



## architects + engineers

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February 10, 2015

Steven M. Scharf, P.E.  
Project Engineer  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway  
Albany, New York 12233-7015

Re:            Brownfield Cleanup Program Remedial Investigation  
                Bethpage Community Park Ice Rink Area – NYSDEC Site No.: C130212  
                Progress Report – February 2015

Dear Mr. Scharf:

On behalf of the Town of Oyster Bay (Town), H2M architects + engineers (H2M) is pleased to provide herein a progress report on the remedial investigation activity at the Bethpage Community Park Ice Rink Area pursuant to Appendix A, Section XI of the New York State Brownfield Site Cleanup Agreement (Index # C130212-01-12).

### **Tasks Initiated or Completed**

- The elevation of the top of casing (TOC) and top of manhole cover (ground surface) of each monitoring well sampled during the remedial investigation (RI-MW-01, RI-MW-02, RI-MW-03, BCPM W6-1, MW-200-1, MW-201-1, MW-202-1, and MW-203-1) was surveyed to the North American Vertical Datum of 1988. A draft of the monitoring well survey was created for the preparation of an accurate potentiometric surface map.
- The groundwater and associated quality assurance / quality control (QA/QC) sample data table was adjusted based on the findings of the Data Usability Summary Report (DUSR) obtained from a third party data validator. Tabulated groundwater sample results are provided as Table 1. Groundwater sampling locations are identified in Figure 1.

### **Tasks to be Initiated or Completed during the Next Reporting Period**

As of October 27, 2014 field related activities associated with the Remedial Investigation (RI) have been completed. Tasks expected to be initiated, continued or completed during the next reporting period include the following:

- Preparation of an RI Report (RIR).

### **Schedule**

Schedule milestones related to the next reporting period are as follows:

- No milestones are expected to be reached in the next reporting period.

Mr. Steven M. Scharf  
Brownfield Cleanup Program – Bethpage Community Park Ice Rink Area – NYSDEC Site No.: C130212  
Progress Report  
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If you should you have any questions or concerns, please contact me at (631) 756-8000 extension 1623.

