



# Ecosystems Strategies, Inc.

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## MEMORANDUM

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**To:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

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**From:** Paul Ciminello, President

**Date:** February 12, 2013

**RE:** Monthly Status Report of Product Activities during January 2013 for the property located at 280 Franklin Street, Borough of Brooklyn, New York  
ESI File: SB09110.50  
NYSDEC Site Code: 224136

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This memo provides a brief summary of investigative and/or interim remedial services conducted at the above-referenced property (the Site) during January 2013.

### A. Investigative Activities

All proposed investigative activities have been conducted to date, with the exception of the installation of proposed monitoring well MW-30 west of existing monitoring well MW-25, as recently requested by NYSDEC. Also, based on recent NYSDEC communications, it is understood that a contingency monitoring well, MW-31, will also need to be installed in the park west of soil boring location SB-72 and north of monitoring well location MW-30 if free product is observed to be present during installation activities associated with MW-30. ESI is in the process of securing a DOT sidewalk disturbance permit to install monitoring well MW-30 (a DOT permit is not required for the contingency well; however, permission from the Park Service will be).

Monitoring wells MW-28 and MW-29 were installed on January 8, and 15, respectively (no product was observed during the installation activities). It is anticipated that monitoring well MW-30 will be installed in the next few weeks (installation will be scheduled after the DOT permit is issued). These additional wells will be developed and then sampled together after MW-30 (and possibly MW-31) are installed. Data from these additional wells will be subsequently incorporated in the Draft Remedial Investigation Report (Draft RIR).

The November 2012 findings (in which one foot of product was observed in MW-27 which had not contained product previously) supported the installation of monitoring well MW-29 (east of monitoring well MW-27) in order to delineate the movement of the plume southeast of the Site. No product was observed while installing MW-29 in January 2013. Subsequent monitoring conducted during December 2012 and January 2013 also documented the absence of product in both MW-27 and MW-29).

The attached map shows existing and proposed monitoring well installation locations.

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## **B. Summary of Interim Remedial Services**

Product recovery activities at the Site were originally initiated by Advanced Site Restoration, LLC (ASR) in October 2006 in order to address the sub-surface phthalate plume present below the western end of the Site, and a petroleum plume at the northeast corner of the Site.

Interim Remedial Measure (IRM) activities that have occurred at the Site to date (by ASR) include the installation of twelve, 4-inch product recovery wells within the western portion of the on-site building (RW-1 through RW-6 and RW-8 through RW-12), and one, 4-inch product recovery well in the northeastern portion of the building complex (RW-7).

In November 2006, two automated product-seeking pumps (manufactured by Spill Buster, Inc.) were installed (by ASR) in recovery wells RW-3 and RW-10; however, the pump at RW-3 no longer functions and was subsequently removed (product removal from RW-3 continues to be accomplished through manual bailing, intermittent pumping and/or the use of absorbent materials, as needed).

Product recovery operations using automated belt skimmers were initiated by ESI in August 2010 (the automated belt skimmers are associated with recovery wells RW-8 and RW-12). Currently the belt skimmer associated with RW-8 is damaged, likely the result of power surges from the power system at the Site per a technician's assessment on July 2012.

Product removal measures for all of the other remaining recovery wells consist of manual bailing, intermittent pumping, and/or the use of absorbent materials, as appropriate.

The following provides a summary of annual product/phthalate recovery and removal (disposal as a hazardous waste) efforts since 2009 which is when ESI became involved with operating, monitoring and maintaining the LNAPL recovery system at the Site:

- Calendar Year 2009 – 2,608 gallons were recovered and removed (disposed of properly).
- Calendar Year 2010 – 2,750 gallons were recovered and removed (disposed of properly).
- Calendar Year 2011 – 2,410 gallons were recovered and removed (disposed of properly).
- Calendar Year 2012\* – 1,380 gallons were recovered and removed (disposed of properly);

\*Note: Additional product generated in the calendar year 2012 (1,114 gallons) was disposed in January 2013 (for a total of 2, 494 gallons generated in the calendar year 2012). Additional information on these activities is provided below.

### January 2013 Monitoring and Removal Efforts

The product recovery drum associated with RW-12 was emptied into an on-site tote on January 16, 2013 to allow for the continued operation of the skimmer at this location. ESI also retained Miller Environmental Group to remove product from the on-site totes and relevant monitoring and recovery wells on January 16, 2012. Approximately 1,114 gallons of product were removed from the on-site totes. All the accessible recovery wells (RW-2, RW-3, RW-4, RW-5, RW-6, RW-9, and RW-11) and monitoring wells (on-site and off-site) were gauged for the presence of product. Table 1, (Attachment B) provides a summary of product thickness measurements collected on the above-referenced date.

Subsequently, approximately 231 gallons of product (and water mixture) was removed from all accessible recovery wells through the use of a vacuum truck from these wells. Product could not be recovered from any of the monitoring wells through the use of a vacuum truck because the equipment (hose) was too large to insert into the wells (2 inch diameter) and the 10 foot extraction extension was not long enough to reach the floating product. A total of approximately 1,345 gallons of product/water mixture were removed

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from the site on January 16, 2013. A copy of the waste manifest documenting the above-referenced disposal is provided as Attachment D.

The recovery system skimmer for RW-10 is operating continuously and discharging to a 400-gallon tote. The belt skimmer associated with RW-12 is operating on timed intervals to allow for the accumulation of an appropriate amount of product. Attachment A, Figure 1 shows recovery and monitoring well locations.

A slightly upward trend in the amount of product measured and recovered was observed when comparing the December 2012 and January 2013 data. This trend is likely the result of the increased frequency of product removal.

On behalf of the client, ESI will continue to monitor on-site generation and removal of the product/phthalate material.

### **C. Product Recovery System (PRS) Assessment and Recommendations**

While the PRS is functioning, the amount of product being removed from the Site is negligible when compared to the amount of product present in the subsurface (based on the most recent investigation results). ESI has increased the frequency of site visits, from monthly to twice per month, in order to increase product recovery and provided additional monitoring to the PRS. Attachment C, Table 2 provides a summary of historical product thickness data for the recovery wells.

Existing efforts suggest that the product recovery systems are incapable of removing sufficient volumes of product, and that more aggressive product recovery is warranted. In an attempt to be more aggressive, ESI utilized a vacuum truck during January 2013 in an effort to extract a larger volume of product from the on-site wells; however, two problems were encountered, as follows:

- Monitoring Wells - The vacuum truck equipment was unable to extend below 10 ft bsg due to the diameter of the wells; and,
- A fairly significant amount of water was extracted along with product from the recovery wells, when compared to traditional product bailing and/or pumping activities which resulted in increased disposal costs without providing any significant benefit.

In addition to the Draft Remedial Investigation Report (Draft RIR), initially completed in December 2012 which will need to be revised to incorporate additional data associated with additional monitoring wells MW-28, 29 and 30/31), ESI has drafted a Work Plan for In-situ Remediation Pilot Study (WIRPS), to more aggressively address the free product plume at the Site (which won't be submitted until after the RIR is finalized).

The Pilot Study work plan currently includes: the excavation and removal of the historical USTs, removal of free product from within the excavations, application of an in-situ treatment within the excavations, and execution of a pilot study with two different products (one chemical product and one biological product) to determine their effectiveness in treating the bis(2-ethyhexyl)phthalate plume at the Site.

After the pilot study is approved and completed, a Draft Remedial Alternative Report (Draft RAR) will be prepared to discuss and identify the final remedy selected for the site.

Note: No equipment repair or installation of additional recovery wells is anticipated at this time.

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**D. Meetings and NYSDEC Communication**

No meetings occurred during January 2013.

Monthly progress reports will continue to be provided.

**E. Anticipated Work in February 2013**

It is anticipated that the following items will be completed:

- Existing recovery and monitoring wells are scheduled to be gauged and product will be removed on February 20, 2013.
- ESI is scheduled to meet with NYSDEC personnel on-site on February 20, 2013.
- Proposed monitoring well MW-30 and possibly MW-31 will be installed (pending receipt of a DOT permit or Park permission, as appropriate).
- Monitoring wells MW-28, 29, 30 and possibly 31 will be developed and sampled (this will likely occur in March 2013).
- The next status report of product recovery and investigation efforts will be provided by March 10, 2013.
- The RIR will be finalized and will be submitted to the NYSDEC after analytical data associated with additional monitoring wells MW-28, 29, 30 and 31 are received. The WIRPS is anticipated to be submitted after the RIR (anticipated in March/April, respectively).

Please contact me at 845-452-1658 should you have any questions or comments.

Attachment A – Figure 1: Well Location Map

Attachment B – Table 1: Measurements Collected Using the Geotech Oil/Water Interface Probe

Attachment C – Table 2: Historical Product Thickness

Attachment D – Waste Manifest

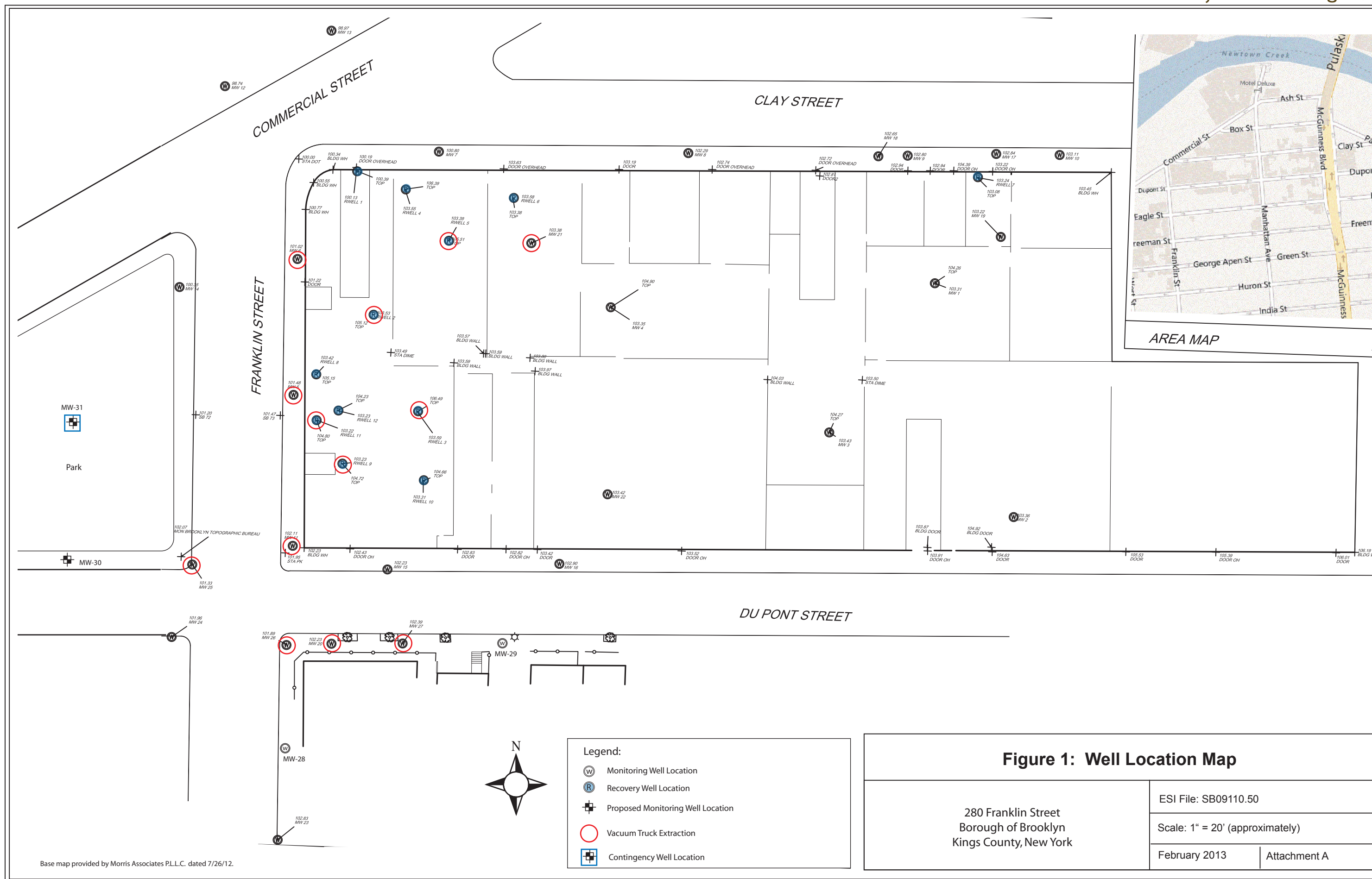


Table 1: January 2013 Measurements Collected Using the Geotech Oil/Water Interface Probe

Well	Depth to Product from Top of PVC (feet)	Depth to Groundwater from Top of PVC (feet)	January 2013 Product Thickness (feet)	December 2012 Product Thickness (feet)	November 2012 Product Thickness (feet)	October 2012 Product Thickness (feet)	September 2012 Product Thickness (feet)
MW – 4	12.93	13.37	0.44	0.80	0.31	0.33	3.13
MW – 5	9.75	12.75	3.00	4.11	3.50	3.41	5.58
MW – 6***	NM	NM	-	-	-	3.49	2.14
MW – 7	9.10	10.40	1.30	1.36	2.00	1.84	1.83
MW – 8	-	9.95	No product	No product	No product	No product	No product
MW – 11***	NM	NM	-	2.09	2.09	3.62	-
MW – 12	-	7.25	No product	No product	No product	No product	No product
MW – 13	-	7.34	No product	No product	No product	No product	No product
MW – 14	-	8.50	No product	No product	No product	No product	No product
MW – 15***	NM	NM	-	1.56	0.99	0.76	2.67
MW – 16	11.20	11.45	0.25	0.20	No product	0.24	0.20
MW – 20	10.50	11.85	1.35	1.38	3.39	3.15	3.80
MW – 21	11.55	15.65	4.10	4.23	2.89	2.04	4.15
MW – 22	12.15	13.35	1.20	0.18	0.21	0.18	1.80
MW – 23	-	11.08	No product	No product	No product	No product	No product
MW – 24	-	10.22	No product	No product	No product	No product	No product
MW – 25	10.10	13.80	3.70	2.82	7.86	4.40	3.96
MW – 26	10.20	12.65	2.45	1.62	-	2.61	4.02
MW – 27	-	10.48	No product	No product	0.99	No product	No product
MW – 28**	-	10.80	No product	-	-	-	-
MW – 29**	-	11.10	No product	-	-	-	-
RW – 1	-	9.00	No product	No product	No product	No product	No product
RW – 2	13.65	17.85	4.20	2.52	1.92	1.50	5.85
RW – 3	14.95	18.65	3.70	3.58	2.84	3.50	3.88
RW – 4	15.05	18.10	3.05	2.95	-	3.45	3.35
RW – 5****	14.10	NM	-	2.35	3.00	1.88	-
RW – 6	12.00	12.40	0.40	0.15	0.90	0.22	0.06
RW – 8*	NM	NM	NM	NM	NM	NM	NM
RW – 9	13.25	16.75	3.50	3.08	3.83	2.98	5.33
RW – 10*	NM	NM	NM	NM	NM	NM	NM
RW – 11	13.25	16.75	3.50	2.93	4.49	2.58	4.40
RW – 12*	NM	NM	NM	NM	NM	NM	NM

**Notes:**

NM – Not Measured

Dash indicates not recorded.

\*Well is equipped with an automated product recovery system.

\*\* New monitoring wells installed in January 2013.

\*\*\* Obstruction in the well or inaccessibility prevented collecting measurement and/or product removal.

\*\*\*\*Equipment was not able to detect water/oil interface consistently.

Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery Well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation; hence data from these wells are not included in this reporting.

Table 2: Historical Product Thickness

Date	Comments	Product Thickness (inches)											
		RW-1	RW-2	RW-3	RW-4	RW-5	RW-6	RW-7***	Skimmer RW-8	RW-9	Spill Buster RW-10	RW-11	Skimmer RW-12
1/16/2013		0	50.40	44.40	36.60	*	4.80	*	*	42.00	*	42.00	*
12/19/2012		0	30.24	42.96	35.40	28.20	1.80	*	*	36.96	*	33.36	*
11/28/2012		0	23.04	34.08	*	36.00	10.8	*	*	45.96	*	53.88	*
11/2/2012		0	18.0	42.0	41.4	22.6	2.6	*	*	35.8	*	31.0	*
9/19/2012		0	70.2	46.6	40.2	*	0.7	*	*	23.9	*	52.8	*
8/22/2012		0	55.2	31.2	40.8	48.0	1.2	*	*	51.6	*	48.0	*
7/19/2012		0	37.2	33.6	39.6	12.0	2.4	*	*	40.8	*	26.4	*
6/20/2012		2.4	44.4	30	38.4	16.8	0	*	*	34.8	*	36.0	*
5/29/2012		1.2	39.6	26.4	14.4	13.2	15.6	*	*	26.4	*	27.6	*
4/25/2012		0	36.0	24.0	15.6	50.4	4.8	*	*	4.8	*	NA	*
3/29/2012		0	44.4	29.8	14.4	3.1	1.0	*	*	43.2	*	51.6	*
2/2/2012	Broken skimmer @ RW-8	0	1.44	26.3	Too thick	Too thick	Too thick	*	47.2	43.1	NA	7.2	54.6
1/10/2012		0	NA	0.2	Too thick	Too thick	0	*	0	0.2	0.3	0.4	5.8
12/15/2011		*	*	0.1	*	*	*	*	0.5	*	0.3	0.6	4.5
11/21/2011		*	*	0.5	*	*	*	*	2.5	0.5	0.9	1.5	16.5
10/21/2011		*	*	0.3	*	*	*	*	0.8	0.3	0.3	0.6	4.5
9/23/2011		*	*	0.1	*	*	*	*	0.3	0.3	0.3	0.5	4.0
8/22/2011		*	*	0.3	*	*	*	*	0.3	0.3	0.5	0.1	1.8
7/20/2011		*	*	0.8	*	*	*	*	1.0	0.4	0.5	0.8	5.0
6/17/2011		*	*	0.3	*	*	*	*	0.5	0.3	0.4	0.8	4.3
5/20/2011		*	*	0.1	*	*	*	*	0.1	0.1	0.3	0.8	2.0
4/25/2011		*	*	0.3	*	*	*	*	0.4	0.3	0.4	1.0	2.5
3/21/2011		*	*	0.4	*	*	*	*	0.4	0.3	0.5	1.0	8.5
2/21/2011		*	*	0.3	*	*	*	*	1.0	0.3	0.5	0.8	8.5
1/20/2011		*	*	0.1	*	*	*	*	1.5	0.3	0.6	0.3	2.5
12/20/2010		*	*	0.5	*	*	*	*	1.5	0.5	*	0.5	4.0
11/17/2010		*	*	0.3	*	*	*	*	1.4	0.4	0.5	0.3	3.8
10/14/2010	Belt Skimmer Installed @ RW-8	*	*	0.1	*	*	*	*	1.1	0.3	0.5	0.3	4.6
9/24/2010	Belt Skimmer Installed @ RW-12	*	*	0.3	*	*	*	*	1.3	0.4	0.9	1.0	3.3
8/20/2010		*	*	0.5	*	*	*	*	1.3	0.3	0.6	0.8	3.3
7/19/2010		*	*	0.5	*	*	*	*	2.0	0.5	0.3	1.0	4.5
6/23/2010		*	*	0.3	*	*	*	*	1.3	0.3	0.4	0.8	4.0
5/21/2010		*	*	0.3	*	*	*	*	0.8	0.3	0.8	0.8	3.0
4/22/2010		*	*	0.5	*	*	*	*	0.5	0.3	0.4	0.8	3.0
3/18/2010		*	*	0.1	*	*	*	*	0.1	0.1	0.1	0.1	0.3
2/22/2010		*	*	0.5	*	*	*	*	1.5	0.5	0.1	0.8	2.0
1/15/2010	ESI became involved	*	*	0.3	*	*	*	*	0.5	0.3	0.4	0.5	3.0
12/18/2009		*	*	0.1	*	*	*	*	0.5	0.3	0.4	0.5	2.5
11/19/2009		*	*	0.3	*	*	*	*	1.0	0.3	0.5	0.5	3.5
10/20/2009		*	*	0.3	*	*	*	*	1.3	0.5	0.5	0.1	4.0
9/29/2009		*	*	0.3	*	*	*	*	1.5	0.3	0.5	0.3	4.5
8/24/2009		*	*	0.8	*	*	*	*	2.5	0.8	1.4	2	5.5
7/22/2009		*	*	0.3	*	*	*	*	1.0	*	0.4	1.0	3.8
6/21/2009		*	*	0.5	*	*	*	*	0.5	0.3	0.3	1.0	2.5
5/15/2009		*	*	0.3	*	*	*	*	0.1	*	0.3	0.8	2.1
4/23/2009		*	*	0.1	*	*	*	*	0.3	1.0	0.3	*	1.0
3/26/2009		**	0.27	0.23	0.32	Sheen	Sheen	0.10	1.22	0.22	0.50	*	*
2/19/2009		**	0.34	0.25	0.13	Sheen	Sheen	0.05	1.67	0.40	0.44	*	*
1/29/2009		**	0.44	0.28	0.37	Sheen	Sheen	Sheen	1.45	0.13	0.76	*	*
12/31/2008		**	0.47	1.41	0.49	Sheen	Sheen	Sheen	0.25	0.38	0.33	*	*
11/14/2008		*	1.68	0.90	0.30	Sheen	0.17	0.07	1.44	0.64	0.55	*	*
10/22/2008		**	*	0.18	0.05	0.19	Sheen	Sheen	1.10	0.35	0.65	*	*
9/19/2008		**	0.38	0.17	*	2.16	**	0.07	0.31	0.20	0.65	*	*
8/21/2008		**	0.37	0.30	0.03	2.09	Sheen	0.10	0.45	0.25	0.61	*	*
7/25/2008		**	0.24	0.48	0.84	3.82	Sheen	0.16	0.83	0.41	0.07	*	*
6/4/2008		**	*	*	*	3.82	Sheen	Too thick	*	*	*	*	*
5/12/2008		**	0.24	0.48	0.39	0.02	0.03	Too thick	0.83	0.41	0.07	*	*
4/7/2008		**	0.24	0.56	0.18	0.01	0.10	0.16	1.45	0.99	0.12	*	*
3/24/2008		**	0.36	0.60	0.29	0.23	0.04	Too thick	1.11	0.73	0.07	*	*
2/28/2008		**	0.18	0.60	0.22	0.01	0.59	0.08	1.35	0.48	0.04	*	*
1/11/2008		**	0.33	0.23	0.15	0.13	0.25	0.04	0.25	0.12	0.14	*	*
12/14/2007		**	1.37	2.22	0.36	0.49	0.57	Too thick	0.83	0.56	0.41	*	*
11/23/2007		**	1.30	1.36	0.46	0.10	0.71	0.06	0.47	0.74	0.71	*	*
10/21/2007		**	0.24	0.51	0.29	0.12	0.81	Too thick	*	*	*	*	*
9/24/2007	Pump @ RW-10 likely installed 8/13/2007	**	*	0.67	1.58	0.30	0.83	Too thick	2.30	1.50	*	*	*
6/18/2007		**	*	0.87	0.23	0.05	**	*	1.11	0.77	*	*	*
5/10/2007		**	*	0.17	0.34	0.08	**	*	0.33	0.23	0.08	*	*
4/25/2007		**	0.20	0.24	0.40	0.15	**	*	0.25	0.15	0.12	*	*
11/20/2006		**	0.01	*	1.98	0.11	**	*	*	*	*	*	*

## Notes:

NA - Not Accessible

\* No data available

\*\*No depth to product provided, product might not be present.

