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Remedial Bureau (sent via email)
Div of Environmental Remediation

June 3, 2014

Mr. Keith Gronwald
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7014

RE: Offsite Supplemental Remedial Investigation Work Plan Addendum
RG&E East Station Former MGP Site, Rochester, NY
Voluntary Cleanup Agreement (VCA) Index # B8-0535-98-07; Site # V00358-8

Dear Mr. Gronwald:

Attached for your review and approval is the Offsite Supplemental Remedial Investigation Work Plan Addendum prepared by Haley & Aldrich of New York (H&A) for RG&E's East Station Former MGP Site. The off-site investigation will be performed on property owned by Bausch & Lomb, Inc. (B&L) and the work scope will need to be provided to B&L as part of the access agreement process.

The Work Scope is intended to fulfill data needs identified in our February 11, 2014 Off-Site Supplemental Remedial Investigation (SRI) Data Summary Package. The field work would be implemented after DEC approval and in accordance with our access agreement with B&L.

One hard copy of the Work Scope will also be sent via standard mail delivery.

If you have any questions, please contact me at (585) 771-4556.

Sincerely,

Steven Mullin
Lead Analyst, RG&E Environmental Compliance

ec: David Crosby, P.E. – NYSDEC (w/o attachment)
David Fingado, PMP – Manager, Electric Capital Delivery and Environmental Remediation
(w/o attachment)

89 East Avenue, Rochester, NY 14649



**OFF-SITE SUPPLEMENTAL REMEDIAL INVESTIGATION
WORK PLAN ADDENDUM
RG&E EAST STATION FORMER MANUFACTURED GAS
PLANT (MGP) SITE
ROCHESTER, NEW YORK
SITE NO. V00358-8**

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by

Remedial Bureau C
Div of Environmental Remediation

**Haley & Aldrich of New York
Rochester, New York**

for

**Rochester Gas & Electric Corporation
Rochester, New York**

**File No. 36492-034
3 June 2014**

**HALEY&
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**HALEY&
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3 June 2014
File No. 36492-034

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway
Albany, New York 12233-7014

Attention: Keith Gronwald

Subject: Off-Site Supplemental Remedial Investigation Work Plan Addendum
RG&E East Station Former Manufactured Gas Plant Site
Rochester, New York
Site No. V00358-8

Dear Mr. Gronwald:

Rochester Gas & Electric Corporation (RG&E) retained Haley & Aldrich of New York (Haley & Aldrich) to prepare an Off-Site Supplemental Remedial Investigation Work Plan Addendum (Off-Site SRIWPA) for the Bausch & Lomb (B&L) Property which is the northern abutter to the RG&E East Station Former Manufactured Gas Plant (MGP) Site in Rochester, New York. This Off-Site SRIWPA describes additional work proposed to fulfill data needs identified in our 11 February 2014 Off-Site Supplemental Remedial Investigation (SRI) Data Summary Package. The Off-Site SRIWPA has been prepared in accordance with the requirements of the Voluntary Cleanup Agreement (Index #B-0535-98-07 dated 10 April 2003) between RG&E and the New York State Department of Environmental Conservation (NYSDEC).

The Off-Site SRI Data Summary Package identified the following additional data needs to delineate overburden impacts:

- Additional borings and overburden monitoring wells in the southeastern portion of the B&L Property to better define the horizontal extent of apparent MGP residual material and petroleum in overburden soil, highly weathered bedrock and overburden groundwater; and,
- Additional borings along the Genesee River to further characterize the overburden along the river, with a focus on the area adjacent to the sheen and non-aqueous phase liquid (NAPL) observed in sediments near the west central portion of the B&L property (as noted in the Remedial Investigation for Sediments Data Summary memorandum submitted to NYSDEC on 30 January 2014).

This work scope has been developed to fulfill the data needs with the overall goal of completing the delineation of MGP-related impacts to overburden soil and overburden groundwater. No additional investigations in bedrock and bedrock groundwater are proposed at this time.

