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ENVIRONMENTAL GROUP, INC.  
ENGINEERING, ARCHITECTURE AND SURVEYING, PC

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**REMEDIAL INVESTIGATION REPORT  
FOR  
AMOS AT QUACKENBUSH SQUARE  
BROADWAY AND SPENCER STREET  
ALBANY, NEW YORK**

**BROWNFIELD CLEANUP PROGRAM  
SITE # C401052**

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## **1.0 INTRODUCTION**

### **1.1 PROJECT AUTHORIZATION AND PURPOSE**

This Remedial Investigation Report (“RIR”), is being submitted as part of the New York State’s Brownfield Cleanup Program (“BCP”) for the Amos at Quackenbush Square Project (the “BCP Site”), located in Albany, New York (Site No. C401052). The RI Report has been prepared in accordance with the BCP agreement (“BCA”) between Albany Soma Project, LLC (“Soma”) and the New York State Department of Environmental Conservation (“DEC”), Index # A4- 0574-1106, dated October 12, 2007, and applicable law. Remedial Investigation (“RI”) activities have been completed in accordance with the approved Remedial Investigation Work Plan (“RIWP”), dated November 2007 and its subsequent addendum, dated March 2008. The RIWP was approved by DEC on May 19, 2008.

The purpose of the RI is to investigate existing environmental conditions, to close any existing “data gaps”, provide an evaluation of the nature and extent of contamination on the BCP Site, and identify source areas of contaminants on the BCP Site. Additionally, the RIWP required that certain lands – the parcels outlined in green on Figure 2, “Remedial Investigation Site Plan” (“Other Lands”) – adjacent to the BCP Site be investigated as part of the RI. Such Other Lands were included in the original BCP Application. The results of such investigation demonstrate that the nature and concentrations of contaminants found at the Other Lands are generally the same as those found at the BCP Site, and, in our opinion, warrant inclusion of the Other Lands in the BCP. Soma has requested that the DEC revisit inclusion of the Other Lands into the BCP in a September 24, 2008 submittal to the NYSDEC. A copy of the request is attached as Appendix J. That request is currently being considered by DEC.

Information collected during the RI is compiled into this RIR, which is to be used to assess whether the BCP Site poses a significant threat to human health and the environment and to use the RI data in developing a Remedial Work Plan (as necessary).

This RIR specifically details the findings of the RIWP implemented at the BCP Site and Other Lands. It describes procedures that were implemented for collecting and evaluating soil and groundwater samples, soil vapors, and measures taken in documenting field investigation activities. The report also provides a qualitative exposure assessment of all existing environmental data to date.

To the extent determined necessary or appropriate, this RI report also provides recommendations for the remediation of BCP Site and Other Lands.

## **1.2 GENERAL SITE DESCRIPTION AND TOPOGRAPHY**

The BCP Site and Other Lands are located in downtown Albany, New York and are shown on Figure 1, “Site Location Map”. The BCP Site is occupied by a CITGO Gasoline Service Station (although this occupant is anticipated to vacate by December 31, 2008), and was formerly occupied by the Broadway Auto Clinic.

The BCP Site is located approximately 900 feet west of the Hudson River and is approximately 20 to 30 feet above mean sea level. BCP Site topography gently slopes uphill to the northwest from Montgomery Street towards Broadway.

Surrounding property uses include a visitor’s center, two restaurants, (Le Canard (formerly Nicole’s Bistro) and the Albany Pump Station); parking lots and a parking garage; and the Progressive Insurance Building. The Leo O’Brien Federal Building is located north of the BCP Site.

Existing BCP Site structures include two single story buildings constructed on concrete slabs, a refueling station canopy, a subsurface hydraulic automotive repair lift, a gasoline fueling pump island, and three two-story buildings. Chain link fencing is also present on the BCP Site. The BCP Site is primarily covered by existing buildings, pavement, and some unpaved areas (primarily gravel and grass) exist. Refer to Figure 1 “Site Location Map” and Figure 2 “Remedial Investigation Site Plan” for the location of the BCP Site and its general layout.

## **1.3 BROWNFIELD CLEANUP AGREEMENT**

New York’s BCP is designed to encourage the private sector to investigate, remediate, and redevelop brownfield properties. A brownfield is any real property where redevelopment or reuse may be complicated by the presence or potential presence of a contaminant. The BCP is administered by the DEC, which oversees applicants that conduct brownfield site remedial activities. The BCP contains investigation and remediation requirements, ensuring that cleanups protect public health and the environment. When DEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use.

A required milestone in the BCP and the RIWP is the development of a RIR. This RIR for the Amos at Quackenbush Square project has been prepared for Soma in accordance with the RIWP approved by DEC and Brownfield Cleanup Agreement, Index # A4- 0574-1106, dated October 12, 2007, between DEC and Soma. Soma has proposed a mixed use, commercial project comprised of an office building, and an apartment building connected at street level by a single level of mixed commercial space, as well as a subsurface parking garage.

As required by the fully executed BCA signed on October 12, 2007, and the schedule contained in the RIWP, Soma must prepare and submit this RIR within approximately 4 to 6 months after the RIWP is approved, subject to DEC approvals, weather conditions and obtaining full Site access.

Soma implemented the RIWP in accordance with its schedule and is submitting the RIR to DEC for its review in accordance with its BCP obligations. The next steps will include a determination by DEC as to whether the site poses a significant threat, and development of a remedial work plan, including an appropriate analysis, to be submitted to the DEC for approval prior to initiation of additional work. Soma must also submit a Final Engineering Report certifying that the remediation has been properly performed upon completion of the work. If engineering controls are required, a complete description and any site management plan requirements, including the mechanisms that will be used to continually implement, maintain, monitor and enforce the engineering control will be detailed in any remedy that includes them. If institutional controls are required, the Final Engineering Report will describe such institutional controls; including mechanisms to implement, maintain, monitor and enforce such controls. The FER will be submitted to the DEC for review and approval prior to implementation of the institutional controls.

#### **1.4 HISTORICAL SITE USES**

SPECTRA Environmental Group, Inc. (SPECTRA) performed a Phase I Environmental Site Assessment in 2005 that identified that the BCP Site and Other Lands as having been used for a variety of commercial and industrial purposes between 1892 and the present. Historically, the BCP Site and Other Lands uses have included multiple meat packing and processing companies, a box factory, coal storage operations, produce storage, railroad rights of way, roofing suppliers, a tin shop, whole meat suppliers, an insecticide factory, gasoline filling, and auto repair activities.

#### **1.5 PRIOR ENVIRONMENTAL INVESTIGATION AND REMEDIAL ACTIVITIES**

As described below, several soil and groundwater investigations have been completed at the BCP Site and the Other Lands over the past decade. The results of these investigations are included in Section 4.1 and are otherwise included in the discussion of the extent and nature of contamination at the BCP Site and the Other Lands.

Circa 2001, eight underground storage tanks (USTs) were removed from the BCP Site. These USTs included one 275-gallon waste oil, one 1,500-gallon gasoline, one 500-gallon waste oil,

two 4,000-gallon diesel/gasoline, one 2,000-gallon diesel, one 3,000-gallon fuel/oil/motor oil, and one 500-gallon fuel oil tank. During removal actions, elevated soil vapor measurements from a photoionization detector (PID) were obtained for soils collected adjacent to the USTs. In addition, significant staining, petroleum sheens, and liquid hydrocarbons were observed on the groundwater, thus resulting in the DEC registering multiple spill numbers (98-01349, 96-01740 and 00-08939). All former UST locations are shown on Figure 2 “Remedial Investigation Site Plan”.

