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Letter of Transmittal

Attention:	Mr. David J Haas, P.G. Wastewater Specialist WDNR 2984 Shawano Ave Green Bay, WI 54313	Date:	6/6/19
Project reference:	Former Newton Pit BRRTS No. 02-36-000268	Project number:	60135471

We are sending you the following:

Number of originals:	Number of copies:	Description:
One	Zero	WPDES Reporting, September 2017 through May 2019

Mr. Haas,

Attached is the WPDES Reporting, September 2017 through May 2019 letter report for the Former Town of Newton Gravel Pit, Manitowoc Wisconsin.

I will also submit the report through the WDNR's electronic submittal system.

Please let me know if you have any questions.

Thank you.

D.S. Henderson

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Cc: Kathleen M. McDaniel, City Attorney, City of Manitowoc
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June 6, 2019

Mr. David J Haas, P.G.
Wastewater Specialist
WDNR
2984 Shawano Ave
Green Bay, WI 54313

WPDES Reporting, September 2017 through May 2019
WPDES General Permit for Contaminated Groundwater from Remedial Action Operations
WPDES Permit No. WI-0046566-07-0
Permittee Name: City of Manitowoc
Site Name: Former Town of Newton Gravel Pit, Outfall 001
Site Address: 3130 Hecker Road, Manitowoc, Wisconsin
Site ID (FIN): 60047
BRRTS No. 02-36-000268, DNR Facility ID #: 436104020
AECOM Project No. 601354714(82518)

Dear Mr. Haas,

AECOM Technical Services, Inc (AECOM), on the behalf of the City of Manitowoc (City), is pleased to submit this first annual Wisconsin Pollutant Discharge Elimination System (WPDES) monitoring letter report for the Former Town of Newton Gravel Pit site, 3130 Hecker Road, Manitowoc Wisconsin. The report covers the period from September 2017, when construction of the treatment system was considered substantially complete, through May 2019. During this period AECOM has conducted periodic monitoring of the system, but no discharges to surface waters have occurred.

Presented below is site information, a permit background review, treatment system information, monitoring results, along with conclusions and recommendations.

Site Information

The Former Town of Newton Gravel Pit site is a 58-acre property located at 3130 Hecker Road in the Town of Newton, Manitowoc County Wisconsin (See Figure 1). The property is owned by the City of Manitowoc. Approximately one acre along the western property boundary (i.e. the Western Source Area) was the location of a disposal pit that received industrial wastes during the 1960s and early 1970s. Approximately 0.2 miles to the east-southeast of the Western Source Area, a small creek (Silver Creek) flows through the property (See Figure 2).

In 2017 remedial actions implemented at the site included construction of a landfill style surface cap to address soil and vadose zone impacts at the Western Source Area, and an engineered groundwater treatment pond to address groundwater impacts within the Groundwater Treatment Area[1], directly down-gradient of the Western Source Area. The contaminants of concern (COCs) within the Groundwater Treatment Area are principally volatile organic compounds (VOCs).

In 2018 the engineered groundwater treatment pond was augmented by the construction of a phytoremediation plot by the U.S. Forest Service Northern Research Station, Institute for Applied Ecosystem Studies located in Rhinelander, Wisconsin. The phytoremediation work included the planting of 348 poplar trees in a study plot immediately down gradient from the treatment pond and 2,748 willow bushes around the perimeter of the pond.

[1] Revised Remedial Action Options Report & Conceptual Design Report, Former Town of Newton Gravel Pit, BRRTS No. 02-36-000268, AECOM Project No: 60135471(82518), June 12, 2017.

In July 2018, at the request of the Wisconsin Department of Natural Resources (WDNR), AECOM conducted a limited on-site groundwater assessment for the emerging contaminant per- and polyfluoroalkyl substances (PFAS). Laboratory analytical results from the July sampling event indicated that PFAS, including Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) compounds, are present in the groundwater beneath the site. PFAS investigation activities are on-going, including the limited sampling of the treatment pond as reported herein.

Permit Background

Discharge Monitoring Plan

AECOM, on behalf of the City, submitted a WPDES request for coverage[2], including a Discharge Monitoring Plan, to the WDNR, Bureau of Water Quality, Wastewater Section, Green Bay Service Center in January 2017. In conjunction with the request for coverage, AECOM submitted treatment system plans and specifications for review and approval by the WDNR Bureau of Water Quality, Wastewater Section, Central Office in Madison. Approval of the plans and specifications was received on June 19, 2017 and approval of the WPDES General Permit for Contaminated Groundwater from Remedial Action Operations, Permit No. WI-0046566-6, was received on June 22, 2017.

The Discharge Monitoring Plan, Section 1.4 *Contaminants Proposed for Periodic Monitoring*, included the following sampling protocol:

> Pre-Discharge Monitoring:
>
> At substantial completion, the pond will be allowed to mix for a minimum of one week prior to a pre-discharge monitoring event.
>
> The proposed pre-discharge sampling location is at the pond entrance to the discharge channel at approximately the midpoint of the channel. The sample will be obtained with a typical groundwater sampling bailer to sample the discharge channel water column.
>
> Weekly pond samples will be collected until two consecutive samples meet the discharge requirements of the permit. At that time, the valve will be opened and discharge to Silver Creek will begin. Periodic monitoring under the permit will commence at that time per the criteria outlined below.
>
> Discharge Monitoring:
>
> Initial periodic monitoring of the discharge will include those parameters listed in Tables 3.1 and 4.1 of the WPDES General Permit. The initial monitoring period shall consist of the first six weeks of discharge. After the sixth week, the monitoring frequency will be reduced to monthly and consist of those contaminants detected during the initial monitoring period. After one year of monitoring, if no analysis results exceed 60% of any discharge limitation, the City of Manitowoc will request a reduction in the monitoring frequency to monthly per Section 2.5 of the WPDES permit.
>
> Flow measurements will be collected during each sampling event based on calibrated flow over the discharge weir. An average flow rate based on the recorded measurements will be reported during the Discharge Monitoring Reporting process.

During the WPDES permit application period AECOM, in communication with the WDNR Wastewater Program[3], agreed to provide the pre-discharge monitoring results to the WDNR for review prior to beginning discharges to Silver Creek.

[2] *Request for Coverage under Wisconsin Pollutant Discharge Elimination System Wastewater Discharge Permit (WI-0046566-06) for Contaminated Groundwater from Remedial Action Operations*, Former Town of Newton Gravel Pit Project, BRRTS #: 02-36-000268, DNR Facility ID #: 436104020, AECOM dated January 3, 2017

[3] Mr. David J Haas, P.G., Wastewater Specialist, WDNR, personal communication January 13, 2017

On June 29, 2018, the City received reissuance of the WPDES general permit, Permit No. WI-0046566-07-0, with an expiration date of June 30, 2023. The new permit includes the requirement for the electronic submittal of discharge monitoring reports (eDMRs).

On November 8, 2018, the City received and email[4] reminder for the submittal of electronic DMRs (eDMRs) from the WDNR's Wastewater Program. AECOM's reply, on behalf of the City, explained the monitoring plan as it was being implemented, introduced the possibility that emerging contaminants may be present in the pond, described our informal agreement with the WDNR Remediation and Redevelopment Program to not begin pond discharges due to the possible presence of emerging contaminants, and confirmed our submittal of an annual monitoring report. The WDNR Wastewater Program acknowledged our situation and approved our approach to permit reporting[5].

Therefore, based upon the approved Discharge Monitoring Plan and our follow-up communications with the WDNR, the initial permit reporting requirements include the transmittal of our pre-discharge sampling results to Mr. David Haas, DNR Bureau of Water Quality, Wastewater Section, Green Bay Service Center, for review prior to discharging to Silver Creek. Additionally, notification must be made to the WDNR wastewater program when we begin discharging, which will trigger the requirement to begin submitting eDMRs.

Emerging Contaminants

As an emerging class of contaminants, to date, the U.S. Environmental Protection Agency (EPA) has not determined ambient water quality standards for PFAS under the National Pollutant Discharge Elimination System (NPDES) of the Clean Water Act. Similarly, Wisconsin's WPDES permits do not currently included PFAS discharge limits.

When it is operational, Outfall 001 for the groundwater treatment pond will discharge to Silver Creek. The WDNR classifies Silver Creek as a warm water forage, limited forage and warm water sport fish community. Silver Creek is within the Lake Michigan watershed and Outfall 001 is approximately 3.2 miles from the lake. Lake Michigan is a drinking water source and is a boundary water with the states of Michigan and Illinois. As such it is considered a 'shared water'. AECOM understands that the WDNR has the authority to provide down-stream protection for shared waters and, therefore, the ability to recognize ambient water quality standards promulgated in adjoining states, in this case the State of Michigan.

The State of Michigan, Department of Environmental Quality (MDEQ), Surface Water Assessment Section, has issued state-wide Rule 57 *Water Quality Values* that identifies ambient surface water quality standards (WQSs) for PFOA and PFOS that are protective to humans, wildlife and aquatic life. The Rule 57 PFAS limits are as follows:

Michigan Department of Environmental Quality, Rule 57 Ambient Water Quality Standard (ng/L)		
	PFOA	**PFOS**
Non-Drinking Water Source	12,000	12
Drinking Water Source	420	11

The MDEQ PFAS ambient WQSs are provided for discussion purposes only.

[4] *eDMR Submittal Reminder – Former Newton Gravel Pit*, email communication from Trevor J Moen, WDNR, Thursday, November 08, 2018, 11:56 am.
[5] *RE: eDMR Submittal Reminder – Former Newton Gravel Pit*, email communication from Trevor J Moen, WDNR, Thursday, November 08, 2018, 12:48 pm.

Treatment System Description

The engineered groundwater treatment system includes the treatment pond with discharge channel, a solar mixer, the pond outlet structure, and Silver Creek discharge structure. Each of these components is described in the following sections.

Treatment Pond

The pond is approximately 540-feet (ft) long, 150-ft wide and 20-ft deep with a lined 200-ft long and 35-ft wide discharge channel extending eastward from the northeast end of the pond (See Figures 2 & 3). At a normal surface water elevation of 685-ft mean sea level (msl) the pond contains approximately five million gallons of water. The discharge channel is lined with a 60-mil textured HDPE geomembrane to facilitate flow of water from the body of the pond to the outlet structure. A staff gauge (SP-P shown on Figure 2) for monitoring pond surface water elevation is mounted on a wooden pole located at the northern end of the pond, near the discharge channel. The pond is designed to treat VOCs using volatilization, phytoremediation, aerobic-bioremediation, and solar (i.e. UV radiation) oxidation.

Solar Mixer

To facilitate pond mixing and volatilization a floating, solar powered, Medora Corporation, Solar Bee Model SB5000 water mixer is installed in the southern portion of the pond. The mixer has a direct flow rate of 700 gallons per minute (gpm) and combined flow rate, i.e. induced flow, of 5,000 gpm. At a direct flow rate of 700 gpm the mixer circulates approximately one pond volume in about 5 days. At the combined flow rate of 5,000 gpm the mixer circulates one pond volume in about 0.7 days. The mixer's intake assembly is installed within a few feet of the bottom of the pond so that the mixer circulates water from the entire water column of the pond.

Treatment Pond Outlet Structure

The outlet structure was constructed at the eastern end of the discharge channel. The structure consists of pre-cast concrete with the following features:

- Fish Screen: an Elgin Separation Solutions, 8-ft wide by 11-ft long, custom-built stainless-steel wedge wire fish screen with ½ inch openings.
- Discharge Weir: an RW Gate Company, Model RW1000-S, 21" wide by 21" high, sluice gate for the regulation and measurement of flow.
- Discharge Control Valve: an RW Gate Company, Model RW3000-S slide gate value.
- Discharge Pipe: Approximately 280-ft of 18-inch dia. HDPE, DR 17, discharge pipe from the Treatment Pond outlet structure to the discharge structure at Silver Creek.

Silver Creek Discharge Structure

The discharge structure constructed at Silver Creek, i.e. Outfall 001, is a cast-in-place concrete structure with wing-walls and a rip-rap outfall. The discharge pipe is protected by a Neenah Model Number R-5050-SF18 wall mounted flap gate to discourage fish passage up the pipe and to prevent back-flow conditions. A staff gauge (SG-C shown on Figure 2) for monitoring the Silver Creek surface water elevation is mounted on the concrete wing-wall of the structure.

A post-construction Photo Log of the treatment pond system, as previously submitted with the Chapter 30 Permit, Notice of Project Completion[6], is provided in Attachment 1.

[6] *Notice of Project Completion*, Chapter 30 Permit, Artificial Waterbody – No Navigable Connection, IP-NE-2016-36-04539, AECOM Project Memorandum dated December 6, 2017

Pre-Discharge Monitoring Results

As noted in the Discharge Monitoring Plan, monitoring is to be conducted in two phases, 1) pre-discharge monitoring and 2) discharge monitoring. For this reporting period no discharges were made to Silver Creek, therefore, only pre-discharge monitoring was conducted and no eDMRs have been filed with the WDNR.

Pre-discharge treatment pond water monitoring included parameters presented in Section 4, *Surface Water Discharge Requirements* of the permit as summarized on the attached Table 1, surface water elevation measurements for both the pond and Silver Creek (See Table 2), and a single pond water sample for PFAS (See Table 3).

WPDES water samples for laboratory analysis were submitted to a Wisconsin Administrative Code Chapter NR 149 certified laboratory (Synergy Environmental Lab, Inc., (Synergy) Appleton, Wisconsin) for analyses of:

- Metals - Total Lead, EPA Method SW 7421
- Oil & Grease, EPA Method SW 1664B
- Polycyclic Aromatic Hydrocarbons (PAHs), EPA Method SW 8270 by SIM
- VOCs, EPA Method SW 8260B
- Total Suspended Solids (TSS), USGS Method 1-3765
- pH, standard measurement

The samples were transferred to the laboratory under chain of custody control. Copies of the permit-required laboratory analytical results are provided in Attachment 2.

Based on site knowledge, treatment pond water sampling focused on VOC compounds, with analysis for other permit parameters (i.e. metals, TSS, oil and grease, PAHs, and pH) only conducted three times during the reporting period to confirm their lack of impact. VOC analysis was conducted every sampling event.

Of the VOCs monitored, vinyl chloride is the only compound with concentrations that approach or exceed its WPDES monthly average discharge limit (i.e. 10 ug/L). Therefore, vinyl chloride is the main compound of interest and the limiting factor when it comes to beginning discharge to Silver Creek. All other VOC compounds identified above laboratory method detection limits (MDLs) were present at concentrations below their individual permit discharge limits or there is no discharge limit for the compound.

Substantial completion for the pond construction occurred in September of 2017 and for the balance of that fall the pond was still filling with groundwater (See Table 2 and Figure 4). Analytical results for water sampled during that period indicated that vinyl chloride consistently exceeded its discharge limit.

In December 2017 sampling was halted due to ice cover on the pond. During the winter months the solar mixer, while continuing to operate, did not keep the pond ice free. In March of 2018 a water sample was obtained while there was still ice on the pond. Analytical results indicated a vinyl chloride concentration of 50 ug/L.

By the May 2018 sampling event, under ice free conditions, vinyl chloride had decreased to 6.9 ug/L. For the summer of 2018 through to November 2018, vinyl chloride varied from a low of 5.0 ug/L to a high of 13.5 ug/L.

During this period, analytical results from two monthly sampling events, June 21st and August 14th, vinyl chloride exceeded discharge limits (i.e. 13.5 ug/L and 11.2 ug/L, respectively). These exceedances appear to be associated either with individual high rainfall events (e.g. June 18th at 3.18-inches) or with extended rainy periods (See Figure 4). Note that, during the summer of 2018, PFAS were identified in the groundwater at the site and the City's voluntary moratorium on discharges to Silver Creek began.

Pond sampling was not conducted during the winter of 2018-2019. Again, the solar mixer operated through the winter, but it did not keep the pond ice free. On April 1, 2019, a water sample was obtained while there was still ice on the pond. Analytical results indicated a vinyl chloride concentration of 50 ug/L, similar to the 2018 ice-out results. The May

2, 2019 water sampling analytical results indicate that, in the 30-day treatment period between May 1st and April 2nd, vinyl chloride was reduced to 10.7 ug/L, just over the discharge limit.

It should be noted that the presence of vinyl chloride at the Former Newton Pit site is not as a primary contaminant originally spilled at the site, but rather, it is present as a biodegradation daughter compound of cis-1,2- dichloroethene (cis12dce). Therefore, there should be a strong correlation between the concentration of cis12dce and vinyl chloride. A graphical presentation (See Figure 5) comparing the concentrations of cis12dce and vinyl chloride concentrations in the pond during the monitoring period identifies such a correlation. Figure 5 also presents the variation of vinyl chloride concentrations during the monitoring period relative to the discharge limit of 10 ug/L.

PFAS sampling of the treatment pond occurred during a November 19, 2018, PFAS-specific groundwater[7] and treatment pond water sampling event. Sampling was conducted using PFAS-free sampling protocols. The pond water sample was collected from the WPDES sampling location using a bailer to collect water from the water column. The sample was immediately transferred to a laboratory supplied 250-ml HDPE bottle. The sample was labeled and stored on ice prior to shipment, under chain of custody, to Test America, West Sacramento, CA., who subcontracted the work to Eurofins Lancaster Laboratories, Lancaster, PA. for analyses (Modified EPA Method 537, isotope dilution method) for the State of Michigan list of 24 PFAS analytes.

The PFAS laboratory analytical results for the pond water sample, Sample ID “SG-P”, obtained on November 19, 2018, indicate that PFAS are present in the treatment pond water (See Table 3).

Currently there are no NPDES or WPDES standards relating to PFAS. For discussion purposes, the analytical results indicate that concentrations of PFOA, at 30 nanograms per liter (ng/l), and PFOS, at 5.9 ng/l, are both below the respective MDEQ WQSs of 420 ng/l and 11 ng/l for a surface water that serves as a drinking water source (i.e. Silver Creek discharges to Lake Michigan, a shared water). Seven other PFAS were detected at concentrations above their respective MDLs.

An abbreviated copy of the PFAS Eurofins laboratory analytical results are provided in Attachment 2. A complete version of the laboratory report with a Data Validation Report, approximately 2,000 pages in length, has been previously submitted to the Department as part of the *Northern Source Area Sampling, 2018 VOC Annual Groundwater Monitoring, and Initial Emerging Contaminant Groundwater Investigation Report.*

Conclusions & Recommendations

AECOM, on behalf of the City of Manitowoc, has conducted WPDES monitoring for Outfall 001 at the Former Newton Gravel Pit in general accordance with WPDES General Permit No. WI-0046566-07-0 and its site-specific Discharge Monitoring Plan.

For this reporting period no discharges from the groundwater treatment pond have been made to Silver Creek. Monitoring has only been conducted for the pre-discharge phase of the project.

WPDES associated laboratory analytical results indicate that vinyl chloride is the only compound with concentrations that approach or exceed its monthly average discharge limit. The vinyl chloride exceedances appear to be related to seasonal variations (i.e. ice cover on the pond during winter) and large precipitation events.

Laboratory analytical results indicate that PFAS compounds are present in the pond water. Currently there are no NPDES or WPDES standards relating to PFAS. The analytical results indicate that concentrations of PFOA and PFOS are both below their respective MDEQ WQSs. Seven other PFAS were detected at concentrations above their respective MDLs in the pond water.

[7] *Northern Source Area Sampling, 2018 VOC Annual Groundwater Monitoring, and Initial Emerging Contaminant Groundwater Investigation Report*, Former Town of Newton Gravel Pit, 3130 Hecker Road, Manitowoc, Wisconsin, WDNR BRRTS No. 02-36-000268, WDNR FID No. 436104020, AECOM June 5, 2019.

AECOM recommends continued pre-discharge phase monitoring of the treatment pond for both WPDES parameters and PFAS. Further discussions with the WDNR concerning the applicability of PFAS discharge limits should be conducted prior to beginning system discharges to Silver Creek.

Yours sincerely,

AECOM Technical Services, Inc.