OFF-SITE SRIWPA SCOPE OF WORK

Field activities will be conducted in accordance with the methods described in the NYSDEC-approved Remedial Investigation Work Plan (RIWP) dated 19 July 2010 and the Health & Safety Plan dated 23 August 2010. Field activities will include the following:

Test Pit Excavations

Test pits will be completed adjacent to the former manufacturing building floor slab in the central and southern portion of the property. The objectives of the test pit program are:

- Evaluate overburden conditions in the vicinity of soil boring location SB-12-17/17A to better understand the distribution of petroleum-like NAPL in overburden soil;
- Evaluate overburden conditions in the vicinity of former subsurface gas distribution pipework and drip structures that are depicted on a historical plan (see Attachment 1); and,
- Collect subsurface soil samples for analytical laboratory analysis.

Three test pits (TP-14-01 through TP-14-03) are proposed to be excavated with a tracked excavator. Excavated soils will be temporarily staged on plastic sheeting next to the test pit locations. Soil will be visually characterized for color, texture, and moisture, and the presence of visible staining or NAPL will be noted. In general, each test pit will be excavated to the top of bedrock, to the stable limits of the test pit, or to the base foundation of historical structures. It is expected that a minimum of two subsurface soil samples will be collected from each test pit for laboratory analysis. Soil samples will be analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-Volatile Organic Compounds (SVOCs), Target Analyte List (TAL) metals and total cyanide. Hydrocarbon identification analysis may be completed at locations where NAPL is observed to help, as needed, to identify if the NAPL is petroleum, MGP-related coal tar, etc.

Proposed test pit locations and rationale are summarized on Table I and shown on Figure 1. The actual number and placement of each test pit will be adjusted in the field as necessary based on the location of subsurface utilities and equipment access. Soils excavated from the test pits will be backfilled in generally the reverse order from which they were removed (i.e. the last soil removed will be the first soil replaced such that the soil stratigraphy remains generally unchanged).

During active test pit excavation and backfill activities, community air monitoring will be completed in accordance with the Community Air Monitoring Plan included as Appendix F in the July 2010 RIWP.

Tar-Specific Green Optical Screening Tool Investigation

The Tar-Specific Green Optical Screening Tool (TarGOST®) developed by Dakota Technologies, Inc. will be used to further evaluate the distribution of NAPL in overburden soils. TarGOST® is an efficient method to identify the presence of MGP-related NAPL and some petroleum NAPLs in soil and highly weathered bedrock. The TarGOST® locations will focus on the central and southeastern portion of the property with the following objectives:

- Delineate the horizontal and vertical extent of MGP-related NAPL in overburden soils and highly weathered bedrock beneath the B&L Property;
- Delineate the horizontal and vertical extent of petroleum-like NAPL observed in the central portion of the B&L Property in the vicinity of soil boring SB-12-17\17A; and,
- Provide additional information regarding the depth to competent bedrock.

Up to forty TarGOST® locations (TG-14-01 through TG-14-40) are proposed to be completed as shown on Figure 1. Confirmatory soil borings (hollow stem auger or direct push) will be advanced adjacent to 30% of the TarGOST® locations to visually verify the TarGOST® results and to collect additional soil samples for laboratory analysis. Soil samples will be analyzed for TCL VOCs, TCL SVOCs, TAL Metals and total cyanide. Up to two soil samples will be collected from each confirmatory boring location. Hydrocarbon identification analysis may be completed at locations where NAPL is observed to help, as needed, to identify if the NAPL is petroleum, MGP-related coal tar, etc.

Proposed locations and rationale for TarGOST® locations are summarized on Table II and shown on Figure 1. The actual number and placement may be adjusted in the field as necessary based on the location of subsurface utilities, equipment access, and subsurface conditions (such as the presence of NAPL) observed at the time of field work.

Overburden Monitoring Wells

Additional overburden monitoring wells are proposed to be installed on the B&L Property to supplement the existing monitoring well network. The objectives of the monitoring well installation program are:

- Delineate the horizontal extent of dissolved phase residuals in overburden groundwater;
- Provide additional information on the depth to groundwater, overburden groundwater flow direction, and hydraulic gradient beneath the B&L Property; and,
- Provide additional information regarding the depth to competent bedrock.

