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10 November 2016

Brian Jankauskas
Remedial Bureau E, Section A
Div. Environmental Remediation
NYSDEC
625 Broadway, 12th Floor, Albany, NY 12233-7017

RE: 2016 Groundwater Sampling Event
Contract/Work Assignment No: D007624-29
Site/Spill No/Pin: Bianchi/Weiss Greenhouses Site, East Patchogue, New York (152209)

Dear Mr. Jankauskas:

This letter work plan describes the groundwater sampling event to be completed in fall of 2016 following remedial action completion at the Bianchi/Weiss Greenhouses site (152209) located in East Patchogue, New York. EA Engineering, P.C. and its affiliate EA Science and Technology (EA) previously completed a remedial investigation (RI) and feasibility study (FS), and presented the findings in a RI Report (EA 2011a)¹ and a FS Report (EA 2011b)², respectively. An additional groundwater sampling event was completed in May 2013 to establish baseline groundwater conditions prior to the remedial action to satisfy the objectives outlined in the New York State Department of Environmental Conservation (NYSDEC 2012) Record of Decision (ROD) (2012)³. The data produced. Results from this groundwater sampling event were presented in a Pre-Design Investigation Groundwater Sampling Report (EA 2013)⁴. An additional pre-remedial action groundwater sampling event was completed by NYSDEC in May 2015 and documented in a memorandum dated 1 September 2015 (NYSDEC 2015)⁵. The remedial action at the site, which involved the removal of 28,511 yd³ of impacted soil was completed in July 2016. NYSDEC has requested that EA complete a post-remediation groundwater sampling event including the following tasks:

- Locate all monitoring wells to be sampled as provided in Attachment A using a global positioning system (GPS) unit, and verify coordinates.
- Gauge all locatable/functioning monitoring wells and piezometers associated with the site

1 EA. 2011a. Final RI Report, Bianchi/Weiss Greenhouses Site (152209), East Patchogue, Suffolk County, New York. August.

2 EA. 2011b. FS, Bianchi/Weiss Greenhouses Site (152209), East Patchogue, Suffolk County, New York. September.

3 NYSDEC. 2012. ROD, Bianchi/Weiss Greenhouses State Superfund Project, East Patchogue, Suffolk County, Site Number 152209. January.

4 EA. 2013. Pre-Design Investigation Groundwater Sampling Report, Contract/Work Assignment No: D007624-18 Bianchi/Weiss Greenhouses Site, East Patchogue, New York (152209). October.

5 NYSDEC. 2015. Memorandum; Groundwater Monitoring May 2015, Bianchi/Weiss Greenhouses. September 1.

- Collect groundwater samples from three on-site shallow piezometers replaced during remedial action
- Collect groundwater samples from 17 off-site monitoring wells
- Collect groundwater samples from up to three off-site private wells (final count will depend on permission from homeowners)
- Collect one surface water sample from Abets Creek.

Each groundwater sample is to be analyzed for chlordane by U.S. Environmental Protection Agency (EPA) Method 608. Category A deliverables are to be requested for samples collected from monitoring wells and surface water and Category B deliverables are to be requested for samples collected from private wells.

GROUNDWATER MONITORING

The objectives of the post-remedial action groundwater sampling event is to provide updated groundwater monitoring data of site-related contamination. A summary of the monitoring locations to be gauged and sampled for this event is provided as Attachment A. A figure showing monitoring locations is provided as Attachment B.

Monitoring Well Gauging

Prior to the start of the groundwater sampling event, a complete round of static water level measurements will be taken from each monitoring well to prepare a groundwater contour map and evaluate groundwater flow patterns.

Monitoring Well Purging and Sampling

Monitoring wells indicated in Attachment A will be purged and sampled using a peristaltic pump following low flow sampling procedures in accordance with the approved generic Field Activities Plan (EA 2011d)⁶. Water produced from purging will be filtered using a 0.5 micron filter on-site prior to discharge.

Surface Water Sampling

A surface water sample (SW-01) from Abet Creek, next to stream gauge SG-03, will also be collected during the groundwater sampling event.

Private Well Sampling

Private well spigots will be turned on for ten minutes prior to collection of field parameters using a Horiba U-52 and sampling.

⁶ EA. 2011d. Generic Field Activities Plan for Work Assignments. October.