\*\*\*RW-7 is associated with a separate portion of the site associated with NYSDC Spill 06-01852; hence data from RW-7 is not included in this summary table (the product is typically too thick to measure).

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <u>NY0001450354</u>		2. Page 1 of <u>1</u>		3. Emergency Response Phone <u>516-276-7540</u>		4. Manifest Tracking Number <b>000346568 JJK</b>			
		5. Generator's Name and Mailing Address <u>49 Dupont Road Corp</u> <u>PO Box 708</u> <u>Dear Park, NY 11726</u>						Generator's Site Address (if different than mailing address) <u>49 Dupont Rd</u> <u>Brooklyn, NY 11222</u>			
Generator's Phone: <u>516-482-1655</u>		6. Transporter 1 Company Name <u>Miller Environmental Group Inc</u>						U.S. EPA ID Number <u>NY D000409030</u>			
		7. Transporter 2 Company Name						U.S. EPA ID Number			
8. Designated Facility Name and Site Address <u>Harita, LLC</u> <u>628 South Seneca Street</u> <u>Cohoes, NY 12047</u>								U.S. EPA ID Number <u>NY D000409030</u>			
Facility's Phone: <u>516-234-0831</u>											
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes					
		No.	Type								
X	1. Waste Tank Liquids, Organic, N.O.S., 6.1, UN 2810 PG II (UN2810/2812 Ethylene Glycol) EP0162	1	IT	1345	13	U000					
	2.										
	3.										
	4.										
14. Special Handling Instructions and Additional Information <u>W13-0000</u> <u>30110130114 101</u> <u>Tank #397 - white 12498 PC</u>											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Offeror's Printed/Typed Name <u>James J. Miller</u>					Signature <u>[Signature]</u>		Month Day Year <u>1 16 13</u>				
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____											
17. Transporter Acknowledgment of Receipt of Materials											
Transporter 1 Printed/Typed Name <u>Tommy Carole</u>					Signature <u>[Signature]</u>		Month Day Year <u>1 16 13</u>				
Transporter 2 Printed/Typed Name					Signature		Month Day Year				
18. Discrepancy											
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection											
Manifest Reference Number: _____											
18b. Alternate Facility (or Generator) U.S. EPA ID Number											
Facility's Phone: _____											
18c. Signature of Alternate Facility (or Generator)							Month Day Year				
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
1.		2.		3.		4.					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a											
Printed/Typed Name					Signature		Month Day Year				



# Ecosystems Strategies, Inc.

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## MEMORANDUM

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**To:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us  
**cc:** Joe Folkman (49 Dupont Realty Corp.) Email: jfolkman@pvcisme.com  
Jane O'Connell (NYSDEC) Email: jhoconne@gw.dec.state.ny.us  
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Bridget Callaghan Email: bkc01@health.state.ny.us

**From:** Paul Ciminello, President

**Date:** March 14, 2013

**RE:** Monthly Status Report of Product Activities during February 2013 for the property located at 280 Franklin Street, Borough of Brooklyn, New York  
ESI File: SB09110.50  
NYSDEC Site Code: 224136

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This memo provides a brief summary of investigative and/or interim remedial services conducted at the above-referenced property (the Site) during February 2013.

### A. Investigative Activities

All proposed investigative activities have been conducted to date, with exception to the installation of 3 additional proposed monitoring wells (MW-30 through MW-33) and a possible contingency well (MW-34) west of existing monitoring wells MW-14 and MW-25, as recently requested by NYSDEC. ESI has also been recently instructed by the NYSDEC to hold off on obtaining the DOT sidewalk disturbance permits to install the additional wells identified above until NYSDEC has had a chance to discuss the installation of the wells with the Park Service. ESI is currently awaiting word from the NYSDEC to proceed.

Monitoring wells MW-28 and MW-29 were installed on January 8, and 15, respectively (no product was observed during the installation activities). These additional wells will be developed and then sampled together with MW-30 through MW-33/34. Data from these additional wells will be subsequently incorporated in the Draft Remedial Investigation Report (Draft RIR).

The attached map shows existing and proposed monitoring well installation locations.

### B. Summary of Interim Remedial Services

Product recovery activities at the Site were originally initiated by Advanced Site Restoration, LLC (ASR) in October 2006 in order to address the sub-surface phthalate plume present below the western end of the Site, and a petroleum plume at the northeast corner of the Site.

Interim Remedial Measure (IRM) activities that have occurred at the Site to date (by ASR) include the installation of twelve, 4-inch product recovery wells within the western portion of the on-site building (RW-

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1 through RW-6 and RW-8 through RW-12), and one, 4-inch product recovery well in the northeastern portion of the building complex (RW-7).

In November 2006, two automated product-seeking pumps (manufactured by Spill Buster, Inc.) were installed (by ASR) in recovery wells RW-3 and RW-10; however, the pump at RW-3 no longer functions and was subsequently removed (product removal from RW-3 continues to be accomplished through manual bailing, intermittent pumping and/or the use of absorbent materials, as needed).

Product recovery operations using automated belt skimmers were initiated by ESI in August 2010 (the automated belt skimmers are associated with recovery wells RW-8 and RW-12). Currently the belt skimmer associated with RW-8 is damaged, likely the result of power surges from the power system at the Site per a technician's assessment on July 2012.

Product removal measures for all of the other remaining recovery wells consist of manual bailing, intermittent pumping, and/or the use of absorbent materials, as appropriate.

The following provides a summary of annual product/phthalate recovery and removal (disposal as a hazardous waste) efforts since 2009 which is when ESI became involved with operating, monitoring and maintaining the LNAPL recovery system at the Site:

- Calendar Year 2009 – 2,608 gallons were recovered and removed (disposed of properly).
- Calendar Year 2010 – 2,750 gallons were recovered and removed (disposed of properly).
- Calendar Year 2011 – 2,410 gallons were recovered and removed (disposed of properly).
- Calendar Year 2012\* – 1,380 gallons were recovered and removed (disposed of properly);

\*Note: Additional product generated in the calendar year 2012 (1,114 gallons) was disposed in January 2013 (for a total of 2, 494 gallons generated in the calendar year 2012). Additional information on these activities is provided below.

#### February 2013 Monitoring and Removal Efforts

On March 1, 2013, ESI personnel thoroughly cleaned the areas around all of the product recovery wells at the site and placed clean absorbent pads at the base of each recovery well to improve general housekeeping practices at the facility (new hazardous waste labels were added to on-site totes and drums, as appropriate). Absorbent pads or plastic sheeting will be used during all future gauging events to keep the areas as clean as possible.

Monthly gauging of the monitoring and recovery wells was conducted on February 20, 2013. The product recovery drum associated with RW-12 was emptied into the on-site tote on February 20, 2013 and again on March 1, 2013 to allow for the continued operation of the skimmer at this location. Table 1, (Attachment B) provides a summary of product thickness measurements collected on the above-referenced date.

Hazardous waste stored on-site is to be removed from the site and is to be disposed of properly by the middle of April 2013. A copy of the hazardous waste manifest(s) will be appended to the subsequent monthly progress report, as appropriate.

The recovery system skimmer for RW-10 is operating continuously and is discharging to a 400-gallon tote. The belt skimmer associated with RW-12 is operating on timed intervals to allow for the accumulation of an appropriate amount of product. Attachment A, Figure 1 shows recovery and monitoring well locations.

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Approximately 36 and 25 gallons of product were removed from the drum collecting product from the belt skimmer system at RW-12 on February 14 and 20, respectively. In addition, 12.5 gallons of product mixed with some water was manually removed from the recovery and monitoring wells on February 20, 2013.

A downward trend in the amount of product measured and recovered was observed when comparing the January and February 2013 data. On behalf of the client, ESI will continue to monitor on-site generation and removal of the product/phthalate material.

### **C. Product Recovery System (PRS) Assessment and Recommendations**

While the PRS is functioning, the amount of product being removed from the Site is negligible when compared to the amount of product present in the subsurface (based on the most recent investigation results). In general, ESI monitors the site twice per month, to increase product recovery efforts. Attachment C, Table 2 provides a summary of historical product thickness data for the recovery wells. Existing efforts suggest that the existing product recovery systems are incapable of removing sufficient volumes of product.

In an attempt to be more aggressive, ESI utilized a vacuum truck during the January 2013 gauging effort to extract a larger volume of product from the on-site wells; however, the vacuum truck equipment was unable to extend below 10 ft bsg due to the diameter of the wells; and, a fairly significant amount of water was ultimately extracted along with product from the recovery wells, when compared to traditional product bailing and/or pumping activities which resulted in increased disposal costs without providing any significant benefit.

NYSDEC has requested that a process to more aggressively remove product from the Site be implemented. ESI is in the process of researching costs to excavate a product recovery trench in the southwest portion of the building that would be ~20' long by 2' wide by 16' deep which would replace the existing product recovery systems (existing product recovery wells would be permanently closed). An appropriate automated product recovery system (or systems) would also be installed which discharged directly to a 400 gallon tote. A more detailed design will be submitted to the NYSDEC no later than March 31, 2013.

In addition to the Draft Remedial Investigation Report (Draft RIR), initially completed in December 2012 will need to be revised to incorporate additional data associated with additional monitoring wells MW-28 through MW-33/34, ESI has drafted a Work Plan for In-situ Remediation Pilot Study (WIRPS), to more aggressively address the free product plume at the Site (which will be submitted after the RIR is finalized - as the additional data will help determine the most appropriate in-situ pilot study treatment locations).

The Pilot Study work plan currently includes: the excavation and removal of the historical USTs, removal of free product from within the excavations, application of an in-situ treatment within the excavations, and execution of a pilot study with two different products (one chemical product and one biological product) to determine their effectiveness in treating the bis(2-ethyhexyl)phthalate plume at the Site.

After the pilot study is approved and completed, a Draft Remedial Alternative Report (Draft RAR) will be prepared to discuss and identify the final remedy selected for the site.

Note: No equipment repair or installation of additional recovery wells is anticipated at this time.

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**D. Meetings and NYSDEC Communication**

ESI met with NYSDEC personnel on-site on February 20, 2013.

Monthly progress reports will continue to be provided.

**E. Anticipated Work in March 2013**

It is anticipated that the following items will be completed:

- Existing recovery and monitoring wells will be gauged and product will be removed during March 2013.
- ESI is awaiting word from NYSDEC to proceed with obtaining DOT permits to install additional monitoring wells (MW-30 through MW-33/34 – surrounding the adjacent park).
- Monitoring wells MW-28 through MW-33/34 will be developed and sampled, pending NYSDEC's notice to proceed and subsequent receipt of the DOT permits to install additional wells MW-30 through MW-33/34.
- The next status report of product recovery and investigation efforts will be provided by April 10, 2013.
- The RIR will be finalized and will be submitted to the NYSDEC after analytical data associated with additional monitoring wells MW-28 through MW-33/34 are received. The WIRPS is anticipated to be submitted after the RIR).

Please contact me at 845-452-1658 should you have any questions or comments.

Attachment A – Figure 1: Well Location Map

Attachment B – Table 1: Measurements Collected Using the Geotech Oil/Water Interface Probe

Attachment C – Table 2: Historical Product Thickness

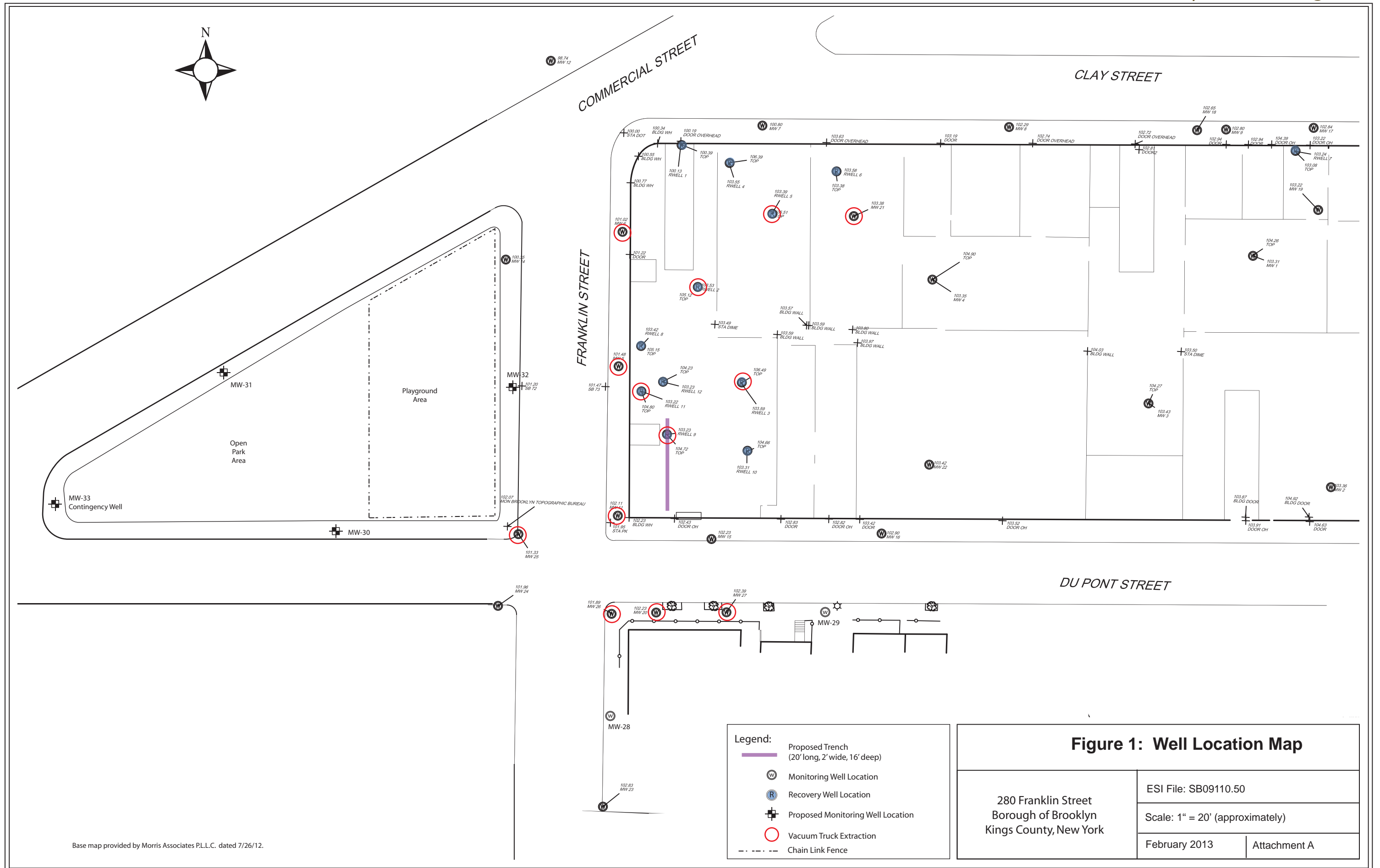


Table 1: February 2013 Measurements Collected Using the Geotech Oil/Water Interface Probe

Well	Depth to Product from Top of PVC (feet)	Depth to Groundwater from Top of PVC (feet)	February 2013 Product Thickness (feet)	January 2013 Product Thickness (feet)	December 2012 Product Thickness (feet)	November 2012 Product Thickness (feet)	October 2012 Product Thickness (feet)	September 2012 Product Thickness (feet)
MW – 4	13.04	13.48	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	9.73	14.05	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6***	NM	NM	-	-	-	-	3.49	2.14
MW – 7	6.12	11.57	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	-	9.95	No product	No product	No product	No product	No product	No product
MW – 11***	NM	NM	-	-	2.09	2.09	3.62	-
MW – 12	-	7.25	No product	No product	No product	No product	No product	No product
MW – 13	-	7.34	No product	No product	No product	No product	No product	No product
MW – 14	-	8.50	No product	No product	No product	No product	No product	No product
MW – 15***	10.43	11.50	-	-	1.56	0.99	0.76	2.67
MW – 16	11.11	11.21	0.10	0.25	0.20	No product	0.24	0.20
MW – 20	10.50	11.60	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	12.05	15.80	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	12.15	13.30	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	-	11.08	No product	No product	No product	No product	No product	No product
MW – 24	-	10.22	No product	No product	No product	No product	No product	No product
MW – 25	10.04	14.38	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	10.20	11.20	1.00	2.45	1.62	-	2.61	4.02
MW – 27	-	10.48	No product	No product	No product	0.99	No product	No product
MW – 28**	-	10.80	No product	No product	-	-	-	-
MW – 29**	-	11.10	No product	No product	-	-	-	-
RW – 1	-	9.05	No product	No product	No product	No product	No product	No product
RW – 2	13.60	17.35	3.75	4.20	2.52	1.92	1.50	5.85
RW – 3	15.05	18.39	3.34	3.70	3.58	2.84	3.50	3.88
RW – 4	15.05	18.05	3.00	3.05	2.95	-	3.45	3.35
RW – 5****	14.04	16.50	-	-	2.35	3.00	1.88	-
RW – 6	12.09	12.30	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8*	NM	NM	NM	NM	NM	NM	NM	NM
RW – 9	13.39	16.50	3.11	3.50	3.08	3.83	2.98	5.33
RW – 10*	NM	NM	NM	NM	NM	NM	NM	NM
RW – 11	13.38	16.49	3.11	3.50	2.93	4.49	2.58	4.40
RW – 12*	NM	NM	NM	NM	NM	NM	NM	NM

**Notes:**

NM – Not Measured

Dash indicates not recorded.

\*Well is equipped with an automated product recovery system.

\*\* New monitoring wells installed in January 2013.

\*\*\* Obstruction in the well or inaccessibility prevented collecting measurement and/or product removal.

\*\*\*\*Equipment was not able to detect water/oil interface consistently.

Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery Well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation; hence data from these wells are not included in this reporting.