Four separate soil excavations were also completed in connection with these spills and 1,679 tons of contaminated soils have been removed in an effort to remediate soil and groundwater impacts. Two subsurface investigations have also been completed under NYSDEC spill number 98-01349. All excavations and investigations were limited, to some extent, by the property boundaries, underground utilities, and existing buildings.

Although numerous soil excavations have been conducted at the BCP Site in connection with UST removals, recent soil and groundwater analytical testing (2005, 2006 and 2008 RI results) indicate that soil and groundwater at the BCP Site and the Other Lands still exhibit petroleum products and concentrations of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and heavy metals in excess of NYSDEC Track 1 “Unrestricted Use Criteria” and 6 NYCRR Part 703 Water Quality Standards. Summaries of these historical data are presented in section 4.1

#### **October 2005 Phase II Subsurface Investigation**

Soil samples were also collected from four test pit locations (TP-1 through TP-4) and two hand auger locations (HA-1 and HA-2) in October 2005. Soil analytical results indicate measurable concentrations of VOCs, SVOCs and RCRA metals above Track 1 “Unrestricted Use Criteria” standards. The results of this investigation are discussed in section 4.1 and are summarized on Table 10 and Figure 7, “Remedial Investigation Historical Soil Exceedances”.

#### **June - July 2006 Limited Phase II Investigation**

A second subsurface investigation was completed at 705 Broadway in July 2006 to investigate an on-site floor drain and its discharge point. Six soil borings were completed downgradient of the floor drain to determine if soil impacts extended beyond the building foundation. This investigation revealed free phase product and VOCs, SVOCs and RCRA metals above Track 1 “Unrestricted Use Criteria” standards in soil and groundwater. The analytical results of this investigation are discussed in section 4.1, are summarized on Tables 11 and 12, and illustrated on Figure 7 “Remedial Investigation Track 1 Historical Soil Exceedances”.

## **2.0 BROWNFIELD CLEANUP PROGRAM INVESTIGATIVE ACTIVITIES**

The RI entailed the advancement of twenty soil borings, collection of seven surface soil samples, installation of eight groundwater monitoring wells, installation of seven soil vapor points, soil screenings using a photoionization detector, laboratory analysis of twenty seven select soil samples, collection and analysis of eight groundwater samples and laboratory analysis of seven soil vapor samples. Refer to Figure 2 “Remedial Investigation Site Plan” for soil boring/soil sample, groundwater monitoring well, and soil vapor sample locations.

### **2.1 SOIL BORING INSTALLATION**

On June 3 - 6 and 9, 2008 SPECTRA oversaw the drilling completed by Aquifer Drilling and Testing, Inc. (“ADT”) to advance twenty soil borings at the BCP Site and the Other Lands . The soil borings were proposed to investigate potential soil and groundwater impacts that have resulted from historical activities and to investigate the extent of contamination of soils and groundwater at and emanating from the BCP Site.

All soil borings were advanced with a Geoprobe Direct Push (“GDP”) drill rig to desired subsurface depths. Subsurface soils were retrieved using 5-foot long, 2-inch diameter Macro Cores® lined with acetate sleeves. Soil borings were typically advanced to a maximum depth of sixteen feet below ground surface (“bgs”), or until soil Photoionization Detector (“PID”) screenings were non-detect or Geoprobe refusal was encountered. RI soil borings are identified as RIWP-1 through RIWP-20, respectively and are shown on Figure 2 “Remedial Investigation Site Plan”. Appendix A, “Remedial Investigation Soil Boring Logs,” contains the documented subsurface soil conditions at each RI soil boring location.

Upon completion of the RI soil borings, each boring hole was backfilled to approximately 1 foot bgs with bentonite pellets, and brought up to existing grades with native soils and asphalt patch.

### **2.2 SOIL PHOTOIONIZATION SCREENING AND SOIL CHARACTERIZATION**

During the advancement of each RI soil boring and the collection of surface soil samples, SPECTRA visually characterized, geologically logged, and field screened soil samples for Total Volatile Organic Vapors (“TVOVs”). All soils were screened during field activities using a MiniRae PGM 2000 PID capable of detecting TVOVs that are associated with volatile and semi-volatile organic compounds (respectively, “VOCs” and “SVOCs”). Throughout the advancement of each RI soil boring, SPECTRA collected soil samples and screened them in one and two foot increments for TVOVs. The surface soil samples were also screened for TVOVs

prior to sample collection. Appendix A, “Remedial Investigation Soil Boring Logs,” provides soil-boring logs that show soil characterizations documented at each RI soil boring location. Table 8, “Remedial Investigation Soil Photoionization Screening Results,” presents documented soil PID screening results at all RI soil boring locations.

### **2.3 SOIL BORING AND SURFACE SOIL SAMPLE COLLECTION**

Soil samples were collected using standard soil sampling methods and submitted to a New York State certified laboratory, Columbia Analytical Services, Inc., Inc. with current ELAP certification for analysis. All RI soil samples were collected and analyzed for VOCs by EPA method 8260 Target Compound List (TCL), SVOCs by EPA method 8270 TCL, Metals Target Analyte List (TAL), and Polychlorinated Biphenyls (PCBs) by EPA method 8082. RI soil borings RIWP-1, 2, 3 and 19 were also analyzed for Pesticides by EPA methods 8081/8141A and Herbicides by EPA method 8151. RI soil samples are identified as RIWP-1 through RIWP-20, respectively and are shown on Figure 2 “Remedial Investigation Site Plan”. Soil analytical results are summarized in section 4.2. The laboratory analytical results of soil sampling are provided at Appendix D.

RI surface soil samples were also collected at each soil boring location where “bare soil” was documented to be present. RI surface soil samples were collected at RIWP-3, RIWP-4, RIWP-5, RIWP-13, RIWP-14, and RIWP-17 and RIWP-18 from the 0-2 inch depth. Refer to Figure 2 “Remedial Investigation Site Plan” for RI surface soil sample locations. RI surface soil analytical results are summarized in section 4.3. The laboratory analytical results of soil sampling are provided at Appendix D.

### **2.4 MONITORING WELL INSTALLATIONS**

During the advancement of the RI soil borings on, June 3 – 6, and 9 2008, SPECTRA and ADT also installed eight groundwater monitoring wells at prescribed RI soil boring locations. Groundwater monitoring wells were installed as prescribed in the RIWP and are shown on Figure 2 “Remedial Investigation Site Plan”. Two additional groundwater monitoring wells were installed at RIWP 13 and 15, due to elevated PID readings and visual petroleum sheens recorded in the field. DEC personnel were at the BCP Site when these changes were made and provided verbal authorization.

RI groundwater monitoring wells were typically installed to depths of 13-16 feet bgs, approximately five to seven feet into the BCP Site groundwater table. Groundwater is at approximate depths of 3-16 feet bgs across the BCP Site and the Other Lands. Refer to Table 9



“Remedial Investigation Monitoring Well Gauging Results” for RI gauging results. See Figure 3, Groundwater Contour, for groundwater elevations.

Each RI monitoring well is constructed with 10-feet of 1-inch diameter schedule 40 (20-slot) PVC prepackaged well screens with No. 1 graded sand packs, Schedule 40 PVC riser pipe, and bentonite seals and finished with steel flush mounted protective road boxes. RI monitoring wells are identified as RIWP-4, RIWP-5, RIWP-6, RIWP-8, RIWP-9, RIWP-10, RIWP-13, and RIWP-15 and are installed at corresponding RI soil boring locations. Refer to Figure 2, “Remedial Investigation Site Plan,” for individual soil boring locations converted to groundwater monitoring wells. Refer to Appendix B “Remedial Investigation Monitoring Well Details” for RI monitoring well details.

