52	3463549
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	WW011-0616	<	4.0		ng/L	---	---	---	---	0.94	06/13/2016 07:29	06/14/2016 04:52	3463549
FS	Perfluorooctanoic acid (PFOA)	537	2.0	WW011-0616		4.9		ng/L	---	---	---	---	0.94	06/13/2016 07:29	06/14/2016 04:52	3463549
FD	IS-PFOA-13C2	537	N/A	WW011-0616		10159.10	9566.1	ng/L	106	50 - 150	---	---	0.93	06/13/2016 07:29	06/14/2016 05:22	3469578
FD	IS-PFOS-13C4	537	N/A	WW011-0616		6931.31	6489.64	ng/L	107	50 - 150	---	---	0.93	06/13/2016 07:29	06/14/2016 05:22	3469578
FD	SS-PFDA-13C2	537	N/A	WW011-0616		86.1867	100	ng/L	93	70 - 130	---	---	0.93	06/13/2016 07:29	06/14/2016 05:22	3469578
FD	SS-PFHxA-13C2	537	N/A	WW011-0616		46.3190	50.0	ng/L	100	70 - 130	---	---	0.93	06/13/2016 07:29	06/14/2016 05:22	3469578
FD	Perfluorobutanesulfonic acid (PFBS)	537	9.0	WW011-0616		10.3		ng/L	---	---	1.0	30	0.93	06/13/2016 07:29	06/14/2016 05:22	3469578
FD	Perfluoroheptanoic acid (PFHpA)	537	1.0	WW011-0616		10.9		ng/L	---	---	1.6	30	0.93	06/13/2016 07:29	06/14/2016 05:22	3469578
FD	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	WW011-0616		21.2		ng/L	---	---	0.2	30	0.93	06/13/2016 07:29	06/14/2016 05:22	3469578
FD	Perfluorononanoic acid (PFNA)	537	2.0	WW011-0616	<	2.0		ng/L	---	---	---	---	0.93	06/13/2016 07:29	06/14/2016 05:22	3469578
FD	Perfluorooctane sulfonate (PFOS)	537	4.0	WW011-0616	<	4.0		ng/L	---	---	---	---	0.93	06/13/2016 07:29	06/14/2016 05:22	3469578
FD	Perfluorooctanoic acid (PFOA)	537	2.0	WW011-0616		4.98		ng/L	---	---	0.9	30	0.93	06/13/2016 07:29	06/14/2016 05:22	3469578
FTB	IS-PFOA-13C2	537	N/A	WW007-0616/FTB		9921.92	9566.1	ng/L	104	50 - 150	---	---	0.93	06/13/2016 07:29	06/14/2016 07:58	3463548
FTB	IS-PFOS-13C4	537	N/A	WW007-0616/FTB		6845.90	6489.64	ng/L	105	50 - 150	---	---	0.93	06/13/2016 07:29	06/14/2016 07:58	3463548
FTB	SS-PFDA-13C2	537	N/A	WW007-0616/FTB		94.6512	100	ng/L	102	70 - 130	---	---	0.93	06/13/2016 07:29	06/14/2016 07:58	3463548
FTB	SS-PFHxA-13C2	537	N/A	WW007-0616/FTB		46.1325	50.0	ng/L	99	70 - 130	---	---	0.93	06/13/2016 07:29	06/14/2016 07:58	3463548
FTB	Perfluorobutanesulfonic acid (PFBS)	537	9.0	WW007-0616/FTB	<	9.0		ng/L	---	---	---	---	0.93	06/13/2016 07:29	06/14/2016 07:58	3463548
FTB	Perfluoroheptanoic acid (PFHpA)	537	1.0	WW007-0616/FTB	<	1.0		ng/L	---	---	---	---	0.93	06/13/2016 07:29	06/14/2016 07:58	3463548
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	WW007-0616/FTB	<	3.0		ng/L	---	---	---	---	0.93	06/13/2016 07:29	06/14/2016 07:58	3463548
FTB	Perfluorononanoic acid (PFNA)	537	2.0	WW007-0616/FTB	<	2.0		ng/L	---	---	---	---	0.93	06/13/2016 07:29	06/14/2016 07:58	3463548
FTB	Perfluorooctane sulfonate (PFOS)	537	4.0	WW007-0616/FTB	<	4.0		ng/L	---	---	---	---	0.93	06/13/2016 07:29	06/14/2016 07:58	3463548
FTB	Perfluorooctanoic acid (PFOA)	537	2.0	WW007-0616/FTB	<	2.0		ng/L	---	---	---	---	0.93	06/13/2016 07:29	06/14/2016 07:58	3463548
FTB	IS-PFOA-13C2	537	N/A	WW011-0616/FTB		9525.90	9566.1	ng/L	100	50 - 150	---	---	0.9	06/13/2016 07:29	06/14/2016 08:29	3463550

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-PFOS-13C4	537	N/A	WW011-0616/FTB		6564.32	6489.64	ng/L	101	50 - 150	---	---	0.9	06/13/2016 07:29	06/14/2016 08:29	3463550
FTB	SS-PFDA-13C2	537	N/A	WW011-0616/FTB		89.2607	100	ng/L	99	70 - 130	---	---	0.9	06/13/2016 07:29	06/14/2016 08:29	3463550
FTB	SS-PFHxA-13C2	537	N/A	WW011-0616/FTB		45.1436	50.0	ng/L	100	70 - 130	---	---	0.9	06/13/2016 07:29	06/14/2016 08:29	3463550
FTB	Perfluorobutanesulfonic acid (PFBS)	537	9.0	WW011-0616/FTB	<	9.0		ng/L	---	---	---	---	0.9	06/13/2016 07:29	06/14/2016 08:29	3463550
FTB	Perfluoroheptanoic acid (PFHpA)	537	1.0	WW011-0616/FTB	<	1.0		ng/L	---	---	---	---	0.9	06/13/2016 07:29	06/14/2016 08:29	3463550
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	WW011-0616/FTB	<	3.0		ng/L	---	---	---	---	0.9	06/13/2016 07:29	06/14/2016 08:29	3463550
FTB	Perfluorononanoic acid (PFNA)	537	2.0	WW011-0616/FTB	<	2.0		ng/L	---	---	---	---	0.9	06/13/2016 07:29	06/14/2016 08:29	3463550
FTB	Perfluorooctane sulfonate (PFOS)	537	4.0	WW011-0616/FTB	<	4.0		ng/L	---	---	---	---	0.9	06/13/2016 07:29	06/14/2016 08:29	3463550
FTB	Perfluorooctanoic acid (PFOA)	537	2.0	WW011-0616/FTB	<	2.0		ng/L	---	---	---	---	0.9	06/13/2016 07:29	06/14/2016 08:29	3463550
CCM	IS-PFOA-13C2	537	N/A	---		9554.19	9554.19	ng/L	100	50 - 150	---	---	1.0	06/09/2016 10:36	06/14/2016 10:32	3469585
CCM	IS-PFOS-13C4	537	N/A	---		6595.41	6595.41	ng/L	100	50 - 150	---	---	1.0	06/09/2016 10:36	06/14/2016 10:32	3469585
CCM	SS-PFDA-13C2	537	N/A	---		98.4403	100	ng/L	98	70 - 130	---	---	1.0	06/09/2016 10:36	06/14/2016 10:32	3469585
CCM	SS-PFHxA-13C2	537	N/A	---		50.9998	50.0	ng/L	102	70 - 130	---	---	1.0	06/09/2016 10:36	06/14/2016 10:32	3469585
CCM	Perfluorobutanesulfonic acid (PFBS)	537	9.0	---		704.4430	675	ng/L	104	70 - 130	---	---	1.0	06/09/2016 10:36	06/14/2016 10:32	3469585
CCM	Perfluoroheptanoic acid (PFHpA)	537	1.0	---		74.5242	75.0	ng/L	99	70 - 130	---	---	1.0	06/09/2016 10:36	06/14/2016 10:32	3469585
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	---		226.4770	225	ng/L	101	70 - 130	---	---	1.0	06/09/2016 10:36	06/14/2016 10:32	3469585
CCM	Perfluorononanoic acid (PFNA)	537	2.0	---		150.5510	150	ng/L	100	70 - 130	---	---	1.0	06/09/2016 10:36	06/14/2016 10:32	3469585
CCM	Perfluorooctane sulfonate (PFOS)	537	4.0	---		298.8770	300	ng/L	100	70 - 130	---	---	1.0	06/09/2016 10:36	06/14/2016 10:32	3469585
CCM	Perfluorooctanoic acid (PFOA)	537	2.0	---		150.3020	150	ng/L	100	70 - 130	---	---	1.0	06/09/2016 10:36	06/14/2016 10:32	3469585

Sample Type Key

Type (Abbr.)	Sample Type	Type (Abbr.)	Sample Type
CCL	Continuing Calibration Low		
CCM	Continuing Calibration Mid		
FD	Field Duplicate		
FS	Field Sample		
FTB	Field Trip Blank		
FBL	Fortified Blank Low		
FBM	Fortified Blank Mid		
LRB	Laboratory Reagent Blank		

END OF REPORT

EA16-0802

eurofins | Eaton Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 298055

Batch # _____

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CHAIN OF CUSTODY RECORD

Page 1 of 1

REPORT TO:	SAMPLER (Signature)	PWS ID #	STATE (sample origin)	PROJECT NAME	PO#
Scott.forbes@usace.army.mil	Scott		NY	Ft. Drum Wellfield Evaluation Wells 7&11	

BILL TO:	COMPLIANCE MONITORING	Yes	No	POPULATION SERVED	SOURCE WATER
Scott.e.forbes@usace.army.mil					Well

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	2-Jan-16	947	X		WW007-0616	PFCs method 537			✓	1	GW	SU
2	2-Jan-16	1037	X		WW011-0616	PFCs method 537			✓	1	GW	SU
3	2-Jan-16	1037	X		WW011-0616 Field Blank	PFCs method 537			✓	1		SU
4	2-Jan-16	947	X		WW007-0616 Field Blank	PFCs Method 537			✓	1		SU
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
	2-Jan-16	1145 AM PM		02/2/16	1145 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			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_____ °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.

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South Bend, IN 46617
T: 1.800.332.4345
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Order # 298055

Batch # _____

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CHAIN OF CUSTODY RECORD

Page _____ of _____

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REPORT TO:	SAMPLER (Signature)	PWS ID #	STATE (sample origin)	PROJECT NAME	PO#
Converse Labs	S.F.		NY	Ft Drum Wellfield Eval. Well 17+11	

BILL TO:	COMPLIANCE MONITORING	Yes	No	POPULATION SERVED	SOURCE WATER
Converse Labs					Well

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	6/2/16	0947	X		WW007 - 06016	PFC's method 537			✓	1	G	SW
2	6/2/16	1037	X		WW011 - 06016	PFC's method 537			✓	1	G	SW
3	6/2/16	1037	X		WW011 - 06016	PFC's method 537			✓	1	G	SW
4	6/2/16	0947	X		WW007 - 06016	PFC's method 537			✓	1	G	SW
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
KMR	6/2/16	1515 AM 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			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 _____ °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.

Down Range Wells

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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: Converse Laboratories

Attn: Donna Zang
800 Starbuck Ave, Suite B101
Watertown, NY 13601

Report: 367277
Priority: Standard 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
3491067	EU16-1094 Range 48	537	07/12/16 09:50	Client	07/13/16 07:30
3491069	EU16-1094 Range 44	537	07/12/16 10:40	Client	07/13/16 07:30
3491071	EU16-1094 Range 39	537	07/12/16 11:15	Client	07/13/16 07:30
3491073	EU16-1094 Range 35	537	07/12/16 11:45	Client	07/13/16 07:30
3491075	EU16-1094 Range 13A	537	07/12/16 12:20	Client	07/13/16 07:30
3491077	EU16-1094 Range 23	537	07/12/16 13:15	Client	07/13/16 07:30
3491079	EU16-1094 2723	537	07/12/16 13:55	Client	07/13/16 07:30
3491081	EU16-1094 2792	537	07/12/16 14:10	Client	07/13/16 07:30
3491083	EU16-1094 2701	537	07/12/16 14:25	Client	07/13/16 07:30
3491085	EU16-1094 4775	537	07/12/16 14:50	Client	07/13/16 07:30

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 Kelly Trott at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Kelly Scott Analytical Services Manager — 08/03/2016

Authorized Signature — Title — Date

Client Name: Converse Laboratories
Report #: 367277

Client Name: Converse Laboratories

Report #: 367277

Sampling Point: EU16-1094 Range 48

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	---	9.0	< 9.0	ng/L	07/22/16 08:45	07/24/16 07:14	3491067
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	07/22/16 08:45	07/24/16 07:14	3491067
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	07/22/16 08:45	07/24/16 07:14	3491067
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	07/22/16 08:45	07/24/16 07:14	3491067
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	07/22/16 08:45	07/24/16 07:14	3491067
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	07/22/16 08:45	07/24/16 07:14	3491067

Sampling Point: EU16-1094 Range 44

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	---	9.0	< 9.0	ng/L	07/25/16 08:15	07/26/16 20:31	3491069
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	07/25/16 08:15	07/26/16 20:31	3491069
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	07/25/16 08:15	07/26/16 20:31	3491069
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/26/16 20:31	3491069
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	07/25/16 08:15	07/26/16 20:31	3491069
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/26/16 20:31	3491069

Sampling Point: EU16-1094 Range 39

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	---	9.0	< 9.0	ng/L	07/25/16 08:15	07/26/16 21:01	3491071
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	07/25/16 08:15	07/26/16 21:01	3491071
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	07/25/16 08:15	07/26/16 21:01	3491071
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/26/16 21:01	3491071
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	07/25/16 08:15	07/26/16 21:01	3491071
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/26/16 21:01	3491071

Client Name: Converse Laboratories

Report #: 367277

Sampling Point: EU16-1094 Range 35

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	---	9.0	< 9.0	ng/L	07/25/16 08:15	07/26/16 22:03	3491073
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	07/25/16 08:15	07/26/16 22:03	3491073
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	07/25/16 08:15	07/26/16 22:03	3491073
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/26/16 22:03	3491073
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	07/25/16 08:15	07/26/16 22:03	3491073
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/26/16 22:03	3491073

Sampling Point: EU16-1094 Range 13A

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	---	9.0	< 9.0	ng/L	07/25/16 08:15	07/26/16 22:34	3491075
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	07/25/16 08:15	07/26/16 22:34	3491075
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	07/25/16 08:15	07/26/16 22:34	3491075
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/26/16 22:34	3491075
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	07/25/16 08:15	07/26/16 22:34	3491075
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/26/16 22:34	3491075

Sampling Point: EU16-1094 Range 23

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	---	9.0	< 9.0	ng/L	07/25/16 08:15	07/26/16 23:04	3491077
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	07/25/16 08:15	07/26/16 23:04	3491077
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	07/25/16 08:15	07/26/16 23:04	3491077
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/26/16 23:04	3491077
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	07/25/16 08:15	07/26/16 23:04	3491077
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/26/16 23:04	3491077

Client Name: Converse Laboratories

Report #: 367277

Sampling Point: EU16-1094 2723

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	---	9.0	< 9.0	ng/L	07/25/16 08:15	07/27/16 03:10	3491079
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	07/25/16 08:15	07/27/16 03:10	3491079
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	07/25/16 08:15	07/27/16 03:10	3491079
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/27/16 03:10	3491079
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	07/25/16 08:15	07/27/16 03:10	3491079
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/27/16 03:10	3491079

Sampling Point: EU16-1094 2792

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	---	9.0	< 9.0	ng/L	07/25/16 08:15	07/27/16 03:41	3491081
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	07/25/16 08:15	07/27/16 03:41	3491081
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	07/25/16 08:15	07/27/16 03:41	3491081
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/27/16 03:41	3491081
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	07/25/16 08:15	07/27/16 03:41	3491081
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/27/16 03:41	3491081

Sampling Point: EU16-1094 2701

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	---	9.0	< 9.0	ng/L	07/25/16 08:15	07/27/16 04:12	3491083
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	07/25/16 08:15	07/27/16 04:12	3491083
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	07/25/16 08:15	07/27/16 04:12	3491083
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/27/16 04:12	3491083
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	07/25/16 08:15	07/27/16 04:12	3491083
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/27/16 04:12	3491083

Client Name: Converse Laboratories

Report #: 367277

Sampling Point: EU16-1094 4775

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	---	9.0	< 9.0	ng/L	07/25/16 08:15	07/27/16 04:43	3491085
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	07/25/16 08:15	07/27/16 04:43	3491085
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	07/25/16 08:15	07/27/16 04:43	3491085
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/27/16 04:43	3491085
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	07/25/16 08:15	07/27/16 04:43	3491085
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	07/25/16 08:15	07/27/16 04:43	3491085

† 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:	*	^	|

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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.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN00035
Arkansas	IN00035	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*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon (Primary AB)*	4074-001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA160002	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
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

Revision date: 04/14/2016

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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110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 299712
Batch # 367277

www.EurofinsUS.com/Eaton

CHAIN OF CUSTODY RECORD

Page 1 of 2

Shaded area for EEA use only

REPORT TO: Conversdabs, 806 Starbuck Ave, Watertown, NY 13601

SAMPLER (Signature): Diane Covell

PWS ID #:

STATE (sample origin):

PROJECT NAME: EWLE-1094

PO#:

BILL TO: (315)788-8388

Results to: Customerservice@conversdabs.com

COMPLIANCE MONITORING: Yes / No ✓

POPULATION SERVED:

SOURCE WATER: Well

LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1 349067	7/12/16	0950	✓		Range 48	PFCs Cl-Assy			✓	2	DW	
2 068		0950	✓		Range 48 Field Blank				✓	1		
3 069		1040	✓		Range 44			✓		2		
4 070		1040	✓		Range 44 Field Blank				✓	1		
5 071		1115	✓		Range 39			✓		2		
6 072		1115	✓		Range 39 Field Blank				✓	1		
7 073		1145	✓		Range 35				✓	2		
8 074		1145	✓		Range 35 Field Blank				✓	1		
9 075		1220		✓	Range 13A		run clear sample	✓		2		
10 076		1220		✓	Range 13A Field Blank				✓	1		
11 077		1315		✓	Range 23				✓	2		
12 078		1315		✓	Range 23 Field Blank				✓	1		
13 079		1355		✓	2723			✓		2		
14 ✓ 080	↓	1355		✓	2723 Field Blank	↓			✓	1		

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
Diane Covell	7/12/16	1515 AM PM	RM Rizzo	7/12/16	1555 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	KD	7-13-16	0730 AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS: only run field blank sample is positive

CONDITIONS UPON RECEIPT (check one): ✓ Iced: Wet/Blue ___ Ambient ___ 1.4 °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-F043S Issue 5.0 Effective Date: 2016-01-20

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 # 299712
Batch # _____

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CHAIN OF CUSTODY RECORD

Shaded area for EEA use only

REPORT TO:

BILL TO:

SAMPLER (Signature): Diane Covell

COMPLIANCE MONITORING: Yes ☐ No ✓

PWS ID #:

POPULATION SERVED:

STATE (sample origin):

SOURCE WATER: Well

PROJECT NAME:

PO#:

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 3441081	7/12/16	1410		✓	2792	PFCs 01-ASG		✓		2		
2 082		1410		✓	2792 Field Blank				✓	1		
3 083		1425		✓	2701			✓		2		
4 084		1425		✓	2701 Field Blank				✓	1		
5 085		1450		✓	4775				✓	2		
6 086		1450		✓	4775 Field Blank				✓	1		
7												
8												
9												
10												
11												
12												
13												
14												

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
Diane Covell	7/12/16	1515 AM PM	KMRi2330	7/12/16	1515 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	KDyus	7-13-16	0730 AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS: only run field blank if positive

CONDITIONS UPON RECEIPT (check one): X Iced: Wet/Blue ___ Ambient 1.4 °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.