Table 2: Historical Product Thickness

Date	Comments	Product Thickness (inches)											
		RW-1	RW-2	RW-3	RW-4	RW-5	RW-6	RW-7***	Skimmer RW-8	RW-9	Spill Buster RW-10	RW-11	Skimmer RW-12
2/20/2013		0	45.00	40.08	36.00	29.52	2.52	*	*	37.32	*	37.32	*
1/16/2013		0	50.40	44.40	36.60	*	4.80	*	*	42.00	*	42.00	*
12/19/2012		0	30.24	42.96	35.40	28.20	1.80	*	*	36.96	*	33.36	*
11/28/2012		0	23.04	34.08	*	36.00	10.8	*	*	45.96	*	53.88	*
11/2/2012		0	18.0	42.0	41.4	22.6	2.6	*	*	35.8	*	31.0	*
9/19/2012		0	70.2	46.6	40.2	*	0.7	*	*	23.9	*	52.8	*
8/22/2012		0	55.2	31.2	40.8	48.0	1.2	*	*	51.6	*	48.0	*
7/19/2012		0	37.2	33.6	39.6	12.0	2.4	*	*	40.8	*	26.4	*
6/20/2012		2.4	44.4	30	38.4	16.8	0	*	*	34.8	*	36.0	*
5/29/2012		1.2	39.6	26.4	14.4	13.2	15.6	*	*	26.4	*	27.6	*
4/25/2012		0	36.0	24.0	15.6	50.4	4.8	*	*	4.8	*	NA	*
3/29/2012		0	44.4	29.8	14.4	3.1	1.0	*	*	43.2	*	51.6	*
2/2/2012	Broken skimmer @ RW-8	0	1.44	26.3	Too thick	Too thick	Too thick	*	47.2	43.1	NA	7.2	54.6
1/10/2012		0	NA	0.2	Too thick	Too thick	0	*	0	0.2	0.3	0.4	5.8
12/15/2011		*	*	0.1	*	*	*	*	0.5	*	0.3	0.6	4.5
11/21/2011		*	*	0.5	*	*	*	*	2.5	0.5	0.9	1.5	16.5
10/21/2011		*	*	0.3	*	*	*	*	0.8	0.3	0.3	0.6	4.5
9/23/2011		*	*	0.1	*	*	*	*	0.3	0.3	0.3	0.5	4.0
8/22/2011		*	*	0.3	*	*	*	*	0.3	0.3	0.5	0.1	1.8
7/20/2011		*	*	0.8	*	*	*	*	1.0	0.4	0.5	0.8	5.0
6/17/2011		*	*	0.3	*	*	*	*	0.5	0.3	0.4	0.8	4.3
5/20/2011		*	*	0.1	*	*	*	*	0.1	0.1	0.3	0.8	2.0
4/25/2011		*	*	0.3	*	*	*	*	0.4	0.3	0.4	1.0	2.5
3/21/2011		*	*	0.4	*	*	*	*	0.4	0.3	0.5	1.0	8.5
2/21/2011		*	*	0.3	*	*	*	*	1.0	0.3	0.5	0.8	8.5
1/20/2011		*	*	0.1	*	*	*	*	1.5	0.3	0.6	0.3	2.5
12/20/2010		*	*	0.5	*	*	*	*	1.5	0.5	*	0.5	4.0
11/17/2010		*	*	0.3	*	*	*	*	1.4	0.4	0.5	0.3	3.8
10/14/2010	Belt Skimmer Installed @ RW-8	*	*	0.1	*	*	*	*	1.1	0.3	0.5	0.3	4.6
9/24/2010	Belt Skimmer Installed @ RW-12	*	*	0.3	*	*	*	*	1.3	0.4	0.9	1.0	3.3
8/20/2010		*	*	0.5	*	*	*	*	1.3	0.3	0.6	0.8	3.3
7/19/2010		*	*	0.5	*	*	*	*	2.0	0.5	0.3	1.0	4.5
6/23/2010		*	*	0.3	*	*	*	*	1.3	0.3	0.4	0.8	4.0
5/21/2010		*	*	0.3	*	*	*	*	0.8	0.3	0.8	0.8	3.0
4/22/2010		*	*	0.5	*	*	*	*	0.5	0.3	0.4	0.8	3.0
3/18/2010		*	*	0.1	*	*	*	*	0.1	0.1	0.1	0.1	0.3
2/22/2010		*	*	0.5	*	*	*	*	1.5	0.5	0.1	0.8	2.0
1/15/2010	ESI became involved	*	*	0.3	*	*	*	*	0.5	0.3	0.4	0.5	3.0
12/18/2009		*	*	0.1	*	*	*	*	0.5	0.3	0.4	0.5	2.5
11/19/2009		*	*	0.3	*	*	*	*	1.0	0.3	0.5	0.5	3.5
10/20/2009		*	*	0.3	*	*	*	*	1.3	0.5	0.5	0.1	4.0
9/29/2009		*	*	0.3	*	*	*	*	1.5	0.3	0.5	0.3	4.5
8/24/2009		*	*	0.8	*	*	*	*	2.5	0.8	1.4	2	5.5
7/22/2009		*	*	0.3	*	*	*	*	1.0	*	0.4	1.0	3.8
6/21/2009		*	*	0.5	*	*	*	*	0.5	0.3	0.3	1.0	2.5
5/15/2009		*	*	0.3	*	*	*	*	0.1	*	0.3	0.8	2.1
4/23/2009		*	*	0.1	*	*	*	*	0.3	1.0	0.3	*	1.0
3/26/2009		**	0.27	0.23	0.32	Sheen	Sheen	0.10	1.22	0.22	0.50	*	*
2/19/2009		**	0.34	0.25	0.13	Sheen	Sheen	0.05	1.67	0.40	0.44	*	*
1/29/2009		**	0.44	0.28	0.37	Sheen	Sheen	Sheen	1.45	0.13	0.76	*	*
12/31/2008		**	0.47	1.41	0.49	Sheen	Sheen	Sheen	0.25	0.38	0.33	*	*
11/14/2008		*	1.68	0.90	0.30	Sheen	0.17	0.07	1.44	0.64	0.55	*	*
10/22/2008		**	*	0.18	0.05	0.19	Sheen	Sheen	1.10	0.35	0.65	*	*
9/19/2008		**	0.38	0.17	*	2.16	**	0.07	0.31	0.20	0.65	*	*
8/21/2008		**	0.37	0.30	0.03	2.09	Sheen	0.10	0.45	0.25	0.61	*	*
7/25/2008		**	0.24	0.48	0.84	3.82	Sheen	0.16	0.83	0.41	0.07	*	*
6/4/2008		**	*	*	*	3.82	Sheen	Too thick	*	*	*	*	*
5/12/2008		**	0.24	0.48	0.39	0.02	0.03	Too thick	0.83	0.41	0.07	*	*
4/7/2008		**	0.24	0.56	0.18	0.01	0.10	0.16	1.45	0.99	0.12	*	*
3/24/2008		**	0.36	0.60	0.29	0.23	0.04	Too thick	1.11	0.73	0.07	*	*
2/28/2008		**	0.18	0.60	0.22	0.01	0.59	0.08	1.35	0.48	0.04	*	*
1/11/2008		**	0.33	0.23	0.15	0.13	0.25	0.04	0.25	0.12	0.14	*	*
12/14/2007		**	1.37	2.22	0.36	0.49	0.57	Too thick	0.83	0.56	0.41	*	*
11/23/2007		**	1.30	1.36	0.46	0.10	0.71	0.06	0.47	0.74	0.71	*	*
10/21/2007		**	0.24	0.51	0.29	0.12	0.81	Too thick	*	*	*	*	*
9/24/2007	Pump @ RW-10 likely installed 8/13/2007	**	*	0.67	1.58	0.30	0.83	Too thick	2.30	1.50	*	*	*
6/18/2007		**	*	0.87	0.23	0.05	**	*	1.11	0.77	*	*	*
5/10/2007		**	*	0.17	0.34	0.08	**	*	0.33	0.23	0.08	*	*
4/25/2007		**	0.20	0.24	0.40	0.15	**	*	0.25	0.15	0.12	*	*
11/20/2006		**	0.01	*	1.98	0.11	**	*	*	*	*	*	*

## Notes:

NA - Not Accessible

\* No data available

\*\*No depth to product provided, product might not be present.

\*\*\*RW-7 is associated with a separate portion of the site associated with NYSDEC Spill 06-01852; hence data from RW-7 is not included in this summary table (the product is typically too thick to measure).



# Ecosystems Strategies, Inc.

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## PRODUCT RECOVERY STATUS MEMORANDUM

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**TO:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

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**FROM:** Paul Ciminello, President

**DATE:** April 15, 2013

**SITE:** Former Nuhart Plastic Manufacturing Site, NYSDEC Site ID: 224136  
ESI File: SB09110.50

**RE:** Investigative and Product Recovery Activities – March 2013

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This memorandum provides a summary of investigative and interim remedial activities conducted by Ecosystems Strategies, Inc. (ESI) at the Former Nuhart Plastic Manufacturing Site (hereafter referred to as the "Site") during March 2013. The Site is located at 280 Franklin Street, Borough of Brooklyn, Kings County, New York.

Interim remedial activities at the Site have been performed in general conformance with the NYSDEC-approved Operation, Maintenance and Monitoring Plan (OM&M Plan) for the Product Recovery System (PRS), dated March 2012 and revised August 2012, prepared by ESI. In addition, investigative activities at the Site have been performed in general conformance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated November 2011 and prepared by ESI.

### A. Investigative Activities

#### DELINEATION OF TCE CONTAMINATION

A draft Supplemental Remedial Investigation Work Plan (Supplemental RIWP) was submitted by ESI to NYSDEC for review on April 3, 2013. The Supplemental RIWP was prepared to address NYSDEC's concerns (communicated to ESI via email, March 6, 2013) regarding elevated trichloroethylene (TCE) concentrations at sampling location SG-3, in the central-portion of the Site. A review of data indicates that TCE is not present in nearby soils (samples collected at the groundwater interface) and not present in on-site groundwater. Proposed activities include extension of additional borings and installation of two new monitoring wells, and collection of soil, groundwater and soil vapor samples to delineate TCE contamination.

#### GROUNDWATER MONITORING

ESI is awaiting approval from NYSDEC regarding the installation of additional off-site monitoring wells (MW-30, MW-31, MW-32, MW-33, and MW-34). A Well Location Map indicating existing on- and off-site

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monitoring wells and proposed off-site monitoring wells is provided as Attachment A. Off-site monitoring wells (MW-28 and MW-29), installed in January 2013, are anticipated to be developed and sampled subsequent to the installation of the additional off-site monitoring wells.

Fieldwork and laboratory data from the additional soil gas delineation and off-site monitoring wells will be incorporated in the Draft Remedial Investigation Report (Draft RIR).

## **B. Interim Remedial Activities – March 2013**

### **MAINTENANCE ACTIVITIES**

ESI personnel inspected the Site and performed general maintenance activities on March 1, 2013 in response to NYSDEC's comments on February 25, 2013. Maintenance activities performed at the Site included:

- Proper disposal of debris in the vicinity of all recovery wells
- Removal of excess of product in the exterior and around recovery wells
- Placing absorbent material at the base and around each recovery well
- Proper labeling of all hazardous waste containers

### **MONITORING AND PRODUCT REMOVAL – MARCH 28, 2013**

Monthly gauging of the monitoring and recovery wells was conducted on March 28, 2013. A table documenting product thickness measurements in monitoring and recovery wells is provided as Attachment B.

ESI personnel removed approximately 40 gallons of product from the 55-gallon drum associated with recovery well RW-12, currently operating a PetroXtractor Well Oil Skimmer (Model PX-B). The product was subsequently emptied into an on-site 400-gallon tote. In addition, approximately 29 gallons of product mixed with some water was manually removed from the recovery and monitoring wells exhibiting significant amounts of product. Absorbent materials at recovery and monitoring wells were properly discarded and replaced.

## **C. Product Recovery System (PRS) Assessment and Recommendations**

The current Interim Remedial Measure (IRM) consists of two automated recovery units (PetroXtractor Well Oil Skimmer Unit and the Spill Buster Unit), currently operating at recovery wells RW-12 and RW-10, respectively, and the manual recovery of product on a monthly basis. All automated equipment appeared to be in good condition and working properly.

Based on ESI's fieldwork observations and review of analytical data, in addition to comments provided by NYSDEC, the current IRM is not adequate to address the contamination present on-site.

Two options are currently being reviewed by ESI in detail:

- Installation of additional wide-bore wells (either inside or outside the building, as dictated by installer accessibility issues) equipped with pumps to create a hydraulic barrier; or
- Installation of an external physical barrier and capture zone.

Both options are intended to collect product as it migrates off-site and both options could be retrofitted with additional features intended to facilitate product flow. More specific information in the form of a draft



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Modified Interim Remedial Measure Work Plan (Modified IRM Work Plan) will be provided to the NYSDEC by April 29, 2013.

#### **D. Meetings and NYSDEC Communication**

No meetings were held with NYSDEC in April 2013. ESI and NYSDEC communication will continue as needed.

#### **E. Anticipated Work and Schedule**

##### **APRIL 2013**

- NYSDEC review and approval of the Supplemental RIWP
- Development and sampling of existing off-site monitoring wells MW-28 and MW-29
- Installation of proposed off-site monitoring wells MW-30, MW-31, MW-32, MW-33, and MW-34 (pending NYSDEC approval)
- Implementation of existing IRM
- Submission of Modified IRM Work Plan to NYSDEC
- Removal of hazardous waste material from the Site by a licensed hauler

##### **MAY 2013**

- Implementation of Supplemental RIWP (pending NYSDEC approval)
- Implementation of existing IRM
- Completion of Product Recovery Status Memorandum
- Review and approval of IRM Work Plan

##### **JUNE 2013**

- Report documenting the results of the Supplemental RIWP
- Implementation of IRM
- Completion of Product Recovery Status Memorandum

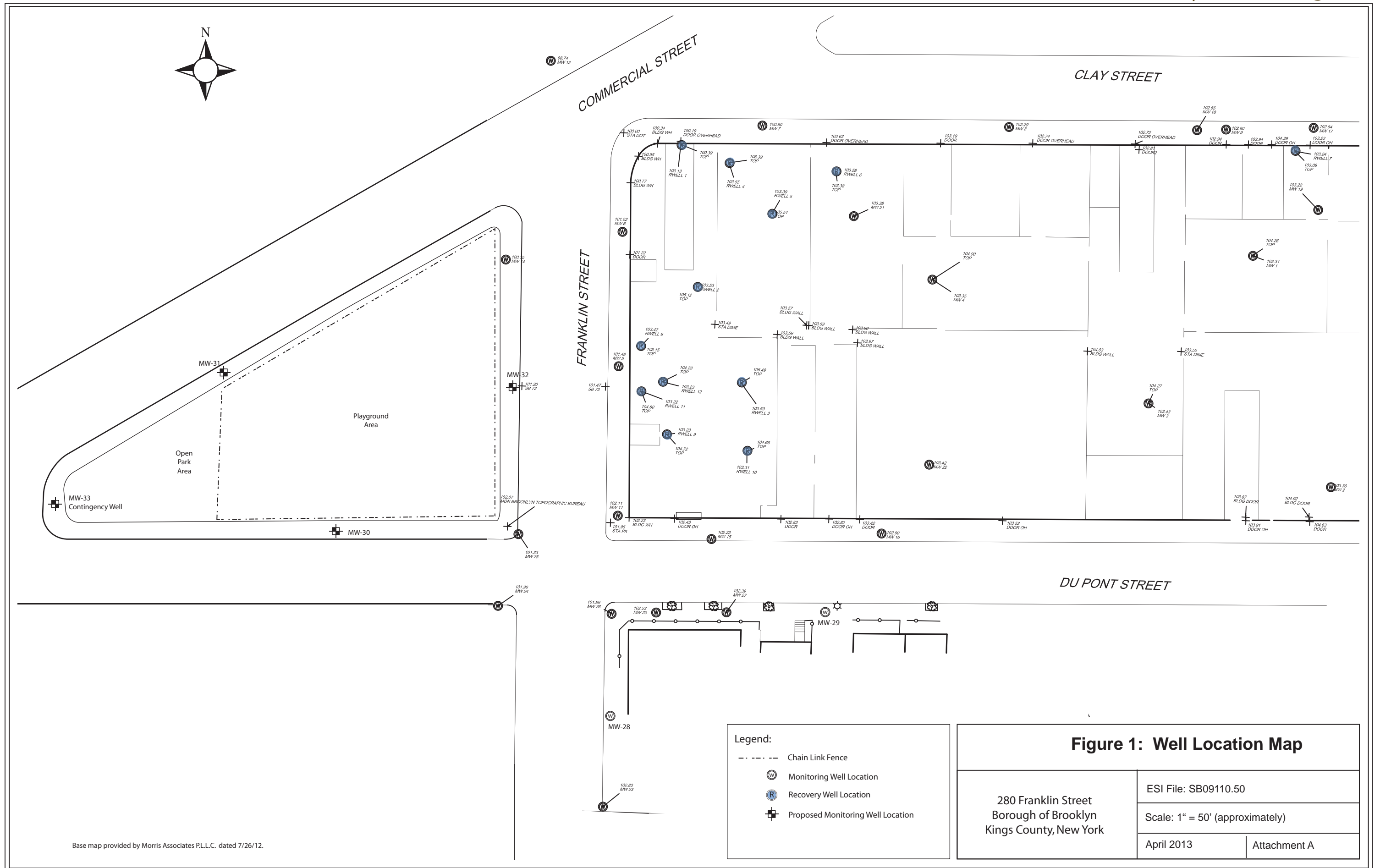
##### **JULY 2013**

- Implementation of IRM
- Completion of Product Recovery Status Memorandum
- Removal of hazardous waste material from the Site by a licensed hauler

##### **AUGUST 2013**

- Implementation of IRM
- Completion of Product Recovery Status Memorandum
- Submittal of Draft RIR to NYSDEC

Please contact me at 845-452-1658 should you have any questions or comments.



**Table: Monitoring Well Measurements (Geotech Oil/Water Interface Probe)**

Well	Depth to Product from Top of PVC (feet)	Depth to Groundwater from Top of PVC (feet)	March 2013 Product Thickness (feet)	February 2013 Product Thickness (feet)	January 2013 Product Thickness (feet)	December 2012 Product Thickness (feet)	November 2012 Product Thickness (feet)	October 2012 Product Thickness (feet)	September 2012 Product Thickness (feet)
MW – 4	12.63	13.30	0.67	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	9.52	11.91	2.39	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6**	NM	NM	-	-	-	-	-	3.49	2.14
MW – 7	6.86	11.78	4.92	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	-	9.71	No product	No product	No product	No product	No product	No product	No product
MW – 11**	NM	NM	-	-	-	2.09	2.09	3.62	-
MW – 12	-	7.38	No product	No product	No product	No product	No product	No product	No product
MW – 13	-	7.26	No product	No product	No product	No product	No product	No product	No product
MW – 14	-	8.34	No product	No product	No product	No product	No product	No product	No product
MW – 15	10.11	10.43	0.32	1.07	-	1.56	0.99	0.76	2.67
MW – 16	10.80	10.81	0.01	0.10	0.25	0.20	No product	0.24	0.20
MW – 20	10.15	11.35	1.20	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	11.82	15.25	3.43	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	11.81	12.43	0.62	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	-	10.78	No product	No product	No product	No product	No product	No product	No product
MW – 24	-	10.09	No product	No product	No product	No product	No product	No product	No product
MW – 25	9.79	13.75	3.96	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	9.81	12.14	2.33	1.00	2.45	1.62	-	2.61	4.02
MW – 27	-	10.30	No product	No product	No product	No product	0.99	No product	No product
MW – 28	-	10.57	No product	No product	No product	-	-	-	-
MW – 29	-	10.85	No product	No product	No product	-	-	-	-
RW – 1	-	8.73	No product	No product	No product	No product	No product	No product	No product
RW – 2	13.42	16.90	3.48	3.75	4.20	2.52	1.92	1.50	5.85
RW – 3	14.75	17.95	3.20	3.34	3.70	3.58	2.84	3.50	3.88
RW – 4	14.75	17.90	3.15	3.00	3.05	2.95	-	3.45	3.35
RW – 5	13.80	16.25	-	-	-	2.35	3.00	1.88	-
RW – 6	11.75	12.25	0.50	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8*	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW – 9	13.08	15.70	2.62	3.11	3.50	3.08	3.83	2.98	5.33
RW – 10*	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW – 11	13.10	15.77	2.67	3.11	3.50	2.93	4.49	2.58	4.40
RW – 12*	NM	NM	NM	NM	NM	NM	NM	NM	NM

**Notes:**

NM – Not Measured

Dash indicates not recorded.

\*Well is equipped with an automated product recovery system.

\*\* Obstruction in the well or inaccessibility prevented collecting measurement and/or product removal.

Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation; hence data from these wells are not included in this reporting.



# Ecosystems Strategies, Inc.

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## PRODUCT RECOVERY STATUS MEMORANDUM

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**TO:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

**CC:** Joe Folkman (49 Dupont Realty Corp.) Email: jfolkman@pvcisme.com  
Jane O'Connell (NYSDEC) Email: jhoconne@gw.dec.state.ny.us  
Larry Schnapf Email: Larry@Schnapflaw.com  
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Bridget Callaghan (NYSDOH) Email: bkc01@health.state.ny.us  
James P. Rigano Email: jrigano@riganollc.com

**FROM:** Paul Ciminello, President

**DATE:** May 22, 2013

**SITE:** Former Nuhart Plastic Manufacturing Site, NYSDEC Site ID: 224136  
ESI File: SB09110.50

**RE:** Investigative and Product Recovery Activities – April 2013

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This memorandum provides a summary of investigative and interim remedial activities conducted by Ecosystems Strategies, Inc. (ESI) at the Former Nuhart Plastic Manufacturing Site (hereafter referred to as the "Site") during April 2013. The Site is located at 280 Franklin Street, Borough of Brooklyn, Kings County, New York.

Interim remedial activities at the Site have been performed in general conformance with the NYSDEC-approved Operation, Maintenance and Monitoring Plan (OM&M Plan) for the Product Recovery System (PRS), dated March 2012 and revised August 2012, prepared by ESI. In addition, investigative activities at the Site have been performed in general conformance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated November 2011 and prepared by ESI.

### A. Investigative Activities

#### DELINEATION OF TCE CONTAMINATION IN SOIL VAPOR

A draft Supplemental Remedial Investigation Work Plan (Supplemental RIWP) was submitted by ESI to NYSDEC for review on April 3, 2013. The Supplemental RIWP was prepared to address NYSDEC's concerns (communicated to ESI via email, March 6, 2013) regarding elevated trichloroethylene (TCE) concentrations in soil gas at sampling location SG-3, in the central-portion of the Site. A review of data indicates that TCE is not present in nearby soils (samples collected at the groundwater interface) and not present in on-site groundwater. Proposed activities include extension of additional borings and installation of two new monitoring wells, and collection of soil, groundwater and soil vapor samples to delineate TCE contamination. The NYSDEC provided comments on the Supplemental RIWP on May 14, 2013. ESI is evaluating these comments and will provide a revised Supplemental RIWP by June 7, 2013.



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#### GROUNDWATER MONITORING

The installation of additional off-site monitoring wells MW-30, MW-31 and MW-32 (and contingency well MW-33 if needed) is tentatively scheduled for the week of June 17, 2013, pending final consultation with NYSDEC. A Well Location Map indicating existing on- and off-site monitoring wells and proposed off-site monitoring wells is provided as Attachment A. Off-site monitoring wells (MW-28 and MW-29), installed in January 2013, were developed during the April 29 gauging event and are anticipated to be sampled subsequent to the installation of the additional off-site monitoring wells.

