REMEDIAL INVESTIGATION REPORT

Former Canada Dry Bottling Facility
2 and 7 Badger Avenue
Endicott, New York, 13670

Site Code # 704050
WA # D006130-17

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(Site Code # 704050)
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CERTIFICATION

I, Nancy Garry, certify that I am currently a Qualified Environmental Professional as defined at 6 Part NYCRR Part 375 and that this report, Remedial Investigation Report, was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER -10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Nancy Garry, PE
Project Manager

Remedial Investigation Report

Former Canada Dry Bottling Facility
2 and 7 Badger Avenue
Endicott, New York

1.0 INTRODUCTION

This report presents the results of the Remedial Investigation (RI) completed by HRP Associates, Inc. dBA as HRP Engineering, P.C. (HRP), during the period of December 2009 through December 2011 in connection with the investigation of the Former Canada Dry Bottling Facility site at 2 and 7 Badger Avenue in the Village of Endicott, Broome County, New York (Site No. 704050), referred to herein as the Site (Figure 1). The RI was completed for the New York State Department of Environmental Conservation (NYSDEC). This report is subject to the limitations in Appendix A.

Interpretations presented within this report are based primarily on the investigations described herein. Previous investigations completed by others at the site have been reviewed by HRP. Applicable data from these reports have been included in sections of this report.

1.1 Purpose

The purpose of this Engineering Services Standby Contract work assignment (WA) was to conduct a Site Characterization and complete a Remedial Investigation / Feasibility Study (RI/FS) to characterize on-site and off-site media potentially impacted by historic activities at the Former Canada Dry Bottling Facility site (Figure 2). This report is for tasks associated with the on-site and off-site remedial investigation. A Feasibility Study (FS) for this work assignment will be submitted separately. The primary objectives of the RI Scope of Work (SOW) were to:

- Investigate the Former Canada Dry Bottling Facility to determine if there is surface and/or subsurface contamination remaining at the site. Previous remedial investigations on-site have revealed contamination in the soil, groundwater and soil vapor above NYSDEC and New York State Department of Health (NYSDOH) standards, criteria, and guidance values;
- Delineate the vertical and horizontal extent of potentially contaminated soil, soil vapor, and groundwater. Investigate any indentified areas of concern (AOCs) associated with the Former Canada Dry Bottling Facility and determine if they have resulted in surface or subsurface contamination and evaluate the extent of contamination;
- Obtain soil, groundwater, soil sediment, soil vapor, and geologic data from the Former Canada Dry Bottling Facility and adjacent area. Verify previous data generated by other consultants. The specific information that should be verified includes: soil types (or fill), depth to groundwater, groundwater flow direction, subsurface geology, subsurface characteristics, etc.;

- To assess the nature of groundwater and subsurface conditions at the site, in support of monitored natural attenuation (MNA), four (4) existing onsite and offsite monitoring wells (DEC-06-MW-6, DEC-MW-21, DEC-MW-27, DEC-MW-30), installed in support of the Endicott Area Wide Study (EAWS) to the northwest of the Former Canada Dry Bottling Facility, were sampled for MNA parameters; and

- Develop a Feasibility Study (FS) report from the data generated from the Remedial Investigation and recommendations for further remedial options as part of the feasibility study report. Determine if onsite remediation would be appropriate.

1.2 Background

1.2.1 Site Description and History

Former Canada Dry Bottling Facility

The Former Canada Dry Bottling Facility (Site) is located at 2 and 7 Badger Avenue, Village of Endicott, Broome County, New York (Figure 1). The Site encompasses all of 2 Badger Avenue and the northwest corner of 7 Badger Avenue. The surrounding properties consist of a mix of industrial, commercial, and residential use properties. The Site and surrounding area is generally flat and without feature. The Site was first investigated in the early 1990's.

The Site is improved by one-story building, approximately 11,610-ft^2, primarily concrete block with a concrete floor. A small, paved loading area is located at the north end of Badger Avenue between the 2 and 7 Badger Avenue buildings on the northern portion of the Site.

The 2 Badger Avenue parcel has one building on it that has been occupied by Neighborhood Recycling, a bottle redemption center, since approximately November 2011. The structure has been vacant and in disrepair for a majority of the investigation. Improvements to the structure have only recently been made since Neighborhood Recycling has occupied the building. Neighborhood Recycling occupies the south east corner of the structure while the remainder of the building contains stored equipment and miscellaneous bails of recycled paper. Two (2) floor drains (west floor drain and east floor drain) and the associated dry wells were removed in 1991. The floor drains and associated dry wells are suspected of being the primary source of subsurface contamination; as reported in the Buck Engineering Soil Excavation and Remedial System Installation report dated August 1993. The footprint of a bailer used for paper recycling is located in the southwest corner of the building.

An excavation was also completed off the north east corner of the building, surrounding the current location of DEC-06-MW-6 (Figure 2). An air sparge and soil vapor extraction (AS/SVE) system was installed in 1993 and operated as an in-situ remedial technology. This system introduced air to the saturated zone in

order to volatilize chlorinated contaminants while it applied a vacuum to the unsaturated zone beneath the treatment area between the two buildings (in the location of monitoring well DEC-06-MW-6 installed in 1991 by Buck Engineering).

At present, the areas surrounding the Site include:

North: Adjacent railroad north of the Site, then businesses along Jennings Street, followed by residential neighborhoods.

West: A mix of commercial and residential buildings further west from the Site, then South Duane Avenue.

South: Mainly residential buildings, then East Union Street.

East: Cider Mill Playhouse (2 South Nanticoke Avenue) and associated buildings, portion of the apartment building listed at 6 South Nanticoke Avenue, then South Nanticoke Avenue, then residential neighborhoods.

This RI investigation included the city block area immediately adjacent to and surrounding the Former Canada Dry Bottling Facility Site.

Off-Site Area – 7 Badger Avenue

The off-site building located east of the Site at 7 Badger Avenue, tax parcel ID 157.09-8-10, zoned General Commercial, was formerly occupied by the Canada Dry bottling facility. The 7 Badger Avenue building was used as a bottling facility from approximately 1948 and went out of business in or around 1999. The 7 Badger Avenue building was utilized for bottling activities, for equipment and materials storage, a sorting room, a loading dock, and office space. The building also contains two (2) basements, one (1) finished basement located below the center/southwest office area of the building formerly utilized as a break room, and the east unfinished basement located below the east corner of the building. Three (3) floor drains (north floor drain, east floor drain, and south floor drain) and a sump (dry well) are present throughout the facility, primarily in the warehouse area, the manufacturing area, and the eastern basement area, respectively. The sump is a suspected preferential pathway to the subsurface and is a likely source of soil and groundwater impact. It is unknown if these drains discharged to a sanitary sewer system or into a sump. Currently, 7 Badger Avenue is utilized by ICS Industries, a recycling facility for paper and printer cartridges.

Previous 2 and 7 Badger Avenue Investigations

Five (5) underground storage tanks (USTs) were excavated and removed from the 2 and 7 Badger Avenue. Tank #1 and Tank #5 were removed from the east side of 2 Badger Ave. and Tank #2, Tank #3, and Tank #4 were removed from an area currently comprising the western portion of the building located at 7

Badger Avenue. UST Tank #5 was removed in 1990, and the four (4) remaining USTs (Tank #1 through Tank #4) were removed in 1991. The USTs included the following: one (1) 3,000-gallon tank (#3), one (1) 2,000-gallon tank (#1), one (1) 1,000-gallon tank (#2), and two (2) additional USTs of unknown size. The type of product stored in the USTs is not known, although it is suspected that Tank #3 contained a petroleum-based product. There was a small excavation performed that removed an unknown volume of contaminated soil from with the north end of the excavation for Tank #3. Additional documentation of these activities is not available.

Ten (10) wells (MW-1 through MW-10) were installed from June 1991 to November 1992 for groundwater monitoring. The current condition and usability of the monitoring wells was determined during the December 20, 2010 site walk. Monitoring wells DEC-06-MW-6 (MW-6) and MW-10 were located and are utilized as part of the current monitoring well network. The remaining eight (8) monitoring wells (MW-1 through MW-5, MW-7, MW-8, and MW-9) were not located or the condition of the well is suspect and the wells are not utilized. As the wells may have provided a preferential pathway to the subsurface, the remaining eight (8) monitoring wells, if located, were properly abandoned. Groundwater at the Site has been periodically sampled since 1991. The Site was included in the Endicott Area Wide Study (Site No. 704038) in 2005 and 2006. High levels of trichloroethylene (TCE) were reported in groundwater and in soil vapor in the Endicott Area Wide Study.

Groundwater exists beneath the Site at a depth of approximately 14 feet below ground surface (bgs). A groundwater divide exists, oriented northeast to southwest, within the area of the Site bounds. This divide in groundwater was first documented in the April 2008 Final Preliminary Site Assessment Report – June Street Plume Delineation. In general, groundwater flow north of the Norfolk Southern Railroad line (located north of 2 and 7 Badger Ave.) and west of Badger Ave. is to the northwest towards Nanticoke Creek, a tributary of the Susquehanna River. South of the Norfolk Southern Railroad and east of Badger Avenue, groundwater flow is generally to the southeast towards the Susquehanna River.

Offsite Area – June Street Plume Delineation

In 2003, the NYSDEC determined it necessary to complete an investigation in and around the Village of Endicott as part of the larger evaluation of the IBM Endicott site. This investigation encompassed most of the Town of Union, including the Villages of Endicott and Endwell. The NYSDEC previously performed a Phase I throughout the Town of Union to identify potential sources of groundwater, soil vapor, and indoor air pollution outside of the area of IBM's responsibility. Initial sampling efforts under the Phase II and Phase IIB investigation of the Endicott Area Wide Study (EAWS) (Site No. 704038) completed to determine the nature and extent of the groundwater contaminant plume.

The June Street neighborhood encompasses approximately 250 acres situated on the border of the Town of Union and Village of Endicott. The study area falls within the southern end of the EAWS Area II (West Corners/West Endicott) and is generally bounded by the Nanticoke Creek to the north, Nanticoke Avenue North to the east, Norfolk Southern Railroad to the south, and the Nanticoke Creek to the west. The study area also included a portion of the land south of the Norfolk Southern Railroad. This area is bounded by Liberty and Dudley Avenue to the east and west, respectively, and East Main Street to the south.

The hydrogeology in the vicinity of Endicott consists of at least five (5) geologic units and at least two (2) aquifers. From deepest to shallowest, the geologic units are: shale bedrock, glacial till consisting of a dense mixture of clay, silt, sand, and gravel, coarse-grained sediments (sand and gravel) of glacial origin, extensive lacustrine silt and silty fine sand of glacial origin, and other unconsolidated sediments of various depositional origins (including alluvium deposits, glacial outwash sand and gravel, and fill used to improve individual tracts of land. The geologic units vary in thickness and hydraulic conductivity through the Town of Union, and in some places, one or more of these units are absent. Generally, the till, outwash, and alluvium deposits thin out with proximity to the hills in the northern portion of the town.

The zone of alluvium and outwash is the principal shallow water-transmitting unit and generally is referred to as the upper aquifer. The silt acts as an aquatard to the vertical migration of groundwater between the upper and lower aquifers. The ice-contact deposits between the bottom of the silt and the top of the till or bedrock generally transmits water and is highly permeable. The ice-contact deposits, together with the bedrock, are referred to as the lower aquifer.

Several inactive hazardous waste sites, voluntary cleanup sites, and other potential areas of concern are in the vicinity of the June Street study area. As described in the Phase I Assessment Report (Shaw 2005), Broome County records indicate that a landfill existed on June Street and portions of the existing neighborhood may have been built on the fill material associated with it. Through the work of the EAWS, the groundwater plume has been shown to be primarily composed on TCE. Elevated levels of contaminants have previously been observed on the west end of June Street, on the corner of Dwight Avenue and Jennings Street, and at the east end of Maple Street. Based on observed groundwater flow direction, it is likely that contamination in the June Street Plume area emanated from source(s) to the southeast of the neighborhood.

The NYSDEC has conducted indoor air sampling annually, as part of the EAWS, since the 2004/2005 heating season and has installed soil vapor mitigation systems as warranted. In 2006, Ecology and Environment Engineering, P.C. (EEEPC) conducted a Phase II Investigation as part of the EAWS in the West Corners/Endicott area. This effort consisted of the collection of groundwater and soil vapor grab samples. Based on these data, a Phase IIB investigation was initiated in winter 2007 and included the installation of permanent groundwater monitoring wells and soil vapor sampling points throughout the June Street Area.

A Preliminary Site Assessment (PSA) was conducted in the fall of 2007 by EEEPC. Additional groundwater monitoring events provided additional chemical and groundwater flow data. Groundwater was collected from 125 temporary groundwater grab points, forty-three (43) temporary wells, twenty-two (22) existing monitoring wells, the New York State Department of Transportation (NYSDOT) storm water sump, and surface water samples from the Nanticoke Creek to evaluate the extent of the previously indentified TCE plume. The analyte list included chlorinated VOCs as well as petroleum and fuel-related products including MTBE consistent with NYSDEC ASP Category B deliverable requirement.

1.2.2 Previous Investigations

The following provides a summary of previous environmental investigations regarding the Former Canada Dry Bottling Facility Site. All previous reports are found in Appendix D.

Final Report of Site Remediation Activities at 7 Badger Avenue, Endicott, New York, completed by Buck Environmental Services *August 1991*

In August 1991, Buck Environmental Services (Buck) completed a *Final Report of Site Remediation Activities* for 7 Badger Avenue in the Village of Endicott, Broome County, New York. This report was prepared for Mr. Tony Garufi of Touhey Associates of Pine West Plaza, Building 2, Washington Avenue Extension Albany, New York. Buck stated the site assessment revealed four (4) underground storage tanks (USTs) that reportedly had housed petroleum had been previously excavated and removed from the site. One (1) of the tanks contained contaminated sand/concrete slurry. With the exception of a small quantity of contaminated soil that was removed from one excavation, no indication of aromatic hydrocarbon contamination was found. Four (4) groundwater monitoring wells were installed. Samples from three (3) of the wells showed levels of TCE ranging from 2.6 ug/L in monitoring well MW-2 to 286 ug/L in monitoring well MW-1. Groundwater flow direction was established as being slightly north of east. The reports states that the data obtained from the monitoring well elevations and samples did not allow a positive conclusion to be reached relative to the source of the TCE in the groundwater.

The report identified several trench drains in 7 Badger Avenue, including an approximately 30 foot long trench drain, near the northwest corner. A series of floor drains, apparently interconnected, was found in the southern portion of the original building. Finally, a number of floor drains and a dry well were found in the eastern portion of the original building, in what was reportedly the bottling room when the structure was used for bottling. Buck made an attempt to trace the interconnected floor drains in the southern portion of the original building to determine if these drains led to a dry well, however the ultimate discharge point of the floor drains was not identified. The Phase I report recommended that

samples be taken from the floor drains and dry wells and analyzed for contaminants.

A soil gas survey was conducted in the general area between 2 and 7 Badger Avenue. Levels of Trichloroethylene (TCE) in the four soil gas samples ranged from 5,900 to 87,400 micrograms per cubic meter (ug/m^3). The report concludes the monitoring well data and the results of the soil gas survey supports that the source of the TCE is a location up-gradient from the subject site and not the site itself.

The conclusions listed in the report are as follows:

- The damaged asbestos containing materials have been removed from the buildings. The asbestos containing material remaining in the building is in relatively good condition and does not constitute an imminent hazard to health.
- No underground aromatic hydrocarbon contamination was found in the areas where USTs were located. The absence of hydrocarbon contamination was confirmed by the analytical results from the groundwater monitoring well samples.
- The groundwater under a portion of the site is contaminated with TCE with concentrations ranging from 3.8 to 286 micrograms per liter (ug/L). However, the data obtained from the monitoring wells was inconclusive relative to the source of the contamination.
- A soil gas survey was conducted in the general vicinity of MW-1. Levels of TCE in the four soil gas samples ranged from 5,900 to 87,400 ug/m^3.
- The trace level of TCE contamination in the dry well sample was thought to have originated from the groundwater beneath the site and not from the site itself.
- It was recommended that the floor drains in the building be sealed with concrete to prevent further contamination of the soil and groundwater beneath the site.

Indoor Air Sampling Letter Report at 7 Badger Avenue, Endicott, New York, completed by Buck Environmental Services February 1992

On February 25, 1992, Buck Environmental Services (Buck) issued a letter report for Former Canada Dry Bottling Facility located at 7 Badger Avenue in the Village of Endicott, New York. This letter was prepared for Mr. Tony Garufi of Touhey Associates of Pine West Plaza, Building 2, Washington Avenue Extension Albany, New York. The purpose of this letter is to communicate the results of the indoor air sampling recently conducted at 7 Badger Avenue on January 30, 1992, referencing the indoor air sampling protocol published by the NYS Department of Health (NYSDOH).

The primary objective of the indoor air testing was to determine if TCE was present in the indoor environment. The report referenced previous analytical work from this site on both soil gas and groundwater revealed the presence of both TCA (in low concentrations) and TCE (in relatively high concentrations). In brief, none of the target contaminants were found in the air samples taken at position 1 (outside ambient to the west of northern 7 Badger Avenue), 2 (sorting room) and 3 (basement break room) (Figure included in Appendix C). Trace levels of 1,1,1-trichloroethane (TCA) were found in the samples taken at position 4 (scales), 5 (old bottling room) and 6 (east basement). TCA was found in trace levels and is a chlorinated solvent that is present in many commercially available cleaners such as engine degreasers and other similar products. In conclusion, while TCE is present in one of the groundwater monitoring wells at relatively high levels, none was found in the air within the building. TCA is also present in the groundwater in low concentrations and was also found to be present at trace levels in the air within the building. The source of the TCA in the air within the building is unknown but we do not believe that it is coming from the soil or groundwater beneath the building. A much more likely source for the TCA is commercially available cleaners that have been used in the building.

Underground Investigation Letter Report at 7 Badger Avenue, Endicott, New York, completed by Buck Environmental Services June 1992

On June 15, 1992, Buck issued a letter report for Former Canada Dry Bottling Facility 7 Badger Avenue in the Village of Endicott, New York. This letter was prepared for Mr. Tony Garufi of Touhey Associates of Pine West Plaza, Building 2, Washington Avenue Extension Albany, New York. The scope of work included the investigation of subsurface to identify the presence of assumed previously removed underground storage tanks (USTs) on the property. Four (4) UST's, reported to have been petroleum storage tanks, were excavated and removed from the area between 2 and 7 Badger Avenue at the end of the street and four (4) groundwater monitoring wells were installed. Although no hydrocarbon contamination was found, concentrations of chlorinated solvents were detected in two (2) of the four (4) wells. Stabilized groundwater depths were obtained and plotted to determine groundwater flow direction which is easterly. The conclusion drawn from these activities was that the source of the chlorinated solvent groundwater contamination was upgradient from the 7 Badger Avenue property or to the west.

Total contaminant concentration observed includes: MW-1: 105 ug/L, MW-6: 1,223 ug/L, RW-1: 1,607 ug/L, MW-5: 27 ug/L and MW-2: 2 ug/L. The laboratory analysis further indicated that essentially the same contaminants beneath the 7 Badger Avenue are found beneath the 2 Badger Avenue. It is stated by Buck that data obtained in this investigation fully supports the preliminary conclusion that the source of the contamination is found beneath the 2 Badger Avenue property.

Report of Dry Well Excavation Report at 2 Badger Avenue, Endicott, New York, completed by Buck Environmental Services October 1992

In October 1992, Buck issued a letter report for Former Canada Dry Bottling Facility located at 7 Badger Avenue in the Village of Endicott, New York. This letter was prepared for Mr. Carl Touhey of Touhey Associates of Pine West Plaza, Building 2, Washington Avenue Extension Albany, New York. The scope of work of the report included the excavation and sampling of the dry wells at 2 Badger Avenue.

The west and east dry well within 2 Badger Avenue were excavated. The dry well and surrounding soil, to a depth of approximately 8 ft and 6-feet bgs, respectively, were removed. The excavated soil and sludge was removed and stockpiled for proper transport and disposal. Excavation was halted based on the low HNu meter readings and visual observations which indicated no discolored soil in the bottom of the excavation. Composite soil samples were obtained from the bottom of the excavation.

The composite soil samples from the bottom of each dry well excavation were analyzed for volatile organic compounds, total petroleum hydrocarbons and for total metals (arsenic, cadmium, chromium and lead) as specified by EPA VIC dry well closure procedures. The composite soil sample from the bottom of the east dry well showed a concentration of TCE of 14.2 ug/Kg (micrograms per kilogram). The sample had no indication of petroleum hydrocarbons, arsenic or cadmium and low concentrations of chromium and lead. The composite soil sample from the bottom of the west dry well showed TCE at a concentration of 162 ug/Kg. The sample also showed a trace concentration of petroleum hydrocarbons, no indication of arsenic or cadmium and elevated levels of chromium and lead.

Report of Groundwater Investigation at Badger Avenue, Endicott, New York, completed by Buck Environmental Services January 1993

In January 15, 1993, Buck issued a letter report for Former Canada Dry Bottling Facility located at 7 Badger Avenue in the Village of Endicott, New York. This letter was prepared for Mr. Carl Touhey of Touhey Associates of Pine West Plaza, Building 2, Washington Avenue Extension Albany, New York.

The conclusions made from the available data are that: although low concentrations of contaminants were found in the up-gradient well, the data generally support the previous conclusion that the point source of the contamination is in or near the 2 Badger Avenue building;

The recommendations listed in the report are as follows:

1. TCE and related contaminants were found in the sample from the up-gradient well (MW-7) at concentrations significantly below those found in some down-gradient wells. This difference in concentration provides

strong evidence that the point source of the TCE contamination was not a location hydraulically up-gradient from the 2 Badger Avenue property. The source of the contaminants in MW-7 is unknown but is believed to be the result of contaminant diffusion from a down-gradient source at a rate exceeding the groundwater flow velocity.

2. The groundwater samples from the site have consistent chemical profiles, indicating that the contamination originated from a single point source. The primary contaminant is believed to have been Trichloroethene. The cis-l,2-Dichloroethene is believed to be a first level degradation product of Trichloroethene and the vinyl chloride is believed to be a second level degradation product of Trichloroethene.

3. The presence of the TCE and related contaminants in the new down-gradient wells indicates a larger contaminant plume than originally thought. The presence of vinyl chloride in the most remote extents of the plume indicates that the plume is aged. The east/west axis of the plume is typically elongated. The most recent data suggests that the area of highest contamination is slightly to the north of the 2 Badger Avenue building. This suggests the possibility of an additional contaminant source or a subsurface hydraulic connection between the floor drains and the area north of the building.

Report of Soil and Excavation and Remediation System Installation at 2 Badger Avenue, Endicott, New York, completed by Buck Environmental Services August 1993

In August 1993, Buck issued a letter report for Former Canada Dry Bottling Facility located at 7 Badger Avenue in the Village of Endicott, New York. This letter was prepared for Mr. Carl Touhey of Touhey Associates of Pine West Plaza, Building 2, Washington Avenue Extension Albany, New York. This report was prepared and submitted to the New York State Department of Environmental Conservation (NYSDEC) on behalf of Touhey Associates to discuss the installation of test pits .

The purpose of the installation of test pits was to investigate the areas to the east, north and west of monitoring well MW-DEC-MW-6. Significant concentrations of organic compounds were detected in the west test pit (between the monitoring well and the building). No significant Photo Ionization Detector (PID) readings were obtained from soil from the north or east test pits. Additional excavation was performed in the area south of monitoring well MW-DEC-MW-6. This excavation revealed a limited area (200 to 300 sq. ft.) that had apparently been used in the past as a dump or refuse pile. There was a noticeable odor from the excavation. The highest PID readings from this material were in excess of 20 ppm (parts per million).

A soil vapor extraction (SVE)/air sparging (AS) system, located in the paved area northeast from 2 Badger Avenue, was installed in 1993 and operated for 18 months. The system utilized in-situ remedial technology that reduced

concentrations of volatile and chlorinated constituents that are adsorbed to soils and dissolved in groundwater. This technology involved the injection of air into the subsurface saturated zone, enabling a phase transfer of hydrocarbons and chlorinated solvents from a dissolved state to a vapor phase. The air sparging was combined with the SVE system to create a negative pressure in the unsaturated zone. A slotted vertical pipe was placed at the interval of contamination to recover the vapor plume migration.

Limited IAQ Sampling and Evaluation at 7 Badger Avenue, Endicott, New York, completed by O'Brien & Gere Engineers. Inc. April 2004

On April 7 2004, O'Brien & Gere Engineers. Inc. issued a letter report for Former Canada Dry Bottling Facility located at 7 Badger Avenue in the Village of Endicott, New York. This letter was prepared for Mr. Thomas Kennedy of ICS Industries, Inc. of 7 Badger Avenue, Endicott, New York.

The purpose of this report was to evaluate the indoor air conditions in the 7 Badger Avenue building. Samples were collected from the following locations; Cider Mill Playhouse (CMP) Storage area, middle warehouse area, west warehouse/ pallet storage area, north shredding room, office area, east basement, southwest basement, and ambient outdoor air. The levels of VOCs detected in the samples were well below OSHA regulatory levels as well as the median concentrations in "background" residences. Based on the data gathered in this limited IAQ sampling/evaluation, the source of VOCs detected in the air samples was reported to be inconclusive. Since chemicals and other materials that may contain VOCs were observed inside ICS, it is possible that these items contributed to the level of VOCs detected in the samples. The report recommended that the NYSDEC be consulted prior to conducting these additional investigations in order to develop a project-specific work plan for the investigation of vapor intrusion issues and establish site-specific indoor air and sub-slab VOC concentration action levels.

Supplemental Groundwater Monitoring Report June Street Plume Delineation at 7 Badger Avenue, Endicott, New York, completed by Ecology and Environment Engineering, P.C. September 2008

In September 2008, Ecology and Environment Engineering, P.C. (EEEPC) issued a letter report for Former Canada Dry Bottling Facility 7 Badger Avenue in the Village of Endicott, New York. This letter was prepared for Mr. Ben Rung of the NYSDEC, Albany, New York.

Field activities included the installation and sampling of 43 temporary groundwater monitoring wells; sampling of 22 existing groundwater monitoring wells (samples only collected from 20 of the groundwater monitoring wells); the New York State Department of Transportation (NYSDOT) storm water sump on Nanticoke Avenue between North and Jennings streets; and sampling of Nanticoke Creek and outfalls to the creek from the NYSDOT sump. Sampling activities began on July 7, 2008, with the collection of static groundwater levels

at each well location. Groundwater samples were collected beginning on July 8, 2008, and completed on July 15, 2008.

