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May 11, 2018

Ms. Charlotte Theobald
Environmental Engineer 1
New York State Department of Environmental Conservation
Department of Environmental Remediation
6274 East Avon Road
Avon, NY 14414

RE: Response to NYSDEC's Request for Sampling of Emerging Contaminants
Qualitrol Company LLC
BCP Site ID: C828185
Fairport (V), Perinton (T), Monroe (C), New York

Dear Ms. Theobald:

FPM Remediations, Inc. (FPM) is transmitting this letter to you on behalf of Qualitrol Company LLC in response to your letter of April 13, 2018 regarding the New York State Department of Conservation's (NYSDEC's) request for sampling of emerging contaminants 1,4-dioxane and 4-dioxane and per- and polyfluoroalkyl substances (PFAS) at the Qualitrol Brownfield Site in Fairport, NY.

Implementation

To satisfy NYSDEC's policy request, FPM proposes to sample and analyze groundwater monitoring wells at three monitoring wells at the Qualitrol Brownfields Site - specifically one hydraulically upgradient sample (MW-31), and two samples (MW-10 and MW-13) located within the defined VOC plume (**Figure 1**). Quality assurance/quality control (QA/QC) sampling will include one field duplicate, one matrix spike/matrix spike duplicate (MS/MSD), and one equipment blank.

The sampling and analysis plan is presented in **Table 1** below.

Table 1 – Sampling and Analysis Plan

Constituent	Field Samples	QA/QC Samples	Total Samples	Target Detection Limit	Laboratory Analytical Method
1,4-Dioxane	3	Equipment Blank (1) Field Duplicate (1) MS/MSD (1)	6	0.28 micrograms per liter (µg/L)	USEPA 8260C (SIM Method)
PFAS (See **Table 2**)	3	Equipment Blank (1) Field Duplicate (1) MS/MSD (1)	6	2 nanograms per liter (ng/L) detection limit for all 21 PFAS listed in **Table 2**.	USEPA Modified Method 537
Note: Category A Lab Report to be Requested. * SIM = selective ion monitoring. USEPA = United States Environmental Protection Agency					

Groundwater sampling will be conducted in accordance with NYSDEC's groundwater sampling requirements, and specifically in accordance with the NYSDEC-approved *Project Quality Assurance Project Plan* (QAPP) (FPM, November 2013) Standard Operating Procedures (SOPs) for groundwater sampling, except for certain items required by NYSDEC as noted below:

- Groundwater sampling will be conducted using a peristaltic pump fitted with silicon flex tubing and high-density polyethylene (HDPE) tubing.
- All sampling equipment components and sample containers will not come in contact with aluminum foil, low density polyethylene (LDPE), glass or polytetrafluoroethylene (polytetrafluorethylene [PTFE], Teflon™) materials, including sample bottle cap liners with a PTFE layer.
- Each groundwater and/or QA/QC sample will be placed in two pre-cleaned 500 milliliter (mL) HDPE or polypropylene bottles and capped with an acceptable cap and liner closure system.
- Standard two step decontamination using Liquinox® detergent and PFAS-free` rinse will be performed for equipment that comes in contact with PFC materials.
- Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFC materials will not be used at the sampling locations.
- No food/drink packaging materials or "plumbers thread seal tape" containing PFCs will be used during sampling.
- All clothing worn by sampling personnel will be laundered multiple times.
- Personnel will wear nitrile gloves while filling and sealing the sample bottles.
- Pre-cleaned sample bottles with closures, coolers, ice, sample labels and a chain-of-custody form will be provided by the laboratory.

Analysis, Data Validation, and Reporting

Groundwater samples collected by FPM field personnel will be shipped via overnight by Federal Express to Alpha Analytical (Alpha) in Mansfield, MA and Westboro, MA, for PFAS analysis by USEPA Methods 537 Rev 1.15 (incorporating the USEPA Technical Advisory 815-B-16-021) and 8270C SIM Method, respectively.

Alpha Analytical-Mansfield, MA holds National Environmental Laboratory Accreditation Program (NELAC) and NYSDOH Environmental Laboratory Approval Program (ELAP) certifications for USEPA Modified Method 537 and Alpha Analytical-Westboro, MA holds the NELAC and NYSDOH NELAC certification for USEPA Method 8260C SIM Method.

We understand that Alpha will be able to meet the 2 ng/L detection limit for all 21 PFCs listed in NYSDEC's "*Full PFAS Target Analyte List*" by USEPA Modified Method 537 (copy of list is provided in **Table 2** below) and the 0.28 µg/L detection limit for 1,4-dioxane by USEPA Method 8270C (SIM Method).

Table 2
Full PFAS Target Analyte List

Group	Chemical Name	Abbreviation	CAS
Perfluoroalkyl sulfonates (PFAS)	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanessulfonic acid	PFOS	1763-23-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
Perfluoroalkyl carboxylates	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7
Fluorinated Telomer Sulfonates	6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2
	8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4

Group	Chemical Name	Abbreviation	CAS
Perfluorooctane-sulfonamides	Perfluroroctanesulfonamide	FOSA	754-91-6
Perfluorooctane-sulfonamidoacetic acids	N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSAA	2991-50-6

The laboratory analytical data will be validated in accordance with NYSDEC's *DER-10, Technical Guidance for Site Investigation and Remediation* (NYSDEC, May 2010), and a Data Usability Summary Report (DUSR) will be prepared by FPM's Chemist (Connie Van Hoesel), which will be transmitted to NYSDEC and New York State Department of Health (NYSDOH) with the final laboratory report.