Fieldwork and laboratory data from the additional soil gas delineation and off-site monitoring wells will be incorporated in the Draft Remedial Investigation Report (Draft RIR).

#### **B. Interim Remedial Activities – April 2013**

Maintenance and interim remedial activities were conducted on April 29, 2013.

##### MAINTENANCE ACTIVITIES

ESI personnel inspected the Site and performed general maintenance activities, including:

- Proper disposal of any debris in the vicinity of all recovery wells
- Removal of any encountered of product at and in the vicinity of recovery wells
- Placing absorbent material at the base and around each recovery well
- Proper labeling of all hazardous waste containers

##### DEVELOPMENT OF MONITORING WELLS

ESI developed off-site monitoring wells MW-28 and MW-29. No free product or other field evidence of contamination was noted at the wells or in the purge water. All water removed from the wells was containerized on-site, pending final off-site disposal.

##### MONITORING AND PRODUCT REMOVAL

ESI conducted monthly gauging of the monitoring and recovery wells. A table documenting product thickness measurements in monitoring and recovery wells is provided as Attachment B.

ESI personnel removed approximately 45 gallons of product from the 55-gallon drum associated with recovery well RW-12, currently operating a PetroXtractor Well Oil Skimmer (Model PX-B). The product was subsequently emptied into an on-site 400-gallon tote. In addition, approximately 20 gallons of product mixed with some water was manually removed from the recovery and monitoring wells exhibiting significant amounts of product. Absorbent materials at recovery and monitoring wells were properly discarded and replaced.

#### **C. Product Recovery System (PRS) Assessment and Recommendations**

The current Interim Remedial Measure (IRM) consists of two automated recovery units (PetroXtractor Well Oil Skimmer Unit and the Spill Buster Unit), currently operating at recovery wells RW-12 and RW-10, respectively, and the manual recovery of product on a monthly basis. All automated equipment appeared to be in good condition and working properly.

Based on ESI's fieldwork observations and review of analytical data, in addition to comments provided by NYSDEC, the current IRM is not adequate to address the contamination present on-site.



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Two options are currently being reviewed by ESI in detail:

- Installation of additional wide-bore wells (either inside or outside the building, as dictated by installer accessibility issues) equipped with pumps to create a hydraulic barrier
- Installation of an interior physical barrier and capture zone (e.g., a trench with skimmers)

Both options are intended to collect product as it migrates off-site and both options could be retrofitted with additional features intended to facilitate product flow. More specific information in the form of a draft Modified Interim Remedial Measure Work Plan (Modified IRM Work Plan) will be provided to the NYSDEC.

#### **D. Meetings and NYSDEC Communication**

No meetings were held with NYSDEC in April 2013. ESI and NYSDEC communication will continue as needed.

#### **E. Anticipated Work and Schedule**

##### **JUNE 2013**

- NYSDEC review and approval of the Supplemental RIWP
- Implementation of the Supplemental RIWP
- Sampling of existing off-site monitoring wells MW-28 and MW-29
- Installation of proposed off-site monitoring wells MW-30, MW-31 and MW-32 (and contingency well MW-33, if needed)
- Implementation of existing IRM
- Submission of Modified IRM Work Plan to NYSDEC
- Removal of hazardous waste material from the Site by a licensed hauler

##### **JULY 2013**

- Report documenting the results of the Supplemental RIWP
- Development and sampling of new off-site monitoring wells in the vicinity of the park
- Implementation of existing IRM
- Completion of Product Recovery Status Memorandum
- NYSDEC Review and approval of Modified IRM Work Plan

##### **AUGUST 2013**

- Report documenting groundwater sampling results from newly installed off-site monitoring wells
- Implementation of IRM
- Completion of Product Recovery Status Memorandum

##### **SEPTEMBER 2013**

- Implementation of IRM
- Completion of Product Recovery Status Memorandum
- Removal of hazardous waste material from the Site by a licensed hauler



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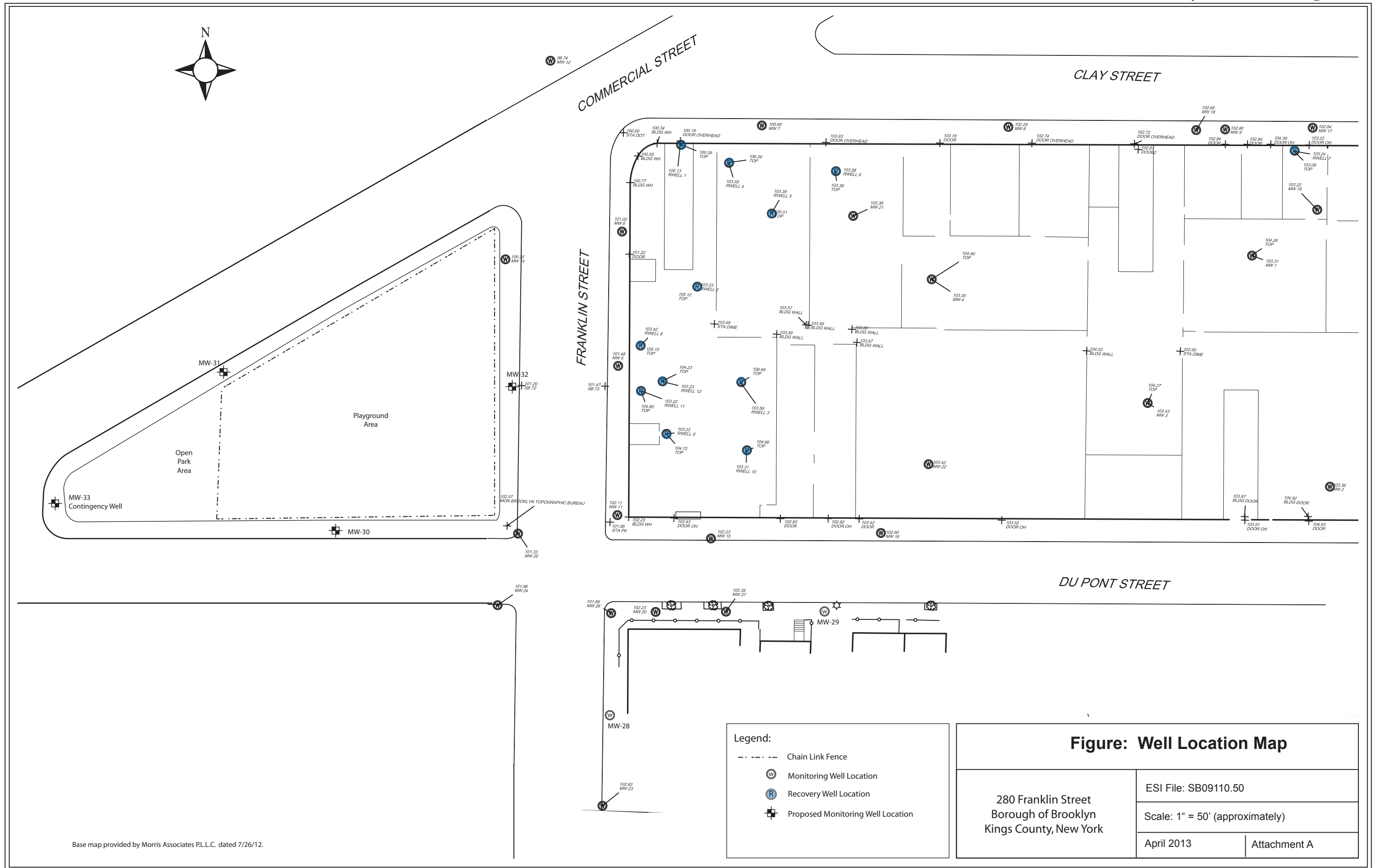
OCTOBER 2013

- Implementation of IRM
- Completion of Product Recovery Status Memorandum
- Submittal of Draft RIR to NYSDEC

Please contact me at 845-452-1658 should you have any questions or comments.

Attachment A – Well Location Map

Attachment B – Table: Monitoring Well Measurements



**Table: Thickness of LNAPL Layer in Site Wells**

Data recorded using a Geotech Oil/Water Interface Probe, unit of measure = foot. All depth measurements from top of PVC well casing.

Well Location	Depth to Product	Depth to Groundwater	Thickness of LNAPL Layer							
			April 1, 2013	March 1, 2013	February 1, 2013	January 1, 2013	December 1, 2012	November 1, 2012	October 1, 2012	September 1, 2012
MW – 4	14.35	14.94	0.59	0.67	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	9.76	12.76	3.00	2.39	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6**	–	–	–	–	–	–	–	–	3.49	2.14
MW – 7	9.09	11.01	1.92	4.92	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	–	9.91	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
11**	–	–	–	–	–	–	2.09	2.09	3.62	–
MW – 12	–	7.55	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 13	–	7.60	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 14	–	8.50	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
15**	–	–	–	0.32	1.07	–	1.56	0.99	0.76	2.67
MW – 16	11.32	11.34	0.02	0.01	0.10	0.25	0.20	Not Detected	0.24	0.20
MW – 20	10.43	13.75	3.32	1.20	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	12.12	15.50	3.38	3.43	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	12.35	12.85	0.50	0.62	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	–	11.01	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 24	–	10.14	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 25	9.95	13.91	3.96	3.96	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	10.10	12.96	2.86	2.33	1.00	2.45	1.62	–	2.61	4.02
MW – 27	–	10.38	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	0.99	Not Detected	Not Detected
MW – 28	–	11.37	Not Detected	Not Detected	Not Detected	Not Detected	–	–	–	–
MW – 29	–	11.03	Not Detected	Not Detected	Not Detected	Not Detected	–	–	–	–
RW – 1	–	–	–	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
RW – 2	15.58	18.50	2.92	3.48	3.75	4.20	2.52	1.92	1.50	5.85
RW – 3	15.05	18.95	3.90	3.20	3.34	3.70	3.58	2.84	3.50	3.88
RW – 4	14.92	17.98	3.06	3.15	3.00	3.05	2.95	–	3.45	3.35
RW – 5	13.96	16.58	2.62	–	–	–	2.35	3.00	1.88	–
RW – 6	11.87	12.32	0.45	0.50	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8*	–	–	–	–	–	–	–	–	–	–
RW – 9	13.30	17.70	4.40	2.62	3.11	3.50	3.08	3.83	2.98	5.33
10*	–	–	–	–	–	–	–	–	–	–
RW – 11	13.35	16.50	3.15	2.67	3.11	3.50	2.93	4.49	2.58	4.40
12*	–	–	–	–	–	–	–	–	–	–

**Notes:**

Dash indicates not recorded.

\* Well is equipped with an automated product recovery system.

\*\* Obstruction in the well or inaccessibility prevented collecting measurement and/or product removal.

Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation.



# Ecosystems Strategies, Inc.

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## PRODUCT RECOVERY STATUS MEMORANDUM

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**TO:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

**CC:** Joe Folkman (49 Dupont Realty Corp.) Email: jfolkman@pvcisme.com  
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James P. Rigano Email: jrigano@riganollc.com

**FROM:** Paul Ciminello, President

**DATE:** June 25, 2013

**SITE:** Former Nuhart Plastic Manufacturing Site, NYSDEC Site ID: 224136  
ESI File: SB09110.50

**RE:** Investigative and Product Recovery Activities – May 2013

---

This memorandum provides a summary of investigative and interim remedial activities conducted by Ecosystems Strategies, Inc. (ESI) at the Former Nuhart Plastic Manufacturing Site (hereafter referred to as the "Site") during May 2013. The Site is located at 280 Franklin Street, Borough of Brooklyn, Kings County, New York.

Interim remedial activities at the Site have been performed in general conformance with the NYSDEC-approved Operation, Maintenance and Monitoring Plan (OM&M Plan) for the Product Recovery System (PRS), dated March 2012 and revised August 2012, prepared by ESI. In addition, investigative activities at the Site have been performed in general conformance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated November 2011 and prepared by ESI.

### A. Investigative Activities

#### DELINEATION OF TCE CONTAMINATION IN SOIL VAPOR

A draft Supplemental Remedial Investigation Work Plan (Supplemental RIWP) was submitted by ESI to NYSDEC for review in April 2013. The Supplemental RIWP was prepared to address NYSDEC's concerns (communicated to ESI via email, March 6, 2013) regarding elevated trichloroethylene (TCE) concentrations in soil gas at sampling location SG-3, in the central-portion of the Site. A review of data indicates that TCE is not present in nearby soils (samples collected at the groundwater interface) and not present in on-site groundwater. Proposed activities include extension of additional borings and installation of two new monitoring wells, and collection of soil, groundwater and soil vapor samples to delineate TCE contamination. The NYSDEC provided comments on the Supplemental RIWP in May 2013 and ESI submitted a revised Supplemental RIWP to NYSDEC on June 25, 2013. Fieldwork will be scheduled following approval of the revised Supplemental RIWP, and all generated data will be incorporated in the Draft Remedial Investigation Report (Draft RIR).

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June 25, 2013  
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#### GROUNDWATER MONITORING

The installation of additional off-site monitoring wells MW-30, MW-31 and MW-32 (and contingency well MW-33 if needed) has been approved by NYSDEC. A date for the installation of these wells has not been established. A Well Location Map indicating existing on- and off-site monitoring wells and proposed off-site monitoring wells is provided as Attachment A. All generated data from the installation and sampling of the additional monitoring wells will be incorporated in the Draft RIR.

#### **B. Interim Remedial Activities – May 2013**

No maintenance or interim remedial activities were conducted in May 2013.

#### **C. Product Recovery System (PRS) Assessment and Recommendations**

The current Interim Remedial Measure (IRM) consists of two automated recovery units (PetroXtractor Well Oil Skimmer Unit and the Spill Buster Unit), currently operating at recovery wells RW-12 and RW-10, respectively, and the manual recovery of product on a monthly basis. No IRM activities were conducted in May 2013.

Based on ESI's previous fieldwork observations and review of analytical data, in addition to comments provided by NYSDEC, the current IRM is not adequate to address the contamination present on-site.

Two options are currently being reviewed by ESI in detail:

- Installation of additional wide-bore wells (either inside or outside the building, as dictated by installer accessibility issues) equipped with pumps to create a hydraulic barrier
- Installation of an interior physical barrier and capture zone (e.g., a trench with skimmers)

Both options are intended to collect product as it migrates off-site and both options could be retrofitted with additional features intended to facilitate product flow. More specific information in the form of a draft Modified Interim Remedial Measure Work Plan (Modified IRM Work Plan) will be provided to the NYSDEC.

#### **D. Meetings and NYSDEC Communication**

No meetings were held with NYSDEC in May 2013. ESI and NYSDEC communication will continue as needed.

#### **E. Anticipated Work and Schedule**

##### JULY 2013

- NYSDEC review and approval of the Supplemental RIWP
- Implementation of the Supplemental RIWP
- Sampling of existing off-site monitoring wells MW-28 and MW-29
- Installation of proposed off-site monitoring wells MW-30, MW-31 and MW-32 (and contingency well MW-33, if needed)
- Implementation of existing IRM
- Removal of hazardous waste material from the Site by a licensed hauler



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AUGUST 2013

- Report documenting the results of the Supplemental RIWP
- Development and sampling of new off-site monitoring wells in the vicinity of the park
- Implementation of existing IRM
- Completion of Product Recovery Status Memorandum
- Submission of Modified IRM Work Plan to NYSDEC

SEPTEMBER 2013

- Report documenting groundwater sampling results from newly installed off-site monitoring wells
- NYSDEC review of modified IRM
- Completion of Product Recovery Status Memorandum

OCTOBER 2013

- Implementation of IRM
- Completion of Product Recovery Status Memorandum
- Removal of hazardous waste material from the Site by a licensed hauler

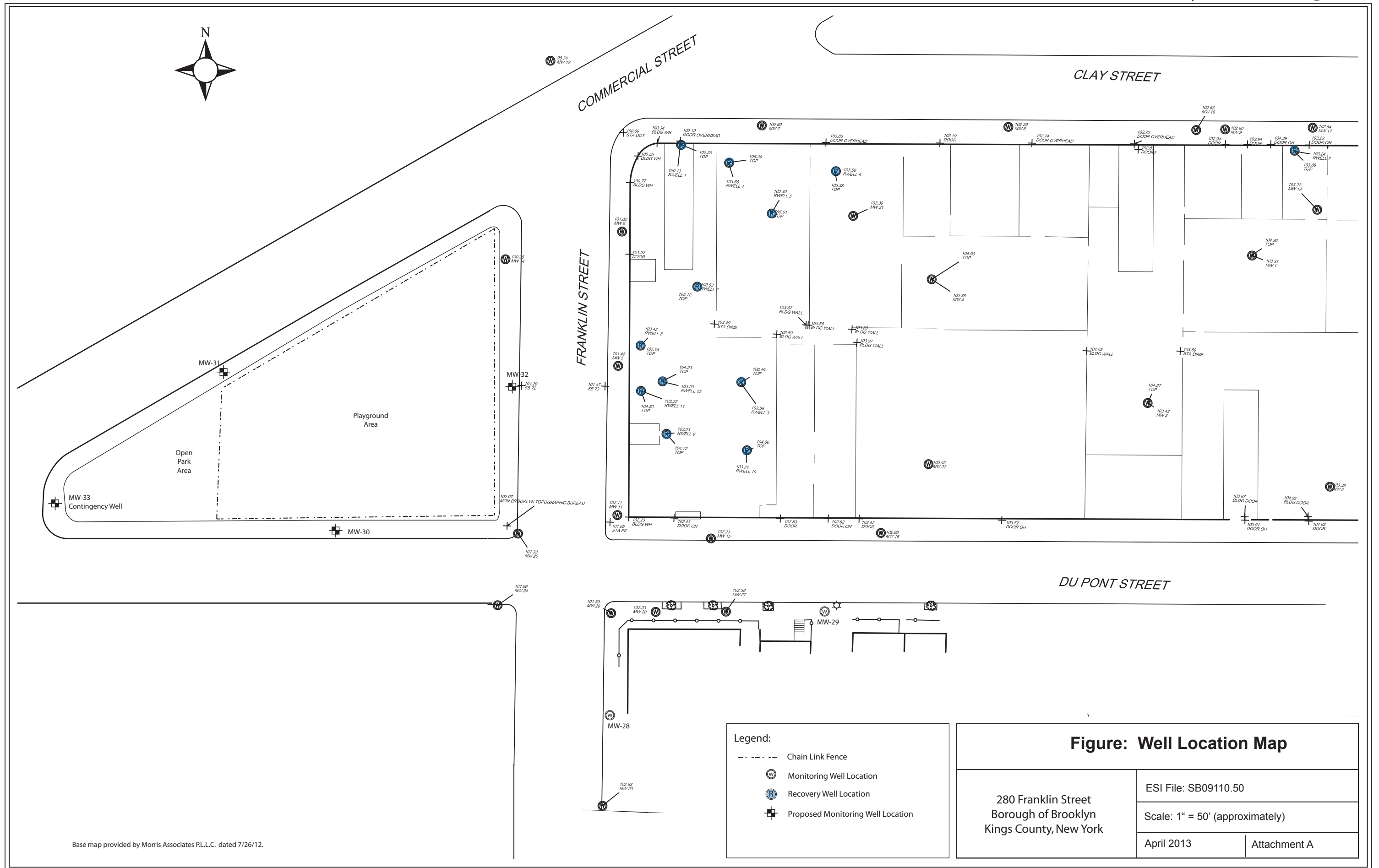
NOVEMBER 2013

- Implementation of IRM
- Completion of Product Recovery Status Memorandum
- Submittal of Draft RIR to NYSDEC

Please contact me at 845-452-1658 should you have any questions or comments.

Attachment A – Well Location Map

Attachment B – Table: Monitoring Well Measurements



**Table: Thickness of LNAPL Layer in Site Wells**

Data recorded using a Geotech Oil/Water Interface Probe, unit of measure = foot. All depth measurements from top of PVC well casing.

Well Location	Depth to Product	Depth to Groundwater	Thickness of LNAPL Layer							
			April 1, 2013	March 1, 2013	February 1, 2013	January 1, 2013	December 1, 2012	November 1, 2012	October 1, 2012	September 1, 2012
MW – 4	14.35	14.94	0.59	0.67	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	9.76	12.76	3.00	2.39	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6**	–	–	–	–	–	–	–	–	3.49	2.14
MW – 7	9.09	11.01	1.92	4.92	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	–	9.91	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
11**	–	–	–	–	–	–	2.09	2.09	3.62	–
MW – 12	–	7.55	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 13	–	7.60	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 14	–	8.50	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
15**	–	–	–	0.32	1.07	–	1.56	0.99	0.76	2.67
MW – 16	11.32	11.34	0.02	0.01	0.10	0.25	0.20	Not Detected	0.24	0.20
MW – 20	10.43	13.75	3.32	1.20	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	12.12	15.50	3.38	3.43	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	12.35	12.85	0.50	0.62	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	–	11.01	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 24	–	10.14	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 25	9.95	13.91	3.96	3.96	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	10.10	12.96	2.86	2.33	1.00	2.45	1.62	–	2.61	4.02
MW – 27	–	10.38	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	0.99	Not Detected	Not Detected
MW – 28	–	11.37	Not Detected	Not Detected	Not Detected	Not Detected	–	–	–	–
MW – 29	–	11.03	Not Detected	Not Detected	Not Detected	Not Detected	–	–	–	–
RW – 1	–	–	–	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
RW – 2	15.58	18.50	2.92	3.48	3.75	4.20	2.52	1.92	1.50	5.85
RW – 3	15.05	18.95	3.90	3.20	3.34	3.70	3.58	2.84	3.50	3.88
RW – 4	14.92	17.98	3.06	3.15	3.00	3.05	2.95	–	3.45	3.35
RW – 5	13.96	16.58	2.62	–	–	–	2.35	3.00	1.88	–
RW – 6	11.87	12.32	0.45	0.50	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8*	–	–	–	–	–	–	–	–	–	–
RW – 9	13.30	17.70	4.40	2.62	3.11	3.50	3.08	3.83	2.98	5.33
10*	–	–	–	–	–	–	–	–	–	–
RW – 11	13.35	16.50	3.15	2.67	3.11	3.50	2.93	4.49	2.58	4.40
12*	–	–	–	–	–	–	–	–	–	–

**Notes:**

Dash indicates not recorded.