A total of three VOCs were detected in groundwater samples collected from existing monitoring wells including TCE, cis-DCE, and 1,1,1-trichloroethane (1,1,1- TCA). TCE was the most commonly detected compound, and was reported in 36 of the 63 samples collected. Of the 12 detections, TCE exceeded the corresponding Class GA groundwater standard of 5 µg/L in 11 of the samples. The highest TCE concentrations reported were 2,300 µg/L, 980 µg/L, and 730 µg/L in wells DEC-MW-30, DEC-MW-27, and DEC-MW-06, respectively. This is consistent with the previous monitoring event, where the same three wells contained the highest TCE concentrations at 1,300 µg/L, 950 µg/L, and 590 µg/L respectively. The remaining detections above the groundwater standard ranged from 10 µg/L to 63 µg/L. The only other VOC reported above groundwater standards was cis-DCE at 170 µg/L, 7.6 µg/L, and 32 µg/L in monitoring wells DEC-MW-06, DEC-MW-08, and DEC-MW-09, respectively. This is below the corresponding groundwater standard of 5 µg/L. The highest total VOC concentration reported was 2,300 µg/L from DEC-MW-30 (all TCE). The report concluded that relatively low concentrations were present along the groundwater divide with high concentration areas present to both the northwest and southeast.

November 2006 Air Sampling Results at 7 Badger Avenue, Endicott, New York, completed by E&E for the State of New York Department of Health March 2007

In March 2007, the State of New York Department of Health issued a letter report for ICS Badger Avenue at the Former Canada Dry Bottling Facility located at 7 Badger Avenue in the Village of Endicott, New York as part of the Endicott Area Wide Study. This letter was prepared for Mr. Tom Kennedy of ICS Industries, Endicott, New York.

Field activities included the installation and sampling of eight (8) soil vapor intrusion samples; including sampling of three (3) first floor air samples, two (2) basement air samples, and three (3) sub-slab vapor samples. Sampling activities included analysis for VOCs and occurred on November 29, 2006. In addition, sixteen outdoor samples in the June Street neighborhood were collected from November through December 2006.

TCE was detected at concentrations of 21.4 micrograms per cubic meter (mcg/m^3) and 2.57 $mcg/m^3$and at 6.06 mcg/m^3, 7.26 mcg/m^3, and 1.86 mcg/m^3 in the basement and first floor air samples, respectively. Numerous VOCs, including TCE at 15,000 mcg/m^3, 2,800 mcg/m^3, and 2,400 mcg/m^3 was detected in the sub-slab vapor samples. The report concluded that the NYSDEOH is recommending action be taken to minimize exposure related to soil vapor intrusion.

1.3 Report Organization

The text of this report is divided into six (6) sections. Immediately following the text are the references, tables, figures and appendices. A brief summary of each report section is provided below.

Section 2.0 **Study Area Investigation:** Summarizes field activities associated with the site characterization, including surficial and subsurface soil investigations, groundwater investigations, passive soil gas survey, soil gas investigations, microbial colony census, and geological investigations.

Section 3.0 **Physical Characteristics of the Site:** Includes results of field activities to determine physical characteristics, including surface features, geology, soils, hydrogeology, demography and land use.

Section 4.0 **Nature and Extent of Contamination:** Presents the results of remedial investigation, both natural and chemical components and contaminants in the following media: subsurface soil, groundwater, and soil gas.

Section 5.0 **Contaminant Fate and Transport:** An evaluation of potential migration pathways and contaminant persistence and/or migration is presented.

Section 6.0 **Exposure Assessment:** Presents the results of a general human health and environmental impact assessment completed at the Site. The assessment includes an estimation of exposure point concentrations and a comparison of this data with established and published standards and guidance values (SGV) including: New York State Standards as well as Federal requirements.

Section 7.0 **Conclusions, Data Limitations, Recommendations:** Summarizes the results and findings of the RI.

2.0 STUDY AREA INVESTIGATIONS

Study area investigations were completed to evaluate the surface and subsurface environmental condition and to provide data pertaining to the degree and extent of contamination. A description of the study area investigations conducted during this Remedial Investigation is presented in this Section.

This Remedial Investigation (RI) report was completed in accordance with the scope of work described in the letter issued to HRP Engineering from the NYSDEC, "Work Assignment Issuance/Notice to Proceed, NYSDEC Site Code: 704050, dated September 9, 2010. The scope of work for the Site was prepared by the NYSDEC, Division of Environmental Remediation. Deviations, based on field conditions, are noted in Section 2.1.7. The investigation tasks described in the work plan utilized the NYSDEC's DER-10 (DER-10), Technical Guidance for Site Investigation and Remediation, dated May 3, 2010. The Site Investigation Work Plan was approved by the NYSDEC. The scope of work incorporated the following site specific components:

- Field Activity Plan (FAP);
- Quality Assurance Project Plan (QAPP);
- Health and Safety Plan (HASP); and
- Community Air Monitoring Plan (CAMP).

Field work for this RI was conducted in several mobilizations to the site and included the following tasks:

- Initial site inspection (December 20, 2010);
- Installation of soil borings and the collection and submittal for analysis of select soil samples (May 23 through 27, 2011);
- Conversion of soil borings to groundwater monitoring wells (May 23 through 27, 2011);
- Installation of passive soil gas samplers (April 18 through 19, 2011);
- Retrieval of passive soil gas samplers and submittal for analysis (May 2, 2011);
- Development of groundwater monitoring wells (May 23 through 27, 2011);
- Microbial Census Survey (June 14 through 15, 2011);
- Sampling of groundwater monitoring wells and submittal for analysis (June 13 through 16, 2011);
- Removal of non-hazardous drums containing drill cuttings (August 22, 2011);
- Second round of sampling of groundwater monitoring wells and submittal for analysis (October 4 through 7, 2011);
- Installation of sub-slab soil vapor and indoor air sampling points and collection and submittal for analysis (December 13, 2011); and
- Retrieval of sub-slab soil vapor and indoor air sampling points and collection and submittal for analysis (December 14, 2011).

2.1 Field Activities Associated with the Remedial Investigation

To determine the degree and extent of the on-site contaminants from the Former Canada Dry Bottling Facility Site, HRP installed passive soil gas points, soil borings, permanent groundwater monitoring wells, and temporary soil vapor points, as presented in the Work Assignment Issuance/Notice to Proceed. Groundwater, soil (subsurface), passive soil gas sample, and soil vapor samples were collected from these points and submitted to a NYSDOH certified laboratory for analysis. Sampling procedures are discussed throughout Section 2.1. The analytical results for each medium are discussed in Section 3.0. The Data Usability Summary Reports (DUSR) are included in Appendix B.

2.1.1 Surface Features: Natural and Manmade Features

As previously discussed, the Site is improved a one-story building, approximately 11,610-ft^2 (2 Badger Avenue), primarily concrete block with a slab on grade concrete floor, and a small paved area located at the end of Badger Avenue is located between the two buildings on the northwestern portion of the Site.

2.1.2 Meteorological Observations

Throughout HRP's on-site subsurface investigation, visual and thermal observations (i.e. ambient temperature readings) were noted and recorded in field logs. Other meteorological observations were conducted as part of the Community Air Monitoring Program (CAMP).

2.1.3 Surface Water and Sediment Investigations

No surface-water was observed on-site during HRP's investigation. Surface water and sediment samples were not included under the scope of this investigation.

2.1.4 Geological Investigations

On April 18 and 19, 2011, HRP observed the installation of soil borings using a Geoprobe 6620DT, truck-mounted drill rig. All boring installations were conducted by GeoLogic NY, Inc. (GeoLogic) of Homer, New York, a New York Licensed driller. Soil boring and monitoring well construction logs are provided in Appendix C. Information on the soil boring logs includes borehole location, drilling information, sample intervals, percent recovery, and sample description information. Information on monitoring well construction logs includes total well depth, screened interval, sand pack interval, bentonite seal interval, and well completion information.

2.1.5 Soil and Vadose Zone Investigations

Passive Soil Gas Sampling

Passive soil gas samplers were implemented on and around the vicinity of the Site, as a screening tool to determine activities for future remedial investigation tasks, such as soil samples, well installation, and soil vapor sampling. HRP selected Beacon Environmental Services, Inc. of Bel Air, Maryland to provide the passive soil gas samplers, known as a BESURE Sample Collection Kit™. The soil gas samplers were analyzed for volatile organic compounds, and included analysis for the Target Compound List by EPA method 8260B. The analytes were reported in nanograms and are strictly a qualitative assessment.

HRP, with the assistance of Shumaker Consulting and Engineering of Albany, New York, installed 39 Beacon® passive soil gas samplers (PSV-1 to PSV-39) in the area surrounding the Site. The passive soil gas sample locations were determined, with approval from the NYSDEC project manager, based on the results of previous subsurface investigations and site observations made during the December 20, 2010 initial site visit. At each sample location, HRP installed a 1-inch diameter borehole 12 to 14 inches in depth with a hand-held rotary hammer drill. The solid plastic cap was removed from each soil gas sampler and replaced with screen meshing cap. Each sampler was then placed inside a 1-foot long by 1-inch diameter metal sleeve, and was secured to the sleeve with a length of retrieval wire. Lastly, the top of the metal sleeve was plugged with aluminum foil and placed in the borehole. The samples were retrieved 13 days after their installation. On May 2, 2011, the passive gas samplers were retrieved. Upon retrieval from the each borehole, the mesh covered sampling caps were removed and replaced with solid plastic caps. Subsequently, the passive soil gas samplers were sent to Beacon Environmental Services, Inc. for analysis of VOCs via EPA method 8260B by thermal desorption-gas chromatography/mass spectrometry. Passive soil gas sample locations are depicted in Figure 3. Beacon Environmental Services report passive soil gas survey report, including passive soil gas sampling logs are provided in Appendix E.

The table below lists the passive gas sampling number and location.

Passive Soil Gas ID	Sample Location	Justification
PSV-1	Driveway area west of the of 2 Badger Ave building.	To assess the presence, identity, and relative strength of volatile organic compounds (VOCs) at strategic locations surrounding the former Canada Dry property.
PSV-2		
PSV-3	Driveway area south of the of 2 Badger Ave building.	
PSV-4		
PSV-5	Paved area located between 2 Badger Ave. and 7 Badger Ave.	
PSV-6		
PSV-7		
PSV-8		
PSV-9		
PSV-10		
PSV-11		
PSV-12		

Passive Soil Gas ID	Sample Location	Justification
PSV-13		
PSV-14	Fenced off area north of site adjacent to railroad tracks.	
PSV-15		
PSV-16		
PSV-17	Paved area located between 2 Badger Ave. and 7 Badger Ave.	To assess the presence, identity, and relative strength of volatile organic compounds (VOCs) at strategic locations surrounding the former Canada Dry property.
PSV-18		
PSV-19		
PSV-20		
PSV-21		
PSV-22	Driveway area south of the of 7 Badger Ave. building.	
PSV-23		
PSV-24		
PSV-25	Driveway area east of the of 7 Badger Ave. building.	
PSV-26		
PSV-27	Inside of 2 Badger Ave, adjacent to former floor drains.	
PSV-28		
PSV-29	Former UST area located on the west side of the 7 Badger Ave building.	
PSV-30		
PSV-31		
PSV-32		
PSV-33	In unfinished basement located in the northeast corner of the 7 Badger Ave. building (PSV-33 near sump).	
PSV-34		
PSV-35	Located in southeast corner of 7 Badger Ave. building (PSV-36 near floor drain).	
PSV-36		
PSV-37	Located in middle rooms of 7 Badger Ave.	
PSV-38		
PSV-39		

Soil Boring Installation and Sampling

To evaluate the degree and extent of on-site and off-site contamination of subsurface soils, HRP and GeoLogic mobilized to the site May 24 through 26, 2011 and drilled a total of eight (8) soil borings (HRP-MW-1 through HRP-MW-5, HRP-MW-7, HRP-MW-9 and HRP-MW-11) which were used to collect subsurface soil samples. Each soil boring location was converted to an overburden monitoring well. Boring locations were determined by the NYSDEC and by HRP, and were specified in the Site-specific field activities plan. Soil boring locations are depicted on Figure 2 and are summarized below. Soil boring logs are provided in Appendix C.

Soil Boring ID	Location	Justification
HRP-MW-1	Driveway area south of the 7 Badger Ave building.	To assess the presence, identity, and relative strength of volatile organic compounds (VOCs) at strategic locations surrounding the former Canada Dry property.
HRP-MW-2	Southeast corner off of 2 Badger Ave.	
HRP-MW-3	Paved area between 2 and 7 Badger Ave.	
HRP-MW-4	In front of driveway used by 55 Locust apartment building (South of Site).	
HRP-MW-5	North side of the paved area between 2 and 7 Badger Ave.	
HRP-MW-7	East side of building located at 7 Badger Ave in parking lot area for adjacent business.	
HRP-MW-9		
HRP-MW-11	Inside of building located at 2 Badger Avenue.	

During soil boring installation activities, continuous soil samples were collected from the ground surface to a depth of approximately twenty-feet below surface at two-foot intervals using a 2" diameter split-barrel sampler. The samples were collected by the attending HRP geologist, placed in laboratory-provided 4-ounce clear tephlon sealed glass jars, labeled, and preserved on ice in a cooler. Each sample was then reviewed for physical evidence of contamination (i.e. odor, staining).

In addition, a small portion (1-2 oz.) was also placed in a polyethylene bag, allowed to attain ambient temperature, and then subjected to a headspace analysis via a field calibrated photoionization detector (PID) equipped with a 10.2 eV bulb.

All non-disposable soil sampling equipment was decontaminated between samples using an Alconox wash followed by a clean water rinse. All investigation derived waste (IDW) was stored in approved labeled 55-gallon drums for proper disposal. Subsequently, the soil borings were converted to permanent, flush-mounted monitoring wells as discussed in Methods of Installation – Overburden Wells.

Based on the results of the field screening and observations, HRP selected a minimum of one (1) soil sample, from the two-foot interval exhibiting the highest PID reading, from each soil boring for laboratory analysis. When no elevated PID readings were observed, the soil sample that corresponded with the water table interface was selected. HRP collected additional subsurface soil samples from borings that exhibited visual, olfactory, or evidence from field PID measurements. In total, HRP collected nine (9) subsurface soil samples and one duplicate sample. The soil samples that were collected and analyzed are listed below. No additional analytical methods were collected or analyzed for the subsurface samples. Of note, due to olfactory observations and PID readings, two (2) soil samples were taken from HRP-MW-11 [HRP-MW-11(11-15') and HRP-MW-11 (18-19')]. Each

sample was sent to Chemtech Laboratory, of Mountain Side, New Jersey, a NYSDOH Environmental Laboratory Accreditation Program (ELAP) approved laboratory, for analysis.

In addition, a matrix spike/matrix spike duplicate (MS/MSD) was also sent to the laboratory for analysis. The matrix spike is an aliquot of a field sample, which is fortified with the analyte(s) of interest and analyzed to monitor measurement bias associated with the sample matrix. A matrix spike and matrix spike duplicate are performed for every analytical batch.

Soil Sample ID	Sample Depth (bgs)	Sample Location	Analysis
HRP-MW-1	11 - 12'	Driveway area south of the of 7 Badger Ave building.	VOCs (via USEPA 8260B)
HRP-MW-2	11 - 12'	Southeast corner off of 2 Badger Ave.	
HRP-MW-3	11 - 12'	Paved area between 2 and 7 Badger Ave.	
HRP-MW-4	11 - 12'	In front of driveway used by 55 Locust apartment building (South of Site).	
HRP-MW-5	11 - 12'	North side of the paved area between 2 and 7 Badger Ave.	
HRP-MW-7	11 - 12'	East side of building located at 7 Badger Ave in parking lot area for adjacent business.	
HRP-MW-9	11 - 12'		
HRP-MW-11	11'-15'	Inside of building located at 2 Badger Ave.	
HRP-MW-11	18' - 19'		

Soil Vapor Intrusion Evaluation

Prior to conducting the soil vapor investigation, HRP along with the NYSDEC had to obtain permission from the on-site property owner and renters to gain access to each sub-slab location for the sampling.

Samples were collected from five (5) temporary sub-slab soil vapor probe installations, two (2) indoor ambient locations and one (1) outdoor ambient locations on December 14 through 15, 2011. All sampling activities were logged in field notebooks. Locations were chosen due to proximity to the Site, and results from the groundwater and soil analytical sampling. Each location was also approved by the NYSDEC prior to sampling activities began.

Sub-Slab Vapor ID	Sub-Slab Location	Justification
HRP-SSV-1	2 Badger Ave-large storage room	To assess the presence, identity, and relative strength of volatile organic compounds
HRP-SSV-2	2 Badger Ave- front storage room	
HRP-SSV-3	Outdoor - paved area adjacent to 2 Badger Ave (Ambient air sample)	
HRP-SSV-4	7 Badger Ave- outside of office	

Sub-Slab Vapor ID	Sub-Slab Location	Justification
HRP-SSV-5	7 Badger Ave- front storage room	(VOCs) at strategic locations surrounding the former Canada Dry property.
HRP-SSV-6	7 Badger Ave - unfinished basement	
Indoor Air-2 Badger Avenue	2 Badger Ave – office building	
Indoor Air-7 Badger Avenue	7 Badger Ave – office building	

Each soil vapor intrusion sample was completed and sampled in accordance with NYSDOH's Guidance for Evaluating Soil Vapor Intrusion in the State of New York dated, October 2006. The depth of each probe that is placed beneath asphalt or concrete pavement/slabs on-site was 2-3 inches below the bottom of the impervious surface. A hand held drill was used to facilitate the collection of the soil vapor samples by boring a hole through the concrete slab and into the soil below the slab. The following procedures were followed during soil vapor sampling:

- Soil vapor samples were collected using 1/4-inch diameter by six-inch long polyethylene tubing.
- Porous backfill material (quartz filtration media) was used to create a sampling zone 2 to 3-inches in length around the polyethylene tubing.
- Soil vapor probes were sealed above the sampling zone first with modeling clay.
- A tracer gas, helium, was used prior to soil vapor sample collection to verify that a seal was achieved during the sampling point installation. Further discussion about tracer gas is provided below.
- Once it was determined that an adequate seal had been achieved, sampling commenced.
- Soil vapor samples were collected for a timeframe of 24-hours into 6-liter Summa canisters provided by the analytical laboratory.

A one-liter summa canister was directly attached to the tubing. The summa canister valve was then opened and allowed to fill. When the pressure gauge on the summa canister neared ambient level or after a time of approximately 24-hours had elapsed, the valve was closed, and the sampling setup was disassembled.

All sampling equipment was removed from the borehole. Soil vapor boreholes were abandoned (backfilled) using a combination of sand and concrete. The summa canisters were appropriately labeled and stored in a shipping container. The canisters were then shipped to Centek Laboratory for analysis by USEPA Method TO-15. In addition, a trip blank and matrix spike/matrix spike duplicate sample was also analyzed.

Microbial Colony Census

Molecular biological tools (MBTs) were collected and analyzed to describe and quantify microbial communities existing in the saturated zone at the Site to demonstrate the feasibility of monitored natural attenuation (MNA). In-situ microbials were assessed via the collection and analysis of BioTraps on June 14 through June 15, 2011, which contained Bio-Sep® beads. The BioTraps were utilized in four (4) monitoring wells (DEC-06-MW-06 [MW-6], DEC-MW-21, DEC-MW-27, and DEC-MW-30) to determine if the desired microbial processes are active. MBTs were analyzed by Microbial Insights of Rockford, Tennessee. The beads are 2-4 mm in diameter and are an engineered composite of Nomex® and powdered activated carbon (PAC). The appropriate amount of groundwater was passed through the sampler. The Bio-Trap® samplers were deployed in a monitoring well, the Bio-Sep® beads absorbed contaminants and nutrients present in the aquifer essentially becoming an in situ microcosm with an incredibly large surface area which is readily colonized by subsurface microorganisms. The BioTraps were utilized during normal sampling procedures.

A number of bacterial cultures are capable of transforming tetrachlorethene (PCE) and TCE; however, Dehalococcoides species may be the most important because they are the only bacterial group that has been isolated to date which is capable of complete reductive dechlorination of PCE to ethene. Thus, qPCR monitoring of the abundance of Dehalococcoides allows for the evaluation of the feasibility of complete reductive dechlorination under monitored natural attenuation (MNA) conditions and the effectiveness of biostimulation (electron donor injection) to promote growth of key reductive dechlorinating bacteria for enhanced bioremediation.

Groundwater was filtered to collect bacterial DNA, at the four (4) monitoring wells, avoiding the biases associated with traditional cultivation techniques (plate counts) and qPCR assays quantify specific bacteria (i.e. dehalococcoides) or specific biological processes responsible for contaminant biodegradation providing a more direct, accurate, and sensitive method to evaluate bioremediation as a corrective action in the Alternative Analysis Report.

Groundwater Investigations

Groundwater Monitoring: Well Installation, Development, Sampling

To evaluate the condition of on-site groundwater, HRP and GeoLogic NY, Inc. mobilized to the site May 24 through 26, 2011 and installed eight (8) overburden wells (HRP-MW-1 through HRP-MW-5, HRP-MW-7, HRP-MW-9 and HRP-MW-11). A total of ten (10) monitoring wells (eight [8] new monitoring wells and two [2] existing monitoring wells [DEC-06-MW-06 {MW-6} and MW-10]) will be considered as part of the onsite monitoring well network.

Subsequent to the advancement of soil borings, the boreholes were converted to permanent, flush-mounted groundwater monitoring wells. Monitoring well locations

were selected by HRP and approved by the NYSDEC. The final installation of the wells were slightly modified based on field conditions from the proposed locations and type of well in the field activities plan.

Groundwater Well ID	Location	Justification
HRP-MW-1	Driveway area south of the of 7 Badger Ave building.	To assess the presence, identity, and relative strength of volatile organic compounds (VOCs) at strategic locations surrounding the Canada Dry property.
HRP-MW-2	South side of 2 Badger Ave.	
HRP-MW-3	Paved area between 2 and 7 Badger Ave.	
HRP-MW-4	In front of driveway used by 55 Locust apartment building (South of Site).	
HRP-MW-5	North side of the paved area between 2 and 7 Badger Ave.	
HRP-MW-7	East side of building located at 7 Badger Ave in parking lot area for adjacent business.	
HRP-MW-9		
HRP-MW-11	Inside of building located at 2 Badger Avenue.	

Methods of Installation – Overburden Wells

Overburden monitoring wells were installed at the site within unconsolidated material in order to allow for the monitoring of groundwater elevation and acquisition of groundwater samples for laboratory testing. Eight (8) two-inch diameter, PVC monitoring wells were installed in the shallow saturated zone beneath the site. The overburden monitoring wells were installed using the procedures described below:

- Soil borings were advanced to the desired depth;
- The 2-inch diameter schedule 40 PVC well screen (0.010-inch slot) and riser pipe were inserted and placed on the bottom of the borehole. The riser was capped to prevent well construction materials from entering the well;
- Washed silica was poured into the annular space between the well material and the borehole sidewall. The sand pack continued to at least two feet above the top of the screen section. The sand was kept from plugging by using a weighted tape and slowly removed from the augers allowing for sand to properly settle;
- Above the sand, a seal (bentonite pellets) was formed in the borehole. Where possible, the bentonite seal extended at least two feet above the top of the sand pack section;
- Clean water was periodically added to the borehole to hydrate the pellets. The pellets were then allowed to hydrate for at least 30 minutes;
- The well riser was cut to approximately 2-inches below grade and flush-mounted curb boxes were installed and grouted in place; and
- A lockable gripper plug was inserted onto the top of each well casing and locked.

Methods of Groundwater Development

HRP mobilized to the site on May 23 and 25, 2011, to develop the eight (8) recently installed groundwater monitoring wells. HRP pumped the wells utilizing a whale pump with a flow regulator, and Teflon lined polyethylene tubing. This method was chosen as the appropriate well development method based on water depth, well productivity, and sediment content of the water. Non-disposable equipment (i.e. water level indicator) was decontaminated prior to use in each well. Care was taken not to introduce contaminants to the equipment during installation. The volume of water, depth to bottom of the well, and other visual observations were recorded in a field notebook. Well development logs can be found in Appendix C.

Well development was discontinued when field parameters met the following conditions:

- Well water had achieved a turbidity value of less than 50 NTU; and
- Well development was supplemented by measurements of temperature, pH, and specific conductance. Development was complete when these parameters stabilized for a minimum of three consecutive readings at 10 percent variability or less.

Methods of Groundwater Sampling

To evaluate the groundwater quality beneath the site, groundwater samples were collected from each of the eight (8) installed groundwater monitoring wells (HRP-MW-1 through HRP-MW-5, HRP-MW-7, HRP-MW-9 and HRP-MW-11), two (2) existing onsite groundwater monitoring wells (06-DEC-MW-06 [MW-6] and MW-10) (Figure 6), and to verify and expand upon previous data generated by other consultants, thirty-one (31) existing off-site permanent monitoring wells (DEC-06-MW-06 [MW-6], DEC-MW-21, DEC-MW-24, DEC-MW-25, DEC-MW-27, DEC-MW-30, DEC-MW-32, DEC-MW-33, JS-TW-002, JS-TW-003, JS-TW-007, JS-TW-010 , JS-TW-12 through JS-TW-014 through JS-TW-020, JS-TW-022 through JS-TW-024, JS-TW-026 through JS-TW-028, JS-TW-031, JS-TW-032) (Figure 7). To collect representative groundwater samples, monitoring wells were purged prior to sampling. Low flow sampling equipment and procedures were used to purge and sample the monitoring wells. Purging required removing water from the well at a rate of at least 250 milliliters per minute, but not exceeding 1 liter per minute for a sufficient length of time for water quality parameters to stabilize (at least 30 minutes). Drawdown did not exceed ten percent of the standing water column. Sampling commenced immediately after purging, without adjusting the flow rate or water intake depth. Of note, JS-TW-06 and JS-TW-11 was not located during the June 2011 or the October 2011 sampling events.

Groundwater samples were collected from each well including a duplicate and MS/MSD sample on June 13 through 16, 2011. A matrix spike is an aliquot part of a field sample, which is fortified with the analyte(s) of interest and analyzed to monitor measurement bias associated with the sample matrix. A matrix spike and matrix spike duplicate are performed for every analytical batch.

Samples from the same locations, were collected and submitted for the same analysis during the second round of sampling completed on October 4 through 6, 2011.