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Run Log

Run ID: **218310** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3500358		OS	CY	07/23/2016 16:23	072316M537a.mdb
LRB	3500352		RW	CY	07/23/2016 17:24	072316M537a.mdb
FBL	3500353		RW	CY	07/23/2016 17:55	072316M537a.mdb
FBM	3500354		RW	CY	07/23/2016 18:26	072316M537a.mdb
CCM	3500359		OS	CY	07/24/2016 02:38	072316M537a.mdb
FS	3491067	EU16-1094 Range 48	DW	CY	07/24/2016 07:14	072316M537a.mdb
CCH	3500360		OS	CY	07/24/2016 12:23	072316M537a.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	—		5019.24	5019.24	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/23/2016 16:23	3500358
CCL	IS-PFOS-13C4	537	N/A	—		2691.86	2691.86	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/23/2016 16:23	3500358
CCL	SS-PFDA-13C2	537	N/A	—		100.8900	100	ng/L	101	70 - 130	—	—	1.0	07/21/2016 14:00	07/23/2016 16:23	3500358
CCL	SS-PFHxA-13C2	537	N/A	—		51.7428	50.0	ng/L	103	70 - 130	—	—	1.0	07/21/2016 14:00	07/23/2016 16:23	3500358
CCL	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		9.5229	9.0	ng/L	106	50 - 150	—	—	1.0	07/21/2016 14:00	07/23/2016 16:23	3500358
CCL	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		0.9842	1.0	ng/L	98	50 - 150	—	—	1.0	07/21/2016 14:00	07/23/2016 16:23	3500358
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		2.4858	3.0	ng/L	83	50 - 150	—	—	1.0	07/21/2016 14:00	07/23/2016 16:23	3500358
CCL	Perfluorononanoic acid (PFNA)	537	2.0	—		1.8381	2.0	ng/L	92	50 - 150	—	—	1.0	07/21/2016 14:00	07/23/2016 16:23	3500358
CCL	Perfluorooctane sulfonate (PFOS)	537	4.0	—		3.3459	4.0	ng/L	84	50 - 150	—	—	1.0	07/21/2016 14:00	07/23/2016 16:23	3500358
CCL	Perfluorooctanoic acid (PFOA)	537	2.0	—		1.9352	2.0	ng/L	97	50 - 150	—	—	1.0	07/21/2016 14:00	07/23/2016 16:23	3500358
LRB	IS-PFOA-13C2	537	N/A	—		5202.48	5019.24	ng/L	104	50 - 150	—	—	0.97	07/22/2016 08:45	07/23/2016 17:24	3500352
LRB	IS-PFOS-13C4	537	N/A	—		2674.50	2691.86	ng/L	99	50 - 150	—	—	0.97	07/22/2016 08:45	07/23/2016 17:24	3500352
LRB	SS-PFDA-13C2	537	N/A	—		88.8489	100	ng/L	92	70 - 130	—	—	0.97	07/22/2016 08:45	07/23/2016 17:24	3500352
LRB	SS-PFHxA-13C2	537	N/A	—		45.1433	50.0	ng/L	93	70 - 130	—	—	0.97	07/22/2016 08:45	07/23/2016 17:24	3500352
LRB	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—	<	9.0		ng/L	—	—	—	—	0.97	07/22/2016 08:45	07/23/2016 17:24	3500352
LRB	Perfluoroheptanoic acid (PFHpA)	537	1.0	—	<	1.0		ng/L	—	—	—	—	0.97	07/22/2016 08:45	07/23/2016 17:24	3500352
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—	<	3.0		ng/L	—	—	—	—	0.97	07/22/2016 08:45	07/23/2016 17:24	3500352
LRB	Perfluorononanoic acid (PFNA)	537	2.0	—	<	2.0		ng/L	—	—	—	—	0.97	07/22/2016 08:45	07/23/2016 17:24	3500352
LRB	Perfluorooctane sulfonate (PFOS)	537	4.0	—	<	4.0		ng/L	—	—	—	—	0.97	07/22/2016 08:45	07/23/2016 17:24	3500352
LRB	Perfluorooctanoic acid (PFOA)	537	2.0	—	<	2.0		ng/L	—	—	—	—	0.97	07/22/2016 08:45	07/23/2016 17:24	3500352
FBL	IS-PFOA-13C2	537	N/A	—		5521.23	5019.24	ng/L	110	50 - 150	—	—	1.0	07/22/2016 08:45	07/23/2016 17:55	3500353
FBL	IS-PFOS-13C4	537	N/A	—		2855.51	2691.86	ng/L	106	50 - 150	—	—	1.0	07/22/2016 08:45	07/23/2016 17:55	3500353
FBL	SS-PFDA-13C2	537	N/A	—		94.3200	100	ng/L	94	70 - 130	—	—	1.0	07/22/2016 08:45	07/23/2016 17:55	3500353
FBL	SS-PFHxA-13C2	537	N/A	—		47.7222	50.0	ng/L	95	70 - 130	—	—	1.0	07/22/2016 08:45	07/23/2016 17:55	3500353
FBL	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		9.1765	9.0	ng/L	102	50 - 150	—	—	1.0	07/22/2016 08:45	07/23/2016 17:55	3500353
FBL	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		1.0254	1.0	ng/L	103	50 - 150	—	—	1.0	07/22/2016 08:45	07/23/2016 17:55	3500353
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		2.5899	3.0	ng/L	86	50 - 150	—	—	1.0	07/22/2016 08:45	07/23/2016 17:55	3500353
FBL	Perfluorononanoic acid (PFNA)	537	2.0	—		1.9968	2.0	ng/L	100	50 - 150	—	—	1.0	07/22/2016 08:45	07/23/2016 17:55	3500353
FBL	Perfluorooctane sulfonate (PFOS)	537	4.0	—		3.4428	4.0	ng/L	86	50 - 150	—	—	1.0	07/22/2016 08:45	07/23/2016 17:55	3500353
FBL	Perfluorooctanoic acid (PFOA)	537	2.0	—		1.8516	2.0	ng/L	93	50 - 150	—	—	1.0	07/22/2016 08:45	07/23/2016 17:55	3500353
FBM	IS-PFOA-13C2	537	N/A	—		5143.93	5019.24	ng/L	102	50 - 150	—	—	1.0	07/22/2016 08:45	07/23/2016 18:26	3500354
FBM	IS-PFOS-13C4	537	N/A	—		2556.26	2691.86	ng/L	95	50 - 150	—	—	1.0	07/22/2016 08:45	07/23/2016 18:26	3500354
FBM	SS-PFDA-13C2	537	N/A	—		100.5710	100	ng/L	101	70 - 130	—	—	1.0	07/22/2016 08:45	07/23/2016 18:26	3500354
FBM	SS-PFHxA-13C2	537	N/A	—		49.0480	50.0	ng/L	98	70 - 130	—	—	1.0	07/22/2016 08:45	07/23/2016 18:26	3500354
FBM	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		685.9760	675	ng/L	102	70 - 130	—	—	1.0	07/22/2016 08:45	07/23/2016 18:26	3500354
FBM	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		71.8552	75.0	ng/L	96	70 - 130	—	—	1.0	07/22/2016 08:45	07/23/2016 18:26	3500354
FBM	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		224.1130	225	ng/L	100	70 - 130	—	—	1.0	07/22/2016 08:45	07/23/2016 18:26	3500354
FBM	Perfluorononanoic acid (PFNA)	537	2.0	—		148.6890	150	ng/L	99	70 - 130	—	—	1.0	07/22/2016 08:45	07/23/2016 18:26	3500354
FBM	Perfluorooctane sulfonate (PFOS)	537	4.0	—		297.0930	300	ng/L	99	70 - 130	—	—	1.0	07/22/2016 08:45	07/23/2016 18:26	3500354
FBM	Perfluorooctanoic acid (PFOA)	537	2.0	—		146.0370	150	ng/L	97	70 - 130	—	—	1.0	07/22/2016 08:45	07/23/2016 18:26	3500354

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	IS-PFOA-13C2	537	N/A	—		5012.54	5012.54	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/24/2016 02:38	3500359
CCM	IS-PFOS-13C4	537	N/A	—		2561.21	2561.21	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/24/2016 02:38	3500359
CCM	SS-PFDA-13C2	537	N/A	—		97.5702	100	ng/L	98	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 02:38	3500359
CCM	SS-PFHxA-13C2	537	N/A	—		49.1098	50.0	ng/L	98	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 02:38	3500359
CCM	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		700.2190	675	ng/L	104	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 02:38	3500359
CCM	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		73.1124	75.0	ng/L	97	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 02:38	3500359
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		219.9750	225	ng/L	98	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 02:38	3500359
CCM	Perfluorononanoic acid (PFNA)	537	2.0	—		147.9240	150	ng/L	99	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 02:38	3500359
CCM	Perfluorooctane sulfonate (PFOS)	537	4.0	—		294.4120	300	ng/L	98	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 02:38	3500359
CCM	Perfluorooctanoic acid (PFOA)	537	2.0	—		148.1560	150	ng/L	99	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 02:38	3500359
FS	IS-PFOA-13C2	537	N/A	EU16-1094 Range 48		5296.70	5012.54	ng/L	106	50 - 150	—	—	0.94	07/22/2016 08:45	07/24/2016 07:14	3491067
FS	IS-PFOS-13C4	537	N/A	EU16-1094 Range 48		2732.72	2561.21	ng/L	107	50 - 150	—	—	0.94	07/22/2016 08:45	07/24/2016 07:14	3491067
FS	SS-PFDA-13C2	537	N/A	EU16-1094 Range 48		87.4984	100	ng/L	93	70 - 130	—	—	0.94	07/22/2016 08:45	07/24/2016 07:14	3491067
FS	SS-PFHxA-13C2	537	N/A	EU16-1094 Range 48		45.0589	50.0	ng/L	96	70 - 130	—	—	0.94	07/22/2016 08:45	07/24/2016 07:14	3491067
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 Range 48	<	9.0		ng/L	—	—	—	—	0.94	07/22/2016 08:45	07/24/2016 07:14	3491067
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 Range 48	<	1.0		ng/L	—	—	—	—	0.94	07/22/2016 08:45	07/24/2016 07:14	3491067
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 Range 48	<	3.0		ng/L	—	—	—	—	0.94	07/22/2016 08:45	07/24/2016 07:14	3491067
FS	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 Range 48	<	2.0		ng/L	—	—	—	—	0.94	07/22/2016 08:45	07/24/2016 07:14	3491067
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 Range 48	<	4.0		ng/L	—	—	—	—	0.94	07/22/2016 08:45	07/24/2016 07:14	3491067
FS	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 Range 48	<	2.0		ng/L	—	—	—	—	0.94	07/22/2016 08:45	07/24/2016 07:14	3491067
CCH	IS-PFOA-13C2	537	N/A	—		4709.02	4709.02	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/24/2016 12:23	3500360
CCH	IS-PFOS-13C4	537	N/A	—		2340.50	2340.5	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/24/2016 12:23	3500360
CCH	SS-PFDA-13C2	537	N/A	—		97.9356	100	ng/L	98	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 12:23	3500360
CCH	SS-PFHxA-13C2	537	N/A	—		50.3487	50.0	ng/L	101	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 12:23	3500360
CCH	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		1140.0100	1125	ng/L	101	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 12:23	3500360
CCH	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		130.9610	125	ng/L	105	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 12:23	3500360
CCH	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		380.2260	375	ng/L	101	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 12:23	3500360
CCH	Perfluorononanoic acid (PFNA)	537	2.0	—		248.4280	250	ng/L	99	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 12:23	3500360
CCH	Perfluorooctane sulfonate (PFOS)	537	4.0	—		514.8690	500	ng/L	103	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 12:23	3500360
CCH	Perfluorooctanoic acid (PFOA)	537	2.0	—		255.8940	250	ng/L	102	70 - 130	—	—	1.0	07/21/2016 14:00	07/24/2016 12:23	3500360

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Run Log
Run ID: **218484** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3501435		OS	CY	07/26/2016 14:52	072616M537a.mdb
LRB	3501408		RW	CY	07/26/2016 15:54	072616M537a.mdb
FBL	3501409		RW	CY	07/26/2016 16:25	072616M537a.mdb
FBH	3501410		RW	CY	07/26/2016 16:55	072616M537a.mdb
FS	3491069	EU16-1094 Range 44	DW	CY	07/26/2016 20:31	072616M537a.mdb
FS	3491071	EU16-1094 Range 39	DW	CY	07/26/2016 21:01	072616M537a.mdb
FD	3501412	EU16-1094 Range 39	DW	CY	07/26/2016 21:32	072616M537a.mdb
FS	3491073	EU16-1094 Range 35	DW	CY	07/26/2016 22:03	072616M537a.mdb
FS	3491075	EU16-1094 Range 13A	DW	CY	07/26/2016 22:34	072616M537a.mdb
FS	3491077	EU16-1094 Range 23	DW	CY	07/26/2016 23:04	072616M537a.mdb
CCM	3501437		OS	CY	07/26/2016 23:35	072616M537a.mdb
FS	3491079	EU16-1094 2723	DW	CY	07/27/2016 03:10	072616M537a.mdb
FS	3491081	EU16-1094 2792	DW	CY	07/27/2016 03:41	072616M537a.mdb
FS	3491083	EU16-1094 2701	DW	CY	07/27/2016 04:12	072616M537a.mdb
FS	3491085	EU16-1094 4775	DW	CY	07/27/2016 04:43	072616M537a.mdb
CCH	3501438		OS	CY	07/27/2016 09:50	072616M537a.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	—		6229.95	6229.95	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/26/2016 14:52	3501435
CCL	IS-PFOS-13C4	537	N/A	—		3762.86	3762.86	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/26/2016 14:52	3501435
CCL	SS-PFDA-13C2	537	N/A	—		100.0090	100	ng/L	100	70 - 130	—	—	1.0	07/21/2016 14:00	07/26/2016 14:52	3501435
CCL	SS-PFHxA-13C2	537	N/A	—		53.0549	50.0	ng/L	106	70 - 130	—	—	1.0	07/21/2016 14:00	07/26/2016 14:52	3501435
CCL	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		9.0373	9.0	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/26/2016 14:52	3501435
CCL	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		1.0518	1.0	ng/L	105	50 - 150	—	—	1.0	07/21/2016 14:00	07/26/2016 14:52	3501435
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		2.6276	3.0	ng/L	88	50 - 150	—	—	1.0	07/21/2016 14:00	07/26/2016 14:52	3501435
CCL	Perfluorononanoic acid (PFNA)	537	2.0	—		2.1919	2.0	ng/L	110	50 - 150	—	—	1.0	07/21/2016 14:00	07/26/2016 14:52	3501435
CCL	Perfluorooctane sulfonate (PFOS)	537	4.0	—		3.8729	4.0	ng/L	97	50 - 150	—	—	1.0	07/21/2016 14:00	07/26/2016 14:52	3501435
CCL	Perfluorooctanoic acid (PFOA)	537	2.0	—		1.8688	2.0	ng/L	93	50 - 150	—	—	1.0	07/21/2016 14:00	07/26/2016 14:52	3501435
LRB	IS-PFOA-13C2	537	N/A	—		6946.97	6229.95	ng/L	112	50 - 150	—	—	0.95	07/25/2016 08:15	07/26/2016 15:54	3501408
LRB	IS-PFOS-13C4	537	N/A	—		4058.43	3762.86	ng/L	108	50 - 150	—	—	0.95	07/25/2016 08:15	07/26/2016 15:54	3501408
LRB	SS-PFDA-13C2	537	N/A	—		93.1442	100	ng/L	98	70 - 130	—	—	0.95	07/25/2016 08:15	07/26/2016 15:54	3501408
LRB	SS-PFHxA-13C2	537	N/A	—		47.0083	50.0	ng/L	99	70 - 130	—	—	0.95	07/25/2016 08:15	07/26/2016 15:54	3501408
LRB	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—	<	9.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 15:54	3501408
LRB	Perfluoroheptanoic acid (PFHpA)	537	1.0	—	<	1.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 15:54	3501408
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—	<	3.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 15:54	3501408
LRB	Perfluorononanoic acid (PFNA)	537	2.0	—	<	2.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 15:54	3501408
LRB	Perfluorooctane sulfonate (PFOS)	537	4.0	—	<	4.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 15:54	3501408
LRB	Perfluorooctanoic acid (PFOA)	537	2.0	—	<	2.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 15:54	3501408
FBL	IS-PFOA-13C2	537	N/A	—		6758.23	6229.95	ng/L	108	50 - 150	—	—	1.0	07/25/2016 08:15	07/26/2016 16:25	3501409
FBL	IS-PFOS-13C4	537	N/A	—		4009.32	3762.86	ng/L	107	50 - 150	—	—	1.0	07/25/2016 08:15	07/26/2016 16:25	3501409
FBL	SS-PFDA-13C2	537	N/A	—		96.6546	100	ng/L	97	70 - 130	—	—	1.0	07/25/2016 08:15	07/26/2016 16:25	3501409
FBL	SS-PFHxA-13C2	537	N/A	—		48.7658	50.0	ng/L	98	70 - 130	—	—	1.0	07/25/2016 08:15	07/26/2016 16:25	3501409
FBL	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		8.7371	9.0	ng/L	97	50 - 150	—	—	1.0	07/25/2016 08:15	07/26/2016 16:25	3501409
FBL	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		0.8211	1.0	ng/L	82	50 - 150	—	—	1.0	07/25/2016 08:15	07/26/2016 16:25	3501409
FBL	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		2.4820	3.0	ng/L	83	50 - 150	—	—	1.0	07/25/2016 08:15	07/26/2016 16:25	3501409
FBL	Perfluorononanoic acid (PFNA)	537	2.0	—		1.8337	2.0	ng/L	92	50 - 150	—	—	1.0	07/25/2016 08:15	07/26/2016 16:25	3501409
FBL	Perfluorooctane sulfonate (PFOS)	537	4.0	—		3.2606	4.0	ng/L	82	50 - 150	—	—	1.0	07/25/2016 08:15	07/26/2016 16:25	3501409
FBL	Perfluorooctanoic acid (PFOA)	537	2.0	—		1.9340	2.0	ng/L	97	50 - 150	—	—	1.0	07/25/2016 08:15	07/26/2016 16:25	3501409
FBH	IS-PFOA-13C2	537	N/A	—		7142.68	6229.95	ng/L	115	50 - 150	—	—	1.0	07/25/2016 08:15	07/26/2016 16:55	3501410
FBH	IS-PFOS-13C4	537	N/A	—		3905.35	3762.86	ng/L	104	50 - 150	—	—	1.0	07/25/2016 08:15	07/26/2016 16:55	3501410
FBH	SS-PFDA-13C2	537	N/A	—		90.6048	100	ng/L	91	70 - 130	—	—	1.0	07/25/2016 08:15	07/26/2016 16:55	3501410
FBH	SS-PFHxA-13C2	537	N/A	—		45.1555	50.0	ng/L	90	70 - 130	—	—	1.0	07/25/2016 08:15	07/26/2016 16:55	3501410
FBH	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		988.1190	1125	ng/L	88	70 - 130	—	—	1.0	07/25/2016 08:15	07/26/2016 16:55	3501410
FBH	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		108.6940	125	ng/L	87	70 - 130	—	—	1.0	07/25/2016 08:15	07/26/2016 16:55	3501410
FBH	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		345.7540	375	ng/L	92	70 - 130	—	—	1.0	07/25/2016 08:15	07/26/2016 16:55	3501410
FBH	Perfluorononanoic acid (PFNA)	537	2.0	—		215.6520	250	ng/L	86	70 - 130	—	—	1.0	07/25/2016 08:15	07/26/2016 16:55	3501410
FBH	Perfluorooctane sulfonate (PFOS)	537	4.0	—		451.6220	500	ng/L	90	70 - 130	—	—	1.0	07/25/2016 08:15	07/26/2016 16:55	3501410
FBH	Perfluorooctanoic acid (PFOA)	537	2.0	—		227.5510	250	ng/L	91	70 - 130	—	—	1.0	07/25/2016 08:15	07/26/2016 16:55	3501410