Proposed locations and rationale for six soil borings completed with overburden monitoring wells (soil borings SB-14-01 through SB-14-06 with monitoring wells SW-14-01 through SW-14-06) are summarized on Table III and shown on Figure 1. The actual placement may be adjusted in the field as necessary based on the location of subsurface utilities and equipment access. The monitoring wells will be developed in accordance with Section 4.5.4 of the July 2010 RIWP.

Soil Borings Adjacent to Genesee River

Soil borings are proposed to be completed west of the B&L Property retaining wall that runs parallel with the Genesee River and adjacent to the River shoreline as shown on Figure 1. The objective of the Genesee River shoreline soil borings is to characterize the overburden adjacent to sediment core location SE-13-57V where NAPL was observed in sediment, as reported in our 30 January 2014 Remedial Investigation for Sediments Data Summary report.

One soil sample will be collected from each of the six Genesee River shoreline soil borings (SB-14-07 through SB-14-12) and submitted for laboratory analysis for TCL VOCs, TCL SVOCs, TAL Metals and total cyanide. Drilling methodology and soil sampling strategy will follow Section 4.5.4 of the July 2010 RIWP.

Proposed locations and rationale for the Genesee River shoreline soil borings are summarized on Table III and shown on Figure 1. The actual placement may be adjusted in the field as necessary due to equipment access limitations. Drilling methodology and soil sampling strategy will follow Section 4.5.4 of the NYSDEC-approved RIWP dated 19 July 2010.

Groundwater Monitoring

One round of groundwater elevation monitoring, NAPL thickness monitoring, and groundwater sampling will be completed at a minimum of two weeks after the new overburden monitoring well installation and development activities. Depth to groundwater and NAPL thickness (if present) measurements will be collected from the B&L Property overburden monitoring wells installed by RG&E. Overburden groundwater samples will be collected from the six new overburden monitoring wells and will be analyzed for TCL VOCs, TCL SVOCs, TAL metals, and total cyanide. Hydrocarbon identification analysis may be completed at monitoring well locations where accumulating NAPL is observed in the groundwater sample to help identify, as needed, if the NAPL is petroleum, MGP-related coal tar, etc. Groundwater elevation monitoring and sampling procedures will follow Section 4.7 of the July 2010 RIWP.

DATA EVALAUTION AND REPORTING

Field observations and analytical results from the Off-Site SRI Addendum will be presented in the East Station MGP Site Remedial Investigation Report (RIR). A separate Data Summary Package will be prepared if additional data gaps are identified at the conclusion of the field work and data evaluation.

RG&E proposes to begin field investigation tasks following NYSDEC approval of this work plan, with the schedule subject to B&L Property access permission and subcontractor availability. Field work is anticipated to begin in June or July 2014. Approximately three to four weeks is anticipated to complete the supplemental off-site field work, with groundwater sampling completed a minimum of two weeks after monitoring well development. RG&E will also complete a comprehensive round of groundwater elevation and NAPL thickness monitoring, and groundwater sampling (B&L Property wells and select Former MGP Site wells) prior to preparing the RIR. If you have any questions or require additional information, please call Steve Mullin (RG&E) at 585-771-4556 or me at 603-391-3320, or contact me via email at DAllen@HaleyAldrich.com.

Sincerely yours,

HALEY & ALDRICH OF NEW YORK



Douglas C. Allen, P.G.
Senior Hydrogeologist



David J. Hagen
Senior Vice President

Enclosures:

Table I: Proposed Off-Site Test Pit Location and Sample Summary

Table II: Proposed Off-Site TarGOST® Location and Confirmatory Boring Summary

Table III: Proposed Off-Site Soil Boring and Overburden Monitoring Well Location and Sample Summary