Groundwater Sample ID	Analyses
HRP-MW-1	VOCs (via USEPA 8260B)
HRP-MW-2	
HRP-MW-3	
HRP-MW-4	
HRP-MW-5	
DEC-06-MW-06 (MW-6)	VOCs (via USEPA 8260B), Nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), Total organic carbon (TOC) (via SM5310B), Alkalinity (via SM2320B), Chloride (via SM 23320B), Carbon Dioxide ($C0_2$) (via SM9040B), and hydrogen (via USEPA 9040B)
HRP-MW-7	VOCs (via USEPA 8260B)
HRP-MW-9	
MW-10	
HRP-MW-11	
DEC-MW-21	VOCs (via USEPA 8260B), Nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), Total organic carbon (TOC) (via SM5310B), Alkalinity (via SM2320B), Chloride (via SM 23320B), Carbon Dioxide ($C0_2$) (via SM9040B), and hydrogen (via USEPA 9040B)
DEC-MW-24	
DEC-MW-25	VOCs (via USEPA 8260B)
DEC-MW-27	VOCs (via USEPA 8260B), Nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), Total organic carbon (TOC) (via SM5310B), Alkalinity (via SM2320B), Chloride (via SM 23320B), Carbon Dioxide ($C0_2$) (via SM9040B), and hydrogen (via USEPA 9040B)
DEC-MW-30	
DEC-MW-32	VOCs (via USEPA 8260B)
DEC-MW-33	
JS-TW-002	
JS-TW-003	
JS-TW-007	
JS-TW-010	
JS-TW-012	
JS-TW-013	VOCs (via USEPA 8260B), Nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), Total organic carbon (TOC) (via SM5310B), Alkalinity (via SM2320B), Chloride (via SM 23320B), Carbon Dioxide ($C0_2$) (via SM9040B), and hydrogen (via USEPA 9040B)
JS-TW-014	VOCs (via USEPA 8260B)

Groundwater Sample ID	Analyses
JS-TW-015	VOCs (via USEPA 8260B), Nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), Total organic carbon (TOC) (via SM5310B), Alkalinity (via SM2320B), Chloride (via SM 23320B), Carbon Dioxide ($C0_2$) (via SM9040B), and hydrogen (via USEPA 9040B)
JS-TW-016	VOCs (via USEPA 8260B)
JS-TW-017	
JS-TW-018	
JS-TW-019	
JS-TW-020	
JS-TW-022	
JS-TW-023	VOCs (via USEPA 8260B), Nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), Total organic carbon (TOC) (via SM5310B), Alkalinity (via SM2320B), Chloride (via SM 23320B), Carbon Dioxide ($C0_2$) (via SM9040B), and hydrogen (via USEPA 9040B)
JS-TW-024	VOCs (via USEPA 8260B)
JS-TW-026	
JS-TW-027	
JS-TW-028	VOCs (via USEPA 8260B), Nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), Total organic carbon (TOC) (via SM5310B), Alkalinity (via SM2320B), Chloride (via SM 23320B), Carbon Dioxide ($C0_2$) (via SM9040B), and hydrogen (via USEPA 9040B)
JS-TW-031	VOCs (via USEPA 8260B)
JS-TW-032	
VOC: Volatile Organic Compounds MW: Monitoring Well USEPA: United States Environmental Protection Agency	

Each sample was sent to Chemtech laboratory of Mountainside New Jersey, and the hydrogen samples were sent to Chemtech's subcontracted laboratory, Shaw Environmental and Infrastructure, Inc. (Shaw), both NYSDOH ELAP approved laboratory, for analysis.

The following list describes the well purging and sampling procedures that were utilized on May 23 through 25, 2011, and both of the well sampling events on June 13 through 16, 2011 and on October 4 through 6, 2011:

- All field instruments were calibrated at the beginning of each work day as per manufactories instructions;
- Monitoring well covers were unlocked and carefully removed to avoid having any foreign material enter the well;

- The water level was measured below the top of casing using an electronic water level indicator. With knowledge of the total depth of the well, it was possible to calculate the volume of water in the well. The tape and probe of the water level indicator was cleaned with an Alconox and water soaked paper towel while reeling in;
- New Teflon lined polyethylene tubing was installed into the well and the end of the tubing was set to approximately the midpoint of the groundwater column inside the well;
- The Teflon lined polyethylene tubing was attached to a Geopump peristaltic pump. Another section of tubing was attached to the effluent side of the pump;
- The tubing was attached to a flow-through cell water quality monitor (YSI 600xl);
- The pump was turned on and set to a relatively low discharge rate (less than 1-liter per minute) and drawdown rate was monitored using a water level indicator;
- The wells were purged while collecting water quality measurements (pH, Specific Conductivity, Temperature, Dissolved Oxygen, Oxidation/Reduction Potential, and Turbidity) and water level measurements were collected every 3 to 5-minutes for at least 30-minutes;
- After water quality conditions stabilized and well purging was completed, a groundwater sample was collected into the appropriate containers;
- The VOC sample containers were filled first. The discharge tubing was directed toward the inside wall of the sample container to minimize volatilization. VOC sample containers were filled so that no headspace (air bubbles) was present. The remainder of the sample containers was filled in order of decreasing volatility of the analyte being sampled for;
- Each sample bottle was labeled in the field and placed in a cooler with ice;
- All non-disposable equipment was decontaminated with alconox and water, and then rinsed with deionized water prior to and after each use; and
- Monitoring well sampling data was recorded in a groundwater sampling data sheet (provided in Appendix C).

Monitoring Well Survey

In addition, the elevation of each on-site monitoring well was surveyed. HRP obtained the services of Shumaker Consulting Engineering and Land Surveying, P.C. (Shumaker) of Utica, New York, to complete the survey portion of the RI. A Site survey was conducted in order to properly locate all sampling points and groundwater wells. The field survey included establishing project horizontal and vertical control and

the collection of planimetric and topographic. Horizontal coordinate values were based on the North American Datum (NAD) of 1983. Vertical coordinate (elevation) values were based on the North American Vertical Datum (NAVD) of 1988. Shumaker was on-site June 15 through 17, 2011 to collect geophysical and site data for the survey needed to be completed in accordance with the site specific field activities plan.

2.1.6 Ecological Investigations

As part of the original scope of work HRP was tasked with completing a Fish and Wildlife Impact Analysis (FWIA) through Step II. As the RI field work began, the NYSDEC directed HRP that the FWIA would not be required.

2.1.7 Deviations from Workplan

HRP deviated from the Workplan only with approval from the NYSDEC. The following deviations occurred during the investigations.

- Changes to the location of monitoring wells and indoor air samples. This was changed due to lack of access to certain areas due to ongoing work onsite and conflicts with underground utilities or substructures;
- JS-TW-06 andJS-TW-11 was not located during the June 2011 or October 2011 sampling event and is assumed to have been destroyed;
- JS-TW-35 through JS-TW-37 could not be located for the June or the October 2011 sampling events; and
- Previously installed in June 1992, onsite monitoring wells MW-2, MW-3 and MW-8 were identified onsite during the December 20, 2010 initial site walk. The integrity of the monitoring wells was suspect and may provide a direct path to the subsurface, therefore, the monitoring wells were not included in the sampling plan. MW-2, MW-3, and MW-8 were abandoned on May 26, 2010 as per general guidance document *CP-43: Groundwater Monitoring Well Decommissioning Policy, (date November 2009)* while executing the monitoring well decommissioning activities.

It is HRP's opinion that these deviations have not affected our ability to identify and determine the degree and extent of contamination at the subject property.

2.2 Technical Correspondence

No formal technical correspondence documenting field activities was identified between HRP and the NYSDEC. However, HRP and the NYSDEC project manager kept in constant coordination throughout the RI field work and other activities via email and telephone conversations. Any changes to the work plan and items encountered in the field were relayed to the NYSDEC project manager immediately and if approval was needed for a change it was obtained prior to it being completed.

3.0 PHYSICAL CHARACTERISTICS OF THE SITE

The following section discusses the results of field activities to determine physical characteristics.

3.1 Results of Field Activities

3.1.1 Surface Features

The area around the buildings at 2 and 7 Badger Avenue is paved with asphalt. The surrounding properties consist of a mix of industrial, commercial, and residential uses.

The larger building located at 7 Badger Avenue on the east side of the site was formerly occupied by the former Canada Dry bottling facility. The building also contains two (2) basements, one finished basement located below the center/southwest office area of the building utilized as a break room, and the east unfinished basement located below the east corner of the building. Three (3) floor drains (north floor drain, east floor drain, and south floor drain) and a sump are reported throughout the facility in the warehouse area, the manufacturing area, and the eastern basement area, respectively. It is unknown if these drains discharged to a sanitary sewer system or into a sump.

The 2 Badger Avenue parcel has one building on it that has been occupied by Neighborhood Recycling, a bottle redemption center, since approximately November 2011. Two (2) floor drains (west floor drain and east floor drain) and the associated underground piping system that previously existed in the building were removed in 1992. Two dry wells were excavated inside the building at 2 Badger Avenue to remove the east and north dry wells. The footprint of a bailer used for paper recycling is located in the southwest corner of the building.

3.1.2 Meteorology

Throughout HRP's investigations, the weather varied due to seasonal temperature changes and precipitation. HRP collected daily outdoor temperature, rain fall measurements (as applicable), and wind direction readings each day that drilling activities were ongoing with a Davis Weather Station. However, technical difficulties were encountered with the weather station and all continuously collected weather data was lost or un-retrievable. Visual and thermal observations (i.e. ambient temperature readings) were noted and recorded in field notebooks approximately once an hour.

3.1.3 Surface Water Hydrology

No open bodies of water (e.g. ponds, wetlands, streams, etc.) or stormwater detention or retention ponds were observed on the site. As such, surface water investigations at the subject Site were not included in the scope of this RI.

3.1.4 Geology

Surficial Geology

Surficial geological materials were encountered throughout the Site and surrounding area to varying depths below grade. Regolith (overburden) was variable across the site, however, generally consisted of sand with some gravel. With increasing depth, gravel was increasingly evident, indicative of fluvial conditions under surface deposits. Bedrock was not encountered during this investigation. Boring logs prepared during this investigation are presented in Appendix C.

According to the Surficial Geology Map of New York – Lower Hudson Sheet (1989), the material underlying the Site is classified as outwash sand and gravel. Outwash sand and gravel is a pro glacially-derived fluvial deposition, consisting of fine to coarse gravel and sand that is well rounded and stratified. Outwash sand and gravel has a variable thickness, ranging from 2 to 20-meters. Outwash sand and gravel is deposited by proglacial action, away from the ice border, in this case, continental glaciers.

The bedrock beneath the Site is comprised of the Devonian Age Catskill Formation, which is comprised primarily of gray siltstones and shale and, in some places, sandstone. The bedrock groundwater is not used as a source of drinking water.

3.1.5 Subsurface Soils

Surficial soils encountered at the Site and surrounding areas were highly similar, however generally consisted of brown to black, silty to sandy to gravel, with trace silt and. According to the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), soils are the Site and surrounding area are classified as cut and fill lands (Cv).

During the installation of MW-11, significant staining, odor, and elevated PID readings were observed in soil samples between depths of 17 to 19 feet bgs. Based on the elevated PID readings in the boring location and the analytical results from the soil samples, there is evidence of petroleum products at this location.

3.1.6 Hydrogeology

Groundwater in Soil Borings

During the installation of on-site and off-site monitoring wells, groundwater was encountered at depths on average ranging from 9.5-feet to 12-feet below grade.

Groundwater in Monitoring Wells

Groundwater was observed in the on-site and off-site overburden wells at depths ranging from 9.86 to 12.01-feet below grade during the May 2011 monitoring well development. During the first round of on-site and off-site monitoring well sampling groundwater was observed at depths ranging from 6.90 to 19.55-feet below grade in the overburden wells. During the second round of monitoring well sampling, groundwater was observed at depths ranging from 5.69 to 18.15-feet below grade in the overburden wells.

The groundwater was observed with no odor, no sheen, and no free product.

HRP conducted a relative groundwater elevation survey between on-site and off-site wells on June 13, 2011 and October 4, 2011. The groundwater levels recorded during the event are as follows.

Overburden Well ID	Overburden Well Diameter	Relative Groundwater Elevation Depth Below Grade (feet)	
		June 13, 2011	October 4, 2011
HRP-MW-1	2”	9.67	8.97
HRP-MW-2	2”	10.79	9.98
HRP-MW-3	2”	11.20	10.21
HRP-MW-4	2”	10.86	9.87
HRP-MW-5	2”	12.09	11.09
DEC-06-MW-06 (MW-6)	2”	11.44	10.45
HRP-MW-7	2”	10.95	9.99
HRP-MW-9	2”	10.36	9.44
MW-10	2”	9.55	8.48
HRP-MW-11	2”	11.02	9.99
DEC-MW-21	2”	10.84	12.90
DEC-MW-24	2”	9.94	8.88
DEC-MW-25	2”	11.32	10.23
DEC-MW-27	2”	12.80	11.62
DEC-MW-30	2”	13.92	12.24
DEC-MW-32	2”	16.53	5.45
DEC-MW-33	2”	6.90	5.90
JS-TW-002	1”	9.08	8.04
JS-TW-003	1”	12.54	11.55

Overburden Well ID	Overburden Well Diameter	Relative Groundwater Elevation Depth Below Grade (feet)	
		June 13, 2011	October 4, 2011
JS-TW-007	1”	11.41	10.25
JS-TW-010	1”	11.63	10.83
JS-TW-012	1”	15.45	14.28
JS-TW-013	1”	15.02	13.88
JS-TW-014	1”	9.93	9.06
JS-TW-015	1”	12.70	11.51
JS-TW-016	1”	9.90	8.54
JS-TW-017	1”	9.23	7.87
JS-TW-018	1”	11.97	10.08
JS-TW-019	1”	12.44	11.35
JS-TW-020	1”	13.35	12.19
JS-TW-022	1”	16.34	15.21
JS-TW-023	1”	17.68	17.62
JS-TW-024	1”	14.41	13.36
JS-TW-026	1”	16.71	15.63
JS-TW-027	1”	19.55	18.08
JS-TW-028	1”	18.35	17.11
JS-TW-031	1”	7.26	6.21
JS-TW-032	1”	9.63	15.47

Groundwater exists beneath the Site at a depth of approximately 14 feet below ground surface (bgs). Based on the results of the groundwater elevation survey, and the two groundwater sampling events (June and October 2011), a groundwater divide exists within the bounds of the Site, oriented northeast to southwest. In general, groundwater flow north of the Norfolk Southern Railroad line (located north of 2 and 7 Badger Ave.) and west of Badger Avenue is the north-northwest towards Nanticoke Creek, a tributary of the Susquehanna River. The groundwater to the south of the Norfolk Southern railroad line and east of Badger Avenue, flows to the east and southeast towards the Susquehanna River. A New York State Department of Transportation (NYSDOT) dewatering sump is located at the Norfolk Southern Railroad underpass on North Nanticoke Avenue. This NYSDOT dewatering station influences the groundwater at the Site, giving the groundwater an east-northeast directionality. The dewatering sump ultimately discharges to the Nanticoke Creek where North Nanticoke Avenue cross the Nanticoke Creek. Groundwater flow diagrams are presented in Figure 6 for the on-site overburden wells and Figure 8A and Figure 8B for the off-site overburden wells.

3.1.7 Investigation Derived Waste

During the installation of the overburden wells, investigation derived waste (IDW) was generated, which consisted of soil, drill cuttings, and groundwater. The IDW was placed into 55-gallon drums and stored at the north end of Badger Avenue. During the length of the remedial investigation, approximately nine (9) drums of IDW were generated.

The IDW drums were profiled and then transported off-site using non-hazardous waste manifests. HRP subcontracted with TIER Environmental, LLC, 5745 Lincoln Hwy, Gap, PA to arrange for the removal and transportation of the IDW to properly permitted treatment, storage, or disposal facility. Based on the representative samples of cuttings and spoils that were analyzed it was determined that the materials would be classified as non-regulated material. The following drums were taken off-site and properly disposed:

Date Removed	Material Removed	Number of Drums	Total Quantity
8/22/2011	Non-regulated material (petroleum contaminated soil), Non RCRA/Non DOT	8	440 lbs.
8/22/2011	Non-regulated material (water), Non RCRA/Non DOT	1	55 gallons

The IDW was disposed of at Vextor Technology Inc. located at 955 West Smith Road in Medina, Ohio (EPA ID#OHD077772895).

3.1.8 Demography and Land Use

The Village of Endicott is located in Broome County, New York, which is approximately 7 miles east of the City of Binghamton and 50 miles north of Scranton, Pennsylvania. According to the United States census of 2000, there were 13,392 people, 5,996 households, and 3,015 families residing in the city. The population density was 4,156.1 people per square mile (1,603.2/km² [per square kilometer]). In addition, there were 6,686 housing units at an average density of 2,131.3 per square mile (1822.1/km²).

Land use at the site and in the surrounding area is mixed commercial and residential. The site is located along the east side of N. Nanticoke Avenue, in the Village of Endicott.

3.1.9 Ecology

A FWIA was not part of the original scope of work HRP was tasked with. See section 2.1.6 for more detail.

4.0 NATURE AND EXTENT OF CONTAMINATION

In order to identify the nature and extent of contamination and the on-site and off-site impacts from the Former Canada Dry Bottling facility (2 and 7 Badger Avenue), HRP submitted passive soil gas, groundwater, and soil vapor samples to a certified laboratory for analysis. The various media samples were analyzed for one or more of the following: volatile organic compounds (VOCs) (via USEPA 8260B), Nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), Total organic carbon (TOC) (via SM5310B), Alkalinity (via SM2320B), Chloride (via SM 23320B), Carbon Dioxide (c02) (via SM9040B), and hydrogen (via USEPA 9040B).

Chemtech Laboratories (Chemtech) of Mountainside, New Jersey provided the analytical laboratory services for the soil and groundwater analysis, Shaw Environmental and Infrastructure Inc. of Lawrenceville, New Jersey, a subcontractor to Chemtech, provided the analytical services for groundwater analysis, and Microbial Insights of Rockford, Tennessee provided laboratory services for the microbial count, while Beacon Environmental Services of Bel Air, Maryland provided the analytical laboratory services for the Passive Soil Vapor Gas analysis and Centek Laboratories, LLC., of Syracuse, New York provided the analytical laboratory services for the soil vapor analysis. Environmental Data Services, Inc. (EDS) of Williamsburg, Virginia, provided data validation services for this project. Data qualifiers and their definitions, as defined by EDS are included in Appendix B. The presentation of results, within this text, does not include data qualifiers. However, the data qualifiers are shown on the Tables included with this report. Detected chemical compounds in the various media sampled as part of the RI and the analytical results are presented in Tables 1 through 10. A general description of the various media sampled and analyzed is provided below.

- Passive soil gas samples (PSV-01 to PSV-39) were collected from shallow borings in the area surrounding the Former Canada Dry Bottling Facility site.

- Subsurface soil samples (HRP-MW-1[11'-12'], HRP-MW-2[11'-12'], HRP-MW-3[11'-12'], HRP-MW-4[11'-12'], HRP-MW-5[11'-12'], HRP-MW-7[11'-12'], HRP-MW-9[11'-12'], HRP-MW-11[11'-15'], and HRP-MW-11[18'-19']) were collected from in the area surrounding the Former Canada Dry Bottling Facility site.

- Surface soil sample (sump [Dry Well]) was collected from the sump located in the east basement in 7 Badger Ave.

- Two rounds of groundwater samples were collected from on-site overburden (HRP-MW-2 through HRP-MW-5, HRP-MW-11, DEC-06-MW-6[MW-6]) and off-site overburden (HRP-MW-1, HRP-MW-7, HRP-MW-9, HRP-MW-10, DEC-MW-21, DEC-MW-24, DEC-MW-25, DEC-MW-27, DEC-MW-30, DEC-MW-32, DEC-MW-33, JS-TW-002, JS-TW-003, JS-TW-007, JS-TW-010 , JS-TW-12 through JS-TW-014, JS-TW-016 through JS-TW-020, JS-TW-022 through JS-TW-024, JS-TW-026 through JS-TW-028, JS-TW-031, JS-TW-032, JS-TW-035 though JS-TW-037) monitoring wells.

- Microbial samples for DNA analysis were collected from on-site and off-site (DEC-06-MW-6 [MW-6], DEC-MW-21, DEC-MW-27, and DEC-MW-30).

- Sub-slab soil vapor samples (HRP-SSV-1[located by former floor drains in 2 Badger Avenue] through HRP-SSV-2 [located former tank #1], HRP-SSV-3 [ambient outdoor air], HRP-SSV-4 HRP [outside of the 7 Badger Avenue office], and-SSV-5 PS-5 [by sump location]) were collected from the basement floor of 2 and 7 Badger Avenue. One outdoor ambient air sample (PS-2) and two indoor ambient air samples (Indoor Air – 2 Badger Ave and Indoor air 7 Badger Ave.) were also collected at that time.

In order to determine if off-site migration of contaminants at the Former Canada Dry Bottling Facility site has occurred, this RI evaluated a broad range of parameters including volatile organic compounds (VOCs) (via USEPA 8260B), nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), total organic carbon (TOC) (via SM5310B), alkalinity (via SM2320B), chloride (via SM 23320B), carbon dioxide (c02) (via SM9040B), and hydrogen (via USEPA 9040B).

Compounds detected in the various media tested during this RI were compared to the following New York State guidance documents, criteria, and standards:

- Groundwater: NYSDEC Division of Water Technical and Operational Guidance Series (TOGS 1.1.1); Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations dated October 1993; Revised June 1998; ERRATA Sheet dated January 1999; and Addendum dated April 2000 (NYSDEC Class GA).

- NYSDEC Regulation, 6 NYCRR Subpart 375-6, "Remedial Program Soil Cleanup Objectives" which applies to the development and implementation of the remedial programs for soil and other media set forth in subparts 375-2 through 375-4 [Inactive Hazardous Waste Disposal Site Remedial Program, Brownfield Cleanup Program, and Environmental Restoration Program] and includes the soil cleanup objective tables developed pursuant to ECL 27-1415(6).

- NYSDOH Soil Vapor Guidance for Evaluating Soil Vapor Intrusion in the State of New York dated October 2006 prepared by New York State Department of Health, Center of Environmental Health, Bureau of Environmental Exposure Investigation.

4.1 Results of Remedial Investigation

This section presents the results of remedial investigation, both natural chemical components and contaminants detected in the following media:

4.1.1 Sources

Based on the results of the previous subsurface investigations at the Former Canada Dry Bottling Facility, the principal contaminant of concern at the site is trichloroethene (TCE), often a degradation product of Tetrachloroethene (PCE). The suspected source(s) of the TCE include the eastern and western floor drains formerly located in 2 Badger Avenue and the dry well (sump) in the east unfinished basement in 7 Badger Avenue. The results of this investigation revealed that on-site media impacted by TCE include soil, groundwater, and soil gas. Concentrations of TCE were detected in groundwater and soil vapor above media at levels exceeding NYSDEC and NYSDOH standards and guidance. Off-site media impacted by TCE includes groundwater and soil vapor exceeding NYSDEC standards and guidance.

As a result of the metals exceedances in the surface soil as presented in this RI, the dry well (sump) located in the eastern unfinished basement of 7 Badger Avenue was excavated as an Interim Remedial Measure (IRM) action. The September 24, 2012 Interim Remedial Action Addendum work plan was approved by the NYSDEC in October 2012. The three-inches concrete floor was removed on December 6, 2012 to expose the dry well below. The dry well was excavated to a depth of 4-feet below grade by approximately three-feet across by removing three rings of weathered cinderblocks and contaminated soil. The soil analytical sample results exceeded Part 375-6 SCO - Protection of Public Health Unrestricted criteria, therefore, additional soil was excavated on January 6, 2013. An additional foot from around the sides of the original excavation limits was removed, with fewer limited exceedances of 375-6 SCO - Protection of Public Health Unrestricted in the soil sample results. The NYSDEC determined that further excavation was not required. The excavation was backfilled and covered with 3-inches of concrete to return the area to pre-excavation conditions on February 13, 2013. The excavated soil was properly disposed of off-site at a NYS approved facility. For complete report of the IRM activities, refer to the Construction Completion Report (CCR), under separate cover.

4.1.2 Passive Soil Gas

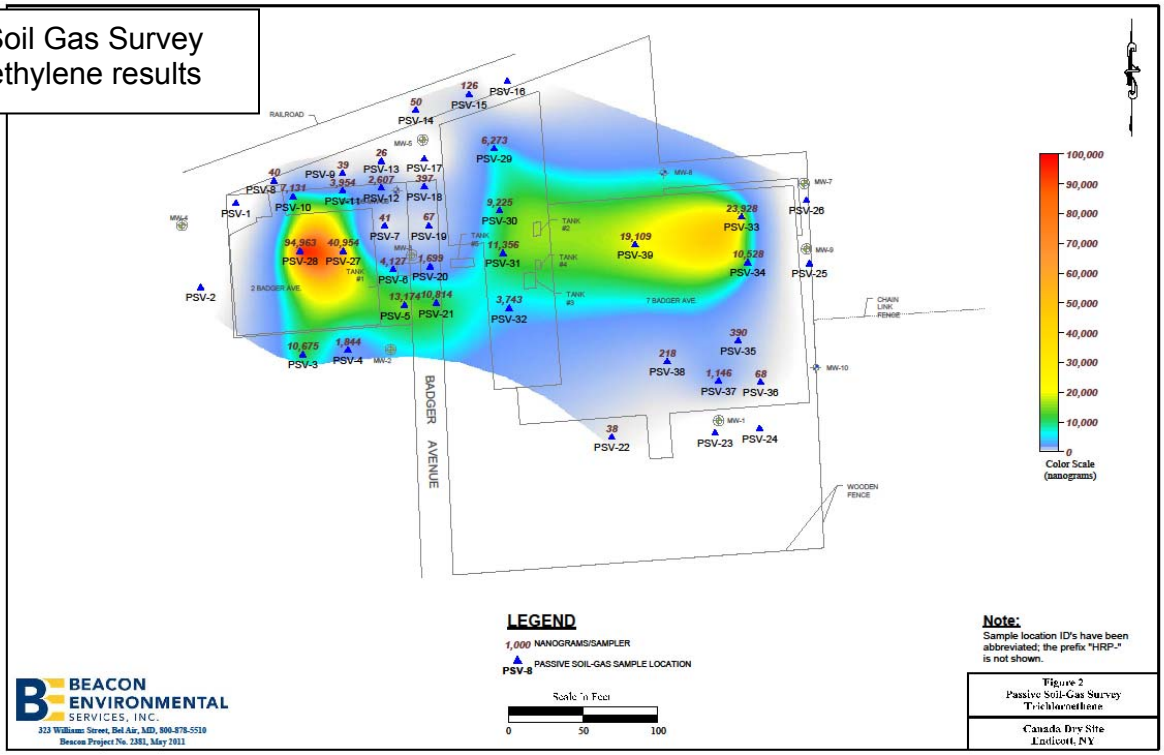
Sample Submittal

Thirty-nine (39) passive soil gas samples were collected at separate locations during the RI between April 18, 2011 and May 2, 2011. The samples were analyzed for the VOC target compound list by EPA method 8260B. The analytes are reported in nanograms and it is strictly a qualitative assessment. The full passive gas sampling report provided by Beacon Environmental Services, Inc., is included in Appendix E.