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Tauren Beggs, Hydrogeologist, WDNR

Attachments:

Table 1 – Treatment Pond Monitoring Summary
Table 2 – Surface Water Elevations
Table 3 – Summary of PFAS Analyzed – Groundwater Treatment Pond

Figure 1 – Site Location Map
Figure 2 – Site Features
Figure 3 – Existing Condition Bathymetric
Figure 4 – Treatment Pond and Silver Creek Hydrograph
Figure 5 – Treatment Pond Contaminant Concentrations

Attachment #1 – Photo Log
Attachment #2 – Laboratory Data

Tables

Table 1: Treatment Pond Monitoring Summary

Table 2: Surface Water Elevations

Table 3: Summary of PFAS Analyzed – Groundwater Treatment Pond

Table 1
Treatment Pond Monitoring Summary, Outfall 001 - Groundwater Treatment Pond
WPDES Permit No. WI-0046566-07-0
Former Town of Newton Gravel Pit
Manitowoc, Wisconsin

Analyte	Effluent Limitations [1]		Pond W	PW	Pond	Pond	Pond	Pond	Pond	Pond	Pond	Pond	Pond	SG-P	SG-P	Pond	Pond
			10/26/2017	11/3/2017	11/30/2017	3/2/2018	4/13/2018	5/17/2018	5/31/2018	6/21/2018	7/18/2018	8/14/2018	9/17/2018	10/8/2018	11/19/2018	4/1/2019	5/2/2019
Volatile Organic Compounds (VOCs) (µg/L):																	
Benzene	50	Monthly Avg	0.32 J	0.35 J	<0.17	<0.22	0.33 J	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<2.2	<0.22	<0.22
t-Butylbenzene	NS		<0.39	<0.39	<0.39	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<2.5	<0.25	<0.25
Bromoform			<0.49	<0.49	<0.49	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<4.5	<0.45	<0.45
Carbon Tetrachloride	150	Monthly Avg	<0.21	<0.21	<0.21	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<3.1	<0.31	<0.31
Chloroethane	NS		<0.5	<0.5	<0.5	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<6.1	<0.61	<0.61
Chloroform	120	Monthly Avg	<0.96	<0.96	<0.96	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
Chloromethane	NS		<1.3	<1.3	<1.3	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<5.4	<0.54	<0.54
2-Chlorotoluene	NS		<0.36	<0.36	<0.36	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<3.1	<0.31	<0.31
1,2-Dichlorobenzene	NS		<0.34	<0.34	<0.34	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86	<8.6	<0.86	<0.86
1,3-Dichlorobenzene	NS		<0.45	<0.45	<0.45	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<8.5	<0.85	<0.85
1,4-Dichlorobenzene	NS		<0.42	<0.42	<0.42	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<7.0	<0.7	<0.7
1,2-Dichloroethane	180	Monthly Avg	<0.45	<0.45	<0.45	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<2.5	<0.25	<0.25
1,1-Dichloroethane	NS		0.52 J	0.43 J	0.42 J	1.49	0.71 J	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	0.37 J	<2.6	1.56	<0.36
1,1-Dichloroethene	50	Monthly Avg	<0.46	<0.46	<0.46	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<4.2	<0.42	<0.42
Dichlorobromomethane			<0.31	<0.31	<0.31	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<3.3	<0.33	<0.33
cis-1,2-Dichloroethene	NS		52	47	33	139	51	18.8	20.1	33	25.2	31.0	25.7	26.7	25.1	136.0	25.0
trans-1,2-Dichloroethene	NS		2.44	0.74 J	0.46 J	0.48 J	0.43 J	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<.3.4	1.28	<0.34
Ethylbenzene	NS		<0.2	<0.2	<0.2	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<2.6	<0.26	<0.26
Ethylene Dibromide	NS		<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<3.4	<0.34	<0.34
Isopropylbenzene	NS		<0.29	<0.29	<0.29	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<7.8	<0.78	<0.78
Methyl Bromide	Not on lab VOC list		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	120	Monthly Avg	<0.94	<0.94	<0.94	<1.32	<1.32	<1.32	<1.32	<1.32	<1.32	<1.32	<1.32	<1.32	<13.2	<1.32	<1.32
Methyl tert-butyl ether	NS		<0.82	<0.82	<0.82	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<2.8	<0.28	<0.28
Naphthalene	70	Monthly Avg	<2.17	<2.17	<2.17	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<21	<2.1	<2.1
n-Propylbenzene	NS		<0.19	<0.19	<0.19	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<6.1	<0.61	<0.61
1,1,2,2-Tetrachloroethane	50	Monthly Avg	<0.69	<0.69	<0.69	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<3.0	<0.3	<0.3
1,1,1,2-Tetrachloroethane	NS		<0.47	<0.47	<0.47	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<3.5	<0.35	<0.35
Tetrachloroethene	50	Monthly Avg	<0.48	<0.48	<0.48	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<3.8	<0.38	<0.38
Toluene	NS		<0.67	<0.67	<0.67	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<19.	<0.19	<0.19
1,1,1-Trichloroethane	50	Monthly Avg	<0.35	<0.35	<0.35	0.56 J	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<3.3	0.43 J	<0.33
1,1,2-Trichloroethane	50	Monthly Avg	<0.65	<0.65	<0.65	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<4.2	<0.42	<0.42
Trichloroethene	50	Monthly Avg	0.95 J	0.89 J	0.53 J	2.68	0.95	0.36 J	0.47 J	0.55 J	<0.3	0.42 J	0.34 J	0.31 J	<3.0	1.38	0.49 J
1,2,4-Trimethylbenzene	NS		<1.14	<1.14	<1.14	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<8.0	<0.8	<0.8
1,3,5-Trimethylbenzene	NS		<0.91	<0.91	<0.91	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<6.3	<0.63	<0.63
Total Trimethylbenzene	NS		<1.14	<1.14	<1.14	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<8.0	<0.8	<0.8
Vinyl Chloride	10	Monthly Avg	**22.9**	**18.1**	**17.7**	**50**	**19.2**	6.9	6.2	**13.5**	8.5	**11.2**	7.3	9.1	5.0 J	**50** J	**10.7**
Xylenes, m + p	NS		<1.56	<1.56	<1.56	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<4.3	<4.3	<4.3
Xylene, o	NS		<0.39	<0.39	<0.39	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29	<2.9	<2.9	<2.9
Total Xylenes	NS		<1.56	<1.56	<1.56	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<4.3	<4.3	<4.3
Total BETX	750	Monthly Avg	0.32	0.35	<750	<750	0.33	<750	<750	<750	<750	<750	<750	<750	<750	<750	<750
Metals (ug/L):																	
Lead, Total Recoverable [(2)]	240.3	Daily Max	NA	NA	<0.9	NA	NA	NA	<0.9	<0.8	NA	NA	NA	NA	NA	NA	NA
Lead, Total Recoverable [(2)]	65.9	Weekly Avg	NA	NA	<0.9	NA	NA	NA	<0.9	<0.8	NA	NA	NA	NA	NA	NA	NA

AECOM

Table 1
Treatment Pond Monitoring Summary, Outfall 001 - Groundwater Treatment Pond
WPDES Permit No. WI-0046566-07-0
Former Town of Newton Gravel Pit
Manitowoc, Wisconsin

Analyte	Effluent Limitations [1]		Pond W	PW	Pond	Pond	Pond	Pond	Pond	Pond	Pond	Pond	Pond	SG-P	SG-P	Pond	Pond
			10/26/2017	11/3/2017	11/30/2017	3/2/2018	4/13/2018	5/17/2018	5/31/2018	6/21/2018	7/18/2018	8/14/2018	9/17/2018	10/8/2018	11/19/2018	4/1/2019	5/2/2019
Wet Chemistry:																	
Total Suspended Solids (mg/l)	40	Daily Max	NA	NA	5.30 J	NA	NA	NA	2.6 J	3.40 J	NA	NA	NA	NA	NA	NA	NA
Oil and Grease (mg/l)	10	Daily Max	NA	NA	<3.04	NA	NA	NA	<2.64	<2.64	NA	NA	NA	NA	NA	NA	NA
Chlorine, Total Residual (ug/l)	19	Daily Max	Samping Not Required														
Polyaromatic Hydrocarbons (PAHs) (ug/L):																	
Acenaphthene	NS		NA	NA	<0.016	NA	NA	NA	0.0095 J	<0.008	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS		NA	NA	<0.019	NA	NA	NA	<0.019	<0.009	NA	NA	NA	NA	NA	NA	NA
Anthracene	NS		NA	NA	<0.017	NA	NA	NA	<0.017	<0.009	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene, TEF 0.1	NS		NA	NA	<0.02	NA	NA	NA	<0.02	<0.017	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	Monthly Avg	NA	NA	<0.018	NA	NA	NA	<0.018	<0.017	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene, TEF 0.1	NS		NA	NA	<0.025	NA	NA	NA	<0.025	<0.02	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene, TEF 0.01	NS		NA	NA	<0.016	NA	NA	NA	<0.016	<0.011	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene, TEF 0.01	NS		NA	NA	<0.02	NA	NA	NA	<0.02	<0.014	NA	NA	NA	NA	NA	NA	NA
Chrysene, TEF 0.001	NS		NA	NA	<0.025	NA	NA	NA	<0.025	<0.019	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene, TEF 1.0	NS		NA	NA	<0.025	NA	NA	NA	<0.025	<0.01	NA	NA	NA	NA	NA	NA	NA
Fluoranthene, TEF 0.001	NS		NA	NA	<0.017	NA	NA	NA	<0.017	<0.031	NA	NA	NA	NA	NA	NA	NA
Fluorene	NS		NA	NA	<0.021	NA	NA	NA	0.0128 J	<0.011	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene, TEF 0.1	NS		NA	NA	<0.023	NA	NA	NA	<0.023	<0.012	NA	NA	NA	NA	NA	NA	NA
1-Methyl napthalene	NS		NA	NA	<0.024	NA	NA	NA	<0.024	<0.0239	NA	NA	NA	NA	NA	NA	NA
2-Methyl napthalene	NS		NA	NA	<0.024	NA	NA	NA	<0.024	<0.0236	NA	NA	NA	NA	NA	NA	NA
Naphthalene	70	Monthly Avg	NA	NA	<0.025	NA	NA	NA	0.033 J	0.0255 J	NA	NA	NA	NA	NA	NA	NA
Phenathrene, TEF 0.001	NS		NA	NA	<0.025	NA	NA	NA	0.0264 J	<0.025	NA	NA	NA	NA	NA	NA	NA
Pyrene, TEF 0.001	NS		NA	NA	<0.02	NA	NA	NA	<0.02	<0.02	NA	NA	NA	NA	NA	NA	NA
PAH Group of Ten, Calc. TEF Sum	0.1	Monthly Avg	NA	NA	0.0	NA	NA	NA	0.0000264	0.0	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																	
Discharge Flow (gpd)	Record		zero	zero	zero	zero	zero	zero	zero	zero	zero	zero	zero	zero	zero	zero	zero
pH (IU)	6.0 to 9.0	Daily Min/Max	8.01	NA	NA	NA	NA	NA	7.35	7.70	NA	NA	NA	NA	NA	NA	NA
Conductivity (uS)	NS		0.556	0.758	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature (^{o}C)	NS		12.21	8.76	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (ppm)	NS		4.53	12.68	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Redox Potential (mV)	NS		186.2	-227.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:

(1) Effluent Limitations from WPDES Permit No. WI-0046566-07-0

(2) Receiving Water Hardness, receiving water is Silver Creek, which drains from Silver Lake in Manitowoc County. Silver Lake hardness, WPDES Permit Appendix D value = 233 mg/l.

Bold indicates a Standard exceedance.

NA - Not analyzed

NS - No Standard

J - Compound was detected at a concentration between the limit of detection (LOD) and the limit of quantitation (LOQ).

AECOM

Table 2
Surface Water Elevations
WPDES Permit No. WI-0046566-07-0
Former Town of Newton Gravel Pit
Manitowoc, Wisconsin

Treatment Pond Staff Gauge Readings & Water Elevations

Top of Staff Gauge Bench Mark Reading (ft) = 4.06
Top of Staff Gauge Bench Mark Elevation (msl) = 687.05
Treatment Pond Outlet Pipe Invert Elevation (msl) = 684.14

Silver Creek Staff Gauge Readings & Water Elevations

Top of Staff Gauge Bench Mark Reading (ft) = 4.06
Top of Staff Gauge Bench Mark Elevation (msl) = 685.43
Silver Creek Discharge Pipe Invert Elevation (msl) = 682.98

Date	"SG-P" Pond Staff Gauge Reading (ft)	Pond Surface Elevation (msl)	Pond Surface Water Elevation Above (+) or Below (-) Outlet Pipe Invert (ft)	Field Notes	Date	"SG-C" Creek Staff Gauge Reading (ft)	Silver Creek Surface Elevation (msl)	Silver Creek Water Elevation Above (+) or Below (-) Discharge Pipe Invert (ft)	Difference in Elevation Btwn Pond and Creek + = pond higher (ft)
9/29/2017	0.96	683.95	-0.19	start of monitoring	9/28/2017	1.25	682.62	-0.36	1.33
10/6/2017	1.18	684.17	0.03		10/6/2017	-			
10/18/2017	1.62	684.61	0.47		10/18/2017	-			
10/23/2017	1.69	684.68	0.54	sample	10/23/2017	-			
11/3/2017	-			sample	11/3/2017	-			
11/29/2017	1.85	684.84	0.7	sample	11/30/2017	1.50	682.87	-0.11	1.97
3/5/2018	2.68	685.67	1.53	sample, pond frozen	3/5/2018	2.36	683.73	0.75	1.94
4/13/2018	2.34	685.33	1.19	sample	4/13/2018	2.34	683.71	0.73	1.62
4/30/2018	2.98	685.97	1.83		4/30/2018	2.36	683.73	0.75	2.24
5/17/2018	3.30	686.29	2.15	sample	5/17/2018	2.40	683.77	0.79	2.52
5/31/2018	2.80	685.79	1.65	sample	5/31/2018	1.60	682.97	-0.01	2.82
6/12/2018	2.39	685.38	1.24		6/12/2018	1.48	682.85	-0.13	2.53
6/21/2018	2.84	685.83	1.69	sample	6/21/2018	3.31	684.68	1.7	1.15
7/19/2018	2.38	685.37	1.23	sample	7/19/2018	1.45	682.82	-0.16	2.55
8/14/2018	1.90	684.89	0.75	sample	8/14/2018	1.32	682.69	-0.29	2.2
9/11/2018	2.95	685.94	1.8		9/11/2018	2.40	683.77	0.79	2.17
9/17/2018	2.75	685.74	1.6	sample	9/17/2018	2.90	684.27	1.29	1.47
10/1/2018	2.45	685.44	1.3		10/1/2018	1.88	683.25	0.27	2.19
10/2/2018	2.59	685.58	1.44		10/2/2018	-			
10/8/2018	2.87	685.86	1.72	sample	10/8/2018	3.56	684.93	1.95	0.93
10/9/2018	-				10/9/2018	3.87	685.24	2.26	
10/11/2018	3.00	685.99	1.85		10/11/2018	-		-	
11/19/2018	2.76	685.75	1.61	sample, ice on pond	11/19/2018	2.44	683.81	0.83	1.94
12/13/2018	2.70	685.69	1.55	pond frozen	12/13/2018	2.36	683.73	0.75	1.96
4/1/2019	3.71	686.7	2.56	sample, partially un-froze	4/1/2019	3.32	684.69	1.71	2.01
5/2/2019	3.43	686.42	2.28	sample	5/2/2019	3.14	684.51	1.53	1.91

Summary of PFAS Analyzed - Groundwater Treatment Pond
WPDES Permit No. WI-0046566-07-0
Former Town of Newton Gravel Pit
Manitowoc, Wisconsin

			Location:	**SG-P**	
			Sample Date:	**11/19/2018**	
			Sample Type:	**N**	
			Field Sample ID:	**SG-P**	
Abbr	**Analyte**	**Cas Number**	**Units**		
PFBA	Perfluorobutanoic acid	375-22-4	ng/L	5.7	J
PFPeA	Perfluoropentanoic acid	2706-90-3	ng/L	5.2	J
PFBS	Perfluorobutanesulfonic acid	375-73-5	ng/L	1.4	J
4:2 FTS	4:2 Fluorotelomer Sulfonic Acid or 4:2 FTS	757124-72-4	ng/L	< 0.89	
PFHxA	Perfluorohexanoic acid	307-24-4	ng/L	4.9	
PFPeS	Perfluoropentane Sulfonic Acid or PFPeS	2706-91-4	ng/L	1.6	J
PFHpA	Perfluoroheptanoic acid	375-85-9	ng/L	2.7	
PFHxS	Perfluorohexanesulfonoic acid	355-46-4	ng/L	6.8	
6:2 FTS	6:2 Fluorotelomer sulfonic acid	27619-97-2	ng/L	< 0.89	
PFOA	Perfluorooctanoic acid	335-67-1	ng/L	30	
PFHpS	Perfluoroheptanesulfonic acid	375-92-8	ng/L	< 0.36	
PFNA	Perfluorononaoic acid	375-95-1	ng/L	0.58	J
PFOSA	Perfluorooctane sulfonamide	754-91-6	ng/L	< 0.44	
PFOS	Perfluorooctanesulfonic acid	1763-23-1	ng/L	5.9	J+
PFDA	Perfluorodecanoic acid	335-76-2	ng/L	< 0.8	
PFNS	Perfluorononanesulfonic Acid	474511-07-4	ng/L	< 0.53	
8:2 FTS	8:2 Fluorotelomer sulfonic acid	39108-34-4	ng/L	< 1.8	
MeFOSAA	MeFOSAA	2355-31-9	ng/L	< 0.89	
EtFOSAA	EtFOSAA	2991-50-6	ng/L	< 0.89	
PFUnA	Perfluoroundecanoic acid	2058-94-8	ng/L	< 0.36	
PFDS	Perfluorodecanesulfonic acid	335-77-3	ng/L	< 0.53	
PFDoA	Perfluorododecanoic acid	307-55-1	ng/L	< 0.44	
PFTrDA	Perfluorotridecanoic acid	72629-94-8	ng/L	< 0.36	
PFTeDA	Perfluorotetradecanoic acid	376-06-7	ng/L	< 0.27	UR

Note:
ng/L - nanograms per liter
J - Estimated value (+/- indicates bias)
R - Rejected
U - Nondetect
UJ - Estimated limit of detection (LOD)
Non-detects reported as < LOD
EPA HAL - EPA Drinking Water Health Advisory Limits (HAL) for Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS), May 2016.

Figures

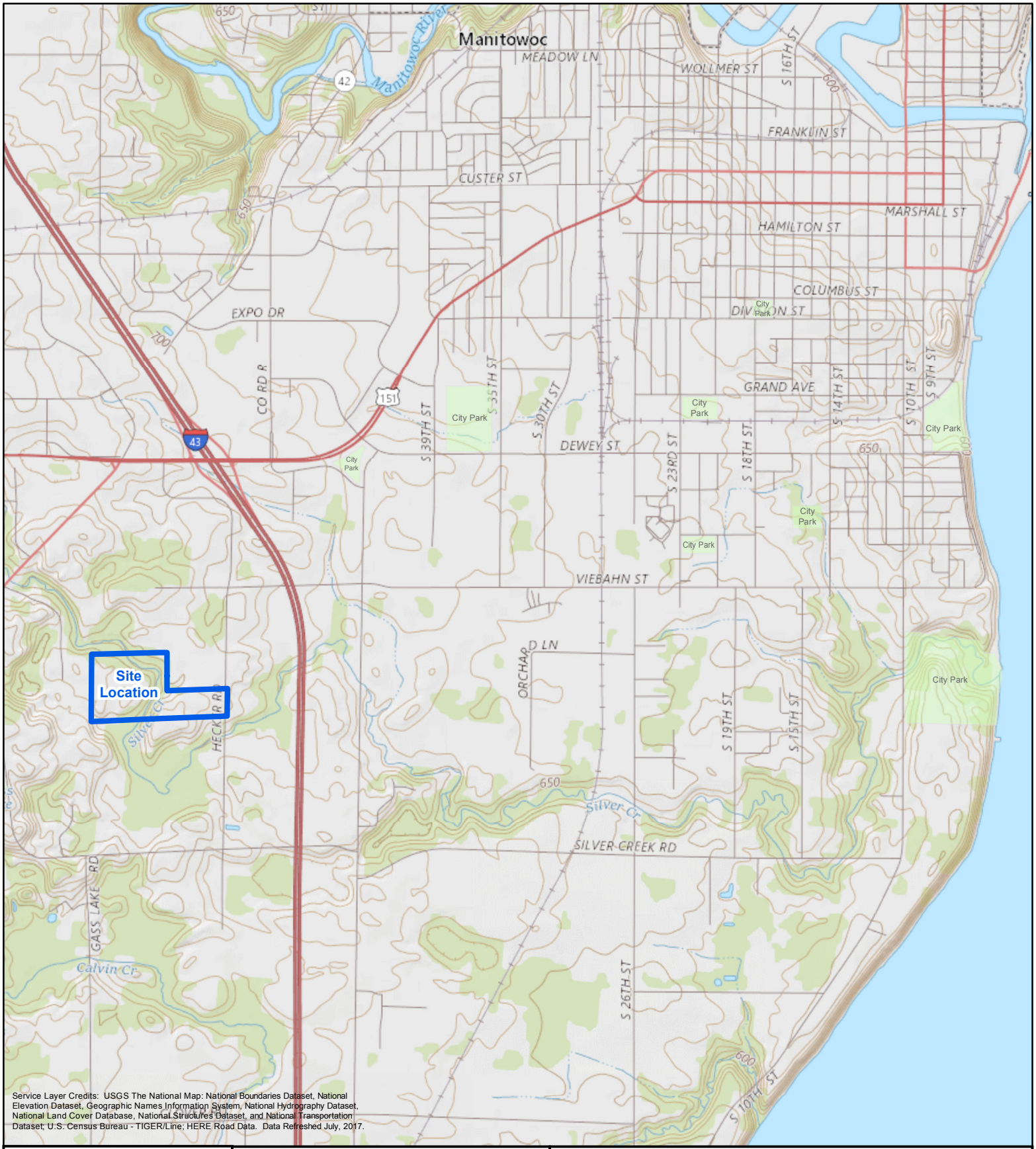
Figure 1: Site Location Map

Figure 2: Site Features

Figure 3: Existing Condition Bathymetric

Figure 4: Treatment Pond and Silver Creek Hydrograph

Figure 5: Treatment Pond Contaminant Concentrations



Service Layer Credits: USGS The National Map: National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line; HERE Road Data. Data Refreshed July, 2017.