\* Well is equipped with an automated product recovery system.

\*\* Obstruction in the well or inaccessibility prevented collecting measurement and/or product removal.

Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation.



# Ecosystems Strategies, Inc.

24 Davis Avenue, Poughkeepsie, NY 12603

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## PRODUCT RECOVERY STATUS MEMORANDUM

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**TO:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

**CC:** Joseph Brunner Email: yb321@yahoo.com  
Joe Folkman (49 Dupont Realty Corp.) Email: jfolkman@pvcisme.com  
Jane O'Connell (NYSDEC) Email: jhoconne@gw.dec.state.ny.us  
Larry Schnapf Email: Larry@Schnapflaw.com  
Sami Groff Email: Sami.Groff@srz.com  
Thomas Spiesman Email: tspiesman@pbnlaw.com  
Joe Dennis (Morris Associates) Email: jdennis@morrisengineers.com  
Bridget Callaghan (NYSDOH) Email: bkc01@health.state.ny.us  
James P. Rigano Email: jrigano@riganollc.com

**FROM:** Paul Ciminello, President

**DATE:** July 15, 2013

**SITE:** Former Nuhart Plastic Manufacturing Site, NYSDEC Site ID: 224136  
ESI File: SB09110.50

**RE:** Investigative and Product Recovery Activities – June 2013

---

This memorandum provides a summary of investigative and interim remedial activities conducted by Ecosystems Strategies, Inc. (ESI) at the Former Nuhart Plastic Manufacturing Site (hereafter referred to as the "Site") during May 2013. The Site is located at 280 Franklin Street, Borough of Brooklyn, Kings County, New York.

Interim remedial activities at the Site have been performed in general conformance with the NYSDEC-approved Operation, Maintenance and Monitoring Plan (OM&M Plan) for the Product Recovery System (PRS), dated March 2012 and revised August 2012, prepared by ESI except as noted below. In addition, investigative activities at the Site have been performed in general conformance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated November 2011 and prepared by ESI.

No monthly well gauging, maintenance activities and other investigative fieldwork was conducted in May or June. ESI's involvement in planning and executing fieldwork activities has resumed as of mid-July 2013. Fieldwork scheduling will be finalized during the week of July 15 and fieldwork dates will be provided to all stakeholders via email.

### A. Investigative Activities

#### DELINEATION OF TCE CONTAMINATION IN SOIL VAPOR

A draft Supplemental Remedial Investigation Work Plan (Supplemental RIWP) was submitted by ESI to NYSDEC for review in April 2013. The Supplemental RIWP was prepared to address NYSDEC's concerns (communicated to ESI via email, March 6, 2013) regarding elevated trichloroethylene (TCE) concentrations in soil gas at sampling location SG-3, in the central-portion of the Site. A review of data indicates that TCE is not present in nearby soils (samples collected at the groundwater interface) and not present in on-site groundwater. Proposed activities include extension of additional borings and installation of two new monitoring wells, and collection of soil, groundwater and soil vapor samples to delineate TCE

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July 15, 2013  
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contamination. The NYSDEC provided comments on the Supplemental RIWP (and on subsequent relevant email and revisions to the document) in May and July, 2013 and ESI submitted the most recent revisions, addressing all comments, to NYSDEC on July 3, 2013. ESI is awaiting formal approval prior to implementation. All generated data will be incorporated in the Draft Remedial Investigation Report (Draft RIR).

#### GROUNDWATER MONITORING

The installation of additional off-site monitoring wells MW-30, MW-31 and MW-32 (and contingency well MW-33 if needed) has been approved by NYSDEC. A Well Location Map indicating existing on- and off-site monitoring wells and proposed off-site monitoring wells is provided as Attachment A. All generated data from the installation and sampling of the additional monitoring wells will be incorporated in the Draft RIR.

#### **B. Interim Remedial Activities – June 2013**

No maintenance or interim remedial activities were conducted in June 2013.

#### **C. Product Recovery System (PRS) Assessment and Recommendations**

The current Interim Remedial Measure (IRM) consists of two automated recovery units (PetroXtractor Well Oil Skimmer Unit and the Spill Buster Unit), currently operating at recovery wells RW-12 and RW-10, respectively, and the manual recovery of product on a monthly basis. No IRM activities were conducted in May 2013.

Based on ESI's previous fieldwork observations and review of analytical data, in addition to comments provided by NYSDEC, the current IRM is not adequate to address the contamination present on-site. Two options are currently being reviewed by ESI in detail:

- Installation of additional wide-bore wells (either inside or outside the building, as dictated by installer accessibility issues) equipped with pumps to create a hydraulic barrier
- Installation of an interior physical barrier and capture zone (e.g., a trench with skimmers)

Both options are intended to collect product as it migrates off-site and both options could be retrofitted with additional features intended to facilitate product flow.

ESI senior staff will be at the Site on July 17 to check on the status of the IRM and to conduct a detailed inspection prior to submitting a draft Modified Interim Remedial Measure Work Plan (Modified IRM Work Plan) to the NYSDEC.

#### **D. Meetings and NYSDEC Communication**

No meetings were held with NYSDEC in June 2013. ESI and NYSDEC communication will continue as needed.



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**E. Anticipated Work and Schedule**

**JULY 2013**

- NYSDEC review and approval of final revisions to the Supplemental RIWP
- Implementation of the Supplemental RIWP
- Sampling of existing off-site monitoring wells MW-28 and MW-29
- Installation of proposed off-site monitoring wells MW-30, MW-31 and MW-32 (and contingency well MW-33, if needed)
- Implementation of existing IRM
- Removal of hazardous waste material from the Site by a licensed hauler

**AUGUST 2013**

- Letter Report documenting initial sampling results of the Supplemental RIWP
- Development and sampling of new off-site monitoring wells in the vicinity of the park
- Implementation of existing IRM
- Completion of Product Recovery Status Memorandum
- Submission of Modified IRM Work Plan to NYSDEC

**SEPTEMBER 2013**

- Letter Report documenting initial groundwater sampling results results from newly installed off-site monitoring wells
- NYSDEC review of modified IRM
- Completion of Product Recovery Status Memorandum

**OCTOBER 2013**

- Implementation of IRM
- Completion of Product Recovery Status Memorandum
- Removal of hazardous waste material from the Site by a licensed hauler

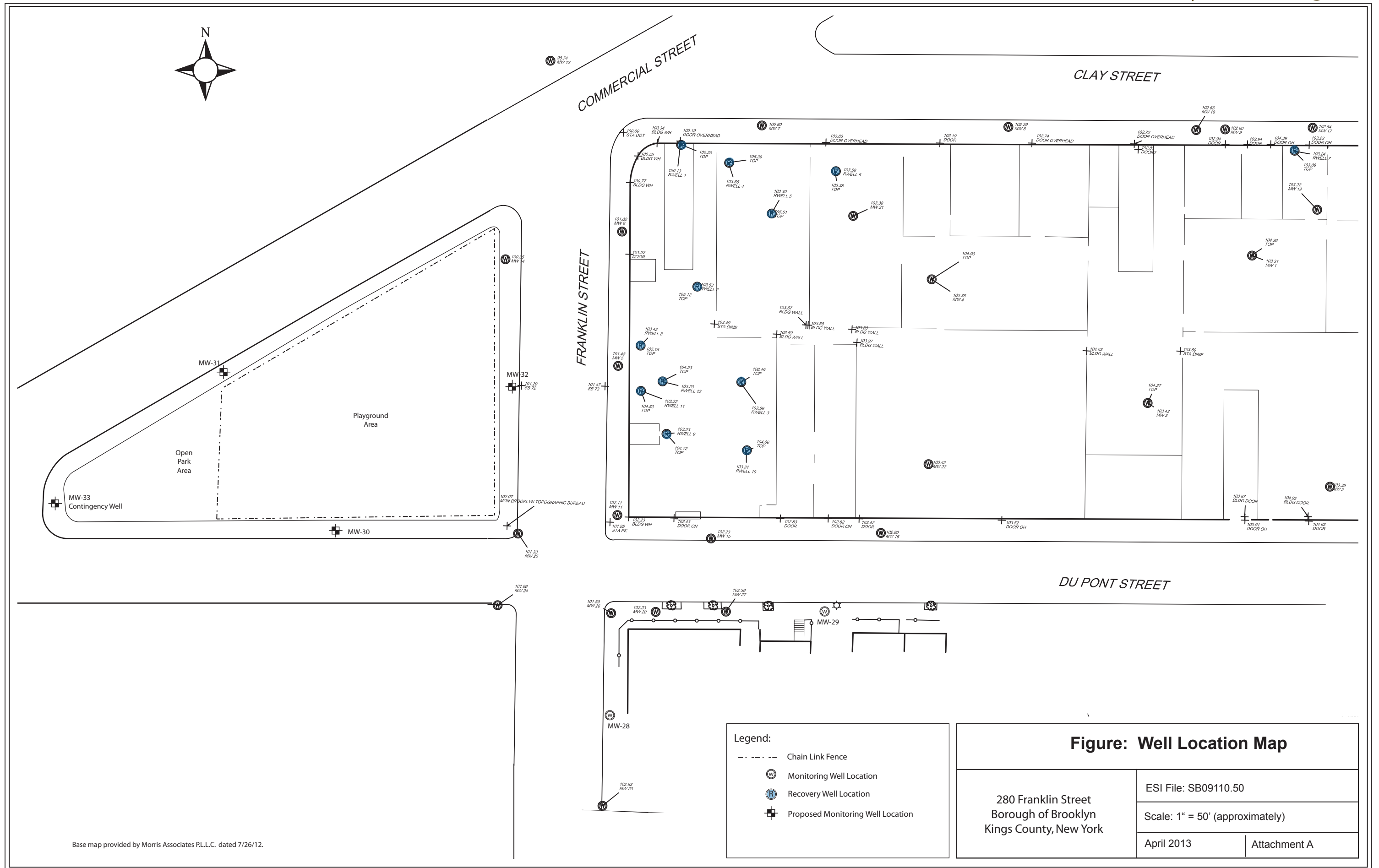
**NOVEMBER 2013**

- Implementation of IRM
- Completion of Product Recovery Status Memorandum
- Submittal of Draft RIR to NYSDEC (inclusive of findings from the Supplemental RIWP and all groundwater sampling data).

Please contact me at 845-452-1658 should you have any questions or comments.

Attachment A – Well Location Map

Attachment B – Table: Monitoring Well Measurements



**Table: Thickness of LNAPL Layer in Site Wells**

Data recorded using a Geotech Oil/Water Interface Probe, unit of measure = foot. All depth measurements from top of PVC well casing.

Well Location	Depth to Product	Depth to Groundwater	Thickness of LNAPL Layer							
			April 1, 2013	March 1, 2013	February 1, 2013	January 1, 2013	December 1, 2012	November 1, 2012	October 1, 2012	September 1, 2012
MW – 4	14.35	14.94	0.59	0.67	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	9.76	12.76	3.00	2.39	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6**	–	–	–	–	–	–	–	–	3.49	2.14
MW – 7	9.09	11.01	1.92	4.92	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	–	9.91	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
11**	–	–	–	–	–	–	2.09	2.09	3.62	–
MW – 12	–	7.55	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 13	–	7.60	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 14	–	8.50	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
15**	–	–	–	0.32	1.07	–	1.56	0.99	0.76	2.67
MW – 16	11.32	11.34	0.02	0.01	0.10	0.25	0.20	Not Detected	0.24	0.20
MW – 20	10.43	13.75	3.32	1.20	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	12.12	15.50	3.38	3.43	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	12.35	12.85	0.50	0.62	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	–	11.01	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 24	–	10.14	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
MW – 25	9.95	13.91	3.96	3.96	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	10.10	12.96	2.86	2.33	1.00	2.45	1.62	–	2.61	4.02
MW – 27	–	10.38	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	0.99	Not Detected	Not Detected
MW – 28	–	11.37	Not Detected	Not Detected	Not Detected	Not Detected	–	–	–	–
MW – 29	–	11.03	Not Detected	Not Detected	Not Detected	Not Detected	–	–	–	–
RW – 1	–	–	–	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
RW – 2	15.58	18.50	2.92	3.48	3.75	4.20	2.52	1.92	1.50	5.85
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RW – 4	14.92	17.98	3.06	3.15	3.00	3.05	2.95	–	3.45	3.35
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RW – 6	11.87	12.32	0.45	0.50	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8*	–	–	–	–	–	–	–	–	–	–
RW – 9	13.30	17.70	4.40	2.62	3.11	3.50	3.08	3.83	2.98	5.33
10*	–	–	–	–	–	–	–	–	–	–
RW – 11	13.35	16.50	3.15	2.67	3.11	3.50	2.93	4.49	2.58	4.40
12*	–	–	–	–	–	–	–	–	–	–

**Notes:**

Dash indicates not recorded.

\* Well is equipped with an automated product recovery system.

\*\* Obstruction in the well or inaccessibility prevented collecting measurement and/or product removal.

Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation.



# Ecosystems Strategies, Inc.

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## PRODUCT RECOVERY STATUS MEMORANDUM

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**TO:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

**CC:** Joseph Brunner Email: yb321@yahoo.com  
Joe Folkman (49 Dupont Realty Corp.) Email: jfolkman@pvcisme.com  
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Bridget Callaghan (NYSDOH) Email: bkc01@health.state.ny.us  
James P. Rigano Email: jrigano@riganollc.com

**FROM:** Paul Ciminello, President

**DATE:** August 9, 2013

**SITE:** Former Nuhart Plastic Manufacturing Site, NYSDEC Site ID: 224136  
ESI File: SB09110.50

**RE:** Investigative and Product Recovery Activities – July 2013

---

This memorandum provides a summary of investigative and interim remedial activities conducted by Ecosystems Strategies, Inc. (ESI) at the Former Nuhart Plastic Manufacturing Site (hereafter referred to as the "Site") during July 2013. The Site is located at 280 Franklin Street, Borough of Brooklyn, Kings County, New York.

Interim remedial activities at the Site have been performed in general conformance with the NYSDEC-approved Operation, Maintenance and Monitoring Plan (OM&M Plan) for the Product Recovery System (PRS), dated March 2012 and revised August 2012, prepared by ESI except as noted below. In addition, investigative activities at the Site have been performed in general conformance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated November 2011 and prepared by ESI.

No monthly well gauging, maintenance activities and other investigative fieldwork was conducted in May or June. ESI's involvement in planning and executing fieldwork activities resumed as of mid-July 2013.

### A. Investigative Activities

#### DELINEATION OF TCE CONTAMINATION IN SOIL VAPOR

A Supplemental Remedial Investigation Work Plan (Supplemental RIWP), prepared to address concerns regarding elevated trichloroethylene (TCE) concentrations in soil gas at sampling location SG-3, was approved by NYSDEC on July 18. Initial fieldwork (installation of borings and groundwater monitoring wells, and collection of soil gas samples) was completed from July 30 to August 1. The newly installed wells were developed on August 9, and groundwater sampling will occur on or about August 16. Laboratory results for the soil and soil vapor samples are expected on or about August 12, and groundwater results are expected the week of August 26. All generated data will be incorporated in the Draft Remedial Investigation Report (Draft RIR). A Fieldwork Map indicating boring locations is provided as Attachment A.

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August 9, 2013  
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#### GROUNDWATER MONITORING

Three additional off-site monitoring wells (MW-30, MW-31 and MW-32) were installed in the sidewalks surrounding the adjoining park to the west during the fieldwork conducted for the Supplemental RIWP. Contingency well MW-33 was not installed, based on an absence of any field evidence of contamination during the installation of MW-30 and MW-31. These three wells were developed on August 9, and will be sampled (along with previously installed and developed monitoring wells MW-28 and MW-29) on or about August 16. All generated data will be incorporated in the Draft RIR. A Well Location Map indicating the location of the newly installed off-site monitoring wells is provided as Attachment B.

#### **B. Interim Remedial Activities – July 2013**

Maintenance and interim remedial activities were conducted on July 24, 2013.

##### MAINTENANCE ACTIVITIES

ESI personnel inspected the Site and performed general maintenance activities, including:

- Proper disposal of any debris in the vicinity of all recovery wells
- Removal of any encountered of product at and in the vicinity of recovery wells
- Placing absorbent material at the base and around each recovery well
- Proper labeling of all hazardous waste containers

##### MONITORING AND PRODUCT REMOVAL

ESI conducted monthly gauging of the monitoring and recovery wells. A table documenting product thickness measurements in monitoring and recovery wells is provided as Attachment C.

ESI personnel removed approximately 48 gallons of product from the 55-gallon drum associated with recovery well RW-12, currently operating a PetroXtractor Well Oil Skimmer (Model PX-B). The product was subsequently emptied into an on-site 400-gallon tote. In addition, approximately 22 gallons of product mixed with some water was manually removed from the recovery and monitoring wells exhibiting significant amounts of product. Absorbent materials at recovery and monitoring wells were properly discarded and replaced.

#### **C. Product Recovery System (PRS) Assessment and Recommendations**

The current Interim Remedial Measure (IRM), as of April 2013, consisted of two automated recovery units, a PetroXtractor Well Oil Skimmer at RW-12 and a Spill Buster product seeking pump at RW-10, and the manual recovery of product on a monthly basis. The Spill Buster pump was noted to be inoperable during the July inspection, and broken/worn electrical connectors were observed within the submersible pump housing. The malfunctioning unit was removed from the well casing in order to allow gauging and product removal. Given the documented high total volume of subsurface LNAPL at the Site, and the minimal rate of recovery previously observed at RW-10, it is proposed that the Spill Buster unit not be repaired at this time.

The current IRM is not adequate to address the contamination present on-site. A site inspection was conducted by ESI and the remedial engineer (Jansen Engineering) on July 17, and ESI is currently reviewing preliminary design specifications for the installation of multiple product recovery trenches designed to intercept and remove LNAPL floating on the groundwater. ESI will submit a draft Modified Interim Remedial Measure Work Plan (Modified IRM Work Plan) to the NYSDEC by the end of August.

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**D. Meetings and NYSDEC Communication**

No meetings were held with NYSDEC in July 2013. ESI and NYSDEC communication will continue as needed.

**E. Anticipated Work and Schedule**

AUGUST 2013

- Development and sampling of on-site monitoring wells MW-34 and MW-35 and off-site monitoring wells MW-30, MW-31 and MW-32
- Sampling of previously installed off-site monitoring wells MW-28 and MW-29
- Letter Report documenting initial sampling results of the Supplemental RIWP (soil and soil gas)
- Implementation of existing IRM
- Submission of Modified IRM Work Plan to NYSDEC
- Removal of hazardous waste material from the Site by a licensed hauler

SEPTEMBER 2013

- Implementation of existing IRM
- Completion of Product Recovery Status Memorandum
- NYSDEC review of modified IRM Work Plan

OCTOBER 2013

- Implementation of IRM
- Completion of Product Recovery Status Memorandum

NOVEMBER 2013

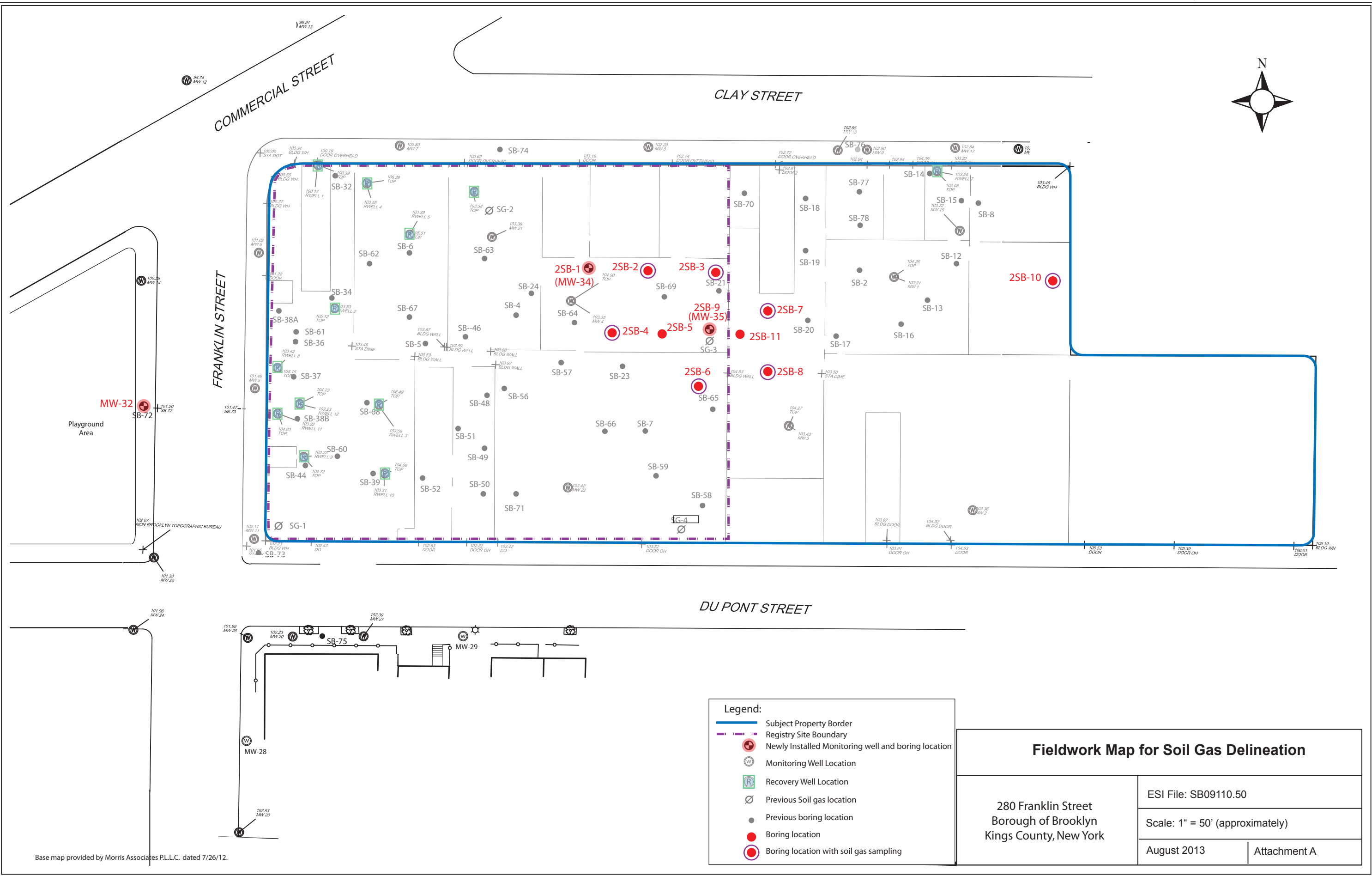
- Implementation of IRM
- Completion of Product Recovery Status Memorandum
- Submittal of Draft RIR to NYSDEC (inclusive of findings from the Supplemental RIWP and all groundwater sampling data).
- Removal of hazardous waste material from the Site by a licensed hauler

Please contact me at 845-452-1658 should you have any questions or comments.