Findings

Trichloroethane (TCE) was detected in thirty-one (31) of the passive soil gas samples. Detection limits ranged from HRP-PSV-13 (26 ng [nanograms]) located at the northern portion of the paved area between the two buildings to HRP-PSV-28 (94,933 ng) located in to the eastern area of the main storage room in 2 Badger Avenue. Twenty-three additional VOCs were detected among the samples tested. On the next page, is a figure from the Beacon Environmental passive gas report that depicts the qualitative concentrations of Trichloroethane (TCE) that were detected during the investigation.

Passive Soil Gas Survey
Trichloroethylene results



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4.1.3 Passive Soil Gas

Soil Vapor Intrusion Evaluation

Soil vapor intrusion evaluation samples were collected December 10 and 11, 2011 and submitted for analytical testing from a total of eight (8) locations on-site and off-site (see Figure 3). The five (5) soil vapor samples (HRP-SSV-1, HRP-SSV-2, HRP-SSV-4 through HRP-SSV-6), the two (2) indoor ambient air samples (Indoor Air – 2 Badger Ave. and Indoor Air – 7 Badger Ave), and outdoor ambient air samples (HRP-SSV-3) samples were analyzed for VOCs via TO-15 analysis. It should be noted that the lab was unable to provide containers to collect a MS/MSD sample.

Findings

The results of the soil vapor analysis indicated that there were miscellaneous VOC compounds detected across the five soil vapor, two indoor air, and one outdoor air sampling locations. These include low levels of chlorinated compounds (commonly associated with solvent degreasing and dry cleaning), and non-chlorinated compounds (commonly associated with petroleum products).

Detected compounds include 1,1,1-trichloroethane, 1,1-dichlororethane, 1,1-dichloroethylene, 1,2-dichloroethane, 1,4-dichlorobenzene, 2-butanone (MEK), 2 hexanone (Methyl butly ketone/MBK), Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethene, Ethylbenzene, m&p Xylene, Methyl Butyl Ketone (MIBK), Methylene chloride, o-Xylene, Styrene, Tetrachloroethylene, Toluene, trans-1,2-Dichloroethylene, Trichloroethylene, Trichlorofluoromethane, Trichlorotrifluoroethane, Vinyl chloride, and Xylene-Total. Soil vapor results and a complete list of parameters are listed in Table 10.

Trichloroethylene (TCE) was detected in all sampling locations. The highest concentration of TCE was detected in HRP-SSV-1 at 70.0 µg/m^3. TCE was also exceeded guidance values at HRP-SSV-2 (18 µg/m^3) and at HRP-SSV-6 (15 µg/m^3). All other sample concentrations were below 0.5 µg/m^3 for TCE and well below the NYSDOH air guideline value (5 µg/m^3).

Methylene chloride was detected in all sampling locations. Three sampling location, HRP-SSV-1 (440 µg/m^3) HRP-SSV-2 (110 µg/m^3), and HRP-SSV-6 (96 µg/m^3).

Low levels of VOC compounds, typically <1.0 ug/m3 and not exceeding the NYSDOH air guideline values, were detected in the sub-slab soil vapor samples, indoor ambient air samples, and outdoor air sample collected from each sample location in the vicinity of the former Canada Dry site. At all sample locations, most compounds, including Trichloroethene and Methylene Chloride were detected at lower levels in the indoor ambient air samples than levels detected in the sub-slab soil vapor samples. In addition, the outdoor air sample had a TCE concentration of 0.47 µg/m^3, and the other VOC compounds detected were typically the lowest results from the sampling event.

The HRP-SSV-1 and HRP-SSV-2 locations were collected within the large warehouse area located to the north side of 2 Badger Ave. The HRP-SSV-1 and HRP-SSV-2 locations were also in the vicinity of the detection of TCE during the passive soil gas sampling investigation.

The soil vapor survey conducted yielded detection of compounds that include chlorinated and non-chlorinated compounds. Volatilized contamination from groundwater is expected to migrate as soil gas with in the soil horizon above the groundwater table. Migration of soil gas contaminated with VOCs is less

predictable than groundwater migration due to subsurface heterogeneities. The soil vapor results show a minimal to low impact from the Canada Dry site to the surrounding properties.

Summary

In summary, chlorinated compounds and non-chlorinated compounds were detected at low levels under 2 Badger Avenue and in the unfinished basement in 7 Badger Avenue. It would be difficult to identify a source area of contamination solely from the soil vapor samples analyzed. New York State does not currently have any standards, criteria or guidance values for concentrations of volatile chemicals in subsurface vapors.

The concentrations of soil vapor and indoor air for TCE were compared to the NYSDOH guidance for soil vapor intrusion, soil vapor/indoor air matrix 1 for TCE. Based on the current matrix, the action recommended according to NYSDOH regulations is to take no further action at all the sampling locations in 7 Badger Avenue and to monitor 2 Badger Avenue. It should be noted that the NYSDOH suggested vapor intrusion mitigation in 2007, however, based on current sample results, a mitigation system is not warranted at this time.

Therefore, the soil vapor results were reviewed as a whole in conjunction with results of other environmental sampling media including passive gas survey, subsurface soil results, and groundwater results. The findings indicate a soil vapor media has been impacted by chlorinated and non-chlorinated compounds.

DUSR

The analytical results were reviewed by Environmental Data Services, Inc., (EDS) for overall usability issues. The EDS Report (Appendix B) found no rejections of data in the sample results reviewed.

4.1.4 Soils

Subsurface Soils

Subsurface Sample Submittal

Nine (9) subsurface soil samples were collected at eight locations during the RI between May 24 and May 26, 2011. All nine (9) samples were analyzed for TCL VOCs (via USEPA 8260B). One sample, HRP-MW-11 (11' – 15' bgs) had a duplicate sample submitted. Sample results are presented below and on Figure 4.

Analytical Results - Subsurface Soils for VOCs

Miscellaneous VOCs were detected among the nine subsurface soil samples tested. There were two (2) exceedances, methylene chloride (HRP-MW-11

[11'-15' bgs] at 54 ug/kg [Micrograms per Kilogram] and 1,2,4-Trimethybenzene (HRP-MW-11 [17'-18' bgs] at 7,000 ug/kg were detected above the Unrestricted SCOs. There were no exceedances above NYSDEC Part 375 Restricted Residential, Commercial or Industrial Site Cleanup Objectives (SCOs). VOCs detected include cis-1,2-Dichloroethylene, Diethyl ether, methylcyclohexane, methylene chloride, trichloroethylene, Hexane, 1,2,4-Trimethylbenzene, 4-Isopropyltoluene/ p-Isopropyltoluene, cyclohexane, ethyl-, heptane, heptane, 2-methyl-, heptane, 3-methyl, hexane, 2-methyl-, hexane, 3-methyl, n-Butylbenzene, n-Nonane, n-Propylbenzene, octane, octane, 2.6-dimethyl-, sec-butylbenzene, 1-propene, 2-methyl-. VOC results for subsurface soil samples are listed in Table 1.

Summary – Subsurface soils

In summary, miscellaneous VOCs were detected among the nine samples analyzed. Two exceedances of NYSDEC Unrestricted SCOs were observed among the VOCs detected, however, no additional exceedances over SCOs were detected.

DUSR – Subsurface soils

The analytical results were reviewed by Environmental Data Services, Inc., (EDS) for overall usability issues. The EDS Report (Appendix B) found data that was qualified for additional deficiencies, but is acceptable for the intended purpose.

Surface Soil

Surface Sample Submittal

One (1) surface soil sample (Dry well [sump]) was collected at the sump (east floor drain - 7 Badger Ave.) located in the eastern basement area location during the RI on May 25, 2011. The sample was analyzed for TCL VOCs, SVOC's, TAL metals, and PCBs. Sample results are presented below.

Analytical Results - Surface Soil for VOCs

Four (4) VOCs were detected in the one surface soil samples tested. There were no exceedances above NYSDEC Part 375 Unrestricted, Restricted Residential, Commercial or Industrial SCOs. VOCs detected include cis-1,2-Dichloroethylene, Diethyl ether, methylene chloride, and trichloroethylene. VOC results for surface soil samples are listed in Table 1.

Analytical Results - Surface Soil for SVOCs

Miscellaneous SVOCs were detected among the one surface soil samples tested. Of the twenty-two SVOCs detected, there were no exceedances above the Unrestricted, Restricted Residential, Commercial or Industrial SCOs. SVOC results for surface soil samples are listed in Table 2.

Analytical Results - Surface Soil for Metals

A total of twenty-three metals were detected. There were five (5) exceedances above NYSDEC Part 375 Unrestricted SCO cooper (238 mg/kg), mercury (0.774 mg/kg), nickel (117 mg/kg), selenium (8.38 mg/kg) and silver (3.02 mg/kg). There were two exceedances over Restricted Residential SCOs, cadmium (10.8 mg/kg) and zinc (2,210 mg/kg), and two exceedence over Residential SCO, total chromium (124 mg/kg) and manganese (2,330 mg/kg). There were no exceedances above the Commercial or Industrial SCOs. The metals detected included Total Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, total Chromium, Cobalt, Copper, total cyanide, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Vandium and Zinc. Metal results for surface soil samples collected are listed in Table 3.

Analytical Results - Surface Soil for PCBs

A total of two were detected. There was one (1) exceedance above Unrestricted SCO of PCBs Total (0.72 mg/kg). There were no exceedances above the Commercial or Industrial SCOs. The PCBs detected included PCB-1260 and PCB's total. PCBs results for surface soil samples collected are listed in Table 4.

Summary – Surface soils

In summary, four VOCs, twenty-two SVOCs, twenty-three metals, and two PCBs were detected among the sample analyzed. No exceedances of NYSDEC SCOs were observed among the VOCs detected. In addition, there were five (5) SVOCs and one PCB exceedances above Unrestricted SCO, two VOC exceedances over Restricted Residential SCOs, and two VOC exceedances over Residential SCO, There were no exceedances of VOCs, SVOCs, or PCBs above the Commercial or Industrial SCOs.

DUSR – Surface soils

The analytical results were reviewed by Environmental Data Services, Inc., (EDS) for overall usability issues. The EDS Report (Appendix B) found minor rejections of data in various samples due to low LCS percent recovery. The rejection included the rejection of 2-Benzaldehyde in one samples. In addition, additional data was qualified for additional deficiencies, but is acceptable for the intended purpose.

4.1.5 Groundwater-First Sampling Round

Groundwater (GW) – first round (June 2011) - sample submittal

For this investigation, two rounds of groundwater samples were collected and submitted for analysis form the on-site and off-site monitoring wells. This section discusses the first round of groundwater sampling from the on-site and off-site

monitoring wells that was conducted in June 2011. The second round of groundwater sampling is described in the next section of this report and presented on Figure 7.

Thirty-six (36) groundwater samples were collected between June 14 through 16, 2011, from the eight (8) installed groundwater monitoring wells (HRP-MW-1 through HRP-MW-5, HRP-MW-7, HRP-MW-9 and HRP-MW-11), two (2) existing groundwater monitoring wells (06-DEC-MW-06 [MW-6] and MW-10), and twenty-six (26) existing off-site permanent monitoring wells (DEC-MW-21, DEC-MW-24, DEC-MW-25, DEC-MW-27, DEC-MW-30, DEC-MW-32, DEC-MW-33, JS-TW-002, JS-TW-003, JS-TW-006, JS-TW-007, JS-TW-010 , JS-TW-12 through JS-TW-017, JS-TW-019. JS-TW-020, JS-TW-022 through JS-TW-024, and JS-TW-026 through JS-TW-028). All the groundwater samples were analyzed for TCL VOCs (via USEPA 8260B). In addition, nine (DEC-06-MW-06 [MW-6], DEC-MW-21, DEC-MW-27, DEC-MW-30, JS-TW-13, JS-TW-015, JS-TW-023, JS-TW-024, and JS-TW-028) monitoring wells were sampled nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), total organic carbon (TOC) (via SM5310B), alkalinity (via SM2320B), chloride (via SM 23320B), carbon dioxide (c02) (via SM9040B), and hydrogen (via USEPA 9040B). in addition to being sampled for VOCs. Two duplicate samples and two matrix spike/matrix spike duplicates were also submitted with the groundwater samples. The results for the analysis of the groundwater samples collected from monitoring wells are summarized below.

Analytical Results – GW first round (June 2011) for VOCs

There were miscellaneous VOCs detected among the thirty-six groundwater samples tested. Of the twelve VOCs detected, only four exceeded their respective NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) Ambient Water Quality Standards and Guidance Value. The four VOCs that exceeded their respective TOGS guidance value included trichloroethylene, cis-1,2-Dichloroethylene, vinyl chloride, and 1,1,1-Trichloroethane. All other VOCs detected did not exceed their respective TOGS guidance values. Other VOCs detected include 1,1,2-Trichlorotrifluoroethane (freon 113), 1,1-Dichloroethane, 1,1-Dichloroethylene, benzene, bromodichloromethane, chloroform, cis-1,2-Dichloroethylene, Dibromochloromethane, methylcyclohexane, trichloroethylene, and vinyl chloride. The VOC results for the groundwater samples are listed in Table 5 and on Figures 5, 7, and 9.

Analytical Results – GW first round (June 2011) for Miscellaneous Parameters

Miscellaneous detections were observed in the nine groundwater samples (DEC-06-MW-06 [MW-6], DEC-MW-21, DEC-MW-27, DEC-MW-30, JS-TW-13, JS-TW-015, JS-TW-023, JS-TW-024, and JS-TW-028) was tested for nitrate, sulfate, sulfide, Iron (II), methane, pH, Total organic carbon (TOC), Alkalinity, Chloride, Carbon Dioxide (c02), and hydrogen. A concentrations detected were well below the TOGS value. The miscellaneous constituent results for this groundwater sample are listed in Table 7.

Summary

In summary, among the forty-one groundwater samples tested, four VOCs (trichloroethylene, cis-1,2-Dichloroethylene, vinyl chloride, and 1,1,1-Trichloroethane) were detected at levels that exceed the NYSDEC TOGS groundwater standards value for these parameters. There were no other exceedances above the TOGS values in submitted groundwater samples.

DUSR

The analytical results were reviewed by Environmental Data Services, Inc., (EDS) for overall usability issues. The EDS Report (Appendix B) found no rejections of data. Overall the data is acceptable for the intended purpose, however, data was qualified for various reasons.

4.1.6 Groundwater-Second Sampling Round

Groundwater –Second Round (October 2011) - Sample Submittal

Thirty-eight (38) groundwater samples were collected October 4 through 6, 2011 from the on-site and off-site monitoring wells discussed and submitted for analytical testing. All the groundwater samples were analyzed for TCL VOCs (via USEPA 8260). In addition, nine (DEC-06-MW-06 [MW-6], DEC-MW-21, DEC-MW-27, DEC-MW-30, JS-TW-13, JS-TW-015, JS-TW-023, JS-TW-024, and JS-TW-028) monitoring wells were sampled Nitrate and sulfate (via USEPA 300), sulfide and Iron (II) (via SW-846 Method 9034), methane (via HACH 8146), pH (via HSK-175), Total organic carbon (TOC) (via SM5310B), Alkalinity (via SM2320B), Chloride (via SM 23320B), Carbon Dioxide (c02) (via SM9040B), and hydrogen (via USEPA 9040B) in addition to being sampled for VOCs. Of note, groundwater samples were collected from monitoring well JS-TW-006 due to the well head being obstructed. A duplicate sample and a matrix spike/matrix spike duplicate were also submitted with the groundwater samples. The results for the analysis of the groundwater samples collected from monitoring wells are summarized below. The groundwater samples collected during the second round of monitoring well sampling are summarized below presented in Table 9 and on Figures 5, 7, and 10.

Analytical Results – GW second round (Oct 2011) for VOCs

There were miscellaneous VOCs detected among the thirty-eight groundwater samples tested. Of the seventeen VOCs detected, only four exceeded their respective NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) Ambient Water Quality Standards and Guidance Value. The four VOCs that exceeded their respective TOGS guidance value included trichloroethylene, cis-1,2-Dichloroethylene, vinyl chloride, and 1,1,1-Trichloroethane. All other VOCs detected did not exceed their respective TOGS guidance values. Other VOCs detected include 1,1,1,-Trichloroethane, 1,1,2-Trichlorotrifluoroethane (freon 113), 1,1-Dichloroethane, 1,1-Dichloroethylene, acetone, bromodichloromethane, Bromoform, chloroform, cis-1,2-

Dichloroethylene, cyclohexane, Dibromochloromethane, methylcyclohexane, trans-1,2-Dichloroethylene, trichloroethylene, vinyl chloride, Methoxyacetic acid, butyl ester, and tert-Butanol. The VOC results for the groundwater samples are listed in Table 8 and on Figures 5, 7, and 10

Analytical Results – GW first round (Oct 2011) for Miscellaneous Parameters

Miscellaneous detections were observed in the nine groundwater samples (DEC-06-MW-06 [MW-6], DEC-MW-21, DEC-MW-27, DEC-MW-30, JS-TW-13, JS-TW-015, JS-TW-023, JS-TW-024, and JS-TW-028) was tested for nitrate, sulfate, sulfide, Iron (II), methane, pH, Total organic carbon (TOC), Alkalinity, Chloride, Carbon Dioxide ($C0_2$), and hydrogen concentrations detected were well below their respective NYSDEC TOGS value. The miscellaneous constituent results for this groundwater sample are listed in Table 9.

Summary

In summary, among the thirty-eight groundwater samples tested, four VOCs (trichloroethylene, cis-1,2-Dichloroethylene, vinyl chloride, and 1,1,1-Trichloroethane) were detected at levels that exceed the NYSDEC TOGS groundwater standards for these parameters. There were no other exceedances above the TOGS values in submitted groundwater samples.

Groundwater exists beneath the Site at a depth of approximately 14 feet below ground surface (bgs). Based on the results of the groundwater elevation survey, and the two groundwater sampling events (June and October 2011), a groundwater divide exists within the area of the Site bounds, oriented northeast to southwest. In general, groundwater flow north of the Norfolk Southern Railroad line (located north of 2 and 7 Badger Ave.) and west of Badger Avenue is to the north-northwest towards Nanticoke Creek, a tributary of the Susquehanna River. The groundwater in the area south of the Norfolk Southern railroad line and east of Badger Avenue flows to the east and southeast towards the Susquehanna River.

The results of the historical and current sampling of the area wide monitoring well network indicate that there are two distinct plumes of TCE detected in the study area bounds, originally established by the June St. Plume Delineation (Site No. 704051). One groundwater plume has been historically observed north of the Norfolk Southern railroad line and west of Duane Avenue while a second groundwater plume has been found to originate on the former Canada Dry site flowing to the east-southeast. These contours are depicted on Figures 6 and 6A. As seen in the figures, the TCE groundwater plume detected in 2007 and 2008 has migrated with groundwater flow on each side of the groundwater divide to the northwest and to the east-southeast. Observations of historic groundwater contours and TCE concentrations show that this divide has persisted over time and indicates that the TCE contamination present to the northwest of Badger Avenue is a result of an additional source located at the intersection of Maple St. and Duane Ave. The second plume, upon which this remedial investigation report focuses and attributable to the former Canada Dry Bottling facility, originates on the 2 Badger

Ave. parcel and follows groundwater to the southeast in the natural flow direction and also to the east and northeast due to the influence of the NYSDOT sump.

DUSR

The analytical results were reviewed by Environmental Data Services, Inc., (EDS) for overall usability issues. The EDS Report (Appendix B) found no rejections of data. Overall the data is acceptable for the intended purpose, however, data was qualified for various reasons.

4.1.7 Surface Water and Sediments

No open bodies of water or water detention/retention ponds were observed on the site. Therefore, no surface water investigations were conducted as part of this RI.

4.1.8 Air

A Community Air Monitoring Plan (CAMP) was included in the scope of work as presented and approved in the RI Work Plan. Real-time monitoring was conducted for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when ground intrusive activities were being conducted, including soil borings and monitoring wells installation. Its intent was to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

VOCs were monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during intrusive work or as otherwise specified. Upwind concentrations were measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work was performed using a Mini Rae 2000 photo ionization detector (PID) equipped with a 10.2 eV bulb. The PID was routinely calibrated as per manufacturer's instructions for the contaminant(s) of concern or for an appropriate surrogate. The PID was placed in a weather proof box that sat on a tripod approximately four feet off the ground. The downwind PID readings did not exceed 5 ppm during the field investigations or IRM activities.

Particulate concentrations were monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations during intrusive work. The particulate monitoring was performed using a Quest Dust Trak 8520, a real-time monitor capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The Dust Trak was routinely zero (0) checked and was placed in a

weather proof box that sat on a tripod approximately four feet off the ground. The equipment was equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration was visually assessed during all work activities. The particulate readings were below 100 mcg/m³ during all field investigations and IRM activities. All tables for VOCs and particulates concentration readings can be found in the CAMP.

5.0 CONTAMINANT FATE AND TRANSPORT

This section discusses the mechanisms that may affect migration of contaminants at the Site and Study Area, and the chemical behavioral characteristics of the compounds detected, including persistence of these chemical substances. This information is compared with the Site specific data and observations to assist in assessing the extent of migration that has occurred.

5.1 Potential Routes of Migration

5.1.1 Soil Vapor

Volatilized contamination from groundwater is expected to migrate in soil vapor above the groundwater table. The soil vapor survey conducted within the site area produced detected compounds that include 1,1,1-trichloroethane, 1,1-dichlororethane, 1,1-dichloroethylene, 1,2-Dichloroethane, 1,4-dichloroethane, 2-butanone (MEK), 2 hexanone (Methyl butyl ketone/MBK), Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethene, Ethylbenzene, m&p Xylene, Methyl Butyl Ketone (MIBK), Methylene chloride, o-Xylene, Styrene, Tetrachloroethylene, Toluene, trans-1,2-Dichloroethylene, Trichloroethylene, Trichlorofluoromethane, Trichlorotrifluoroethane, Vinyl chloride, and Xylene-Total.

Migration of soil gas contaminated with VOCs is possible but is less predictable than groundwater migration due to subsurface heterogeneities and subsurface structures (e.g., utilities, building foundations, roundways, underground streams). The VOC, TCE and its chemical breakdown products detected in this on-site and off-site remedial investigation can be attributed to the former site operations of Former Canada Dry Bottling Facility. The petroleum compounds detected could be attributed to possible historical and current petroleum releases from USTs in the area.

Low levels of VOCs, including non-chlorinated and chlorinated compounds, were detected in the soil vapor samples collected. Migration of soil vapor contaminated with VOCs could occur and is less predictable than groundwater migration due to subsurface heterogeneities and subsurface structures (e.g., utilities, building foundations). The site is currently developed, and significant vapors could accumulate in enclosed areas such as basements, crawl spaces, or narrow/deep excavations.

5.1.2 Groundwater

HRP collected and analyzed groundwater samples from the thirty-nine installed monitoring wells on-site and off-site (two rounds of sampling). Based on the analytical results, there were four (4) VOCs detected during each round of groundwater sampling which exceeded the NYSDEC TOGS guidance values. In addition, several metals were detected above NYSDEC TOGS guidance values.

Primary route of contaminant migration within the site is via groundwater. Due to the groundwater divide that exists at the Former Canada Dry Site (see Figure 6 and figure 6A) overburden groundwater generally flows in west to northwest and an east by south east direction. A source of petroleum contamination was noted in previous on-site remedial investigations at the Former Canada Dry site. During the 1999 remedial investigations, TCE was detected in the soil and groundwater on-site at levels that exceed standards. Due to the historical high levels of TCE in the on-site groundwater and TCE being detected in on-site and off-site monitoring wells it has been shown that there is a high potential for groundwater contamination to migrate from the site to the surrounding properties and potentially impact additional receptors. Refer to Section 1.2.3 Previous Investigations for a description of soil and groundwater analytical results.

5.1.3 Soil

On-site and off-site subsurface soil samples were collected at nine (9) locations, and submitted for analysis. Twenty-two (22) VOCs were detected among the nine (9) samples analyzed. For the on-site subsurface soil sampling locations, two (2) VOCs (methylene chloride and trichloroethylene) were detected at concentrations exceeding Unrestricted Subpart 375-6 SCOs.

In addition, the soil sample from the sump (dry well) at 7 Badger Avenue sample was also analyzed for total metals. There were ten metals that had detections above the Unrestricted, Residential, and Restricted Residential Subpart 375-6 SCOs. However, only one metal, Cadmium, was detected above the Commercial Subpart 375-6 SCO.

The on-site investigation area consisted of paved asphalt, sidewalks and some small landscaped areas. Due to the impervious nature of the on-site investigation area, the majority of the storm water will via sheet flow discharge to the municipal storm water drains with the road areas. Therefore, due to the impervious nature of the site and low detections of VOCs above NYSDEC SCOs, there is little to no potential for the subsurface soil contaminants to migrate off-site in the unsaturated zone.

5.2 Contaminant Persistence

In general, chemical compounds within a given chemical class will behave similarly in the environment. However, significant differences in behavior of chemical compounds may be observed within a chemical class. Their behavior is dependent on their physical and chemical properties as well as environmental conditions, such as the presence of bacteria, pH variations, and oxidation potential (Eh) conditions. Certain metals detected above in applicable TOGS values in the groundwater samples, are expected to be persistent on site because of their chemical nature or natural occurrence in the area.

5.3 Contaminant Migration

5.3.1 Factors Affecting Contaminant Migration

Factors affecting contaminant migration for the media of importance (i.e. soil vapor and groundwater) is the NYSDOT pumping station associated with the North Nanticoke Avenue located to the east, north east of the 7 Badger Avenue off-site. The NYSDOT sump and associated pumping station has a radius of influence that effectively de-waters an area that includes the eastern limits of the off-site area. Additional factors affecting contaminant migration for the media of importance includes future development or alteration of the on-site and off-site properties and the potential for vapors to migrate to the sub-slab area.

5.3.2 Modeling Methods and Results

Modeling methods were not included in the scope of this RI.

6.0 EXPOSURE ASSESSMENT

A qualitative baseline exposure assessment was completed based on the information presented in Sections 1.0 through 5.0. Generally, the human health evaluation involves an exposure assessment, an evaluation of Site occurrence, hazard identification and comparison to New York State risk-based criteria.

6.1 Qualitative Public Exposure Assessment

This Section discusses the exposure assessment, an evaluation of Site occurrence and a comparison to State criteria related to potential impacts to human health. It should be noted that several conservative assumptions were used in completing this assessment; and, thus, the risks identified are expected to be "worse case scenarios".

6.1.1 Exposure Assessment

This exposure assessment discusses potential migration routes by which chemicals in the environment may be able to reach human receptors. This discussion is based on current and hypothetical future site conditions at the Site and investigation area, which is assumed to be similar to the current conditions.