Map Location

0 1,250 2,500 5,000 Feet

FORMER NEWTON GRAVEL PIT

SITE LOCATION MAP

AECOM - Milwaukee Office
1555 River Center Dr
Milwaukee WI

AECOM

Project No. 60581251 | Drawn By: RW | Date: July 2018

Figure 1

Project Management Initials: BM Creator: MLB Checked: Approved: ANSI B 11" x 17"

C:\data\Projects\Newton GP\MXD\Fig2_SiteFeatures_NewtonGPJuly2018letterReport.mxd

FIGURE 2
SITE FEATURES

Former Newton Gravel Pit
Manitowoc, Wisconsin

Legend

- Monitoring Well(s)
- Staff Gauge
- Gravel Pit Roads
- Approximate Pond Location
- Approximate Outfall Pipe Location
- Engineered Cap
- Electric Line
- Civil Divisions
- Parcels
- Streams
- Building Footprints

Notes:
1. Horizontal Coordinates = NAD83 Manitowoc County Coordinates.

1 inch = 250 feet

AECOM
1555 N. RiverCenter Drive, Suite 214
Milwaukee, Wi 53212
PH: 414-944-6080
www.aecom.com

DRAWN BY: RW	DATE: 7/17/2018

Project No.: 60581251

BEARINGS ARE REFERENCED TO THE MANITOWOC COUNTY COORDINATE SYSTEM.

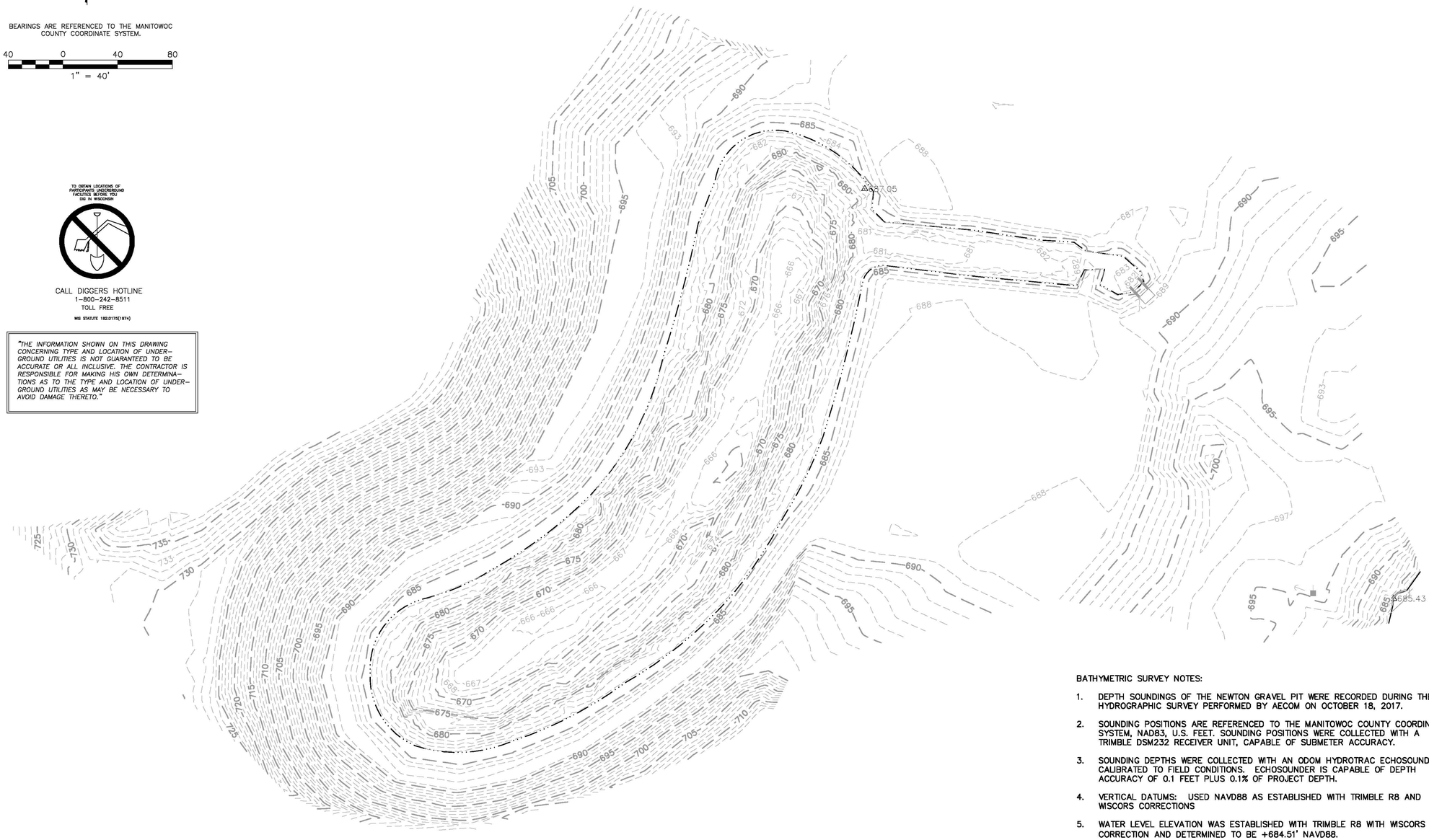
40 0 40 80

1" = 40'

TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE
WIS STATUTE 182.0175(1974)

"THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDER-GROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINA-TIONS AS TO THE TYPE AND LOCATION OF UNDER-GROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO."



SURVEY NOTES:

1. TOPOGRAPHIC SURVEY PERFORMED BY AECOM FROM OCTOBER 15, 2017.
2. HORIZONTAL COORDINATES BASED ON MANITOWOC COUNTY COORDINATES, NORTH AMERICAN DATUM OF 1983 (NAD83).
3. VERTICAL DATUM BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

BATHYMETRIC SURVEY NOTES:

1. DEPTH SOUNDINGS OF THE NEWTON GRAVEL PIT WERE RECORDED DURING THE HYDROGRAPHIC SURVEY PERFORMED BY AECOM ON OCTOBER 18, 2017.
2. SOUNDING POSITIONS ARE REFERENCED TO THE MANITOWOC COUNTY COORDINATE SYSTEM, NAD83, U.S. FEET. SOUNDING POSITIONS WERE COLLECTED WITH A TRIMBLE DSM232 RECEIVER UNIT, CAPABLE OF SUBMETER ACCURACY.
3. SOUNDING DEPTHS WERE COLLECTED WITH AN ODOM HYDROTRAC ECHOSOUNDER, CALIBRATED TO FIELD CONDITIONS. ECHOSOUNDER IS CAPABLE OF DEPTH ACCURACY OF 0.1 FEET PLUS 0.1% OF PROJECT DEPTH.
4. VERTICAL DATUMS: USED NAVD88 AS ESTABLISHED WITH TRIMBLE R8 AND WISCORS CORRECTIONS
5. WATER LEVEL ELEVATION WAS ESTABLISHED WITH TRIMBLE R8 WITH WISCORS CORRECTION AND DETERMINED TO BE +684.51' NAVD88.
6. THE STAFF GAGE WATER LEVEL WAS OBSERVED TO BE +1.62' DURING THE PERIOD OF SURVEY. THIS GAGE IS MOUNTED TO A VERTICAL TIMBER PILE AT THE NORTH END OF THE MAIN POND.
7. WAVE CLIMATE WAS CALM/FLAT DURING THE SURVEY WORK.
8. SOUNDING ELEVATIONS AND CONTOURS (AS SHOWN) ARE REFERENCED TO NAVD88. CONTOUR LINES WERE GENERATED WITH AUTOCAD CIVIL3D AND SHOULD BE CONSIDERED TO BE APPROXIMATE AS THEY ARE INTERPOLATED FROM SOUNDINGS.
9. SURVEY DATA PROVIDED IS CONSIDERED REPRESENTATIVE OF CONDITIONS AT TIME OF THE SURVEY. CONDITIONS MAY CHANGE OVER TIME.

AECOM

PROJECT

Newton Pit
Existing Conditions &
Bathymetric Survey
Hecker Road
Manitowoc, WI

CLIENT

City of Manitowoc
Manitowoc, WI

CONSULTANT

AECOM
2985 South Ridge Road
Suite B
Green Bay, WI 54304
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www.aecom.com

REGISTRATION

ISSUE/REVISION

1	11/06/2017	Issued for Review
I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

60135471

SHEET TITLE

EXISTING CONDITION
BATHYMETRIC

SHEET NUMBER

Figure 3

Figure 4
Treatment Pond and Silver Creek Hydrograph
Former Town of Newton Gravel Pit
Manitowoc, Wisconsin

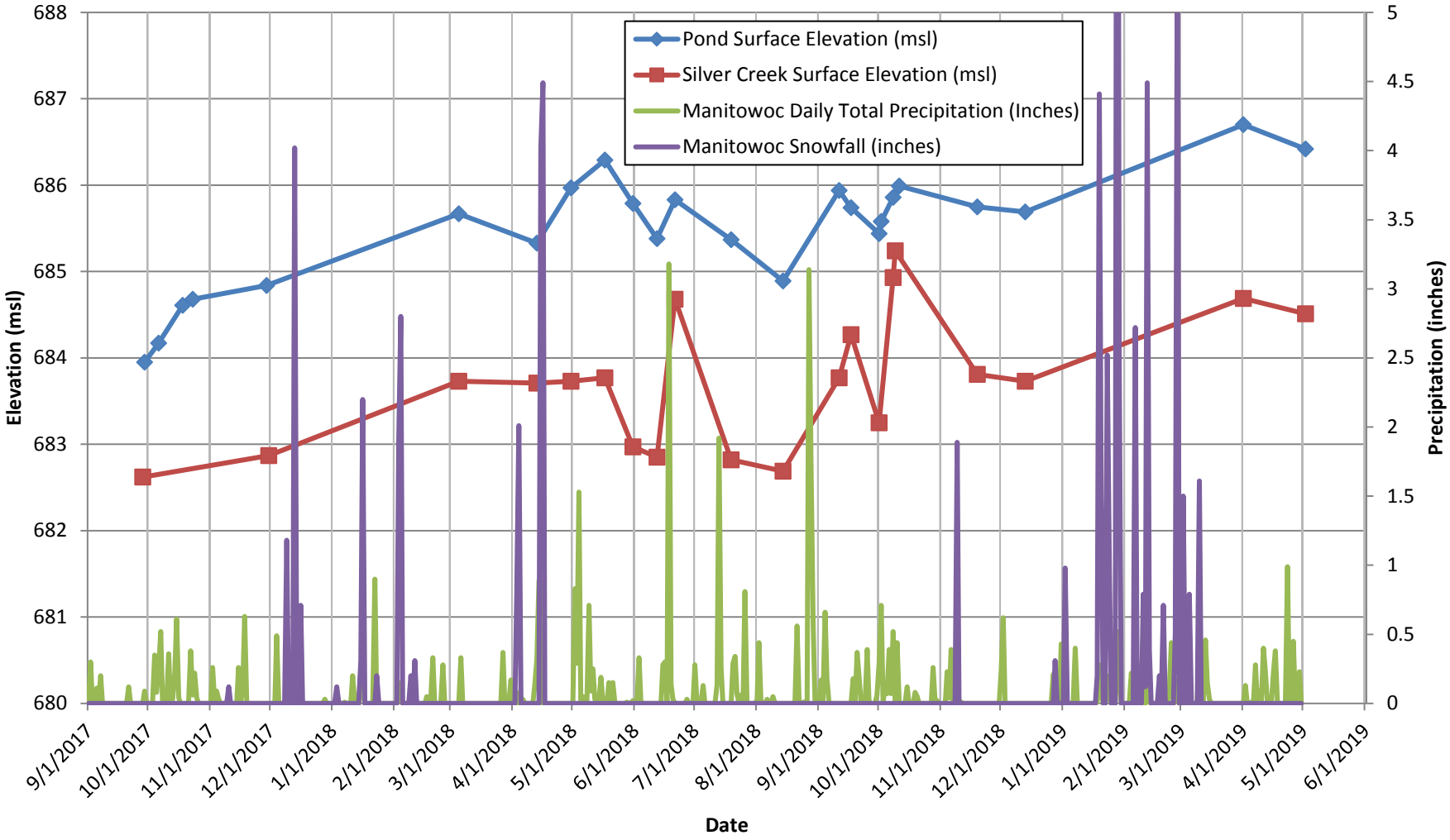
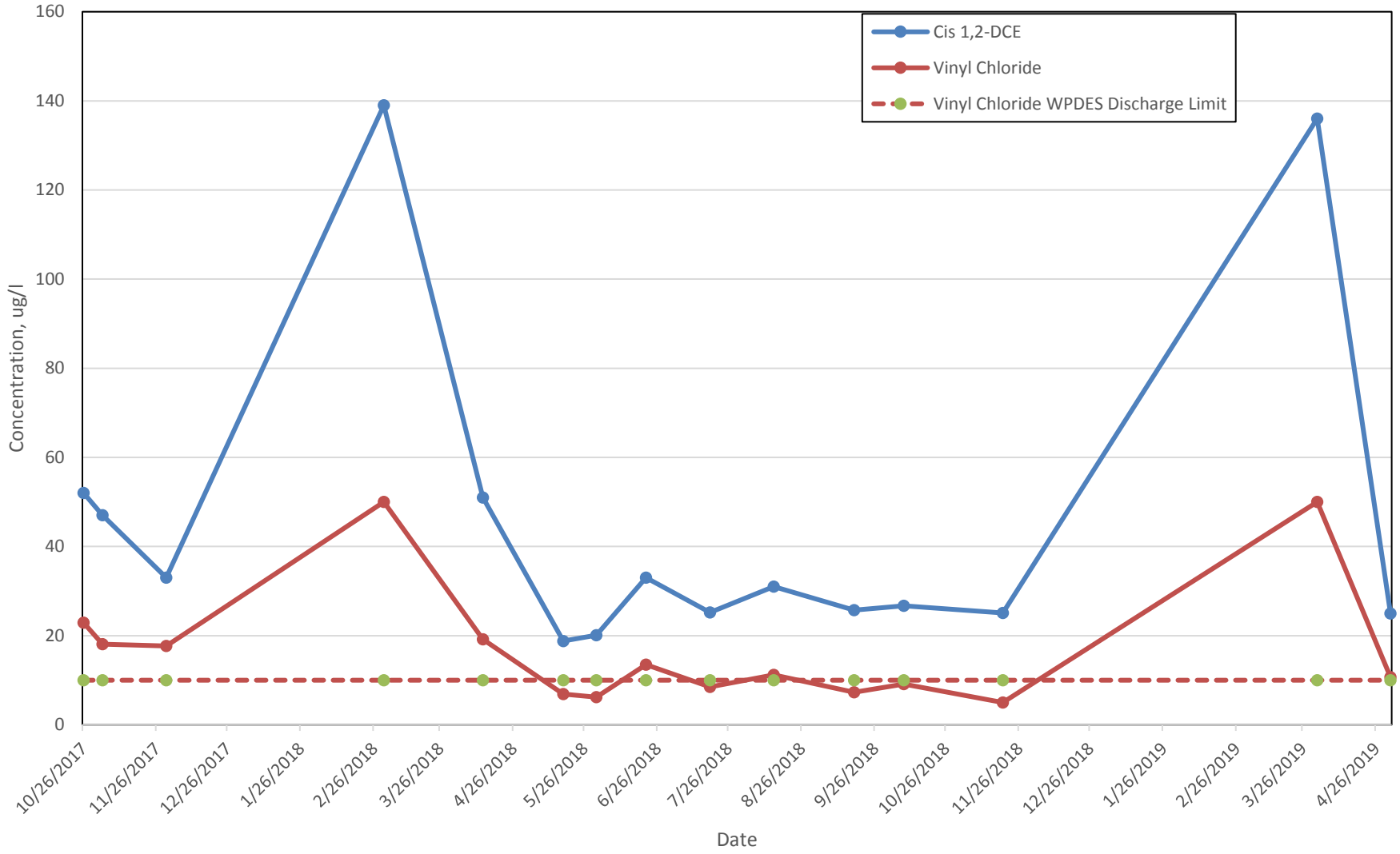


Figure 5
Treatment Pond Contaminant Concentrations
Former Town of Newton Gravel Pit
Manitowoc, Wisconsin



Attachment A

Photo Log

PHOTOGRAPHIC LOG

Facility Name:	Site Location:	Project No.
Former Town of Newton Gravel Pit	3130 Hecker Road, Manitowoc, Wisconsin	60135471

Photo No.	Date:
1	11/30/17

Direction Photo Taken:

North-northeast

Description:

Chapter 30 Permit, Notice of Project Completion.

View of southern portion of pond.

Note solar pond mixer in center area of pond and pond sign on south end.

Photo No.	Date:
2	11/30/17

Direction Photo Taken:

Northeast

Description:

Chapter 30 Permit, Notice of Project Completion.

View of solar pond mixer.

Note solar mixer anchor cable and pond signs on both east and west side of pond.

AECOM

PHOTOGRAPHIC LOG

Facility Name:	Site Location:	Project No.
Former Town of Newton Gravel Pit	3130 Hecker Road, Manitowoc, Wisconsin	60135471

Photo No.	Date:
3	11/30/17

Direction Photo Taken:

East

Description:

Chapter 30 Permit, Notice of Project Completion.

View of north portion of pond and discharge channel to the east.

Note staff gage pole within pond, north (left) of discharge channel, and outlet structure on east end of channel.

Photo No.	Date:
4	11/30/17

Direction Photo Taken:

East

Description:

Chapter 30 Permit, Notice of Project Completion.

View of staff gage pole with solar pond mixer in the background.

Note pond sign and staff gage on pole.

PHOTOGRAPHIC LOG

Facility Name:	Site Location:	Project No.
Former Town of Newton Gravel Pit	3130 Hecker Road, Manitowoc, Wisconsin	60135471

Photo No.	Date:
5	11/30/17

Direction Photo Taken:

East

Description:

Chapter 30 Permit, Notice of Project Completion.

View of outlet structure.

Note fish screen inlet and outlet control valve pedestal.

Photo No.	Date:
6	11/30/17

Direction Photo Taken:

West

Description:

Chapter 30 Permit, Notice of Project Completion.

View of outlet structure.

Note outlet control valve pedestal and pond sign.

PHOTOGRAPHIC LOG

Facility Name:	Site Location:	Project No.
Former Town of Newton Gravel Pit	3130 Hecker Road, Manitowoc, Wisconsin	60135471

Photo No.	Date:
7	11/30/17

Direction Photo Taken:

West/downward looking.

Description:

Chapter 30 Permit, Notice of Project Completion.

View of outlet structure.

Note fish screen inlet.

Photo No.	Date:
8	11/30/17

Direction Photo Taken:

na

Description:

Chapter 30 Permit, Notice of Project Completion.

Example of pond sign.

PHOTOGRAPHIC LOG

Facility Name:	Site Location:	Project No.
Former Town of Newton Gravel Pit	3130 Hecker Road, Manitowoc, Wisconsin	60135471

Photo No.	Date:
9	11/30/17

Direction Photo Taken:

South

Description:

Chapter 30 Permit, Notice of Project Completion.

View downstream of discharge structure at Silver Creek.

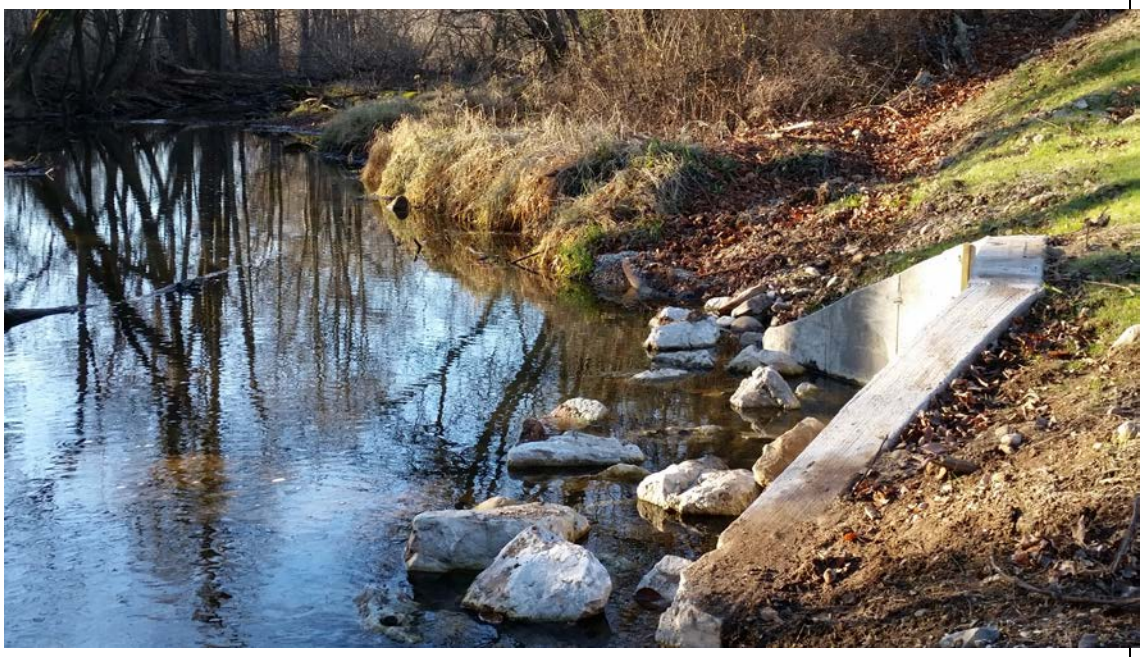


Photo No.	Date:
10	11/30/17

Direction Photo Taken:

South

Description:

Chapter 30 Permit, Notice of Project Completion.