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	EU16-1094 Range 44		7157.51	6229.95	ng/L	115	50 - 150	—	—	0.98	07/25/2016 08:15	07/26/2016 20:31	3491069
FS	IS-PFOS-13C4	537	N/A	EU16-1094 Range 44		4073.51	3762.86	ng/L	108	50 - 150	—	—	0.98	07/25/2016 08:15	07/26/2016 20:31	3491069
FS	SS-PFDA-13C2	537	N/A	EU16-1094 Range 44		91.4136	100	ng/L	93	70 - 130	—	—	0.98	07/25/2016 08:15	07/26/2016 20:31	3491069
FS	SS-PFHxA-13C2	537	N/A	EU16-1094 Range 44		46.5518	50.0	ng/L	95	70 - 130	—	—	0.98	07/25/2016 08:15	07/26/2016 20:31	3491069
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 Range 44	<	9.0		ng/L	—	—	—	—	0.98	07/25/2016 08:15	07/26/2016 20:31	3491069
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 Range 44	<	1.0		ng/L	—	—	—	—	0.98	07/25/2016 08:15	07/26/2016 20:31	3491069
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 Range 44	<	3.0		ng/L	—	—	—	—	0.98	07/25/2016 08:15	07/26/2016 20:31	3491069
FS	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 Range 44	<	2.0		ng/L	—	—	—	—	0.98	07/25/2016 08:15	07/26/2016 20:31	3491069
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 Range 44	<	4.0		ng/L	—	—	—	—	0.98	07/25/2016 08:15	07/26/2016 20:31	3491069
FS	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 Range 44	<	2.0		ng/L	—	—	—	—	0.98	07/25/2016 08:15	07/26/2016 20:31	3491069
FS	IS-PFOA-13C2	537	N/A	EU16-1094 Range 39		6974.68	6229.95	ng/L	112	50 - 150	—	—	0.91	07/25/2016 08:15	07/26/2016 21:01	3491071
FS	IS-PFOS-13C4	537	N/A	EU16-1094 Range 39		4115.28	3762.86	ng/L	109	50 - 150	—	—	0.91	07/25/2016 08:15	07/26/2016 21:01	3491071
FS	SS-PFDA-13C2	537	N/A	EU16-1094 Range 39		84.8742	100	ng/L	93	70 - 130	—	—	0.91	07/25/2016 08:15	07/26/2016 21:01	3491071
FS	SS-PFHxA-13C2	537	N/A	EU16-1094 Range 39		44.8294	50.0	ng/L	99	70 - 130	—	—	0.91	07/25/2016 08:15	07/26/2016 21:01	3491071
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 Range 39	<	9.0		ng/L	—	—	—	—	0.91	07/25/2016 08:15	07/26/2016 21:01	3491071
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 Range 39	<	1.0		ng/L	—	—	—	—	0.91	07/25/2016 08:15	07/26/2016 21:01	3491071
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 Range 39	<	3.0		ng/L	—	—	—	—	0.91	07/25/2016 08:15	07/26/2016 21:01	3491071
FS	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 Range 39	<	2.0		ng/L	—	—	—	—	0.91	07/25/2016 08:15	07/26/2016 21:01	3491071
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 Range 39	<	4.0		ng/L	—	—	—	—	0.91	07/25/2016 08:15	07/26/2016 21:01	3491071
FS	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 Range 39	<	2.0		ng/L	—	—	—	—	0.91	07/25/2016 08:15	07/26/2016 21:01	3491071
FD	IS-PFOA-13C2	537	N/A	EU16-1094 Range 39		6827.51	6229.95	ng/L	110	50 - 150	—	—	0.94	07/25/2016 08:15	07/26/2016 21:32	3501412
FD	IS-PFOS-13C4	537	N/A	EU16-1094 Range 39		3794.40	3762.86	ng/L	101	50 - 150	—	—	0.94	07/25/2016 08:15	07/26/2016 21:32	3501412
FD	SS-PFDA-13C2	537	N/A	EU16-1094 Range 39		85.3726	100	ng/L	91	70 - 130	—	—	0.94	07/25/2016 08:15	07/26/2016 21:32	3501412
FD	SS-PFHxA-13C2	537	N/A	EU16-1094 Range 39		43.8974	50.0	ng/L	93	70 - 130	—	—	0.94	07/25/2016 08:15	07/26/2016 21:32	3501412
FD	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 Range 39	<	9.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/26/2016 21:32	3501412
FD	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 Range 39	<	1.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/26/2016 21:32	3501412
FD	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 Range 39	<	3.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/26/2016 21:32	3501412
FD	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 Range 39	<	2.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/26/2016 21:32	3501412
FD	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 Range 39	<	4.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/26/2016 21:32	3501412
FD	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 Range 39	<	2.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/26/2016 21:32	3501412
FS	IS-PFOA-13C2	537	N/A	EU16-1094 Range 35		7046.52	6229.95	ng/L	113	50 - 150	—	—	0.95	07/25/2016 08:15	07/26/2016 22:03	3491073
FS	IS-PFOS-13C4	537	N/A	EU16-1094 Range 35		4020.81	3762.86	ng/L	107	50 - 150	—	—	0.95	07/25/2016 08:15	07/26/2016 22:03	3491073
FS	SS-PFDA-13C2	537	N/A	EU16-1094 Range 35		88.2337	100	ng/L	93	70 - 130	—	—	0.95	07/25/2016 08:15	07/26/2016 22:03	3491073
FS	SS-PFHxA-13C2	537	N/A	EU16-1094 Range 35		46.1679	50.0	ng/L	97	70 - 130	—	—	0.95	07/25/2016 08:15	07/26/2016 22:03	3491073
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 Range 35	<	9.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 22:03	3491073
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 Range 35	<	1.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 22:03	3491073
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 Range 35	<	3.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 22:03	3491073
FS	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 Range 35	<	2.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 22:03	3491073
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 Range 35	<	4.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 22:03	3491073
FS	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 Range 35	<	2.0		ng/L	—	—	—	—	0.95	07/25/2016 08:15	07/26/2016 22:03	3491073
FS	IS-PFOA-13C2	537	N/A	EU16-1094 Range 13A		7019.60	6229.95	ng/L	113	50 - 150	—	—	0.99	07/25/2016 08:15	07/26/2016 22:34	3491075

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	EU16-1094 Range 13A		3954.72	3762.86	ng/L	105	50 - 150	—	—	0.99	07/25/2016 08:15	07/26/2016 22:34	3491075
FS	SS-PFDA-13C2	537	N/A	EU16-1094 Range 13A		88.9757	100	ng/L	90	70 - 130	—	—	0.99	07/25/2016 08:15	07/26/2016 22:34	3491075
FS	SS-PFHxA-13C2	537	N/A	EU16-1094 Range 13A		48.3812	50.0	ng/L	98	70 - 130	—	—	0.99	07/25/2016 08:15	07/26/2016 22:34	3491075
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 Range 13A	<	9.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 22:34	3491075
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 Range 13A	<	1.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 22:34	3491075
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 Range 13A	<	3.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 22:34	3491075
FS	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 Range 13A	<	2.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 22:34	3491075
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 Range 13A	<	4.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 22:34	3491075
FS	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 Range 13A	<	2.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 22:34	3491075
FS	IS-PFOA-13C2	537	N/A	EU16-1094 Range 23		6981.06	6229.95	ng/L	112	50 - 150	—	—	0.99	07/25/2016 08:15	07/26/2016 23:04	3491077
FS	IS-PFOS-13C4	537	N/A	EU16-1094 Range 23		3979.94	3762.86	ng/L	106	50 - 150	—	—	0.99	07/25/2016 08:15	07/26/2016 23:04	3491077
FS	SS-PFDA-13C2	537	N/A	EU16-1094 Range 23		92.6719	100	ng/L	94	70 - 130	—	—	0.99	07/25/2016 08:15	07/26/2016 23:04	3491077
FS	SS-PFHxA-13C2	537	N/A	EU16-1094 Range 23		48.9344	50.0	ng/L	99	70 - 130	—	—	0.99	07/25/2016 08:15	07/26/2016 23:04	3491077
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 Range 23	<	9.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 23:04	3491077
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 Range 23	<	1.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 23:04	3491077
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 Range 23	<	3.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 23:04	3491077
FS	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 Range 23	<	2.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 23:04	3491077
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 Range 23	<	4.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 23:04	3491077
FS	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 Range 23	<	2.0		ng/L	—	—	—	—	0.99	07/25/2016 08:15	07/26/2016 23:04	3491077
CCM	IS-PFOA-13C2	537	N/A	—		6799.00	6799	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/26/2016 23:35	3501437
CCM	IS-PFOS-13C4	537	N/A	—		3573.84	3573.84	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/26/2016 23:35	3501437
CCM	SS-PFDA-13C2	537	N/A	—		90.7555	100	ng/L	91	70 - 130	—	—	1.0	07/21/2016 14:00	07/26/2016 23:35	3501437
CCM	SS-PFHxA-13C2	537	N/A	—		48.3763	50.0	ng/L	97	70 - 130	—	—	1.0	07/21/2016 14:00	07/26/2016 23:35	3501437
CCM	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		693.2190	675	ng/L	103	70 - 130	—	—	1.0	07/21/2016 14:00	07/26/2016 23:35	3501437
CCM	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		72.5079	75.0	ng/L	97	70 - 130	—	—	1.0	07/21/2016 14:00	07/26/2016 23:35	3501437
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		226.7840	225	ng/L	101	70 - 130	—	—	1.0	07/21/2016 14:00	07/26/2016 23:35	3501437
CCM	Perfluorononanoic acid (PFNA)	537	2.0	—		142.4010	150	ng/L	95	70 - 130	—	—	1.0	07/21/2016 14:00	07/26/2016 23:35	3501437
CCM	Perfluorooctane sulfonate (PFOS)	537	4.0	—		304.1390	300	ng/L	101	70 - 130	—	—	1.0	07/21/2016 14:00	07/26/2016 23:35	3501437
CCM	Perfluorooctanoic acid (PFOA)	537	2.0	—		146.9130	150	ng/L	98	70 - 130	—	—	1.0	07/21/2016 14:00	07/26/2016 23:35	3501437
FS	IS-PFOA-13C2	537	N/A	EU16-1094 2723		6977.48	6799	ng/L	103	50 - 150	—	—	0.94	07/25/2016 08:15	07/27/2016 03:10	3491079
FS	IS-PFOS-13C4	537	N/A	EU16-1094 2723		3902.11	3573.84	ng/L	109	50 - 150	—	—	0.94	07/25/2016 08:15	07/27/2016 03:10	3491079
FS	SS-PFDA-13C2	537	N/A	EU16-1094 2723		82.5958	100	ng/L	88	70 - 130	—	—	0.94	07/25/2016 08:15	07/27/2016 03:10	3491079
FS	SS-PFHxA-13C2	537	N/A	EU16-1094 2723		45.1860	50.0	ng/L	96	70 - 130	—	—	0.94	07/25/2016 08:15	07/27/2016 03:10	3491079
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 2723	<	9.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/27/2016 03:10	3491079
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 2723	<	1.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/27/2016 03:10	3491079
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 2723	<	3.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/27/2016 03:10	3491079
FS	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 2723	<	2.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/27/2016 03:10	3491079
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 2723	<	4.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/27/2016 03:10	3491079
FS	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 2723	<	2.0		ng/L	—	—	—	—	0.94	07/25/2016 08:15	07/27/2016 03:10	3491079
FS	IS-PFOA-13C2	537	N/A	EU16-1094 2792		6790.62	6799	ng/L	100	50 - 150	—	—	1.0	07/25/2016 08:15	07/27/2016 03:41	3491081
FS	IS-PFOS-13C4	537	N/A	EU16-1094 2792		3770.89	3573.84	ng/L	106	50 - 150	—	—	1.0	07/25/2016 08:15	07/27/2016 03:41	3491081

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	EU16-1094 2792		91.1993	100	ng/L	91	70 - 130	—	—	1.0	07/25/2016 08:15	07/27/2016 03:41	3491081
FS	SS-PFHxA-13C2	537	N/A	EU16-1094 2792		47.4887	50.0	ng/L	95	70 - 130	—	—	1.0	07/25/2016 08:15	07/27/2016 03:41	3491081
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 2792	<	9.0		ng/L	—	—	—	—	1.0	07/25/2016 08:15	07/27/2016 03:41	3491081
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 2792	<	1.0		ng/L	—	—	—	—	1.0	07/25/2016 08:15	07/27/2016 03:41	3491081
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 2792	<	3.0		ng/L	—	—	—	—	1.0	07/25/2016 08:15	07/27/2016 03:41	3491081
FS	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 2792	<	2.0		ng/L	—	—	—	—	1.0	07/25/2016 08:15	07/27/2016 03:41	3491081
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 2792	<	4.0		ng/L	—	—	—	—	1.0	07/25/2016 08:15	07/27/2016 03:41	3491081
FS	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 2792	<	2.0		ng/L	—	—	—	—	1.0	07/25/2016 08:15	07/27/2016 03:41	3491081
FS	IS-PFOA-13C2	537	N/A	EU16-1094 2701		7230.23	6799	ng/L	106	50 - 150	—	—	0.92	07/25/2016 08:15	07/27/2016 04:12	3491083
FS	IS-PFOS-13C4	537	N/A	EU16-1094 2701		3956.52	3573.84	ng/L	111	50 - 150	—	—	0.92	07/25/2016 08:15	07/27/2016 04:12	3491083
FS	SS-PFDA-13C2	537	N/A	EU16-1094 2701		78.2528	100	ng/L	85	70 - 130	—	—	0.92	07/25/2016 08:15	07/27/2016 04:12	3491083
FS	SS-PFHxA-13C2	537	N/A	EU16-1094 2701		42.7452	50.0	ng/L	93	70 - 130	—	—	0.92	07/25/2016 08:15	07/27/2016 04:12	3491083
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 2701	<	9.0		ng/L	—	—	—	—	0.92	07/25/2016 08:15	07/27/2016 04:12	3491083
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 2701	<	1.0		ng/L	—	—	—	—	0.92	07/25/2016 08:15	07/27/2016 04:12	3491083
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 2701	<	3.0		ng/L	—	—	—	—	0.92	07/25/2016 08:15	07/27/2016 04:12	3491083
FS	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 2701	<	2.0		ng/L	—	—	—	—	0.92	07/25/2016 08:15	07/27/2016 04:12	3491083
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 2701	<	4.0		ng/L	—	—	—	—	0.92	07/25/2016 08:15	07/27/2016 04:12	3491083
FS	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 2701	<	2.0		ng/L	—	—	—	—	0.92	07/25/2016 08:15	07/27/2016 04:12	3491083
FS	IS-PFOA-13C2	537	N/A	EU16-1094 4775		7449.48	6799	ng/L	110	50 - 150	—	—	0.97	07/25/2016 08:15	07/27/2016 04:43	3491085
FS	IS-PFOS-13C4	537	N/A	EU16-1094 4775		4056.24	3573.84	ng/L	113	50 - 150	—	—	0.97	07/25/2016 08:15	07/27/2016 04:43	3491085
FS	SS-PFDA-13C2	537	N/A	EU16-1094 4775		81.2819	100	ng/L	84	70 - 130	—	—	0.97	07/25/2016 08:15	07/27/2016 04:43	3491085
FS	SS-PFHxA-13C2	537	N/A	EU16-1094 4775		44.5903	50.0	ng/L	92	70 - 130	—	—	0.97	07/25/2016 08:15	07/27/2016 04:43	3491085
FS	Perfluorobutanesulfonic acid (PFBS)	537	9.0	EU16-1094 4775	<	9.0		ng/L	—	—	—	—	0.97	07/25/2016 08:15	07/27/2016 04:43	3491085
FS	Perfluoroheptanoic acid (PFHpA)	537	1.0	EU16-1094 4775	<	1.0		ng/L	—	—	—	—	0.97	07/25/2016 08:15	07/27/2016 04:43	3491085
FS	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	EU16-1094 4775	<	3.0		ng/L	—	—	—	—	0.97	07/25/2016 08:15	07/27/2016 04:43	3491085
FS	Perfluorononanoic acid (PFNA)	537	2.0	EU16-1094 4775	<	2.0		ng/L	—	—	—	—	0.97	07/25/2016 08:15	07/27/2016 04:43	3491085
FS	Perfluorooctane sulfonate (PFOS)	537	4.0	EU16-1094 4775	<	4.0		ng/L	—	—	—	—	0.97	07/25/2016 08:15	07/27/2016 04:43	3491085
FS	Perfluorooctanoic acid (PFOA)	537	2.0	EU16-1094 4775	<	2.0		ng/L	—	—	—	—	0.97	07/25/2016 08:15	07/27/2016 04:43	3491085
CCH	IS-PFOA-13C2	537	N/A	—		6193.44	6193.44	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/27/2016 09:50	3501438
CCH	IS-PFOS-13C4	537	N/A	—		3211.80	3211.8	ng/L	100	50 - 150	—	—	1.0	07/21/2016 14:00	07/27/2016 09:50	3501438
CCH	SS-PFDA-13C2	537	N/A	—		91.4480	100	ng/L	91	70 - 130	—	—	1.0	07/21/2016 14:00	07/27/2016 09:50	3501438
CCH	SS-PFHxA-13C2	537	N/A	—		50.0916	50.0	ng/L	100	70 - 130	—	—	1.0	07/21/2016 14:00	07/27/2016 09:50	3501438
CCH	Perfluorobutanesulfonic acid (PFBS)	537	9.0	—		1117.6100	1125	ng/L	99	70 - 130	—	—	1.0	07/21/2016 14:00	07/27/2016 09:50	3501438
CCH	Perfluoroheptanoic acid (PFHpA)	537	1.0	—		122.3250	125	ng/L	98	70 - 130	—	—	1.0	07/21/2016 14:00	07/27/2016 09:50	3501438
CCH	Perfluorohexanesulfonic acid (PFHxS)	537	3.0	—		386.5150	375	ng/L	103	70 - 130	—	—	1.0	07/21/2016 14:00	07/27/2016 09:50	3501438
CCH	Perfluorononanoic acid (PFNA)	537	2.0	—		235.1780	250	ng/L	94	70 - 130	—	—	1.0	07/21/2016 14:00	07/27/2016 09:50	3501438
CCH	Perfluorooctane sulfonate (PFOS)	537	4.0	—		507.4830	500	ng/L	101	70 - 130	—	—	1.0	07/21/2016 14:00	07/27/2016 09:50	3501438
CCH	Perfluorooctanoic acid (PFOA)	537	2.0	—		250.7650	250	ng/L	100	70 - 130	—	—	1.0	07/21/2016 14:00	07/27/2016 09:50	3501438