A complete exposure pathway must exist for an exposure to occur to the population from chemicals at the Site. A complete exposure pathway includes the following:

1. a source and mechanism of chemical release;
2. a transport medium;
3. a point of potential human contact with the contaminated medium;
4. an exposure route at the contact point; and
5. receptor population.

The Sections below focus primarily on identifying potential points of human contact with contaminated media and exposure pathways identified for the Site and investigation area.

Overburden Groundwater

Exposure to overburden groundwater, if used as a drinking water supply, includes ingestion, dermal contact and inhalation of vapors.

At the time of investigation, the Site vicinity utilized municipal water for drinking water. Therefore, a possible potential threat would occur during future renovations, demolitions, redevelopment or utility repair within the site, which may require excavation and dewatering, and workers may be exposed to groundwater. A second possible exposure could occur while visitors or trespassers were to come onsite during future construction activities and were exposed to the groundwater. The likelihood for these exposure scenarios to occur is considered low.

Surface Water

No surface water is present on the subject Site. Exposure to surface water is unlikely, and the overall likelihood for exposure to surface water is considered minimal at the subject Site.

Potential Exposure to Soil Vapors

When volatile organics are detected within soil gas, soils and/or groundwater it creates a potential exposure to building occupants when vapors accumulate beneath structures or have impacted indoor air quality within a structure.

The Site is currently developed and there is a potential that vapors could possibly accumulate in enclosed areas such as basements, crawl spaces, etc. of the building located at 2 Badger Avenue or the surrounding buildings. Based on the off-site investigation at 7 Badger Avenue, there is also potential that vapors could possibly accumulate in enclosed areas such as basements, crawl spaces, etc.

Subsurface and Surface Soils

Potential routes of exposure to subsurface and surface soils include dermal contact, ingestion and inhalation of soil particulates. Exposure through dermal contact and ingestion is minimal due to the presence of asphalt and concrete roads and sidewalks, as well as buildings over the entire Site area. Exposure through inhalation is also considered low since no intrusive activities occur on-site that disturbs soils and generates inhalable dust. At present, the exposure to subsurface soils is presently minimal since the Site is developed, and soils are covered.

During future construction activities, specifically disturbance of soils, the potential for exposures to soils would increase for on-site workers, utility workers, trespassers and visitors.

6.1.2 Hazard Identification and Comparison to State Risk-Based Criteria

The potential Site hazards due to human exposures were reviewed based on chemical-specific health exposure based criteria. State values believed potentially applicable to the medium or pathway were examined (see Tables 1 through 10).

Subsurface Soils

The State risk-based criteria used for the Site subsurface and surface soils include the following:

- 6 NYCRR Part 375-6: Remedial Program Soil Cleanup Objectives, Technical Support Document (TSD). "Technical Support Document" is also known as the "New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document" dated September

2006. This document presents and discusses the assumptions, exposure scenarios, receptors, rationale, and calculations utilized by the Department and the New York State Department of Health to develop the soil cleanup objectives in ECL 27-1415(6).

- NYSDEC, Division of Environmental Remediation, DER-10, "Technical Guidance For Site Investigation and Remediation", dated May 2010.

All Soil analytical results for this investigation were compared against Unrestricted, Restricted Residential, Commercial and Industrial Soil Cleanup Objectives (SCOs). A comparison of soil risk-based criteria and investigation occurrence information compiled from analytical testing results of subsurface soil samples collected from the investigation is included on Tables 1 through 4.

From the nine (9) subsurface soil samples collected miscellaneous VOCs were detected at low levels that did not exceed the Unrestricted, Restricted Residential, Commercial, or Industrial SCOs. In addition, two (2) VOCs were detected that exceeded the Unrestricted SCO, but did not exceed Restricted Residential, Commercial, or Industrial SCOs.

The former bottling facility site is zoned GB- General Commercial. The properties in the June Street area are zoned as Suburban Single-Family:

The definitions of each zoned area according to Village of Endicott municipal code is as follows:

- General Commercial. The purpose of the General Commercial District is to encourage commercial development and to support the goals and objectives contained in the Unified Comprehensive Plan. The GC District is established to provide areas for intensive commercial activities that primarily depend upon a large volume of vehicular traffic and serve the daily shopping needs of the community-at-large and surrounding areas. This district encourages the application of site design and buffering techniques to mitigate the impacts of commercial operations and traffic on adjacent uses and the traveling public.

- Suburban Single-Family. The purpose of the Suburban Single-Family District is to preserve the traditional village neighborhoods within the Villages and the Town and to support the goals and objectives contained in the Unified Comprehensive Plan. These neighborhoods are generally characterized by owner-occupied, single-family, detached homes placed on lots 9,000 square feet in size or larger. The SSF District is established to maintain the character and lifestyle offered by these single-family neighborhoods. The SSF District is intended for areas with access to public water and sanitary sewer service.

Based on the results from the subsurface soils sampling and the fact that only two of the analytical results exceeded Unrestricted Part 375-6 soil cleanup objectives for VOCs, there would be no restrictions on the use of the surrounding properties investigated as defined in DER-10.

Surface Soil

Surface soil samples were not collected or analyzed as part of this remedial investigation. Therefore, surface soil was not compared to State risk-based criteria and human health risks associated with exposure were not examined.

Groundwater

Human health risks associated with exposure to groundwater were examined by considering both:

- Use of the overburden groundwater as a drinking water source; and
- Potential exposure to overburden groundwater at a point of contact, by construction or utility workers.

The State criteria used for human health risks associated with use of overburden groundwater at the Site and surrounding areas as drinking water source includes the following.

- NYSDEC Division of Water Technical and Operational Guidance Series (TOGS 1.1.1)

Four (4) VOCs (1,1,1-tri chloroethane, trichloroethylene, cis-1,2-dichloroethylene, and vinyl chloride) were detected among the 39 (38 for the second sampling event) groundwater samples tested at levels that exceeded the NYSDEC TOGS value for their respective parameters. Nine (9) samples were selected and submitted for additional analysis for metals, and miscellaneous analytes. There were exceedances above the TOGS values in submitted groundwater samples, for metals and miscellaneous analytes.

The potential for exposure due to use of overburden groundwater as a drinking water source is considered minimal. The Site is currently connected to municipal water, and is expected to be in the future. The Site does not use the overburden groundwater for cooling, dewatering, or irrigation purposes. However in the event those construction activities are carried out onsite, construction or utility workers may have minimal contact of the overburden groundwater.

Volatile Vapors near the Former Canada Dry Bottling Facility and in the Investigation Surrounding Area

Human health risks associated with exposure to soil vapor intrusion were examined by the utilizing the NYSDOH's guidance for evaluating soil vapor intrusion in the State of New York, dated October 2006.

The concentrations of soil vapor and indoor air for TCE were compared to the NYSDOH guidance for soil vapor intrusion, soil vapor/indoor air matrix 1 for TCE. Based on this matrix, the action recommended by the NYSDOH is to take no further action at all the sampling locations in 2 and 7 Badger Avenue.

7.0 CONCLUSIONS, DATA LIMITATIONS, AND RECOMMEDATIONS

The purpose of this remedial investigation is to identify and define the extent of hazardous substances as well as assess the lateral and vertical extent of contamination at the site. This investigation identified contamination in each medium shown below which were assessed at levels exceeding applicable criteria.

7.1 Conclusions

7.1.1 Nature and Extent of Contamination

- Based on Site investigation findings, the nature and extent of the contamination on-site and off-site the area encompassing 7 Badger Avenue contamination has been determined to include trichloroethylene and its breakdown products in the groundwater throughout the site. Based on the results of this investigation, the groundwater at 2 Badger Avenue has been impacted on site due to past operations.

- There are two distinct plumes of TCE detected in the study area bounds, one groundwater plume has been observed north of the Norfolk Southern railroad line and west of Duane Avenue, that flows north-northwest. A second groundwater plume has been found to originate on the former Canada Dry site flowing to the east-northeast and is influenced a New York State Department of Transportation (NYSDOT) dewatering sump is located at the Norfolk Southern Railroad underpass on North Nanticoke Avenue.

- Town of Union utilities service the general area northwest of the Norfolk Southern railroad, while the Village of Endicott utilities service the area southeast of the Norfolk Southern railroad. There are two distinct set of utilities in the whole RI area. Utilities provide a preferential pathway for contamination.

On-site (2 Badger Avenue)

- Based on the findings to date, there is TCE contamination of the groundwater on-site from historic activities. The groundwater contamination plume is flowing east-northeast towards the NYSDOT dewatering sump located at the Norfolk Southern Railroad underpass on North Nanticoke Avenue.
- Groundwater exists beneath the Site at a depth of approximately 14 feet below ground surface (bgs). Based on the results of the RI, a groundwater divide exists within the bounds of the Site, oriented northeast to southwest direction.

- Based on the findings to date, of the nine (9) subsurface soils analyzed for VOCs, only two (2) exceedances (methylene chloride and 1,2,4-Trimethylbenzene) were detected at HRP-MW-11 and reported above Unrestricted Subpart 375-6 SCOs. These two VOCs are not present above Residential values listed for Subpart 375-6 SCOs and therefore meet the proposed SCO's for the area and the use definitions in DER-10.

- During the installation of HRP-MW-11 significant staining, odor, and elevated PID readings were observed in soil samples between depths of 18 to 19 feet bgs. In addition, elevated PID readings were observed from 18 to 19 feet bgs in the same boring. Based on the sheen noted on the groundwater in the boring location and the analytical results from the soil samples, there is evidence of petroleum products at this location.

- Based on the soil boring installations on-site, the analytical soil sample results from the saturated zone at HRP-MW-11 (inside the building at 2 Badger Avenue, between the two [2] former floor drains), exceed Part 375 SCO for Protection of Public Heath, unrestricted use for methylene chloride (11-15 feet bgs) and 1,2,4-trimethylbenzene (18-19 feet bgs).

- Three (3) VOCs (cis-1,2-Dichloroethylene, vinyl chloride, and trichloroethylene) were detected among the three (3) groundwater samples analyzed from the on-site groundwater monitoring wells. The concentrations of VOCs in the aqueous samples located in the western portion of offsite marginally exceed the TOGS value for these parameters; however the results from the wells to the east of the Site are within TOGS values for submitted groundwater samples.

- One (1) groundwater sample was selected and submitted for analysis of TAL metals and miscellaneous parameters. There were no exceedances above the TOGS values in submitted groundwater sample.

- A passive soil gas survey was completed. The samples were analyzed for the VOC target compound list by EPA method 8260B. Trichloroethane (TCE) was detected in thirty-one (31) of the thirty-nine (39) passive soil gas samples. Detection limits ranged from HRP-PSV-13 (26 ng [nanograms]) located at the northern portion of the paved area between the two buildings to HRP-PSV-28 (94,933 ng) located in to the eastern area of the main storage room in 2 Badger Avenue.

- Based on the data generated from the site investigation, there are two (2) source areas at the Site that appear to have historically contributed to the current on-site contamination. These source areas are the two (2) former on-site floor drains and associated sumps within 2 Badger Avenue.

Off-site (7 Badger Avenue and June Street Plume Delineation Area)

- Based on the findings to date, of the seven (7) subsurface soils analyzed for volatile organic compounds, with no exceedances reported above 375-6 Unrestricted SCO - Protection of Public Health, and therefore meet the proposed SCO's for the area, and the use definitions in DER-10.

- Based on the soil sample, approximately two feet below the sump located in the eastern basement of 7 Badger Avenue, metals (total chromium, lead, and manganese) and PCBs were detected above Subpart 375-6 SCOs for Protection of Public Heath, restricted residential use, but did not exceed Commercial use. It should be noted that one (1) metal (Cadmium) did exceed Subpart Part 375 SCO for Protection of Public Heath, commercial use, but not industrial use standards.

- Four (4) VOCs (cis-1,2-Dichloroethylene, Diethyl ether, methylene chloride, and trichloroethylene) were detected among the thirty-six (36) groundwater samples analyzed from the thirty-six (36) off-site groundwater monitoring wells. The concentrations of VOCs in the aqueous samples located in the western portion of offsite marginally exceed the TOGS value for these parameters; however the results from the wells to the east of the Site are within TOGS values for submitted groundwater samples.

- Eight (8) ground water samples were selected and submitted for analysis of TAL metals and miscellaneous parameters. There were no exceedances above the TOGS values in submitted groundwater samples.

- The results of the soil vapor sample analysis showed that there were a total of twenty-nine (29) VOC compounds detected across the five (5) soil vapor (SV), two (2) indoor air (AA), and one (1) outdoor air (OA) sampling locations. Of these analyzed samples, TCE and methyl chloride were noted in all of the nine (9) soil vapor samples. As a whole, low levels of chlorinated compounds (commonly associated with solvent degreasing and dry cleaning), and non-chlorinated compounds (commonly associated with petroleum products) were detected. Based on all the results from the soil vapor investigation, chlorinated compounds and non-chlorinated compounds were detected at low levels to the west and east of the Site.

- A passive soil gas survey was completed. The samples were analyzed for the VOC target compound list by EPA method 8260B. Trichloroethane (TCE) was detected in the passive soil gas samples collected and analyzed at 7 Badger Avenue. The comparison of the passive gas results revealed a higher concentration of TCE in the area of the basement sump. The analytical results from the soil sampling have determined that the vadose soil zone does not have contamination above Part 375 SCO for Protection of Public Heath, unrestricted use. Therefore, the vadose zone does not require remediation.

- Based on analytical results of the soil vapor, the concentrations of soil vapor and indoor air for TCE were compared to the NYSDOH guidance for soil vapor intrusion, soil vapor/indoor air matrix 1 for TCE. Based on this matrix, the action recommended by the NYSDEC and NYSDOH regulations is to take no further action at all the sampling locations in 7 Badger Avenue and to monitor 2 Badger Avenue.

7.2 Data Limitations

Data limitations were not identified in the course of HRP's investigations.

7.3 Recommendations

The purpose of this Work Assignment was to conduct a Remedial Investigation to determine the degree and extent of on-site contamination impacted by past operations as a Former Canada Dry Bottling Facility, and off-site groundwater contamination near the Site associated with the eastern portion of 7 Badger Avenue and the June Street plume. Based on the investigation findings, the following recommendations are offered:

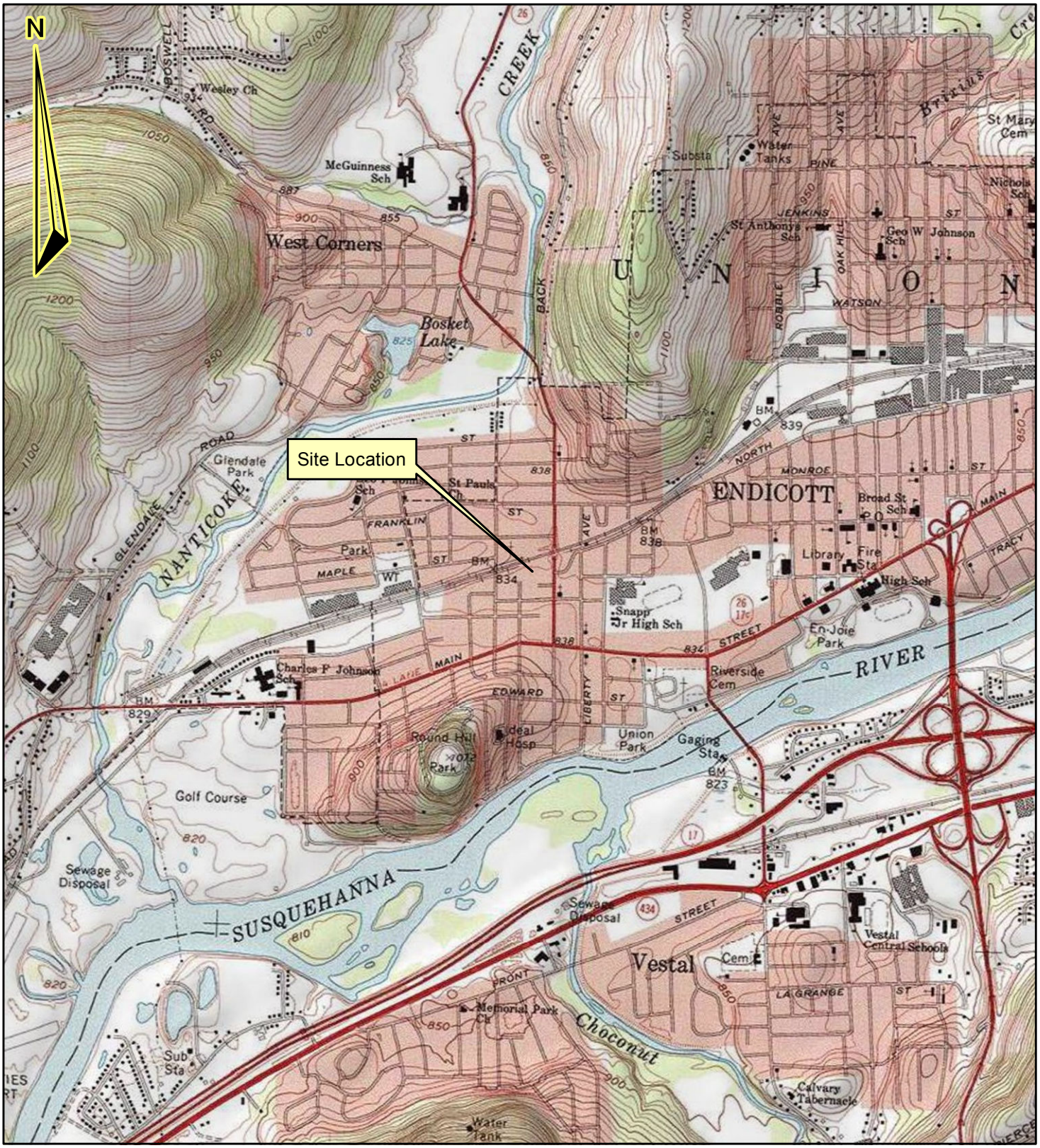
- Based on the off-site sampling of groundwater wells to the east of the Site HRP recommends installing five (5) additional monitoring wells to further vertically delineate the soil and groundwater. HRP proposes to install two (2) wells, one (1) location to the east of the site and one (1) location to the west to a depth where a confining layer is observed. HRP also purposes the installation of two (2) groundwater monitoring wells to 20-feet bgs in the location of former monitoring well MW-8 and at a location inside 7 Badger Avenue building to the east of the former UST locations and west of the sump. The fifth monitoring well will be a temporary monitoring well advanced in the sump area of the 7 Badger Avenue building to determine if the groundwater in that area has been impacted.

  Soil and groundwater samples should also be collected and submitted to a laboratory for analysis to supplement the soil data previously obtained on-site and off-site. These results along with historical data should be used to develop a remedial strategy in a Remedial Action Plan to address remaining impacts of contamination in-site.

- The analytical results from the soil sample taken approximately two feet below the sump located in the eastern basement of 7 Badger Avenue exceeded the Commercial Subpart Part 375 SCO for Cadmium. To further delineate the vertical extent of contamination of the sump, additional soil samples should be collected and analyzed. HRP is purposing an Interim Remedial measure including a limited excavation in the area of the sump once the extent of the contamination in the sump is defined.

- Remedial design alternatives are needed to address the groundwater contamination beneath 2 and 7 Badger Avenue.

- The results of the off-site evaluation of groundwater for the possibility of utilizing monitoring natural attenuation (MNA) as a remedial action are favorable. The details of utilizing monitoring natural attenuation (MNA) will be addressed in the Alternative Analysis report.



USGS Quadrangle Information
Quad ID: 42076-A1
Name: Endicott, New York
Date Rev: 1969
Date Pub: 1972

1 inch = 2,000 feet

0 1,000 2,000 4,000

Figure 1
Site Location
2 & 7 Badger Avenue
Endicott, New York
Work Assignment# D006130-17
HRP # NEW9616.P2
Scale 1" = 2,000'

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Path: S:\Data\NNEWEN - NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION\CANADA DRY PLANT, 2&7 BADGER AVENUE, ENDICOTT, NY\NEW9616P2\GIS\Site Location.mxd

North

RAILROAD

MW–5

FORMER SOIL EXCAVATION AREA,
BUCK ENGINEERING, AUGUST 1993

DEC–06–MW–06

MW–4

EASTERN
FLOOR DRAIN

WESTERN
FLOOR DRAIN

MW–11

MW–3

FORMER
TANK #5

FORMER TANK #1 (APPROX. 1,000–GAL.)

2 BADGER AVE.

MW–2

BADGER AVENUE

FORMER TANK #2 (APPROX. 1,000–GAL.)

FORMER TANK #4

DRYWELL LOCATION

FORMER TANK #3 (APPROX. 3,000–GAL.)

7 BADGER AVE.

MW–7

MW–9

CHAIN LINK FENCE

EAST FLOOR DRAIN

MW–10

SOUTH FLOOR DRAIN

MW–1

WOODEN FENCE

LEGEND

–EXISTING MONITORING WELL LOCATION,
INSTALLED JUNE 1991, BUCK ENGINERING

–NEWLY INSTALLED MONITORING WELL LOCATION,
INSTALLED MAY 2011

–PASSIVE SOIL GAS SURVEY POINTS, APRIL 2011

– PROERTY LINE

–FLOOR DRAIN

40 0 20 40

APPROXIMATE SCALE
(1" = 40')

FIGURE 2
SITE PLAN
FORMER CANADA DRY
2 & 7 BADGER AVE.
ENDICOTT, NY
WORK ASSIGNMENT#
D006130–17
HRP# NEW9616.P2
SCALE: 1" = 40'

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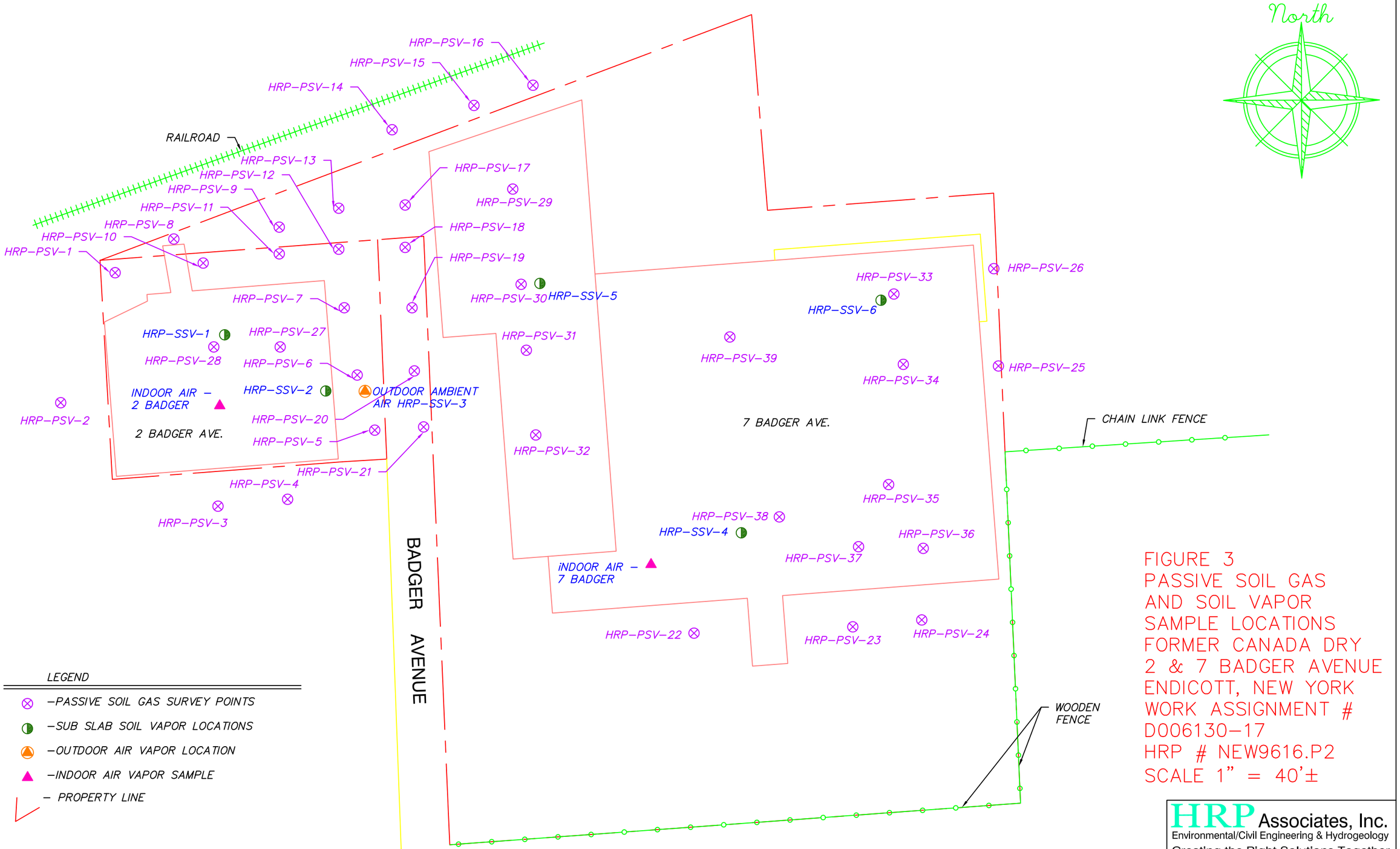

FIGURE 3
PASSIVE SOIL GAS
AND SOIL VAPOR
SAMPLE LOCATIONS
FORMER CANADA DRY
2 & 7 BADGER AVENUE
ENDICOTT, NEW YORK
WORK ASSIGNMENT #
D006130-17
HRP # NEW9616.P2
SCALE 1" = 40'±