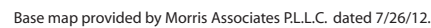
Attachment A – Fieldwork Map

Attachment B – Well Location Map

Attachment C – Table: Monitoring Well Measurements



Base map provided by Morris Associates P.L.L.C. dated 7/26/12.



**Table: Thickness of LNAPL Layer in Site Wells**

Data recorded using a Geotech Oil/Water Interface Probe, unit of measure = foot. All depth measurements from top of PVC well casing.

Well Location	Depth to Product	Depth to Groundwater	Thickness of LNAPL Layer								
			Jul-13	Apr-13	Mar-13	Feb-13	Jan-13	Dec-12	Nov-12	Oct-12	Sep-12
MW – 4	12.48	14.70	2.22	0.59	0.67	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	9.40	13.32	3.92	3.00	2.39	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6	8.48	11.30	2.82	–	–	–	–	–	–	3.49	2.14
MW – 7	8.80	9.86	1.06	1.92	4.92	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	ND	9.62	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 11	10.30	10.80	0.5	–	–	–	–	2.09	2.09	3.62	–
MW – 12	ND	7.38	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 13	ND	8.22	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 14	ND	7.60	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 15	10.09	10.79	0.70	–	0.32	1.07	–	1.56	0.99	0.76	2.67
MW – 16	10.78	10.85	0.07	0.02	0.01	0.10	0.25	0.20	ND	0.24	0.20
MW – 20	10.10	11.47	1.37	3.32	1.20	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	11.06	14.72	3.66	3.38	3.43	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	11.74	12.60	0.86	0.50	0.62	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	ND	10.72	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 24	ND	9.89	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 25	9.70	13.28	3.58	3.96	3.96	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	9.74	13.43	3.69	2.86	2.33	1.00	2.45	1.62	–	2.61	4.02
MW – 27	ND	10.15	ND	ND	ND	ND	ND	ND	0.99	ND	ND
MW – 28	ND	10.48	ND	ND	ND	ND	ND	–	–	–	–
MW – 29	ND	10.78	ND	ND	ND	ND	ND	–	–	–	–
RW – 1	ND	8.70	ND	–	ND	ND	ND	ND	ND	ND	ND
RW – 2	13.29	16.25	2.96	2.92	3.48	3.75	4.20	2.52	1.92	1.50	5.85
RW – 3	14.71	16.15	1.44	3.90	3.20	3.34	3.70	3.58	2.84	3.50	3.88
RW – 4	14.70	15.78	1.08	3.06	3.15	3.00	3.05	2.95	–	3.45	3.35
RW – 5	13.65	14.16	0.51	2.62	–	–	–	2.35	3.00	1.88	–
RW – 6	11.72	11.80	0.08	0.45	0.50	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8	13.38	17.02	3.64	–	–	–	–	–	–	–	–
RW – 9	12.95	15.32	2.37	4.40	2.62	3.11	3.50	3.08	3.83	2.98	5.33
RW – 10	12.65	16.20	3.55	–	–	–	–	–	–	–	–
RW – 11	12.97	16.46	3.49	3.15	2.67	3.11	3.50	2.93	4.49	2.58	4.40
RW – 12*	–	–	–	–	–	–	–	–	–	–	–

**Notes:**

"–" Indicates not recorded.

"\*\*\*" Indicates well is equipped with an automated product recovery system.

Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation.



# Ecosystems Strategies, Inc.

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---

## PROJECT STATUS MEMORANDUM

---

**TO:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

**CC:** Joseph Brunner Email: yb321@yahoo.com  
Joe Folkman (49 Dupont Realty Corp.) Email: jfolkman@pvcisme.com  
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James P. Rigano Email: jrigano@riganollc.com

**FROM:** Paul Ciminello, President

**DATE:** September 12, 2013

**SITE:** Former Nuhart Plastic Manufacturing Site, NYSDEC Site ID: 224136  
ESI File: SB09110.50

**RE:** Investigative and Product Recovery Activities – August 2013

---

This memorandum provides a summary of investigative and interim remedial activities conducted by Ecosystems Strategies, Inc. (ESI) at the Former Nuhart Plastic Manufacturing Site (hereafter referred to as the "Site") during August 2013. The Site is located at 280 Franklin Street, Borough of Brooklyn, Kings County, New York.

Interim remedial activities at the Site have been performed in general conformance with the NYSDEC-approved Operation, Maintenance and Monitoring Plan (OM&M Plan) for the Product Recovery System (PRS), dated March 2012 and revised August 2012, prepared by ESI except as noted below. In addition, investigative activities at the Site have been performed in general conformance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated November 2011 and prepared by ESI.

### A. Investigative Activities

#### DELINEATION OF TCE CONTAMINATION IN SOIL VAPOR

A Supplemental Remedial Investigation Work Plan (Supplemental RIWP), prepared to address concerns regarding elevated trichloroethylene (TCE) concentrations in soil gas at sampling location SG-3, was approved by NYSDEC on July 18. Initial fieldwork (installation of borings and groundwater monitoring wells [MW-34 and MW-35], and collection of soil gas samples) was completed from July 30 to August 1. The newly installed wells were developed on August 9 and sampled on August 16. A memorandum summarizing fieldwork analytical data will be provided to NYSDEC during the week of September 16. All generated data will be incorporated in the Draft Remedial Investigation Report (Draft RIR).

#### GROUNDWATER MONITORING

Three additional off-site monitoring wells (MW-30, MW-31 and MW-32) were installed in the sidewalks surrounding the adjoining park to the west during the fieldwork conducted for the Supplemental RIWP.

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Contingency well MW-33 was not installed, based on an absence of any field evidence of contamination during the installation of MW-30 and MW-31. These three wells were developed on August 9 and sampled (along with previously installed and developed monitoring wells MW-28 and MW-29) on August 16. All generated data will be incorporated in the memorandum to be submitted to NYSDEC and in the Draft RIR.

#### **B. Interim Remedial Activities – August 2013**

Maintenance and interim remedial activities were conducted on August 22, 2013.

##### **MAINTENANCE ACTIVITIES**

ESI personnel inspected the Site and performed general maintenance activities, including:

- Proper disposal of any debris in the vicinity of all recovery wells
- Removal of any encountered of product at and in the vicinity of recovery wells
- Placing absorbent material at the base and around each recovery well
- Proper labeling of all hazardous waste containers

##### **MONITORING AND PRODUCT REMOVAL**

ESI conducted monthly gauging of the monitoring and recovery wells, including newly installed monitoring wells MW-30, MW-31, MW-32, MW-34 and MW-35. A table documenting product thickness measurements in monitoring and recovery wells is provided as Attachment A and a Well Location Map is provided as Attachment B.

ESI supervised the removal of 1002 gallons of phthalate containing liquids from the on-site storage totes on August 22, performed by personnel from Miller Environmental Group using a vacuum truck. The liquid waste was transported the same day for off-site disposal at a properly permitted facility. Waste disposal documentation is provided as Attachment C.

ESI personnel removed approximately 47 gallons of product from the 55-gallon drum associated with recovery well RW-12, currently operating a PetroXtractor Well Oil Skimmer (Model PX-B). The product was subsequently emptied into an on-site 400-gallon tote. In addition, approximately 18 gallons of product mixed with some water was manually removed from the recovery and monitoring wells exhibiting significant amounts of product. Absorbent materials at recovery and monitoring wells were properly discarded and replaced.

#### **C. Product Recovery System (PRS) Assessment and Recommendations**

The current Interim Remedial Measure (IRM) consists of an automated recovery unit (PetroXtractor Well Oil Skimmer) at RW-12 (the Spill Buster product seeking pump was found to be malfunctioning and was removed from RW-10 in July). The current IRM is not adequate to address the contamination present on-site. ESI is currently reviewing preliminary design specifications for the installation of a recovery trench or other remedial approach designed to intercept and remove LNAPL floating on the groundwater.

#### **D. Meetings and NYSDEC Communication**

No meetings were held with NYSDEC in August 2013. ESI and NYSDEC communication will continue as needed.



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**E. Anticipated Work and Schedule**

SEPTEMBER 2013

- Submission of Memorandum documenting initial findings of the Supplemental RIWP
- Implementation of existing IRM

OCTOBER 2013

- Implementation of existing IRM
- Completion of Product Recovery Status Memorandum
- Submittal of Draft RIR to NYSDEC (inclusive of findings from the Supplemental RIWP and all groundwater sampling data).
- Meeting with NYSDEC to review modified IRM to address LNAPL

NOVEMBER 2013

- Implementation of IRM
- Completion of monthly Project Status Memorandum
- Submittal of modified IRM Work Plan to NYSDEC
- Removal of hazardous waste material from the Site by a licensed hauler

DECEMBER 2013

- Implementation of IRM
- Completion of Product Recovery Status Memorandum

Please contact me at 845-452-1658 should you have any questions or comments.

Attachment A – Well Location Map

Attachment B – Table: Monitoring Well Measurements

Attachment C – Waste Disposal Documentation

**Attachment A Table: Thickness of LNAPL Layer in Site Wells**

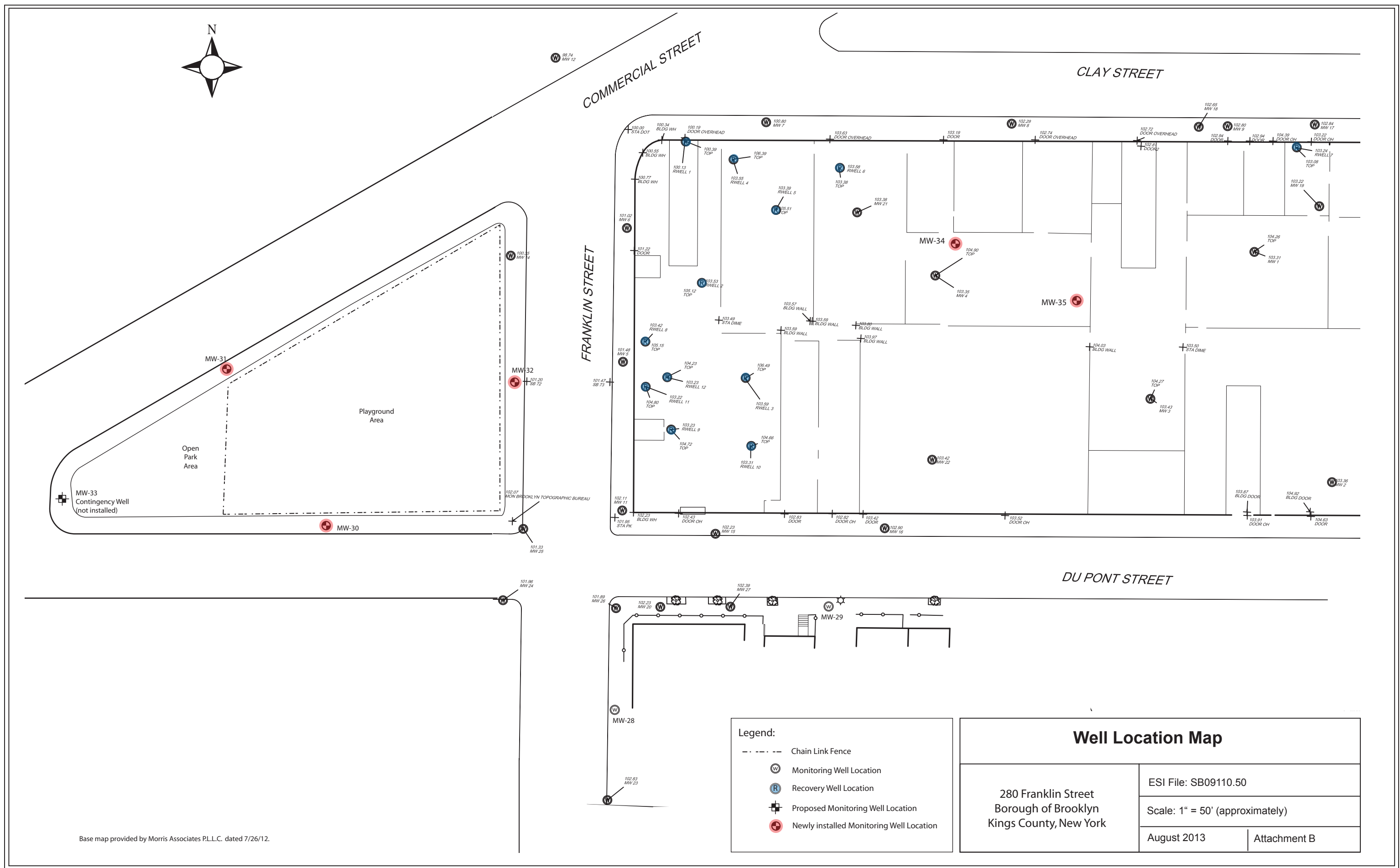


Data recorded using a Geotech Oil/Water Interface Probe, unit of measure = foot. All depth measurements from top of PVC well casing.

Well Location	Depth to Product	Depth to Groundwater	Thickness of LNAPL Layer									
			Aug-13	Jul-13	Apr-13	Mar-13	Feb-13	Jan-13	Dec-12	Nov-12	Oct-12	Sep-12
MW – 4	12.78	16.27	3.49	2.22	0.59	0.67	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	9.72	14.80	5.08	3.92	3.00	2.39	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6	8.81	11.23	2.42	2.82	–	–	–	–	–	–	3.49	2.14
MW – 7	9.11	11.88	2.77	1.06	1.92	4.92	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	ND	10.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 11	–	–	–	0.5	–	–	–	–	2.09	2.09	3.62	–
MW – 12	ND	7.59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 13	ND	7.88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 14	ND	8.58	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 15	10.44	12.58	2.14	0.70	–	0.32	1.07	–	1.56	0.99	0.76	2.67
MW – 16	11.14	11.19	0.05	0.07	0.02	0.01	0.10	0.25	0.20	ND	0.24	0.20
MW – 20	10.40	13.73	3.33	1.37	3.32	1.20	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	11.35	15.72	4.37	3.66	3.38	3.43	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	12.10	13.22	1.12	0.86	0.50	0.62	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	ND	11.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 24	ND	10.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 25	10.02	14.43	4.41	3.58	3.96	3.96	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	10.10	14.28	4.18	3.69	2.86	2.33	1.00	2.45	1.62	–	2.61	4.02
MW – 27	ND	10.51	ND	ND	ND	ND	ND	ND	ND	0.99	ND	ND
MW – 28	ND	10.83	ND	ND	ND	ND	ND	ND	–	–	–	–
MW – 29	ND	11.22	ND	ND	ND	ND	ND	ND	–	–	–	–
MW – 30	ND	9.70	ND	–	–	–	–	–	–	–	–	–
MW – 31	ND	9.04	ND	–	–	–	–	–	–	–	–	–
MW – 32	ND	9.77	ND	–	–	–	–	–	–	–	–	–
MW – 34	ND	14.93	ND	–	–	–	–	–	–	–	–	–
MW – 35	ND	14.65	ND	–	–	–	–	–	–	–	–	–
RW – 1	ND	9.06	ND	ND	–	ND	ND	ND	ND	ND	ND	ND
RW – 2	13.62	17.69	4.07	2.96	2.92	3.48	3.75	4.20	2.52	1.92	1.50	5.85
RW – 3	15.01	17.97	2.96	1.44	3.90	3.20	3.34	3.70	3.58	2.84	3.50	3.88
RW – 4	12.22	14.97	2.75	1.08	3.06	3.15	3.00	3.05	2.95	–	3.45	3.35
RW – 5	14.03	14.72	0.69	0.51	2.62	–	–	–	2.35	3.00	1.88	–
RW – 6	12.10	12.20	0.10	0.08	0.45	0.50	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8	13.65	18.24	4.59	3.64	–	–	–	–	–	–	–	–
RW – 9	13.24	17.33	4.09	2.37	4.40	2.62	3.11	3.50	3.08	3.83	2.98	5.33
RW – 10	13.02	17.13	4.11	3.55	–	–	–	–	–	–	–	–
RW – 11	13.25	17.16	3.91	3.49	3.15	2.67	3.11	3.50	2.93	4.49	2.58	4.40
RW – 12*	–	–	–	–	–	–	–	–	–	–	–	–

**Notes:** "–" Indicates not recorded. "\*\*\*" Indicates well is equipped with an automated product recovery system.

Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation.



## Daily Job Report

**Contact Phone:**

PO#:

Phone:

Service Code:

10900

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number NY0001453354		2. Page 1 of 1		3. Emergency Response Phone 516-376-7340		4. Manifest Tracking Number <b>000346674 JJK</b>							
		5. Generator's Name and Mailing Address 49 DuPont Realty Corp PO Box 785 Dear Park, NY 11229						Generator's Site Address (if different than mailing address) 49 DuPont St Brooklyn, NY 11222							
6. Transporter 1 Company Name Miller Environmental Group INC		U.S. EPA ID Number NY0005900095													
7. Transporter 2 Company Name		U.S. EPA ID Number													
8. Designated Facility Name and Site Address Norite, LLC 620 South Saratoga Street Cobleskill, NY 12047		U.S. EPA ID Number													
Facility's Phone:															
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes					
						No.	Type								
	1.	Waste Toxic Liquids, Organic, N.O.S., 6.1, UN 2810, PG II, UO25, Ethylbenzene, Phthalate, ERG162				1	π	1002	G	U028					
	2.														
	3.														
	4.														
14. Special Handling Instructions and Additional Information M13-0779 J0815130069-101 Treat as SOL. Date # 12/24/13															
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.															
Generator's/Offoror's Printed/Typed Name						Signature			Month Day Year						
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.						Port of entry/exit:			Date leaving U.S.:						
Transporter signature (for exports only):															
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials														
	Transporter 1 Printed/Typed Name						Signature			Month Day Year					
	Transporter 2 Printed/Typed Name						Signature			Month Day Year					
DESIGNATED FACILITY	18. Discrepancy														
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection														
	Manifest Reference Number:														
	18b. Alternate Facility (or Generator) U.S. EPA ID Number														
	Facility's Phone:														
18c. Signature of Alternate Facility (or Generator)									Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)															
1.				2.				3.				4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a															
Printed/Typed Name						Signature			Month Day Year						



# Ecosystems Strategies, Inc.

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## PROJECT STATUS MEMORANDUM

---

**TO:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

**CC:** Joseph Brunner Email: yb321@yahoo.com  
Joe Folkman (49 Dupont Realty Corp.) Email: jfolkman@pvcisme.com  
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James P. Rigano Email: jrigano@riganollc.com

**FROM:** Paul Ciminello, President

**DATE:** October 17, 2013

**SITE:** Former Nuhart Plastic Manufacturing Site, NYSDEC Site ID: 224136  
ESI File: SB09110.50

**RE:** Investigative and Product Recovery Activities – September 2013

---

This memorandum provides a summary of investigative and interim remedial activities conducted by Ecosystems Strategies, Inc. (ESI) at the Former Nuhart Plastic Manufacturing Site (hereafter referred to as the "Site") during September and early October 2013. The Site is located at 280 Franklin Street, Borough of Brooklyn, Kings County, New York.

Interim remedial activities at the Site have been performed in general conformance with the NYSDEC-approved Operation, Maintenance and Monitoring Plan (OM&M Plan) for the Product Recovery System (PRS), dated March 2012 and revised August 2012, prepared by ESI except as noted below. In addition, investigative activities at the Site have been performed in general conformance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated November 2011 and prepared by ESI.

### A. Investigative Activities

#### DELINEATION OF TCE CONTAMINATION AT NORTHWESTERN PORTION OF SITE

Fieldwork for the Supplemental Remedial Investigation Work Plan (Supplemental RIWP) was conducted from July to August, and a Status Memorandum documenting fieldwork observations and laboratory data was provided to NYSDEC on September 30, 2013. Additional fieldwork proposed to further delineate TCE contamination (collection of additional groundwater, soil and soil vapor samples) is being reviewed by ESI's Client and will be scheduled for the October 2013. All generated data will be incorporated in the Draft Remedial Investigation Report (Draft RIR).