Sample Type Key

Type (Abbr.)	Sample Type
CCH	Continuing Calibration High
CCL	Continuing Calibration Low
CCM	Continuing Calibration Mid
FD	Field Duplicate
FS	Field Sample
FBH	Fortified Blank High
FBL	Fortified Blank Low
FBM	Fortified Blank Mid
LRB	Laboratory Reagent Blank

Type (Abbr.)	Sample Type

END OF REPORT

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CHAIN OF CUSTODY RECORD

Page _____ of _____

REPORT TO: Converse Labs, 806 Starbuck Ave, Watertown, NY 13601

BILL TO: (315)788-8388

Results to: Customerservice@conversdabs.com

SAMPLER (Signature): Diane Coveil

COMPLIANCE MONITORING: Yes ____ No ✓

PWS ID #:

POPULATION SERVED:

STATE (sample origin): Well

PROJECT NAME: EHHE-1094

PO#:

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	7/12/16	0950	✓		Range 48	PFCs			✓	2	DW	
2		0950	✓		Range 48 Field Blank				✓	1		
3		1040	✓		Range 44			✓		2		
4		1040	✓		Range 44 Field Blank				✓	1		
5		1115	✓		Range 39			✓		2		
6		1115	✓		Range 39 Field Blank				✓	1		
7		1145	✓		Range 35				✓	2		
8		1145	✓		Range 35 Field Blank				✓	1		
9		1220		✓	Range 13A		run clear sample	✓		2		
10		1220		✓	Range 13A Field Blank				✓	1		
11		1315		✓	Range 23				✓	2		
12		1315		✓	Range 23 Field Blank				✓	1		
13		1355		✓	2723			✓		2		
14	↓	1355		✓	2723 Field Blank	↓			✓	1		

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
Diane Coveil	7/12/16	1515 AM PM	RM Rizzo	7/12/16	1555 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			AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS: only run field blank sample is positive

CONDITIONS UPON RECEIPT (check one): ____ Iced: Wet/Blue ____ Ambient ____ °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.

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REPORT TO:	SAMPLER (Signature)	PWS ID #	STATE (sample origin)	PROJECT NAME	PO#
	Diane Covell				

BILL TO:	COMPLIANCE MONITORING	Yes	No	POPULATION SERVED	SOURCE WATER
			✓		Well

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	7/10/16	1410		✓	2792	PFC's		✓		2		
2		1410		✓	2792 Field Blank				✓	1		
3		1425		✓	2701			✓		2		
4		1425		✓	2701 Field Blank				✓	1		
5		1450		✓	4775				✓	2		
6		1450		✓	4775 Field Blank				✓	1		
7												
8												
9												
10												
11												
12												
13												
14												

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
Diane Covell	7/12/16	1515 AM PM	Kim Rizzo	7/12/16	1515 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			AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS: only run field blank if positive

CONDITIONS UPON RECEIPT (check one):

____ Iced: Wet/Blue ____ Ambient ____ °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.

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1 800 332 4345

Laboratory Report

Client: Converse Laboratories

Attn: Donna Zang
800 Starbuck Ave, Suite B101
Watertown, NY 13601

Report: 371169
Priority: Standard 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
3530851	22771-17DSP	537	08/23/16 09:40	Client	08/24/16 08:30
3530853	22609-13ASP	537	08/23/16 10:15	Client	08/24/16 08:30
3530855	23051-14GSP	537	08/23/16 10:40	Client	08/24/16 08:30

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 Kelly Trott at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Kelly Trott Analytical Services Manager — 09/30/2016

Authorized Signature — Title — Date

Client Name: Converse Laboratories
Report #: 371169

Client Name: Converse Laboratories

Report #: 371169

Sampling Point: 22771-17DSP

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	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:14	3530851
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:14	3530851
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:14	3530851
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:14	3530851
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:14	3530851
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:14	3530851

Sampling Point: 22609-13ASP

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	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:57	3530853
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:57	3530853
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:57	3530853
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:57	3530853
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:57	3530853
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 08:57	3530853

Sampling Point: 23051-14GSP

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	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 09:40	3530855
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 09:40	3530855
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 09:40	3530855
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 09:40	3530855
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 09:40	3530855
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.5	< 2.5	ng/L	09/04/16 00:00	09/07/16 09:40	3530855

† 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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CHAIN OF CUSTODY RECORD

Page 1 of 1

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REPORT TO: Converse Labs

BILL TO: Converse Labs

SAMPLER (Signature): Diane Coveee

COMPLIANCE MONITORING: Yes ___ No ✓

PWS ID #: N/A

POPULATION SERVED: N/A

STATE (sample origin): NY

SOURCE WATER: well

PROJECT NAME:

PO#: EAile-1340

	LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	3530.851	8/23/16	0940	✓		22771-17D SP	PFCs	C1-A SS		✓	2	DW	
2	852		0940	✓		Field Blk for 22771-17DSP					1		
3	853		1015	✓		22609-13A SP					1		
4	854		1015	✓		Field Blk for 22609-13ASP					1		
5	855		1040	✓		23051-14G SP					1		
6	856		1040	✓		Field Blk for 23051-14GSP					1		
7													
8													
9													
10													
11													
12													
13													
14													

	DATE	TIME		DATE	TIME
RELINQUISHED BY:(Signature) Diane Coveee	8/23/16	1340 AM PM	RECEIVED BY:(Signature) Sue Hoffman	8/23/16	1340 AM PM
RELINQUISHED BY:(Signature) KMR13880	8/23/16	1500 AM PM	RECEIVED BY:(Signature)		AM PM
RELINQUISHED BY:(Signature)		AM PM	RECEIVED FOR LABORATORY BY: K Dunn 8.24.16		0830 AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS: Only run field blank if there is a hit

CONDITIONS UPON RECEIPT (check one): X Iced: Wet/Blue ___ Ambient 3.8 °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.

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.

*Returning un-used sample bottles, ordered too many

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Run Log

Run ID: **220941** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
FS	3530851	22771-17DSP	DW	R L	09/07/2016 08:14	537 Ref Lab
FTB	3530852	22771-17DSP FTB	RW	R L	09/07/2016 08:35	537 Ref Lab
FS	3530853	22609-13ASP	DW	R L	09/07/2016 08:57	537 Ref Lab
FTB	3530854	22609-13ASP FTB	RW	R L	09/07/2016 09:19	537 Ref Lab
FS	3530855	23051-14GSP	DW	R L	09/07/2016 09:40	537 Ref Lab
FTB	3530856	23051-14GSP FTB	RW	R L	09/07/2016 10:02	537 Ref Lab

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 #
FS	Perfluorobutanesulfonic acid (PFBS)	537	2.5	22771-17DSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:14	3530851
FS	Perfluoroheptanoic acid (PFHpA)	537	2.5	22771-17DSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:14	3530851
FS	Perfluorohexanesulfonic acid (PFHxS)	537	2.5	22771-17DSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:14	3530851
FS	Perfluorononanoic acid (PFNA)	537	2.5	22771-17DSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:14	3530851
FS	Perfluorooctane sulfonate (PFOS)	537	2.5	22771-17DSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:14	3530851
FS	Perfluorooctanoic acid (PFOA)	537	2.5	22771-17DSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:14	3530851
FTB	Perfluorobutanesulfonic acid (PFBS)	537	2.5	22771-17DSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:35	3530852
FTB	Perfluoroheptanoic acid (PFHpA)	537	2.5	22771-17DSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:35	3530852
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	2.5	22771-17DSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:35	3530852
FTB	Perfluorononanoic acid (PFNA)	537	2.5	22771-17DSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:35	3530852
FTB	Perfluorooctane sulfonate (PFOS)	537	2.5	22771-17DSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:35	3530852
FTB	Perfluorooctanoic acid (PFOA)	537	2.5	22771-17DSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:35	3530852
FS	Perfluorobutanesulfonic acid (PFBS)	537	2.5	22609-13ASP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:57	3530853
FS	Perfluoroheptanoic acid (PFHpA)	537	2.5	22609-13ASP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:57	3530853
FS	Perfluorohexanesulfonic acid (PFHxS)	537	2.5	22609-13ASP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:57	3530853
FS	Perfluorononanoic acid (PFNA)	537	2.5	22609-13ASP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:57	3530853
FS	Perfluorooctane sulfonate (PFOS)	537	2.5	22609-13ASP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:57	3530853
FS	Perfluorooctanoic acid (PFOA)	537	2.5	22609-13ASP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 08:57	3530853
FTB	Perfluorobutanesulfonic acid (PFBS)	537	2.5	22609-13ASP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:19	3530854
FTB	Perfluoroheptanoic acid (PFHpA)	537	2.5	22609-13ASP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:19	3530854
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	2.5	22609-13ASP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:19	3530854
FTB	Perfluorononanoic acid (PFNA)	537	2.5	22609-13ASP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:19	3530854
FTB	Perfluorooctane sulfonate (PFOS)	537	2.5	22609-13ASP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:19	3530854
FTB	Perfluorooctanoic acid (PFOA)	537	2.5	22609-13ASP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:19	3530854
FS	Perfluorobutanesulfonic acid (PFBS)	537	2.5	23051-14GSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:40	3530855
FS	Perfluoroheptanoic acid (PFHpA)	537	2.5	23051-14GSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:40	3530855
FS	Perfluorohexanesulfonic acid (PFHxS)	537	2.5	23051-14GSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:40	3530855
FS	Perfluorononanoic acid (PFNA)	537	2.5	23051-14GSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:40	3530855
FS	Perfluorooctane sulfonate (PFOS)	537	2.5	23051-14GSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:40	3530855
FS	Perfluorooctanoic acid (PFOA)	537	2.5	23051-14GSP	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 09:40	3530855
FTB	Perfluorobutanesulfonic acid (PFBS)	537	2.5	23051-14GSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 10:02	3530856
FTB	Perfluoroheptanoic acid (PFHpA)	537	2.5	23051-14GSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 10:02	3530856
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	2.5	23051-14GSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 10:02	3530856
FTB	Perfluorononanoic acid (PFNA)	537	2.5	23051-14GSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 10:02	3530856
FTB	Perfluorooctane sulfonate (PFOS)	537	2.5	23051-14GSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 10:02	3530856
FTB	Perfluorooctanoic acid (PFOA)	537	2.5	23051-14GSP FTB	<	2.5		ng/L	---	---	---	---	1.0	09/04/2016 00:00	09/07/2016 10:02	3530856

Sample Type Key

Type (Abbr.)	Sample Type
FS	Field Sample
FTB	Field Trip 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.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN00035
Arkansas	IN00035	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*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon (Primary AB)*	4074-001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA160002	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
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

Revision date: 04/14/2016

EA16-1340

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Order # 303373
Batch # _____

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CHAIN OF CUSTODY RECORD

Page _____ of _____

REPORT TO:	SAMPLER (Signature)	PWS ID #	STATE (sample origin)	PROJECT NAME	PO#
Converse Labs	Diane Coveee	N/A	NY		
BILL TO:	COMPLIANCE MONITORING: Yes ___ No ✓	POPULATION SERVED: N/A	SOURCE WATER: well		

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	8/23/16	0940	✓		22771-17D SP	PFCs			✓	2	DW	
2	"	0940	✓		Field Blk for 22771-17DSP	"			"	1	"	
3	"	1015	✓		22609-13A SP	"			"	1	"	
4	"	1015	✓		Field Blk for 22609-13ASP	"			"	1	"	
5	"	1040	✓		23051-14GSP	"			"	1	"	
6	"	1040	✓		Field Blk for 23051-14GSP	"			"	1	"	
7												
8												
9												
10												
11												
12												
13												
14												

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
Diane Coveee	8/23/16	1340 AM PM	Sue Hoffman	8/23/16	1340 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:	DATE	TIME AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS
Only run field blank if there is a hit

CONDITIONS UPON RECEIPT (check one):
___ Iced: Wet/Blue ___ Ambient ___ °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.

Laundry Pad Sites

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Analysis Report

Sample Description: SB-1-SUMP Grab Soil
Fort Drum

LL Sample # SW 8680107
LL Group # 1729266
Account # 38055

Project Name: Fort Drum

Collected: 11/01/2016 14:05 by N

Submitted: 11/04/2016 08:00
Reported: 12/08/2016 10:36

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/g**		**ng/g**	**ng/g**	
14027	NEtFOSAA	2991-50-6	N.D.		1.2	3.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA	2355-31-9	N.D.		1.2	3.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonate	375-73-5	N.D.		0.62	2.0	1
14027	Perfluorodecanoic acid	335-76-2	0.30	J	0.25	0.50	1
14027	Perfluorododecanoic acid	307-55-1	N.D.		0.50	0.99	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.		0.37	0.75	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.		0.62	2.0	1
14027	Perfluorohexanoic acid	307-24-4	N.D.		0.25	0.50	1
14027	Perfluorononanoic acid	375-95-1	N.D.		0.25	0.50	1
14027	Perfluoro-octanesulfonate	1763-23-1	N.D.		0.87	2.0	1
14027	Perfluorooctanoic acid	335-67-1	N.D.		0.37	0.75	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.		0.37	0.99	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.		0.75	1.5	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.		0.37	0.75	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	26.7		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/15/2016 22:54	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16326820007A	11/22/2016 01:04	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SB-1-DRAIN Grab Soil
Fort Drum

LL Sample # SW 8680108
LL Group # 1729266
Account # 38055

Project Name: Fort Drum

Collected: 11/01/2016 16:15 by N

Submitted: 11/04/2016 08:00
Reported: 12/08/2016 10:36

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		ng/g	ng/g	ng/g	
14027	NEtFOSAA	2991-50-6	N.D.	1.1	3.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA	2355-31-9	N.D.	1.1	3.4	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonate	375-73-5	N.D.	0.56	1.8	1
14027	Perfluorodecanoic acid	335-76-2	N.D.	0.22	0.45	1
14027	Perfluorododecanoic acid	307-55-1	N.D.	0.45	0.90	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.	0.34	0.67	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.	0.56	1.8	1
14027	Perfluorohexanoic acid	307-24-4	N.D.	0.22	0.45	1
14027	Perfluorononanoic acid	375-95-1	N.D.	0.22	0.45	1
14027	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.79	1.8	1
14027	Perfluorooctanoic acid	335-67-1	N.D.	0.34	0.67	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.34	0.90	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.67	1.3	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.	0.34	0.67	1
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	15.3	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/15/2016 23:10	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16326820007A	11/22/2016 01:04	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SB-2-SUMP Grab Soil
Fort Drum

LL Sample # SW 8680109
LL Group # 1729266
Account # 38055

Project Name: Fort Drum

Collected: 11/02/2016 09:55 by N

Submitted: 11/04/2016 08:00
Reported: 12/08/2016 10:36

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		ng/g	ng/g	ng/g	
14027	NEtFOSAA	2991-50-6	N.D.	1.2	3.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA	2355-31-9	N.D.	1.2	3.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonate	375-73-5	N.D.	0.59	1.9	1
14027	Perfluorodecanoic acid	335-76-2	N.D.	0.24	0.48	1
14027	Perfluorododecanoic acid	307-55-1	N.D.	0.48	0.95	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.	0.36	0.71	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.	0.59	1.9	1
14027	Perfluorohexanoic acid	307-24-4	N.D.	0.24	0.48	1
14027	Perfluorononanoic acid	375-95-1	N.D.	0.24	0.48	1
14027	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.83	1.9	1
14027	Perfluorooctanoic acid	335-67-1	N.D.	0.36	0.71	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.36	0.95	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.71	1.4	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.	0.36	0.71	1
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	16.7	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/16/2016 00:16	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16326820007A	11/22/2016 01:04	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SB-2-DRAIN Grab Soil
Fort Drum

Project Name: Fort Drum

Collected: 11/02/2016 10:30 by N

Submitted: 11/04/2016 08:00
Reported: 12/08/2016 10:36

LL Sample # SW 8680110
LL Group # 1729266
Account # 38055

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/g**	**ng/g**	**ng/g**	
14027	NEtFOSAA	2991-50-6	N.D.	1.1	3.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA	2355-31-9	N.D.	1.1	3.4	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonate	375-73-5	N.D.	0.57	1.8	1
14027	Perfluorodecanoic acid	335-76-2	N.D.	0.23	0.46	1
14027	Perfluorododecanoic acid	307-55-1	N.D.	0.46	0.91	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.	0.34	0.68	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.	0.57	1.8	1
14027	Perfluorohexanoic acid	307-24-4	N.D.	0.23	0.46	1
14027	Perfluorononanoic acid	375-95-1	N.D.	0.23	0.46	1
14027	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.80	1.8	1
14027	Perfluorooctanoic acid	335-67-1	N.D.	0.34	0.68	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.34	0.91	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.68	1.4	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.	0.34	0.68	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	15.4	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/16/2016 00:32	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16326820007A	11/22/2016 01:04	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SB-3-SUMPA Grab Soil
Fort Drum