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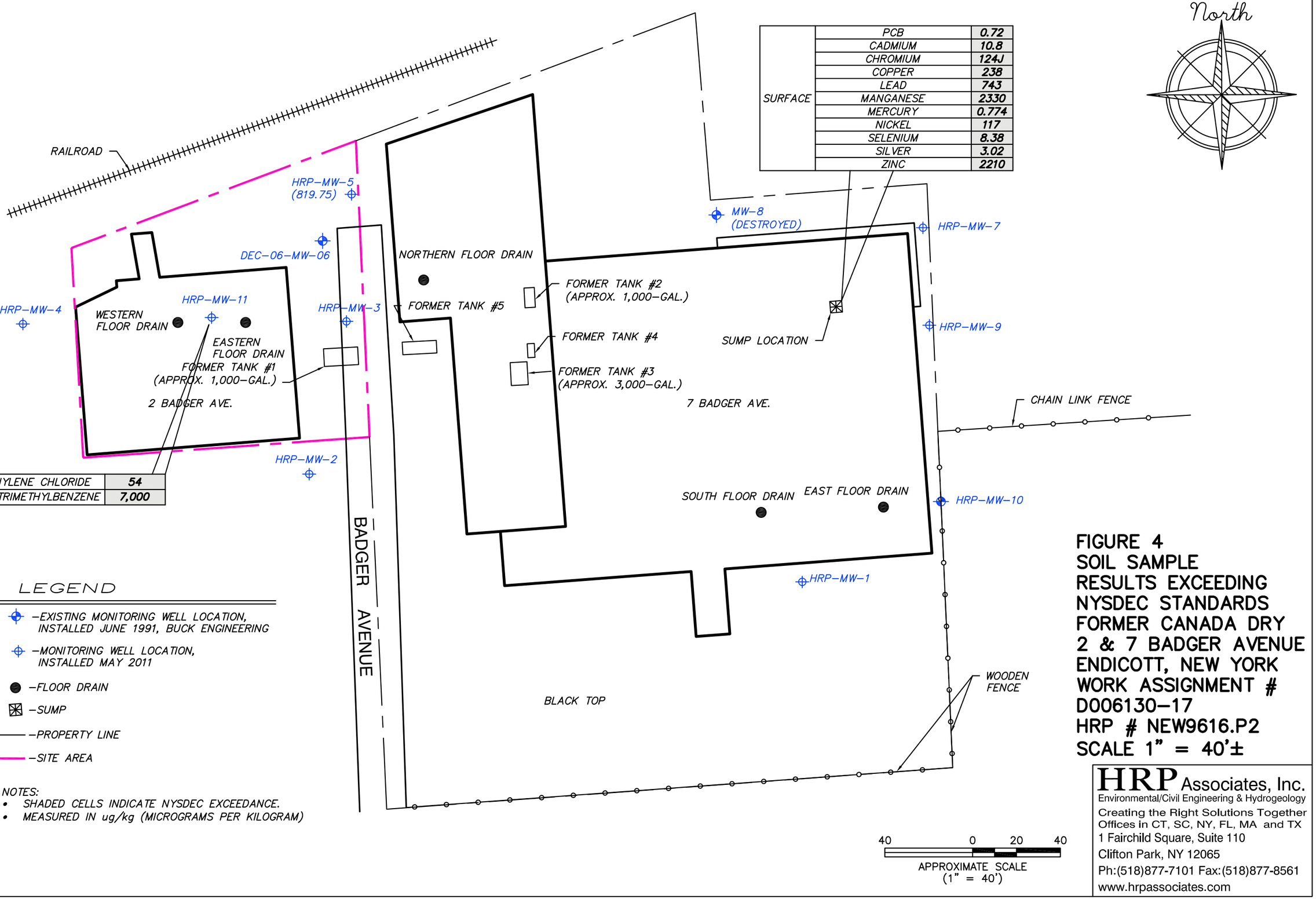

SURFACE	PCB	0.72
	CADMIUM	10.8
	CHROMIUM	124J
	COPPER	238
	LEAD	743
	MANGANESE	2330
	MERCURY	0.774
	NICKEL	117
	SELENIUM	8.38
	SILVER	3.02
	ZINC	2210

12' BGS	METHYLENE CHLORIDE	54
15' BGS	1,2,4–TRIMETHYLBENZENE	7,000

LEGEND

- –EXISTING MONITORING WELL LOCATION, INSTALLED JUNE 1991, BUCK ENGINEERING
- –MONITORING WELL LOCATION, INSTALLED MAY 2011
- –FLOOR DRAIN
- –SUMP
- –PROPERTY LINE
- –SITE AREA

NOTES:
- SHADED CELLS INDICATE NYSDEC EXCEEDANCE.
- MEASURED IN ug/kg (MICROGRAMS PER KILOGRAM)

FIGURE 4
SOIL SAMPLE RESULTS EXCEEDING NYSDEC STANDARDS
FORMER CANADA DRY
2 & 7 BADGER AVENUE
ENDICOTT, NEW YORK
WORK ASSIGNMENT # D006130–17
HRP # NEW9616.P2
SCALE 1" = 40'±

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HRP-MW-5		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	13	27

DEC-06-MW-6		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	140	110
CIS-1,2-DICHLOROETHYLENE	9.1	

HRP-MW-3		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	70	150

HRP-MW-7		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	95	140
CIS-1,2-DICHLOROETHYLENE	33	40.0

HRP-MW-9		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	400	250
CIS-1,2-DICHLOROETHYLENE	33	25

HRP-MW-10		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE		61
CIS-1,2-DICHLOROETHYLENE		24

HRP-MW-11		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	140	77
CIS-1,2-DICHLOROETHYLENE	10.0	11.0
VINYL CHLORIDE	5.8	5.1

HRP-MW-2		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	9	11

RAILROAD

HRP–MW–5

DEC–06–MW–06

HRP–MW–4

EASTERN FLOOR DRAIN

WESTERN FLOOR DRAIN

HRP–MW–11

HRP–MW–3

NORTHERN FLOOR DRAIN

TANK #5

FORMER TANK #1 (APPROX. 1,000–GAL.)

2 BADGER AVE.

HRP–MW–2

BADGER AVENUE

MW–8 (DESTROYED)

HRP–MW–7

FORMER TANK #2 (APPROX. 1,000–GAL.)

TANK #4

SUMP LOCATION

FORMER TANK #3 (APPROX. 3,000–GAL.)

7 BADGER AVE.

HRP–MW–9

CHAIN LINK FENCE

EAST FLOOR DRAIN

HRP–MW–10

SOUTH FLOOR DRAIN

HRP–MW–1

WOODEN FENCE

BLACK TOP

North

LEGEND

–EXISTING MONITORING WELL LOCATION INSTALLED IN JUNE 1991 AND MAY 2011

–FORMER FLOOR DRAIN LOCATION

–PROPERTY LINE

–SITE AREA

NOTES:
CONCENTRATIONS IN ug/L (MICROGRAMS PER LITER)
SAMPLE EXCEEDS NYSDEC CLASS GA CRITERIA

40 0 20 40

APPROXIMATE SCALE
(1" = 40')

FIGURE 5
GROUNDWATER RESULTS EXCEEDING NYSDEC STANDARDS
JUNE & OCTOBER 2011
FORMER CANADA DRY
2 & 7 BADGER AVE.
ENDICOTT, NY
WORK ASSIGNMENT# D006130–17
HRP# NEW9616.P2
SCALE: 1" = 40'

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FIGURE 6
ON-SITE GROUNDWATER CONTOURS
JUNE 2011
FORMER CANADA DRY
2 & 7 BADGER AVE.
ENDICOTT, NEW YORK
WORK ASSIGNMENT# D006130-17
HRP# NEW9616.P2
SCALE: 1" = 40'

RAILROAD

HRP-MW-5 (819.75)

DEC-06-MW-06 (819.86)

MW-8 (DESTROYED)

HRP-MW-7 (819.01)

(820.76) HRP-MW-4

HRP-MW-11 (819.92)

HRP-MW-9 (818.88)

HRP-MW-3 (819.97)

820.6 820.4 820.2 820.0 819.8 819.8 820.0 819.8 819.4 819.2 819.0 819.6

2 BADGER AVE.

7 BADGER AVE.

CHAIN LINK FENCE

HRP-MW-2 (820.20)

HRP-MW-10 (819.20)

HRP-MW-1 (819.71)

WOODEN FENCE

BLACK TOP

N

LEGEND

- EXISTING MONITORING WELL LOCATION INSTALLED IN JUNE 1991 AND MAY 2011
- JUNE 2011 0.2 FT. GROUNDWATER CONTOUR LINES
- APPROXIMATE GROUNDWATER DIVIDE
- PROPERTY LINE
- SITE AREA

40 0 20 40

APPROXIMATE SCALE
(1" = 40')

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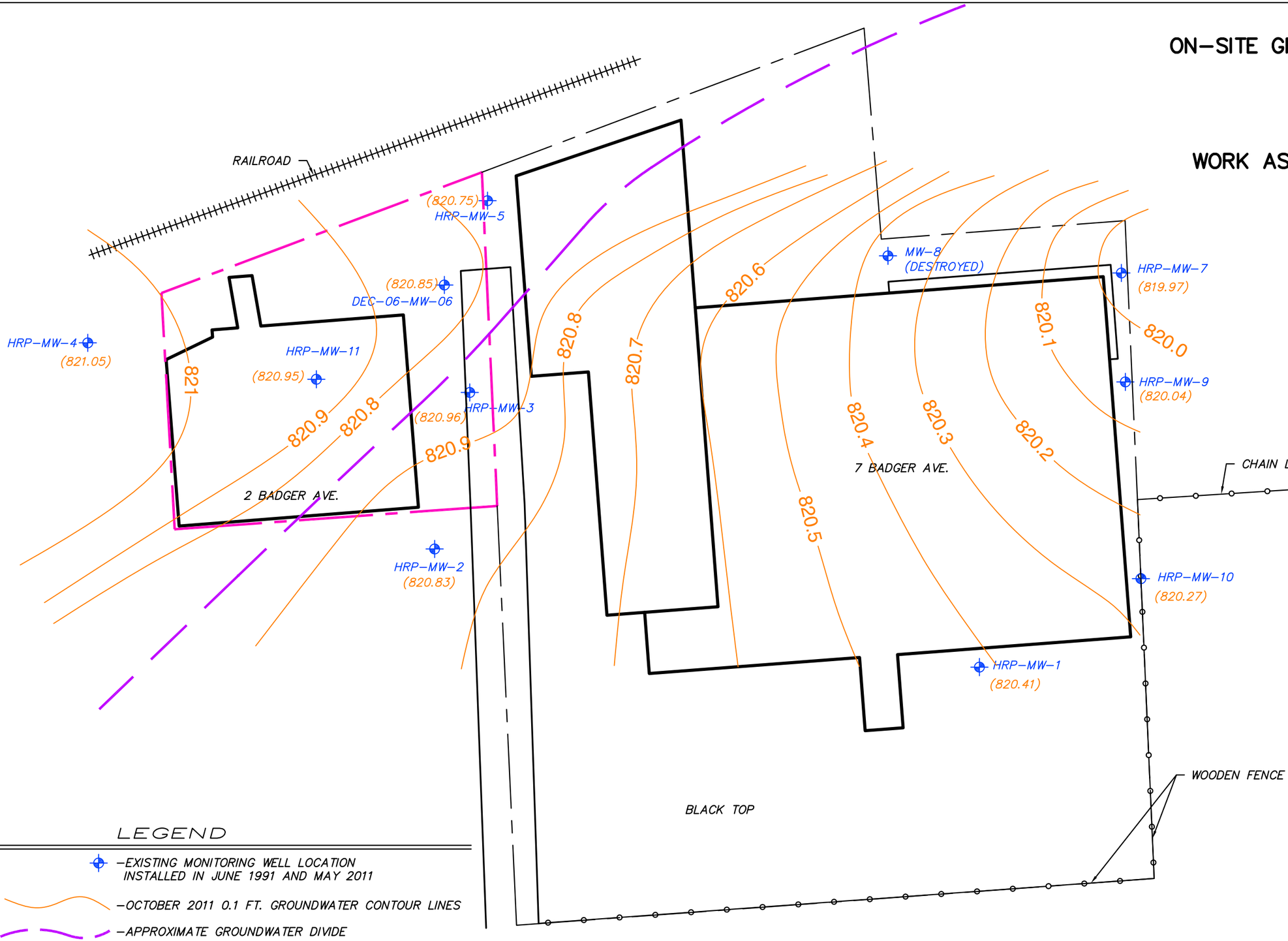
FIGURE 6A
ON-SITE GROUNDWATER CONTOURS
OCTOBER 2011
FORMER CANADA DRY
2 & 7 BADGER AVE.
ENDICOTT, NEW YORK
WORK ASSIGNMENT# D006130-17
HRP# NEW9616.P2
SCALE: 1" = 40'



LEGEND

- –EXISTING MONITORING WELL LOCATION INSTALLED IN JUNE 1991 AND MAY 2011
- –OCTOBER 2011 0.1 FT. GROUNDWATER CONTOUR LINES
- –APPROXIMATE GROUNDWATER DIVIDE
- –PROPERTY LINE
- –SITE AREA

40 0 20 40

APPROXIMATE SCALE
(1" = 40')

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JS-TW-20		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	53	51

JS-TW-13		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	13	35

JS-TW-019		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	14	

DEC-MW-27		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	140	140

JS-TW-15		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	23	11

JS-TW-18		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE		51

JS-TW-16		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	7.0	9

JS-TW-14		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	21	40

DEC-MW-21		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE		79

JS-TW-26		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	73	81

DEC-MW-25		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	53	63

JS-TW-24		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	150	130

JS-TW-028		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	71	76

JS-TW-027		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	61	61

JS-TW-023		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	120 J	

JS-TW-022		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	98	160

DEC-MW-32		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	11	18

DEC-MW-30		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	520	40
1,1,1-TRICHLOROETHANE	16 J	8.4

DEC-MW-24		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	22	29

JS-TW-010		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	7.2	5.3

DEC-06-MW-06		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	140	
CIS-1,2-DICHLOROETHYLENE	9.1	

JS-TW-007		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE		8

JS-TW-006		
YEAR 2011	JUNE	OCTOBER
TRICHLOROETHYLENE	21	
CIS-1,2-DICHLOROETHYLENE	12	

JS-TW-025, DEC-MW-21, JS-TW-020, JW-TW-021, DEC-MW-22, JS-TW-026, JS-TW-024, JS-TW-019, JS-TW-017, JS-TW-016, DEC-MW-23, DEC-MW-26, JS-TW-028, DEC-MW-27, JS-TW-018, JS-TW-027, JS-TW-022, JS-TW-023, JS-TW-013, JS-TW-015, JS-TW-014, DEC-MW-20, JS-TW-029, JS-TW-012, DEC-MW-25, DEC-MW-28, DEC-MW-30, JS-TW-032, DEC-MW-32, DEC-MW-29, JS-TW-010, JS-TW-030, JS-TW-011, DEC-MW-24, JS-TW-031, JS-TW-008, DEC-MW-33, DEC-06-MW-06, DEC-06-MW-08, JS-TW-003, JS-TW-002, DEC-06-MW-07, DEC-06-MW-09, JS-TW-007, JS-TW-001, JS-TW-009, JS-TW-006, JS-TW-005, JS-TW-004, DEC-MW-31

FIGURE 7
OFF-SITE GROUNDWATER RESULTS EXCEEDING NYSDEC STANDARDS JUNE & OCT. 2011 CANADA DRY PLANT 2&7 BADGER AVE. ENDICOTT, NY HRP# NEW9616.P2

SCALE: 1" = 120'

NOTE:
- VOCs (ppb - PARTS PER BILLION)
- ONLY EXCEEDANCES SHOWN

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North

RAILROAD

MW–5
(820.75)

MW–4
(821.05)

DEC–06–MW–06
(820.85)

HRP–MW–11
(820.95)

MW–3
(820.96)

MW–8
(DESTROYED)

MW–7
(819.97)

MW–9
(820.04)

821

820.9

820.8

820.7

820.6

820.5

820.4

820.3

820.2

820.1

820.0

2 BADGER AVE.

7 BADGER AVE.

CHAIN LINK FENCE

MW–2
(820.83)

BADGER AVENUE

MW–10
(820.27)

MW–1
(820.41)

WOODEN FENCE

LEGEND

–EXISTING MONITORING WELL LOCATION INSTALLED IN JUNE 1991 AND MAY 2011

820.5 – 0.1 FT. GROUNDWATER CONTOUR LINES

40 0 20 40

APPROXIMATE SCALE
(1" = 40')

FIGURE 8A
ON–SITE GROUNDWATER CONTOURS
OCTOBER, 2011
FORMER CANADA DRY
2 & 7 BADGER AVE.
ENDICOTT, NEW YORK
WORK ASSIGNMENT# D006130–17
HRP# NEW9616.P2
SCALE: 1" = 40'

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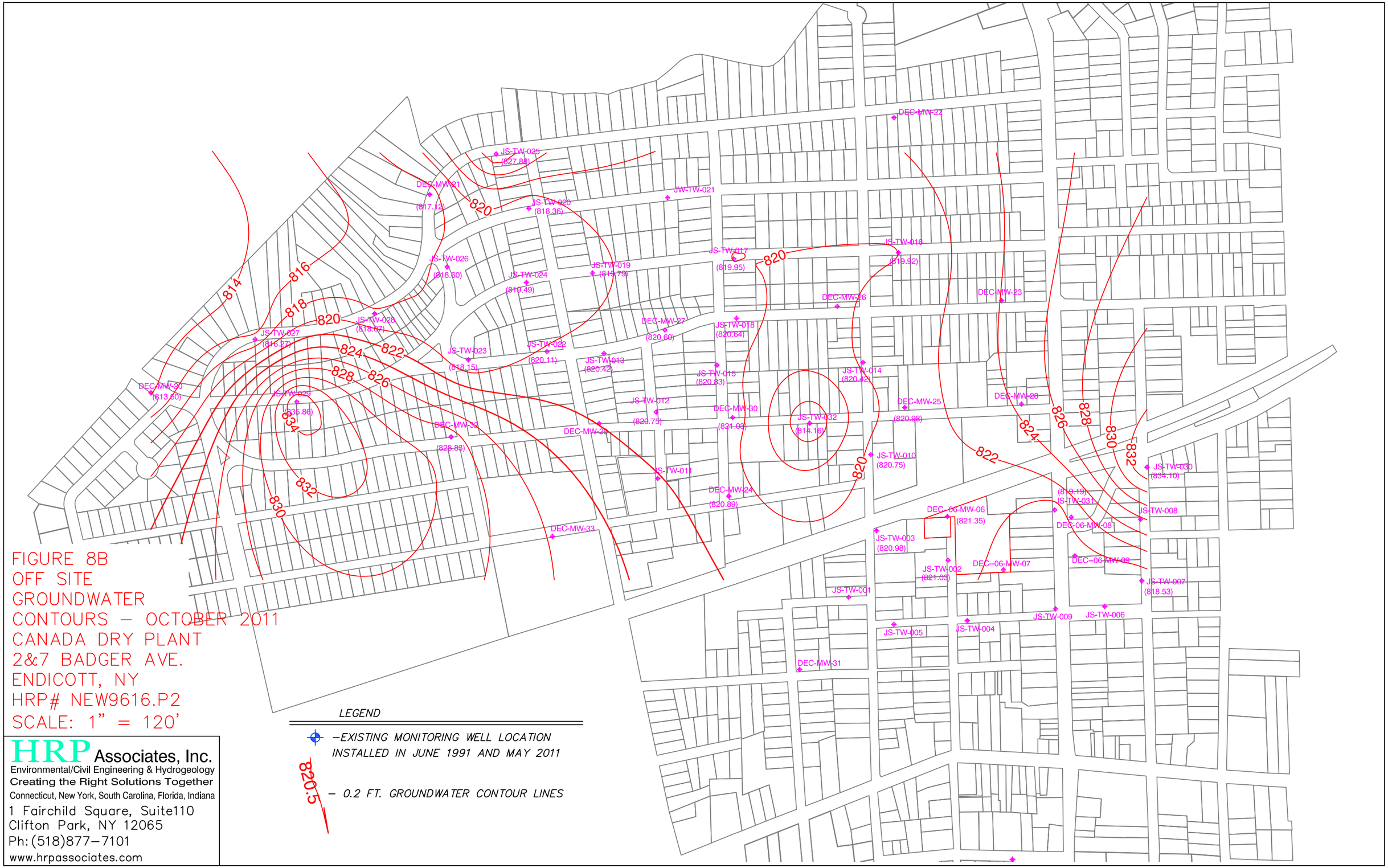

FIGURE 8B
OFF SITE
GROUNDWATER
CONTOURS – OCTOBER 2011
CANADA DRY PLANT
2&7 BADGER AVE.
ENDICOTT, NY
HRP# NEW9616.P2
SCALE: 1" = 120'

LEGEND

–EXISTING MONITORING WELL LOCATION INSTALLED IN JUNE 1991 AND MAY 2011

820.5 *– 0.2 FT. GROUNDWATER CONTOUR LINES*

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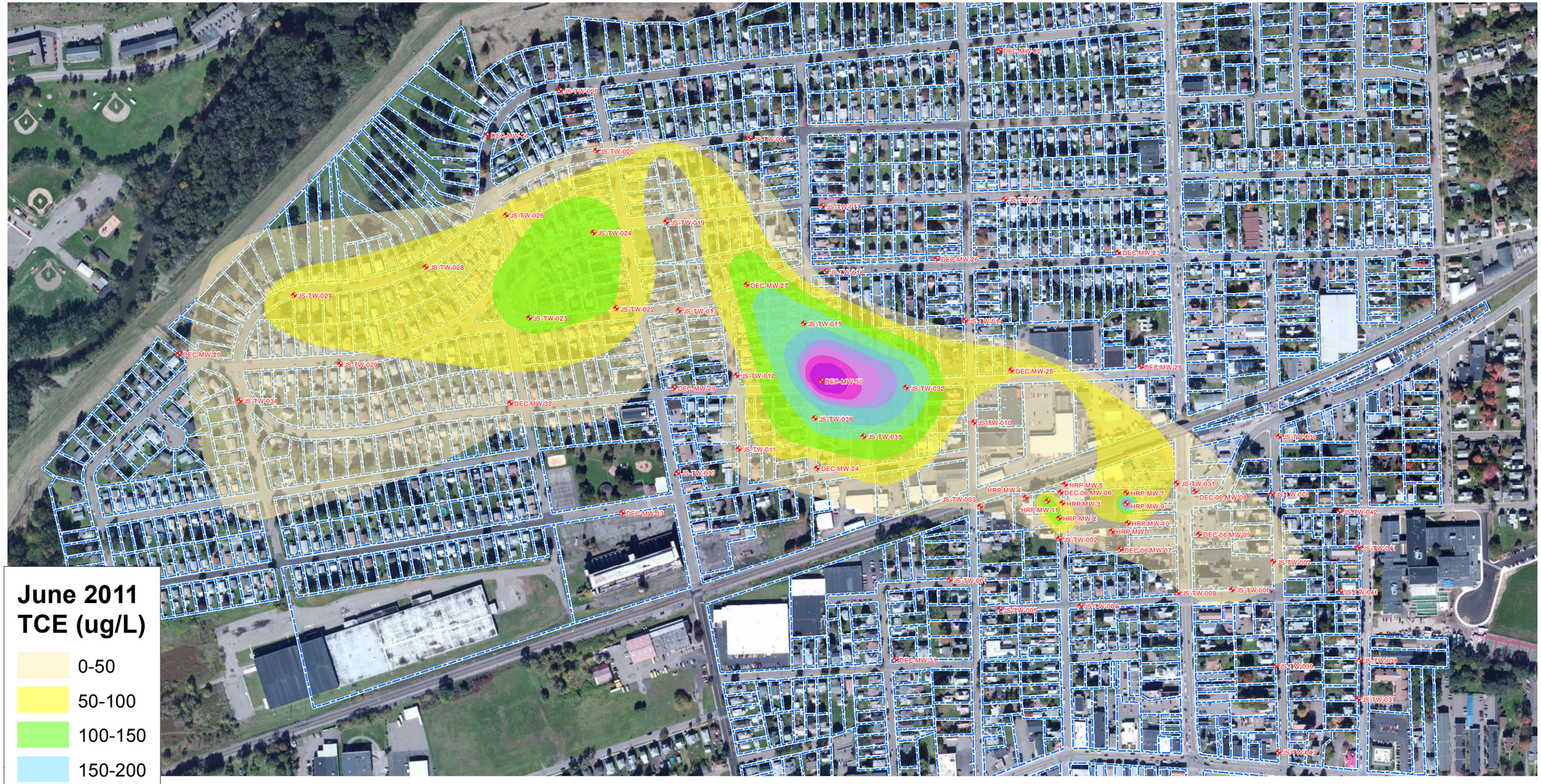

June 2011 TCE (ug/L)

- 0-50
- 50-100
- 100-150
- 150-200
- 200-250
- 250-300
- 300-350
- 350-400
- >400

1 inch = 400 feet

0 200 400 800 1,200 Feet

N

Figure 9
Former Canada Dry Site
NYSDEC Site No. 7-04-050

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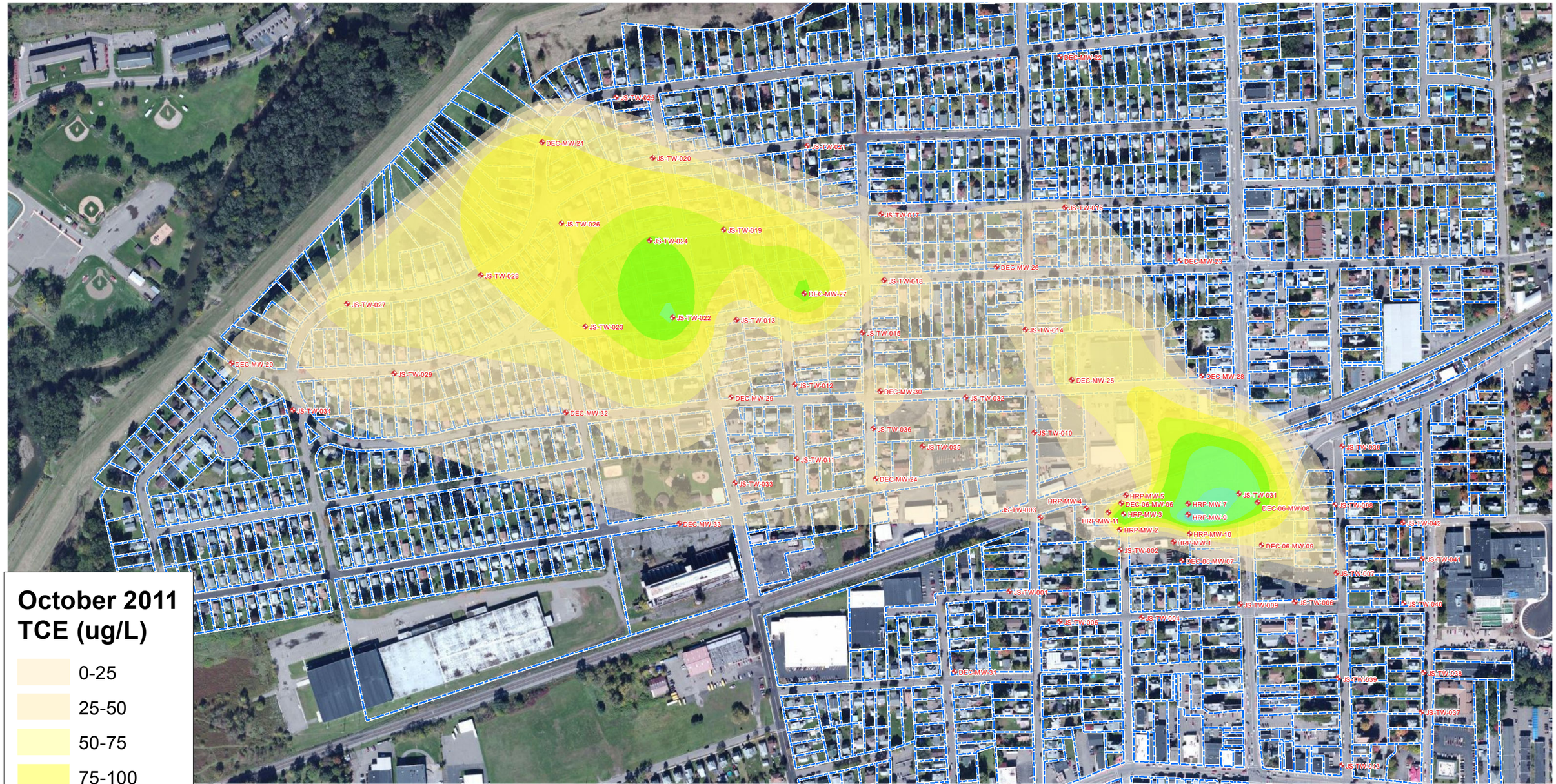