Very truly yours,

**H2M architects + engineers**



Philip J. Schade, P.E.  
Vice President

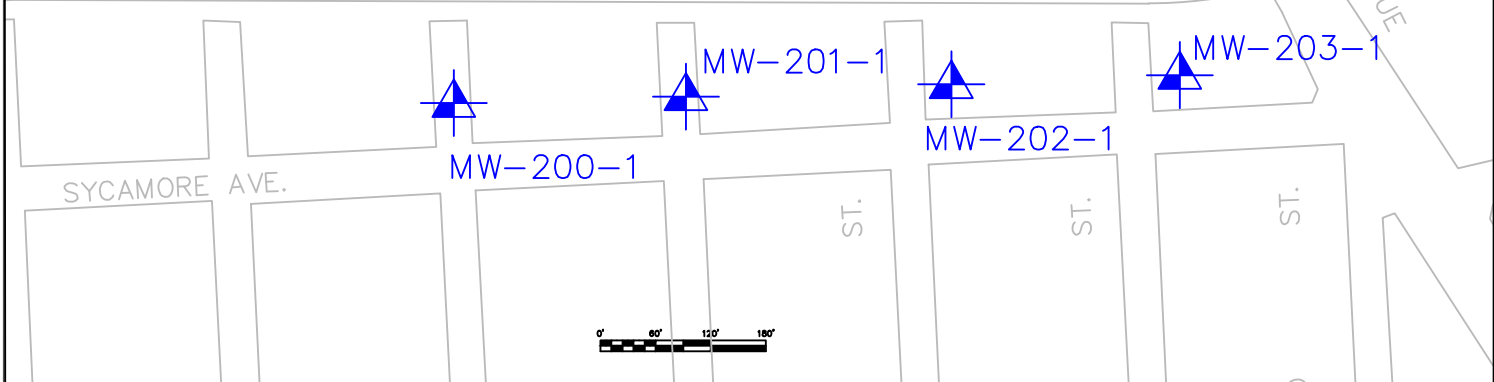
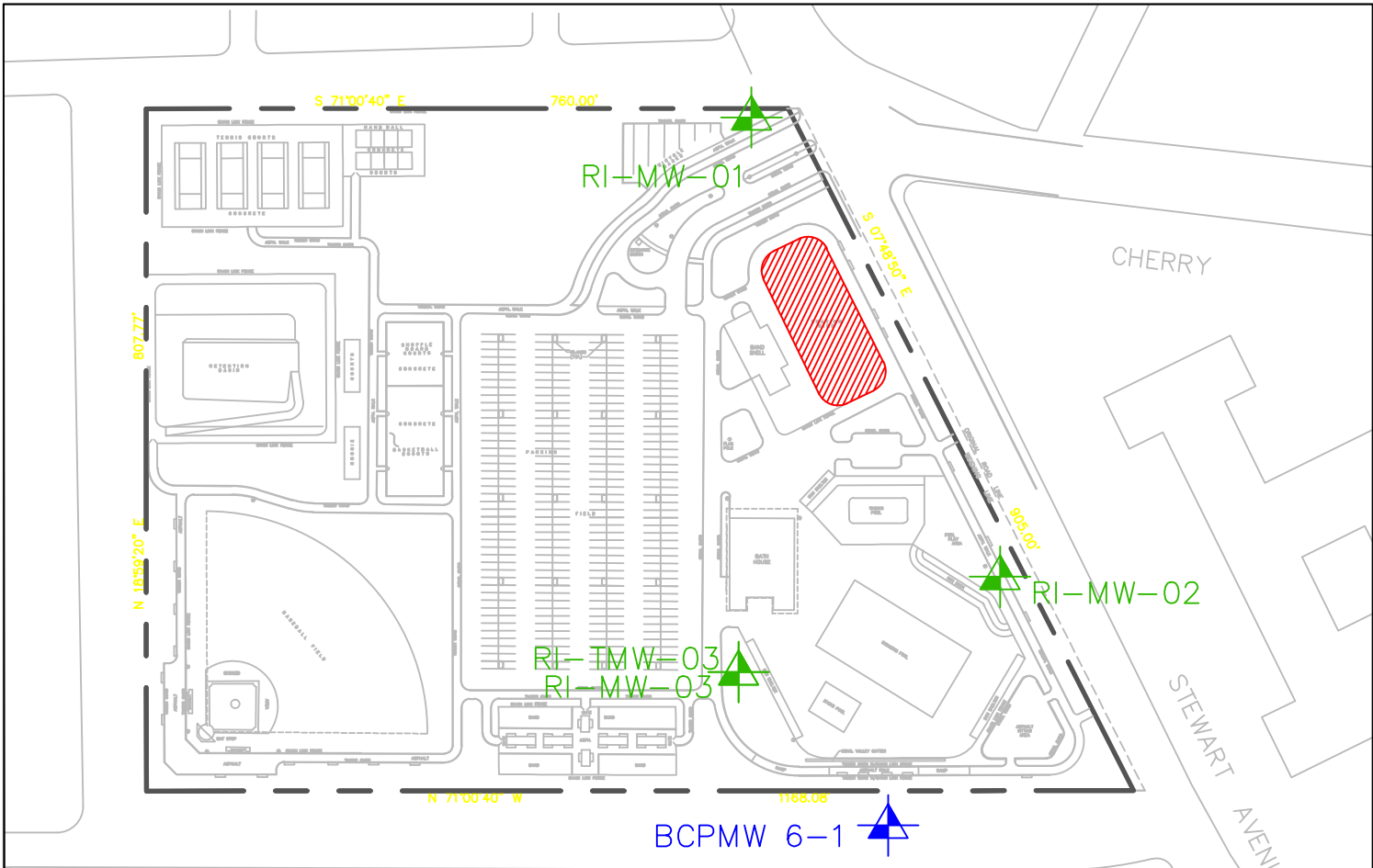
Figure 1 – Groundwater Sample Locations  
Table 1 – Groundwater Sample Analytical Results

cc: Richard Betz, Commissioner of Public Works/Town of Oyster Bay  
Matt Russo, Town of Oyster Bay  
John Ellsworth, Cashin Spinelli & Ferretti  
Steve Karpinski, NYSDOH  
Rosalie Rusinko, Esq., NYSDEC  
Terry Clark, Superintendent of Schools, Bethpage School District  
Smita Day, P.E., H2M

**FIGURES**

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M:\cadd\TOBY1307 (Bethpage Community Park Rem Invest)\2013-09-xx DRAFT RIR\2014-11-10 MPR Figure 1.dwg Last Modified: Nov 09, 2014 - 9:56am Plotted on: Nov 09, 2014 - 9:56am By: sday



**LEGEND:**

- BCP PROJECT SITE
- GROUNDWATER SAMPLING LOCATION (RI INSTALLATION).
- BETHPAGE COMMUNITY PARK BOUNDARY
- GROUNDWATER SAMPLING LOCATION (NORTHROP GRUMMAN).

**NOTES:**

1. BASED MAP OBTAINED FROM SIDNEY B. BOWNE & SON, LLP, PROJECT NO. 1D408802, DATED SEPTEMBER 2004 AND PLAN OF DISTRIBUTION SYSTEM PREPARED BY THE BETHPAGE WATER DISTRICT AND DATED FEBRUARY 5, 2009 (REVISION DATE).
2. PARK FEATURES SHOWN WERE PRESENT PRIOR TO THE TOWN OF OYSTER BAY DEVELOPMENT IN 2005.
3. BETHPAGE COMMUNITY PARK BOUNDARY BASED ON A SURVEY PERFORMED BY H2M GROUP AND DATED APRIL 22, 2005.
4. GROUNDWATER SAMPLING LOCATIONS ARE APPROXIMATE.