Figure 1: Proposed Supplemental Exploration Location Plan

Attachment 1: Historical Plan

REFERENCES

1. Phase 2 Data Summary Package – Assessment of MGP-Related NAPL Residual in Sediments in the Genesee River Project Area. GEI Consultants, Inc., March 2010.
2. Remedial Investigation Work Plan – RG&E East Station Former Manufactured Gas Plant (MGP) Site, Rochester, New York. Haley & Aldrich of New York, July 2010.
3. Health & Safety Plan for Remedial Investigation – RG&E East Station Former Manufactured Gas Plant (MGP) Site, Rochester, New York. Haley & Aldrich of New York, December August 2010.
4. Off-Site Supplemental Remedial Investigation Data Summary Package – RG&E East Station Former Manufactured Gas Plant (MGP) Site, Rochester, New York. Haley & Aldrich of New York, February 2014

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TABLE I
Proposed Off-Site Test Pit Location and Sample Summary
 East Station Former MGP
 Rochester, New York

Test Pit	Location	Rationale	Target Depth	Laboratory Analyses
TP-14-01	Central portion of B&L Property, east of northern half of former manufacturing building floor slab	Investigate apparent petroleum-like NAPL observed at soil boring location SB-12-17/17A, investigate former gas distribution pipework	Equipment refusal (bedrock or bottom of structures), equipment maximum reach, water table (pooling water), or excavation stability limit	<u>Soil:</u> TCL VOCs TCL SVOCs TAL Metals Total Cyanide Hydrocarbon Fingerprint Analysis at select locations, to be determined at the time of sampling
TP-14-02	Central portion of B&L Property, east of former manufacturing building floor slab			
TP-14-03	Southern portion of B&L Property, east and southeast of former manufacturing building floor slab			

NOTES:

1. Actual number and location of test pits may vary.

TABLE II
Proposed Off-Site TarGOST® Location and Confirmatory Boring Summary
 East Station Former MGP
 Rochester, New York

Probe	Location	Rationale	Target Depth	Laboratory Analyses		
TG-14-01	Former B&L manufacturing building floor slab located on the western portion of the B&L Property	Investigate conditions downgradient from (west of) the area where apparent MGP- and Petroleum-related NAPL was observed, provide broad coverage of floor slab area	Refusal*, after coring through floor slab			
TG-14-02						
TG-14-02C						
TG-14-03						
TG-14-04						
TG-14-05						
TG-14-06						
TG-14-06C	Along asphalt driveway located east of former B&L manufacturing building floor slab	Investigate conditions downgradient from (west of) the area where apparent MPG-related NAPL was observed and investigate horizontal and vertical distribution of apparent petroleum-related NAPL observed at SB-12-17/17A	Refusal*	<u>Confirmatory Soil Boring Locations</u> TCL VOCs TCL SVOCs TAL Metals Total Cyanide Hydrocarbon Fingerprint Analysis at select locations, to be determined at the time of sampling		
TG-14-07						
TG-14-07C	East of asphalt driveway and west of soil pile area	Investigate conditions between the area where apparent MPG-related NAPL was observed and the boring (SB-12-17/17A) where apparent petroleum-related NAPL was observed to better understand the two NAPL areas				
TG-14-08						
TG-14-08C						
TG-14-09						
TG-14-10						
TG-14-11	Along property boundary between Former MGP Site and B&L Property	Investigate conditions along property boundary and better define the transition between conditions observed on the Former MGP Site and conditions observed on the B&L Property				
TG-14-12						
TG-14-12C						
TG-14-13						
TG-14-14						
TG-14-15						
TG-14-16						
TG-14-17						
TG-14-17C						
TG-14-18						
TG-14-18C						
TG-14-19						
TG-14-20						
TG-14-21						

