HAZARD EVALUATIONS

HAZARD EVALUATIONS, INC. · 3636 N. BUFFALO ROAD · ORCHARD PARK, NEW YORK 14127
PHONE (716) 667-3130 · FAX (716) 667-3156 · www.hazardevaluations.com

October 26, 2018

Gary Priscott, DER Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 7
1679 Route 11
Kirkwood, New York 13795

Re: **Proposed Emergent Contaminant Sampling**
Campagnolo Property, 503-511 North Meadow Street, Ithaca, NY
NYSDEC Site #755013

Dear Mr. Priscott:

Hazard Evaluations, Inc. (HEI) has been retained by Mr. Benedetto Campagnolo to complete the New York State Department of Environmental Conservation (NYSDEC) request for sampling of Emergent Contaminants. As part of current on-site monitoring activities, three existing monitoring wells are scheduled to be sampled in April 2019. Emergent contaminant sampling will be completed in conjunction with required monitoring.

Emergent Contaminant Sampling

NYSDEC is undertaking a statewide evaluation of remediation sites to better understand potential risk associated with 1,4-dioxane and per- and polyfluoroalkyl substances (PFAS). As such, the NYSDEC requested that a select number of existing monitoring wells that represent groundwater quality at the Site, be sampled for these parameters. To meet the NYSDEC requirements, three monitoring wells will be sampled, including **CP-MW-01S, CP-MW-03S and CP-MW-05S**, as shown on Figure 1.

1,4-Dioxane

Groundwater samples collected for 1,4-dioxan laboratory analysis will be collected by utilizing low-flow sampling techniques with dedicated tubing. A peristaltic pump and new disposable high density polyethylene (HDPE) tubing will be used at each location. Tubing and sampling equipment will be new or cleaned upon arrival at the Site. The well will be sampled after removal of three well volumes or well purging.

A Well Data Sheet should be completed during groundwater sampling. Each well to be sampled will have designated pre-labeled and certified clean sample bottles. The following steps describe the groundwater sample procedure:

- Unlock and remove the well cap. Test the air at the wellhead with the OVM.
- Measure the static water level and determine the total well volume.
- Slowly lower the dedicated bailer or tubing into the well. Purge the well a minimum of three well volumes. If the well goes dry during bailing, allow for full recovery and sample. If recovery takes longer than 20 minutes, proceed to next well but return to sample within 24 hours.

- Fill the appropriate sample bottles.
- Record pertinent information in the field logbook and well data sheet.
- Lock the well, inspect the well site, and note any maintenance required.
- Purged water will be containerized for future disposal.

Samples will be submitted to Alpha Analytical Laboratory for analysis via EPA Method 8270 selective ion monitoring (SIM) mode. Detection limit will be no higher than 0.28 ppb.

Field-specific quality assurance/quality control samples will be collected and analyzed, to support third-party data usability assessment effort. Site-specific QA/QC samples will include blind duplicate, matrix spike/matrix spike duplicate, and rinsate blank, as indicated on Table 1.

PFAS

Groundwater sample collection procedure for PFAS will be done in accordance with NYSDEC provided protocol included in Attachment A. All sampling equipment components and sample containers will not come in contact with aluminum foil, low density polyethylene (LCPE), glass or polytetrafluoroethylene (PTFE, Teflon) materials, including sample bottle cap liners with a PTFE layer. Groundwater samples will be analyzed for PFAS via EPA method 537, to achieve reporting limits of 2 ng/l (parts per trillion (ppt)).

Field-specific quality assurance/quality control samples will be collected and analyzed, to support third-party data usability assessment effort. Site-specific QA/QC samples will include blind/field duplicate, matrix spike/matrix spike duplicate, and rinsate/equipment blank, as summarized on Table 1.

Schedule

Groundwater sampling will be conducted with required monitoring, scheduled for April 2019.

Please approve the work plan for emergent contaminant sampling. Should you have any questions relative to this request, please contact me at 716-667-3130.

Very truly yours,
HAZARD EVALUATIONS, INC.

Michele M. Wittman, P.G.
Director of Site Services

C. Mark Hanna, CHMM
President

TABLES

TABLE 1
Additional Analytical Testing Summary
Campagnolo Property, N. Meadow Street
Ithaca, NY
NYSDEC Brownfield Cleanup Program

Location	Matrix	1,4-dioxane	PFAS
On-site Monitoring Wells			
Monitoring Wells	Groundwater	3	3
Duplicate	Groundwater	1	1
MS/MSD	Groundwater	2	2
Rinsate	Water	1	1
Trip Blank	Water	1	1
Total		**8**	**8**

Notes:

PFAS - Polyfluoroalkyl substances

FIGURES

HAZARD EVALUATIONS, INC.

