Honeywell

Honeywell
301 Plainfield Road
Suite 330
Syracuse, NY 13212
www.honeywell.com

19 October 2016

Mr. William Daigle, P.E.
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7016

RE: Additional Phase 1 Site Characterization
Oak Materials – River Road 1, 2 and 3 (442008)
Town of Hoosick, Rensselaer County, New York
Former Oak Materials Fluorglas Division – John Street (442049)
Village of Hoosick Falls, Rensselaer County, New York

Dear Mr. Daigle:

Thank you for the Department's input during our recent meeting at your office on 14 October 2016. Honeywell continues to advance the site characterization of both the John Street and River Road properties. To maintain our progress, we intend to keep the field teams working on the next phases, with no break in the site characterization field work. To that end and as requested by the Department, Honeywell is submitting the attached memorandum from ERM identifying the specifics of the additional site characterization work that we agreed to implement during our discussions at your office.

Thank you and please contact me at 315-552-9782 to discuss any questions or comments.

Sincerely,

John P. McAuliffe

John P. McAuliffe, P.E.
Program Director

Cc: Richard Mustico, P.E. (NYSDEC)
Andrew Guglielmi, Esq. (NYSDEC)
Krista Anders, Ph.D. (NYSDOH)
Justin Deming (NYSDOH)
John Morris, P.E. (Honeywell)
Mark Sweitzer, P.G. (Honeywell)
Jon Fox, P.G. (ERM)

Memorandum

Environmental
Resources
Management

5788 Widewaters Parkway
Syracuse, NY 13214
+1 315 445 2554
+1 315 445 2543 (fax)

http://www.erm.com

To: John McAuliffe
Mark Sweitzer

From: Maureen Leahy
Jon Fox

Date: 19 October 2016

Subject: Additional Phase 1 Site Characterization
Oak Materials - River Road 1, 2 and 3 and
Former Oak Materials Fluorglas Division - John Street

Summary

This memorandum summarizes a scope of work for additional Phase 1 Site Characterization (SC) activities at the above-referenced properties based on preliminary results of SC performed to date. The additional SC activities were discussed and verbally approved during the meeting with the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) on 14 October 2016.

Scope of Work

Consistency with Approved Work Plan

Associated work including subsurface clearance, laboratory analytical methods, quality assurance/quality control (QA/QC) procedures, data validation, handling and management of investigation-derived wastes, surveying of sampling locations, and reporting for the additional SC work described below will be performed in a manner consistent with the NYSDEC-approved SC Field Sampling and Analysis Plan (FSAP). New work not previously described in the FSAP is described below. Sample locations, media, and analytes are presented in Table 1.

River Road

The locations and additional details for work described below are presented in Figure 1.

1) Sediment and Surface Water: Additional co-located sediment and surface water samples will be collected to:

a. provide data in the vicinity of borrow pits (locations OS-S-11 and 12); and
b. provide data west of New York Route 22 (locations OS-S-13 and 14).

2) Surface Geophysics: Additional surface geophysics lines (seismic and conductivity) will be installed to facilitate mapping of overburden thickness, groundwater, and the bedrock surface.
3) Monitoring Well Installations: Fixed monitoring wells will be installed to facilitate triangulation of groundwater flow and additional evaluation of groundwater chemistry. Details on monitoring well construction and sampling are provided below.

John Street

The locations and additional details for work described below are presented in Figure 2.