## **2.5 SOIL VAPOR POINT INSTALLATION**

On June 3 – 6, and 9 2008, SPECTRA and ADT completed eight RI soil vapor points to assess the potential impact from off-site and on-site contamination. RI soil vapor locations are identified as VP-1 through VP-8 and are shown on Figure 2 “Remedial Investigation Site Plan”. Each RI soil vapor point was installed in accordance with the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 (NYSDOH Final Guidance).

All RI soil vapor points were completed at depths comparable to the depth of the adjacent foundation footings, directly below concrete slabs, or at least 1-2 feet above the documented BCP Site/Other Lands water table. All RI soil vapor points were constructed with permanent prefabricated soil vapor points manufactured by Geoprobe Systems.

All RI soil vapor points were sealed above the screened interval and at the ground surface to prevent surface air interference and infiltration. Each RI vapor point is finished with a steel flush mounted protective road box to prevent surface disturbance. Refer to Appendix C, “Remedial Investigation Soil Vapor Point Details,” for RI vapor point details. Refer to Figure 2, “Remedial Investigation Site Plan,” for individual soil vapor locations.

## **2.6 WELL DEVELOPMENT, GROUNDWATER SAMPLING & GROUNDWATER MEASUREMENTS**

### **2.6.1 June 18 and 19 2008 Groundwater Sampling Event**

On June 12<sup>th</sup> 2008, SPECTRA developed the newly installed RI monitoring wells using a Geotech peristaltic pump and dedicated Teflon-lined polyethylene tubing. All RI monitoring

wells were purged of at least six well volumes or until groundwater became visibly free of suspended sediments.

SPECTRA also gauged all monitoring wells for depth to water at the existing monitoring wells and the newly installed RI monitoring wells in order to determine the stabilized groundwater depths, calculate groundwater elevations, and determine the presence of any Light Non-Aqueous Phase Liquids (“LNAPL”) sheens that could potentially be present. Measured depths to groundwater and well bottoms were recorded and are documented in Table 9, “Remedial Investigation Monitoring Well Gauging Results,” and Appendix B, “Monitoring Well Construction Details.”

On June 18 and 19, 2008, SPECTRA returned to the BCP Site and Other Lands to sample each RI monitoring well that was completed as part of the RI. Prior to sample collection, SPECTRA measured depth to groundwater to verify groundwater elevations.

Following depth to water measurements, SPECTRA purged three complete well volumes from each new RI monitoring well and collected groundwater samples in appropriate laboratory sample containers. Each RI groundwater sample was placed on ice in a clean cooler, and shipped then to Columbia Analytical Services of Rochester, New York for analysis of VOCs by USEPA Method 8260 TCL, SVOCs by USEPA Method 8270 TCL, and TAL Metals. In addition, monitoring well RIWP-9 was analyzed for pesticides and herbicides. RI groundwater analytical results are summarized in Sections 4.4 and 4.6. The laboratory analytical results of groundwater sampling are provided at Appendix E.

#### 2.6.2 October 15, 2009 Groundwater Sampling Event

At the request of the NYSDEC, SPECTRA completed a second groundwater sampling event on October 15, 2009. This event included sampling for VOCs by USEPA Method 8260 TCL, SVOCs by USEPA Method 8270 TCL, total (non-filtered) and dissolved Metals by USEPA Method 6010B.

Filtered and unfiltered groundwater samples have been collected and analyzed as part of the October 15, 2009 groundwater sample event. Laboratory data for all parameters analyzed have been reported in a NYSDEC ASP Category B package. Results of the filtered samples for metals were generally lower than the unfiltered samples and are discussed under Section 4.4.2.

Groundwater analytical data for the October 15, 2009 sample event has been provided to the NYSDEC and NYSDOH with Category B deliverables. All future laboratory data packages (i.e. post remedial sampling) will also be reported with Category B deliverables.

The laboratory analytical result sheets for the October 15, 2009 sample event is provided as Appendix M.

## **2.7 SOIL VAPOR SAMPLING**

On June 17, 2008, SPECTRA collected soil vapor samples from soil vapor points VP-1, VP-2, VP-3, VP-5, VP-6, VP-7, and VP-8. A soil vapor sample was not drawn from VP-4 due to vacuum conditions resulting from the clay substrata at the vapor point.

While the NYSDOH does not have guidance values for subsurface vapors the comparison of the RI soil vapor results to the NYSDOH 2003 Study is meant only to demonstrate that the detected levels of VOCs located directly below the site and below building slabs are above normal indoor air VOC concentrations. The NYSDOH values are not regulatory standards and soil vapor values above the NYSDOH values do not represent exceedances of any regulatory Standard. The comparison of soil vapor results to this 2003 study was presented to assess the potential risk that soil vapor may present when site remediation is initiated.

During sampling, the above-grade end of the polyethylene tubing (extending from the RI vapor point) was connected and sealed to a 6-liter Summa canister by an airtight compression fitting and sealed at the surface with VOC free modeling clay. Three volumes of air were purged from each RI soil vapor point prior to sample collection using a Gilain GilAir-5 Air Sampling Pump to confirm free flow of sub-surface soil vapor was taking place. A two-hour sampling period was then initiated in order to collect a sufficient volume of air for sample analysis by EPA method TO-15. Refer to Appendix C, "Remedial Investigation Soil Vapor Point Details," for RI vapor point construction details.

After sample collection, all SUMMA Canisters were submitted to Columbia Analytical Services of Rochester, New York for analysis using EPA Method TO-15. RI soil vapor results are summarized in section 4.5. The laboratory analytical results of soil vapor sampling are provided at Appendix F.

## **2.8 AMBIENT AIR SURVEY**

One ambient air sample was also collected on June 17, 2008 during the soil vapor-sampling event utilizing a certified clean Summa canister. The ambient air sample was collected for quality assurance/quality control (QA/QC) purposes and background comparisons. The ambient sample was collected at a height of approximately three (3) feet above grade to simulate breathing zone conditions. The air sample collection was performed in accordance with the NYSDOH Final Guidance.

The ambient air sample was collected for a 4-hour period. The four-hour period was selected to overlap with the collection time frames of the soil vapor samples collected on the same day.

After collection, the ambient SUMMA Canister was submitted to Columbia Analytical Services of Rochester, New York for analysis using EPA Method TO-15. Ambient air sample results are summarized in section 4.5. The ambient air sample location is shown on Figure 2, “Remedial Investigation Site Plan.”

## **2.9 SURVEY OF SOIL BORING AND MONITORING WELL LOCATIONS**

On June 13, 2008, SPECTRA surveyed the RI soil boring, monitoring well, and soil vapor point locations that were completed during the RI. Individual RI soil borings, monitoring well, and vapor point locations were surveyed relative to the local datum. Refer to Table 9 “Remedial Investigation Monitor Well Gauging Results” for recorded RI monitoring well casing elevations. Refer to Figure 2 “Remedial Investigation Site Plan” for the locations of RI soil boring, monitoring wells, and soil vapor point locations.

## **2.10 COMMUNITY AIR MONITORING**

On June 3 – 6, and 9, 2008 SPECTRA and Ambient Environmental, Inc. (“Ambient”) conducted a Community Air Monitoring Program (“CAMP”) at the BCP Site and Other Lands.

As specified by NYSDOH, the CAMP was implemented to provide real-time and continuous VOC and particulate monitoring during ground intrusive activities (including installation of RI soil borings, monitoring wells, and soil vapor points).

Continuous VOC monitoring was documented at monitoring stations positioned along the downwind perimeter of the BCP Site during RI activities. VOCs were also monitored periodically from upwind locations. Upwind monitoring was determined at the start of each RI soil boring and at approximate time intervals of 2 hours, thereafter.