Phase I/II Audits – Site Investigations – Facility Inspections

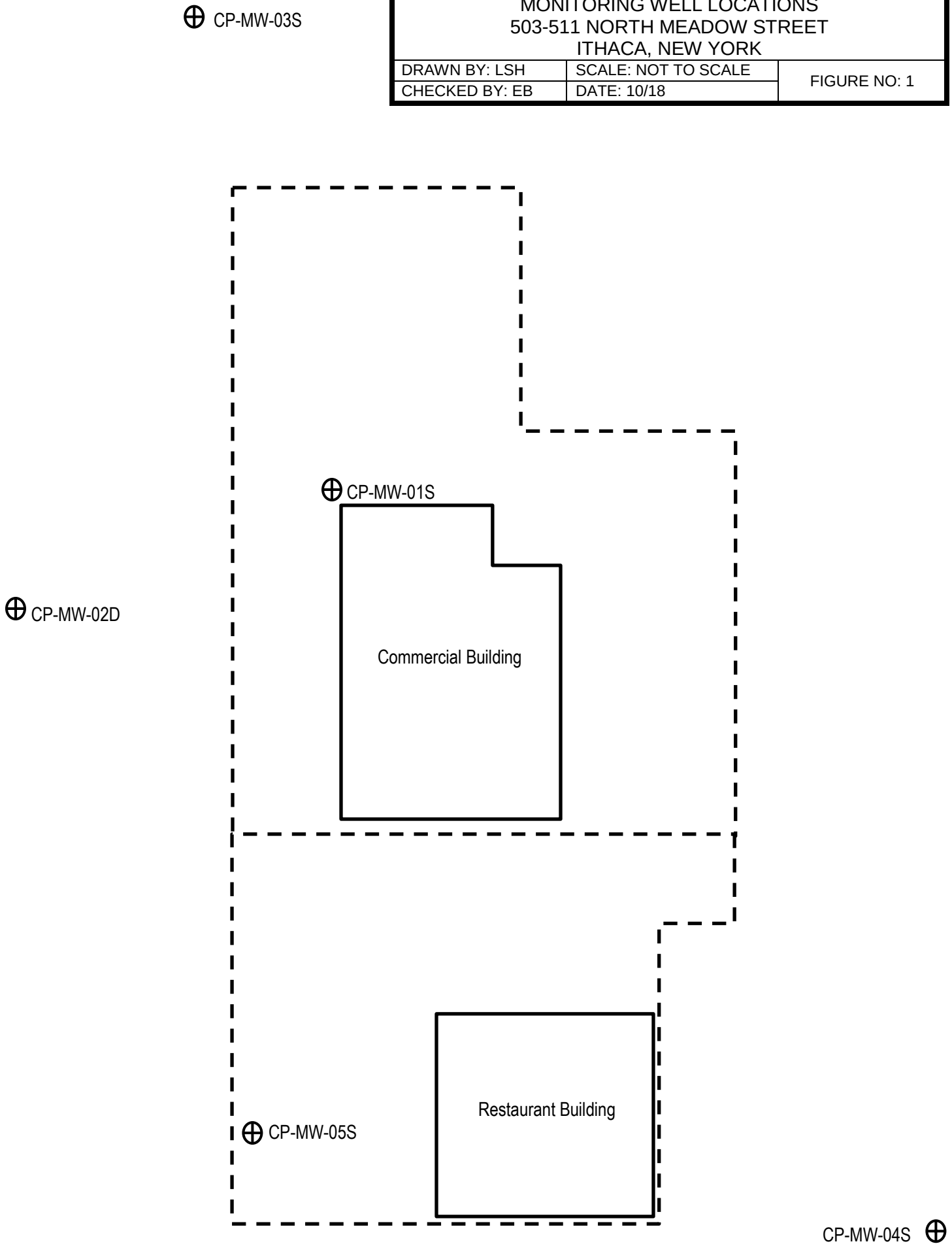
CAMPAGNOLO PROPERTY SITE

MONITORING WELL LOCATIONS

503-511 NORTH MEADOW STREET

ITHACA, NEW YORK

DRAWN BY: LSH	SCALE: NOT TO SCALE	FIGURE NO: 1
CHECKED BY: EB	DATE: 10/18	



ATTACHMENT A

SAMPLING PROTOCOL

Groundwater Sampling for Emerging Contaminants

February 2018

Issue: NYSDEC has committed to analyzing representative groundwater samples at remediation sites for emerging contaminants (1,4-dioxane and PFAS) as described in the below guidance.

Implementation

NYSDEC project managers will be contacting site owners to schedule sampling for these chemicals. Only groundwater sampling is required. The number of samples required will be similar to the number of samples where "full TAL/TCL sampling" would typically be required in a remedial investigation. If sampling is not feasible (e.g., the site no longer has any monitoring wells in place), sampling may be waived on a site-specific basis after first considering potential sources of these chemicals and whether there are water supplies nearby.