1) Soil Vapor Sampling: Soil vapor monitoring will be conducted to provide information on potential soil gas concentrations. Samples will be collected from a depth consistent with a typical building footer (approximately 3 to 4 feet below ground surface) or a minimum of 1 foot above groundwater. Stainless steel rods equipped with a detachable stainless steel sampling point will be driven to the sampling depth. Dedicated Nylaflow® tubing will be attached to each sampling point. Boreholes will be backfilled with glass beads to a minimum of 6 inches above the soil vapor sampling point. The remainder of the annular space will be filled with bentonite chips and immediately hydrated with approved potable water. Soil vapor sampling points will set for a minimum of 24-hours. The sampling point and tubing will be purged prior to sampling. An enclosed container will be placed over each soil vapor sampling point to create a seal. A helium tracer gas test will be performed to confirm a tight seal between the bentonite and soils at each location. Soil vapor samples will be collected using Summa canisters over a 24-hour period and will be analyzed for chlorinated volatile organic compounds (VOCs) by USEPA Method TO-15. An outdoor ambient air sample will also be collected upwind of the property during soil vapor sampling.
2) Soil Borings: Soil borings will be installed to collect additional subsurface soil samples at the locations shown in Figure 1. Soil borings will be installed using direct-push drilling techniques.
4) Surface Geophysics: Additional surface geophysics lines (seismic) will be installed at the locations shown in Figure 1 to facilitate

mapping of overburden thickness, groundwater, and the bedrock surface.

5) Monitoring Well Installations: Fixed monitoring wells will be installed at the locations shown in Figure 2 to facilitate triangulation of groundwater flow and additional evaluation of groundwater chemistry. Details on monitoring well construction and sampling are provided below.

Monitoring Well Construction and Sampling

One, two, or three overburden monitoring wells will be installed at each location as shown in Figures 1 and 2 based on the texture, relative permeability, and thickness of subsurface geologic units encountered to date. "Shallow" monitoring wells will be screened at the groundwater table or in the sandy unit above the clay unit (when the clay unit is present). "Intermediate" monitoring wells will be screened below the clay unit near the top of the lower sand and gravel unit, or at an appropriate depth between the upper and lower well screens at the discretion of ERM's field geologist in consultation with the NYSDEC's field representative. "Deep" monitoring wells will be screened near the bottom of the overburden deposits.

Monitoring wells will be installed using direct-push drilling techniques using 3.25-inch diameter probe rods and will be constructed of 1-inch polyvinyl chloride (PVC). Hollow-stem auger drilling techniques may be necessary to reach target depths for "deep" monitoring wells based on subsurface drilling conditions encountered to date. Wells will be constructed using 5-foot long, 0.010-inch pre-slotted screens. Sand filter packs will be constructed around each well screen using Morie #1 or equivalent sand a minimum of 2-feet above the top of the well screen. A minimum 2-foot thick bentonite seal will be installed and hydrated above the well's filter pack using approved potable water. Cement-bentonite grout will be installed in the remainder of the borehole to approximately 1-foot below ground surface. A flush-mounted steel protective casing will be cemented in place over each well.

"Intermediate" and "deep" monitoring wells at the John Street property will be double-cased to minimize the potential for downward migration of VOCs during drilling activities. A 4-inch diameter steel casing will be installed and grouted 5-feet into the clay unit. Fluid rotary drilling techniques will be used to advance the borehole to the top of bedrock (or to drilling refusal). The "intermediate" and "deep" monitoring wells will be installed nested inside the borehole. Wells will be constructed using 5-foot long, 0.010-inch pre-slotted screens. Sand filter packs will be

constructed around each well screen using Morie #1 or equivalent sand a minimum of 2-feet above the top of the well screen. A minimum 2-foot thick bentonite seal will be installed and hydrated above the well's filter pack. Cement-bentonite grout will be installed in the remainder of the borehole to approximately 1-foot below ground surface. A flush-mounted steel protective casing will be cemented in place over each well.

Each monitoring well will be developed using inertial pumping techniques. A stainless steel foot (check) valve and high-density polyethylene (HDPE) tubing will be used for well development and sampling activities. Sample locations, media, and analytes are presented in Table 1. Where applicable, a low-flow VOC sampling tube obtained from the inertial pump manufacturer will be utilized during groundwater sampling for VOCs.