Continuous particulate air monitoring was also performed at one upwind and one downwind perimeter location during the RI. The particulate monitoring instruments were equipped with an audible alarm to indicate any exceedance of NYSDOH action levels. In addition to automated monitoring, fugitive dust migration was visually assessed during all RI. All air monitoring equipment was calibrated and operated in accordance with manufacturing specifications and NYSDOH requirements. A complete Community Air Monitoring Report documenting all RI Camp activities is included as Appendix I.

A VOC monitoring program was also implemented during monitoring well gauging, monitoring well development and monitoring well sampling activities. VOCs were recorded periodically using a PID. The air at each monitoring well location was measured for VOCs at the beginning, during and at the close of each monitoring well disturbance. The results of VOC screenings are reported on RI well development logs presented in Appendix G and the RI monitoring well sampling logs included as Appendix H. The results of the RI CAMP are summarized in section 4.7.

Provisions for the continued implementation of the CAMP during site remedial activities to protect the surrounding community from the potential off-site migration of contaminated particulates or volatile organic contaminants in ambient air will be included as part of the Remedial Action Work Plan that will be submitted to the NYSDEC and NYSDOH for review.

### **3.0 SUMMARY OF LOCAL GEOLOGY, SITE SOILS AND HYDROLOGY**

#### **3.1 LOCAL SURFICIAL GEOLOGY**

According to the US Department of Agriculture (“USDA”) Soil Conservation Service “Soil Survey of Albany County, New York”, the BCP Site and Other Lands are situated on urban land. This classification of surficial soils is a mix of non-hydric loamy sand, silt loam, sandy loam, and fine sandy loam.

According to the Geological Survey Map of Unconsolidated Glacial Deposits and SPECTRA’s geotechnical borings completed at the BCP Site and Other Lands, the top layer of the soil is fill comprised of varying quantities of sand, silt, clay, and gravel mixed with brick, ash, wood, small roots and metal debris. This material extends to a depth of 4-12 feet below grade. This material is loose to medium-dense with varying moisture content (dry to wet).

The native soil immediately below the fill is a lacustrine (lake bottom) varved (layered) silt with clay that was deposited under glacial lake Albany, which flooded much of the Hudson River Valley during retreat of the most recent glacier. This deposit includes a stiffer brown crust of silt and clay overlying soft, wet, grey silt and clay. This stratum extends to a depth of 16-37 feet, being generally thicker to the west toward Broadway. This stratum is soft to very stiff.

Beneath the varved silt and clay stratum, there is a stratum of sand with varying amounts of clay, silt, and gravel. The layer extends to depths of 32-47 feet below grade. This stratum is loose to dense and is wet. This layer is either a glacial outwash deposit, an alluvial floodplain, or a river delta deposit. This layer has zones of loose and possibly liquefiable material.

Beneath this sand layer is a glacial till stratum that is comprised of varying amounts of silt, clay, sand, and gravel in a compact matrix. The glacial till layer extends to a depth of 45-50 feet below grade. The stratum is very dense and is dry to moist.

### 3.2 SOILS

The geologic conditions beneath the BCP Site and Other Lands were generally documented to consist of the following strata and fill materials:

| Depth          | Soil Description  |
|----------------|---|
| 0 – 6 feet BGS | Brown sand and/or silt with subordinate amounts of fine gravel, large boulders, grey to green clay, and construction debris (i.e. brick, metal, glass, and wood). |

Soil encountered during RI soil borings consist of fill materials that may have originated from off-site sources. Refer to Appendix A, “Remedial Investigation Soil Boring Logs,” for documented soil characteristics at location.

### 3.3 LOCAL BEDROCK GEOLOGY

SPECTRA did not encounter bedrock during completion of the RI soil borings. However, according to the Bedrock Geological Map of New York State “Upper Hudson Sheet”, the BCP Site and Other Lands are underlain by the Devonian-Age Snake Hill formation, which consists of soft to medium hard gray to dark gray shale with interbedded siltstone. Geotechnical investigations have documented bedrock to be at depths of 50-80 feet bgs across the BCP Site and Other Lands.

### 3.4 LOCAL HYDROGEOLOGY AND GROUNDWATER FLOW

Groundwater generally occurs within the unconsolidated sediments at average depths of 2.76 feet to 16.56 feet bgs. Measured depths to groundwater and calculated groundwater contours indicate that groundwater generally flows in a southeasterly direction across the BCP Site and Other Lands. However, based on calculated groundwater flow at the BCP Site and vicinity it appears that the groundwater is being diverted to the south by subsurface features. It is suspected that the concrete basement wall, extending to depths of 8-12 feet bgs and located at the northwesterly boundary of parcel 76.27-1-7, is acting as a barrier and redirecting groundwater flow.

Refer to Figure 3, “Remedial Investigation Groundwater Contour Map,” for a depiction of groundwater flow at the BCP Site and Other Lands. Groundwater contours illustrated on Figure 3, “Remedial Investigation Groundwater Contour Map,” are based on data obtained during the June 12<sup>th</sup>, 2008 groundwater-gauging event.

#### **4.0 SUMMARY OF SOIL, GROUNDWATER, SOIL VAPOR ANALYTICAL AND COMMUNITY AIR MONITORING PROGRAM RESULTS**

Columbia Analytical Services, Inc., Inc. (Columbia) performed all soil, groundwater and soil vapor laboratory analyses for this RI. Refer to Tables 1 through 7 for a summary of soil, groundwater and soil vapor analytical results. Figure 2, “Remedial Investigation Site Plan,” identifies the locations of each RI soil boring, groundwater monitoring well and soil vapor points completed during the RI. See also Appendices D, E, and F for laboratory analyses.

The RI soil and groundwater analytical data were internally reviewed by the laboratory for accuracy, precision, and completeness. A general data consistency review was also performed by SPECTRA prior to completing this RIR. The laboratory provided analytical data in the appropriate concentration units as specified under each test method.

Of particular note are the laboratory’s elevated method detection limits for some of the soil and groundwater samples analyzed. Per the laboratory report summaries, the reported elevated method detection limits are due to either matrix interferences, interfering non-target compounds and/or required sample dilutions due to dark sample extracts. As such, it is possible that the effected samples contain the chemical constituents in question at concentrations at or above the achieved method detection limits.

The noted elevated method detection limits that are reported above Track 1 “Unrestricted Use Criteria” standards are shown in bold with blue highlights in Tables 2, 3, 4, 5, and 6.

The following NYSDEC and NYSDOH regulatory standards and guidelines are used to interpret the soil, soil vapor, and groundwater analytical results obtained during the RI. The particular standards and guidelines used to evaluate the data are described below.

##### **Brownfield’s Cleanup Program (Subpart 375)**

Analytical results for soil samples are compared to Track 1 “Unrestricted Use Criteria” standards presented in the BCP multi-track remedial programs and site use-based soil cleanup objectives (“SCOs”) as promulgated in the 6 NYCRR § 375 regulations (effective December 14, 2006.) *See* 6 N.Y.C.R.R. 375 Subpart 6. Soil cleanup objectives are based on protection of public health, groundwater, and protection of ecological resources.



## **Technical and Operational Guidance Series (TOGS)**

Groundwater sample results are compared against the NYSDEC ground water quality standards and guidance values provided in 6 NYCRR 703 and described in Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

### **Sub-Surface Soil Vapor Guidelines**

Analytical results for sub-surface soil vapor samples are compared to the NYSDOH Air Guideline Values (“AGVs”) and to background databases for indoor air published in the NYSDOH Final Guidance, Summary of Background Levels (“NYSDOH BGL”). These databases include the NYSDOH 2003 Study of VOCs in Air of Fuel Oil Heated Homes, which included indoor samples from 104 fuel oil-heated homes in New York State. With respect to NYSDOH 2003 Study of VOC, SPECTRA compared RI soil vapor analytical results to 75<sup>th</sup> percentile values.