View of discharge structure at Silver Creek.

Note staff gage and one-way discharge valve.

Attachment B

Laboratory Data

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Report Date *02-Nov-17*

Project Name NEWTON GRAVEL PIT **Invoice #** E33811
Project #

Lab Code 5033811A
Sample ID POND W-10/26/17
Sample Matrix Water
Sample Date 10/26/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	0.32 "J"	ug/l	0.17	0.55	1	8260B		11/1/2017	CJR	1
Bromobenzene	< 0.43	ug/l	0.43	1.37	1	8260B		11/1/2017	CJR	1
Bromodichloromethane	< 0.31	ug/l	0.31	1	1	8260B		11/1/2017	CJR	1
Bromoform	< 0.49	ug/l	0.49	1.56	1	8260B		11/1/2017	CJR	1
tert-Butylbenzene	< 0.39	ug/l	0.39	1.23	1	8260B		11/1/2017	CJR	1
sec-Butylbenzene	< 0.24	ug/l	0.24	0.76	1	8260B		11/1/2017	CJR	1
n-Butylbenzene	< 0.34	ug/l	0.34	1.08	1	8260B		11/1/2017	CJR	1
Carbon Tetrachloride	< 0.21	ug/l	0.21	0.68	1	8260B		11/1/2017	CJR	1
Chlorobenzene	< 0.27	ug/l	0.27	0.86	1	8260B		11/1/2017	CJR	1
Chloroethane	< 0.5	ug/l	0.5	1.6	1	8260B		11/1/2017	CJR	1
Chloroform	< 0.96	ug/l	0.96	3.04	1	8260B		11/1/2017	CJR	1
Chloromethane	< 1.3	ug/l	1.3	4.15	1	8260B		11/1/2017	CJR	1
2-Chlorotoluene	< 0.36	ug/l	0.36	1.15	1	8260B		11/1/2017	CJR	1
4-Chlorotoluene	< 0.35	ug/l	0.35	1.11	1	8260B		11/1/2017	CJR	1
1,2-Dibromo-3-chloropropane	< 1.88	ug/l	1.88	5.98	1	8260B		11/1/2017	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.44	1	8260B		11/1/2017	CJR	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.34	1	8260B		11/1/2017	CJR	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.43	1	8260B		11/1/2017	CJR	1
1,2-Dichlorobenzene	< 0.34	ug/l	0.34	1.09	1	8260B		11/1/2017	CJR	1
Dichlorodifluoromethane	< 0.38	ug/l	0.38	1.2	1	8260B		11/1/2017	CJR	1
1,2-Dichloroethane	< 0.45	ug/l	0.45	1.43	1	8260B		11/1/2017	CJR	1
1,1-Dichloroethane	0.52 "J"	ug/l	0.42	1.34	1	8260B		11/1/2017	CJR	1
1,1-Dichloroethene	< 0.46	ug/l	0.46	1.47	1	8260B		11/1/2017	CJR	1
cis-1,2-Dichloroethene	52	ug/l	0.41	1.29	1	8260B		11/1/2017	CJR	1
trans-1,2-Dichloroethene	2.44	ug/l	0.35	1.12	1	8260B		11/1/2017	CJR	1
1,2-Dichloropropane	< 0.39	ug/l	0.39	1.24	1	8260B		11/1/2017	CJR	1
1,3-Dichloropropane	< 0.49	ug/l	0.49	1.55	1	8260B		11/1/2017	CJR	1
trans-1,3-Dichloropropene	< 0.42	ug/l	0.42	1.33	1	8260B		11/1/2017	CJR	1
cis-1,3-Dichloropropene	< 0.21	ug/l	0.21	0.65	1	8260B		11/1/2017	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E33811
Project #

Lab Code 5033811A
Sample ID POND W-10/26/17
Sample Matrix Water
Sample Date 10/26/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.26	ug/l	0.26	0.83	1	8260B		11/1/2017	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		11/1/2017	CJR	1
Ethylbenzene	< 0.2	ug/l	0.2	0.63	1	8260B		11/1/2017	CJR	1
Hexachlorobutadiene	< 1.47	ug/l	1.47	4.68	1	8260B		11/1/2017	CJR	1
Isopropylbenzene	< 0.29	ug/l	0.29	0.93	1	8260B		11/1/2017	CJR	1
p-Isopropyltoluene	< 0.28	ug/l	0.28	0.91	1	8260B		11/1/2017	CJR	1
Methylene chloride	< 0.94	ug/l	0.94	2.98	1	8260B		11/1/2017	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.82	ug/l	0.82	2.6	1	8260B		11/1/2017	CJR	1
Naphthalene	< 2.17	ug/l	2.17	6.9	1	8260B		11/1/2017	CJR	1
n-Propylbenzene	< 0.19	ug/l	0.19	0.62	1	8260B		11/1/2017	CJR	1
1,1,2,2-Tetrachloroethane	< 0.69	ug/l	0.69	2.21	1	8260B		11/1/2017	CJR	1
1,1,1,2-Tetrachloroethane	< 0.47	ug/l	0.47	1.48	1	8260B		11/1/2017	CJR	1
Tetrachloroethene	< 0.48	ug/l	0.48	1.52	1	8260B		11/1/2017	CJR	1
Toluene	< 0.67	ug/l	0.67	2.13	1	8260B		11/1/2017	CJR	1
1,2,4-Trichlorobenzene	< 1.29	ug/l	1.29	4.1	1	8260B		11/1/2017	CJR	1
1,2,3-Trichlorobenzene	< 0.83	ug/l	0.83	2.63	1	8260B		11/1/2017	CJR	1
1,1,1-Trichloroethane	< 0.35	ug/l	0.35	1.11	1	8260B		11/1/2017	CJR	1
1,1,2-Trichloroethane	< 0.65	ug/l	0.65	2.06	1	8260B		11/1/2017	CJR	1
Trichloroethene (TCE)	0.95 "J"	ug/l	0.45	1.43	1	8260B		11/1/2017	CJR	1
Trichlorofluoromethane	< 0.64	ug/l	0.64	2.04	1	8260B		11/1/2017	CJR	1
1,2,4-Trimethylbenzene	< 1.14	ug/l	1.14	3.63	1	8260B		11/1/2017	CJR	1
1,3,5-Trimethylbenzene	< 0.91	ug/l	0.91	2.9	1	8260B		11/1/2017	CJR	1
Vinyl Chloride	22.9	ug/l	0.19	0.62	1	8260B		11/1/2017	CJR	1
m&p-Xylene	< 1.56	ug/l	1.56	4.95	1	8260B		11/1/2017	CJR	1
o-Xylene	< 0.39	ug/l	0.39	1.25	1	8260B		11/1/2017	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		11/1/2017	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		11/1/2017	CJR	1
SUR - 4-Bromofluorobenzene	97	REC %			1	8260B		11/1/2017	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		11/1/2017	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 2705

Page 1 of 1

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
____ Normal Turn Around

Lab I.D. #

Account No. : **Quote No.:**

Project #:

Sampler: (signature) Sarah E Krueger

Project (Name / Location): NEWTON GRAVEL PIT (NGP) MANITOWOC WI

Reports To: DAVE HENDERSON	Invoice To: (SEE LEFT)
Company AECOM	Company
Address 1555 NORTH RIVER CENTER DR SUITE 214	Address
City State Zip MILWAUKEE WI 53212	City State Zip
Phone (414) 944-6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
503381 1A	Pond W-10/24/17	10/24/17	1110		X	N	3	GW	HCl

Analysis Requested

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS
												V	

Other Analysis

PID/FID

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

ANALYSIS PER CONTRACT
POND SURFACE WATER SAMPLES ON THEIR OWN REPORT

Sample Integrity - To be completed by receiving lab.

Method of Shipment: SEL

Temp. of Temp. Blank ___ °C On Ice: X

Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Sarah E Krueger	0700	10/27/17			

Received in Laboratory By: -SEL Time: 0801 AM Date: 10-27-17

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Report Date *14-Nov-17*

Project Name NGP
Project # 60135471.38

Invoice # E33845

Lab Code 5033845A
Sample ID PW-11/3/17
Sample Matrix Water
Sample Date 11/3/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	0.35 "J"	ug/l	0.17	0.55	1	8260B		11/10/2017	CJR	1
Bromobenzene	< 0.43	ug/l	0.43	1.37	1	8260B		11/10/2017	CJR	1
Bromodichloromethane	< 0.31	ug/l	0.31	1	1	8260B		11/10/2017	CJR	1
Bromoform	< 0.49	ug/l	0.49	1.56	1	8260B		11/10/2017	CJR	1
tert-Butylbenzene	< 0.39	ug/l	0.39	1.23	1	8260B		11/10/2017	CJR	1
sec-Butylbenzene	< 0.24	ug/l	0.24	0.76	1	8260B		11/10/2017	CJR	1
n-Butylbenzene	< 0.34	ug/l	0.34	1.08	1	8260B		11/10/2017	CJR	1
Carbon Tetrachloride	< 0.21	ug/l	0.21	0.68	1	8260B		11/10/2017	CJR	1
Chlorobenzene	< 0.27	ug/l	0.27	0.86	1	8260B		11/10/2017	CJR	1
Chloroethane	< 0.5	ug/l	0.5	1.6	1	8260B		11/10/2017	CJR	1
Chloroform	< 0.96	ug/l	0.96	3.04	1	8260B		11/10/2017	CJR	1
Chloromethane	< 1.3	ug/l	1.3	4.15	1	8260B		11/10/2017	CJR	1
2-Chlorotoluene	< 0.36	ug/l	0.36	1.15	1	8260B		11/10/2017	CJR	1
4-Chlorotoluene	< 0.35	ug/l	0.35	1.11	1	8260B		11/10/2017	CJR	1
1,2-Dibromo-3-chloropropane	< 1.88	ug/l	1.88	5.98	1	8260B		11/10/2017	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.44	1	8260B		11/10/2017	CJR	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.34	1	8260B		11/10/2017	CJR	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.43	1	8260B		11/10/2017	CJR	1
1,2-Dichlorobenzene	< 0.34	ug/l	0.34	1.09	1	8260B		11/10/2017	CJR	1
Dichlorodifluoromethane	< 0.38	ug/l	0.38	1.2	1	8260B		11/10/2017	CJR	1
1,2-Dichloroethane	< 0.45	ug/l	0.45	1.43	1	8260B		11/10/2017	CJR	1
1,1-Dichloroethane	0.43 "J"	ug/l	0.42	1.34	1	8260B		11/10/2017	CJR	1
1,1-Dichloroethene	< 0.46	ug/l	0.46	1.47	1	8260B		11/10/2017	CJR	1
cis-1,2-Dichloroethene	47	ug/l	0.41	1.29	1	8260B		11/10/2017	CJR	1
trans-1,2-Dichloroethene	0.74 "J"	ug/l	0.35	1.12	1	8260B		11/10/2017	CJR	1
1,2-Dichloropropane	< 0.39	ug/l	0.39	1.24	1	8260B		11/10/2017	CJR	1
1,3-Dichloropropane	< 0.49	ug/l	0.49	1.55	1	8260B		11/10/2017	CJR	1
trans-1,3-Dichloropropene	< 0.42	ug/l	0.42	1.33	1	8260B		11/10/2017	CJR	1
cis-1,3-Dichloropropene	< 0.21	ug/l	0.21	0.65	1	8260B		11/10/2017	CJR	1

Project Name NGP **Invoice #** E33845
Project # 60135471.38

Lab Code 5033845A
Sample ID PW-11/3/17
Sample Matrix Water
Sample Date 11/3/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.26	ug/l	0.26	0.83	1	8260B		11/10/2017	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		11/10/2017	CJR	1
Ethylbenzene	< 0.2	ug/l	0.2	0.63	1	8260B		11/10/2017	CJR	1
Hexachlorobutadiene	< 1.47	ug/l	1.47	4.68	1	8260B		11/10/2017	CJR	1
Isopropylbenzene	< 0.29	ug/l	0.29	0.93	1	8260B		11/10/2017	CJR	1
p-Isopropyltoluene	< 0.28	ug/l	0.28	0.91	1	8260B		11/10/2017	CJR	1
Methylene chloride	< 0.94	ug/l	0.94	2.98	1	8260B		11/10/2017	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.82	ug/l	0.82	2.6	1	8260B		11/10/2017	CJR	1
Naphthalene	< 2.17	ug/l	2.17	6.9	1	8260B		11/10/2017	CJR	1
n-Propylbenzene	< 0.19	ug/l	0.19	0.62	1	8260B		11/10/2017	CJR	1
1,1,2,2-Tetrachloroethane	< 0.69	ug/l	0.69	2.21	1	8260B		11/10/2017	CJR	1
1,1,1,2-Tetrachloroethane	< 0.47	ug/l	0.47	1.48	1	8260B		11/10/2017	CJR	1
Tetrachloroethene	< 0.48	ug/l	0.48	1.52	1	8260B		11/10/2017	CJR	1
Toluene	< 0.67	ug/l	0.67	2.13	1	8260B		11/10/2017	CJR	1
1,2,4-Trichlorobenzene	< 1.29	ug/l	1.29	4.1	1	8260B		11/10/2017	CJR	1
1,2,3-Trichlorobenzene	< 0.83	ug/l	0.83	2.63	1	8260B		11/10/2017	CJR	1
1,1,1-Trichloroethane	< 0.35	ug/l	0.35	1.11	1	8260B		11/10/2017	CJR	1
1,1,2-Trichloroethane	< 0.65	ug/l	0.65	2.06	1	8260B		11/10/2017	CJR	1
Trichloroethene (TCE)	0.89 "J"	ug/l	0.45	1.43	1	8260B		11/10/2017	CJR	1
Trichlorofluoromethane	< 0.64	ug/l	0.64	2.04	1	8260B		11/10/2017	CJR	1
1,2,4-Trimethylbenzene	< 1.14	ug/l	1.14	3.63	1	8260B		11/10/2017	CJR	1
1,3,5-Trimethylbenzene	< 0.91	ug/l	0.91	2.9	1	8260B		11/10/2017	CJR	1
Vinyl Chloride	18.1	ug/l	0.19	0.62	1	8260B		11/10/2017	CJR	1
m&p-Xylene	< 1.56	ug/l	1.56	4.95	1	8260B		11/10/2017	CJR	1
o-Xylene	< 0.39	ug/l	0.39	1.25	1	8260B		11/10/2017	CJR	1
SUR - Toluene-d8	99	REC %			1	8260B		11/10/2017	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %			1	8260B		11/10/2017	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1	8260B		11/10/2017	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		11/10/2017	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF JSTODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # № 3300

Page ____ of ____

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
_X_ Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #:	
Sampler: (signature)	Sarah E Krueger
Project (Name / Location):	NEWTON GRAVEL PIT (NGP) MANITOWOC WI
Reports To:	DAVE HENDERSON
Company	AECOM
Address	1555 NORTH RIVER CENTER DR SUITE 214
City State Zip	MILWAUKEE WI 53212
Phone	(414) 944-6190
FAX	
Invoice To:	(SEE LEFT)
Company	
Address	
City State Zip	
Phone	
FAX	

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
503845A	PW-11/2/17	11/3/17	1335		x	N	3	GW	HCl

Analysis Requested / **Other Analysis**

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	8-RCRA METALS	PID/FID
												X		

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

ANALYSIS PER CONTRACT
POND SURFACE WATER SAMPLES ON THEIR OWN REPORT

Sample Integrity - To be completed by receiving lab.

Method of Shipment: Client

Temp. of Temp. Blank ____ °C On Ice: X

Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Sarah E Krueger	1650	11/3/17			

Received in Laboratory By: [signature] Time: 1650 Date: 11/3/17

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Report Date *08-Dec-17*

Project Name NEWTON PIT
Project # 60135471.38

Invoice # E33989

Lab Code 5033989A
Sample ID 11/30 POND
Sample Matrix Water
Sample Date 11/30/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Lead, Total	< 0.9	ug/L	0.9	3	1	7421		12/5/2017	CWT	1
Wet Chemistry										
Oil and Grease	< 3.04	mg/l	3.04	9.69	1	1664B		12/5/2017	NJC	1
Organic										
PAH SIM										
Acenaphthene	< 0.016	ug/l	0.016	0.05	1	M8270C	12/6/2017	12/7/2017	NJC	1
Acenaphthylene	< 0.019	ug/l	0.019	0.061	1	M8270C	12/6/2017	12/7/2017	NJC	1
Anthracene	< 0.019	ug/l	0.019	0.062	1	M8270C	12/6/2017	12/7/2017	NJC	1
Benzo(a)anthracene	< 0.017	ug/l	0.017	0.054	1	M8270C	12/6/2017	12/7/2017	NJC	1
Benzo(a)pyrene	< 0.02	ug/l	0.02	0.065	1	M8270C	12/6/2017	12/7/2017	NJC	1
Benzo(b)fluoranthene	< 0.018	ug/l	0.018	0.058	1	M8270C	12/6/2017	12/7/2017	NJC	1
Benzo(g,h,i)perylene	< 0.025	ug/l	0.025	0.081	1	M8270C	12/6/2017	12/7/2017	NJC	1
Benzo(k)fluoranthene	< 0.016	ug/l	0.016	0.05	1	M8270C	12/6/2017	12/7/2017	NJC	1
Chrysene	< 0.02	ug/l	0.02	0.065	1	M8270C	12/6/2017	12/7/2017	NJC	1
Dibenzo(a,h)anthracene	< 0.025	ug/l	0.025	0.078	1	M8270C	12/6/2017	12/7/2017	NJC	1
Fluoranthene	< 0.017	ug/l	0.017	0.053	1	M8270C	12/6/2017	12/7/2017	NJC	1
Fluorene	< 0.021	ug/l	0.021	0.066	1	M8270C	12/6/2017	12/7/2017	NJC	1
Indeno(1,2,3-cd)pyrene	< 0.023	ug/l	0.023	0.074	1	M8270C	12/6/2017	12/7/2017	NJC	1
1-Methyl naphthalene	< 0.024	ug/l	0.024	0.076	1	M8270C	12/6/2017	12/7/2017	NJC	1
2-Methyl naphthalene	< 0.024	ug/l	0.024	0.075	1	M8270C	12/6/2017	12/7/2017	NJC	1
Naphthalene	< 0.025	ug/l	0.025	0.081	1	M8270C	12/6/2017	12/7/2017	NJC	1
Phenanthrene	< 0.025	ug/l	0.025	0.081	1	M8270C	12/6/2017	12/7/2017	NJC	1
Pyrene	< 0.02	ug/l	0.02	0.063	1	M8270C	12/6/2017	12/7/2017	NJC	1
VOC's										
Benzene	< 0.17	ug/l	0.17	0.55	1	8260B		12/5/2017	CJR	1
Bromobenzene	< 0.43	ug/l	0.43	1.37	1	8260B		12/5/2017	CJR	1
Bromodichloromethane	< 0.31	ug/l	0.31	1	1	8260B		12/5/2017	CJR	1
Bromoform	< 0.49	ug/l	0.49	1.56	1	8260B		12/5/2017	CJR	1