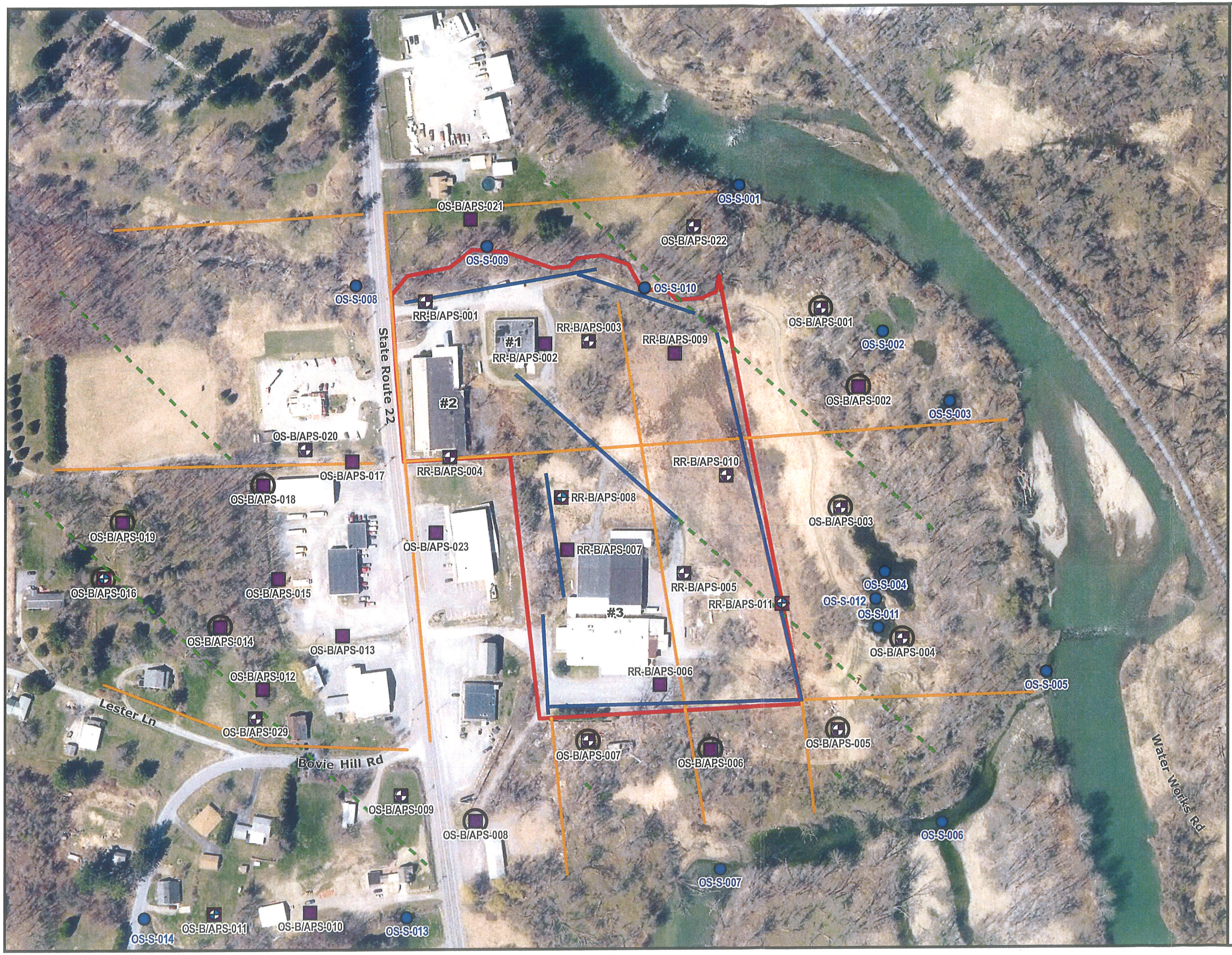
Please contact us if you have any questions.