Schedule

FPM is prepared to collect the groundwater samples within two weeks of approval of this letter. We will notify you when the specific sampling date is scheduled.

We expect that Alpha will provide preliminary results within two weeks of sample receipt, and another two to three weeks to transmit the final laboratory report.

We expect to have FPM's chemist validate the data within two weeks of receipt. Once the DUSR report is received, we will transmit the results to you.

Please recall that all groundwater samples collected to date on- and off-site have been analyzed for TCA and 1,4-dioxane per USEPA Method 8260B or 8260C, among many other contaminants, as specified by DER-10. TCA and 1,4-dioxane have never been detected in any of the groundwater samples to date at the detection limits specified by those methods (2.00 ug/L for TCA and 0.20 ug/L for 1,4-dioxane, respectively).

Qualitrol is voluntarily agreeing to conduct the sampling and analysis of these contaminants as requested by NYSDEC. Qualitrol has no knowledge of the use, manufacture or discharge of TCA, 1,4-dioxane, PFAS at their facility.

If you have any questions regarding this work plan, please contact Ms. Virginia (Ginny) Murn at Qualitrol (vmurn@qualitrolcorp.com, 585-643-3659) or me (s.saroff@fpm-remediations, Inc., 315-336-7721, Ext. 251).

Sincerely,
FPM Remediations, Inc.

Scott T. Saroff, CPG, PG (NY #329), CHMM
Project Manager/Principal Hydrogeologist

Cc: Virginia Murn (Qualitrol)
Jim Niederst (Qualtirol)
Justin Deming (NYS. Dept. of Health – Albany)
Mark Sergott (NYS Dept. of Health - Albany)
John Frazer (Monroe County Health Department)
Wade Silkworth (Monroe County Health Department)
Dennis Harkawik (NYSDEC)
Michael Hecker (Hodgson Russ LLP)
Bernette Schilling (NYSDEC)
Todd Caffoe (NYSDEC)

1448000 1448500 1449000

1131500 1131000 1130500

Jefferson Ave

Fairport Road

Fairport Park

Pilgrim Cir

Jefferson Park Senior Apartments

TW-01 (ND)

MW-03 (ND)

TW-02 (ND)

Original Building (1955)

TW-06 (ND)

TW-10 **TCE: (7.82) Cis-1,2-DCE: (5.11)**

MW-9 **TCE: (159) Cis-1,2-DCE: (15.4)**

TW-11 (ND)

TW-22 **TCE: (1,820) Cis-1,2-DCE: (112)**

MW-12/MW-12 Dup **TCE: (26.8/27.9)** Cis-1,2-DCE: (1.27J/1.29J)

TW-16 TCE: (1.04)

Former Leach Field #3 (>1978)

TW-18 Benzene: (0.653)

TW-20 (ND)

TW-04 (ND)

TW-5 Acetone: (0.551J) Benzene: (0.551J)

TW-07 (ND)

MW-31

Former Leach Field #1 (<1978)

Building Addition (1978)

TW-8 Acetone: (7.67J) Benzene: (0.653J)

Suspected Former Leach Field #2 (>1978) (Removed)

Building Addition (2012)

TW-14 (ND)

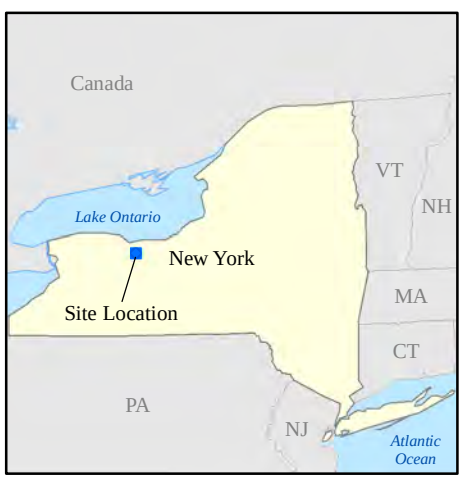
MW-13 **TCE: (12.8)**

TW-15 (ND)

TW-17 (ND)

MW-19 (ND)

TW-21 (ND)



Key Features

- Proposed Existing Wells for Emerging Contaminant Sampling
- Permanent Monitoring Well (MW)
- Temporary Monitoring Well (TW)
- Groundwater Flow Direction
- Approximate Extent of TCE and Cis-1,2-DCE in Groundwater above NYS Ambient Groundwater (GA) Standards
- Original Building (1955)
- Building Addition (1978 & 2012)
- Qualitrol Parcel Property
- Former Septic Tanks/Leach Field

N

NOTES:

1. New York State Ambient Water Quality Standards Groundwater (GA) (TOGs 1.1.1, June 1998) Benzene 1µg/L Cis-1,2-DCE 5µg/L TCE 5µg/L.
2. ND = Non-detect.
3. All units in µg/L = micrograms per Liter.
4. Groundwater samples collected February and March 2014 and August 2015.
5. Bolded concentrations exceed the level of concern
6. Revision Date: 5/10/2018

Coordinate System: NAD 1983 StatePlane New York West FIPS 3103 Feet
Projection: Transverse Mercator
Datum: North American 1983
Units: Foot US
Service Layer Credits: Digital Globe New York GIS 2017.
Basemap Date: 5/10/2018

1 inch = 150 feet

0 15 30 Meters

0 75 150 Feet

Qualitrol Company LLC
1385 Fairport Road
Fairport, NY 14450

FIGURE 1

Proposed Wells for Sampling of Emerging Contaminants

FPM Remediations, Inc.

May 2018

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