LL Sample # SW 8680111
LL Group # 1729266
Account # 38055

Project Name: Fort Drum

Collected: 11/02/2016 15:45 by N

Submitted: 11/04/2016 08:00
Reported: 12/08/2016 10:36

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/g**		**ng/g**	**ng/g**	
14027	NEtFOSAA	2991-50-6	N.D.		1.1	3.3	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA	2355-31-9	N.D.		1.1	3.3	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonate	375-73-5	N.D.		0.54	1.7	1
14027	Perfluorodecanoic acid	335-76-2	N.D.		0.22	0.43	1
14027	Perfluorododecanoic acid	307-55-1	N.D.		0.43	0.87	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.		0.33	0.65	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.		0.54	1.7	1
14027	Perfluorohexanoic acid	307-24-4	N.D.		0.22	0.43	1
14027	Perfluorononanoic acid	375-95-1	N.D.		0.22	0.43	1
14027	Perfluoro-octanesulfonate	1763-23-1	1.6	J	0.76	1.7	1
14027	Perfluorooctanoic acid	335-67-1	N.D.		0.33	0.65	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.		0.33	0.87	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.		0.65	1.3	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.		0.33	0.65	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	14.4		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/16/2016 00:49	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16326820007A	11/22/2016 01:04	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SB-3-SUMPB Grab Soil
Fort Drum

LL Sample # SW 8680112
LL Group # 1729266
Account # 38055

Project Name: Fort Drum

Collected: 11/02/2016 16:00 by N

Submitted: 11/04/2016 08:00
Reported: 12/08/2016 10:36

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/g**	**ng/g**	**ng/g**	
14027	NEtFOSAA	2991-50-6	N.D.	1.1	3.3	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA	2355-31-9	N.D.	1.1	3.3	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonate	375-73-5	N.D.	0.55	1.7	1
14027	Perfluorodecanoic acid	335-76-2	N.D.	0.22	0.44	1
14027	Perfluorododecanoic acid	307-55-1	N.D.	0.44	0.87	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.	0.33	0.65	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.	0.55	1.7	1
14027	Perfluorohexanoic acid	307-24-4	N.D.	0.22	0.44	1
14027	Perfluorononanoic acid	375-95-1	N.D.	0.22	0.44	1
14027	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.76	1.7	1
14027	Perfluorooctanoic acid	335-67-1	N.D.	0.33	0.65	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.33	0.87	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.65	1.3	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.	0.33	0.65	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	15.0	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/16/2016 01:05	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16326820007A	11/22/2016 01:04	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SB-3-DRAIN Grab Soil
Fort Drum

LL Sample # SW 8680113
LL Group # 1729266
Account # 38055

Project Name: Fort Drum

Collected: 11/02/2016 16:30 by N

Submitted: 11/04/2016 08:00
Reported: 12/08/2016 10:36

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/g**	**ng/g**	**ng/g**	
14027	NEtFOSAA	2991-50-6	N.D.	0.99	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA	2355-31-9	N.D.	0.99	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonate	375-73-5	N.D.	0.50	1.6	1
14027	Perfluorodecanoic acid	335-76-2	N.D.	0.20	0.40	1
14027	Perfluorododecanoic acid	307-55-1	N.D.	0.40	0.80	1
14027	Perfluoroheptanoic acid	375-85-9	N.D.	0.30	0.60	1
14027	Perfluorohexanesulfonate	355-46-4	N.D.	0.50	1.6	1
14027	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.40	1
14027	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.40	1
14027	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.70	1.6	1
14027	Perfluorooctanoic acid	335-67-1	N.D.	0.30	0.60	1
14027	Perfluorotetradecanoic acid	376-06-7	N.D.	0.30	0.80	1
14027	Perfluorotridecanoic acid	72629-94-8	N.D.	0.60	1.2	1
14027	Perfluoroundecanoic acid	2058-94-8	N.D.	0.30	0.60	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	6.4	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	14 PFCs in Soil	EPA 537 Rev. 1.1 modified	1	16315006	11/15/2016 19:54	Atulbhai Patel	1
14090	PFC Solid Prep	EPA 537 Rev. 1.1 modified	1	16315006	11/10/2016 16:30	Devon M Whooley	1
00111	Moisture	SM 2540 G-1997	1	16326820007A	11/22/2016 01:04	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

Report Date: December 08, 2016

Project: Fort Drum

Submittal Date: 11/04/2016
Group Number: 1729266
PO Number: EA16-1688
State of Sample Origin: NY

Client Sample Description	Lancaster Labs (LL) #
SB-1-SUMP Grab Soil	8680107
SB-1-DRAIN Grab Soil	8680108
SB-2-SUMP Grab Soil	8680109
SB-2-DRAIN Grab Soil	8680110
SB-3-SUMPA Grab Soil	8680111
SB-3-SUMPB Grab Soil	8680112
SB-3-DRAIN Grab Soil	8680113

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Converse Laboratories, Inc.	Attn: Customer Service
Electronic Copy To	Converse Laboratories, Inc.	Attn: Donna K Zang

Respectfully Submitted,

Angela M. Miller

Angela M. Miller
Specialist

(717) 556-7260

Quality Control Summary

Client Name: Converse Laboratories, Inc. Group Number: 1729266
Reported: 12/08/2016 10:36

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ng/g	ng/g	ng/g
Batch number: 16315006	Sample number(s): 8680107-8680113		
NEtFOSAA	N.D.	1.0	3.0
NMeFOSAA	N.D.	1.0	3.0
Perfluorobutanesulfonate	N.D.	0.50	1.6
Perfluorodecanoic acid	N.D.	0.20	0.40
Perfluorododecanoic acid	N.D.	0.40	0.80
Perfluoroheptanoic acid	N.D.	0.30	0.60
Perfluorohexanesulfonate	N.D.	0.50	1.6
Perfluorohexanoic acid	N.D.	0.20	0.40
Perfluorononanoic acid	N.D.	0.20	0.40
Perfluoro-octanesulfonate	N.D.	0.70	1.6
Perfluorooctanoic acid	N.D.	0.30	0.60
Perfluorotetradecanoic acid	N.D.	0.30	0.80
Perfluorotridecanoic acid	N.D.	0.60	1.2
Perfluoroundecanoic acid	N.D.	0.30	0.60

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ng/g	ng/g	ng/g	ng/g					
Batch number: 16315006	Sample number(s): 8680107-8680113								
NEtFOSAA	20	21.21	20	20.6	106	103	70-130	3	30
NMeFOSAA	20	25.52	20	23.5	128	118	70-130	8	30
Perfluorobutanesulfonate	17.7	17.23	17.7	15.7	97	89	70-130	9	30
Perfluorodecanoic acid	20	19.67	20	19.43	98	97	70-130	1	30
Perfluorododecanoic acid	20	15.97	20	16.13	80	81	70-130	1	30
Perfluoroheptanoic acid	20	21.09	20	21.7	105	109	70-130	3	30
Perfluorohexanesulfonate	18.9	19.86	18.9	17.74	105	94	70-130	11	30
Perfluorohexanoic acid	20	20.01	20	18.74	100	94	70-130	7	30
Perfluorononanoic acid	20	16.02	20	17.22	80	86	70-130	7	30
Perfluoro-octanesulfonate	19.1	16.81	19.1	15.36	88	80	70-130	9	30
Perfluorooctanoic acid	20	18.37	20	17.29	92	86	70-130	6	30
Perfluorotetradecanoic acid	20	17.4	20	17.46	87	87	70-130	0	30
Perfluorotridecanoic acid	20	21.08	20	19.7	105	99	70-130	7	30
Perfluoroundecanoic acid	20	14.18	20	14.5	71	73	70-130	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Converse Laboratories, Inc. Group Number: 1729266
Reported: 12/08/2016 10:36

LCS/LCSD (continued)

Analysis Name	LCS Spike Added %	LCS Conc %	LCSD Spike Added %	LCSD Conc %	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 16326820007A	Sample number(s): 8680107-8680113								
Moisture	89.5	89.43			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 16315006	Sample number(s): 8680107-8680113 UNSPK: 8680113									
NEtFOSAA	N.D.	19.12	21.54			113		70-130		
NMeFOSAA	N.D.	19.12	24.75			129		70-130		
Perfluorobutanesulfonate	N.D.	16.92	15.26			90		70-130		
Perfluorodecanoic acid	N.D.	19.12	17.65			92		70-130		
Perfluorododecanoic acid	N.D.	19.12	15.48			81		70-130		
Perfluoroheptanoic acid	N.D.	19.12	17.6			92		70-130		
Perfluorohexanesulfonate	N.D.	18.07	17.96			99		70-130		
Perfluorohexanoic acid	N.D.	19.12	17.22			90		70-130		
Perfluorononanoic acid	N.D.	19.12	16.81			88		70-130		
Perfluoro-octanesulfonate	N.D.	18.26	15.74			86		70-130		
Perfluorooctanoic acid	N.D.	19.12	17.57			92		70-130		
Perfluorotetradecanoic acid	N.D.	19.12	18.51			97		70-130		
Perfluorotridecanoic acid	N.D.	19.12	20.37			107		70-130		
Perfluoroundecanoic acid	N.D.	19.12	16.39			86		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 16326820007A	Sample number(s): 8680107-8680113 BKG: 8680109			
Moisture	16.68	17.47	5	5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 38055 Group # 1729266 Sample # 8680107-13

Client: CONVERSE LABS

Project Name/#: FORT DRUM	Site ID #:		
Project Manager:	P.O. #: EA16-1688		
Sampler: NELSON & CORONA	PWSID #:		
Phone #:	Quote #:		
State where samples were collected: ny	For Compliance: Yes ☐ No ☐		

Matrix: Soil ☑ Sediment ☐ Tissue ☐ / Water: Potable ☐ NPDES ☐ Ground ☐ Surface ☐ / Other:

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix	Total # of Containers	PFC (ALL 14 ANALYTES)	Remarks
SB-1-SUMP	1-Nov	1405	X				1	
SB-1-DRAIN	1-Nov	1615	X				1	
SB -2-SUMP	2-Nov	955	X				1	
SB-2-DRAIN	2-Nov	1030	X				1	
SB-3-SUMPA	2-Nov	1545	X				1	
SB-3 SUMPB	2-Nov	1600	X				1	
SB-3 -DRAIN	2-Nov	1630	X				1	

Analyses Requested / Preservation Codes

For Lab Use Only
SF #:
SCR #:

Preservation Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 P = H_3PO_4
O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 11/21/16

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: customerservice2@converselabs.com

Phone:

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐
Type III (Reduced non-CLP) ☐ CT RCP ☐
Type VI (Raw Data Only) ☐ TX TRRP-13 ☐
NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☐ No ☐ If yes, format:

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	11/3	1500			
			[signature]	11-4-16	800

Relinquished by Commercial Carrier: UPS ___ FedEx X Other ___

Temperature upon receipt 1.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 167234

Group Number(s): 1729266

Client: Converse

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/04/2016 8:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	No
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Timothy Cubberley (6520) at 08:40 on 11/04/2016

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	1.4	IR	Ice Pack	Y	Bagged	N

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
SB-1-SUMP	11/01/2016 14:15	Time on CoC marked at 14:05

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	none detected
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…
W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

CONVERSE LABORATORIES, INC.
800 Starbuck Ave., Suite B101
Watertown, NY 13601
(315) 788-8388 www.converselabs.com

Chain of Custody

EAIC-1688

Fort Drum

Client Address:

Client Project ID / PO# :
Govt Credit Card
*Bill Dianne

Matrix Codes
DW= Drinking Water GW= Ground Water
WW= Waste Water SL= Sludge
SW= Surface Water SO= Soil

Sample Information:
☐ Finished ☒ Raw
☐ Chlorinated ☐ UV
☐ OTHER: _____

Phone #: 315-523-2143 Fax#: 315-772-8050
E-Mail address: diane.h.covell.civ@mail.mil, Scottie.forbes@usace.army.mil
Contact/Report to: Diane Covell
Sampler: Nelson & Corona

Preservative Codes
1= $Na_2S_2O_3$ 2= HCl 3= H_2SO_4
4= HNO_3 5= NaOH 6= Asorbic Acid
7= NH_4CL 8= NONE
9= _____ 10= _____

NOTES TO LABORATORY
☐ Normal TAT
☐ Rush TAT
Date Needed: _____ a.m. / p.m.

Date Collected	Time Collected	Sample Identification	G = Grab C = Composite	Matrix - see codes above	Chlorine Residual	Conductivity	List Preservative Code Below	ANALYSIS / TEST REQUESTED	SAMPLE ID # (lab use only)
11/1/2016	1405	SB-1-Sump	C	SO			1 8	PFC 14 analytes	
11/1/2016	1615	SB-1-Drain	C	SO					
11/2/2016	0955	SB-2-Sump	C	SO					
11/2/2016	1030	SB-2-Drain	C	SO					
11/2/2016	1545	SB-3-SumpA	C	SO					
11/2/2016	1600	SB-3-SumpB	C	SO					
11/2/2016	1630	SB-3-Drain	C	SO					

Relinquished by:	Date	Time	Received by:	Date	Time	Temp°
Kaitlyn Nelson	~~11/3~~ 11/3/2016	1115	KMLR 333	11/3/16	1115	

AUTHORIZED RECIPIENTS & CONTACT INFO:

SAMPLE(S) AS RECEIVED CONFORM TO NELAC STANDARDS
YES NO
IF NO, SEE ATTACHED SHEET

Amt. Due: _____
Amt. Paid: _____
Cash: _____ Check# _____
Credit: _____

Initial Review: _____
Transcriptual Rev.: _____
Final Review: _____

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # ______ Group # ______ Sample # ______

Client: **CONVERSE LABS**

Project Name/#: FORT DRUM	Site ID #:
Project Manager:	P.O. #: EA16-1688
Sampler: NELSON & CORONA	PWSID #:
Phone #:	Quote #:
State where samples were collected: ny	For Compliance: Yes ☐ No ☐

Matrix: Tissue ☐ Sediment ☐ Soil ☑ Water: Ground ☐ Surface ☐ Potable ☐ NPDES ☐ Other:

Analyses Requested / **Preservation Codes**

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil	Water	Other	Total # of Containers	PFC (ALL 14 ANALYTES)										Remarks
SB-1-SUMP	1-Nov	1405	X						1										
SB-1-DRAIN	1-Nov	1615	X						1										
SB -2-SUMP	2-Nov	955	X						1										
SB-2-DRAIN	2-Nov	1030	X						1										
SB-3-SUMPA	2-Nov	1545	X						1										
SB-3 SUMPB	2-Nov	1600	X						1										
SB-3 -DRAIN	2-Nov	1630	X						1										

For Lab Use Only

SF #: ______

SCR #: ______

Preservation Codes

H = HCl T = Thiosulfate

N = HNO_3 B = NaOH

S = H_2SO_4 P = H_3PO_4

O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 11/21/16

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: customerservice2@converselabs.com

Phone:

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☐ No ☐ If yes, format: ______

Relinquished by:	Date	Time	Received by:	Date	Time
KMG 333	11/3	1500			

Relinquished by Commercial Carrier:

UPS ______ FedEx ______ Other ______

Temperature upon receipt ______ °C

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: Fire Pit Water Grab Surface Water
Fort Drum

LL Sample # WW 8422678
LL Group # 1671282
Account # 38055

Project Name: Fort Drum

Collected: 06/09/2016 09:55 by DC

Submitted: 06/10/2016 09:25
Reported: 08/16/2016 10:23

Converse Laboratories, Inc.
800 Starbuck Ave
Suite B101
Watertown NY 13601

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Misc. Organics	EPA 537 Rev. 1.1 modified		ng/l	ng/l	ng/l	
10954	Perfluorooctanoic acid	335-67-1	30,000	200	400	200
10954	Perfluorononanoic acid	375-95-1	2,100	200	400	200
10954	Perfluorodecanoic acid	335-76-2	780	200	400	200
10954	Perfluoroundecanoic acid	2058-94-8	63 J	40	80	20
10954	Perfluorododecanoic acid	307-55-1	N.D.	60	100	20
10954	Perfluorotridecanoic acid	72629-94-8	N.D.	40	80	20
10954	Perfluorotetradecanoic acid	376-06-7	N.D.	60	100	20
10954	Perfluorohexanoic acid	307-24-4	530,000	2,000	4,000	2000
10954	Perfluoroheptanoic acid	375-85-9	28,000	200	400	200
10954	Perfluorobutanesulfonate	375-73-5	10,000	800	2,000	200
10954	Perfluorohexanesulfonate	355-46-4	90,000	800	2,000	200
*10954	Perfluoro-octanesulfonate	1763-23-1	280,000	1,000	2,000	200
10954	NEtFOSAA	2991-50-6	N.D.	100	200	20
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
10954	NMeFOSAA	2355-31-9	N.D.	800	2,000	200
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	14 PFCs in Water	EPA 537 Rev. 1.1 modified	1	16166005	06/21/2016 00:48	Jason W Knight	20
10954	14 PFCs in Water	EPA 537 Rev. 1.1 modified	1	16166005	06/21/2016 00:48	Jason W Knight	200
10954	14 PFCs in Water	EPA 537 Rev. 1.1 modified	1	16166005	06/21/2016 01:04	Jason W Knight	200
10954	14 PFCs in Water	EPA 537 Rev. 1.1 modified	1	16166005	06/21/2016 09:27	Jason W Knight	2000
14091	PFAA Water Prep	EPA 537 Rev. 1.1 modified	1	16166005	06/15/2016 09:40	Jason W Knight	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Converse Laboratories, Inc. Group Number: 1671282
Reported: 08/16/2016 10:23

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Batch number: 16166005	Sample number(s): 8422678		
Perfluorooctanoic acid	N.D.	1	2
Perfluorononanoic acid	N.D.	1	2
Perfluorodecanoic acid	N.D.	1	2
Perfluoroundecanoic acid	N.D.	2	4
Perfluorododecanoic acid	N.D.	3	5
Perfluorotridecanoic acid	N.D.	2	4
Perfluorotetradecanoic acid	N.D.	3	5
Perfluorohexanoic acid	N.D.	1	2
Perfluoroheptanoic acid	N.D.	1	2
Perfluorobutanesulfonate	N.D.	4	10
Perfluorohexanesulfonate	N.D.	4	10
Perfluoro-octanesulfonate	N.D.	5	10
NEtFOSAA	N.D.	5	8
NMeFOSAA	N.D.	4	8

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 16166005	Sample number(s): 8422678								
Perfluorooctanoic acid	200	184.49	200	195.14	92	98	70-130	6	30
Perfluorononanoic acid	200	154.31	200	180.6	77	90	70-130	16	30
Perfluorodecanoic acid	200	158.83	200	176.64	79	88	70-130	11	30
Perfluoroundecanoic acid	200	165.69	200	193.16	83	97	70-130	15	30
Perfluorododecanoic acid	200	154.05	200	163.63	77	82	70-130	6	30
Perfluorotridecanoic acid	200	152.73	200	167.97	76	84	70-130	10	30
Perfluorotetradecanoic acid	200	171.86	200	189.37	86	95	70-130	10	30
Perfluorohexanoic acid	200	178.52	200	191.14	89	96	70-130	7	30
Perfluoroheptanoic acid	200	172.36	200	186.78	86	93	70-130	8	30
Perfluorobutanesulfonate	176.8	128.1	176.8	177.69	72	101	70-130	32*	30
Perfluorohexanesulfonate	189.2	156.27	189.2	178.14	83	94	70-130	13	30
Perfluoro-octanesulfonate	191.2	145.71	191.2	183.01	76	96	70-130	23	30
NEtFOSAA	200	177.61	200	157.67	89	79	70-130	12	30
NMeFOSAA	200	215.2	200	261	108	130	70-130	19	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

APPLIED TECHNICAL SERVICES, INCORPORATED

1049 Triad Court, Marietta, Georgia 30062 • (770) 423-1400 Fax (770) 424-6415

CHEMICAL TEST REPORT

Ref. C262640 **Date** October 25, 2016 **Page** 1 **of** 1

Attention: Diane Covell

Customer: Converse Laboratories
800 Starbuck Ave, Suite B101
Watertown, NY 13601

P.O.# 16207

Samples: See Below

Materials Specification: N/A

Test Methods: EPA Method 3545A *Pressurized Fluid Extraction (PFE)* and EPA Method 8321B *Solvent Extractable Nonvolatile Compounds by High Performance Liquid Chromatography/ Thermospray/Mass Spectrometry (HPLC/TS/MS) or Ultraviolet (UV) Detection*

Test Results

Sample	Results			
	PFOA		**PFOS**	
	ppb (µg/L)	ppm (mg/L)	ppb (µg/L)	ppm (mg/L)
2072 PFOA + PFOS	25.790	0.026	156.0	0.156
Crash Truck #1	N.D. < 100 ppt	N/A	1361.2	1.36
Crash Truck #2	42.440	0.042	137160	137
Crash Truck #3	N.D. < 100 ppt	N/A	4035.6	4.04
Crash Truck #4	N.D. < 100 ppt	N/A	873.0	0.873
Crash Truck #5	N.D. < 100 ppt	N/A	3286.4	3.29

The sample was analyzed for PFOA and PFOS with a detection limit of 100 parts per trillion (ppt) ng/L.