Table 1
Sample Locations, Media, and Analytes
Additional Phase 1 Site Characterization

Location	Media	Analytes[1]				
		PFCs[2]	VOCs	Metals	Other TAL/TCL[3]	TO-15[4]
River Rd. – On-Site						
RR-B/APS-001	GW	X		X		
RR-B/APS-003	GW	X		X		
RR-B/APS-004	GW	X		X		
RR-B/APS-005	GW	X	X	X		
RR-B/APS-008	GW	X		X		
RR-B/APS-010	GW	X		X		
RR-B/APS-011	GW	X		X		
River Rd. – Off-Site						
OS-B/APS-001	GW	X		X		
OS-B/APS-002	GW	X		X		
OS-B/APS-003	GW	X		X		
OS-B/APS-004	GW	X		X		
OS-B/APS-005	GW	X		X		
OS-B/APS-007	GW	X		X		
OS-B/APS-009	GW	X		X		
OS-B/APS-011	GW	X		X		
OS-B/APS-013	GW	X		X		
OS-B/APS-020	GW	X		X		
OS-B/APS-022	GW	X		X		
OS-S-11	SW/Sed	X	X	X	X	
OS-S-12	SW/Sed	X	X	X	X	
OS-S-13	SW/Sed	X	X	X	X	
OS-S-14	SW/Sed	X	X	X	X	
John St. – On-Site						
JS-B/APS-001	GW	X		X		
JS-B/APS-002	GW	X		X		
JS-B/APS-003	GW	X		X		
JS-B/APS-004	GW	X		X		
JS-B/APS-005	GW	X		X		
Soil borings (8)	Soil		X			
Soil vapor points (9)	Soil Gas					X
John St. - Off-Site						
OS-B/APS-024	GW	X	X	X		
OS-B/APS-025	GW	X	X	X		
OS-B/APS-026	GW	X	X			
OS-B/APS-027	GW	X	X			
OS-B/APS-028	GW	X	X			
OS-B/APS-030	GW	X	X			
OS-B/APS-031	GW	X	X			

Footnotes:
1. Analytical methods and analyte lists are the same as contained in the NYSDEC-approved Field Sampling and Analysis Plan.
2. All groundwater samples analyzed for perfluorinated compounds (PFCs) will also be analyzed for pH and total organic carbon.
3. Target Compound List (TCL)/ Target Analyte List (TAL) of analytes in addition to volatile organic compounds (VOCs) and metals.
4. Chlorinated VOCs by USEPA Method TO-15.

Media Abbreviations:
GW – groundwater; SW – surface water; Sed – sediments



Legend

- Approximate Property Boundaries

Sample Locations

- Soil Boring / Advanced Profiling System (APS) Location
- Off-Site TAL/TCL Analysis of Soil
- Surface Water / Sediment Locations
- Surface Geophysical Survey Line