PROJECT:  
**BROWNFIELD CLEANUP PROGRAM**  
**BETHPAGE COMMUNITY PARK ICE RINK AREA**  
**REMEDIAL INVESTIGATION WORK PLAN**  
 TOWN OF OYSTER BAY  
 BETHPAGE, NEW YORK  
 NYSDEC SITE NO.: C130212

DRAWING:  
**FIGURE 1: GROUNDWATER SAMPLING LOCATIONS**

SCALE:  
**AS SHOWN**

H2M PROJECT NO.:  
**TOBY1203**

DATE:  
**NOVEMBER 2014**

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## TABLES

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Table 1  
 Groundwater Sample Results  
 Brownfield Cleanup Program  
 Bethpage Community Park Ice Rink Area  
 Remedial Investigation  
 Town of Oyster Bay, Bethpage, New York  
 NYSDEC Site No.: C130212

Sample ID:		R1-MW-01-093014	R1-MW-02-093014	DUP-093014	R1-MW-03-093014	BCPMW6-1-093014	MW-203-1-100114	MW-202-1-100114	DUP-100114	MW-201-1-100114	MW-200-1-100114	TRIPBLANK
Sample Location:	NYSDEC	R1-MW-01	R1-MW-02	R1-MW-02	R1-MW-03	BCPMW 6-1	MW-203-1	MW-202-1	MW-202-1	MW-201-1	MW-200-1	QA/QC Sample
Sample Depth (feet bgs):	TOGS	50 to 60	60 to 70	60 to 70	50 to 60	88.5 to 98.5	103 to 113	125 to 135	125 to 135	70 to 80	85 to 95	Not Applicable
Sampling Date:	AWQS	9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014	10/1/2014	10/1/2014	10/1/2014	10/1/2014	10/1/2014	10/1/2014
Lab Sample ID:		F4133-01	F4133-04	F4133-07	F4133-05	F4133-06	F4133-08	F4133-11	F4133-14	F4133-12	F4133-13	F4133-15
Units:		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
<b>TCL VOCs, Freon 12™, and Freon 22™ via EPA Method 8260</b>												
Dichlorodifluoromethane (FREON-12)	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chloromethane	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	3	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Vinyl Chloride	2	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromomethane	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chloroethane	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trichlorofluoromethane	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2-Trichlorotrifluoroethane	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.670 J	1	1.1	1.00 U	1.00 U	1.00 U
1,1-Dichloroethane	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.900 J	0.930 J	0.930 J	1.00 U	1.00 U	1.00 U
Acetone	50	5.00 U	5.00 U	5.00 U	5.00 U	1.60 J	5.00 U	5.00 U	5.00 U	1.30 J	1.00 J	5.00 U
Carbon Disulfide	--	0.220 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methyl tert-butyl Ether	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methyl Acetate	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methylene Chloride	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethane	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.4	1.5	1.00 U	1.00 U	1.00 U	1.00 U
Cyclohexane	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Butanone	50	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Carbon Tetrachloride	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene	5	1.00 U	1.00 U	1.00 U	1.00 U	3.7	1.00 U	0.640 N*J	0.750 J	2.1	1.00 U	1.00 U
Bromochloromethane	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chloroform	7	1.00 U	0.330 J	0.290 J	1.00 U	1.00 U	0.390 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,1-Trichloroethane	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methylcyclohexane	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Benzene	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	0.6	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trichloroethene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.8	1.1	1.5	1.6	3.1	0.620 J	1.00 U
1,2-Dichloropropane	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromodichloromethane	50	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4-Methyl-2-Pentanone	--	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Toluene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1-1,3-Dichloropropene	0.4	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
cis-1,3-Dichloropropene	0.4	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2-Trichloroethane	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Hexanone	50	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Dibromochloromethane	50	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dibromoethane	0.0006	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.600 J	1.1	1.2	1.00 U	1.00 U	1.00 U
Chlorobenzene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Ethyl Benzene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
m/p-Xylenes	5	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
o-Xylene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Styrene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromoform	50	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Isopropylbenzene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	3	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	3	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	3	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-Chloropropane	0.04	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorodifluoromethane (FREON-22)	5	1.00 U	1	1	43.3	3.6	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dioxane	--	100 U, R*	100 U, R*	100 U, R*	100 U, R*	100 U, R*	100 U, R*	100 U, R*	100 U, R*	100 U, R*	100 U, R*	100 U, R*

**ABBREVIATIONS, ACRONYMS AND NOTES:**

- NYSDEC - New York State Department of Environmental Conservation
  - TOGS - Technical and Operational Guidance Series (1.1.1)
  - AWQS - Ambient Water Quality Standard
  - bgs - below ground surface
  - ug/L - micrograms per liter
  - QA/QC - Quality Assurance / Quality Control
  - TCL - Target Compound List
  - VOC - Volatile Organic Compound
  - MDL - Method Detection Limit
  - EPA - United States Environmental Protection Agency
- ## ##** - Value shaded and in red, bold typeface. Concentration of detected compounds is greater than the corresponding NYSDEC AWQS.
- U - The compound was not detected at the indicated concentration.
  - J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than the MDL. The concentration given is an approximate value.
  - R\* - Based on data validation criteria, the data are unusable.
  - N\*J - Based on data validation criteria, the detection is tentative in identification and estimated in value.

1. Analytical results compared to NYSDEC Division of Water TOGS AWQS for Class GA Water (NYSDEC AWQS).