N. D. < 100 – None Detected, less than 100 parts per trillion.

ISO 9001

Prepared by: William Carson
Chemist

Approved by: P. E. Rogers
Manager

APPENDIX D

Water Quality and Sampling Data Sheets

Fire Training Area

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 8 Sept. 2016
SAMPLED BY: Nelson/Layman **TIME: 1040**
WEATHER CONDITIONS: 78 °F, mostly cloudy, wind: 11 mph

Location: Fort Drum Fire Training Pit	**Sample ID: MW-1-Sept 2016 (VOCs)** **FDFT-MW 1-Sept 2016 (PFCs)**

PRESERVATIVE: HCl
ANALYSES REQUESTED: VOCs, PFCs
 # OF CONTAINERS: **1 (VOCs), 2 (PFCs)**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water level meter

3. WELL EVACUATION DATA

Well Depth (wd):	41.76	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	22.76	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				3.12	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	5.5	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter – 4.01, 7.00, 9.99	☒
Conductivity Meter – 1.14 mS/cm	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter – 96.9%	☒
ORP Meter – 240.0	☒
CO_2 –	☒

Time	09:59	10:04	10:09	10:14	10:19	10:23
Temp. °C	13.3	13.1	13.2	13.3	13.0	13.4
DO (mg/L)	7.65	7.50	7.58	7.72	7.78	7.63
Sp. Cond. (mS/cm)	0.152	0.150	0.151	0.151	0.151	0.151
pH	8.12	8.12	8.21	8.28	8.40	8.38
ORP (mV)	238.5	240.9	236.6	232.8	225.6	225.1
Turb. (NTU)	11.23	9.11	7.59	6.41	5.70	4.67
Water Level	23.35	23.35	23.32	23.35	23.35	23.35

5. Notes:
Start of Pumping: 0939 **Sample Time: 1040**

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 8 Sept. 2016
SAMPLED BY: Nelson/Layman **TIME: 1350**
WEATHER CONDITIONS: 78 °F, mostly cloudy, wind: 11 mph

Location: Fort Drum Fire Training Pit	**Sample ID: MW-2-Sept 2016 (VOCs)** **FDFT-MW 2-Sept 2016 (PFCs)**

PRESERVATIVE: HCl
ANALYSES REQUESTED: VOCs, PFCs
 # OF CONTAINERS: **1 (VOCs), 2 (PFCs)**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water level meter

3. WELL EVACUATION DATA

Well Depth (wd):	35.45	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	25.39	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			1.65	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	7	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter – 4.01, 7.00, 9.99	☒
Conductivity Meter – 1.14 mS/cm	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter – 96.9%	☒
ORP Meter – 240.0	☒
CO_2 –	☒

Time	13:19	13:24	13:30	13:35	13:40	13:45
Temp. °C	13.1	13.7	13.2	13.2	13.6	13.3
DO (mg/L)	8.88	8.91	8.64	8.72	8.81	8.81
Sp. Cond. (mS/cm)	0.159	0.161	0.160	0.160	0.162	0.161
pH	8.19	8.19	8.24	8.23	8.30	8.26
ORP (mV)	220.3	221.0	220.3	221.5	217.8	221.8
Turb. (NTU)	25.72	17.11	18.87	10.23	9.27	9.30
Water Level	25.35	25.36	25.35	25.35	25.35	25.35

5. Notes:
Start of Pumping: 1238 **Sample Time: 1350**

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 8 Sept. 2016
SAMPLED BY: Nelson/Layman **TIME: 1545**
WEATHER CONDITIONS: 80 °F, mostly cloudy, wind: 11 mph

Location: Fort Drum Fire Training Pit	**Sample ID: MW-3-Sept 2016 (VOCs)** **FDFT-MW 3-Sept 2016 (PFCs)**

PRESERVATIVE: HCl
ANALYSES REQUESTED: VOCs, PFCs MS/MSD (VOCs, PFCs), Field Blank (PFCs)
 # OF CONTAINERS: **3 (VOCs), 4 + 1 Field Blank (PFCs)**
SAMPLING METHOD: ☐ Peristaltic Pump LOW FLOW: ☒ YES ☐ NO
☒ Bladder Pump DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water level meter

3. WELL EVACUATION DATA

Well Depth (wd):	35.3	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	25.51	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			1.61	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	4.5	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter – 4.01, 7.00, 9.99	☒
Conductivity Meter – 1.14 mS/cm	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter – 96.9%	☒
ORP Meter – 240.0	☒
CO_2 –	☒

Time	15:15	15:20	15:25	15:30	15:35	15:40
Temp. °C	15.5	15.9	15.0	15.2	14.9	14.5
DO (mg/L)	9.13	9.17	9.40	8.78	9.20	9.17
Sp. Cond. (mS/cm)	0.248	0.252	0.255	0.257	0.256	0.256
pH	7.18	7.33	7.35	7.40	7.45	7.51
ORP (mV)	221.2	207.0	209.0	209.3	207.2	205.3
Turb. (NTU)	21.61	13.28	8.45	6.23	5.22	4.93
Water Level	25.55	25.55	25.55	25.55	25.55	25.55

5. Notes:
Start of Pumping: 1432 **Sample Time: 1545**

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 8 Sept. 2016
SAMPLED BY: Nelson/Layman **TIME: 1724**
WEATHER CONDITIONS: 80 °F, mostly cloudy, wind: 11 mph

Location: Fort Drum Fire Training Pit	**Sample ID: MW-4-Sept 2016 (VOCs)** **FDFT-MW 4-Sept 2016 (PFCs)**

PRESERVATIVE: HCl
ANALYSES REQUESTED: VOCs, PFCs
 # OF CONTAINERS: **2 (VOCs), 4 (PFCs)**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water level meter

3. WELL EVACUATION DATA

Well Depth (wd):	56.68	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	25.47	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			5.12	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	5.5	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter – 4.01, 7.00, 9.99	☒
Conductivity Meter – 1.14 mS/cm	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter – 96.9%	☒
ORP Meter – 240.0	☒
CO_2 –	☒

Time	16:52	16:57	17:02	17:07	17:12	17:17
Temp. °C	15.8	16.3	15.8	15.3	15.2	15.0
DO (mg/L)	9.93	10.55	10.24	10.78	10.77	10.68
Sp. Cond. (mS/cm)	0.088	0.088	0.088	0.088	0.088	0.087
pH	8.59	8.59	8.64	8.62	8.69	8.73
ORP (mV)	223.6	223.6	222.6	225.6	220.8	221.3
Turb. (NTU)	12.86	8.42	7.89	5.04	4.42	4.20
Water Level	25.53	25.53	25.53	25.53	25.53	25.53

5. Notes:
Start of Pumping: 1620 **Sample Time: 1724**

Water Supply Wells

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Ft. Drum
SAMPLED BY: Forbes & Webster
WEATHER CONDITIONS: In-doors

DATE: 2-Jun-2016
TIME : 920

Location: Ft. Drum, NY	**Sample ID: Well 7**

PRESERVATIVE: Tizma
ANALYSES REQUESTED: Method 537
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☐ Bladder Pump
LOW FLOW: ☐ YES ☒ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO permanent submersible.

2. WATER LEVEL DATA

MEASURING POINT: ☐ Top of casing ☐ Other:
METHOD OF MEASUREMENT: GW level not measured

3. WELL EVACUATION DATA

Well Depth (wd):		(ft)	Diameter (d):		(in)
Depth to Water (dw):		(ft)	Diameter (d):	0.000	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			0.00	(gallons)
	Flow Rate:	(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:	27	(minutes)	Purge Time:	920	
Amount Purged:	2000	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	947					
Temp. °C	10.9					
DO (mg/L)	3.72					
Sp. Cond. (mS/cm)	0.62					
pH	7.38					
ORP (mV)	115.8					
Turb. (NTU)	0					
Water Level	n/a					

5. Notes: Sample t=947. Sampled from bypass spigot inside pump house. Approximatley 5 gallons flushed through spigot prior to sampling.

	U.S. ARMY CORPS OF ENGINEERS **BALTIMORE DISTRICT** **GEOLOGY and HYDROGEOLOGY**	GROUNDWATER FIELD DATA LOG

1. CLIENT: Ft. Drum
SAMPLED BY: Forbes & Webster
WEATHER CONDITIONS: In-doors

DATE: 2-Jun-2016
TIME : 1020

Location: Ft. Drum, NY	**Sample ID: Well 11**

PRESERVATIVE: Trizma
ANALYSES REQUESTED: Method 537
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☐ Bladder Pump
LOW FLOW: ☐ YES ☒ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO permanent submersible.

2. WATER LEVEL DATA

MEASURING POINT: ☐ Top of casing ☐ Other:
METHOD OF MEASUREMENT: GW level not measured

3. WELL EVACUATION DATA

Well Depth (wd):		(ft)	Diameter (d):		(in)
Depth to Water (dw):		(ft)	Diameter (d):	0.000	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			0.00	(gallons)
	Flow Rate:	(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:	17	(minutes)	Purge Time:	1020	
Amount Purged:	2000	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	1037					
Temp. °C	11.4					
DO (mg/L)	3.32					
Sp. Cond. (mS/cm)	0.415					
pH	7.72					
ORP (mV)	-25.2					
Turb. (NTU)	2.2					
Water Level	n/a					

5. Notes: Sample t=1037. Sampled from bypass spigot inside pump house. Approximatley 5 gallons flushed through spigot prior to sampling.

FdqaszxaszGBHN JM BFABXSS888IO	**U.S. ARMY CORPS OF ENGINEERS** **BALTIMORE DISTRICT** **GEOLOGY and HYDROGEOLOGY**	GROUNDWATER FIELD DATA LOG

1. CLIENT: Ft. Drum **DATE:** 14-Apr-2016
SAMPLED BY: S. Forbes **TIME : 1400**
WEATHER CONDITIONS: 55F light breeze, clear

Location: Ft. Drum	**Sample ID: MW-13D-Apr-2016**

PRESERVATIVE: **HCL** _____
ANALYSES REQUESTED: 8260B
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	146	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	53.1	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			15.24	(gallons)
	Flow Rate:	(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	4	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	1612	1614	1616	1618	1620	
Temp. °C	11.3	11.4	11.7	11.3	11.7	
DO (mg/L)	3.4	3.2	3.1	3.1	3.0	
Sp. Cond. (mS/cm)	.245	.244	.243	.241	.242	
pH	9.72	9.61	9.64	9.59	9.59	
ORP (mV)	-22.7	-22.5	-29.8	-30.6	-35.7	
Turb. (NTU)	35.31	32.19	28.34	27.31	24.09	
Water Level	53.1	-	-	-	-	

5. Notes: Sample t= 1627

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Ft. Drum **DATE:** 13-Apr-2016
SAMPLED BY: S. Forbes **TIME : 1558**
WEATHER CONDITIONS: 40F light breeze, clear

Location: Ft. Drum	**Sample ID: MW-16D5-Apr-2016**

PRESERVATIVE: **HCL**
ANALYSES REQUESTED: 8260B
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	151.5	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	66.15	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			14.00	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	2.5	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	1723	1725	1727	1729	1731	
Temp. °C	9	9	9	9.1	9	
DO (mg/L)	2.64	2.66	2.66	2.66	2.68	
Sp. Cond. (mS/cm)	0.429	0.411	0.429	0.415	0.26	
pH	7.9	7.9	7.9	7.9	7.9	
ORP (mV)	-26.3	-26	-24.3	-23.3	-22.1	
Turb. (NTU)	14.2	11.9	10.4	10.1		
Water Level	66.15	-	-	-	-	

5. Notes: Sample t=1730

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Ft. Drum **DATE:** 13-Apr-2016
SAMPLED BY: S. Forbes **TIME : 1351**
WEATHER CONDITIONS: 50F light breeze, clear

Location: Ft. Drum	**Sample ID: MW-18D-Apr-2016**

PRESERVATIVE: **HCL**
ANALYSES REQUESTED: 8260B MS/MSD
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	174	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	64.75	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			17.92	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:	55	(minutes)	Purge Time:	1415	
Amount Purged:	1.5	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	1404	1406	1408	1410	1412	
Temp. °C	7.7	7.7	7.8	7.9	8	
DO (mg/L)	10.65	10.66	10.66	10.42	10.63	
Sp. Cond. (mS/cm)	1.94	1.93	1.94	1.94	1.94	
pH	7.4	7.4	7.42	7.41	7.44	
ORP (mV)	116.4	114.4	110.1	107.1	103.9	
Turb. (NTU)	106	40.0	38.55	40.0		
Water Level	64.75	-	-	-	-	

5. Notes: Sample t=1515

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Ft. Drum **DATE:** 14-Apr-2016
SAMPLED BY: S. Forbes **TIME : 1155**
WEATHER CONDITIONS: 40F light breeze, clear

Location: Ft. Drum	**Sample ID: MW-37-Apr-2016**

PRESERVATIVE: **HCL**
ANALYSES REQUESTED: 8260B
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	174.5	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	61.97	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			18.45	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	1.5	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	11:18:20	11:20:20	11:22:20	11:24:20	11:26:20	11:28:20
Temp. °C	9.5	9.6	9.6	9.8	9.8	9.9
DO (mg/L)	12.2	11.1	10.5	10.3	10.2	10.3
Sp. Cond. (mS/cm)	.299	.309	.295	.294	.303	.307
pH	7.83	7.78	7.77	7.76	7.77	7.76
ORP (mV)	66.4	66.7	64.8	63.3	60.5	59.1
Turb. (NTU)						
Water Level	7.58	5.0				

5. Notes: Sample t= 1225

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Ft. Drum **DATE:** 13-Apr-2016
SAMPLED BY: S. Forbes **TIME : 9:19**
WEATHER CONDITIONS: 45F light breeze, clear

Location: Ft. Drum	**Sample ID: OBS-1-Apr-2016**

PRESERVATIVE: **HCL**
ANALYSES REQUESTED: 8260B
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	48	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	41.63	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			1.04	(gallons)
	Flow Rate:	(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:	53	(minutes)	Purge Time:		
Amount Purged:	4.5	(gallons)	Pump Depth:	46	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	1008	1010	1012	1014	1016	
Temp. °C	9.2	9.2	9.3	9.2	9.2	
DO (mg/L)	10.27	10.17	10.22	10.16	10.28	
Sp. Cond. (mS/cm)	0.076	0.076	0.076	0.076	0.076	
pH	7.26	7.2	7.2	7.17	7.17	
ORP (mV)	122.5	123.7	121.7	121.6	120.0	
Turb. (NTU)	8.84		7.84		8.18	
Water Level	41.64	41.64	41.64	41.64	41.64	

5. Notes: Sample t= 10:20

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Ft. Drum **DATE:** 14-Apr-2016
SAMPLED BY: S. Forbes **TIME : 1000**
WEATHER CONDITIONS: 40F light breeze, clear

Location: Ft. Drum	**Sample ID: W9MW-04-Apr-2016**

PRESERVATIVE: **HCL**
ANALYSES REQUESTED: 8260B
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	164.05	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	59.69	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			17.12	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:	1007	
Amount Purged:	4	(gallons)	Pump Depth:	159	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	1043	1045	1047	1049	1051	
Temp. °C	9	9.1	8.9	8.8	9.4	
DO (mg/L)	4.58	4.67	4.72	4.71	4.37	
Sp. Cond. (mS/cm)	0.233	0.217	0.218	0.214	0.239	
pH	8.28	8.3	8.33	8.28	8.27	
ORP (mV)	60.2	58.9	57.8	60.4	61.5	
Turb. (NTU)	27.98	28.29	23.9	22.19	20.8	
Water Level	59.69	-	-	-	-	

5. Notes: Sample t= 1150

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Ft. Drum **DATE:** 14-Apr-2016
SAMPLED BY: S. Forbes **TIME : 818**
WEATHER CONDITIONS: 40F light breeze, clear

Location: Ft. Drum	**Sample ID: W9SentinelWell-Apr-2016**

PRESERVATIVE: **HCL** _____
ANALYSES REQUESTED: 8260B
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	174	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	59.7	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			18.75	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:	830	
Amount Purged:		(gallons)	Pump Depth:	100	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	910	912	914	916	918	
Temp. °C	9.3	9.0	9.1	9.1	9.2	
DO (mg/L)	.71	.72	.72	.75	.60	
Sp. Cond. (mS/cm)	.373	.350	.360	.370	.356	
pH	10.99	10.97	10.94	10.99	10.98	
ORP (mV)	37.3	36.3	34.3	31.0	26.8	
Turb. (NTU)	4.18	3.49	2.34			
Water Level						

5. Notes: Sample t= 925

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 12-April-2016
SAMPLED BY: Forbes **TIME : 1120**
WEATHER CONDITIONS: windy 40F, cloudy

Location: Ft. Drum, NY	**Sample ID: Well 14**

PRESERVATIVE: _____
ANALYSES REQUESTED: NY Part 5 and PFC
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☐ Bladder Pump
LOW FLOW: ☐ YES ☒ NO
DUPLICATE SAMPLE: ☐ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☐ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Not measured

3. WELL EVACUATION DATA

Well Depth (wd):	248	(ft)	Diameter (d):	8.00	(in)
Depth to Water (dw):	50	(ft)	Diameter (d):	0.667	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			519.55	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	1600	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	1220					
Temp. °C	9.5					
DO (mg/L)	3.22					
Sp. Cond. (mS/cm)	0.151					
pH	6.38					
ORP (mV)	168.1					
Turb. (NTU)	0.94					
Water Level	NA					