### **Ambient Air Guidelines**

Analytical results for the ambient air sample are compared to the nearest New York State Department of Environmental Conservation Ambient Air Monitoring Station located at Troy Atrium on 4<sup>th</sup> Street in Troy New York. This ambient air sampling station is the closest air sampling station and is approximately 7.6 miles from the BCP Site.

SPECTRA also reviewed the Loudonville Reservoir air monitoring station test data from the Shaker Road site as well test data from the air monitoring station located atop of the Albany County Board of Health at 175 Green Street, Albany. Both the Loudonville Reservoir and ACDOH rooftop monitoring stations were noted to only measure particulate matter and not ambient VOC concentrations. The NYDEC web page <http://www.dec.ny.gov/chemical/27370.html>, lists the Troy Atrium as the closest air monitoring station that provides measurements for ambient concentrations of volatile organic compounds.

In addition, the Remedial Investigation (RI) did not monitor for fine particulates during soil vapor sampling, as there was no ground disturbances occurring at this time. The ambient air sample collected during the soil vapor testing was collected and analyzed only for volatile organic compounds by EPA Method TO-15. Fine particulates were only monitored during ground intrusive activity to ensure compliance with the Community Air Monitoring Plan

(CAMP) particulate action levels. CAMP particulate monitoring results were not compared to local particulate air monitoring station data.

The following sections (*sections 4.1 and 4.2*) summarize the soil, soil vapor and groundwater analytical results from both historical sampling and the RI.

## **4.1 HISTORICAL ENVIRONMENTAL ANALYTICAL DATA SUMMARY**

### **4.1.1 Historical Soil Quality**

#### **October 19<sup>th</sup>, 2005 Phase II Subsurface Investigation**

Soil samples were collected from four test pit locations (TP-1 through TP-4) and two hand auger locations (HA-1 and HA-2) in October 2005. Test Pit and Hand Auger locations are shown on Figure 2, “Remedial Investigation Site Plan”. Reportable concentrations have been compared to the Track 1 “Unrestricted Use Criteria” Standards. Soil analytical results obtained during October 19<sup>th</sup>, 2005 Subsurface Investigation are summarized below.

#### RCRA Metals

Five RCRA metals (arsenic, barium, chromium, lead, and mercury) were reported in the samples from all test pit and hand boring locations. One additional RCRA metal (silver) was also reported at TP-1 (8 ft bgs).

Of the six RCRA 8 metals reported, chromium at (HA-1, HA-2, TP-1, TP-2, TP-3 and TP-4), lead at (HA-1, HA-2, TP-1 and TP-4), and mercury (HA-2, TP-1, TP-3 and TP-4), are above Track 1 “Unrestricted Use Criteria” standards. Tabulated analytical results for metals are presented on Table 10 and presented graphically on Figure 7, “Remedial Investigation Track 1 Historical Soil Exceedances.”

#### VOCs

Soil analytical results indicate measurable concentrations of four VOCs in the samples collected from two test pit locations (TP-3, 6 ft bgs, and TP-4, 7 ft bgs). Detected VOCs include acetone, benzene, ethylbenzene, and m/p-xylems. The acetone detection of 83.6 ppb is in exceedance of the Track 1 “Unrestricted Use Criteria” standard of 50 ppb. Tabulated VOC analytical results are summarized in Table 10 and are presented on Figure 7, “Remedial Investigation Track 1 Historical Soil Exceedances.”

## SVOCs

Eighteen SVOCs (2-Methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, carbazole, chrysene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene) were also reported in the samples collected from test pits TP-3 (6 ft bgs) and TP-4 (7 ft bgs), and soil boring HA-1 (4.5 ft bgs).

Of the eighteen individual constituents reported, six SVOCs (benzo (a) anthracene, benzo (a) pyrene, benzo (b) fluoranthene, benzo (k) fluoanthene, chrysene, and indeno (1,2,3-cd) pyrene) are above Track 1 “Unrestricted Use Criteria” standards at HA-1 and TP-4. The October 2005 analytical data is summarized in Table 10 and presented graphically on Figure 7, “Remedial Investigation Track 1 Historical Soil Exceedances”.

## **June - July 2006 Phase II Investigation**

A subsurface investigation that occurred in July 2006 at 705 Broadway sought to investigate an on-site floor drain and its potential discharge location. The July 2006 investigation advanced six soil borings downgradient of the floor drain in order to determine if soil impacts extended beyond the building foundation footprint. The results from this investigation are as follows:

### Drain sediments

As documented by soil analytical testing, three samples submitted for analysis (Drain Sample 3 inches, Drain Sample 18 inches, and Drain Line Sludge) indicate two VOCs (cis-1,2-Dichloroethene and tetrachloroethene (PCE)) and twelve SVOCs (bis (2-ethylhexyl) phthalate, fluoranthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b) fluoranthene, benzo(g,h,i) perylene, benzo(k) Fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene) in the drain sediments.

Of the fourteen compounds reported, two VOCs (cis-1,2-Dichloroethene and Tetrachloroethene (PCE)) and eight SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b) fluoranthene, chrysene, ideno(1,2,3-cd)pyrene, phenanthrene, and pyrene ) exceed Track 1 “Unrestricted Use Criteria” standards.

Drain sediment analysis also reports four RCRA 8 metals; chromium, lead, mercury, and silver in excess of Track 1 “Unrestricted Use Criteria” standards. Refer to Table 11 and Figure 7,

“Remedial Investigation Track 1 Historical Soil Exceedances,” for a summary of drain analytical results.

### Soil Borings

Seven soil samples were collected from six locations (SPSB-1 through SPSB-5, and SPSB-7) during the June-July 2006 Phase II Investigation.

Soil analytical results indicate the presence of six VOCs, namely; 1,2,4-trimethylbenzene, isopropylbenzene, methyl t-butyl ether (MTBE), n-butylbenzene, n-propylbenzene, and sec-butylbenzene and fifteen SVOCs, namely; bis(2-ethylhexyl)phthalate, 2-methylnaphthalene, acenaphthene, fluoranthene, fluorine, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene across the seven soil samples analyzed.

As shown on Table 12 and Figure 7 “Remedial Investigation Track 1 Historical Soil Exceedances” soil samples show VOCs (1,2,4-trimethylbenzene at SPSB-4) and SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b) fluoranthene, chrysene and indeno(1,2,3-cd)pyrene) at SPSB-3 above Track 1 “Unrestricted Use Criteria” standards.

#### **4.1.2 Historical Groundwater Quality**

Five monitoring wells (PES-1, PES-2, PES-5, MW-2, and MW-3) and two groundwater grab samples obtained from two test pits (TP-2 and TP-3) were sampled in October 2005. Groundwater samples locations are summarized on Table 13 and are presented on Figure 8 “Remedial Investigation Part 703 Historical Groundwater Exceedances.” The October 2005 groundwater results are discussed below.

#### **October 2005 Phase II Subsurface Investigation**

### VOCs

Table 13 summarizes the historical groundwater analytical results for groundwater samples collected at the BCP Site. Groundwater analytical results indicate measurable concentrations of six VOCs at five groundwater monitoring wells (PES-1, PES-2, PES-5, MW-2, and MW-3) and one test pit location (TP-3). The reported VOCs are benzene, MTBE, toluene, ethylbenzene, m/p-xylenes, and o-xylene. As reported on Table 13, “Historical Groundwater Analytical Results,” four VOCs (benzene, MTBE, ethylbenzene, and m/p-xylenes) are above Title 6 NYCRR Part 703 Water Quality Standards across PES-1, PES-5, MW-2, MW-3, and TP-3.

Refer to Figure 8, “Remedial Investigation Part 703 Historical Groundwater Exceedances,” for sample locations.