Project Name NEWTON PIT **Invoice #** E33989
Project # 60135471.38

Lab Code 5033989A
Sample ID 11/30 POND
Sample Matrix Water
Sample Date 11/30/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
tert-Butylbenzene	< 0.39	ug/l	0.39	1.23	1	8260B		12/5/2017	CJR	1
sec-Butylbenzene	< 0.24	ug/l	0.24	0.76	1	8260B		12/5/2017	CJR	1
n-Butylbenzene	< 0.34	ug/l	0.34	1.08	1	8260B		12/5/2017	CJR	1
Carbon Tetrachloride	< 0.21	ug/l	0.21	0.68	1	8260B		12/5/2017	CJR	1
Chlorobenzene	< 0.27	ug/l	0.27	0.86	1	8260B		12/5/2017	CJR	1
Chloroethane	< 0.5	ug/l	0.5	1.6	1	8260B		12/5/2017	CJR	1
Chloroform	< 0.96	ug/l	0.96	3.04	1	8260B		12/5/2017	CJR	1
Chloromethane	< 1.3	ug/l	1.3	4.15	1	8260B		12/5/2017	CJR	1
2-Chlorotoluene	< 0.36	ug/l	0.36	1.15	1	8260B		12/5/2017	CJR	1
4-Chlorotoluene	< 0.35	ug/l	0.35	1.11	1	8260B		12/5/2017	CJR	1
1,2-Dibromo-3-chloropropane	< 1.88	ug/l	1.88	5.98	1	8260B		12/5/2017	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.44	1	8260B		12/5/2017	CJR	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.34	1	8260B		12/5/2017	CJR	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.43	1	8260B		12/5/2017	CJR	1
1,2-Dichlorobenzene	< 0.34	ug/l	0.34	1.09	1	8260B		12/5/2017	CJR	1
Dichlorodifluoromethane	< 0.38	ug/l	0.38	1.2	1	8260B		12/5/2017	CJR	1
1,2-Dichloroethane	< 0.45	ug/l	0.45	1.43	1	8260B		12/5/2017	CJR	1
1,1-Dichloroethane	0.42 "J"	ug/l	0.42	1.34	1	8260B		12/5/2017	CJR	1
1,1-Dichloroethene	< 0.46	ug/l	0.46	1.47	1	8260B		12/5/2017	CJR	1
cis-1,2-Dichloroethene	33	ug/l	0.41	1.29	1	8260B		12/5/2017	CJR	1
trans-1,2-Dichloroethene	0.46 "J"	ug/l	0.35	1.12	1	8260B		12/5/2017	CJR	1
1,2-Dichloropropane	< 0.39	ug/l	0.39	1.24	1	8260B		12/5/2017	CJR	1
1,3-Dichloropropane	< 0.49	ug/l	0.49	1.55	1	8260B		12/5/2017	CJR	1
trans-1,3-Dichloropropene	< 0.42	ug/l	0.42	1.33	1	8260B		12/5/2017	CJR	1
cis-1,3-Dichloropropene	< 0.21	ug/l	0.21	0.65	1	8260B		12/5/2017	CJR	1
Di-isopropyl ether	< 0.26	ug/l	0.26	0.83	1	8260B		12/5/2017	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		12/5/2017	CJR	1
Ethylbenzene	< 0.2	ug/l	0.2	0.63	1	8260B		12/5/2017	CJR	1
Hexachlorobutadiene	< 1.47	ug/l	1.47	4.68	1	8260B		12/5/2017	CJR	1
Isopropylbenzene	< 0.29	ug/l	0.29	0.93	1	8260B		12/5/2017	CJR	1
p-Isopropyltoluene	< 0.28	ug/l	0.28	0.91	1	8260B		12/5/2017	CJR	1
Methylene chloride	< 0.94	ug/l	0.94	2.98	1	8260B		12/5/2017	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.82	ug/l	0.82	2.6	1	8260B		12/5/2017	CJR	1
Naphthalene	< 2.17	ug/l	2.17	6.9	1	8260B		12/5/2017	CJR	1
n-Propylbenzene	< 0.19	ug/l	0.19	0.62	1	8260B		12/5/2017	CJR	1
1,1,2,2-Tetrachloroethane	< 0.69	ug/l	0.69	2.21	1	8260B		12/5/2017	CJR	1
1,1,1,2-Tetrachloroethane	< 0.47	ug/l	0.47	1.48	1	8260B		12/5/2017	CJR	1
Tetrachloroethene	< 0.48	ug/l	0.48	1.52	1	8260B		12/5/2017	CJR	1
Toluene	< 0.67	ug/l	0.67	2.13	1	8260B		12/5/2017	CJR	1
1,2,4-Trichlorobenzene	< 1.29	ug/l	1.29	4.1	1	8260B		12/5/2017	CJR	1
1,2,3-Trichlorobenzene	< 0.83	ug/l	0.83	2.63	1	8260B		12/5/2017	CJR	1
1,1,1-Trichloroethane	< 0.35	ug/l	0.35	1.11	1	8260B		12/5/2017	CJR	1
1,1,2-Trichloroethane	< 0.65	ug/l	0.65	2.06	1	8260B		12/5/2017	CJR	1
Trichloroethene (TCE)	0.53 "J"	ug/l	0.45	1.43	1	8260B		12/5/2017	CJR	1
Trichlorofluoromethane	< 0.64	ug/l	0.64	2.04	1	8260B		12/5/2017	CJR	1
1,2,4-Trimethylbenzene	< 1.14	ug/l	1.14	3.63	1	8260B		12/5/2017	CJR	1
1,3,5-Trimethylbenzene	< 0.91	ug/l	0.91	2.9	1	8260B		12/5/2017	CJR	1
Vinyl Chloride	17.7	ug/l	0.19	0.62	1	8260B		12/5/2017	CJR	1
m&p-Xylene	< 1.56	ug/l	1.56	4.95	1	8260B		12/5/2017	CJR	1
o-Xylene	< 0.39	ug/l	0.39	1.25	1	8260B		12/5/2017	CJR	1
SUR - Toluene-d8	97	REC %			1	8260B		12/5/2017	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		12/5/2017	CJR	1

Project Name NEWTON PIT **Invoice #** E33989
Project # 60135471.38

Lab Code 5033989A
Sample ID 11/30 POND
Sample Matrix Water
Sample Date 11/30/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
SUR - 4-Bromofluorobenzene	109	REC %			1	8260B		12/5/2017	CJR	1
SUR - Dibromofluoromethane	104	REC %			1	8260B		12/5/2017	CJR	1
Wet Chemistry										
General										
Solids, Total Suspended	5.30 "J"	mg/l	2	6.6	2	USGS 1-3765		12/4/2017	NJC	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

CWT denotes sub contract lab - Certification #445126660

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 30026

Page 1 of 1

Sample Handling Request

____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
Account No. :	**Quote No.:**
Project #: 60135471.38	
Sampler: (signature) D.S. Henderson	
Project (Name / Location): Newton Pit	

Reports To: DSH	Invoice To: Same
Company AECOM	Company
Address 1555 N Rivercenter Dr	Address
City State Zip MKE WI 53212	City State Zip
Phone 414 944 6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD TOTAL Recovery Bl	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
503399 9A	9/30 Pond	9/30/17	12:45		X	N	7	WW	Y			X		X	X					X		X		

Analysis Requested | **Other Analysis**

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Treatment Pond water Sample

Sample ID is 11/30 Pond o Sample date is 11/30 per MSH - 12/4/17

Sample Integrity - To be completed by receiving lab.

Method of Shipment: Ice

Temp. of Temp. Blank ____ °C On Ice: X

Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
D.S. Henderson		12/1/17			

Received in Laboratory By: [signature] Time: 10:00 Date: 12/2/17

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Report Date *08-Mar-18*

Project Name NEWTON PIT
Project # 60135401.38

Invoice # E34309

Lab Code 5034309A
Sample ID POND
Sample Matrix Water
Sample Date 3/2/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		3/7/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		3/7/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		3/7/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		3/7/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		3/7/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		3/7/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		3/7/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		3/7/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		3/7/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		3/7/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		3/7/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		3/7/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		3/7/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		3/7/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		3/7/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		3/7/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		3/7/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		3/7/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		3/7/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		3/7/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		3/7/2018	CJR	1
1,1-Dichloroethane	1.49	ug/l	0.36	1.14	1	8260B		3/7/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		3/7/2018	CJR	1
cis-1,2-Dichloroethene	139	ug/l	0.37	1.16	1	8260B		3/7/2018	CJR	1
trans-1,2-Dichloroethene	0.48 "J"	ug/l	0.34	1.07	1	8260B		3/7/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		3/7/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		3/7/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		3/7/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		3/7/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34309
Project # 60135401.38

Lab Code 5034309A
Sample ID POND
Sample Matrix Water
Sample Date 3/2/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		3/7/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		3/7/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		3/7/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		3/7/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		3/7/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		3/7/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		3/7/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		3/7/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		3/7/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		3/7/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		3/7/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		3/7/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		3/7/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		3/7/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		3/7/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		3/7/2018	CJR	1
1,1,1-Trichloroethane	0.56 "J"	ug/l	0.33	1.05	1	8260B		3/7/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		3/7/2018	CJR	1
Trichloroethene (TCE)	2.68	ug/l	0.3	0.94	1	8260B		3/7/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		3/7/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		3/7/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		3/7/2018	CJR	1
Vinyl Chloride	50	ug/l	0.2	0.65	1	8260B		3/7/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		3/7/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		3/7/2018	CJR	1
SUR - Toluene-d8	104	REC %			1	8260B		3/7/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		3/7/2018	CJR	1
SUR - 4-Bromofluorobenzene	91	REC %			1	8260B		3/7/2018	CJR	1
SUR - Dibromofluoromethane	105	REC %			1	8260B		3/7/2018	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

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Chain # Nº 3004[illegible]

Page 1 of 1

Sample Handling Request

____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
Account No. :	**Quote No.:**
Project #:	~~60~~ 60135401.38
Sampler: (signature)	DS Hinders
Project (Name / Location):	Newton Pit
Reports To: DSH	Invoice To: SAME
Company AECOM	Company
Address	Address
City State Zip	City State Zip
Phone	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
503430-1	Pond	3/2/18	2:30		X	N	1	H_2O	HCl													X		

Analysis Requested **Other Analysis**

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.

Method of Shipment: ~~GC~~ SAL

Temp. of Temp. Blank ___ °C On Ice: X

Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
D.S Hinders			Sarah E Krueger	1530	3/6/18
Sarah E Krueger	0815	3/6/18			

Received in Laboratory By: [signature] Time: 8:15 Date: 3/7/18

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

Dave Henderson
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Report Date *27-Apr-18*

Project Name NEWTON PIT
Project # 60135471.38

Invoice # E34504

Lab Code 5034504A
Sample ID POND
Sample Matrix Water
Sample Date 4/13/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	0.33 "J"	ug/l	0.22	0.71	1	8260B		4/17/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		4/17/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		4/17/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		4/17/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		4/17/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		4/17/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		4/17/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		4/17/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/17/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		4/17/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		4/17/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		4/17/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		4/17/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		4/17/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		4/17/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		4/17/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		4/17/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		4/17/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		4/17/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		4/17/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		4/17/2018	CJR	1
1,1-Dichloroethane	0.71 "J"	ug/l	0.36	1.14	1	8260B		4/17/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		4/17/2018	CJR	1
cis-1,2-Dichloroethene	51	ug/l	0.37	1.16	1	8260B		4/17/2018	CJR	1
trans-1,2-Dichloroethene	0.43 "J"	ug/l	0.34	1.07	1	8260B		4/17/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		4/17/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		4/17/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		4/17/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		4/17/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34504
Project # 60135471.38

Lab Code 5034504A
Sample ID POND
Sample Matrix Water
Sample Date 4/13/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		4/17/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		4/17/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/17/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		4/17/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		4/17/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		4/17/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		4/17/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		4/17/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		4/17/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		4/17/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		4/17/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		4/17/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		4/17/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		4/17/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		4/17/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		4/17/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		4/17/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		4/17/2018	CJR	1
Trichloroethene (TCE)	0.95	ug/l	0.3	0.94	1	8260B		4/17/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		4/17/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		4/17/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		4/17/2018	CJR	1
Vinyl Chloride	19.2	ug/l	0.2	0.65	1	8260B		4/17/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		4/17/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		4/17/2018	CJR	1
SUR - Toluene-d8	99	REC %			1	8260B		4/17/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	108	REC %			1	8260B		4/17/2018	CJR	1
SUR - 4-Bromofluorobenzene	95	REC %			1	8260B		4/17/2018	CJR	1
SUR - Dibromofluoromethane	103	REC %			1	8260B		4/17/2018	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 3006

Page 1 of 1

Sample Handling Request
_____ Rush Analysis Date Required _____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : **Quote No.:**

Project #: 60135471.38

Sampler: (signature) DAVE HENDERSON

Project (Name / Location): Newton Pit

Reports To: DAVE HENDERSON	Invoice To: SAME
Company AECOM	Company
Address 1555 N River Center	Address
City State Zip Milwaukee WI	City State Zip
Phone 414 944 6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
503450-1A	Pond	4/13	12-		X	N	3	GW	HCl

Analysis Requested / **Other Analysis**

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS								PID/ FID
												X									

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.

Method of Shipment: GC

Temp. of Temp. Blank ___ °C On Ice: X

Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
D.S. Henderson					

Received in Laboratory By: [signature] Time: 8:00 Date: 4/17/13

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

Dave Henderson
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Report Date *23-May-18*

Project Name NEWTON PIT
Project # 60135471.38

Invoice # E34663

Lab Code 5034663A
Sample ID POND
Sample Matrix Water
Sample Date 5/17/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/21/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/21/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/21/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/21/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/21/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/21/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/21/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/21/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/21/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/21/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/21/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/21/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/21/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/21/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/21/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/21/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/21/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/21/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/21/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/21/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/21/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/21/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/21/2018	CJR	1
cis-1,2-Dichloroethene	18.8	ug/l	0.37	1.16	1	8260B		5/21/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/21/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/21/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/21/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/21/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/21/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34663
Project # 60135471.38

Lab Code 5034663A
Sample ID POND
Sample Matrix Water
Sample Date 5/17/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/21/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/21/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/21/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/21/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/21/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/21/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/21/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/21/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/21/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/21/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/21/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/21/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/21/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/21/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/21/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/21/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/21/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/21/2018	CJR	1
Trichloroethene (TCE)	0.36 "J"	ug/l	0.3	0.94	1	8260B		5/21/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/21/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/21/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/21/2018	CJR	1
Vinyl Chloride	6.9	ug/l	0.2	0.65	1	8260B		5/21/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/21/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/21/2018	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		5/21/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	91	REC %			1	8260B		5/21/2018	CJR	1
SUR - 4-Bromofluorobenzene	99	REC %			1	8260B		5/21/2018	CJR	1
SUR - Dibromofluoromethane	100	REC %			1	8260B		5/21/2018	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF JSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 300

Page 1 of 1

Sample Handling Request

____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)

X Normal Turn Around

Lab I.D. #

Account No. : **Quote No.:**

Project #: 60135471.38

Sampler: (signature) DAVE Hendrson

Project (Name / Location): Newton Pit

Reports To: DSH	Invoice To: SAME
Company AECom	Company
Address 1555 Rivercenter	Address
City State Zip Milwaukee WI 53212	City State Zip
Phone 414 944 6190	Phone
FAX	FAX

Analysis Requested | **Other Analysis**

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
505466SA	Pond	5/17/18	1440		X	N	3	H2O	HCL

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
												X		

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.

Method of Shipment: GC

Temp. of Temp. Blank ___ °C On Ice: X

Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
D.S. Hendrson		7/18/18			

Received in Laboratory By: [signature] Time: 10:00 Date: 5/19/18

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Report Date *15-Jun-18*

Project Name NEWTON PIT
Project # 60135471.38

Invoice # E34722

Lab Code 5034722A
Sample ID POND
Sample Matrix Water
Sample Date 5/31/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Lead, Total	< 0.9	ug/L	0.9	3	1	7421		6/8/2018	CWT	1
Wet Chemistry										
Oil and Grease	< 2.64	mg/l	2.64	8.4	1	1664B		6/15/2018	NJC	1
Organic										
PAH SIM										
Acenaphthene	0.0095 "J"	ug/l	0.008	0.025	1	M8270C	6/5/2018	6/5/2018	NJC	5
Acenaphthylene	< 0.009	ug/l	0.009	0.028	1	M8270C	6/5/2018	6/5/2018	NJC	1
Anthracene	< 0.009	ug/l	0.009	0.03	1	M8270C	6/5/2018	6/5/2018	NJC	1
Benzo(a)anthracene	< 0.017	ug/l	0.017	0.054	1	M8270C	6/5/2018	6/5/2018	NJC	1
Benzo(a)pyrene	< 0.017	ug/l	0.017	0.055	1	M8270C	6/5/2018	6/5/2018	NJC	1
Benzo(b)fluoranthene	< 0.02	ug/l	0.02	0.063	1	M8270C	6/5/2018	6/5/2018	NJC	1
Benzo(g,h,i)perylene	< 0.011	ug/l	0.011	0.036	1	M8270C	6/5/2018	6/5/2018	NJC	1
Benzo(k)fluoranthene	< 0.014	ug/l	0.014	0.044	1	M8270C	6/5/2018	6/5/2018	NJC	1
Chrysene	< 0.019	ug/l	0.019	0.062	1	M8270C	6/5/2018	6/5/2018	NJC	1
Dibenzo(a,h)anthracene	< 0.01	ug/l	0.01	0.031	1	M8270C	6/5/2018	6/5/2018	NJC	1
Fluoranthene	< 0.031	ug/l	0.031	0.098	1	M8270C	6/5/2018	6/5/2018	NJC	1
Fluorene	0.0128 "J"	ug/l	0.011	0.034	1	M8270C	6/5/2018	6/5/2018	NJC	5
Indeno(1,2,3-cd)pyrene	< 0.012	ug/l	0.012	0.038	1	M8270C	6/5/2018	6/5/2018	NJC	1
1-Methyl naphthalene	< 0.0239	ug/l	0.0239	0.076	1	M8270C	6/5/2018	6/5/2018	NJC	1
2-Methyl naphthalene	< 0.0236	ug/l	0.0236	0.0751	1	M8270C	6/5/2018	6/5/2018	NJC	1
Naphthalene	0.033 "J"	ug/l	0.023	0.073	1	M8270C	6/5/2018	6/5/2018	NJC	1
Phenanthrene	0.0264 "J"	ug/l	0.025	0.081	1	M8270C	6/5/2018	6/5/2018	NJC	1
Pyrene	< 0.03	ug/l	0.03	0.095	1	M8270C	6/5/2018	6/5/2018	NJC	1
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		6/7/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		6/7/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		6/7/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		6/7/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34722
Project # 60135471.38

Lab Code 5034722A
Sample ID POND
Sample Matrix Water
Sample Date 5/31/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		6/7/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		6/7/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		6/7/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/7/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		6/7/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		6/7/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		6/7/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		6/7/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		6/7/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/7/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		6/7/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		6/7/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		6/7/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		6/7/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		6/7/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		6/7/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		6/7/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		6/7/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		6/7/2018	CJR	1
cis-1,2-Dichloroethene	20.1	ug/l	0.37	1.16	1	8260B		6/7/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		6/7/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		6/7/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		6/7/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		6/7/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		6/7/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		6/7/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		6/7/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		6/7/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		6/7/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		6/7/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		6/7/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/7/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		6/7/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		6/7/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		6/7/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		6/7/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		6/7/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		6/7/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		6/7/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		6/7/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		6/7/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		6/7/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		6/7/2018	CJR	1
Trichloroethene (TCE)	0.47 "J"	ug/l	0.3	0.94	1	8260B		6/7/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		6/7/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		6/7/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		6/7/2018	CJR	1
Vinyl Chloride	6.2	ug/l	0.2	0.65	1	8260B		6/7/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		6/7/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		6/7/2018	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		6/7/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1	8260B		6/7/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34722
Project # 60135471.38

Lab Code 5034722A
Sample ID POND
Sample Matrix Water
Sample Date 5/31/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
SUR - 4-Bromofluorobenzene	100	REC %			1	8260B		6/7/2018	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		6/7/2018	CJR	1
Wet Chemistry										
General										
pH	7.35	su			1	9040C		6/1/2018	NJC	1
Solids, Total Suspended	2.60 "J"	mg/l	2	6.6	2	USGS 1-3765		6/7/2018	NJC	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.
5	The QC blank not within established limits.

CWT denotes sub contract lab - Certification #445126660

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD

Synergy
Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 30622

Page 1 of 1

Sample Handling Request
_____ Rush Analysis Date Required _____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : | **Quote No.:**

Project #: 60135471.38

Sampler: (signature) Matthew Smith

Project (Name / Location): NEWTON PIT

Reports To: DAVID HENDERSON	Invoice To:
Company AECOM	Company
Address 1555 N RIVERCENTER DR	Address
City State Zip MILWAUKEE WI	City State Zip
Phone 414-944-6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
503477ZA	POND A	5/31/18	11:20		X	N	7	H_2O	

Analysis Requested

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD TOTAL	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PH
		X		X	X					X		X		X

Other Analysis

PID/FID

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.