5. Notes: Well flushed through hydrant, used installed pump to purge well volume. Sample t = 1220

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 13-April-2016
SAMPLED BY: Forbes **TIME : 0900**
WEATHER CONDITIONS: light breeze 40F, clearf

Location: Ft. Drum, NY	**Sample ID: Well 15**

PRESERVATIVE: _____
ANALYSES REQUESTED: NY Part 5 and PFC
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☐ Bladder Pump
LOW FLOW: ☐ YES ☒ NO
DUPLICATE SAMPLE: ☐ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☐ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Not measured

3. WELL EVACUATION DATA

Well Depth (wd):	250	(ft)	Diameter (d):	8.00	(in)
Depth to Water (dw):	50	(ft)	Diameter (d):	0.667	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			524.80	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:	35	(minutes)	Purge Time:		
Amount Purged:	1600	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	0940					
Temp. °C	9.6					
DO (mg/L)	29.5					
Sp. Cond. (mS/cm)	0.193					
pH	8.55					
ORP (mV)	110.5					
Turb. (NTU)	0.50					
Water Level	NA					

5. Notes: Well flushed through hydrant, used installed pump to purge well volume. Sample t = 0940

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 13-April-2016
SAMPLED BY: Forbes **TIME : 1020**
WEATHER CONDITIONS: light breeze 50F, clearf

Location: Ft. Drum, NY	**Sample ID: Well 13**

PRESERVATIVE:
ANALYSES REQUESTED: NY Part 5 and PFC
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☐ Bladder Pump LOW FLOW: ☐ YES ☒ NO DUPLICATE SAMPLE: ☐ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☐ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Not measured

3. WELL EVACUATION DATA

Well Depth (wd):	249	(ft)	Diameter (d):	8.00	(in)
Depth to Water (dw):	50	(ft)	Diameter (d):	0.667	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			522.18	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:	30	(minutes)	Purge Time:		
Amount Purged:	1600	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	1055					
Temp. °C	10.5					
DO (mg/L)	14.7					
Sp. Cond. (mS/cm)	0.166					
pH	7.5					
ORP (mV)	26.8					
Turb. (NTU)	0.49					
Water Level	NA					

5. Notes: Well flushed through hydrant, used installed pump to purge well volume. Sample t = 1055

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 13-April-2016
SAMPLED BY: Forbes **TIME : 1112**
WEATHER CONDITIONS: light breeze 50F, clearf

Location: Ft. Drum, NY	**Sample ID: Well 17**

PRESERVATIVE:
ANALYSES REQUESTED: NY Part 5 and PFC
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☐ Bladder Pump
LOW FLOW: ☐ YES ☒ NO
DUPLICATE SAMPLE: ☐ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☐ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Not measured

3. WELL EVACUATION DATA

Well Depth (wd):	215.5	(ft)	Diameter (d):	8.00	(in)
Depth to Water (dw):	50	(ft)	Diameter (d):	0.667	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			434.27	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:	30	(minutes)	Purge Time:		
Amount Purged:	1600	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time						
Temp. °C	11.7					
DO (mg/L)	17.8					
Sp. Cond. (mS/cm)	0.156					
pH	7.58					
ORP (mV)	163.4					
Turb. (NTU)	1.34					
Water Level	NA					

5. Notes: Well flushed through hydrant, used installed pump to purge well volume. Sample t = not recorded in notes

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 12-April-2016
SAMPLED BY: Forbes **TIME : 1018**
WEATHER CONDITIONS: windy 40F, cloudy

Location: Ft. Drum, NY	**Sample ID: Well 18**

PRESERVATIVE: _____
ANALYSES REQUESTED: NY Part 5 and PFC
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☐ Bladder Pump LOW FLOW: ☐ YES ☒ NO DUPLICATE SAMPLE: ☐ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☐ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Not measured

3. WELL EVACUATION DATA

Well Depth (wd):	240	(ft)	Diameter (d):	8.00	(in)
Depth to Water (dw):	50	(ft)	Diameter (d):	0.667	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			498.56	(gallons)
	Flow Rate:	(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	2000	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☒
ORP Meter –	☒
CO_2 –	☐

Time	1100					
Temp. °C	9.6					
DO (mg/L)	2.75					
Sp. Cond. (mS/cm)	0.168					
pH	6.7					
ORP (mV)	149.3					
Turb. (NTU)	0.88					
Water Level	NA					

5. Notes: Well flushed through hydrant, used installed pump to purge well volume. Sample t = 1100

Old Sanitary Landfill

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 21-Jun-2016
SAMPLED BY: Forbes and Nelson **TIME : 840**
WEATHER CONDITIONS: 60F Partly cloudy and calm

Location: Ft. Drum Ny	**Sample ID: OSL-MW08-July2016**

PRESERVATIVE: Trisma
ANALYSES REQUESTED: Method 537
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☐ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	51	(ft)	Diameter (d):	4.00	(in)
Depth to Water (dw):	33.77	(ft)	Diameter (d):	0.333	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			11.30	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	4	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☐
ORP Meter –	☒
CO_2 –	☐

Time	903	905	907	909	911	
Temp. °C	12.8	12.7	12.9	12.7	12.9	
DO (mg/L)	9.96	10.62	11.16	13.16	14.55	
Sp. Cond. (mS/cm)	0.72	0.73	0.71	0.73	0.77	
pH	7.47	7.52	7.48	7.52	7.48	
ORP (mV)	212.7	210.8	212.1	210.4	212.4	
Turb. (NTU)	0.26	-	-	-	-	
Water Level	33.87	-	-	-	-	

5. Notes: Sample t = 920
Active construction area for road work. Dust being kicked up and fill be dumped next to well.

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 21-Jun-2016
SAMPLED BY: Forbes and Nelson **TIME : 1110**
WEATHER CONDITIONS: 85F Partly cloudy and breezy

Location: Ft. Drum Ny	**Sample ID: OSL-MW10-July2016**

PRESERVATIVE: Trisma
ANALYSES REQUESTED: Method 537
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☐ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	66	(ft)	Diameter (d):	4.00	(in)
Depth to Water (dw):	50.12	(ft)	Diameter (d):	0.333	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			10.42	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	5.754	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☐
ORP Meter –	☒
CO_2 –	☐

Time	1214	1219	1224	1229	1234	1239
Temp. °C	12.6	12.7	11.8	11.9	11.7	11.8
DO (mg/L)	2.89	3.01	3.1	3.04	3.06	2.94
Sp. Cond. (mS/cm)	0.89	0.89	0.88	0.88	0.88	0.88
pH	7.14	7.15	7.21	7.20	7.22	7.21
ORP (mV)	116.8	93.2	82.5	70.6	60.8	58
Turb. (NTU)	68.55	19.60	11.0	11.1	8.0	9.7
Water Level	50.23	-	-	-	-	

5. Notes: Sample t = 1240

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 21-Jun-2016
SAMPLED BY: Forbes and Nelson **TIME : 950**
WEATHER CONDITIONS: 70F Partly cloudy and calm

Location: Ft. Drum Ny	**Sample ID: OSL-MW10-July2016**

PRESERVATIVE: Trisma
ANALYSES REQUESTED: Method 537 MS/MSD
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☐ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	53.15	(ft)	Diameter (d):	4.00	(in)
Depth to Water (dw):	42.21	(ft)	Diameter (d):	0.333	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			7.18	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	4.5	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☐
ORP Meter –	☒
CO_2 –	☐

Time	1010	1015	1020	1025	1030	1035
Temp. °C	15.5	15	15.2	14.6	14.9	15
DO (mg/L)	2.61	1.07	0.94	0.88	1.39	0.91
Sp. Cond. (mS/cm)						
pH	7.32	7.32	7.33	7.38	7.31	7.36
ORP (mV)	-26.1	-46.3	-56.4	-63.4	-74.5	-74.1
Turb. (NTU)	23.28	11.87	8.97	7.08	6.2	4.63
Water Level	42.55	-	-	-	-	

5. Notes: Sample t = 1050

Airfield Sanitary Landfill

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 21-Jun-2016
SAMPLED BY: Forbes and Nelson **TIME : 1600**
WEATHER CONDITIONS: 88F Partly cloudy and windy

Location: Ft. Drum Ny	**Sample ID: ASL-MW12A-July2016**

PRESERVATIVE: Trisma
ANALYSES REQUESTED: Method 537
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☐ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	78	(ft)	Diameter (d):	4.00	(in)
Depth to Water (dw):	65.5	(ft)	Diameter (d):	0.333	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			8.20	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	3.5	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☐
ORP Meter –	☒
CO_2 –	☐

Time	1608	1613	1618	1623	1628	
Temp. °C	31.4	14.4	14.3	13.9	14.2	
DO (mg/L)	6.39	11.06	11.13	11.23	11.17	
Sp. Cond. (mS/cm)	.01	1.3	1.29	1.27	1.28	
pH	7.45	7.48	7.54	7.58	7.65	
ORP (mV)	217.7	226.8	213.3	203.7	194.4	
Turb. (NTU)	13.94	6.79	3.26	1.76	2.16	
Water Level	63.44	-	-	-	-	-

5. Notes: Sample t = 1630

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 21-Jun-2016
SAMPLED BY: Forbes and Nelson **TIME : 1440**
WEATHER CONDITIONS: 88F Partly cloudy and windy

Location: Ft. Drum Ny	**Sample ID: ASL-MW961-July2016**

PRESERVATIVE: Trisma
ANALYSES REQUESTED: Method 537
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☐ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	75	(ft)	Diameter (d):	4.00	(in)
Depth to Water (dw):	63.28	(ft)	Diameter (d):	0.333	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			7.69	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	2	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☐
ORP Meter –	☒
CO_2 –	☐

Time	1445	1450	1455	1500	1505	1510
Temp. °C	25.5	21.3	19.3	18.9	20.3	20
DO (mg/L)	6.28	11.39	6.24	6.25	6.54	6.28
Sp. Cond. (mS/cm)	0.01	0.67	0.65	0.65	0.68	0.67
pH	8.3	7.1	6.5	6.5	6.7	6.6
ORP (mV)	92	229.6	228.5	219.3	206.6	205.9
Turb. (NTU)	1.09	1.69	1.14			
Water Level	63.44	-	-	-	-	-

5. Notes: Sample t = 1515

	U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: USACE **DATE:** 21-Jun-2016
SAMPLED BY: Forbes and Nelson **TIME : 1335**
WEATHER CONDITIONS: 85F Partly cloudy and windy

Location: Ft. Drum Ny	**Sample ID: ASL-MW961-July2016**

PRESERVATIVE: Trisma
ANALYSES REQUESTED: Method 537
 # OF CONTAINERS:
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☐ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Electronic Water Meter

3. WELL EVACUATION DATA

Well Depth (wd):	86.6	(ft)	Diameter (d):	4.00	(in)
Depth to Water (dw):	74.31	(ft)	Diameter (d):	0.333	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			8.06	(gallons)
Flow Rate:		(ml/min)	Purge Vol:	0.0	(gallons)
Length of Time Purged:		(minutes)	Purge Time:		
Amount Purged:	2.5	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –	☒
Conductivity Meter –	☒
Temperature –	☒
Turbidity Meter –	☒
DO Meter –	☐
ORP Meter –	☒
CO_2 –	☐

Time	1353	1358	1403	1408	1413	1418
Temp. °C	14.4	13,9	14	13.7	14	13.7
DO (mg/L)	9.36	9.14	9.03	9.05	8.91	8.84
Sp. Cond. (mS/cm)	1.15	1.17	1.21	1.21	1.24	1.24
pH	7.51	7.63	7.71	7.78	7.79	7.81
ORP (mV)	99	112.6	116.4	117.7	120.8	122
Turb. (NTU)	4.39	3.45	12.99	2.60	2.43	3.55
Water Level	74.32	-	-	-	-	-

5. Notes: Sample t = 1425

APPENDIX E

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Class B Fire Suppression Foam Usage Survey Questions

If possible, please complete the fillable PDF survey available at:

http://www.dec.ny.gov/docs/remediation_hudson_pdf/survey2.pdf

Instructions: Please answer all questions with respect to the period of current ownership/operation. In the event information is available regarding prior owners or operators, include it in the responses.

Please return the completed survey (PDF file) via email to derweb@dec.ny.gov by **July 15, 2016**. Non-electronic responses must be mailed to the following address: Ted Bennett, NYSDEC, Division of Environmental Remediation, 625 Broadway (12th Floor), Albany, NY 12233-7012.

If you have any questions, contact Ted Bennett at (518) 402-9764 or by email at theodore.bennett@dec.ny.gov

1. Facility Name: Fort Drum - Environmental Compliance Branch
2. Facility Address: 4896 Nininger St

   City/Town: Fort Drum

   State: New York

   Zip Code: 13602-5097
3. Period of Facility Ownership: 1940s to present
4. Period of Facility Operation or Control: 1940s to present
5. Identities of Prior Facility Owners and Operators (to the extent available to current Owner/Operator): NA
6. Is any Class B fire suppression foam currently stored and/or used at the Facility? (•) Yes ( ) No

   If yes, please provide all known information about the type of Class B fire suppression foam currently stored and/or used, including:

   a. Date of purchase: 2005/2006/2011/2016
   b. Manufacturer and type of Class B fire suppression foam stored: 1. National Foam Aer-O-Water 3% AFFF; 2
   c. Quantity of Class B fire suppression foam stored: 10,316 gallons or 87,857 lbs
   d. % PFOS/A concentrate: Varies by product. See attached spreadsheet.
   e. Method of storage: 55 gallon drums, tanks, fire crash trucks
   f. Other relevant information: See attached spreadsheet of Class B foam inventory

7. Has any Class B fire suppression foam ever been stored and/or used at the Facility? (•) Yes ( ) No ( ) Unknown

   If yes, please note:

   a. Dates of storage: Last several decades
   b. Manufacturer and type of Class B fire suppression foam stored: Multiple types and formulations of AFFF were
   c. Quantity of Class B fire suppression foam stored: Storage quantity's were less histo
   d. % PFOS/A concentrate: unknown/various
   e. Method of storage: Tanks, 55-gallon drums, emergency response vehicles
   f. Other relevant information: Since 2011, six (6) aircraft hangers were converted from AFFF to high

8. Has Class B fire suppression foam ever been used for training purposes at the Facility? (•) Yes ( ) No ( ) Unknown

   If yes, please note:

   a. Dates and frequency of training: Monthly functional tests at fire training pit plus periodic training
      i. If exact information is not available, please provide an estimate:
         1. 1-10 times over 10 years ( )
         2. 11-50 times over 10 years ( )
         3. 50 or more times over 10 years (•)
   b. Manufacturer and type of Class B fire suppression foam used in training: National Foam Aer-O-Water/Lite 3% and others
   c. Quantity of Class B fire suppression foam used in training: Approximately 100 gallons or 835
   d. Other relevant information: Used for fire fighting training certification

9. Has Class B fire suppression foam ever been used for firefighting or other emergency response purposes at the Facility? (•) Yes ( ) No ( ) Unknown

   If yes, please note:

   a. Date of emergency response: 2002
      i. If exact information is not available, please provide an estimate:
         1. 1-10 times over 10 years (•)
         2. 11-50 times over 10 years ( )
         3. 50 or more times over 10 years ( )
   b. Manufacturer and type of Class B fire suppression foam used in firefighting or emergency response: National Foam or Ansul AFFF 3%
   c. Quantity of Class B fire suppression foam used in firefighting and emergency response: 400 gallons or 3340 lbs
   d. Other relevant information: Used to extinguish rubber backdrop on firing Range 8

10. Has the Facility ever experienced a spill or leak of Class B fire suppression foam? (●) Yes ( ) No ( ) Unknown

If yes, please note:

a. Date of spill/leak: 1987-present; exact dates unknown
   i. If exact information is not available, please provide an estimate:
      1. 1-10 times over 10 years (●)
      2. 11-50 times over 10 years ( )
      3. 50 or more times over 10 years ( )
b. Manufacturer and type of Class B fire suppression foam spilled/leaked: SEE 10.d.
c. Quantity of Class B fire suppression foam spilled/leaked: SEE 10.d.
d. Other relevant information: National Foam Aer-O-Water/Lite 3% unknown quantity of drips in piping inside buildings repaired over several years

11. Has your Facility ever been responsible for the use of Class B fire suppression foam at a location other than the Facility (i.e. offsite training, emergency response, or spill)? (●) Yes ( ) No ( ) Unknown

If yes, please note:

a. Date of each offsite use: 5/11/2001 and 7/30/2012
   i. If exact information is not available, please provide an estimate:
      1. 1-10 times over 10 years (●)
      2. 11-50 times over 10 years ( )
      3. 50 or more times over 10 years ( )
b. Manufacturer and type of Class B fire suppression foam used: National Foam or Ansul AFFF 3%
c. Quantity of Class B fire suppression foam: 2001-800 gals, 2012-10 gals
d. Other relevant information: 2001 - tractor trailer rollover (Rt 342/Rt11)
2012 - brake fire on Rt. 81 in Watertown

☐ **Upon completing the survey you must place an "✓" in this box to certify the following:**

Certification. I certify that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Name of person who completed and submitted responses to Survey (the legal owner, operator, or their representative authorized to complete and submit Survey)

BRYAN J. LASKEY, Garrison Commander

Name and Official Title

4896 Nininger Street, Fort Drum NY 13602-5097

Address

(315) 772-5269

Telephone Number

james.m.miler352.civ@mail.mil

E-mail Address

Date Certified or Signed

Clear Form

10TH MTN DIV (LI) & FORT DRUM ROUTING SLIP

For use of this form, see 10th Mtn Div & Fort Drum Pam 5-1. The proponent is the SGS.

SUBJECT:	DATE:	OFFICE:	POC / POC #:	EMAIL:
Class B Foam Survey for NYSDEC	11 July 2016	IMDR-PWE	James Miller 772-5269	james.m.miller352.civ@mail.mil

TO:	ACTION / INFO	INITIAL / DATE	COMMENTS
aSC			
aCofS			
aDCofS			
aDCSM			
GC	6		
DGC	5		
GCSM			
GXO			
SGS			
G1			
G2			
G3			
G4			
G5			
G6			
G8			
G9			
DIV CHAP			
DIV SURG			
EO			
FIRES			
IG			
KM			
PAO			
PMO			
SAFETY			
SHARP			
SJA	4		
HHBN			
1BCT			
2BCT			
3BCT			
DIVARTY			
10CAB			
10SBDE			
20ASOS			
AFSBN			
CID			
DENTAC			
MEDDAC			
CPAC			
DES	3		
DHR			
DPTMS			
DPW	2		
DRM			
EEO			
FMWR			
INST CHAP			
IR			
LRC			
MICC			
NEC			
PAI			
PROTOCOL			
SGS ADMIN			
PW Secretary	1,7		

REMARKS:

1. PURPOSE. To obtain the Garrison Commander's signature on the attached firefighting foam usage survey from the New York State Department of Euvironmental Conservation (NYSDEC). The survey was due to the NYSDEC by 15 July 2016 with a 30 day extensiou request granted on 7/13/2016.