### B. Interim Remedial Activities – September 2013

Maintenance and interim remedial activities originally scheduled for September were conducted on October 4, 2013.



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October 17, 2013  
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#### MAINTENANCE ACTIVITIES

ESI personnel inspected the Site and performed general maintenance activities, including:

- Proper disposal of any debris in the vicinity of all recovery wells
- Removal of any encountered of product at and in the vicinity of recovery wells
- Placing absorbent material at the base and around each recovery well
- Proper labeling of all hazardous waste containers

#### MONITORING AND PRODUCT REMOVAL

ESI conducted monthly gauging of the monitoring and recovery wells, including recently installed monitoring wells MW-30, MW-31, MW-32, MW-34 and MW-35. Difficulties with the interface probe prevented the collection of usable LNAPL depth measurements (ESI believes the instrument recordings are of insufficient accuracy and precision to provide meaningful comparison with previous data). Wells observed to contain LNAPL during this gauging round correspond to the wells containing LNAPL in August 2013. A table documenting available product thickness measurements in monitoring and recovery wells is provided as Attachment A and a Well Location Map is provided as Attachment B.

ESI personnel removed approximately 49 gallons of product from the 55-gallon drum associated with recovery well RW-12, currently operating a PetroXtractor Well Oil Skimmer (Model PX-B). The product was subsequently emptied into an on-site 400-gallon tote. In addition, approximately 21 gallons of product mixed with some water was manually removed from the recovery and monitoring wells exhibiting significant amounts of product. Absorbent materials at recovery and monitoring wells were properly discarded and replaced.

#### **C. Product Recovery System (PRS) Assessment and Recommendations**

The current Interim Remedial Measure (IRM) consists of an automated recovery unit (PetroXtractor Well Oil Skimmer) at RW-12 (the Spill Buster product seeking pump was found to be malfunctioning and was removed from RW-10 in July). The current IRM is not adequate to address the contamination present on-site. ESI is currently reviewing preliminary design specifications for the installation of a recovery trench or other remedial approach designed to intercept and remove LNAPL floating on the groundwater.

#### **D. Meetings and NYSDEC Communication**

No meetings were held with NYSDEC in September 2013. ESI and NYSDEC communication will continue as needed.

#### **E. Anticipated Work and Schedule**

##### OCTOBER 2013

- Implementation of existing IRM
- Additional groundwater, soil and soil vapor investigation to delineate TCE contamination

##### NOVEMBER 2013

- Implementation of existing IRM
- Completion of Product Recovery Status Memorandum
- Submittal of Draft RIR to NYSDEC (inclusive of findings from the Supplemental RIWP and all groundwater sampling data).
- Meeting with NYSDEC to review modified IRM to address LNAPL



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DECEMBER 2013

- Implementation of IRM
- Completion of monthly Project Status Memorandum
- Submittal of modified IRM Work Plan to NYSDEC
- Removal of hazardous waste material from the Site by a licensed hauler

JANUARY 2014

- Implementation of IRM
- Completion of Product Recovery Status Memorandum

Please contact me at 845-452-1658 should you have any questions or comments.

Attachment A – Table: Monitoring Well Measurements

Attachment B – Well Location Map

**Attachment A Table: Thickness of LNAPL Layer in Site Wells**

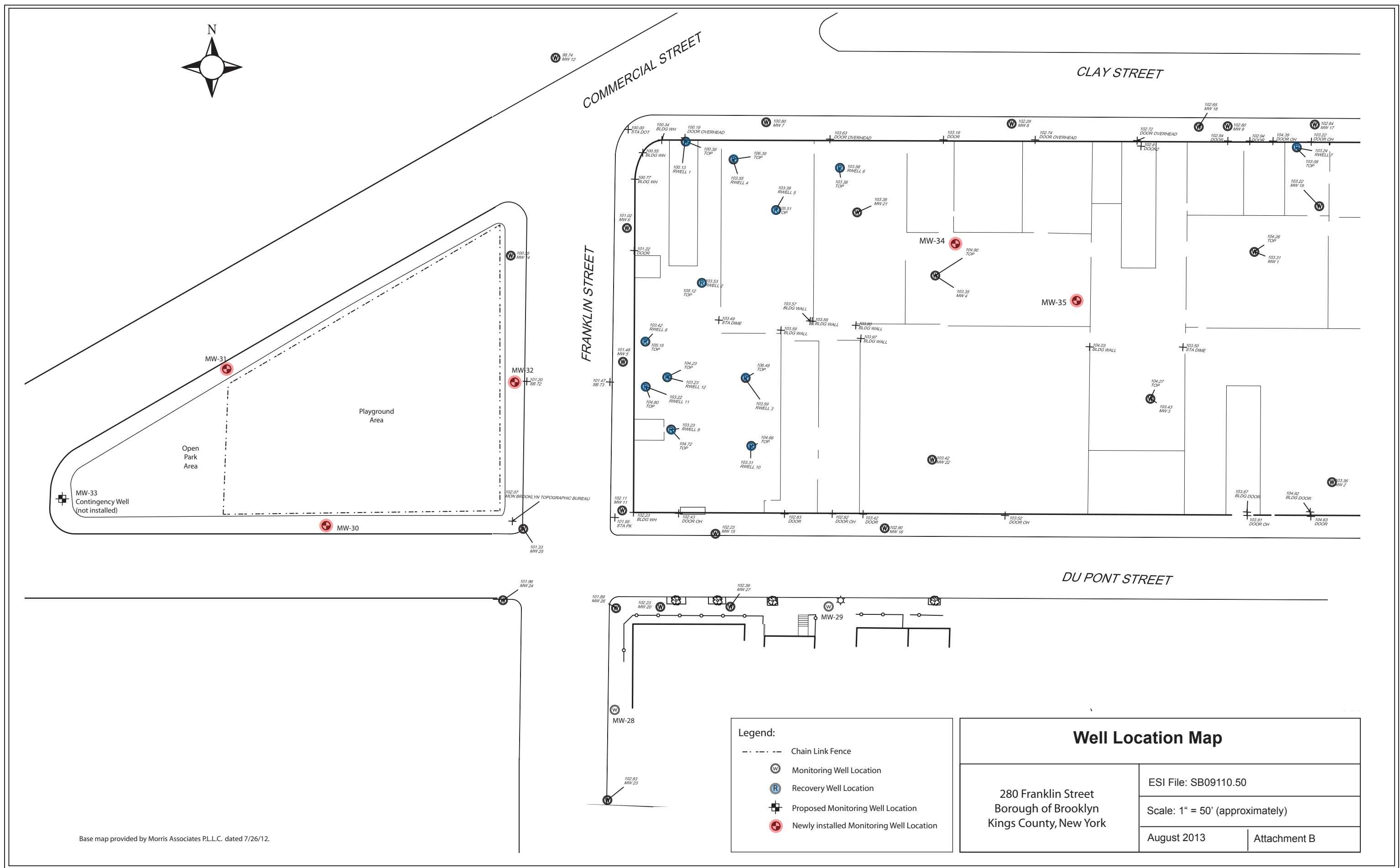
Data recorded using a Geotech Oil/Water Interface Probe, unit of measure = foot. All depth measurements from top of PVC well casing.



Well Location	Thickness of LNAPL Layer										
	Sep-13	Aug-13	Jul-13	Apr-13	Mar-13	Feb-13	Jan-13	Dec-12	Nov-12	Oct-12	Sep-12
MW – 4	##	3.49	2.22	0.59	0.67	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	##	5.08	3.92	3.00	2.39	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6	##	2.42	2.82	–	–	–	–	–	–	3.49	2.14
MW – 7	##	2.77	1.06	1.92	4.92	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 15	##	2.14	0.70	–	0.32	1.07	–	1.56	0.99	0.76	2.67
MW – 16	##	0.05	0.07	0.02	0.01	0.10	0.25	0.20	ND	0.24	0.20
MW – 20	##	3.33	1.37	3.32	1.20	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	##	4.37	3.66	3.38	3.43	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	##	1.12	0.86	0.50	0.62	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 25	##	4.41	3.58	3.96	3.96	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	##	4.18	3.69	2.86	2.33	1.00	2.45	1.62	–	2.61	4.02
MW – 27	ND	ND	ND	ND	ND	ND	ND	ND	0.99	ND	ND
MW – 28	ND	ND	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed
MW – 29	ND	ND	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed
MW – 30	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 31	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 32	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 34	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 35	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
RW – 1	ND	ND	ND	–	ND	ND	ND	ND	ND	ND	ND
RW – 2	##	4.07	2.96	2.92	3.48	3.75	4.20	2.52	1.92	1.50	5.85
RW – 3	##	2.96	1.44	3.90	3.20	3.34	3.70	3.58	2.84	3.50	3.88
RW – 4	##	2.75	1.08	3.06	3.15	3.00	3.05	2.95	–	3.45	3.35
RW – 5	##	0.69	0.51	2.62	–	–	–	2.35	3.00	1.88	–
RW – 6	##	0.10	0.08	0.45	0.50	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8	##	4.59	3.64	–	–	–	–	–	–	–	–
RW – 9	##	4.09	2.37	4.40	2.62	3.11	3.50	3.08	3.83	2.98	5.33
RW – 10	##	4.11	3.55	–	–	–	–	–	–	–	–
RW – 11	##	3.91	3.49	3.15	2.67	3.11	3.50	2.93	4.49	2.58	4.40
RW – 12*	–	–	–	–	–	–	–	–	–	–	–

**Notes:** "##" LNAPL observed, depth not recorded "–" Indicates not recorded. "\*\*\*" Indicates well is equipped with an automated product recovery system.

Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation.





# Ecosystems Strategies, Inc.

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## PROJECT STATUS MEMORANDUM

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**TO:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

**CC:** Joseph Brunner Email: yb321@yahoo.com  
David Cohen Email: davidcohen16@gmail.com  
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James P. Rigano Email: jrigano@riganollc.com

**FROM:** Paul Ciminello, President

**DATE:** November 18, 2013

**SITE:** Former Nuhart Plastic Manufacturing Site, NYSDEC Site ID: 224136  
ESI File: SB09110.50

**RE:** Investigative and Product Recovery Activities – October 2013

---

This memorandum provides a summary of investigative and interim remedial activities conducted by Ecosystems Strategies, Inc. (ESI) at the Former Nuhart Plastic Manufacturing Site (hereafter referred to as the "Site") during October 2013. The Site is located at 280 Franklin Street, Borough of Brooklyn, Kings County, New York.

Interim remedial activities at the Site have been performed in general conformance with the NYSDEC-approved Operation, Maintenance and Monitoring Plan (OM&M Plan) for the Product Recovery System (PRS), dated March 2012 and revised August 2012, prepared by ESI except as noted below. In addition, investigative activities at the Site have been performed in general conformance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated November 2011 and prepared by ESI.

### A. Investigative Activities

#### DELINEATION OF TCE CONTAMINATION AT NORTHWESTERN PORTION OF SITE

Fieldwork for the Supplemental Remedial Investigation Work Plan (Supplemental RIWP) was conducted from July to August, and a Status Memorandum documenting fieldwork observations and laboratory data was provided to NYSDEC on September 30, 2013. Additional fieldwork proposed to further delineate TCE contamination (collection of additional groundwater, soil and soil vapor samples) is being scheduled for November 2013. All generated data will be incorporated in the Draft Remedial Investigation Report (Draft RIR).

### B. Interim Remedial Activities – October 2013

Maintenance and interim remedial activities were conducted on October 24, 2013.

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#### MAINTENANCE ACTIVITIES

ESI personnel inspected the Site and performed general maintenance activities, including:

- Proper disposal of any debris in the vicinity of all recovery wells
- Removal of any encountered product at and in the vicinity of recovery wells
- Placing absorbent material at the base and around each recovery well
- Proper labeling of all hazardous waste containers

#### MONITORING AND PRODUCT REMOVAL

ESI conducted monthly gauging of the monitoring and recovery wells. Wells observed to contain LNAPL during this gauging round correspond to the wells containing LNAPL during the previous gauging event in September 2013 (i.e. no new LNAPL contamination has been encountered within monitoring wells). A table documenting available product thickness measurements in monitoring and recovery wells is provided as Attachment A and a Well Location Map is provided as Attachment B.

ESI personnel removed approximately 48 gallons of product from the 55-gallon drum associated with recovery well RW-12, currently operating a PetroXtractor Well Oil Skimmer (Model PX-B). The product was subsequently emptied into an on-site 400-gallon tote. In addition, approximately 22 gallons of product mixed with some water was manually removed from the recovery and monitoring wells exhibiting significant amounts of product. Absorbent materials at recovery and monitoring wells were properly discarded and replaced.

#### **C. Product Recovery System (PRS) Assessment and Recommendations**

The current Interim Remedial Measure (IRM) consists of an automated recovery unit (PetroXtractor Well Oil Skimmer) at RW-12 (the Spill Buster product seeking pump was found to be malfunctioning and was removed from RW-10 in July). The current IRM is not adequate to address the contamination present on-site. ESI is currently reviewing preliminary design specifications for the installation of a recovery trench or other remedial approach designed to intercept and remove LNAPL floating on the groundwater.

#### **D. Meetings and NYSDEC Communication**

ESI has been informed that a meeting was held between Joseph Brunner (ESI's client) and NYSDEC personnel in October 2013; ESI did not participate in this meeting and so the relevant issues or decisions from that meeting are not included here. ESI and NYSDEC communication will continue as needed.

#### **E. Anticipated Work and Schedule**

##### NOVEMBER 2013

- Implementation of existing IRM
- Additional groundwater, soil and soil vapor investigation to delineate TCE contamination



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DECEMBER 2013

- Implementation of existing IRM
- Completion of Product Recovery Status Memorandum
- Submittal of Draft RIR to NYSDEC (inclusive of findings from the Supplemental RIWP and all groundwater sampling data).
- Meeting with NYSDEC to review modified IRM to address LNAPL
- Removal of hazardous waste material from the Site by a licensed hauler

JANUARY 2014

- Implementation of IRM
- Completion of monthly Project Status Memorandum
- Submittal of modified IRM Work Plan to NYSDEC

FEBRUARY 2014

- Implementation of IRM
- Completion of Product Recovery Status Memorandum

Please contact me at 845-452-1658 should you have any questions or comments.

Attachment A – Table: Monitoring Well Measurements

Attachment B – Well Location Map

**Attachment A Table: Thickness of LNAPL Layer in Site Wells**



Data recorded using a Geotech Oil/Water Interface Probe, unit of measure = foot. All depth measurements from top of PVC well casing.

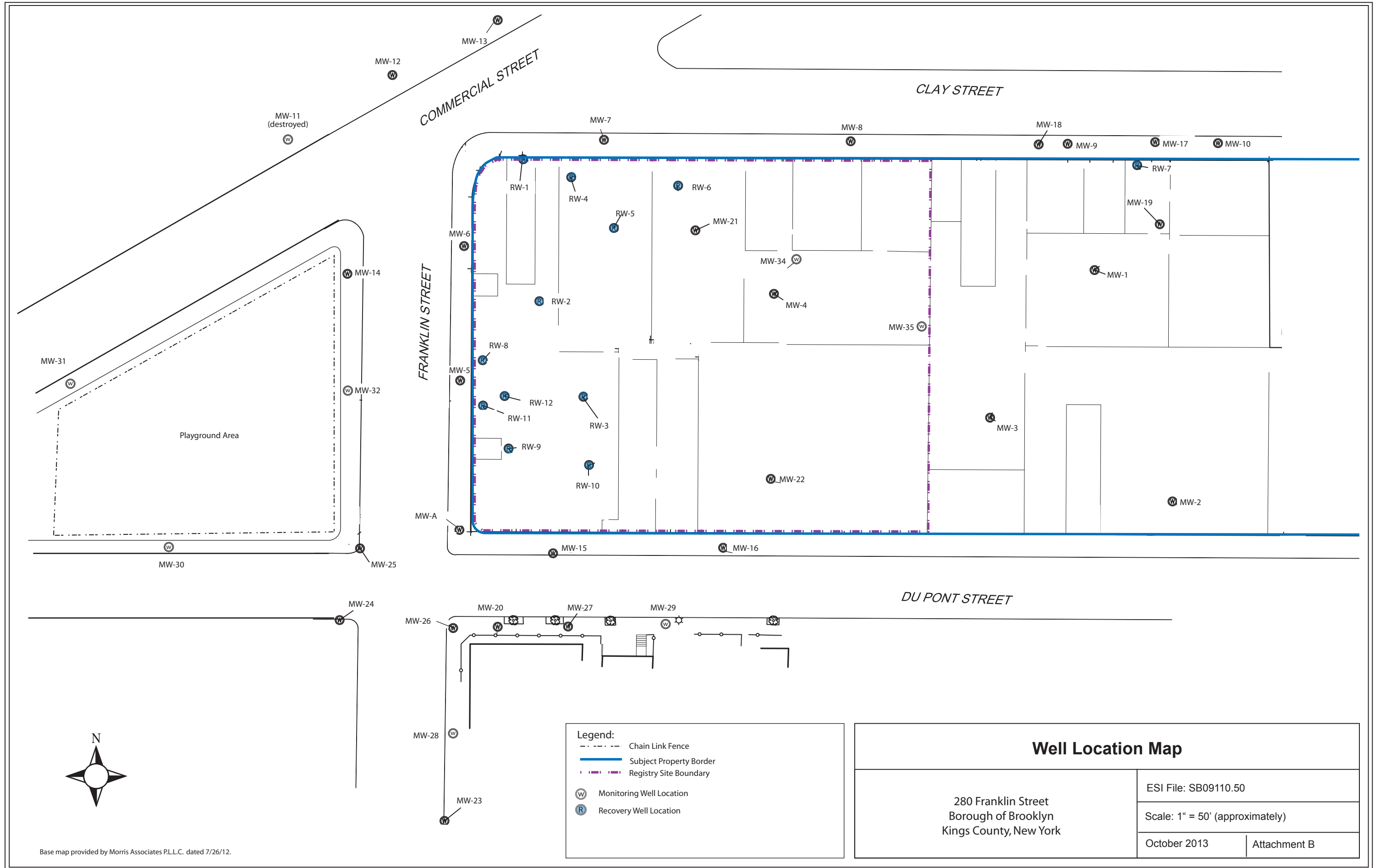
Well Location	Depth to Product	Depth to Groundwater	Thickness of LNAPL Layer											
			Oct-13	Sep-13	Aug-13	Jul-13	Apr-13	Mar-13	Feb-13	Jan-13	Dec-12	Nov-12	Oct-12	Sep-12
MW – 4	13.47	14.25	0.78	##	3.49	2.22	0.59	0.67	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	10.21	15.75	5.54	##	5.08	3.92	3.00	2.39	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6	9.25	11.25	2.00	##	2.42	2.82	—	—	—	—	—	—	3.49	2.14
MW – 7	9.49	13.49	4.00	##	2.77	1.06	1.92	4.92	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	ND	10.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 12	ND	8.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 13	ND	8.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 14	ND	9.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 15	10.86	14.20	3.34	##	2.14	0.70	–	0.32	1.07	–	1.56	0.99	0.76	2.67
MW – 16	11.66	11.85	0.19	##	0.05	0.07	0.02	0.01	0.10	0.25	0.20	ND	0.24	0.20
MW – 20	10.9	15.01	4.11	##	3.33	1.37	3.32	1.20	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	11.82	16.48	4.66	##	4.37	3.66	3.38	3.43	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	12.69	13.19	0.50	##	1.12	0.86	0.50	0.62	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	ND	11.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 24	ND	10.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 25	10.55	14.56	4.01	##	4.41	3.58	3.96	3.96	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	10.6	15.22	4.62	##	4.18	3.69	2.86	2.33	1.00	2.45	1.62	–	2.61	4.02
MW – 27	ND	11.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.99	ND	ND
MW – 28	ND	11.36	ND	ND	ND	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed
MW – 29	ND	11.71	ND	ND	ND	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed
MW – 30	ND	10.21	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 31	ND	9.54	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 32	ND	10.26	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 34	ND	15.52	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 35	ND	15.15	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
RW – 1	ND	9.51	ND	ND	ND	ND	–	ND	ND	ND	ND	ND	ND	ND
RW – 2	14.05	17.91	3.86	##	4.07	2.96	2.92	3.48	3.75	4.20	2.52	1.92	1.50	5.85
RW – 3	15.56	17.24	1.68	##	2.96	1.44	3.90	3.20	3.34	3.70	3.58	2.84	3.50	3.88
RW – 4	15.49	16.95	1.46	##	2.75	1.08	3.06	3.15	3.00	3.05	2.95	—	3.45	3.35
RW – 5	14.55	15.09	0.54	##	0.69	0.51	2.62	—	—	—	2.35	3.00	1.88	–
RW – 6	12.53	13.20	0.67	##	0.10	0.08	0.45	0.50	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8	14.14	18.27	4.13	##	4.59	3.64	—	—	—	—	—	—	—	—
RW – 9	13.81	16.89	3.08	##	4.09	2.37	4.40	2.62	3.11	3.50	3.08	3.83	2.98	5.33
RW – 10	13.53	17.64	4.11	##	4.11	3.55	—	—	—	—	—	—	—	—
RW – 11	13.83	16.48	2.65	##	3.91	3.49	3.15	2.67	3.11	3.50	2.93	4.49	2.58	4.40
RW – 12*	—	—	—	—	—	—	—	—	—	—	—	—	—	—

**Notes**

Well gauging conducted on October 24, 2013

Symbol Key: ## LNAPL observed, depth not recorded — Data not recorded. \* Well equipped with automated product recovery system

Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation.