Method of Shipment: GC

Temp. of Temp. Blank ___ °C On Ice: X

Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Matthew Smith	11:47	5/31/18	TRANSFER		

Received in Laboratory By: _____ Time: 8:00 Date: 6/1/18

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Report Date *16-Jul-18*

Project Name NEWTON PIT
Project # 60135471.38

Invoice # E34837

Lab Code 5034837A
Sample ID POND
Sample Matrix Water
Sample Date 6/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Lead, Total	< 0.8	ug/L	0.8	2.7	1	7421		6/26/2018	CWT	1
Wet Chemistry										
Oil and Grease	< 2.64	mg/l	2.64	8.4	1	1664B		7/15/2018	NJC	1
Organic										
PAH SIM										
Acenaphthene	< 0.008	ug/l	0.008	0.025	1	M8270C	6/27/2018	6/28/2018	NJC	1
Acenaphthylene	< 0.009	ug/l	0.009	0.028	1	M8270C	6/27/2018	6/28/2018	NJC	1
Anthracene	< 0.009	ug/l	0.009	0.03	1	M8270C	6/27/2018	6/28/2018	NJC	1
Benzo(a)anthracene	< 0.017	ug/l	0.017	0.054	1	M8270C	6/27/2018	6/28/2018	NJC	1
Benzo(a)pyrene	< 0.017	ug/l	0.017	0.055	1	M8270C	6/27/2018	6/28/2018	NJC	1
Benzo(b)fluoranthene	< 0.02	ug/l	0.02	0.063	1	M8270C	6/27/2018	6/28/2018	NJC	1
Benzo(g,h,i)perylene	< 0.011	ug/l	0.011	0.036	1	M8270C	6/27/2018	6/28/2018	NJC	1
Benzo(k)fluoranthene	< 0.014	ug/l	0.014	0.044	1	M8270C	6/27/2018	6/28/2018	NJC	1
Chrysene	< 0.019	ug/l	0.019	0.062	1	M8270C	6/27/2018	6/28/2018	NJC	1
Dibenzo(a,h)anthracene	< 0.01	ug/l	0.01	0.031	1	M8270C	6/27/2018	6/28/2018	NJC	1
Fluoranthene	< 0.031	ug/l	0.031	0.098	1	M8270C	6/27/2018	6/28/2018	NJC	1
Fluorene	< 0.011	ug/l	0.011	0.034	1	M8270C	6/27/2018	6/28/2018	NJC	1
Indeno(1,2,3-cd)pyrene	< 0.012	ug/l	0.012	0.038	1	M8270C	6/27/2018	6/28/2018	NJC	1
1-Methyl naphthalene	< 0.0239	ug/l	0.0239	0.076	1	M8270C	6/27/2018	6/28/2018	NJC	1
2-Methyl naphthalene	< 0.0236	ug/l	0.0236	0.0751	1	M8270C	6/27/2018	6/28/2018	NJC	1
Naphthalene	0.0255 "J"	ug/l	0.023	0.073	1	M8270C	6/27/2018	6/28/2018	NJC	1
Phenanthrene	< 0.025	ug/l	0.025	0.081	1	M8270C	6/27/2018	6/28/2018	NJC	1
Pyrene	< 0.03	ug/l	0.03	0.095	1	M8270C	6/27/2018	6/28/2018	NJC	1
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		6/27/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		6/27/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		6/27/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		6/27/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34837
Project # 60135471.38

Lab Code 5034837A
Sample ID POND
Sample Matrix Water
Sample Date 6/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		6/27/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		6/27/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		6/27/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/27/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		6/27/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		6/27/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		6/27/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		6/27/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		6/27/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/27/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		6/27/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		6/27/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		6/27/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		6/27/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		6/27/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		6/27/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		6/27/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		6/27/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		6/27/2018	CJR	1
cis-1,2-Dichloroethene	33	ug/l	0.37	1.16	1	8260B		6/27/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		6/27/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		6/27/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		6/27/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		6/27/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		6/27/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		6/27/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		6/27/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		6/27/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		6/27/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		6/27/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		6/27/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/27/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		6/27/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		6/27/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		6/27/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		6/27/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		6/27/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		6/27/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		6/27/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		6/27/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		6/27/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		6/27/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		6/27/2018	CJR	1
Trichloroethene (TCE)	0.55 "J"	ug/l	0.3	0.94	1	8260B		6/27/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		6/27/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		6/27/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		6/27/2018	CJR	1
Vinyl Chloride	13.5	ug/l	0.2	0.65	1	8260B		6/27/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		6/27/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		6/27/2018	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		6/27/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B		6/27/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34837
Project # 60135471.38

Lab Code 5034837A
Sample ID POND
Sample Matrix Water
Sample Date 6/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
SUR - 4-Bromofluorobenzene	99	REC %			1	8260B		6/27/2018	CJR	1
SUR - Dibromofluoromethane	100	REC %			1	8260B		6/27/2018	CJR	1
Wet Chemistry										
General										
pH	7.70	su			1	9040C		6/22/2018	NJC	1
Solids, Total Suspended	3.40 "J"	mg/l	2	6.6	2	USGS 1-3765		6/26/2018	NJC	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

CWT denotes sub contract lab - Certification #445126660

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 3004

Page ____ of ____

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
____ Normal Turn Around

Lab I.D. #

Account No. : | **Quote No.:**

Project #: 60135471.38

Sampler: (signature)

Project (Name / Location): NEWTON PIT

Reports To: DAVID HENDERSON	Invoice To: SAME
Company AECOM	Company
Address 1555 N RIVERCENTER DR	Address
City State Zip MILWAUKEE WI	City State Zip
Phone 414 - 944 - 6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
505483 7A	POND	6/20/18	1:00		X	N		H2O	

Analysis Requested | **Other Analysis**

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PH	PID/FID
		X		X	X					X		X		X	

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: GC
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date

Received in Laboratory By: Time: 8:00 Date: 6/22/18

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Report Date *24-Jul-18*

Project Name NEWTON PIT
Project # 60135471.38

Invoice # E34952

Lab Code 5034952A
Sample ID POND
Sample Matrix Water
Sample Date 7/18/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		7/20/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		7/20/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		7/20/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		7/20/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		7/20/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		7/20/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		7/20/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		7/20/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		7/20/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		7/20/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		7/20/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		7/20/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		7/20/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		7/20/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		7/20/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		7/20/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		7/20/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		7/20/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		7/20/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		7/20/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		7/20/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		7/20/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		7/20/2018	CJR	1
cis-1,2-Dichloroethene	25.2	ug/l	0.37	1.16	1	8260B		7/20/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		7/20/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		7/20/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		7/20/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		7/20/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		7/20/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34952
Project # 60135471.38

Lab Code 5034952A
Sample ID POND
Sample Matrix Water
Sample Date 7/18/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		7/20/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		7/20/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		7/20/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		7/20/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		7/20/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		7/20/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		7/20/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		7/20/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		7/20/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		7/20/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		7/20/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		7/20/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		7/20/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		7/20/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		7/20/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		7/20/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		7/20/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		7/20/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		7/20/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		7/20/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		7/20/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		7/20/2018	CJR	1
Vinyl Chloride	8.5	ug/l	0.2	0.65	1	8260B		7/20/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		7/20/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		7/20/2018	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		7/20/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		7/20/2018	CJR	1
SUR - 4-Bromofluorobenzene	101	REC %			1	8260B		7/20/2018	CJR	1
SUR - Dibromofluoromethane	96	REC %			1	8260B		7/20/2018	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF STODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # № 369[illegible]

Page 1 of 1

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
Account No. :	**Quote No.:**
Project #: 60135471.38	
Sampler: (signature) MATT SMITH	
Project (Name / Location): NEWTON PIT	
Reports To: DAVID HENDERSON	Invoice To: SAME
Company AECOM	Company
Address 1555 N RIVER CENTER DR	Address
City State Zip MILWAUKEE WI	City State Zip
Phone 414 - 944 - 6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
50349521	POND	7/18/18	10:25																			X		

Analysis Requested **Other Analysis**

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: GR
Temp. of Temp. Blank ___ °C On Ice: X
Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date

Received in Laboratory By: [signature] Time: 8:00 Date: 7/19/18

Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE. WI 53212

Report Date *24-Aug-18*

Project Name NEWTON PIT
Project # 60135471.38

Invoice # E35087

Lab Code 5035087A
Sample ID POND
Sample Matrix Water
Sample Date 8/14/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		8/22/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		8/22/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		8/22/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		8/22/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		8/22/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		8/22/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		8/22/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		8/22/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		8/22/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		8/22/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		8/22/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		8/22/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		8/22/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		8/22/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		8/22/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		8/22/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		8/22/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		8/22/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		8/22/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		8/22/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		8/22/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		8/22/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		8/22/2018	CJR	1
cis-1,2-Dichloroethene	31	ug/l	0.37	1.16	1	8260B		8/22/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		8/22/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E35087
Project # 60135471.38

Lab Code 5035087A
Sample ID POND
Sample Matrix Water
Sample Date 8/14/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		8/22/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		8/22/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		8/22/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		8/22/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		8/22/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		8/22/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		8/22/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		8/22/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		8/22/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		8/22/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		8/22/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		8/22/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		8/22/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		8/22/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		8/22/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		8/22/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		8/22/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		8/22/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		8/22/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		8/22/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		8/22/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		8/22/2018	CJR	1
Trichloroethene (TCE)	0.42 "J"	ug/l	0.3	0.94	1	8260B		8/22/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		8/22/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		8/22/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		8/22/2018	CJR	1
Vinyl Chloride	11.2	ug/l	0.2	0.65	1	8260B		8/22/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		8/22/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		8/22/2018	CJR	1
SUR - Toluene-d8	99	REC %			1	8260B		8/22/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	106	REC %			1	8260B		8/22/2018	CJR	1
SUR - 4-Bromofluorobenzene	106	REC %			1	8260B		8/22/2018	CJR	1
SUR - Dibromofluoromethane	117	REC %			1	8260B		8/22/2018	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD

Synergy
Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 3006

Page 1 of 1

Sample Handling Request
_____ Rush Analysis Date Required _____
(Rushes accepted only with prior authorization)
_X_ Normal Turn Around

Lab I.D. #	
Account No. :	**Quote No.:**
Project #: 60135471.38	
Sampler: (signature)	
Project (Name / Location): NEWTON PIT	
Reports To: DAVID HENDERSON	Invoice To: SAME
Company AECOM	Company
Address 1555 N RIVERCENTER DR	Address
City State Zip MILWAUKEE WI	City State Zip
Phone 414-944-6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
80350874	POND	8/14/18 ~~10:00~~	10:00		X	N	3	H_2O														X		

Analysis Requested | **Other Analysis**

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: GC
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
	10:30	8/14/18			

Received in Laboratory By: Time: 8:00 Date: 8/16/18

Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE. WI 53212

Report Date *25-Sep-18*

Project Name NEWTON PIT
Project # 60135471.38

Invoice # E35225

Lab Code 5035225A
Sample ID POND
Sample Matrix Water
Sample Date 9/17/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		9/20/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		9/20/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		9/20/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		9/20/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		9/20/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		9/20/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		9/20/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		9/20/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		9/20/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		9/20/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		9/20/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		9/20/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		9/20/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		9/20/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		9/20/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		9/20/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		9/20/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		9/20/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		9/20/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		9/20/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		9/20/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		9/20/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		9/20/2018	CJR	1
cis-1,2-Dichloroethene	25.7	ug/l	0.37	1.16	1	8260B		9/20/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		9/20/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E35225
Project # 60135471.38

Lab Code 5035225A
Sample ID POND
Sample Matrix Water
Sample Date 9/17/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		9/20/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		9/20/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		9/20/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		9/20/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		9/20/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		9/20/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		9/20/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		9/20/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		9/20/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		9/20/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		9/20/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		9/20/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		9/20/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		9/20/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		9/20/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		9/20/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		9/20/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		9/20/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		9/20/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		9/20/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		9/20/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		9/20/2018	CJR	1
Trichloroethene (TCE)	0.34 "J"	ug/l	0.3	0.94	1	8260B		9/20/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		9/20/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		9/20/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		9/20/2018	CJR	1
Vinyl Chloride	7.3	ug/l	0.2	0.65	1	8260B		9/20/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		9/20/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		9/20/2018	CJR	1
SUR - Toluene-d8	104	REC %			1	8260B		9/20/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	100	REC %			1	8260B		9/20/2018	CJR	1
SUR - 4-Bromofluorobenzene	116	REC %			1	8260B		9/20/2018	CJR	1
SUR - Dibromofluoromethane	105	REC %			1	8260B		9/20/2018	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF STODY RECORD

Synergy

Environmental Lab, Inc.

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920-830-2455 • FAX 920-733-0631

Chain # Nº 3001

Page 1 of 1

Sample Handling Request
_____ Rush Analysis Date Required _____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
Account No. :	**Quote No.:**
Project #: 60135471.38	
Sampler: (signature)	
Project (Name / Location): NEWTON Pit	
Reports To: DAVID HENDERSON	Invoice To: SAME
Company ALECOM	Company
Address 1555 N RIVERCENTER DR	Address
City State Zip MILWAUKEE WI	City State Zip
Phone 414-944-6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
503525A	POND	9/17/18	8:00		X	N	3	H20	

Analysis Requested

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS
												X	

Other Analysis

PID/FID

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Car
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date

Received in Laboratory By: Time: 10:00 Date: 9/18/18

Project Name NEWTON PIT **Invoice #** E35330
Project # 60135471.34

Lab Code 5035330N
Sample ID SG-P
Sample Matrix Water
Sample Date 10/8/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		10/13/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		10/13/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		10/13/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		10/13/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		10/13/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		10/13/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		10/13/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		10/13/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		10/13/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		10/13/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		10/13/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		10/13/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		10/13/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		10/13/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		10/13/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		10/13/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		10/13/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		10/13/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		10/13/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		10/13/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		10/13/2018	CJR	1
1,1-Dichloroethane	0.37 "J"	ug/l	0.36	1.14	1	8260B		10/13/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		10/13/2018	CJR	1
cis-1,2-Dichloroethene	26.7	ug/l	0.37	1.16	1	8260B		10/13/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		10/13/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		10/13/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		10/13/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		10/13/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		10/13/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		10/13/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		10/13/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		10/13/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		10/13/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		10/13/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		10/13/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		10/13/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		10/13/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		10/13/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		10/13/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		10/13/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		10/13/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		10/13/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		10/13/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		10/13/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E35330
Project # 60135471.34

Lab Code 5035330N
Sample ID SG-P
Sample Matrix Water
Sample Date 10/8/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		10/13/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		10/13/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		10/13/2018	CJR	1
Trichloroethene (TCE)	0.31 "J"	ug/l	0.3	0.94	1	8260B		10/13/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		10/13/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		10/13/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		10/13/2018	CJR	1
Vinyl Chloride	9.1	ug/l	0.2	0.65	1	8260B		10/13/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		10/13/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		10/13/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	107	REC %			1	8260B		10/13/2018	CJR	1
SUR - 4-Bromofluorobenzene	100	REC %			1	8260B		10/13/2018	CJR	1
SUR - Dibromofluoromethane	103	REC %			1	8260B		10/13/2018	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		10/13/2018	CJR	1

CHAIN OF CUSTODY RECORD

Synergy Environmental Lab, Inc.

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Chain # Nº 35[illegible]7

Page 1 of 3

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
A Normal Turn Around

Lab I.D. #
Account No. : Quote No.:
Project #: 60135471.34
Sampler: (signature) RW & JM

Project (Name / Location): Newton Pit

Reports To: DAVE HENDERSON	Invoice To: SAME
Company AECOM	Company
Address 1555 Rivercenter Dr	Address
City State Zip Milw WI 53212	City State Zip
Phone 414 944 6190	Phone
FAX ———	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	8-RCRA METALS	PID/FID
5035550 A	PZ16C	10/9/18	11:00			N	3	GW	HCL													X		
B	PZ16B		12:00			N	3	GW	HCL													X		
C	PZ16A		12:20			N	3	GW	HCL													X		
D	PZ16		13:00			N	3	GW	HCL													X		
E	WT16		14:00			N	3	GW	HCL													X		
F	FD2		11:00			N	3	GW	HCL													X		
G	WT21		12:30			N	3	GW	HCL													X		
H	WT20		11:40			N	3	GW	HCL													X		
I	WT23		10:50			N	3	GW	HCL													X		
J	WT22		13:15			N	3	GW	HCL													X		

Analysis Requested — Other Analysis

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Car
Temp. of Temp. Blank ___ °C On Ice: X
Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
DSHenderson		10/10/18			

Received in Laboratory By: [signature] Time: 8:00 Date: 10/11/18

CHAIN OF CUSTODY RECORD

Synergy Environmental Lab, Inc.

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Chain # Nº 35[illegible]3

Page 2 of 3

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
A Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #:	60135471.34
Sampler: (signature)	
Project (Name / Location):	Newton Pit

Reports To:	Invoice To:
Company	Company
Address	Address
City State Zip	City State Zip
Phone	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
503533OK	SG1	10/9/18	15:45			N	3	GW	HCL													X		
L	SG2		15:10			N	3	GW	HCL													X		
M	SG3		15:30			N	3	GW	HCL													X		
N	SG-P		16:20			N	3	GW	HCL													X		
O	FD3		15:10			N	3	GW	HCL													X		
P	PZ26A		17:00			N	3	GW	HCL													X		
Q	WT26		18:00			N	3	GW	HCL													X		
R	TB100818		—			N	3	GW	HCL													X		

Analysis Requested — Other Analysis

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: GS
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
D.S. Henderson		10/10/18			

Received in Laboratory By: [signature] Time: 8:00 Date: 10/11

CHAIN OF CUSTODY RECORD

Synergy
Environmental Lab, Inc.

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Chain # № 35[illegible]4

Page 3 of 3

Sample Handling Request

____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #: 6013547/.34	
Sampler: (signature)	
Project (Name / Location): Newton Pit	
Reports To:	Invoice To:
Company	Company
Address	Address
City State Zip	City State Zip
Phone	Phone
FAX	FAX

Analysis Requested / **Other Analysis**

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	~~8 RCRA~~ METALS copper contract Lg AL	Aluminum						PID/FID
S035330S	WT05 ✓	10/9/18	10:00			N	3	GW	HCL													X								
T	PZ05A ✓	↓	10:40			N	3	GW	HCL													X								
U	PZ05B ✓	↓	9:45			N	3	GW	HCL													X								
V	WT15 ✓	↓	12:00			N	~~3~~ 1	GW	HCL													X								
W	PZ15A ✓	↓	12:10			N	3	GW	HCL													X								
X	PZ15B ✓	↓	13:00			N	3	GW	HCL													X								
Y	WT11 ✓	↓	1545			N	3	GW	HCL													X								
Z	WT12 ✓	↓	15:00			N	3	GW	HCL													X								
AA	PZ12 ✓	↓	14:10			N	3	GW	HCL													X								
BB	WT34 ✓	↓	16:30			N	1	GW	HNO_3														X							

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

WT-15, 2 Broken vials only 1 whole vial DSH

Sample Integrity - To be completed by receiving lab.

Method of Shipment: Gc

Temp. of Temp. Blank ____ °C On Ice: X

Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
D.S. Henderson		10/10/18			

Received in Laboratory By: [signature] Time: 8:00 Date: 10/10/18

Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE. WI 53212

Report Date *04-Dec-18*

Project Name NEWTON GRAVEL PIT **Invoice #** E35527
Project # 60135471

Lab Code 5035527A
Sample ID SG-P
Sample Matrix Water
Sample Date 11/19/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 2.2	ug/l	2.2	7.1	10	8260B		12/1/2018	CJR	1
Bromobenzene	< 4.4	ug/l	4.4	13.8	10	8260B		12/1/2018	CJR	1
Bromodichloromethane	< 3.3	ug/l	3.3	10.6	10	8260B		12/1/2018	CJR	1
Bromoform	< 4.5	ug/l	4.5	14.4	10	8260B		12/1/2018	CJR	1
tert-Butylbenzene	< 2.5	ug/l	2.5	8	10	8260B		12/1/2018	CJR	1
sec-Butylbenzene	< 7.9	ug/l	7.9	25.3	10	8260B		12/1/2018	CJR	1
n-Butylbenzene	< 7.1	ug/l	7.1	22.5	10	8260B		12/1/2018	CJR	1
Carbon Tetrachloride	< 3.1	ug/l	3.1	9.8	10	8260B		12/1/2018	CJR	1
Chlorobenzene	< 2.6	ug/l	2.6	8.3	10	8260B		12/1/2018	CJR	1
Chloroethane	< 6.1	ug/l	6.1	19.5	10	8260B		12/1/2018	CJR	1
Chloroform	< 2.6	ug/l	2.6	8.2	10	8260B		12/1/2018	CJR	1
Chloromethane	< 5.4	ug/l	5.4	17.2	10	8260B		12/1/2018	CJR	1
2-Chlorotoluene	< 3.1	ug/l	3.1	9.8	10	8260B		12/1/2018	CJR	1
4-Chlorotoluene	< 2.6	ug/l	2.6	8.3	10	8260B		12/1/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 29.6	ug/l	29.6	94.3	10	8260B		12/1/2018	CJR	1
Dibromochloromethane	< 2.2	ug/l	2.2	6.9	10	8260B		12/1/2018	CJR	1
1,4-Dichlorobenzene	< 7	ug/l	7	22.2	10	8260B		12/1/2018	CJR	1
1,3-Dichlorobenzene	< 8.5	ug/l	8.5	27	10	8260B		12/1/2018	CJR	1
1,2-Dichlorobenzene	< 8.6	ug/l	8.6	27.4	10	8260B		12/1/2018	CJR	1
Dichlorodifluoromethane	< 3.2	ug/l	3.2	10.2	10	8260B		12/1/2018	CJR	1
1,2-Dichloroethane	< 2.5	ug/l	2.5	7.8	10	8260B		12/1/2018	CJR	1
1,1-Dichloroethane	< 3.6	ug/l	3.6	11.4	10	8260B		12/1/2018	CJR	1
1,1-Dichloroethene	< 4.2	ug/l	4.2	13.4	10	8260B		12/1/2018	CJR	1
cis-1,2-Dichloroethene	25.1	ug/l	3.7	11.6	10	8260B		12/1/2018	CJR	1
trans-1,2-Dichloroethene	< 3.4	ug/l	3.4	10.7	10	8260B		12/1/2018	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E35527
Project # 60135471