2. BACKGROUND

a. In January 2016, New York State passed emergency regulations adding perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) to the state's hazardous substance list. PFOA/PFOS (PFOA/S) are ingredients in certain firefighting foams.

b. The five key aspects of the emergency regulation are: (i) registration of certain PFOA/S containing tanks; (ii) reporting of certain PFOA/S releases; (iii) replacement of certain PFOA/S systems by April, 2017; (iv) the state-wide ban on the discharge of all Class B foams for training regardless of PFOS concentration; and (v) soil and groundwater clean-up obligations where PFOA/S releases have occurred.

c. Firefighting foams at Fort Drum are present in emergency response vehicles, in fixed fire suppression systems, and drum storage areas. The Directorate of Public Works (DPW) evaluated each storage area (enclosure 1) for compliance with the emergency regulation. Based on the low PFOA/S concentrations present at all locations, the registration, reporting, and system replacement mandates of the regulation are not triggered.

d. The NYSDEC prohibition on the use of class B foams for training purposes (as opposed to an actual emergency) will adversely impact the Directorate of Emergency Services (DES). Additionally, the ACSIM issued a policy directive prohibiting all non-emergency discharges of Aqueous Film Forming Foam (AFFF) effective 29 June 2016. The NYSDEC/ACSIM directives are applicable to the AFFF foam currently used in DES Fire Fighting Vehicles. While it is not expected that one time release of the AFFF type currently used by DES is likely to cause contamination, repeated application duriug training or equipment testing (on or off post) could.

e. Legacy AFFF formulations used on FD are suspected to have contained PFOA/S. The cost of studies and clean-up obligations due to PFOA/S contamination could reach several 100's of thousands of dollars or more. Ground water contamination exceeding health advisory (HA) levels continues to be detected in the aquifer near the fire training pit.

3. RECOMMENDATION: Recommend that the Garrison Commander sign the attached (enclosure 2) survey.

Kurt W. Hauk
Public Works
Director

APPENDIX F

PHOTOS

Laundry Pad 1

Figure 8 - Laundry Pad 1

Figure 9 - Laundry Pad 1 Looking Toward Leachate Field

Figure 10 - Laundry Pad 1 Sump

LAUNDRY PAD 2

Figure 11 - Laundry Pad 2

Figure 12 - Laundry Pad 2 Looking in from Leachate Field

Figure 13 - Laundry Pad 2 Sump

Figure 14 - Laundry Pad 3

Figure 15 - Laundry Pad 3 Looking in From Leachate Field

Figure 16 Laundry Pad 3 Sump 2 Center of Pad

Figure 17 - Laundry Pad 3 Sump 1

Boring Logs

Hole No. SB-1-Drain

DRILLING LOG

DIVISION: North Atlantic Division

INSTALLATION: Fort Drum

SHEET 1 OF 1 SHEETS

1. PROJECT: Shower Points: Soil Borings and Sampling
2. BORING LOCATION (Coordinates or Station):
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Kaitlyn Nelson
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 8.0 ft
10. SIZE AND TYPE OF BIT: 3.25" OD hollow stem auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-55 Yellow, continuous flight hollow-stem auger
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 5; UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/1/16 0000; COMPLETED 11/1/16 0000
17. ELEVATION TOP OF HOLE:
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		TOPSOIL, FILL.		SPT	4-6-8-8		2.0	100%		
	2.0		GRAVELLY, SANDY FILL.		SPT	9-12-12-16		2.0	100%		
	4.0		GRAVELLY, SANDY FILL.		SPT	8-13-17-18		1.7	100%		
	5.7		SILTY SAND (SM).	SB-1-Drain	SPT	8-13-17-18		0.3	100%		
	6.0		POORLY GRADED SAND (SP), trace clay lenses, trace silt lenses.	SB-1-Drain	SPT	7-12-13-12		2.0	100%		
			BOTTOM OF HOLE								

Notes:

A Schonstedt Multi-Frequency Pipe & Cable Locator was used to determine the borehole location.

Sampled using a standard 1 3" split spoon driven automatically by a 140 lb. hammer dropped 30".

Soils are field visually classified in accordance with the Unified Soils Classification System.

Soil samples will be analyzed for PFCs via method 537 as well as, VOCs, SVOCs and Metals via methods 8260-C, 8270 and 3050B, respectively.

NAB 1836 LETTER SHOWER POINTS SITES SOIL BORINGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 11/9/16

DRILLING LOG

DIVISION: North Atlantic Division

INSTALLATION: Fort Drum

SHEET 1 OF 1 SHEETS

1. PROJECT: Shower Points: Soil Borings and Sampling
2. BORING LOCATION (Coordinates or Station):
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Kaitlyn Nelson
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 4.0 ft
10. SIZE AND TYPE OF BIT: 3.25" OD hollow stem auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-55 Yellow, continuous flight hollow-stem auger
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 2; UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/1/16 0000; COMPLETED 11/1/16 0000
17. ELEVATION TOP OF HOLE:
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		OPEN HOLE.								
	2.0		SILTY SAND (SM), fine, subangular to subrounded; blackish brown, very moist, trace organics, trace gravel, trace rootlets.	SB-1-Sump	SPT	6-5-5-5		0.7	100%		
	2.7		POORLY GRADED SAND (SP), fine, subangular to subrounded; brown, very moist, trace silt.	SB-1-Sump	SPT	6-5-5-5		0.5	38%		
			BOTTOM OF HOLE								

Notes:

Depth of sump measured from 0-2 ft bgs.

Sampled using a standard 1 3" split spoon driven automatically by a 140 lb. hammer dropped 30".

Soils are field visually classified in accordance with the Unified Soils Classification System.

Soil samples will be analyzed for PFCs via method 537 as well as, VOCs, SVOCs and Metals via methods 8260-C, 8270 and 3050B, respectively.

Hole No. SB-2-Drain

DRILLING LOG	DIVISION: North Atlantic Division	INSTALLATION: Fort Drum	SHEET 1 OF 1 SHEETS

1. PROJECT: Shower Points: Soil Borings and Sampling
2. BORING LOCATION (Coordinates or Station):
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Kaitlyn Nelson
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 6.5 ft
10. SIZE AND TYPE OF BIT: 3.25" OD hollow stem auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-55 Yellow, continuous flight hollow-stem auger
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 2; UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/2/16 0000; COMPLETED 11/2/16 0000
17. ELEVATION TOP OF HOLE:
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		FILL.								
	4.5		POORLY GRADED SAND (SP), fine to medium, subangular to subrounded; yellowish red, wet, loose, iron oxide staining.	SB-2-Drain	SPT	4-6-6-6		0.5	100%		
	5.0		LEAN CLAY (CL), gray, medium stiff, trace silt.	SB-2-Drain	SPT	4-6-6-6		0.7	47%		
			BOTTOM OF HOLE								

Notes:

A Schonstedt Multi-Frequency Pipe & Cable Locator was used to determine the borehole location.

Sampled using a standard 1 3" split spoon driven automatically by a 140 lb. hammer dropped 30".

Soils are field visually classified in accordance with the Unified Soils Classification System.

Soil samples will be analyzed for PFCs via method 537 as well as, VOCs, SVOCs and Metals via methods 8260-C, 8270 and 3050B, respectively.

NAB 1836 LETTER SHOWER POINTS SITES SOIL BORINGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 11/9/16

DRILLING LOG

DIVISION: North Atlantic Division

INSTALLATION: Fort Drum

SHEET 1 OF 1 SHEETS

1. PROJECT: Shower Points: Soil Borings and Sampling
2. BORING LOCATION (Coordinates or Station):
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Kaitlyn Nelson
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 3.3 ft
10. SIZE AND TYPE OF BIT: 3.25" OD hollow stem auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-55 Yellow, continuous flight hollow-stem auger
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 2 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/2/16 0000 COMPLETED 11/2/16 0000
17. ELEVATION TOP OF HOLE:
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		OPEN HOLE.								
	1.3		SILTY SAND (SM), brownish black, trace organics, trace roots, trace gravel.	SB-2-Sump	SPT	WOH-5-1-1		0.5	100%		
	1.8		POORLY GRADED SAND (SP), fine, subangular to subrounded; yellowish red, very moist, loose, iron oxide staining.	SB-2-Sump	SPT	WOH-5-1-1		0.6	40%		
			BOTTOM OF HOLE								

Notes:

Depth of sump measured from 0-1.3 ft bgs.

Sampled using a standard 1 3" split spoon driven automatically by a 140 lb. hammer dropped 30".

Soils are field visually classified in accordance with the Unified Soils Classification System.

Soil samples will be analyzed for PFCs via method 537 as well as, VOCs, SVOCs and Metals via methods 8260-C, 8270 and 3050B, respectively.

NAB 1836 LETTER SHOWER POINTS SITES SOIL BORINGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 11/9/16

DRILLING LOG

DIVISION: North Atlantic Division

INSTALLATION: Fort Drum

SHEET 1 OF 1 SHEETS

1. PROJECT: Shower Points: Soil Borings and Sampling
2. BORING LOCATION (Coordinates or Station):
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Kaitlyn Nelson
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 4.5 ft
10. SIZE AND TYPE OF BIT: 3.25" OD hollow stem auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-750
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 1; UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/2/16 0000; COMPLETED 11/2/16 0000
17. ELEVATION TOP OF HOLE:
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		GRAVELLY, SANDY FILL.								
	2.5		POORLY GRADED SAND (SP), fine to medium, subangular to subrounded; tannish brown, slightly moist, loose.								
	3.5		Fine; trace silt, trace, iron oxide staining, contains one large iron concretion.	SB-3-Drain	SPT	6-10-8-9		1.7	85%		
			BOTTOM OF HOLE								

Notes:

A Schonstedt Multi-Frequency Pipe & Cable Locator was used to determine the borehole location.

Sampled using a standard 1 3" split spoon driven automatically by a 140 lb. hammer dropped 30".

Soils are field visually classified in accordance with the Unified Soils Classification System.

Soil samples will be analyzed for PFCs via method 537 as well as, VOCs, SVOCs and Metals via methods 8260-C, 8270 and 3050B, respectively.

NAB 1836 LETTER SHOWER POINTS SITES SOIL BORINGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 11/9/16

DRILLING LOG

DIVISION: North Atlantic Division

INSTALLATION: Fort Drum

SHEET 1 OF 1 SHEETS

1. PROJECT: Shower Points: Soil Borings and Sampling
2. BORING LOCATION (Coordinates or Station):
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Kaitlyn Nelson
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 4.5 ft
10. SIZE AND TYPE OF BIT: 3.25" OD hollow stem auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-750
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 1; UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/2/16 0000; COMPLETED 11/2/16 0000
17. ELEVATION TOP OF HOLE:
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		OPEN HOLE.								
	0.5		NR.					0.0	0%		
	2.5		POORLY GRADED SAND (SP), fine, subangular to subrounded; yellowish brown, slightly moist, loose, trace silt.	SB-3-Sump-A	SPT	4-4-5-5		2.0	100%		
			BOTTOM OF HOLE								

Notes:

Depth of sump measured from 0-0.5 ft bgs.

Sampled using a standard 1 3" split spoon driven automatically by a 140 lb. hammer dropped 30".

Soils are field visually classified in accordance with the Unified Soils Classification System.

Soil samples will be analyzed for PFCs via method 537 as well as, VOCs, SVOCs and Metals via methods 8260-C, 8270 and 3050B, respectively.

NAB 1836 LETTER SHOWER POINTS SITES SOIL BORINGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 11/9/16

DRILLING LOG

DIVISION: North Atlantic Division

INSTALLATION: Fort Drum

SHEET 1 OF 1 SHEETS

1. PROJECT: Shower Points: Soil Borings and Sampling
2. BORING LOCATION (Coordinates or Station):
3. DRILLING AGENCY: USACE, Baltimore District
4. NAME OF DRILLER: Justin Blackson
5. NAME OF INSPECTOR: Kaitlyn Nelson
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED --- DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN:
8. DEPTH DRILLED INTO ROCK:
9. TOTAL DEPTH OF HOLE: 3.0 ft
10. SIZE AND TYPE OF BIT: 3.25" OD hollow stem auger
11a. VERTICAL DATUM:
11b. HORIZONTAL DATUM:
12. MANUFACTURER'S DESIGNATION OF DRILL: CME-750
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 1 UNDISTURBED 0
14. TOTAL # OF CORE BOXES: 0
15. ELEVATION GROUND WATER:
16. DATE/TIME: STARTED 11/2/16 0000 COMPLETED 11/2/16 0000
17. ELEVATION TOP OF HOLE:
18. TOTAL ROCK CORE RECOVERY FOR BORING: N/A
19. SIGNATURE OF INSPECTOR:

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SAMPLE/ BOX	SPT/ AB/ CR	Blows/ 0.5 ft	PP/ tsf	Length REC. (ft)	% REC.	RQD	Length RQD (in)
	0.0		OPEN HOLE.								
	2.0		POORLY GRADED SAND (SP), fine, subangular to subrounded; brown with blackish brown, slightly moist, loose, trace silt, trace clay, trace organics, 'burnt' blackish staining.	SB-3-Sump B	SPT	7-21		0.7	70%		
			BOTTOM OF HOLE Notes: Depth of sump measured from 0-2 ft bgs. Sampled using a standard 1 3" split spoon driven automatically by a 140 lb. hammer dropped 30". Soils are field visually classified in accordance with the Unified Soils Classification System. Soil samples will be analyzed for PFCs via method 537 as well as, VOCs, SVOCs and Metals via methods 8260-C, 8270 and 3050B, respectively.								

NAB 1836 LETTER SHOWER POINTS SITES SOIL BORINGS.GPJ ACE MVD WITH RAPID CPT 2009_03_02.GDT 11/9/16

Appendix G

Fire Fighting Foam Compliance Storyboard

Foam Storage as of 7/12/2016	Chemical Bulk Storage (CBS) Registration Determination *					Hazardous Subtance Reporting Determination		Release Prohibition and Phase-Out Determination		Training & Testing Release Prohibitions		General PFC Considerations
	Gallons of Liquid Concentrate	Container Type	Foam Manufacturer & Name	Percent (by volume) of the four regulated PFOA/S Hazardous Substances in the Liquid Concentrate	Does the container require CBC Registration by April 2016 due to PFOA/S? (Yes/No)	Pounds of PFOA/S Released in the event of 100% discharge from the container	Would a full container discharge exceed the 1 lb Reportable Quantity (RQ) for PFOA/S? (Y/N)	Will more than one pound of PFOA/S be discharged when the fire suppression system or emergency response vehicle is used? ***	Is the fixed or mobile fire suppression system required to be be replaced by DEC's April 25, 2017 deadline? (Y/N) ***	Is the foam subject to NYSDEC request to discontinue use of **ANY** Class B fire fighting foam for training purposes due to potential environmental and human health effects? (Yes/No)	Is the foam subject to ACSIM request to discontinue use of **AFFF** for training purposes ? (Yes/No)	Other than PFOA/S, should the foam be expected to have any other Perfluorinated Chemicals (PFCs), Fluroalkyl surfactants, etc. including the short chain less toxic PFC compounds with C6 telomer chemisty? (Yes/No)
Hanger 2072 Fixed Fire Suppression System	2,600	Stationary tank	National Foam, Inc. Aer-O-Water 3% Aqueous Film Forming Foam (AFFF)	less than 0.0001 %	No	Less than 0.022	No	No	No	YES	YES	YES
Hanger 2072 Drum Storage	220	4-55 gallon drums	National Foam, Inc. Aer-O-Water 3% Aqueous Film Forming Foam (AFFF)	less than 0.0001 %	No	Less than 0.002	No	No	No	YES	YES	YES
Building 19855 Fixed Fire Suppresion System	300	Stationary tank	National Foam, Inc. Aer-O-Water 3% Aqueous Film Forming Foam (AFFF)	less than 0.0001 %	No	Less than 0.003	No	No	No	YES	YES	YES
Hanger 2049 Fixed Fire Suppresion System	400	Stationary tank	ANSUL Jet-X 2%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 2050 Fixed Fire Suppresion System	200	Stationary tank	ANSUL Jet-X 2%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 2060 Fixed Fire Suppresion System	500	Stationary tank	ANSUL Jet-X 2%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 2060 Drum Storage	110	2-55 gallon drums	ANSUL Jet-X 2%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 2070 Fixed Fire Suppression System	700	Stationary tank	ANSUL Jet-X 2%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 2070 Drum Storage	110	2-55 gallon drums	ANSUL Jet-X 2%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 2074 Fixed Fire Suppresion System **	600	Stationary tank	ANSUL Jet-X 2%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 2074 Drum Storage	660	12-55 gallon drums	ANSUL Jet-X 2%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 19710 Fixed Fire Suppresion System	700	Stationary tank	ANSUL Jet-X 2%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 20470 Fixed Fire Suppresion System AF Gray Eagle Hanger	200	Stationary tank	ANSUL Jet-X 2 3/4%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 20470 Drum Storage	55	1-55 gallon drum	ANSUL Jet-X 2 3/4%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 20471 Fixed Fire Suppresion System AF Gray Eagle Hanger	200	Stationary tank	ANSUL Jet-X 2 3/4%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
Hanger 20471 Drum Storage	65	2-55 gallon drums	ANSUL Jet-X 2 3/4%, High Expansion Foam Concentrate)	0%	No	0	No	No	No	Not Applicable	NO	NO
DES Crash Truck # 1	390	Non-Stationary device	Likely Ansul 3%AFFF	less than 0.0001 %	No	less than 0.003	No	No	No	YES	YES	YES
DES Crash Truck # 2	390	Non-Stationary device	Likely Ansul 3%AFFF	less than 0.0001 %	No	less than 0.003	No	No	No	YES	YES	YES
DES Crash Truck # 3	390	Non-Stationary device	Likely Ansul 3%AFFF	less than 0.0001 %	No	less than 0.003	No	No	No	YES	YES	YES
DES Crash Truck # 4	400	Non-Stationary device	Chemguard- 3% AFFF C301MS	less than 0.0001 %	No	less than 0.003	No	No	No	YES	YES	YES
DES Crash Truck # 5	130	Non-Stationary device	Likely Ansul 3%AFFF	less than 0.0001 %	No	less than 0.001	No	No	No	YES	YES	YES
DES Trailer	1000	Non-Stationary device	Chemguard- 3% AFFF C301MS	less than 0.0001 %	No	less than 0.009	No	No	No	YES	YES	YES

***** **CBS registration is required only if the concentration of PFOA/S exceeds 1% or more by volume of one or more of the PFOA/S hazardous substances AND the stationary device stores more than 185 gallons (or 2,200 lbs in a non-stationary device).**

****** **The Hanger 2074 stationary tank is currently empty.**

******* **In accordance with NYSDEC's emergency rule, replacement foam may not contain a hazardous substance at a concentration that would release more than one pound when used. The foams currently in place are therefore considered regulatory compliant since there "use" would not exceed 1 pound.**