Upon a new site being brought into any program (i.e., SSF, BCP), PFAS and 1,4-dioxane will be incorporated into the investigation of groundwater as part of the standard "full TAL/TCL" sampling. Until an SCO is established for PFAS, soil samples do not need to be analyzed for PFAS unless groundwater contamination is detected. Separate guidance will be developed to address sites where emerging contaminants are found in the groundwater. The analysis currently performed for SVOCs in soil is adequate for evaluation of 1,4-dioxane, which already has an established SCO.

Analysis and Reporting

Labs should provide a full category B deliverable, and a DUSR should be prepared by a data validator.

The work plan should explicitly describe analysis and reporting requirements.

PFAS sample analysis: Samples should be analyzed by an environmental laboratory certified by ELAP to use EPA method 537 or ISO 25101. ELAP does not currently offer certification for PFAS analysis of non-drinking water samples (including groundwater, soil and sediment), so there is no requirement to use an ELAP certified method. The preferred method is the modified EPA Method 537. Labs have been able to achieve reporting limits for PFOA and PFOS of 2 ng/l (part per trillion). If labs are not able to achieve similar reporting limits, the NYSDEC project manager will make case-by-case decisions as to whether the analysis can meet the needs for the specific site.

PFAS sample reporting: DER has developed a PFAS target analyte list (below) with the intent of achieving reporting consistency between labs for commonly reportable analytes. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. This list may be updated in the future as new information is learned and as labs develop new capabilities. If lab and/or matrix specific issues are encountered for any particular compounds, the NYSDEC project manager will make case-by-case decisions as to whether particular analytes may be temporarily or permanently discontinued from analysis for each site. Any technical lab issues should be brought to the attention of a NYSDEC chemist.

Some sampling using this full PFAS target analyte list is needed to understand the nature of contamination. It may also be critical to differentiate PFAS compounds associated with a site from other sources of these chemicals. Like routine refinements to parameter lists based on investigative findings, the full PFAS target analyte list may not be needed for all sampling intended to define the extent of

Collection of Groundwater Samples for Perfluorooctanoic Acid (PFOA) and Perfluorinated Compounds (PFCs) from Monitoring Wells Sample Protocol

Samples collected using this protocol are intended to be analyzed for perfluorooctanoic acid (PFOA) and other perfluorinated compounds by Modified (Low Level) Test Method 537.

The procedure used must be consistent with the NYSDEC March 1991 Sampling Guidelines and Protocols http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf with the following materials limitations.

At this time acceptable materials for sampling include: stainless steel, high density polyethylene (HDPE), PVC, silicone, acetate and polypropylene. Equipment blanks should be generated at least daily. Additional materials may be acceptable if pre-approved by NYSDEC. Requests to use alternate equipment should include clean equipment blanks. **NOTE: Grunfos pumps and bladder pumps are known to contain PFC materials (e.g. Teflon™ washers for Grunfos pumps and LDPE bladders for bladder pumps).** All sampling equipment components and sample containers should not come in contact with aluminum foil, low density polyethylene (LDPE), glass or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer. Standard two step decontamination using detergent and clean water rinse will be performed for equipment that does come in contact with PFC materials. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFC materials must be avoided. Many food and drink packaging materials and “plumbers thread seal tape” contain PFCs.

All clothing worn by sampling personnel must have been laundered multiple times. The sampler must 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.

1. Fill two pre-cleaned 500 mL HDPE or polypropylene bottle with the sample.
2. Cap the bottles with an acceptable cap and liner closure system.
3. Label the sample bottles.
4. Fill out the chain of custody.
5. Place in a cooler maintained at 4 ± 2º Celsius.

Collect one equipment blank for every sample batch, not to exceed 20 samples.

Collect one field duplicate for every sample batch, not to exceed 20 samples.

Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, not to exceed 20 samples.

Request appropriate data deliverable (Category A or B) and an electronic data deliverable.

contamination. Project managers may approve a shorter analyte list (e.g., just the UCMR3 list) for some reporting on a case by case basis.

1,4-Dioxane Analysis and Reporting: The method detection limit (MDL) for 1,4-dioxane should be no higher than 0.28 µg/l (ppb). ELAP offers certification for both EPA Methods 8260 and 8270. In order to get the appropriate detection limits, the lab would need to run either of these methods in "selective ion monitoring" (SIM) mode. DER is advising PMS to use 8270, since this method provides a more robust extraction procedure, uses a larger sample volume, and is less vulnerable to interference from chlorinated solvents (we acknowledge that 8260 has been shown to have a higher recovery in some studies).

Full PFAS Target Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonates	**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
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

Bold entries depict the 6 original UCMR3 chemicals