Lab Code 5035527A
Sample ID SG-P
Sample Matrix Water
Sample Date 11/19/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 4.4	ug/l	4.4	13.9	10	8260B		12/1/2018	CJR	1
1,3-Dichloropropane	< 3	ug/l	3	9.4	10	8260B		12/1/2018	CJR	1
trans-1,3-Dichloropropene	< 3.2	ug/l	3.2	10.1	10	8260B		12/1/2018	CJR	1
cis-1,3-Dichloropropene	< 2.6	ug/l	2.6	8.1	10	8260B		12/1/2018	CJR	1
Di-isopropyl ether	< 2.1	ug/l	2.1	6.6	10	8260B		12/1/2018	CJR	1
EDB (1,2-Dibromoethane)	< 3.4	ug/l	3.4	10.9	10	8260B		12/1/2018	CJR	1
Ethylbenzene	< 2.6	ug/l	2.6	8.3	10	8260B		12/1/2018	CJR	1
Hexachlorobutadiene	< 13.4	ug/l	13.4	42.8	10	8260B		12/1/2018	CJR	4
Isopropylbenzene	< 7.8	ug/l	7.8	24.7	10	8260B		12/1/2018	CJR	1
p-Isopropyltoluene	< 2.4	ug/l	2.4	7.6	10	8260B		12/1/2018	CJR	1
Methylene chloride	< 13.2	ug/l	13.2	42.1	10	8260B		12/1/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 2.8	ug/l	2.8	8.9	10	8260B		12/1/2018	CJR	1
Naphthalene	< 21	ug/l	21	66.5	10	8260B		12/1/2018	CJR	1
n-Propylbenzene	< 6.1	ug/l	6.1	19.5	10	8260B		12/1/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 3	ug/l	3	9.7	10	8260B		12/1/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 3.5	ug/l	3.5	11.3	10	8260B		12/1/2018	CJR	1
Tetrachloroethene	< 3.8	ug/l	3.8	12.1	10	8260B		12/1/2018	CJR	1
Toluene	< 1.9	ug/l	1.9	6	10	8260B		12/1/2018	CJR	1
1,2,4-Trichlorobenzene	< 11.5	ug/l	11.5	36.7	10	8260B		12/1/2018	CJR	1
1,2,3-Trichlorobenzene	< 17.1	ug/l	17.1	54.3	10	8260B		12/1/2018	CJR	1
1,1,1-Trichloroethane	< 3.3	ug/l	3.3	10.5	10	8260B		12/1/2018	CJR	1
1,1,2-Trichloroethane	< 4.2	ug/l	4.2	13.2	10	8260B		12/1/2018	CJR	1
Trichloroethene (TCE)	< 3	ug/l	3	9.4	10	8260B		12/1/2018	CJR	1
Trichlorofluoromethane	< 3.5	ug/l	3.5	11	10	8260B		12/1/2018	CJR	1
1,2,4-Trimethylbenzene	< 8	ug/l	8	25.5	10	8260B		12/1/2018	CJR	1
1,3,5-Trimethylbenzene	< 6.3	ug/l	6.3	20	10	8260B		12/1/2018	CJR	1
Vinyl Chloride	5.0 "J"	ug/l	2	6.5	10	8260B		12/1/2018	CJR	1
m&p-Xylene	< 4.3	ug/l	4.3	13.8	10	8260B		12/1/2018	CJR	1
o-Xylene	< 2.9	ug/l	2.9	9.3	10	8260B		12/1/2018	CJR	1
SUR - Toluene-d8	96	REC %			10	8260B		12/1/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	110	REC %			10	8260B		12/1/2018	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			10	8260B		12/1/2018	CJR	1
SUR - Dibromofluoromethane	103	REC %			10	8260B		12/1/2018	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.
4	The continuing calibration standard not within established limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD wells

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 357[illegible]9

Page 1 of 1

Sample Handling Request
_____ Rush Analysis Date Required _____
(Rushes accepted only with prior authorization)
_____ Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #: 60135471	
Sampler: (signature) Robert Wasylyk	
Project (Name / Location): Newton Gravel Pit, Newton, WI	

Reports To: Dave Henderson	Invoice To:
Company 1555 N. RiverCenter Ave	Company
Address Milwaukee, WI 53212	Address
City State Zip ~~Milwaukee, WI~~ AECOM	City State Zip
Phone /	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
535527A	SG-P	11/19/18	1415		X	N	3	GW	HCL

Analysis Requested / **Other Analysis**

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (~~EPA 524.2~~)	VOC (~~EPA 8260~~)	8-RCRA METALS	PID/ FID
											X			

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Client
Temp. of Temp. Blank ____ °C On Ice: Y
Cooler seal intact upon receipt: ✓ Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Robert Wasylyk	10:20	11/21/18			

Received in Laboratory By: [signature] Time: 10:20 Date: 11-21-18

Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE. WI 53212

Report Date *05-Apr-19*

Project Name NEWTON PIT
Project # 60135471.38

Invoice # E35959

Lab Code 5035959A
Sample ID POND
Sample Matrix Water
Sample Date 4/1/2019

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		4/3/2019	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		4/3/2019	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		4/3/2019	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		4/3/2019	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		4/3/2019	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		4/3/2019	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		4/3/2019	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		4/3/2019	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/3/2019	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		4/3/2019	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		4/3/2019	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		4/3/2019	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		4/3/2019	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		4/3/2019	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		4/3/2019	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		4/3/2019	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		4/3/2019	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		4/3/2019	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		4/3/2019	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		4/3/2019	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		4/3/2019	CJR	1
1,1-Dichloroethane	1.56	ug/l	0.36	1.14	1	8260B		4/3/2019	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		4/3/2019	CJR	1
cis-1,2-Dichloroethene	136	ug/l	0.37	1.16	1	8260B		4/3/2019	CJR	1
trans-1,2-Dichloroethene	1.28	ug/l	0.34	1.07	1	8260B		4/3/2019	CJR	1

Project Name NEWTON PIT **Invoice #** E35959
Project # 60135471.38

Lab Code 5035959A
Sample ID POND
Sample Matrix Water
Sample Date 4/1/2019

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		4/3/2019	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		4/3/2019	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		4/3/2019	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		4/3/2019	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		4/3/2019	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		4/3/2019	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/3/2019	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		4/3/2019	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		4/3/2019	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		4/3/2019	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		4/3/2019	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		4/3/2019	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		4/3/2019	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		4/3/2019	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		4/3/2019	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		4/3/2019	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		4/3/2019	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		4/3/2019	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		4/3/2019	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		4/3/2019	CJR	1
1,1,1-Trichloroethane	0.43 "J"	ug/l	0.33	1.05	1	8260B		4/3/2019	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		4/3/2019	CJR	1
Trichloroethene (TCE)	1.38	ug/l	0.3	0.94	1	8260B		4/3/2019	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		4/3/2019	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		4/3/2019	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		4/3/2019	CJR	1
Vinyl Chloride	50	ug/l	0.2	0.65	1	8260B		4/3/2019	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		4/3/2019	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		4/3/2019	CJR	1
SUR - Toluene-d8	96	REC %			1	8260B		4/3/2019	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		4/3/2019	CJR	1
SUR - 4-Bromofluorobenzene	97	REC %			1	8260B		4/3/2019	CJR	1
SUR - Dibromofluoromethane	106	REC %			1	8260B		4/3/2019	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 300

Page 1 of 1

Sample Handling Request
_____ Rush Analysis Date Required _____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : **Quote No.:**

Project #: 60135471.38

Sampler: (signature)

Project (Name / Location): NEWTON PIT

Reports To: DAVID HENDERSON	Invoice To: SAME
Company RECOM	Company
Address 1555 N RIVERCENTER DR	Address
City State Zip MILWAUKEE WI	City State Zip
Phone 414-944-6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/FID
503595971	POND	4/1/19	9:35		✓	N	3	N20														X		

Analysis Requested | **Other Analysis**

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.

Method of Shipment: GC

Temp. of Temp. Blank ____ °C On Ice: X

Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
	10:40	4/1/19			

Received in Laboratory By: Time: 8:00 Date: 4-2-19

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Type I Data Package

Prepared for:

TestAmerica University Park,IL
2417 Bond Street
University Park IL 60484

Project: Newton - 60135471
Water Samples
Collected on 11/19/18-11/20/18

SDG# TAA60

GROUP	SAMPLE NUMBERS
2013413	9917123-9917135

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman **Date:** **01/10/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Wendy Kozma at (717) 556-7257.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

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Sample Reference List for SDG Number TAA60
with a Data Package Type of I

01042 - TestAmerica University Park,IL

Project: Newton - 60135471

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9917123	WT30 (320-45514-1)	11/19/2018 09:30	11/29/2018 10:30
9917124	WT32 (320-45514-2)	11/19/2018 10:30	11/29/2018 10:30
9917125	WT33 (320-45514-3)	11/19/2018 11:00	11/29/2018 10:30
9917126	WT02A (320-45514-4)	11/19/2018 12:00	11/29/2018 10:30
9917127	WT28 (320-45514-5)	11/19/2018 13:00	11/29/2018 10:30
9917128	WT03 (320-45514-6)	11/19/2018 14:00	11/29/2018 10:30
9917129	FD07 (320-45514-7)	11/19/2018 11:00	11/29/2018 10:30
9917130	SG-P (320-45514-8)	11/19/2018 14:15	11/29/2018 10:30
9917131	WP07R (320-45514-9)	11/19/2018 16:00	11/29/2018 10:30
9917132	WT29 (320-45514-10)	11/20/2018 11:00	11/29/2018 10:30
9917133	WT27 (320-45514-11)	11/20/2018 12:00	11/29/2018 10:30
9917134	FB112018 (320-45514-12)	11/20/2018 12:15	11/29/2018 10:30
9917135	EB112018 (320-45514-13)	11/20/2018 12:30	11/29/2018 10:30

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

14473 PFAS in Water by LC/MS/MS
14091 PFAS Water Prep

A 250 ml sample of water is extracted using a solid phase extraction (SPE) cartridge. The resulting extract is analyzed by LC/MS/MS in negative electrospray ionization (ESI) mode.

Reference: Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LCMSMS), Version 1.1, September 2009.

Analysis Reports / Field Chain of Custody

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REVISED

ANALYSIS REPORT

Prepared by:

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

Prepared for:

TestAmerica University Park,IL
2417 Bond Street
University Park IL 60484

Report Date: January 10, 2019 08:35

Project: Newton - 60135471

Account #: 01042
Group Number: 2013413
SDG: TAA60
PO Number: 32011982
Release Number: 320-45514-1
State of Sample Origin: WI

Electronic Copy To TestAmerica
1 Copy To Data Package Group

Attn: Sandie Fredrick

Respectfully Submitted,

Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WT30 (320-45514-1) Water	11/19/2018 09:30	9917123
WT32 (320-45514-2) Water	11/19/2018 10:30	9917124
WT33 (320-45514-3) Water	11/19/2018 11:00	9917125
WT02A (320-45514-4) Water	11/19/2018 12:00	9917126
WT28 (320-45514-5) Water	11/19/2018 13:00	9917127
WT03 (320-45514-6) Water	11/19/2018 14:00	9917128
FD07 (320-45514-7) Water	11/19/2018 11:00	9917129
SG-P (320-45514-8) Water	11/19/2018 14:15	9917130
WP07R (320-45514-9) Water	11/19/2018 16:00	9917131
WT29 (320-45514-10) Water	11/20/2018 11:00	9917132
WT27 (320-45514-11) Water	11/20/2018 12:00	9917133
FB112018 (320-45514-12) Water	11/20/2018 12:15	9917134
EB112018 (320-45514-13) Water	11/20/2018 12:30	9917135

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

REVISED

Sample Description: **WT30 (320-45514-1) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 09:30
SDG#: TAA60-01

TestAmerica University Park,IL
ELLE Sample #: WW 9917123
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.87	0.87	2.6	1
14473	6:2-Fts	27619-97-2	< 0.87	0.87	1.7	1
14473	8:2-Fts	39108-34-4	< 1.7	1.7	5.2	1
14473	NEtFOSAA	2991-50-6	< 0.87	0.87	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.87	0.87	2.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	1.8	0.26	0.87	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.52	0.52	1.7	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.35	0.35	1.7	1
14473	Perfluorohexanesulfonic Acid	355-46-4	< 0.35	0.35	1.7	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.52	0.52	1.7	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	1.3 J	0.35	1.7	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	< 0.35	0.35	1.7	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	22	1.7	5.2	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.78	0.78	1.7	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.43	0.43	1.7	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	3.7	0.35	0.87	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	6.5	0.35	1.7	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	0.44 J	0.35	1.7	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	4.4	0.26	0.87	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.43	0.43	2.6	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	8.1	1.7	5.2	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.26	0.26	0.87	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.35	0.35	0.87	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.35	0.35	1.7	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 20:03	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **WT32 (320-45514-2) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 10:30
SDG#: TAA60-02

TestAmerica University Park,IL
ELLE Sample #: WW 9917124
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.87	0.87	2.6	1
14473	6:2-Fts	27619-97-2	1.2 J	0.87	1.7	1
14473	8:2-Fts	39108-34-4	< 1.7	1.7	5.2	1
14473	NEtFOSAA	2991-50-6	< 0.87	0.87	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.87	0.87	2.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	1.5	0.26	0.87	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.52	0.52	1.7	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.35	0.35	1.7	1
14473	Perfluorohexanesulfonic Acid	355-46-4	6.7	0.35	1.7	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.52	0.52	1.7	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	3.4	0.35	1.7	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	1.4 J	0.35	1.7	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	5.5	1.7	5.2	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.78	0.78	1.7	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.43	0.43	1.7	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	2.3	0.35	0.87	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	3.8	0.35	1.7	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	< 0.35	0.35	1.7	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	18	0.26	0.87	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.43	0.43	2.6	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	4.2 J	1.7	5.2	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.26	0.26	0.87	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.35	0.35	0.87	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.35	0.35	1.7	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/08/2018 21:23	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **WT33 (320-45514-3) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 11:00
SDG#: TAA60-03

TestAmerica University Park,IL
ELLE Sample #: WW 9917125
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.86	0.86	2.6	1
14473	6:2-Fts	27619-97-2	< 0.86	0.86	1.7	1
14473	8:2-Fts	39108-34-4	< 1.7	1.7	5.2	1
14473	NEtFOSAA	2991-50-6	< 0.86	0.86	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.86	0.86	2.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	1.7	0.26	0.86	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.52	0.52	1.7	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.34	0.34	1.7	1
14473	Perfluorohexanesulfonic Acid	355-46-4	6.9	0.34	1.7	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.52	0.52	1.7	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	4.5	0.34	1.7	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	1.6 J	0.34	1.7	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	7.2	1.7	5.2	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.77	0.77	1.7	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.43	0.43	1.7	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	2.9	0.34	0.86	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	5.2	0.34	1.7	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	0.43 J	0.34	1.7	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	26	0.26	0.86	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.43	0.43	2.6	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	5.7	1.7	5.2	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.26	0.26	0.86	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.34	0.34	0.86	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.34	0.34	1.7	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/08/2018 21:32	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **WT02A (320-45514-4) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 12:00
SDG#: TAA60-04

TestAmerica University Park,IL
ELLE Sample #: WW 9917126
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.88	0.88	2.6	1
14473	6:2-Fts	27619-97-2	< 0.88	0.88	1.8	1
14473	8:2-Fts	39108-34-4	< 1.8	1.8	5.3	1
14473	NEtFOSAA	2991-50-6	< 0.88	0.88	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.88	0.88	2.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	1.9	0.26	0.88	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.53	0.53	1.8	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.35	0.35	1.8	1
14473	Perfluorohexanesulfonic Acid	355-46-4	1.7 J	0.35	1.8	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.53	0.53	1.8	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	1.1 J	0.35	1.8	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	2.3	0.35	1.8	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	29	1.8	5.3	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.79	0.79	1.8	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.44	0.44	1.8	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	32	0.35	0.88	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	72	0.35	1.8	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	0.84 J	0.35	1.8	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	380	2.6	8.8	10
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.44	0.44	2.6	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	63	1.8	5.3	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.26	0.26	0.88	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.35	0.35	0.88	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.35	0.35	1.8	1

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

The sample injection internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

The recovery for a labeled compound used as extraction standard did not recover above 10% in the sample. The following corrective action was taken: The sample was re-extracted outside of the required holding time and although the extraction standard in question was within the QC acceptance limits, others did not meet the QC acceptance limits. The data is reported from the original extraction.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

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

REVISED

Sample Description: **WT02A (320-45514-4) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 12:00
SDG#: TAA60-04

TestAmerica University Park,IL
ELLE Sample #: WW 9917126
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor

The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 20:30	Devon M Whooley	1
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/03/2018 15:47	Devon M Whooley	10
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **WT28 (320-45514-5) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 13:00
SDG#: TAA60-05

TestAmerica University Park,IL
ELLE Sample #: WW 9917127
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.91	0.91	2.7	1
14473	6:2-Fts	27619-97-2	< 0.91	0.91	1.8	1
14473	8:2-Fts	39108-34-4	< 1.8	1.8	5.5	1
14473	NEtFOSAA	2991-50-6	< 0.91	0.91	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.91	0.91	2.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	2.1	0.27	0.91	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.55	0.55	1.8	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.37	0.37	1.8	1
14473	Perfluorohexanesulfonic Acid	355-46-4	< 0.37	0.37	1.8	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.55	0.55	1.8	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	1.8 J	0.37	1.8	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	< 0.37	0.37	1.8	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	12	1.8	5.5	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.82	0.82	1.8	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.46	0.46	1.8	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	3.8	0.37	0.91	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	6.5	0.37	1.8	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	< 0.37	0.37	1.8	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	110	0.27	0.91	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.46	0.46	2.7	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	< 1.8	1.8	5.5	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.27	0.27	0.91	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.37	0.37	0.91	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.37	0.37	1.8	1

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

The sample injection internal standard peak areas were outside of the QC limits for both the initial extraction and the re-extraction. The values here are from the initial extraction of the sample.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

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

REVISED

Sample Description: **WT28 (320-45514-5) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 13:00
SDG#: TAA60-05

TestAmerica University Park,IL
ELLE Sample #: WW 9917127
ELLE Group #: 2013413
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 20:40	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **WT03 (320-45514-6) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 14:00
SDG#: TAA60-06

TestAmerica University Park,IL
ELLE Sample #: WW 9917128
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.90	0.90	2.7	1
14473	6:2-Fts	27619-97-2	< 0.90	0.90	1.8	1
14473	8:2-Fts	39108-34-4	< 1.8	1.8	5.4	1
14473	NEtFOSAA	2991-50-6	< 0.90	0.90	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.90	0.90	2.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	2.9	0.27	0.90	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.54	0.54	1.8	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.36	0.36	1.8	1
14473	Perfluorohexanesulfonic Acid	355-46-4	3.4	0.36	1.8	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.54	0.54	1.8	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	0.61 J	0.36	1.8	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	5.0	0.36	1.8	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	< 1.8	1.8	5.4	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.81	0.81	1.8	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.45	0.45	1.8	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	2.1	0.36	0.90	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	1.6 J	0.36	1.8	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	< 0.36	0.36	1.8	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	20	0.27	0.90	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.45	0.45	2.7	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	< 1.8	1.8	5.4	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.27	0.27	0.90	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.36	0.36	0.90	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.36	0.36	1.8	1

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

The sample injection internal standard peak areas were outside of the QC limits for both the initial extraction and the re-extraction. The values here are from the initial extraction of the sample.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

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

REVISED

Sample Description: **WT03 (320-45514-6) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 14:00
SDG#: TAA60-06

TestAmerica University Park,IL
ELLE Sample #: WW 9917128
ELLE Group #: 2013413
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 20:49	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **FD07 (320-45514-7) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 11:00
SDG#: TAA60-07FD

TestAmerica University Park,IL
ELLE Sample #: WW 9917129
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.89	0.89	2.7	1
14473	6:2-Fts	27619-97-2	< 0.89	0.89	1.8	1
14473	8:2-Fts	39108-34-4	< 1.8	1.8	5.3	1
14473	NEtFOSAA	2991-50-6	< 0.89	0.89	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.89	0.89	2.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	1.7	0.27	0.89	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.53	0.53	1.8	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.35	0.35	1.8	1
14473	Perfluorohexanesulfonic Acid	355-46-4	6.8	0.35	1.8	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.53	0.53	1.8	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	4.2	0.35	1.8	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	1.5 J	0.35	1.8	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	7.9	1.8	5.3	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.80	0.80	1.8	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.44	0.44	1.8	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	2.8	0.35	0.89	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	4.8	0.35	1.8	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	0.42 J	0.35	1.8	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	26	0.27	0.89	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.44	0.44	2.7	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	6.0	1.8	5.3	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.27	0.27	0.89	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.35	0.35	0.89	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.35	0.35	1.8	1

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

The sample injection internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

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

REVISED

Sample Description: **FD07 (320-45514-7) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 11:00
SDG#: TAA60-07FD

TestAmerica University Park,IL
ELLE Sample #: WW 9917129
ELLE Group #: 2013413
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 20:58	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **SG-P (320-45514-8) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 14:15
SDG#: TAA60-08

TestAmerica University Park,IL
ELLE Sample #: WW 9917130
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.89	0.89	2.7	1
14473	6:2-Fts	27619-97-2	< 0.89	0.89	1.8	1
14473	8:2-Fts	39108-34-4	< 1.8	1.8	5.3	1
14473	NEtFOSAA	2991-50-6	< 0.89	0.89	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.89	0.89	2.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	1.4	0.27	0.89	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.53	0.53	1.8	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.36	0.36	1.8	1
14473	Perfluorohexanesulfonic Acid	355-46-4	6.8	0.36	1.8	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.53	0.53	1.8	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	5.9	0.36	1.8	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	1.6 J	0.36	1.8	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	5.7	1.8	5.3	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.80	0.80	1.8	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.44	0.44	1.8	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	2.7	0.36	0.89	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	4.9	0.36	1.8	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	0.58 J	0.36	1.8	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	30	0.27	0.89	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.44	0.44	2.7	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	5.2 J	1.8	5.3	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.27	0.27	0.89	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.36	0.36	0.89	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.36	0.36	1.8	1

The sample injection internal standard peak areas were outside of the QC limits for both the initial extraction and the re-extraction. The values here are from the initial extraction of the sample.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

The recovery for a labeled compound used as extraction standard did not recover above 10% in the sample. The following corrective action was taken: The sample was re-extracted outside of the required holding time and although the exttaction standard in question was within the QC acceptance limits, other extraction standards didno tmeet the QC acceptance limits. The data isreported from the original extraction.