Proposed Sample Locations

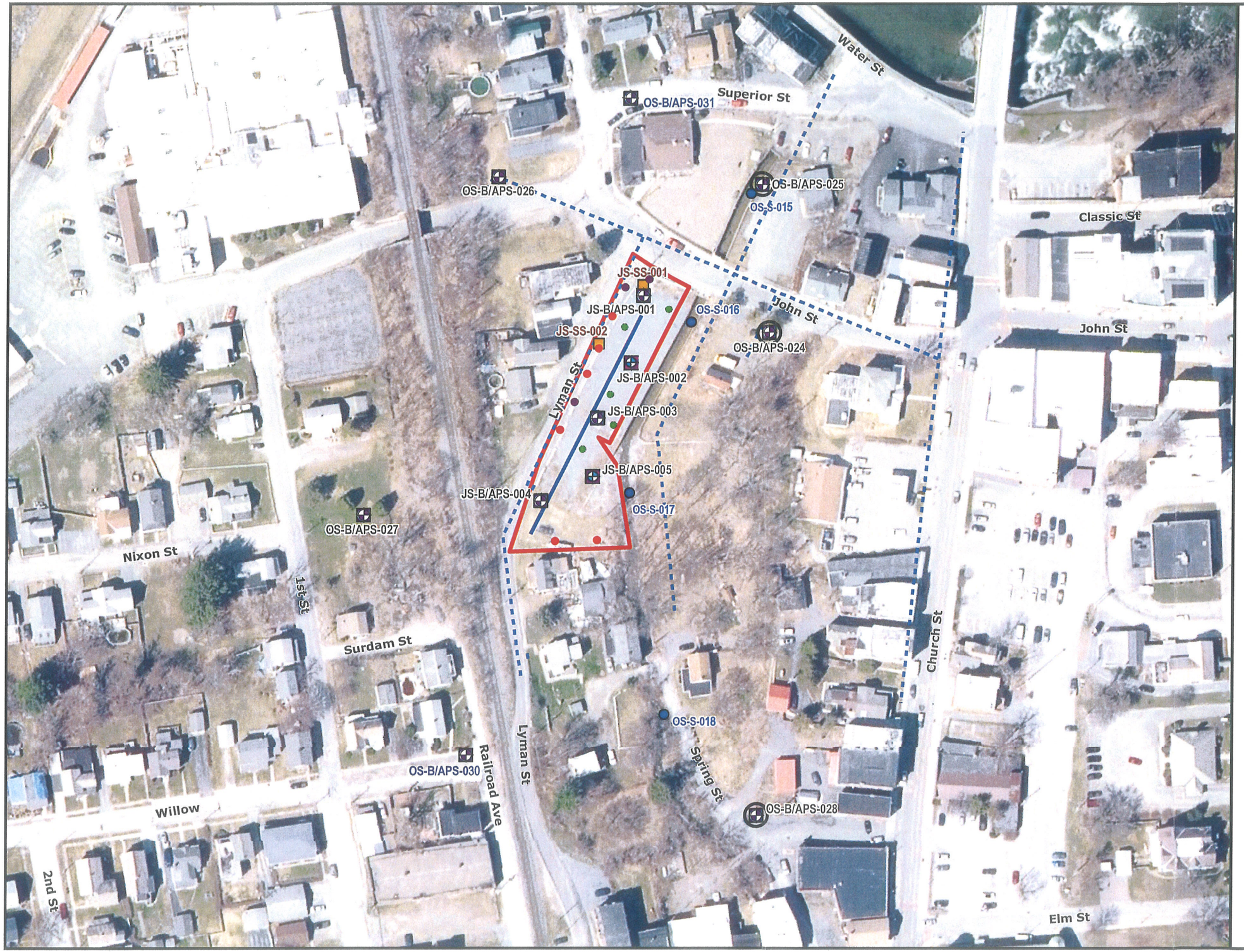
- Proposed Monitoring Well (single)
- Proposed Monitoring Well (pair)
- Proposed Siesmic Line
- Proposed VLF (Very Low Frequency Conductivity) Line

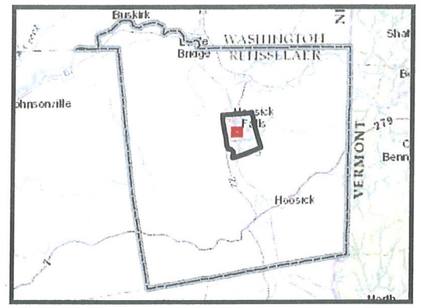
N

0 50 100 200 300 400
Feet

Figure 1: Sample Locations
River Road
Town of Hoosick
New York

ERM





Legend

Approximate Property Boundaries

Sample Locations

- Soil Boring / Advanced Profiling System (APS) Location
- Off-Site TAL/TCL Analysis of Soil
- Surface Water / Sediment Locations
- Surface Geophysical Survey Line