### SVOCs

Seven SVOCs (2-Methylnaphthalene, acenaphthene, anthracene, fluoanthene, naphthalene, phenanthrene, and chrysene) were reported in the groundwater sample from test pit TP-3 and PES-1. Measurable concentrations of fluoanthene were also detected in the groundwater sample collected from at TP-2.

Of the seven individual constituents reported, three SVOCs (2-Methylnaphthalene, naphthalene and chrysene) at TP-3 are in excess of NYSDEC Title 6 NYCRR Part 703 Water Quality Standards. Refer to Figure 8, “Part 703 Historical Groundwater Exceedances,” for sample locations.

### RCRA Metals

One RCRA metal (barium) was reported at a measurable concentration in all groundwater samples collected from the during the October 2005 investigation. The barium detections are below Title 6 NYCRR Part 703 Water Quality Standards. Refer to Table 13, “Historical Groundwater Analytical Results.”

## **June – July 2006 Phase II Investigation**

### Groundwater Sampling

Groundwater samples were collected from three monitoring wells SPMW-2, SPMW-3 and SPMW-5 at the BCP Site during June-July 2006. Groundwater analytical results indicated seven VOCs in one groundwater monitoring well (SPMW-5). VOCs; 1, 2, 4-trimethylbenzene, isopropylbenzene, methyl t-butyl ether (MTBE), n-butylbenzene, n-propylbenzene, p-isopropyltolune, and sec-butylbenzene were detected at monitoring well SPMW-5. All VOCs at SPMW-5 were in exceedance of 6 NYCRR Part 703 Water Quality Standards. Refer to Table 14 for a summary of June-July 2006 groundwater data and Figure 8, Remedial Investigation Part 703 Historical Groundwater Exceedances,” for sample locations.

MTBE was also detected above 6 NYCRR Part 703 Water Quality Standards at monitoring wells SPMW-2 and SPMW-3. LNAPL was also present at SPMW-3 at the time of groundwater sampling.

The groundwater sample from SPMW-3 was also analyzed for fingerprint analysis by Total Petroleum Hydrocarbons by EPA Method TPH 8100 due to measureable LNAPL. The analytical results indicate that the LNAPL at SPMW-3 contains a mixture of two petroleum distributions in the diesel/fuel #2 to motor oil range C12 to C36.

## **4.2 REMEDIAL INVESTIGATION SUBSURFACE SOIL ANALYTICAL RESULTS**

The RI included collection of twenty-seven soil samples across the BCP Site and Other Lands from varying depths that were analyzed for VOCs by USEPA Method 8260 TCL, SVOCs by USEPA Method 8270 TCL, Total Metals by USEPA Method 6010B, and Polychlorinated Biphenyls by EPA Method 8082. Select soil samples were also analyzed for Pesticides by EPA Method 8081A and Herbicides by EPA Method 8151A.

The following sections summarize the RI soil analytical results.

### *Target Analyte List (TAL) Metals in Subsurface Soil*

Seven metals; cadmium chromium, copper, lead, mercury, nickel, and zinc were detected at concentrations above Track 1 “Unrestricted Use Criteria” standards at the BCP Site and Other Lands.

Cadmium was reported above the Track 1 “Unrestricted Use Criteria” standard of 1 ppb at subsurface RI soil sample location RIWP-8 6’-8’ (5.45 ppm).

Total chromium was detected above the Track 1 “Unrestricted Use Criteria” standard of 1 ppb at all subsurface RI soil sample locations (RIWP-1 through RIWP-20). To be conservative, SPECTRA is considering all detected chromium to be in the hexavalent form.

Copper was detected at RI sample locations RIWP-8 6’-8’ (84.7 ppm), RIWP-15 8’-9’ (46.1 ppm/[51.6 ppm duplicate sample], and RIWP-16 1’-2’ (54.7 ppm) during the RI. Each of the above copper detections were above the Track 1 “Unrestricted Use Criteria” standard of 50 ppm,

Lead was detected at multiple RI sample locations; RIWP-3 4’-6’ (446 ppm), RIWP-6 8’-10’ (382 ppm), RIWP-8 6’-8’ (820 ppm), RIWP-11 6’-8’ (276 ppm), RIWP-13 6’-10’ (340 ppm), RIWP-15 8’-9’ (426 ppm [211 ppm duplicate sample]), and RIWP-18 2’-4’ (474 ppm). Each of the above lead concentrations exceed the Track 1 “Unrestricted Use Criteria” standard of 63 ppm.

Mercury was detected at multiple RI sample locations; RIWP-6 8'-10' (1.24 ppm), RIWP-8 6'-8' (0.915 ppm), RIWP-9 8'-9' (0.203 ppm), RIWP-10 12'-14' (0.37 ppm), RIWP-11 6'-8' (0.298 ppm), RIWP-13 6'-10' (0.947 ppm), RIWP-15 8'-9' (0.205 ppm [0.297 ppm duplicate sample]), RIWP-18 2'-4' (0.905 ppm), and RIWP-20 8'-9' (0.218 ppm). Each of the above mercury concentrations exceed the Track 1 "Unrestricted Use Criteria" standard of 0.18 ppm.

Nickel was detected at RI sample locations; RIWP-4 10'-12' (30.8 ppm) and RIWP-8 6'-8' (41.5 ppm). Each nickel concentration exceeds the Track 1 "Unrestricted Use Criteria" standard of 30 ppm.

Zinc was detected at multiple RI sample locations; RIWP-3 4'-6' (134 ppm), RIWP-6 8'-10' (224 ppm), RIWP-8 6'-8' (394 ppm), RIWP-11 6'-8' (163 ppm), RIWP-15 8'-9' (135 ppm [66.6 ppm duplicate]), RIWP-16 1'-2' (275 ppm), and RIWP-18 2'-4' (432 ppm). Each of the above zinc concentrations exceed the Track 1 "Unrestricted Use Criteria" standard of 109 ppm.

Several additional detections of TAL metals; including aluminum, arsenic, barium, beryllium, calcium, cobalt, iron, magnesium, manganese, potassium, selenium, sodium, thallium, and vanadium were reported in the subsurface RI soil samples collected, but are reported at concentrations below Track 1 "Unrestricted Use Criteria" standards. Although detections of these metals are reported below the Track 1 "Unrestricted Use Criteria" standards, they are widespread across the BCP Site as well as the Other Lands.

Refer to Table 1, "Remedial Investigation Soil Analytical Results (Metals)," and Appendix D for a summary of laboratory RI soil analysis. Figure 4, "Remedial Investigation Track 1 Soil Exceedances," presents a visual representation of the soil sample locations reported above Track 1 "Unrestricted Use Criteria" standards.

#### Volatile Organic Compounds (VOCs) in Subsurface Soil

Three VOCs (Acetone, 2-Butanone (MEK), and m & p xylene) were detected above Track 1 "Unrestricted Use Criteria" standards during the RI.

Acetone was detected at eight RI soil boring locations; RIWP-1 10'-12' (120 ppb), RIWP-2 6'-7' (210 ppb), RIWP-3 4'-6' (110 ppb), RIWP-4 10'-12' (320 ppb), RIWP-9 8'-9' (670 ppb), RIWP-10 12'-14' (82 ppb), RIWP-19 13'-14' (140 ppb) and RIWP-20 8'-9' (290 D ppb). Each of the eight acetone detections were above the Track 1 "Unrestricted Use Criteria" standard of 50 ppb.

Acetone was also present in RI soil samples RIWP-12 8'-10' (49 ppb), RIWP-14 12'-14' (43 ppb), and RIWP-17 8'-10' (38) ppb) but below the 50 ppb Track 1 "Unrestricted Use Criteria" standard.