October 2011
TCE (ug/L)

- 0-25
- 25-50
- 50-75
- 75-100
- 100-125
- 125-150
- 150-175
- 175-200
- >200

1 inch = 400 feet

0 200 400 800 1,200 Feet

N

Figure 10
Former Canada Dry Site
NYSDEC Site No. 7-04-050

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Table 1
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Ave.
Endicott, New York
5/24/2011 - 5/26/2011
375-6 SCO - Protection of Public Health - Unrestricted, Residential, Restricted- Residential, Commercial, and Industrial
Soil Samples - Analyzed for TCL VOCs 8260 B
(Only detected constituents are listed)

Soil Sample ID / Date Collected	CAS #	DRY WELL 5/25/2011	HRP-MW-1 (11-12BGS) 5/24/2011	HRP-MW-2 (11-12BGS) 5/24/2011	HRPMW-3 (11-12BGS) 5/26/2011	HRP-MW-4 (11-12BGS) 5/25/2011	HRP-MW-5 (11-12BGS) 5/24/2011	375-6 SCO - Protection of Public Health Unrestricted	375-6 SCO - Protection of Public Health - Residential	375-6 SCO - Protection of Public Health - Restricted- Residential	375-6 SCO - Protection of Public Health - Commercial	375-6 SCO - Protection of Public Health - Industrial
VOCs 8260 B (ug/kg)	**CAS #**											
cis-1,2-Dichloroethylene	156-59-2	**15**	<5.4	<5.3	<5.4	<5.6	<5.2	**250**	**59,000**	**100,000**	**500,000**	**1,000,000**
Diethyl ether	60-29-7	**4.6 UJ**	**2.9**	NA	NA	**2.8 UJ**	NA	**NE**	**NE**	**NE**	**NE**	**NE**
Methylcyclohexane	108-87-2	<6.4	<5.4	<5.3	<5.4	<5.6	<5.2	**NE**	**NE**	**NE**	**NE**	**NE**
Methylene chloride	75-09-2	**46 UJ**	**19 UJ**	**31**	**38 J**	**22 UJ**	**15 UJ**	**50**	**51,000**	**100,000**	**500,000**	**1,000,000**
Trichloroethylene	79-01-6	**31**	<5.4	<5.3	<5.4	<5.6	**8.2**	**470**	**10,000**	**21,000**	**200,000**	**400,000**
Hexane	000110-54-3	NA	**10 J**	NA	NA	NA	**9.2**	**NE**	**NE**	**NE**	**NE**	**NE**
1,2,4-Trimethylbenzene	95-63-6	NA	NA	NA	NA	NA	NA	**3,600**	**47,000**	**52,000**	**190,000**	**380,000**
4-Isopropyltoluene / p-Isopropyltoluene	99-87-6	NA	NA	NA	NA	NA	NA	**NE**	**NE**	**NE**	**NE**	**NE**
Cyclohexane, ethyl-	001678-91-7	NA	NA	NA	NA	NA	NA	**NE**	**NE**	**NE**	**NE**	**NE**
Heptane	000142-82-5	NA	NA	NA	NA	NA	NA	**NE**	**NE**	**NE**	**NE**	**NE**
Heptane, 2-methyl-	000592-27-8	NA	NA	NA	NA	NA	NA	**NE**	**NE**	**NE**	**NE**	**NE**
Heptane, 3-methyl-	000589-81-1	NA	NA	NA	NA	NA	NA	**NE**	**NE**	**NE**	**NE**	**NE**
Hexane, 2-methyl-	000591-76-4	NA	NA	NA	NA	NA	NA	**NE**	**NE**	**NE**	**NE**	**NE**
Hexane, 3-methyl-	000589-34-4	NA	NA	NA	NA	NA	NA	**NE**	**NE**	**NE**	**NE**	**NE**
n-Butylbenzene	104-51-8	NA	NA	NA	NA	NA	NA	**12,000**	**100,000**	**100,000**	**500,000**	**1,000,000**
n-Nonane	111-84-2	NA	NA	NA	NA	NA	NA	**NE**	**NE**	**NE**	**NE**	**NE**
n-Propylbenzene	103-65-1	NA	NA	NA	NA	NA	NA	**3,900**	**100,000**	**100,000**	**500,000**	**1,000,000**
Octane	111-65-9	NA	NA	NA	NA	NA	NA	**NE**	**NE**	**NE**	**NE**	**NE**
Octane, 2,6-dimethyl-	002051-30-1	NA	NA	NA	NA	NA	NA	**NE**	**NE**	**NE**	**NE**	**NE**
sec-Butylbenzene	135-98-8	NA	NA	NA	NA	NA	NA	**11,000**	**100,000**	**100,000**	**500,000**	**1,000,000**
1-Propene, 2-methyl-	000115-11-7	NA	NA	NA	NA	NA	**6.6**	**NE**	**NE**	**NE**	**NE**	**NE**
Naphthalene	91-20-3	NA	NA	NA	NA	NA	**0.56 J**	**12,000**	**100,000**	**100,000**	**500,000**	**1,000,000**

Soil Sample ID / Date Collected	CAS #	HRP-MW-7 (11-12BGS) 5/25/2011	HRP-MW-9 (11-12BGS) 5/25/2011	HRP-MW-11 (11-15BGS) 5/26/2011	HRP-MW-11 (18-19BGS) 5/26/2011	FIELD DUPLICATE (HRP-MW-11) 5/26/2011		375-6 SCO - Protection of Public Health Unrestricted	375-6 SCO - Protection of Public Health - Residential	375-6 SCO - Protection of Public Health - Restricted- Residential	375-6 SCO - Protection of Public Health - Commercial	375-6 SCO - Protection of Public Health - Industrial
VOCs 8260 B (ug/kg)	**CAS #**											
cis-1,2-Dichloroethylene	156-59-2	<5.4	<5.6	<5.7	<560	<5.4		**250**	**59,000**	**100,000**	**500,000**	**1,000,000**
Diethyl ether	60-29-7	**2.9 J**	**3.2 UJ**	NA	NA	NA		**NE**	**NE**	**NE**	**NE**	**NE**
Methylcyclohexane	108-87-2	<5.4	<5.6	<5.7	**20,000**	<5.4		**NE**	**NE**	**NE**	**NE**	**NE**
Methylene chloride	75-09-2	**21 UJ**	**26 UJ**	**54**	<560	**4.4 J**		**50**	**51,000**	**100,000**	**500,000**	**1,000,000**
Trichloroethylene	79-01-6	**3.7**	**16**	6.5	<560	**8.2**		**470**	**10,000**	**21,000**	**200,000**	**400,000**
Hexane	000110-54-3	**9.3 J**	**8.4 J**	NA	**27,000 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
1,2,4-Trimethylbenzene	95-63-6	NA	NA	NA	**7,000 J**	NA		**3,600**	**47,000**	**52,000**	**190,000**	**380,000**
4-Isopropyltoluene / p-Isopropyltoluene	99-87-6	NA	NA	NA	**1,500 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
Cyclohexane, ethyl-	001678-91-7	NA	NA	NA	**13,000 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
Heptane	000142-82-5	NA	NA	NA	**49,000 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
Heptane, 2-methyl-	000592-27-8	NA	NA	NA	**27,000 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
Heptane, 3-methyl-	000589-81-1	NA	NA	NA	**17,000 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
Hexane, 2-methyl-	000591-76-4	NA	NA	NA	**41,000 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
Hexane, 3-methyl-	000589-34-4	NA	NA	NA	**37,000 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
n-Butylbenzene	104-51-8	NA	NA	NA	**3,400 J**	NA		**12,000**	**100,000**	**100,000**	**500,000**	**1,000,000**
n-Nonane	111-84-2	NA	NA	NA	**12,000 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
n-Propylbenzene	103-65-1	NA	NA	NA	**1,800 J**	NA		**3,900**	**100,000**	**100,000**	**500,000**	**1,000,000**
Octane	111-65-9	NA	NA	NA	**14,000 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
Octane, 2,6-dimethyl-	002051-30-1	NA	NA	NA	**12,000 J**	NA		**NE**	**NE**	**NE**	**NE**	**NE**
sec-Butylbenzene	135-98-8	NA	NA	NA	**1,400 J**	NA		**11,000**	**100,000**	**100,000**	**500,000**	**1,000,000**
1-Propene, 2-methyl-	000115-11-7	NA	NA	NA	NA	NA		**NE**	**NE**	**NE**	**NE**	**NE**
Naphthalene	91-20-3	NA	NA	NA	NA	NA		**12,000**	**100,000**	**100,000**	**500,000**	**1,000,000**

Bold	Sample is Above Non-Detect Value but Below Objective
Bold	Sample Exceeds Unrestricted Objective
Bold	Sample Exceeds Residential Objective
Bold	Sample Exceeds Restricted-Residential Objective
Bold	Sample Exceeds Commercial Objective
Bold	Sample Exceeds Industrial Objective
NE	Not Established
NA	Not Analyzed
<###	Sample is Non-Detect at Laboratory
ug/kg	Micrograms per Kilogram
VOCs	Volatile Organic Compounds
BGS	Below Ground Surface

Table 2
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Ave.
Endicott, New York
May 25, 2011
375-6 SCO - Protection of Public Health - Unrestricted, Residential, Restricted- Residential, Commercial, and Industrial
Soil Samples - Analyzed for SVOCs 8270 C
(Only detected constituents are listed)

Soil Sample ID Date Collected		DRY WELL 5/25/2011 12:45:00 PM	375-6 SCO - Protection of Public Health Unrestricted	375-6 SCO - Protection of Public Health - Residential	375-6 SCO - Protection of Public Health - Restricted- Residential	375-6 SCO - Protection of Public Health - Commercial	375-6 SCO - Protection of Public Health - Industrial
SVOCs 8270 C (ug/kg)	**CAS #**						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	**430**	**NE**	**NE**	**NE**	**NE**	**NE**
Benzo(ghi)perylene	191-24-2	**170**	**100,000**	**100,000**	**100,000**	**500,000**	**1,000,000**
Benzoic acid, 2-ethylhexyl ester	5444-75-7	**160**	**NE**	**NE**	**NE**	**NE**	**NE**
Bis(2-ethylhexyl)phthalate	117-81-7	**300**	**NE**	**NE**	**NE**	**NE**	**NE**
Eicosane	112-95-8	**190**	**NE**	**NE**	**NE**	**NE**	**NE**
Ethanol, 2-(2-butoxyethoxy)-, acet	124-17-4	**880**	**NE**	**NE**	**NE**	**NE**	**NE**
Heneicosane	629-94-7	**520**	**NE**	**NE**	**NE**	**NE**	**NE**
Heptadecane	629-78-7	**470**	**NE**	**NE**	**NE**	**NE**	**NE**
Methyl Methacrylate	80-62-6	**200**	**NE**	**NE**	**NE**	**NE**	**NE**
m-Xylene	108-38-3	**210**	**NE**	**NE**	**NE**	**NE**	**NE**
n-Docosane	629-97-0	**310**	**NE**	**NE**	**NE**	**NE**	**NE**
n-Hexadecane	544-76-3	**340**	**NE**	**NE**	**NE**	**NE**	**NE**
n-Hexadecanoic acid	57-10-3	**760**	**NE**	**NE**	**NE**	**NE**	**NE**
n-Pentacosane	629-99-2	**190**	**NE**	**NE**	**NE**	**NE**	**NE**
n-Triacontane	638-68-6	**580**	**NE**	**NE**	**NE**	**NE**	**NE**
Octacosane	630-02-4	**340**	**NE**	**NE**	**NE**	**NE**	**NE**
Octadecanoic acid	57-11-4	**530**	**NE**	**NE**	**NE**	**NE**	**NE**
Pentadecane	629-62-9	**310**	**NE**	**NE**	**NE**	**NE**	**NE**
Tridecane, 5-propyl-	55045-11-9	**210**	**NE**	**NE**	**NE**	**NE**	**NE**
unknown10.3	unknown10.3	**370**	**NE**	**NE**	**NE**	**NE**	**NE**
unknown2.03	unknown2.03	**180**	**NE**	**NE**	**NE**	**NE**	**NE**
unknown5.96	unknown5.96	**750**	**NE**	**NE**	**NE**	**NE**	**NE**

Bold	Sample is Above Non-Detect Value but Below Objective
Bold	Sample Exceeds Unrestricted Objective
Bold	Sample Exceeds Residential Objective
Bold	Sample Exceeds Restricted-Residential Objective
Bold	Sample Exceeds Commercial Objective
Bold	Sample Exceeds Industrial Objective
NE	Not Establihed
NA	Not Analyzed
<###	Sample is Non-Detect at Laboratory
ug/kg	Micrograms per Kilogram
SVOCs	Semi-Volatile Organic Compounds
BGS	Below Ground Surface

Table 3
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Ave.
Endicott, New York
May 25, 2011
375-6 SCO - Protection of Public Health - Unrestricted, Residential, Restricted- Residential, Commercial, and Industrial
Soil Samples - Analyzed for TAL Metals
(Only detected constituents are listed)

Soil Sample ID Date Collected	DRY WELL 5/25/2011 12:45:00 PM	375-6 SCO - Protection of Public Health - Restricted- Residential	375-6 SCO - Protection of Public Health - Commercial	375-6 SCO - Protection of Public Health - Industrial
Metals (mg/kg)				
Aluminum, Total	**4,910**	**NE**	**NE**	**NE**
Antimony	**2.06**	**NE**	**NE**	**NE**
Arsenic	**4.36**	**16**	**16**	**16**
Barium	**322**	**400**	**400**	**10,000**
Beryllium	**1.23**	**72**	**590**	**2,700**
Cadmium	**10.8**	**4.3**	**9.3**	**60**
Calcium	**184,000**	**NE**	**NE**	**NE**
Chromium, Total	**124 J**	**110**	**400**	**800**
Cobalt	**15**	**NE**	**NE**	**NE**
Copper	**238**	**270**	**270**	**10,000**
Cyanide, Total	**0.321**	**27**	**27**	**10,000**
Iron	**83,100**	**NE**	**NE**	**NE**
Lead	**743**	**400**	**1,000**	**3,900**
Magnesium	**21,600**	**NE**	**NE**	**NE**
Manganese	**2,330**	**2,000**	**10,000**	**10,000**
Mercury	**0.774**	**0.81**	**2.8**	**5.7**
Nickel	**117**	**310**	**310**	**10,000**
Potassium, Total	**848**	**NE**	**NE**	**NE**
Selenium	**8.38**	**180**	**1,500**	**6,800**
Silver	**3.02**	**180**	**1,500**	**6,800**
Sodium, Total	**1,350**	**NE**	**NE**	**NE**
Vanadium	**12.7**	**NE**	**NE**	**NE**
Zinc	**2,210 J**	**10,000**	**10,000**	**10,000**

Bold	Sample is Above Non-Detect Value but Below Objective
Bold	Sample Exceeds Unrestricted Objective
Bold	Sample Exceeds Residential Objective
Bold	Sample Exceeds Restricted-Residential Objective
Bold	Sample Exceeds Commercial Objective
Bold	Sample Exceeds Industrial Objective
NE	Not Established
NA	Not Analyzed
<###	Sample is Non-Detect at Laboratory
mg/kg	Milligrams per Kilogram
BGS	Below Ground Surface
Chromium, Total	Chromium DEC standards as shown are for Hexavalent Chromium.

Table 4
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Ave.
Endicott, New York
May 25, 2011
375-6 SCO - Protection of Public Health - Unrestricted, Residential, Restricted- Residential, Commercial, and Industrial
Soil Samples - Analyzed for Polychlorinated Biphenyls (PCBs)
(Only detected constituents are listed)

Soil Sample ID Date Collected		DRY WELL 5/25/2011 12:45:00 PM	375-6 SCO - Protection of Public Health Unrestricted	375-6 SCO - Protection of Public Health - Residential	375-6 SCO - Protection of Public Health - Restricted- Residential	375-6 SCO - Protection of Public Health - Commercial	375-6 SCO - Protection of Public Health - Industrial
PCBs (mg/kg)	**CAS #**						
PCB-1260	11096-82-5	**0.73 J**	**NE**	**NE**	**NE**	**NE**	**NE**
PCBs-Total		**0.72**	**0.1**	**1**	**1**	**1**	**25**

Bold	Sample is Above Non-Detect Value but Below Objective
Bold	Sample Exceeds Unrestricted Objective
Bold	Sample Exceeds Residential Objective
Bold	Sample Exceeds Restricted-Residential Objective
Bold	Sample Exceeds Commercial Objective
Bold	Sample Exceeds Industrial Objective
NE	Not Established
NA	Not Analyzed
DL	Sample Diluted
<###	Sample is Non-Detect at Laboratory
mg/kg	Milligrams per Kilogram
BGS	Below Ground Surface

Table 5
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Ave.
Endicott, New York
6/14/2011 - 6/17/2011
Groundwater Samples - Analyzed for TCL VOCs 8260 B
(Only detected constituents are listed)

Groundwater Sample ID / Date Collected		HRP-MW-1 (6-14-11) 6/14/2011 12:10:00 PM	HRP-MW-2 (6-14-11) 6/14/2011 11:35:00 AM	HRP-MW-3 (6-14-11) 6/14/2011 8:50:00 AM	HRP-MW-4 (6-14-11) 6/14/2011 11:50:00 AM	HRP-MW-5 (6-14-11) 6/14/2011 9:05:00 AM	DEC-06-MW-6 (6-14-11) 6/14/2011 10:20:00 AM	HRP-MW-7 (6-14-11) 6/14/2011 2:30:00 PM	HRP-MW-9 (6-14-11) 6/14/2011 1:45:00 PM	HRP-MW-10 (6-14-11) 6/14/2011 2:20:00 PM	NYSDEC Class GA Criteria
VOCs 8260 B (ug/L)	**CAS #**										
1,1,1-Trichloroethane	71-55-6	<1 UJ	<1	<1	<1	<1	<1	**1.8 J**	**2.2 J**	<1	**5**
1,1,2-Trichlorotrifluoroethane (freon 113)	76-13-1	<1 UJ	<1	<1	<1	<1	<1	<1	<1	<1	**5**
1,1-Dichloroethane	75-34-3	<1 UJ	<1	<1	<1	<1	<1	<1	<1	<1	**5**
1,1-Dichloroethylene	75-35-4	<1 UJ	<1	<1	<1	<1	<1	<1	**2.9**	**0.67**	**5**
Benzene	71-43-2	<1 UJ	<1	<1	<1	<1	<1	<1	<1	<1	**1**
Bromodichloromethane	75-27-4	<1 UJ	<1	**1.1**	**1.9**	<1	<1	<1	<1	<1	**50**
Chloroform	67-66-3	<1 UJ	<1	**2.8**	**4**	<1	**0.57**	**0.74**	<1	<1	**7**
cis-1,2-Dichloroethylene	156-59-2	<1 UJ	**1.6**	**1.7**	<1	<1	**9.1**	**33**	**33**	**3.8**	**5**
Dibromochloromethane	124-48-1	<1 UJ	<1	<1	**0.96**	<1	<1	<1	<1	<1	**50**
Methylcyclohexane	108-87-2	<1 UJ	<1	<1	<1	<1	<1	<1	**5.3**	<1	**NE**
trans-1,2-Dichloroethylene	156-60-5	<1 UJ	<1	<1	<1	<1	<1	<1	**0.64**	<1	**5**
Trichloroethylene	79-01-6	**2 J**	**9.1**	**70**	**2.6**	**13**	**140**	**95**	**270**	**16**	**5**
Vinyl chloride	75-01-4	<1 UJ	<1	<1	<1	<1	<1	<1	<1	<1	**2**

Groundwater Sample ID / Date Collected		HRP-MW-11 (6-14-11) 6/14/2011 10:30:00 AM	DEC-MW-21 (6-15-11) 6/15/2011 11:40:00 AM	DEC-MW-24 (6-16-11) 6/16/2011 11:17:00 AM	DEC-MW-25 (6-16-11) 6/16/2011 2:15:00 PM	DEC-MW-27 (6-14-11) 6/14/2011 4:50:00 PM	DEC-MW-30 (6-14-11) 6/14/2011 3:35:00 PM	DEC-MW-32 (6-15-11) 6/15/2011 3:00:00 PM	DEC-MW-33 (6-16-11) 6/16/2011 12:10:00 PM	FD1(6-14-11) (split with DEC-MW-27) 6/14/2011	NYSDEC Class GA Criteria
VOCs 8260 B (ug/L)	**CAS #**										
1,1,1-Trichloroethane	71-55-6	<1	<1	<1	<1 UJ	<1	**16 J**	<1	<1 UJ	<1	**5**
1,1,2-Trichlorotrifluoroethane (freon 113)	76-13-1	<1	<1	<1	<1	<1	**2.7**	<1	<1	<1	**5**
1,1-Dichloroethane	75-34-3	<1	<1	<1	<1 UJ	**0.66**	**2.5**	<1	<1 UJ	**0.66**	**5**
1,1-Dichloroethylene	75-35-4	**0.92**	<1	<1	<1	**0.79**	**3.9**	<1	<1	**0.98**	**5**
Benzene	71-43-2	**0.63**	<1	<1	<1	<1	<1	<1	<1	<1	**1**
Bromodichloromethane	75-27-4	**1.1**	<1	<1	<1	<1	<1	<1	<1	<1	**50**
Chloroform	67-66-3	**2.2**	<1	<1	<1	**0.88**	<1	<1	<1	**1.1**	**7**
cis-1,2-Dichloroethylene	156-59-2	**10**	<1	<1	<1	<1	**2.3**	<1	<1	<1	**5**
Dibromochloromethane	124-48-1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**50**
Methylcyclohexane	108-87-2	**6.5**	<1	<1	<1	<1	<1	<1	<1	<1	**NE**
trans-1,2-Dichloroethylene	156-60-5	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
Trichloroethylene	79-01-6	**140**	<1	**22**	**53**	**140**	**520**	**11**	<1	**140**	**5**
Vinyl chloride	75-01-4	**5.8**	<1	<1	<1 UJ	<1	<1	<1	<1 UJ	<1	**2**

NYSDEC class GA criteria are from NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1), Ambient water quality, class GA standards/guidance values from Table 1.

Bold	Sample Exceeds NYSDEC Class GA Criteria
Bold	Sample is above Non-Detect Value but Below NYSDEC Class GA Criteria
<###	Sample is Non-Detect at Laboratory
MW	Monitor Well
NE	Not Established
NA	Not Analyzed
DL	Sample Diluted
ug/l	micrograms per liter
VOCs	Volatile Organic Compounds

Table 5
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Ave.
Endicott, New York
6/14/2011 - 6/17/2011
Groundwater Samples - Analyzed for TCL VOCs 8260 B
(Only detected constituents are listed)

Groundwater Sample ID / Date Collected	CAS #	FD2(6-15-11) (split with JS-TW-019) 6/15/2011	JS-TW-002 (6-16-11) 6/16/2011 8:45:00 AM	JS-TW-003 (6-16-11) 6/16/2011 8:40:00 AM	JS-TW-006 (6-16-11) 6/16/2011 9:37:00 AM	JS-TW-007 (6-16-11) 6/16/2011 9:45:00 AM	JS-TW-010 (6-16-11) 6/16/2011 10:25:00 AM	JS-TW-012 (6-16-11) 6/16/2011 10:25:00 AM	JS-TW-013 (6-16-11) 6/16/2011 10:30:00 AM	JS-TW-019 (6-15-11) 6/15/2011 10:00:00 AM	NYSDEC Class GA Criteria
VOCs 8260 B (ug/L)											
1,1,1-Trichloroethane	71-55-6	<1	<1 UJ	<1 UJ	<1	<1	<1 UJ	<1 UJ	<1 UJ	<1	**5**
1,1,2-Trichlorotrifluoroethane (freon 113)	76-13-1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
1,1-Dichloroethane	75-34-3	<1	<1 UJ	<1 UJ	<1	<1	<1 UJ	<1 UJ	<1 UJ	<1	**5**
1,1-Dichloroethylene	75-35-4	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
Benzene	71-43-2	<1	<1	<1	<1	<1	<1	<1	<1	<1	**1**
Bromodichloromethane	75-27-4	<1	<1	**2.1**	<1	<1	<1	<1	<1	<1	**50**
Chloroform	67-66-3	<1	<1	**4.5**	**1.2**	<1	<1	<1	<1	<1	**7**
cis-1,2-Dichloroethylene	156-59-2	<1	<1	<1	**12**	<1	<1	<1	<1	<1	**5**
Dibromochloromethane	124-48-1	<1	<1	**0.8**	<1	<1	<1	<1	<1	<1	**50**
Methylcyclohexane	108-87-2	<1	<1	<1	<1	<1	<1	<1	<1	<1	**NE**
trans-1,2-Dichloroethylene	156-60-5	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
Trichloroethylene	79-01-6	**14**	<1	<1	**21**	**4.7**	**7.2**	<1	**8.3**	**14**	**5**
Vinyl chloride	75-01-4	<1	<1 UJ	<1 UJ	<1	<1	<1 UJ	<1 UJ	<1 UJ	<1	**2**

Groundwater Sample ID / Date Collected	CAS #	JS-TW-20 (6-15-11) 6/15/2011 10:42:00 AM	JS-TW-022 (6-15-11) 6/15/2011 3:02:00 PM	JS-TW-023 (6-15-11) 6/15/2011 4:25:00 PM	JS-TW-24 (6-15-11) 6/15/2011 10:05:00 AM	JS-TW-026 (6-15-11) 6/15/2011 1:54:00 PM	JS-TW-27 (6-15-11) 6/15/2011 2:15:00 PM	JS-TW-028 (6-15-11) 6/15/2011 11:35:00 AM			NYSDEC Class GA Criteria
VOCs 8260 B (ug/L)											
1,1,1-Trichloroethane	71-55-6	<1	<1	<1	<1	<1	<1	<1			**5**
1,1,2-Trichlorotrifluoroethane (freon 113)	76-13-1	<1	<1	<1	<1	<1	<1	<1			**5**
1,1-Dichloroethane	75-34-3	<1	<1	<1	<1	<1	<1	<1			**5**
1,1-Dichloroethylene	75-35-4	<1	<1	<1	**0.63**	<1	<1	<1			**5**
Benzene	71-43-2	<1	<1	<1	<1	<1	<1	<1			**1**
Bromodichloromethane	75-27-4	<1	<1	<1	<1	<1	<1	<1			**50**
Chloroform	67-66-3	<1	**0.78**	<1	<1	<1	<1	<1			**7**
cis-1,2-Dichloroethylene	156-59-2	<1	<1	<1	<1	<1	<1	<1			**5**
Dibromochloromethane	124-48-1	<1	<1	<1	<1	<1	<1	<1			**50**
Methylcyclohexane	108-87-2	<1	<1	<1	<1	<1	<1	<1			**NE**
trans-1,2-Dichloroethylene	156-60-5	<1	<1	<1	<1	<1	<1	<1			**5**
Trichloroethylene	79-01-6	**53**	**98**	**120 J**	**150**	**73**	**61**	**71**			**5**
Vinyl chloride	75-01-4	<1	<1	<1 UJ	<1	<1	<1	<1			**2**

NYSDEC class GA criteria are from NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1), Ambient water quality, class GA standards/guidance values from Table 1.