Proposed Sample Locations

- Proposed Soil Boring
- Proposed Soil Vapor Sample Location
- Proposed Soil Boring and Soil Vapor Location
- Proposed Monitoring Well Location (single)
- Proposed Monitoring Well Location (triplet)
- Proposed Surface Geophysical Survey Line

N

0 25 50 100 150 200

Feet

Figure 2: Sampling Locations
John Street
Village of Hoosick Falls
New York

ERM

G:\Graphics\Clients_A_E\Honeywell\Porter\Hoosick Falls\MXD\Sampling\JohnStJohnSt_FieldSampleLocations_20161007.mxd - steven.hickey - 10/7/2016

Jon Fox

From: Jon Fox <Jon.Fox@erm.com>
Sent: Wednesday, October 26, 2016 5:17 PM
To: Johnson, Jason D (DEC)
Cc: McAuliffe, John; Sweitzer, Mark; Daigle, William (DEC); Shaw, William (DEC); Maureen Leahy; Jim Perazzo
Subject: RE: Hoosick Falls - Additional Phase 1 Site Characterization

Jason,

To follow-up on our discussions yesterday and today, and a discussion today with William Shaw, please review the following technical clarifications to the memorandum dated 19 October 2016 and advise us if they are acceptable to the Department.

Figure 2 - Proposed Locations OS-B-030 and OS-B-031 (John Street Off-Site)

- Given that these two new locations are in paved roadways, we do not intend to collect surface soil samples for laboratory analysis, but soil core will be described and field-screened to refusal in a manner consistent with the approved Site Characterization (SC) Field Sampling and Analysis Plan (FSAP), and one or more soil samples will be collected for laboratory analysis using the procedures contained in the approved SC FSAP.
- Given that fixed monitoring well triplets are planned for installation and groundwater sampling, we do not intend to conduct permeability profiling or groundwater sampling using the Waterloo Advanced Profiling System at these two locations.

Monitoring Well Construction and Sampling

- Use of the "drive-and-wash casing" drilling technique is acceptable to the Department under the following conditions:
  - All casing must be steam-cleaned prior to use at our properties with approved water (previously tested for PFCs and found to be "non-detect").
  - We must use a joint compound for the casing that has been tested and shown to be "non-detect" for PFCs. The NYSDEC has previously approved of the use of vegetable shortening as a joint compound at other PFC sites in the area, and we intend to use vegetable shortening.
  - All cuttings will be contained at the surface and handled, characterized, and managed as investigation-derived waste in a manner consistent with the approved SC FSAP work plan.

Thank you.

Regards,
Jon

Jon S. Fox, P.G.
Principal Consultant
Environmental Resources Management
5788 Widewaters Parkway
Syracuse, New York 13214 USA
office phone: 315-233-3035
cell phone: 315-256-5352
jon.fox@erm.com

"We can complain because rose bushes have thorns, or rejoice because thorn bushes have roses."
Abraham Lincoln

From: McAuliffe, John [mailto:John.McAuliffe@Honeywell.com]
Sent: Wednesday, October 19, 2016 4:30 PM
To: William L. Daigle (william.daigle@dec.ny.gov)
Cc: Richard Mustico (richard.mustico@dec.ny.gov); Andrew O Guglielmi (DEC); Krista M. Anders (krista.anders@health.ny.gov); justin.deming@health.ny.gov; Jon Fox; Sweitzer, Mark; Morris, John
Subject: Hoosick Falls - Additional Phase 1 Site Characterization

Please see attached letter. As a reminder, we are not sending a hard copy unless specifically requested. Regards,

John P. McAuliffe, P.E.
Program Director, Syracuse
Honeywell
301 Plainfield Road
Suite 330
Syracuse, NY 13212
Office: 315.552.9782
Mobile: 315.440.0859
Fax: 315.552.9780

john.mcauliffe@honeywell.com
www.honeywell.com