TABLE II
Proposed Off-Site TarGOST® Location and Confirmatory Boring Summary

East Station Former MGP
 Rochester, New York

Probe	Location	Rationale	Target Depth	Laboratory Analyses
TG-14-22	Southeast portion of the B&L Property in the vicinity of the soil pile area	Investigate conditions immediate downgradient and down top of bedrock slope from the apparent MGP-related NAPL area identified in the southeastern corner of the B&L Property	Refusal*	Confirmatory Soil Boring Locations: TCL VOCs TCL SVOCs TAL Metals Total Cyanide Hydrocarbon Fingerprint Analysis at select locations, to be determined at the time of sampling
TG-14-23				
TG-14-24				
TG-14-24C				
TG-14-25				
TG-14-26				
TG-14-27				
TG-14-27C				
TG-14-28				
TG-14-29				
TG-14-30				
TG-14-30C				
TG-14-31	Southeast portion of the B&L Property in the area where apparent MGP-related NAPL impacts were observed	Investigate the horizontal and vertical distribution of apparent MGP-related NAPL. Better define the continuity of the NAPL observed beneath the northeastern portion of the Former MGP Site and the NAPL observed in the southeastern corner of the B&L Property	Refusal*	
TG-14-32				
TG-14-33				
TG-14-34				
TG-14-35				
TG-14-35C				
TG-14-36				
TG-14-37				
TG-14-37C				
TG-14-38				
TG-14-39				
TG-14-40				

Note:

1. "*" - Target depth of refusal will be competent bedrock. TarGOST® explorations may not be able to penetrate below ground structures. Other drilling methods may be substituted for TarGOST® investigation techniques to penetrate subsurface structures, if encountered.
2. "TG-14-#C" refers to a co-located soil boring to be completed to confirm TarGOST® response.
3. Actual number and location of TarGOST® explorations and confirmatory soil borings may vary.

TABLE III

Proposed Off-Site Soil Boring and Overburden Monitoring Well Location and Sample Summary