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

REVISED

Sample Description: **SG-P (320-45514-8) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 14:15
SDG#: TAA60-08

TestAmerica University Park,IL
ELLE Sample #: WW 9917130
ELLE Group #: 2013413
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 21:07	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **WP07R (320-45514-9) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/19/2018 16:00
SDG#: TAA60-09

TestAmerica University Park,IL
ELLE Sample #: WW 9917131
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.87	0.87	2.6	1
14473	6:2-Fts	27619-97-2	< 0.87	0.87	1.7	1
14473	8:2-Fts	39108-34-4	< 1.7	1.7	5.2	1
14473	NEtFOSAA	2991-50-6	< 0.87	0.87	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.87	0.87	2.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	1.4	0.26	0.87	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.52	0.52	1.7	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.35	0.35	1.7	1
14473	Perfluorohexanesulfonic Acid	355-46-4	5.3	0.35	1.7	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.52	0.52	1.7	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	2.8	0.35	1.7	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	1.2 J	0.35	1.7	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	5.5	1.7	5.2	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.79	0.79	1.7	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.44	0.44	1.7	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	1.0	0.35	0.87	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	1.5 J	0.35	1.7	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	< 0.35	0.35	1.7	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	13	0.26	0.87	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.44	0.44	2.6	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	< 1.7	1.7	5.2	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.26	0.26	0.87	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.35	0.35	0.87	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.35	0.35	1.7	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 21:25	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **WT29 (320-45514-10) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/20/2018 11:00
SDG#: TAA60-10

TestAmerica University Park,IL
ELLE Sample #: WW 9917132
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.86	0.86	2.6	1
14473	6:2-Fts	27619-97-2	< 0.86	0.86	1.7	1
14473	8:2-Fts	39108-34-4	< 1.7	1.7	5.2	1
14473	NEtFOSAA	2991-50-6	< 0.86	0.86	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.86	0.86	2.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	1.8	0.26	0.86	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.52	0.52	1.7	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.35	0.35	1.7	1
14473	Perfluorohexanesulfonic Acid	355-46-4	5.5	0.35	1.7	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.52	0.52	1.7	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	5.3	0.35	1.7	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	1.1 J	0.35	1.7	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	6.8	1.7	5.2	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.78	0.78	1.7	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.43	0.43	1.7	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	1.6	0.35	0.86	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	3.0	0.35	1.7	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	0.41 J	0.35	1.7	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	16	0.26	0.86	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.43	0.43	2.6	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	4.8 J	1.7	5.2	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.26	0.26	0.86	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.35	0.35	0.86	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.35	0.35	1.7	1

The recovery for internal standard peak areas and several extraction standards is outside of QC acceptance limits. This sample was reextracted outside of the method holding time and again the recovery for internal standard peak areas and several extraction standards is outside of QC acceptance limits, indicating a matrix effect.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

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

REVISED

Sample Description: **WT29 (320-45514-10) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/20/2018 11:00
SDG#: TAA60-10

TestAmerica University Park,IL
ELLE Sample #: WW 9917132
ELLE Group #: 2013413
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 21:34	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **WT27 (320-45514-11) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/20/2018 12:00
SDG#: TAA60-11

TestAmerica University Park,IL
ELLE Sample #: WW 9917133
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.86	0.86	2.6	1
14473	6:2-Fts	27619-97-2	< 0.86	0.86	1.7	1
14473	8:2-Fts	39108-34-4	< 1.7	1.7	5.1	1
14473	NEtFOSAA	2991-50-6	< 0.86	0.86	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.86	0.86	2.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	0.90	0.26	0.86	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.51	0.51	1.7	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.34	0.34	1.7	1
14473	Perfluorohexanesulfonic Acid	355-46-4	1.6 J	0.34	1.7	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.51	0.51	1.7	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	2.8	0.34	1.7	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	0.46 J	0.34	1.7	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	3.6 J	1.7	5.1	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.77	0.77	1.7	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.43	0.43	1.7	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	0.47 J	0.34	0.86	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	0.48 J	0.34	1.7	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	< 0.34	0.34	1.7	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	5.0	0.26	0.86	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.43	0.43	2.6	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	< 1.7	1.7	5.1	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.26	0.26	0.86	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.34	0.34	0.86	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.34	0.34	1.7	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 21:43	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

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Analysis Report

REVISED

Sample Description: **FB112018 (320-45514-12) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/20/2018 12:15
SDG#: TAA60-12FB

TestAmerica University Park,IL
ELLE Sample #: WW 9917134
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.88	0.88	2.6	1
14473	6:2-Fts	27619-97-2	< 0.88	0.88	1.8	1
14473	8:2-Fts	39108-34-4	< 1.8	1.8	5.3	1
14473	NEtFOSAA	2991-50-6	< 0.88	0.88	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.88	0.88	2.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	< 0.26	0.26	0.88	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.53	0.53	1.8	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.35	0.35	1.8	1
14473	Perfluorohexanesulfonic Acid	355-46-4	< 0.35	0.35	1.8	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.53	0.53	1.8	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	< 0.35	0.35	1.8	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	< 0.35	0.35	1.8	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	< 1.8	1.8	5.3	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.79	0.79	1.8	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.44	0.44	1.8	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	< 0.35	0.35	0.88	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	< 0.35	0.35	1.8	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	< 0.35	0.35	1.8	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	< 0.26	0.26	0.88	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.44	0.44	2.6	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	< 1.8	1.8	5.3	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.26	0.26	0.88	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.35	0.35	0.88	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.35	0.35	1.8	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 21:52	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Sample Description: **EB112018 (320-45514-13) Water**
Newton - 60135471

Project Name: **Newton - 60135471**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/20/2018 12:30
SDG#: TAA60-13EB

TestAmerica University Park,IL
ELLE Sample #: WW 9917135
ELLE Group #: 2013413
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	**ng/l**	
14473	4:2-Fts	757124-72-4	< 0.90	0.90	2.7	1
14473	6:2-Fts	27619-97-2	1.2 J	0.90	1.8	1
14473	8:2-Fts	39108-34-4	< 1.8	1.8	5.4	1
14473	NEtFOSAA	2991-50-6	< 0.90	0.90	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	< 0.90	0.90	2.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	< 0.27	0.27	0.90	1
14473	Perfluorodecanesulfonic Acid	335-77-3	< 0.54	0.54	1.8	1
14473	Perfluoroheptanesulfonic Acid	375-92-8	< 0.36	0.36	1.8	1
14473	Perfluorohexanesulfonic Acid	355-46-4	< 0.36	0.36	1.8	1
14473	Perfluorononanesulfonic Acid	68259-12-1	< 0.54	0.54	1.8	1
14473	Perfluorooctanesulfonic Acid	1763-23-1	2.7	0.36	1.8	1
14473	Perfluoropentanesulfonic Acid	2706-91-4	< 0.36	0.36	1.8	1
14473	Pfba-Perfluorobutanoic Acid	375-22-4	< 1.8	1.8	5.4	1
14473	Pfda-Perfluorodecanoic Acid	335-76-2	< 0.81	0.81	1.8	1
14473	Pfdoda-Perfluorododecanoic	307-55-1	< 0.45	0.45	1.8	1
14473	Pfhpa-Perfluoroheptanoic Acid	375-85-9	< 0.36	0.36	0.90	1
14473	Pfhxa-Perfluorohexanoic Acid	307-24-4	< 0.36	0.36	1.8	1
14473	Pfna-Perfluorononanoic Acid	375-95-1	< 0.36	0.36	1.8	1
14473	Pfoa-Perfluorooctanoic Acid	335-67-1	< 0.27	0.27	0.90	1
14473	Pfosa-Perfluorooctanesulfonami	754-91-6	< 0.45	0.45	2.7	1
14473	Pfpea-Perfluoropentanoic Acid	2706-90-3	< 1.8	1.8	5.4	1
14473	Pfteda-Perfluorotetradecanoic	376-06-7	< 0.27	0.27	0.90	1
14473	Pftrda-Perfluorotridecanoic Ac	72629-94-8	< 0.36	0.36	0.90	1
14473	Pfunda-Perfluoroundecanoic Aci	2058-94-8	< 0.36	0.36	1.8	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside of the required holding time and the target analyte(s) were within QC acceptance limits. The data is reported from the original extraction.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18334001	12/02/2018 22:01	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18334001	11/30/2018 07:55	Courtney J Fatta	1

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

REVISED

Quality Control Summary

Client Name: TestAmerica University Park,IL Group Number: 2013413
Reported: 01/10/2019 08:35

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: 18334001	Sample number(s): 9917123-9917135		
4:2-Fts	< 1.0	1.0	3.0
6:2-Fts	< 1.0	1.0	2.0
8:2-Fts	< 2.0	2.0	6.0
NEtFOSAA	< 1.0	1.0	3.0
NMeFOSAA	< 1.0	1.0	3.0
Perfluorobutanesulfonic Acid	< 0.30	0.30	1.0
Perfluorodecanesulfonic Acid	< 0.60	0.60	2.0
Perfluoroheptanesulfonic Acid	< 0.40	0.40	2.0
Perfluorohexanesulfonic Acid	< 0.40	0.40	2.0
Perfluorononanesulfonic Acid	< 0.60	0.60	2.0
Perfluorooctanesulfonic Acid	< 0.40	0.40	2.0
Perfluoropentanesulfonic Acid	< 0.40	0.40	2.0
Pfba-Perfluorobutanoic Acid	< 2.0	2.0	6.0
Pfda-Perfluorodecanoic Acid	< 0.90	0.90	2.0
Pfdoda-Perfluorododecanoic	< 0.50	0.50	2.0
Pfhpa-Perfluoroheptanoic Acid	< 0.40	0.40	1.0
Pfhxa-Perfluorohexanoic Acid	< 0.40	0.40	2.0
Pfna-Perfluorononanoic Acid	< 0.40	0.40	2.0
Pfoa-Perfluorooctanoic Acid	< 0.30	0.30	1.0
Pfosa-Perfluorooctanesulfonami	< 0.50	0.50	3.0
Pfpea-Perfluoropentanoic Acid	< 2.0	2.0	6.0
Pfteda-Perfluorotetradecanoic	< 0.30	0.30	1.0
Pftrda-Perfluorotridecanoic Ac	< 0.40	0.40	1.0
Pfunda-Perfluoroundecanoic Aci	< 0.40	0.40	2.0

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: 18334001	Sample number(s): 9917123-9917135								
4:2-Fts	14.94	15.38	14.94	14.49	103	97	82-152	6	30
6:2-Fts	15.17	14.59	15.17	34.1	96	225*	66-155	80*	30
8:2-Fts	15.33	17.33	15.33	14.94	113	97	66-148	15	30
NEtFOSAA	5.44	4.69	5.44	6.06	86	111	55-169	25	30
NMeFOSAA	5.44	3.93	5.44	3.79	72	70	44-147	4	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.

REVISED

Quality Control Summary

Client Name: TestAmerica University Park,IL
Reported: 01/10/2019 08:35

Group Number: 2013413

LCS/LCSD (continued)

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
Perfluorobutanesulfonic Acid	4.81	4.54	4.81	4.78	94	99	73-128	5	30
Perfluorodecanesulfonic Acid	5.24	4.55	5.24	4.73	87	90	60-135	4	30
Perfluoroheptanesulfonic Acid	5.18	5.02	5.18	4.77	97	92	64-135	5	30
Perfluorohexanesulfonic Acid	5.14	4.75	5.14	4.71	92	92	71-131	1	30
Perfluorononanesulfonic Acid	5.22	4.75	5.22	5.18	91	99	66-133	9	30
Perfluorooctanesulfonic Acid	5.20	4.67	5.20	9.83	90	189*	67-138	71*	30
Perfluoropentanesulfonic Acid	5.10	4.93	5.10	4.84	97	95	76-127	2	30
Pfba-Perfluorobutanoic Acid	5.44	5.31	5.44	5.87	98	108	74-142	10	30
Pfda-Perfluorodecanoic Acid	5.44	4.83	5.44	5.45	89	100	69-148	12	30
Pfdoda-Perfluorododecanoic	5.44	5.04	5.44	4.57	93	84	75-136	10	30
Pfhpa-Perfluoroheptanoic Acid	5.44	5.42	5.44	5.45	100	100	76-140	0	30
Pfhxa-Perfluorohexanoic Acid	5.44	4.74	5.44	4.86	87	89	75-135	3	30
Pfna-Perfluorononanoic Acid	5.44	4.97	5.44	5.32	91	98	72-148	7	30
Pfoa-Perfluorooctanoic Acid	5.44	4.99	5.44	5.04	92	93	72-138	1	30
Pfosa-Perfluorooctanesulfonami	5.44	4.96	5.44	4.89	91	90	65-164	1	30
Pfpea-Perfluoropentanoic Acid	5.44	4.84	5.44	5.00	89	92	74-134	3	30
Pfteda-Perfluorotetradecanoic	5.44	5.41	5.44	5.60	100	103	74-135	3	30
Pftrda-Perfluorotridecanoic Ac	5.44	5.74	5.44	5.58	105	103	61-145	3	30
Pfunda-Perfluoroundecanoic Aci	5.44	4.97	5.44	4.35	91	80	75-146	13	30

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Water by LC/MS/MS
Batch number: 18334001

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
9917123	91	130	140	80	76	91
9917124	80	97	101	117	58	59
9917125	87	110	122	138	64	68
9917126	76	142	255*	110	45	75
9917127	87	131	258*	163	50	87
9917128	86	111	137	112	66	91
9917129	100	138	166*	107	78	99
9917130	91	119	143	99	73	85
9917131	89	119	132	88	71	82
9917132	82	115	142	79	63	80
9917133	93	122	138	77	74	88
9917134	92	94	83	102	90	81
9917135	98	102	91	102	97	95
Blank	86	91	83	106	79	75

*- 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.

REVISED

Quality Control Summary

Client Name: TestAmerica University Park,IL Group Number: 2013413
Reported: 01/10/2019 08:35

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Water by LC/MS/MS
Batch number: 18334001

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
LCS	96	102	90	111	95	87
LCSD	94	100	90	111	92	90
Limits:	33-123	31-157	26-148	21-182	35-138	34-126

	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA
9917123	95	117	96	86	91	97
9917124	73	112	75	75	102	78
9917125	85	144	86	82	112	77
9917126	72	141	81	80	90	64
9917127	83	180*	84	79	98	59
9917128	92	137	88	81	86	78
9917129	104	131	100	98	101	94
9917130	96	124	90	86	102	82
9917131	89	113	90	84	85	90
9917132	82	117	84	79	85	84
9917133	90	113	92	87	90	91
9917134	92	105	91	92	99	97
9917135	99	132	104	96	103	99
Blank	87	119	87	85	95	85
LCS	100	126	98	93	99	96
LCSD	97	121	90	94	98	92
Limits:	35-126	32-170	48-122	50-121	41-144	47-125

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA
9917123	117	96	82	69	72	64
9917124	87	86	69	61	65	55
9917125	93	90	63	67	57	39
9917126	94	75	46	50	23*	5*
9917127	102	76	51	61	46	46
9917128	98	84	82	69	83	76
9917129	111	95	92	78	70	22*
9917130	90	87	69	63	44	4*
9917131	105	85	87	67	74	68
9917132	100	83	83	70	67	58
9917133	97	85	84	70	72	62
9917134	116	95	93	81	79	76
9917135	118	99	94	78	84	83
Blank	134	85	84	66	73	88
LCS	119	90	93	84	81	85
LCSD	117	95	99	81	87	81

*- 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.

REVISED

Quality Control Summary

Client Name: TestAmerica University Park,IL Group Number: 2013413
Reported: 01/10/2019 08:35

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Water by LC/MS/MS
Batch number: 18334001

Limits:	27-164	30-127	30-128	30-142	39-130	26-119

	13C8-PFOSA
9917123	49
9917124	57
9917125	51
9917126	27
9917127	25
9917128	76
9917129	88
9917130	56
9917131	72
9917132	43
9917133	71
9917134	81
9917135	79
Blank	70
LCS	84
LCSD	81
Limits:	11-127

*- 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.

TestAmerica Sacramento 1040/2013413/9917123-35
880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600 Fax (916) 372-1059

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fredrick, Sandie J	Carrier Tracking No(s):	COC No: 320-135896.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sandie.fredrick@testamericainc.com	State of Origin: Wisconsin	Page: Page 1 of 2
Company: Eurofins Lancaster Laboratories Env LLC		Accreditations Required (See note):		Job #: 320-45514-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 12/7/2018			Preservation Codes:
City: Lancaster	TAT Requested (days):			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: Newton - 60135471	Project #: 32011982			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (PFAS, Standard List (24 Analytes) Mod 537)/ Copy Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
WT30 (320-45514-1)	11/19/18	09:30 Central		Water			X	2	
WT32 (320-45514-2)	11/19/18	10:30 Central		Water			X	2	
WT33 (320-45514-3)	11/19/18	11:00 Central		Water			X	2	
WT02A (320-45514-4)	11/19/18	12:00 Central		Water			X	2	
WT28 (320-45514-5)	11/19/18	13:00 Central		Water			X	2	
WT03 (320-45514-6)	11/19/18	14:00 Central		Water			X	2	
FD07 (320-45514-7)	11/19/18	11:00 Central		Water			X	2	
SG-P (320-45514-8)	11/19/18	14:15 Central		Water			X	2	
WP07R (320-45514-9)	11/19/18	16:00 Central		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	11/26/18 1630	TAS			
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 11-29-18 1030	Company ELLE

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: Yes	Cooler Temperature(s) °C and Other Remarks: 0.6 - 2.3

1042/20134131991723-35

TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600 Fax (916) 372-1059

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fredrick, Sandie J	Carrier Tracking No(s):	COC No: 320-135896.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: sandie.fredrick@testamericainc.com	State of Origin: Wisconsin	Page: Page 2 of 2
Company: Eurofins Lancaster Laboratories Env LLC		Accreditations Required (See note):		Job #: 320-45514-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 12/7/2018			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: Newton - 60135471	Project #: 32011982			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (PFAS, Standard List (24 Analytes) Mod 537)/ Copy Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
WT29 (320-45514-10)	11/20/18	11:00 Central		Water			X	2	
WT27 (320-45514-11)	11/20/18	12:00 Central		Water			X	2	
FB112018 (320-45514-12)	11/20/18	12:15 Central		Water			X	2	
EB112018 (320-45514-13)	11/20/18	12:30 Central		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	11/28/18 1630	TAS			
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 11-29-18 1030	Company EUL

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: Yes	Cooler Temperature(s) °C and Other Remarks: 0.6 - 2.3

1042/2013413/9917123-35

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Report To
Contact: Dave Henderson
Company: AECOM
Address: 1555 RiverCenter Dr, Ste 214
Address: Milwaukee, WI 53212
Phone:
Fax:
E-Mail:

Bill To (optional)
Contact: Dave Henderson
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #:
Chain of Custody Number:
Page 1 of 2
Temperature °C of Cooler: 0.6-2.3

Client: AECOM
Client Project #: 60135471
Project Name: Newton
Project Location/State: Newton, WI
Lab Project #:
Sampler: Kirsti Westphal / Joel M.
Lab PM:

Preservative
Parameter
PFAS (see list)

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	PFAS	Comments
		WT30	11/19/18	9:30	2		X	
		WT32		10:30	2		X	
		WT33		11:00	2		X	
		WT02A		12:00	2		X	
		WT28		13:00	2		X	
		WT03		14:00	2		X	
		FD07		11:00	2		X	
		SG-P		14:15	2		X	
		WP07R		16:00	2		X	

320-45514 Chain of Custody

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date:

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
	AECOM	11/20/18	1630		TA-SMC	11-21-18	1030
	TASoa	11/28/18	1630		Company	Date	Time
	Company	Date	Time		ELLE	11-29-18	1030

Lab Courier:
Shipped:
Hand Delivered:

Matrix Key
WW - Wastewater
W - Water
S - Soil
SL - Sludge
MS - Miscellaneous
Oil - Oil
A - Air
SE - Sediment
SO - Soil
L - Leachate
WI - Wipe
DW - Drinking Water
O - Other

Client Comments:

Lab Comments: Temp. 0.9 BK-2

TAL-4124-5200 (1009)

TestAmerica

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Phone: 708.534.5200 Fax: 708.534.5211

1042/20134131917123-35

Report To: Dave Henderson
Company: AECOM
Address: 1555 RiverCenter Dr Ste 214
Address: Milwaukee WI 53212
Phone:
Fax:
E-Mail:

Bill To (optional): Dave Henderson
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #:
Chain of Custody Number:
Page 2 of 2
Temperature °C of Cooler: 0.6 - 2.3

Client: AECOM
Client Project #: 60135471
Project Name: Newton
Project Location/State: Newton, WI
Lab Project #:
Sampler: Robert Wesolowski / Joel M
Lab PM:

Preservative: 1
Parameter: PFAS (See contract)

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	PFAS (See contract)	Comments
		WT29	11/20/18	11:00	2		X	
		WT27		12:00	2		X	
		FB112018		12:15	2		X	
		EB112018		12:30	2		X	

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Joel Mayo	AECOM	11/20/18	1630	Jaime R	TAL-SAC	11-21-18	1030
Robert Wesolowski	TAL-SAC	11/28/18	1630		Company	Date	Time
	Company	Date	Time	Chris Sl	ELLE	11-29-18	1030

Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments:

Lab Comments:
Temp 0.9 BK-7

TAL-4124-580 (1209)

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Sample Administration Receipt Documentation Log

Doc Log ID: 234513

Group Number(s): 2013413

Client: Test America

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/29/2018 10:30
Number of Packages:	3	Number of Projects:	9
State/Province of Origin:	WI		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
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:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Christopher Stief (12429) at 14:05 on 11/29/2018

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	DT131	2.3	DT	Wet	Y	Loose/Bag	N
2	DT131	1.5	DT	Wet	Y	Loose/Bag	N
3	DT131	0.6	DT	Wet	Y	Loose/Bag	N

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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	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	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.

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.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
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.
P^	Concentration difference between the primary and confirmation column > 40%. The higher 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.
Z	Laboratory Defined - see analysis report

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.