2-butanone (MEK) was detected in the RI soil sample collected at RIWP-4 10'-12' at 140 ppb and above the Track 1 "Unrestricted Use Criteria" standard of 120 ppb.

2-butanone (MEK) was also present in RI soil samples collected from RIWP-1 10'-12' (23 ppb), RIWP-2 6'-7' (49 ppb), RIWP-10 12'-14' (15 ppb), RIWP-19 13'-14' (15 ppb) and RIWP-20 8'-9' (60 ppb) but below the 120 ppb Track 1 "Unrestricted Use Criteria" standard.

M & P-xylene was present above the Track 1 "Unrestricted Use Criteria" standard of 260 ppb at RIWP-4 10-12' (1,400 ppb).

M & p xylene was also present at RI soil sample locations RIWP-7 10'-13' (8.8 ppb) and RIWP-18 2'-4' (31 ppb) but below the 260 ppb Track 1 "Unrestricted Use Criteria" standard.

Five additional VOCs (cyclohexone, ethylbenzene, isopropylbenzene, methylcyclohexane, o-xylene) were also detected across seven (RIWP-3 4'-6', RIWP-4 10'-12', RIWP-5 12'-14', RIWP-7 8'-10', RIWP-9 8'-9', RIWP-14 12'-14' and RIWP-18 2'-4') subsurface RI soil sample locations. Although detections of these constituents were reported below the Track 1 "Unrestricted Use Criteria" standards, they are present across the BCP Site and the Other Lands.

Refer to Table 2, "Remedial Investigation Soil Analytical Results (VOCs)", Figure 4, "Remedial Investigation Track 1 Soil Exceedances," and Appendix D laboratory analytical report sheets for RI soil data summaries.

#### *Semi-volatile Organic Compounds (SVOCs) in Subsurface Soil*

Six VOCs, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene and chrysene were reported above Track 1 "Unrestricted Use Criteria" standards at RI soil sample location RIWP-16 1'-2'. Benzo(a)anthracene (1,800 ppb), benzo(a)pyrene (1,400 ppb), benzo(b)fluoranthene (1,300 ppb), indeno(1,2,3-cd)pyrene (860 ppb) and chrysene (1,800 ppb) were above the Track 1 "Unrestricted Use Criteria" standard of 1,000 ppb at soil sample location RIWP-16 1'-2'. Benzo(k)fluoranthene (1,300 ppb) compared to a Track 1 "Unrestricted Use Criteria" standard of 800 ppb and indeno (1,2,3-cd) pyrene (860 ppb) compared to a Track 1 "Unrestricted Use Criteria" standard of 500 ppb were also reported at sample location RIWP-16 1'-2'.



Benzo(a)pyrene (1,400 ppb at RIWP-16) and (4100 ppb at RIWP-17) were reported at concentrations above the “Commercial Restricted Use Soil Cleanup Objectives” standard of 1,000 ppb.

Eleven additional SVOCs (benzo(a)anthracene, chrysene, acenaphthene, anthracene, benzo(ghi)anthracene, carbazole, dibenzofuran, bis(2-ethylhexyl)phthalate, fluoranthene, fluorene, 2-methylnaphthalene, phenanthrene, and pyrene) were detected across seven (RIWP-3, RIWP-5, RIWP-6, RIWP-9, RIWP-11, RIWP-16 and RIWP-19) subsurface soil sample locations during the RI. Although detections of these constituents were below Track 1 “Unrestricted Use Criteria” standards they were present across the BCP Site and the Other Lands.

Refer to Table 3, “Remedial Investigation Soil Analytical Results (SVOCs)”, Figure 4, “Remedial Investigation Track 1 Soil Exceedances,” and Appendix D laboratory analytical report sheets for soil data summaries.

#### Polychlorinated Biphenyls(PCBs) in Subsurface Soil

PCBs were detected at RI soil sample locations RIWP-2 6’-7’ (45 ppb), RIWP-8 6’-8’ (79 ppb), RIWP-16 1’-2’ (39 ppb), and RIWP-18 2’-4’ (51 ppb). These concentrations are below the Track 1 “Unrestricted Use Criteria” standard of 100 ppb, however, they are present at the BCP Site and the Other Lands.

Refer to Table 4, “Remedial Investigation Soil Analytical Results (PCBs)”, Figure 4, “Remedial Investigation Track 1 Soil Exceedances”, and Appendix D laboratory analytical report sheets for PCB results.

#### Pesticides and Herbicides in Subsurface Soil

All subsurface RI soil samples collected and analyzed for Pesticides and Herbicides were at non-detect concentrations and below Track 1 “Unrestricted Use Criteria” standards. Refer to Table 5, “Remedial Investigation Soil Analytical Results (Pesticides and Herbicides)”, Figure 4, “Remedial Investigation Track 1 Soil Exceedances,” and Appendix D laboratory analytical report sheets for a summary of pesticide and herbicide data.

### 4.3 IRM POST-EXCAVATION SOIL DATA SUMMARY

Adirondack Environmental Services, Inc. completed the soil laboratory analyses for the IRM. Refer to Table 1A, 2A and 3A for a summary of post-excavation soil analytical results. The analytical data generated was internally reviewed by the laboratory for accuracy, precision, and completeness. A general data consistency review was also performed by SPECTRA prior to completing this report. The laboratory provided analytical data in the appropriate concentration units as specified under each test method, and no apparent lab deviations were noted.

All detectable soil concentrations that were observed during analytical testing were compared to NYSDEC cleanup levels promulgated under the NYSDEC Brownfields Cleanup Program (BCP) Track 1 “Unrestricted Use Criteria Standards” Track 2 “Commercial Restricted Use” promulgated in the 6 NYCRR § 375 regulations.

The following sections summarize the soil analytical results.

#### Total Metals Analysis

Thirteen metals samples were collected at the close of the excavation activities. Based on the post-excavation soil sample results, all thirteen soils samples show total chromium values above the Track 1 Unrestricted Use Criteria Value of 1 ppm (hexavalent), but at concentrations below Track 2 Commercial Restricted Use Criteria in all post excavation-samples. For the purpose of this report, chromium test results are assumed to be hexavalent chromium. The actual chromium laboratory result reported as total chromium and is most likely a combination of trivalent and hexavalent chromium.

In addition, lead was reported above the Track 1 Unrestricted Use Criteria Value of 63 ppm at excavation walls north wall 5-9 feet, northwest corner 5-12 ft, and south wall 8-10 ft samples. All other lead concentrations are reported below the Track 1 Unrestricted Use Criteria Value of 63 ppm.

Mercury was also reported above the Track 1 Unrestricted Use Criteria Value of 0.18 ppm at excavation walls; east wall 5-9 ft, north wall 5-9 feet, northwest corner 5-12 ft, south wall 8-10 ft and west wall 5-9 ft samples. All other mercury concentrations are reported below the Track 1 Unrestricted Use Criteria Value of 63 ppm.

Refer to Table 1A “Post-Excavation Soil Analytical Results (Metals)” and Figure 4A “IRM Post-Excavation Track 1 Soil Exceedances” for a summary of post excavation soil analytical metal results.

#### *Volatile Organic Compounds (VOCs)*

As shown on Table 2A “Post-Excavation Soil Analytical Results”, only minimal VOC concentrations were recorded at all post excavation soil sample locations. VOC concentrations from all sidewall and excavation bottom sample locations are all non-detect and/or below the Track 1 Unrestricted Use Criteria Values and Track 2 “Commercial Use Values”.

Refer to Table 2A “Post-Excavation Soil Analytical Results (VOCs)” and Figure 4A “IRM Post-Excavation Track 1 Soil Exceedances” for a summary of post- excavation soil analytical VOC results.