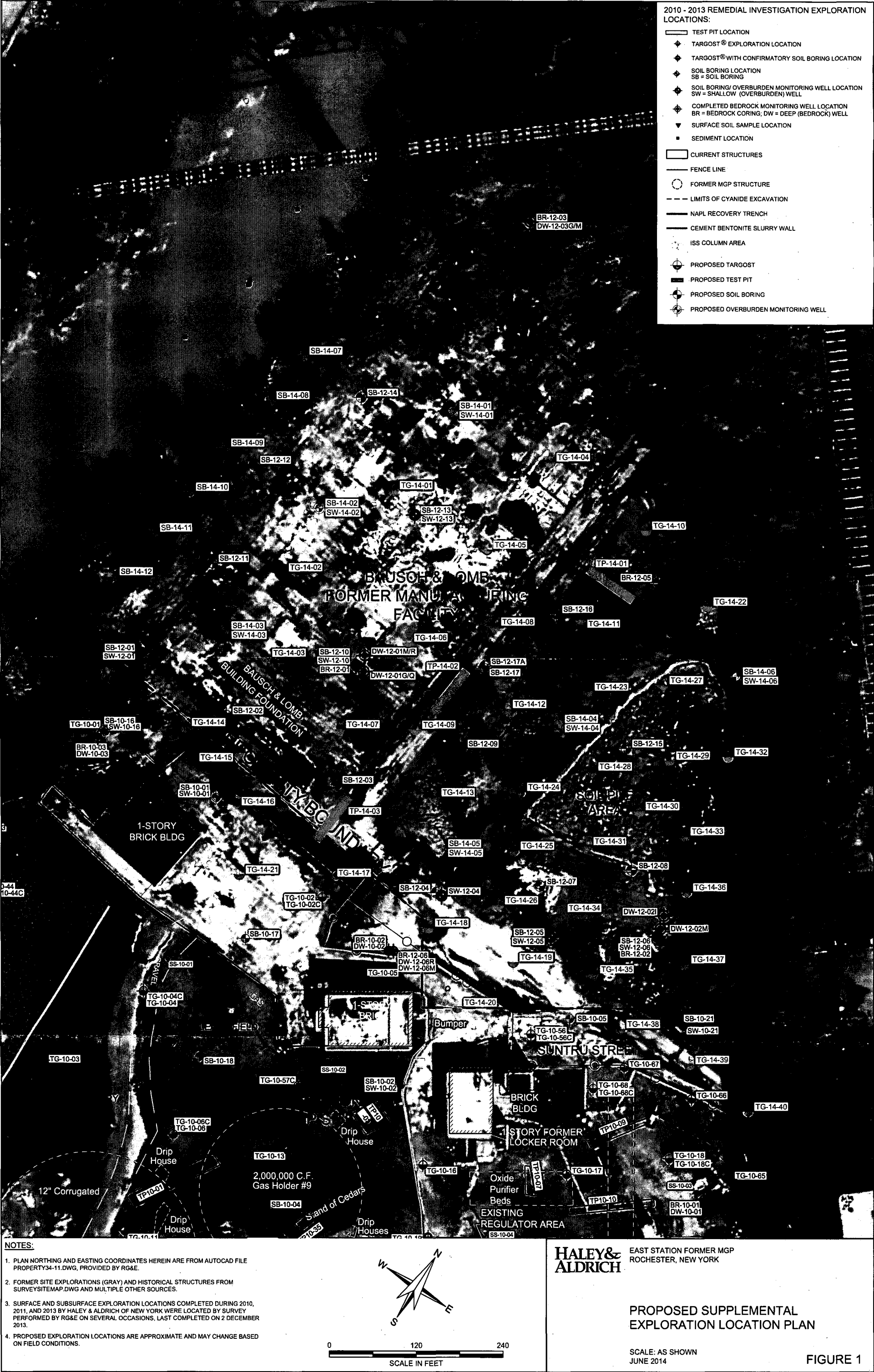
East Station Former MGP

Rochester, New York

Boring ID	General Off-Site Location	Rationale	Target Depth	Well Completions**	Soil Laboratory Analysis & Sampling Frequency	Groundwater Laboratory Analyses
SB-14-01 SW-14-01	Former manufacturing building floor slab area	Investigate off-site groundwater conditions between the Genesee River and apparent petroleum- and MGP-related NAPL areas, delineate extent of dissolved phase plume	Refusal*, after coring through floor slab where present	Overburden Monitoring well	Not Anticipated	<u>Groundwater:</u> TCL VOCs TCL SVOCs TAL Metals Total Cyanide Including Water Level Measurements
SB-14-02 SW-14-02				Overburden Monitoring well		
SB-14-03 SW-14-03				Overburden Monitoring well		
SB-14-04 SW-14-04	West of soil pile area	Investigate groundwater conditions downgradient of apparent MGP-related NAPL area and potentially upgradient of petroleum-related NAPL area.	Refusal*	Overburden Monitoring well		
SB-14-05 SW-14-05				Overburden Monitoring well		
SB-14-06 SW-14-06	East of soil pile area at toe of gorge wall	Investigate groundwater conditions potentially upgradient or sidegradient of apparent MGP-related NAPL area		Overburden Monitoring well		
SB-14-07	West of retaining wall that runs parallel to the Genesee River, along the River shoreline	Investigate upland overburden conditions adjacent to Genesee River sediment sample location (SE-13-57V) where NAPL was observed		Not Anticipated	<u>Subsurface Soil:</u> TCL VOCs TCL SVOCs TAL Metals Total Cyanide	None
SB-14-08				Not Anticipated		
SB-14-09				Not Anticipated		
SB-14-10			Not Anticipated	<u>Anticipated Sampling Frequency:</u> 1 Subsurface Soil Per Boring		
SB-14-11			Not Anticipated			
SB-14-12			Not Anticipated			

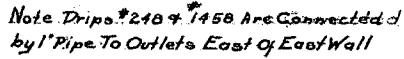
Note:

1. "*" - Target depth of refusal will be competent bedrock.
2. "**" - Monitoring well locations will be determined based on observed field conditions.
3. "TBD" - to be determined. Need for a monitoring well will be based on field conditions and the need to fill data gaps to meet supplemental RI objectives and in consultation with NYSDEC.
4. "SB" indicates soil boring identification. "SW" indicates shallow (overburden) monitoring well identification.
5. Actual number and location of soil borings and monitoring wells may vary.



Attachment 1

Historical Plan

[illegible]