Bold	Sample Exceeds NYSDEC Class GA Criteria
Bold	Sample is above Non-Detect Value but Below NYSDEC Class GA Criteria
<###	Sample is Non-Detect at Laboratory
MW	Monitor Well
NE	Not Established
NA	Not Analyzed
DL	Sample Diluted
ug/l	micrograms per liter
VOCs	Volatile Organic Compounds

Table 6
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Ave.
Endicott, New York
6/14/2011 - 6/17/2011
Groundwater Samples - Analyzed for TAL Metals
(Only detected constituents are listed)

Groundwater Sample ID		DEC-MW-6 (6-14-11)	DEC-MW-21 (6-15-11)	DEC-MW-27 (6-14-11)	DEC-MW-30 (6-14-11)	JS-TW-013 (6-16-11)	JS-TW-015 (6-16-11)	JS-TW-023 (6-15-11)	JS-TW-24 (6-15-11)	JS-TW-028 (6-16-11)	FD1 (6-14-11) (split with DEC-MW-27)	NYSDEC Class GA Criteria
Date Collected		**6/14/2011**	**6/15/2011**	**6/14/2011**	**6/15/2011**	**6/16/2011**	**6/16/2011**	**6/15/2011**	**6/15/2011**	**6/16/2011**	**6/14/2011**	
Metals (mg/L)	**CAS #**											
Ferrous Iron	15438-31-0	<0.1 UJ	<0.1	<0.1	<0.1 UJ	<0.1 UJ	<0.1 UJ	<0.1	<0.1	<0.1 UJ	<0.1	**0.3**

NYSDEC class GA criteria are from NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1), Ambient water quality, class GA standards/guidance values from Table 1.

Bold	Sample Exceeds NYSDEC Class GA Criteria
Bold	Sample is above Non-Detect Value but Below NYSDEC Class GA Criteria
MW	Monitor Well
NE	Not Established
NA	Not analyzed
mg/l	milligrams per liter

Table 7
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Ave.
Endicott, New York
6/14/2011 - 6/17/2011
Groundwater Samples - Analyzed for Miscellaneous Constituents
(Only detected constituents are listed)

Groundwater Sample ID / Date Collected		DEC-MW-6 (6-14-11) 6/14/2011	DEC-MW-21 (6-15-11) 6/15/2011	DEC-MW-27 (6-14-11) 6/14/2011	DEC-MW-30 (6-14-11) 6/14/2011	FD1 (6-14-11) (split with DEC-MW-27) 6/14/2011	NYSDEC Class GA Criteria
Misc. Constituents (ug/L)	**CAS #**						
Alkalinity		**220**	**150**	**330**	**350**	**340**	**NE**
Carbon Dioxide		**220**	**29**	**310**	**370**	**310**	**NE**
Chloride		**53**	**520**	**560**	**800**	**570**	**500,000**
Methane	74-82-8	<1	<1 UJ	<1 UJ	<1	<1 UJ	**NE**
Nitrate		**2.6 J**	**1.4**	**5.2**	**2.8 J**	**5.2**	**10,000**
pH		**6.94**	**5.94**	**7.28**	**6.83**	**7.3**	**NE**
Sulfate		**80**	**62 J**	**40**	**42**	**40**	**250,000**
Sulfide	18496-25-8	<1	<1	<1	<1	<1	**50**
TOC	10-35-5	**1.9**	**3.5**	**2.2**	**3.1**	**2.1**	**NE**

Groundwater Sample ID / Date Collected		JS-TW-013 (6-16-11) 6/16/2011	JS-TW-015 (6-14-11) 6/14/2011	JS-TW-023 (6-15-11) 6/15/2011	JS-TW-028 (6-15-11) 6/15/2011	JS-TW-24 (6-15-11) 6/15/2011	NYSDEC Class GA Criteria
Misc. Constituents (ug/L)	**CAS #**						
Alkalinity		**270**	**330**	**270**	**210**	**240**	**NE**
Carbon Dioxide		**260**	**320**	**290**	**200**	**230**	**NE**
Chloride		**190**	**1200**	**700**	**260**	**330**	**500,000**
Methane	74-82-8	<1	<1 UJ	<1	<1 UJ	<1 UJ	**NE**
Nitrate		**3.6**	**4.1**	**4**	**4.1**	**5.3**	**10,000**
pH		**7.22**	**7.23**	**6.92**	**7.16**	**7.19**	**NE**
Sulfate		**18**	**46 J**	**27**	**300 J**	**23 J**	**250,000**
Sulfide	18496-25-8	<1	<1	<1	<1	<1	**50**
TOC	10-35-5	**2.1**	**4**	**1.9**	**1.8**	**1.4**	**NE**

NYSDEC class GA criteria are from NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1), Ambient water quality, class GA standards/guidance values from Table 1.

Bold	Sample Exceeds NYSDEC Class GA Criteria
Bold	Sample is above Non-Detect Value but Below NYSDEC Class GA Criteria
<###	Sample is Non-Detect at Laboratory
MW	Monitor Well
NE	Not Established
NA	Not Analyzed
DL	Sample Diluted
ug/l	micrograms per liter

Table 8
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Avenue
Endicott, New York
10/4/2011 - 10/6/2011
Groundwater Samples - Analyzed for TCL VOCs 8260 B
(Only detected constituents are listed)

Groundwater Sample ID / Date Collected	CAS #	HRP-MW-1 (10-4-11) 10/4/2011	HRP-MW-2 (10-4-11) 10/4/2011	HRP-MW-3 (10-4-11) 10/4/2011	HRP-MW-4 (10-4-11) 10/4/2011	HRP-MW-5 (10-4-11) 10/4/2011	DEC-06-MW-06 (10-5-11) 10/5/2011	HRP-MW-7 (10-4-11) 10/4/2011	HRP-MW-9 (10-4-11) 10/4/2011	HRP-MW-10 (10-4-11) 10/4/2011	HRP-MW-11 (10-4-11) 10/4/2011	NYSDEC Class GA Criteria
VOCs 8260 B (ug/L)	**CAS #**											
1,1,1-Trichloroethane	71-55-6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
1,1,2-Trichlorotrifluoroethane (freon 113)	76-13-1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
1,1-Dichloroethane	75-34-3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
1,1-Dichloroethylene	75-35-4	<1	<1	<1	<1	<1	<1	<1	**2.3**	**3.6**	**1.2**	**5**
Acetone	67-64-1	<5 UJ	<5 UJ	<5 UJ	<5 UJ	<5 UJ	**5**	<5 UJ	<5 UJ	<5 UJ	<5 UJ	**50**
Bromodichloromethane	75-27-4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**50**
Bromoform	75-25-2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**50**
Chloroform	67-66-3	<1	<1	**0.61**	**0.78**	<1	**0.56**	<1	<1	<1	<1	**7**
cis-1,2-Dichloroethylene	156-59-2	<1	**1.2**	**1.7**	<1	**0.87**	**4.9**	**40**	**25**	**24**	**11**	**5**
Cyclohexane	110-82-7	<1	<1	<1	<1	<1	<1	<1	<1	<1	**0.75**	**NE**
Dibromochloromethane	124-48-1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**50**
Methylcyclohexane	108-87-2	<1	<1	<1	<1	<1	<1	<1	<1	<1	**4.4**	**NS**
trans-1,2-Dichloroethylene	156-60-5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
Trichloroethylene	79-01-6	**2.7**	**11**	**150**	4.4	**27**	**110**	**140**	**250**	**61**	**77**	**5**
Vinyl chloride	75-01-4	<1	<1	<1	<1	<1	<1	<1	<1	0.81	**6.1**	**2**
Methoxyacetic acid, butyl ester	017640-22-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	**6.4**	**NE**
tert-Butanol	75-65-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	**4.6**	**NE**

Groundwater Sample ID / Date Collected	CAS #	DEC-MW-20 (10-4-11) 10/4/2011	DEC-MW-21 (10-5-11) 10/5/2011	DEC-MW-24 (10-4-11) 10/4/2011	DEC-MW-25 (10-6-11) 10/6/2011	DEC-MW-27 (10-5-11) 10/5/2011	DEC-MW-30 (10-5-11) 10/5/2011	DEC-MW-32 (10-4-11) 10/4/2011	DEC-MW-33 (10-4-11) 10/4/2011	JS-TW-02 (10-6-11) 10/6/2011	JS-TW-03 (10-6-11) 10/6/2011	NYSDEC Class GA Criteria
VOCs 8260 B (ug/L)	**CAS #**											
1,1,1-Trichloroethane	71-55-6	<1	**0.87**	<1	<1	**2**	**8.4**	<1	<1	<1	<1	**5**
1,1,2-Trichlorotrifluoroethane (freon 113)	76-13-1	<1	<1	<1	<1	**0.57**	**2.4**	<1	<1	<1	<1	**5**
1,1-Dichloroethane	75-34-3	<1	<1	<1	<1	**0.47**	**1.4**	<1	<1	<1	<1	**5**
1,1-Dichloroethylene	75-35-4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
Acetone	67-64-1	<5 UJ	<5	<5	**4.8**	<5	<5	<5 UJ	<5	<5	**4.2**	**50**
Bromodichloromethane	75-27-4	<1	<1	<1	<1 UJ	<1	<1	<1	<1	<1	**1.8 J**	**50**
Bromoform	75-25-2	<1	<1	<1	<1 UJ	<1	<1	<1	<1	<1 UJ	<1 UJ	**50**
Chloroform	67-66-3	<1	<1	<1	<1	**0.76**	<1	<1	<1	**0.4**	**3.1**	**7**
cis-1,2-Dichloroethylene	156-59-2	<1	<1	<1	<1	<1	**0.89**	<1	<1	<1	<1	**5**
Cyclohexane	110-82-7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**NE**
Dibromochloromethane	124-48-1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**4.2**	**50**
Methylcyclohexane	108-87-2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**NS**
trans-1,2-Dichloroethylene	156-60-5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
Trichloroethylene	79-01-6	**0.98**	**79**	**29**	**63**	**140**	**40**	**18**	<1	**1**	**2.5**	**5**
Vinyl chloride	75-01-4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**2**
Methoxyacetic acid, butyl ester	017640-22-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**NE**
tert-Butanol	75-65-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**NE**

NYSDEC class GA criteria are from NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1), Ambient water quality, class GA standards/guidance values from Table 1.

Bold	Sample Exceeds NYSDEC Class GA Criteria
Bold	Sample is above Non-Detect Value but Below NYSDEC Class GA Criteria
<###	Sample is Non-Detect at Laboratory
MW	Monitor Well
NE	Not Established
NA	Not Analyzed
DL	Sample Diluted
ug/l	micrograms per liter
VOCs	Volatile Organic Compounds

Table 8
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Avenue
Endicott, New York
10/4/2011 - 10/6/2011
Groundwater Samples - Analyzed for TCL VOCs 8260 B
(Only detected constituents are listed)

Groundwater Sample ID / Date Collected		JS-TW-007 (10-4-11) 10/4/2011	JS-TW-010 (10-6-11) 10/6/2011	JS-TW-12 (10-4-11) 10/4/2011	JS-TW-13 (10-5-11) 10/5/2011	JS-TW-14 (10-6-11) 10/6/2011	JS-TW-15 (10-5-11) 10/5/2011	JS-TW-16 (10-6-11) 10/6/2011	JS-TW-17 (10-4-11) 10/4/2011	JS-TW-18 (10-6-11) 10/6/2011	JS-TW-20 (10-4-11) 10/4/2011	NYSDEC Class GA Criteria
VOCs 8260 B (ug/L)	**CAS #**											
1,1,1-Trichloroethane	71-55-6	<1	<1	<1	<1	<1	<1	<1	<1	**3.2**	<1	**5**
1,1,2-Trichlorotrifluoroethane (freon 113)	76-13-1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
1,1-Dichloroethane	75-34-3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
1,1-Dichloroethylene	75-35-4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
Acetone	67-64-1	<5 UJ	**4.4**	<5	<5	**3.9**	**3.9**	**4.4**	<5	<5	<5 UJ	**50**
Bromodichloromethane	75-27-4	<1	<1 UJ	<1	<1	<1 UJ	<1	<1	<1	<1 UJ	<1	**50**
Bromoform	75-25-2	<1	<1 UJ	<1	<1	<1 UJ	<1	<1 UJ	<1	<1 UJ	<1	**50**
Chloroform	67-66-3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**7**
cis-1,2-Dichloroethylene	156-59-2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
Cyclohexane	110-82-7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**NE**
Dibromochloromethane	124-48-1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**50**
Methylcyclohexane	108-87-2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**NS**
trans-1,2-Dichloroethylene	156-60-5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5**
Trichloroethylene	79-01-6	**8**	**5.3**	<1	**35**	**40**	**11**	**9.8**	3.2	**51**	**61**	**5**
Vinyl chloride	75-01-4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**2**
Methoxyacetic acid, butyl ester	017640-22-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**NE**
tert-Butanol	75-65-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**NE**

Groundwater Sample ID / Date Collected		JS-TW-22 (10-4-11) 10/4/2011	JS-TW-24 (10-5-11) 10/5/2011	JS-TW-26 (10-4-11) 10/4/2011	JS-TW-27 (10-4-11) 10/4/2011	JS-TW-28 (10-5-11) 10/5/2011	JS-TW-031 (10-4-11) 10/4/2011	JS-TW-32 (10-6-11) 10/6/2011	FIELDDUP (10-4-11) 10/4/2011	FIELDDUP (10-5-11) 10/5/2011		NYSDEC Class GA Criteria
VOCs 8260 B (ug/L)	**CAS #**											
1,1,1-Trichloroethane	71-55-6	<1	**1.4**	<1	<1	<1	<1	<1	<1	<1		**5**
1,1,2-Trichlorotrifluoroethane (freon 113)	76-13-1	<1	<1	<1	<1	<1	<1	<1	<1	<1		**5**
1,1-Dichloroethane	75-34-3	<1	<1	<1	<1	<1	<1	<1	<1	<1		**5**
1,1-Dichloroethylene	75-35-4	**0.61**	<1	<1	<1	<1	<1	<1	**1.2**	<1		**5**
Acetone	67-64-1	<5 UJ	<5	<5 UJ	<5 UJ	<5	<5 UJ	**3.9**	<5 UJ	<5		**50**
Bromodichloromethane	75-27-4	<1	<1	<1	<1	<1	<1	<1 UJ	<1	<1		**50**
Bromoform	75-25-2	<1	<1	<1	<1	<1	<1	**4.6 J**	<1	<1		**50**
Chloroform	67-66-3	**0.82**	<1	<1	<1	<1	**0.45**	<1	**0.67**	**0.65**		**7**
cis-1,2-Dichloroethylene	156-59-2	<1	<1	<1	<1	<1	**34**	<1	**10**	**5.1**		**5**
Cyclohexane	110-82-7	<1	<1	<1	<1	<1	<1	<1	**0.79**	<1		**NE**
Dibromochloromethane	124-48-1	<1	<1 UJ	<1	<1	<1	<1	<1	<1	<1		**50**
Methylcyclohexane	108-87-2	<1	<1	<1	<1	<1	<1	<1	**4.5**	<1		**NS**
trans-1,2-Dichloroethylene	156-60-5	<1	<1	<1	<1	<1	**0.82**	<1	<1	<1		**5**
Trichloroethylene	79-01-6	**160**	**130**	**81**	**61**	**75**	**150**	**0.42**	**80**	**110**		**5**
Vinyl chloride	75-01-4	<1	<1	<1	<1	<1	<1	<1	**6.1**	<1		**2**
Methoxyacetic acid, butyl ester	017640-22-1	NA	NA	NA	NA	NA	NA	NA	NA	NA		**NE**
tert-Butanol	75-65-0	NA	NA	NA	NA	NA	NA	NA	NA	NA		**NE**

NYSDEC class GA criteria are from NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1), Ambient water quality, class GA standards/guidance values from Table 1.

Bold	Sample Exceeds NYSDEC Class GA Criteria
Bold	Sample is above Non-Detect Value but Below NYSDEC Class GA Criteria
<###	Sample is Non-Detect at Laboratory
MW	Monitor Well
NE	Not Established
NA	Not Analyzed
DL	Sample Diluted
ug/l	micrograms per liter
VOCs	Volatile Organic Compounds

Table 9
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Ave.
Endicott, New York
10/4/2011 - 10/6/2011
Groundwater Samples - Analyzed for Miscellaneous Constituents
(Only detected constituents are listed)

Groundwater Sample ID / Date Collected	CAS #		DEC-06-MW-06(10-5-11) 10/5/2011	DEC-MW-21(10-5-11) 10/5/2011	DEC-MW-27(10-5-11) 10/5/2011	DEC-MW-30(10-5-11) 10/5/2011	JS-TW-13(10-5-11) 10/5/2011	NYSDEC Class GA Criteria
Misc. Constituents								
Alkalinity		mg/l	**270**	**230**	**350**	**440**	**290**	**NE**
Carbon Dioxide	124-38-9	mg/l	**280**	**220**	**330**	**440**	**270**	**NE**
Chloride	7782-50-5	mg/l	**59**	**250**	**290**	**610**	**110**	**NE**
Nitrate		mg/l	**4.1**	**7.4**	**6.2**	**2.2**	**8.1**	**NE**
pH		su	**7.18**	**7.21**	**7.25**	**7.07**	**7.16**	**NE**
Sulfate		mg/l	**64 J**	**13 J**	**27 J**	**52 J**	**13 J**	**NE**
Sulfide	18496-25-8	mg/l	<1	<1	<1	<1	<1	**NE**
Dissolved Hydrogen		ug/L	0.0044 J	0.0021 J	0.0041 J	0.001 J	0.0059 J	**NE**
TOC		mg/l	**2.6**	**1.6**	**2.7**	**3.4**	**2.1**	**NE**

Groundwater Sample ID / Date Collected	CAS #		JS-TW-15(10-5-11) 10/5/2011	JS-TW-23 (10-5-11) 10/5/2011	JS-TW-24 (10-5-11) 10/5/2011	JS-TW-28 (10-5-11) 10/5/2011	FIELDDUP(10-5-11) 10/5/2011	NYSDEC Class GA Criteria
Misc. Constituents								
Alkalinity		mg/l	**400**	**320**	**270**	**270**	**270**	**NE**
Carbon Dioxide	124-38-9	mg/l	**380**	**300**	**240**	**260**	**270**	**NE**
Chloride	7782-50-5	mg/l	**11 J**	**370**	**150**	**120**	**59**	**NE**
Nitrate		mg/l	**930 J**	**4.9**	**5.7**	**4.3**	**4.1**	**NE**
pH		su	**7.3**	**7.21**	**7.58**	**7.27**	**7.15**	**NE**
Sulfate		mg/l	**30 J**	**34 J**	**16 J**	**190 J**	**65 J**	**NE**
Sulfide	18496-25-8	mg/l	**1**	<1	<1	<1	<1	**NE**
Dissolved Hydrogen		ug/L	**0.0140**	0.0140	0.0053 J	0.0020 J	0.0042 J	**NE**
TOC		mg/l	**4.3**	**2.3**	**1.6**	**2.2**	**2.8**	**NE**

NYSDEC class GA criteria are from NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1), Ambient water quality, class GA standards/guidance values from Table 1.

Bold	Sample Exceeds NYSDEC Class GA Criteria
Bold	Sample is above Non-Detect Value but Below NYSDEC Class GA Criteria
<###	Sample is Non-Detect at Laboratory
MW	Monitor Well
NE	Not Established
NA	Not Analyzed
DL	Sample Diluted
su	Standard Units
mg/l	milligrams per liter
ug/l	micrograms per liter

Table 10
FORMER CANADA DRY FACILITY - SITE CODE 704050
2-7 Badger Ave.
Endicott, New York
12/13-12/14/2011
Air Samples - Analyzed for TO-15
(Only detected constituents are listed)

Vapor Sample ID Date Collected		HRP-SSV-1 12/14/2011	HRP-SSV-2 12/14/2011	HRP-SSV-3 Outdoor Air 12/14/2011	HRP-SSV-3DUP 12/14/2011	HRP-SSV-4 12/14/2011	HRP-SSV-5 12/14/2011	HRP-SSV-6 12/14/2011	INDOOR AIR 2 BADGER 12/14/2011	INDOOR AIR 7 BADGER 12/14/2011	NYSDOH Guidance Values
AIR-TO15 (ug/m3)	**CAS #**										
1,1,1-Trichloroethane	71-55-6	**700**	<11	<0.29	<0.29	<0.29	**4.7**	**150**	<0.18	<0.1	NE
1,1-Dichloroethane	75-34-3	<20	<5.1	<0.13	<0.13	<0.13	<0.13	**110**	<0.083	<0.047	NE
1,1-Dichloroethylene	75-35-4	<13	<3.3	**3.5**	**3.5**	<0.085	<0.087	**110**	<0.054	<0.031	NE
1,2-Dichloroethane	107-06-2	<27	**130**	**3.5**	**3.5**	**3.5**	**3.5**	<5.8	<0.11	<0.064	NE
1,4-Dichlorobenzene	106-46-7	<21	<5.4	<0.14	<0.14	**10**	**10**	<4.6	**6.4**	**3.7**	NE
2-Butanone (MEK)	78-93-3	**760**	**190**	**5.1**	**5.1**	**5**	**5.1**	**160**	**3.2**	**1.8**	NE
2-Hexanone (Methyl butyl ketone/MBK)	591-78-6	<16	<4.2	<0.11	<0.11	**3.5**	<0.11	<3.5	**2.2**	**1.3**	NE
Acetone	67-64-1	<220	**1500**	**39**	**39**	**39**	**39**	**1300**	**24**	**14**	NE
Benzene	71-43-2	**410**	**100**	**2.8**	**2.8**	**2.7**	**2.8**	**89**	**1.7**	**0.97**	NE
Carbon disulfide	75-15-0	**400**	**100**	**2.7**	**2.7**	**2.6**	**2.7**	**86**	**1.7**	**0.94**	NE
Carbon tetrachloride	56-23-5	<35	<8.9	**0.55**	**0.55**	**0.54**	**0.55**	<7.6	**0.34**	**0.19**	NE
Chloroethane	75-00-3	<27	<6.9	**4.6**	**4.6**	<0.18	<0.18	<5.8	<0.11	<0.064	NE
Chloroform	67-66-3	**630**	<8	<0.21	<0.21	<0.21	**4.2**	**140**	**2.6**	**1.5**	NE
Chloromethane	74-87-3	<12	<3	**3.5**	**3.5**	**3.5**	**3.5**	<2.5	**2.2**	**1.3**	NE
cis-1,2-Dichloroethylene	156-59-2	**510**	**130**	**3.5**	**3.5**	<0.14	<0.14	**110**	<0.088	<0.05	NE
Ethylbenzene	100-41-4	<13	**280**	**7.5**	**7.5**	**7.3**	**7.5**	**240**	**4.6**	**2.6**	NE
m/p-Xylenes	179601-23-1	<21	**570**	**15**	**15**	**15**	**15**	**480**	**9.3**	**5.3**	NE
Methyl isobutyl ketone (MIBK)	108-10-1	<12	<3	<0.079	<0.079	**7**	<0.079	<2.5	<0.049	**2.5**	NE
Methylene chloride	75-09-2	**440**	**110**	**3**	**3**	**2.9**	**3**	**96**	**1.9**	**1.1**	**60**
o-Xylene	95-47-6	<8.2	**280**	**7.5**	**7.5**	**7.3**	**7.5**	**240**	**4.6**	**2.6**	NE
Styrene	100-42-5	<11	<2.7	**7.4**	**7.4**	**7.3**	**7.4**	**240**	**4.6**	<0.025	NE
Tetrachloroethylene	127-18-4	<33	<8.3	<0.22	<0.22	**0.62**	**0.63**	**20**	**0.39**	**0.22**	**100**
Toluene	108-88-3	**480**	**120**	**3.2**	**3.2**	**3.2**	**3.2**	**100**	**2**	**1.1**	NE
trans-1,2-Dichloroethylene	156-60-5	**510**	**130**	**3.5**	**3.5**	<0.093	<0.094	**110**	<0.059	<0.033	NE
Trichloroethylene	79-01-6	**70**	**18**	**0.47**	**0.47**	**0.46**	**0.47**	**15**	**0.29**	**0.17**	**5**
Trichlorofluoromethane	75-69-4	<26	<6.6	**4.9**	**4.9**	**4.8**	**4.9**	<5.6	**3**	**1.7**	NE
Trichlorotrifluoroethane	26523-64-8	<45	<12	**1.3**	**1.3**	**1.3**	**1.3**	<9.8	**0.83**	**0.47**	NE
Vinyl chloride	75-01-4	<16	<4.2	**0.47**	**0.47**	<0.11	<0.11	<3.5	<0.068	<0.039	NE
Xylene-Total		<29.2	**850**	**22.5**	**22.5**	**22.3**	**22.5**	**720**	**13.9**	**7.9**	NE

Key

1 Parameter Detected Below Standards

1 Parameter Exceeds ANY standards

Notes:
Shaded Cells indicate exceedances of one or more of the listed standards.
The Lab Sample No. is the merging of the Lab Sample ID and the Lab Sample Type.
NA = Not Submitted for analysis
NE = None Established
( ) = Indicates the stated minimum detectable level exceeds a criteria.