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---

## PROJECT STATUS MEMORANDUM

---

**TO:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

**CC:** Joseph Brunner Email: yb321@yahoo.com  
David Cohen Email: davidcohen16@gmail.com  
Joe Folkman (49 Dupont Realty Corp.) Email: jfolkman@pvcisme.com  
Jane O'Connell (NYSDEC) Email: jhoconne@gw.dec.state.ny.us  
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Bridget Callaghan (NYSDOH) Email: bkc01@health.state.ny.us  
James P. Rigano Email: jrigano@riganollc.com

**FROM:** Paul Ciminello, President

**DATE:** December 17, 2013

**SITE:** Former Nuhart Plastic Manufacturing Site, NYSDEC Site ID: 224136  
ESI File: SB09110.50

**RE:** Investigative and Product Recovery Activities – November 2013

---

This memorandum provides a summary of investigative and interim remedial activities conducted by Ecosystems Strategies, Inc. (ESI) at the Former Nuhart Plastic Manufacturing Site (hereafter referred to as the "Site") during November 2013. The Site is located at 280 Franklin Street, Borough of Brooklyn, Kings County, New York.

Interim remedial activities at the Site have been performed in general conformance with the NYSDEC-approved Operation, Maintenance and Monitoring Plan (OM&M Plan) for the Product Recovery System (PRS), dated March 2012 and revised August 2012, prepared by ESI, except as noted below. In addition, investigative activities at the Site have been performed in general conformance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated November 2011, prepared by ESI.

### A. Investigative Activities

#### DELINEATION OF TCE CONTAMINATION AT NORTHWESTERN PORTION OF SITE

Fieldwork for the Supplemental Remedial Investigation Work Plan (Supplemental RIWP) was conducted from July to August, and a Status Memorandum documenting fieldwork observations and laboratory data was provided to NYSDEC on September 30, 2013. Additional fieldwork to further delineate TCE contamination (collection of additional groundwater, soil and soil vapor samples) was conducted on November 25 and December 4, 2013. An analysis of investigative findings is pending receipt of complete laboratory reports; all generated data will be incorporated in the Draft Remedial Investigation Report (Draft RIR).

B. Wong  
December 17, 2013  
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Page 2 of 3

## **B. Interim Remedial Activities – November 2013**

Maintenance and interim remedial activities were conducted on November 22, 2013.

### **MAINTENANCE ACTIVITIES**

ESI personnel inspected the Site and performed general maintenance activities, including:

- Proper disposal of any debris in the vicinity of all recovery wells
- Removal of any encountered product at and in the vicinity of recovery wells
- Placing absorbent material at the base and around each recovery well
- Proper labeling of all hazardous waste containers

### **MONITORING AND PRODUCT REMOVAL**

ESI conducted monthly gauging of the monitoring and recovery wells. Wells observed to contain LNAPL during this gauging round correspond to the wells containing LNAPL during the previous gauging event in October 2013 (i.e. no new LNAPL contamination has been encountered within monitoring wells). A table documenting available product thickness measurements in monitoring and recovery wells is provided as Attachment A and a Well Location Map is provided as Attachment B.

ESI personnel removed approximately 50 gallons of product from the 55-gallon drum associated with recovery well RW-12, currently operating a PetroXtractor Well Oil Skimmer (Model PX-B). The product was subsequently emptied into an on-site 400-gallon tote. In addition, approximately 21 gallons of product mixed with some water was manually removed from the recovery and monitoring wells exhibiting significant amounts of product. Absorbent materials at recovery and monitoring wells were properly discarded and replaced.

## **C. Product Recovery System (PRS) Assessment and Recommendations**

The current Interim Remedial Measure (IRM) consists of an automated recovery unit (PetroXtractor Well Oil Skimmer) at RW-12 (the Spill Buster product seeking pump was found to be malfunctioning and was removed from RW-10 in July). The current IRM is not adequate to address the contamination present on-site. ESI is currently reviewing preliminary design specifications for the installation of a recovery trench or other remedial approach designed to intercept and remove LNAPL floating on the groundwater.

## **D. Meetings and NYSDEC Communication**

No meetings were held with NYSDEC in November 2013. A meeting (telephone conference call) is expected in late December or early January to discuss current Site conditions and potential remedial actions; participants are expected to include representatives of ESI's client, the client's lenders, ESI and NYSDEC. ESI and NYSDEC communication on technical matters will continue as needed.

## **E. Anticipated Work and Schedule**

### **DECEMBER 2013**

- Implementation of existing IRM
- Additional sample collection to delineate TCE contamination (as required, pending NYSDEC review of current data)



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JANUARY 2014

- Implementation of existing IRM
- Completion of monthly Project Status Memorandum
- Submittal of Draft RIR to NYSDEC (inclusive of findings from the Supplemental RIWP and all groundwater sampling data).
- Removal of hazardous waste material from the Site by a licensed hauler

FEBRUARY 2014

- Implementation of IRM
- Completion of monthly Project Status Memorandum

MARCH 2014

- Implementation of IRM
- Completion of monthly Project Status Memorandum
- Submittal of modified IRM Work Plan to NYSDEC

Please contact me at 845-452-1658 should you have any questions or comments.

Attachment A – Table: Monitoring Well Measurements

Attachment B – Well Location Map

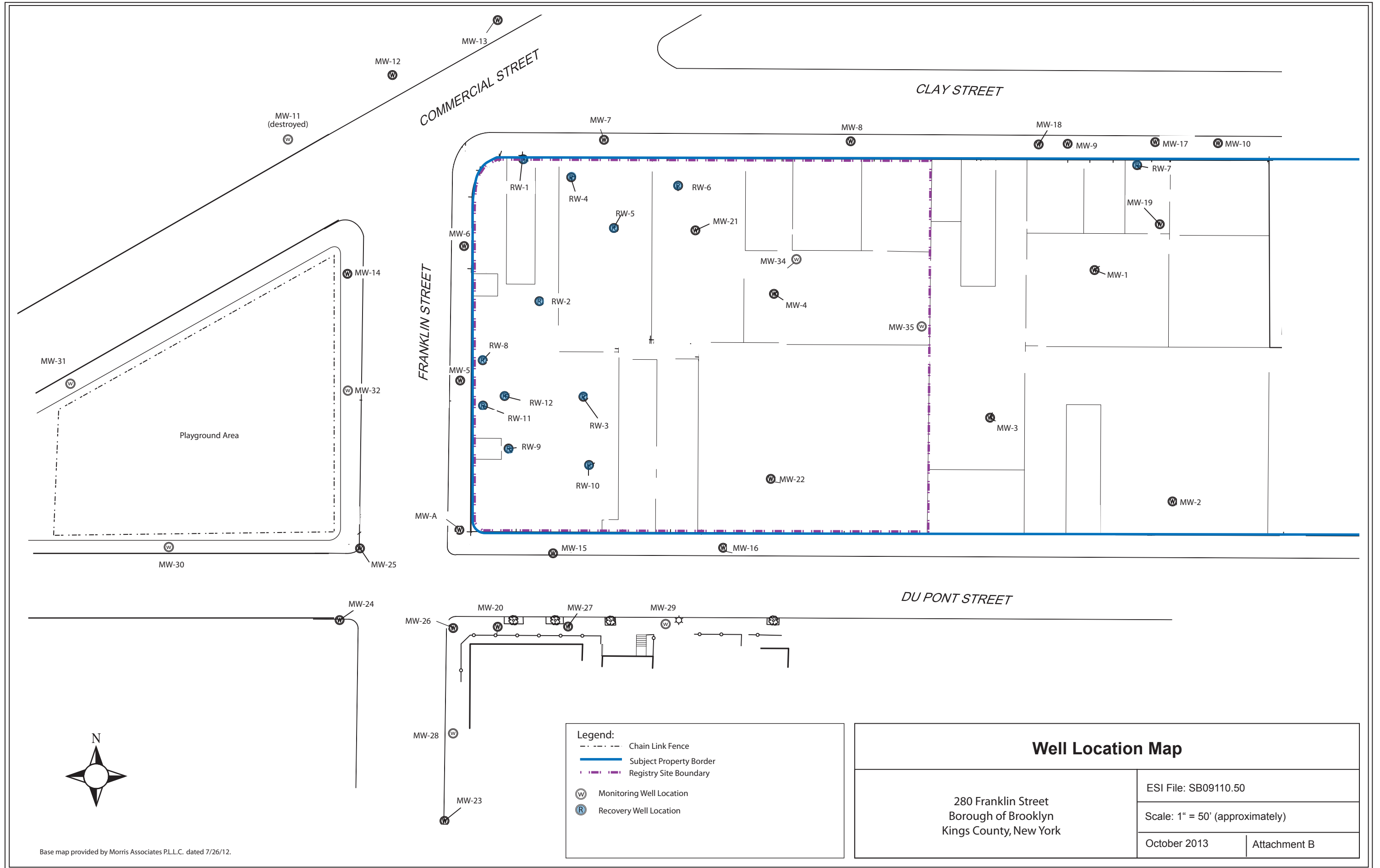
Attachment A      Table: Thickness of LNAPL Layer in Site Wells



Data recorded using a Geotech Oil/Water Interface Probe, unit of measure = foot. All depth measurements from top of PVC well casing.

Well Location	Depth to Product	Depth to Groundwater	Thickness of LNAPL Layer												
			Nov-13	Oct-13	Sep-13	Aug-13	Jul-13	Apr-13	Mar-13	Feb-13	Jan-13	Dec-12	Nov-12	Oct-12	Sep-12
MW – 4	13.72	14.38	0.66	0.78	##	3.49	2.22	0.59	0.67	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	10.38	17.55	7.17	5.54	##	5.08	3.92	3.00	2.39	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6	9.38	12.14	2.76	2.00	##	2.42	2.82	—	—	—	—	—	—	3.49	2.14
MW – 7	9.60	14.30	4.70	4.00	##	2.77	1.06	1.92	4.92	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	ND	10.79	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 12	ND	8.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 13	ND	8.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 14	ND	9.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 15	11.04	14.23	3.19	3.34	##	2.14	0.70	–	0.32	1.07	–	1.56	0.99	0.76	2.67
MW – 16	11.80	12.02	0.22	0.19	##	0.05	0.07	0.02	0.01	0.10	0.25	0.20	ND	0.24	0.20
MW – 20	11.01	15.91	4.90	4.11	##	3.33	1.37	3.32	1.20	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	12.02	15.74	3.72	4.66	##	4.37	3.66	3.38	3.43	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	12.85	13.54	0.69	0.50	##	1.12	0.86	0.50	0.62	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	ND	11.79	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 24	ND	10.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 25	10.66	16.22	5.56	4.01	##	4.41	3.58	3.96	3.96	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	10.78	15.25	4.47	4.62	##	4.18	3.69	2.86	2.33	1.00	2.45	1.62	–	2.61	4.02
MW – 27	ND	11.23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.99	ND	ND
MW – 28	ND	11.54	ND	ND	ND	ND	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed
MW – 29	ND	11.90	ND	ND	ND	ND	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed
MW – 30	ND	10.39	ND	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 31	ND	9.69	ND	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 32	ND	10.44	ND	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 34	ND	13.68	ND	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 35	ND	13.33	ND	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
RW – 1	ND	10.08	ND	ND	ND	ND	ND	–	ND	ND	ND	ND	ND	ND	ND
RW – 2	14.24	19.33	5.09	3.86	##	4.07	2.96	2.92	3.48	3.75	4.20	2.52	1.92	1.50	5.85
RW – 3	15.68	19.01	3.33	1.68	##	2.96	1.44	3.90	3.20	3.34	3.70	3.58	2.84	3.50	3.88
RW – 4	15.67	17.97	2.30	1.46	##	2.75	1.08	3.06	3.15	3.00	3.05	2.95	—	3.45	3.35
RW – 5	14.73	15.52	0.79	0.54	##	0.69	0.51	2.62	—	—	—	2.35	3.00	1.88	–
RW – 6	12.70	14.00	1.30	0.67	##	0.10	0.08	0.45	0.50	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8	14.38	18.30	3.92	4.13	##	4.59	3.64	—	—	—	—	—	—	—	—
RW – 9	13.94	18.82	4.88	3.08	##	4.09	2.37	4.40	2.62	3.11	3.50	3.08	3.83	2.98	5.33
RW – 10	13.69	17.68	3.99	4.11	##	4.11	3.55	—	—	—	—	—	—	—	—
RW – 11	13.95	19.43	5.48	2.65	##	3.91	3.49	3.15	2.67	3.11	3.50	2.93	4.49	2.58	4.40
RW – 12*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Notes      Well gauging conducted on November 22, 2013  
Symbol Key:    ## LNAPL observed, depth not recorded      — Data not recorded.      \* Well equipped with automated product recovery system  
Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation.





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## PROJECT STATUS MEMORANDUM

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**TO:** Bryan Wong (NYSDEC) Email: yywong@gw.dec.state.ny.us

**CC:** Joseph Brunner Email: yb321@yahoo.com  
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Bridget Callaghan (NYSDOH) Email: bkc01@health.state.ny.us  
James P. Rigano Email: jriganol@riganol.com

**FROM:** Paul Ciminello, President

**DATE:** January 24, 2014

**SITE:** Former Nuhart Plastic Manufacturing Site, NYSDEC Site ID: 224136  
ESI File: SB09110.50

**RE:** Investigative and Product Recovery Activities – December 2013

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### A. Investigative Activities

#### DELINEATION OF TCE CONTAMINATION AT NORTHWESTERN PORTION OF SITE

Fieldwork for the Supplemental Remedial Investigation Work Plan (Supplemental RIWP) was implemented from July to August, and in November and December, 2013, to delineate TCE contamination. Additional sampling is being scheduled in order to collect groundwater quality data from two monitoring wells that could not be sampled during previous fieldwork (MW-4 and MW-21). All generated data will be incorporated in the Draft Remedial Investigation Report (Draft RIR).

B. Wong  
January 24, 2014  
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## **B. Interim Remedial Activities – December 2013**

Maintenance and interim remedial activities were conducted on December 18, 2013.

### **MAINTENANCE ACTIVITIES**

ESI personnel inspected the Site and performed general maintenance activities, including:

- Proper disposal of any debris in the vicinity of all recovery wells
- Removal of any encountered product at and in the vicinity of recovery wells
- Placing absorbent material at the base and around each recovery well
- Proper labeling of all hazardous waste containers

### **MONITORING AND PRODUCT REMOVAL**

ESI conducted monthly gauging of the monitoring and recovery wells. Wells observed to contain LNAPL during this gauging round correspond to the wells containing LNAPL during the previous gauging event in November 2013 (i.e. no new LNAPL contamination has been encountered within monitoring wells). A table documenting available product thickness measurements in monitoring and recovery wells is provided as Attachment A and a Well Location Map is provided as Attachment B.

ESI personnel removed approximately 48 gallons of product from the 55-gallon drum associated with recovery well RW-12, currently operating a PetroXtractor Well Oil Skimmer (Model PX-B). The product was subsequently emptied into an on-site 400-gallon tote. In addition, approximately 24 gallons of product mixed with some water was manually removed from the recovery and monitoring wells exhibiting significant amounts of product. Absorbent materials at recovery and monitoring wells were properly discarded and replaced.

## **C. Product Recovery System (PRS) Assessment and Recommendations**

The current Interim Remedial Measure (IRM) consists of an automated recovery unit (PetroXtractor Well Oil Skimmer) at RW-12 (the Spill Buster product seeking pump was found to be malfunctioning and was removed from RW-10 in July). The current IRM is not adequate to address the contamination present on-site. ESI is currently reviewing preliminary design specifications for the installation of a recovery trench or other remedial approach designed to intercept and remove LNAPL floating on the groundwater.

## **D. Meetings and NYSDEC Communication**

No meetings were held with NYSDEC in December 2013. A meeting (telephone conference call) is expected in February 2014 to discuss current Site conditions and potential remedial actions; participants are expected to include representatives of ESI's client, the client's lenders, ESI and NYSDEC. ESI and NYSDEC communication on technical matters will continue as needed.

## **E. Anticipated Work and Schedule**

JANUARY 2014

- Implementation of existing IRM
- Completion of monthly Project Status Memorandum



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FEBRUARY 2014

- Implementation of IRM
- Completion of monthly Project Status Memorandum
- Additional groundwater sampling at MW-4 and MW-21 to delineate TCE contamination (pending Client authorization)

MARCH 2014

- Implementation of IRM
- Completion of monthly Project Status Memorandum
- Submittal of Draft RIR to NYSDEC (inclusive of findings from the Supplemental RIWP and all groundwater sampling data).
- Removal of hazardous waste material from the Site by a licensed hauler

APRIL 2014

- Implementation of IRM
- Completion of monthly Project Status Memorandum
- Revisions to the RIR based on NYSDEC comments
- Submittal of modified IRM Work Plan to NYSDEC

Please contact me at 845-452-1658 should you have any questions or comments.

Attachment A – Table: Monitoring Well Measurements

Attachment B – Well Location Map

Attachment A      Table: Thickness of LNAPL Layer in Site Wells



Data recorded using a Geotech Oil/Water Interface Probe, unit of measure = foot. All depth measurements from top of PVC well casing.

Well Location	Depth to Product	Depth to Groundwater	Thickness of LNAPL Layer													
			Dec-14	Nov-13	Oct-13	Sep-13	Aug-13	Jul-13	Apr-13	Mar-13	Feb-13	Jan-13	Dec-12	Nov-12	Oct-12	Sep-12
MW – 4	14.09	14.39	0.30	0.66	0.78	##	3.49	2.22	0.59	0.67	0.44	0.44	0.80	0.31	0.33	3.13
MW – 5	10.22	16.68	6.46	7.17	5.54	##	5.08	3.92	3.00	2.39	4.32	3.00	4.11	3.50	3.41	5.58
MW – 6	9.27	12.16	2.89	2.76	2.00	##	2.42	2.82	—	—	—	—	—	—	3.49	2.14
MW – 7	9.51	14.29	4.78	4.70	4.00	##	2.77	1.06	1.92	4.92	5.45	1.30	1.36	2.00	1.84	1.83
MW – 8	ND	10.83	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 12	ND	8.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 13	ND	8.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 14	ND	9.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 15	11.11	14.22	3.11	3.19	3.34	##	2.14	0.70	–	0.32	1.07	–	1.56	0.99	0.76	2.67
MW – 16	11.83	12.06	0.23	0.22	0.19	##	0.05	0.07	0.02	0.01	0.10	0.25	0.20	ND	0.24	0.20
MW – 20	10.95	16.02	5.07	4.90	4.11	##	3.33	1.37	3.32	1.20	1.10	1.35	1.38	3.39	3.15	3.80
MW – 21	11.91	15.04	3.13	3.72	4.66	##	4.37	3.66	3.38	3.43	3.75	4.10	4.23	2.89	2.04	4.15
MW – 22	12.98	14.05	1.07	0.69	0.50	##	1.12	0.86	0.50	0.62	1.15	1.20	0.18	0.21	0.18	1.80
MW – 23	ND	17.84	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 24	ND	11.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW – 25	10.61	16.27	5.66	5.56	4.01	##	4.41	3.58	3.96	3.96	4.34	3.70	2.82	7.86	4.40	3.96
MW – 26	10.74	15.18	4.44	4.47	4.62	##	4.18	3.69	2.86	2.33	1.00	2.45	1.62	–	2.61	4.02
MW – 27	ND	11.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.99	ND	ND
MW – 28	ND	11.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed
MW – 29	ND	11.84	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed
MW – 30	ND	10.37	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 31	ND	9.70	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 32	ND	10.41	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 34	ND	13.64	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
MW – 35	ND	13.30	ND	ND	ND	ND	ND	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed	not installed
RW – 1	ND	10.11	ND	ND	ND	ND	ND	ND	–	ND	ND	ND	ND	ND	ND	ND
RW – 2	14.01	17.20	3.19	5.09	3.86	##	4.07	2.96	2.92	3.48	3.75	4.20	2.52	1.92	1.50	5.85
RW – 3	15.40	19.00	3.60	3.33	1.68	##	2.96	1.44	3.90	3.20	3.34	3.70	3.58	2.84	3.50	3.88
RW – 4	15.33	18.00	2.67	2.30	1.46	##	2.75	1.08	3.06	3.15	3.00	3.05	2.95	—	3.45	3.35
RW – 5	14.44	15.04	0.60	0.79	0.54	##	0.69	0.51	2.62	—	—	—	2.35	3.00	1.88	–
RW – 6	12.28	13.22	0.94	1.30	0.67	##	0.10	0.08	0.45	0.50	0.21	0.40	0.15	0.90	0.22	0.06
RW – 8	14.19	16.65	2.46	3.92	4.13	##	4.59	3.64	—	—	—	—	—	—	—	—
RW – 9	13.67	18.92	5.25	4.88	3.08	##	4.09	2.37	4.40	2.62	3.11	3.50	3.08	3.83	2.98	5.33
RW – 10	13.45	17.26	3.81	3.99	4.11	##	4.11	3.55	—	—	—	—	—	—	—	—
RW – 11	13.70	17.97	4.27	5.48	2.65	##	3.91	3.49	3.15	2.67	3.11	3.50	2.93	4.49	2.58	4.40
RW – 12*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Notes      Well gauging conducted on December 18, 2013  
Symbol Key:    ## LNAPL observed, depth not recorded      — Data not recorded.      \* Well equipped with automated product recovery system  
Monitoring wells MW-1, MW-2, MW-3, MW-9, MW-10, MW-17, MW-18, and MW-19 and recovery well RW-7, associated with NYSDEC Spill ID 06-01852, are under the scope of a separate investigation.