All groundwater and surface water samples will be placed in appropriate sample containers, sealed, and submitted to the laboratory for chlordane analysis by EPA Method 608. Category B deliverables will be requested for private well sample results; Category A deliverables will be requested for all other samples.

Quality Assurance / Quality Control

All samples will be labeled, handled, and packaged following the procedures described in the Generic Quality Assurance Project Plan (QAPP) (EA 2011e)⁷ and site-specific QAPP Addendum developed for the RI (EA 2011a)¹. Two duplicates and three field blanks will be collected and analyzed to meet the requirements of the QAPP. A matrix spike and matrix spike duplicate sample will be collected from a private well location. Analytical data for private well samples will be sent to a third party validator, Environmental Data Services, Inc. (EDS), and data usability summary reports (DUSRs) will be prepared for the analytical package.

REPORTING

Following receipt of the data and DUSRs, sampling activities and results will be summarized in a groundwater sampling report. This will include a comparison with previous groundwater sampling events.

If you have any questions regarding this sampling event, please do not hesitate to contact me at (315) 565-6557.

Sincerely yours,

EA SCIENCE AND TECHNOLOGY

A handwritten signature in black ink, reading 'Megan Miller'.

Megan Miller
Project Manager

EA ENGINEERING, P.C.

A handwritten signature in black ink, reading 'Donald F. Conan'.

Donald F. Conan, P.E.
Vice President

⁷ EA. 2011e. Generic QAPP For Work Assignments Contract D007624. April.

Attachment A

Monitoring Locations Summary Table

Bianchi/Weiss Greenhouses Site
East Patchogue, New York (152209)
2016 Groundwater Sampling Event

SUMMARY OF MONITORING LOCATIONS						
Monitoring Location ID	Location to be Gauged	Location to be Sampled	Well Depth	Well Casing Elevation	Northing	Easting
				(ft AMSL)		
TPMW-01	x	x		Not Surveyed		
PDI-PZ-01	x	x		Not Surveyed		
PDI-PZ-02	x	x		Not Surveyed		
MW-33D	x	x	60	2.64	215784.359	1267781.767
MW-33I	x	x	25	2.86	215775.936	1267779.595
MW-33S	x	x	10	2.72	215768.091	1267777.468
WO-33P	x	x	40		215784.358	1267781.766
MW-41	x	x	35	20.46	218550.729	1270338.35
MW-42	x		25	12.43	215875.012	1269364
WO-07	x	x	20	11.66	217526.218	1269717.018
WO-08	x	x	20	11.88	217579.246	1269611.877
WO-09	x	x	20	11.27	217619.425	1269528.141
WO-10	x	x	20	10.72	217661.734	1269448.94
WO-11	x		20	10.9	217705.957	1269356.389
WO-15	x		20	11.01	217157.588	1269885.099
WO-16	x		20	9.98	217201.172	1269761.527
WO-17	x		20	8.97	217267.786	1569630.341
WO-18	x		20	8.49	217325.825	1269508.65
WO-19	x	x	20	8.93	217311.829	1269384
WO-21	x		20	14.94	217157.588	1269885.099
WO-25	x	x	15	10.08	216870.205	1268802.325
WO-26	x	x	40	11.07	216889.549	1268859.293
WO-27	x	x	40	10.86	216588.49	1268692.085
WO-28	x	x	40	15.71	216448.529	1268470.565
WO-30	x	x	50	11.52	216294.267	1268171.414
WO-31	x	x	40	8.28	216053.371	1268108.836
WO-34	x		10	0.43	216134.595	1267872.65
WO-36	x		10	9.92	216364.318	1269025.992
PW-01		x				
PW-01A		x				
PW-02		x				
SG-03	x	x	Not applicable	Not applicable	215320.439	1267473.984
PW = Private Well						
SG = Stream Gauge						

Attachment B

Monitoring Locations

Figure

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Legend

- Groundwater Monitoring Well
- Potable Well
- PDI Piezometer
- Surface Water Location
- Fenceline
- Property Boundaries

Figure 1
2016 Groundwater Sampling Locations
Bianchi Weiss Greenhouses (152209)
East Patchogue, New York

Map Date: 11/10/2016
Source: ESRI, 2011
Projection: NAD 1983 State Plane NY Long Island