#### *Semi-Volatile Organic Compounds (SVOCs)*

The post-excavation soil laboratory analysis performed as part of the IRM indicates that the soil removal action has also effectively reduced SVOC concentrations in the soil surrounding the USTs to concentrations below Track 1 Unrestricted Use Criteria Values, with the exception of the north wall 5-9 ft depths. Benzo (a) anthracene, chrysene, benzo (k) fluoranthrene and indeno (1,2,3-cd) pyrene were reported at concentrations exceeding Track 1 Unrestricted Use Criteria Values along the north wall. No samples exceeded the Track 2 Commercial Restricted Use Soil Cleanup Objectives.

All other post-excavation soil samples resulted in concentrations of SVOCs below Track 1 Unrestricted Use Criteria Values.

Refer to Table 3A “Post-Excavation Soil Analytical Results (SVOCs)” and Figure 4A “IRM Post-Excavation Track 1 Soil Exceedances” for a summary of post excavation soil analytical SVOC results.

## **4.4 REMEDIAL INVESTIGATION SURFACE SOIL ANALYTICAL RESULTS**

Seven surface soil samples were collected during the RI at soil boring locations that exhibited exposed soils at the ground surface. At soil boring locations where exposed soil was present, surface soil samples were collected from 0-2 inches and analyzed for VOCs by USEPA Method 8260 TCL, SVOCs by USEPA Method 8270 TCL, Total Metals by USEPA Method 6010B, and

Polychlorinated Biphenyls by EPA Method 8082. Select soil surface samples were also analyzed for Pesticide by EPA Method 8081A and Herbicides by EPA Method 8151A.

The following sections summarize the RI surface soil analytical results and present tabulated summaries of the data.

*Target Analyte List (TAL) Metals in Surface Soil (0-2“)*

Eight TAL Metals; Barium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, and Zinc were detected at concentrations above Track 1 “Unrestricted Use Criteria” standards in surface soils at the BCP Site and at the Other Lands.

Barium was detected in surface sample location RIWP-17 at 433 ppm and exceeded the Track 1 “Unrestricted Use Criteria” standard of 350 mg/kg.

Cadmium was detected in surface sample location RIWP-3 at 4.69 ppm and exceeded the Track 1 “Unrestricted Use Criteria” standard of 2.5 ppm.

Chromium was reported above the Track 1 “Unrestricted Use Criteria” standard of 1 ppm at surface sample locations RIWP-3 (26.7 ppm), RIWP-4 (20.8 ppm), RIWP-5 (8.15 ppm), RIWP-13 (19.3 ppm), RIWP-14 (25.2 ppm), RIWP-17 (42.8 ppm) and RIWP-18 (14 ppm). To be conservative, SPECTRA is considering all detected chromium to be in the hexavalent form.

Copper was detected at surface sample locations RIWP-3 (67.4 ppm), RIWP-4 (51.5 ppm) RIWP-14 (79.3 ppm) and RIWP-17 (145 ppm) during the RI. Each of these detections are above the Track 1 “Unrestricted Use Criteria” standard of 50 ppm.

Lead was detected surface soil sample location RIWP-3 (433 ppm) and RIWP-17 (2,270 ppm) during the RI. Each of the reported concentrations for lead exceeds the Track 1 “Unrestricted Use Criteria” standard of 63 ppm.

Mercury was detected in surface sample locations RIWP-3 (0.332 ppm) and RIWP-17 (4.55 ppm) during the RI. Each of the reported concentrations for lead exceeds the Track 1 “Unrestricted Use Criteria” standard of 0.18 ppm.

Nickel was detected at sample location RIWP-17 at a concentration of 33.9 ppm. This concentration for nickel is above the Track 1 “Unrestricted Use Criteria” standard of 30 ppm.

Zinc was detected at multiple sample locations: RIWP-3 (134 ppm), RIWP-6 (224 ppm), RIWP-8 (394 ppm), RIWP-11 (163 ppm), RIWP-15 (135 ppm) RIWP-16 (275 ppm), and RIWP-18 (432 ppm), all of which exceed the Track 1 “Unrestricted Use Criteria” standard of 109 ppm.

Several additional detections of metals were reported in the subsurface soil samples collected during the RI, but are reported at concentrations below Track 1 “Unrestricted Use Criteria” standards. Refer to Table 1 for a summary of “Remedial Investigation Soil Analytical Results (Metals)”, Figure 4, “Remedial Investigation Track 1 Soil Exceedances,” and Appendix D for laboratory analytical report sheets.

#### *Volatile Organic Compounds (VOCs) in Surface Soil (0-2“)*

No surface soil samples collected and analyzed as part of the RI yielded any detections of VOCs above Track 1 “Unrestricted Use Criteria” standards.

Refer to Table 2 for a summary of “Remedial Investigation Soil Analytical Results (VOCs)” and Appendix D for laboratory analytical report sheets.

#### *Semi-volatile Organic Compounds (SVOCs) in Surface Soil (0-2“)*

Three SVOCs benzo(a)anthracene (4,100 ppb), benzo(a)pyrene (4,100 ppb), and chrysene (4,200 ppb) were reported above Track 1 “Unrestricted Use Criteria” 1,000 ppb standard at surface soil sample location RIWP-17 (0-2”).

Fluoranthene (10,000 ppb), phenanthrene (6,700 ppb), and pyrene (7,500 ppb) were also detected at RIWP-17 (0-2”) but below the Track 1 “Unrestricted Use Criteria” standard of 100,000 ppb.

Refer to Table 3, “Remedial Investigation Soil Analytical Results (SVOCs)”, Figure 4, “Remedial Investigation Track 1 Soil Exceedances,” and Appendix D for laboratory analytical report sheets.

#### *Polychlorinated Biphenyls in Surface Soil (0-2“)*

Total PCBs concentrations were reported at surface soil sample locations RIWP-3 (140 ppb) and RIWP-13 (107 ppb) at levels exceeding the Track 1 “Unrestricted Use Criteria” standard of 100 ppb for total PCBs. Refer to Table 4 for a summary of “Remedial Investigation Soil Analytical Results (PCBs)”, Figure 4, “Remedial Investigation Track 1 Soil Exceedances,” and Appendix D for laboratory analytical report sheets.

### Pesticides in Surface Soils (0-2“)

One surface soil sample was collected and analyzed for pesticides during the RI. The surface soil sample collected and analyzed from location RIWP-3 indicates pesticides 4,4-DDD (550 ppb) 4,4-DDE (730 ppb) and 4,4-DDT (1,100 ppb) above the applicable Track 1 “Unrestricted Use Criteria” standard of 3.3 ppb at the 0-2 inch depth.

Surface soil sample RIWP-3 was collected in an isolated area of where bare soil was exposed during advancement of soil boring RIWP-3. Surface coverings located immediately adjacent to RIWP-3 are covered with asphalt and therefore potential exposure is limited at this time.

Refer to Table 5 for a summary of “Remedial Investigation Soil Analytical Results”, Figure 4, “Remedial Investigation Track 1 Soil Exceedances,” and Appendix D for laboratory analytical report sheets.

## **4.5 REMEDIAL INVESTIGATION GROUNDWATER ANALYTICAL RESULTS**

### **4.5.1 June 18 and 19, 2008 Groundwater Analytical Results**

Eight groundwater samples were collected from newly installed groundwater monitoring wells. All groundwater monitoring wells were analyzed for VOCs by USEPA Method 8260 TCL, SVOCs by USEPA Method 8270 TCL, Total Metals by USEPA Method 6010B, and Polychlorinated Biphenyls by EPA Method 8082. Monitoring Well RIWP-9 was also analyzed for pesticides by EPA Method 8081A and Herbicides by EPA Method 8151A.

### Target Analyte List (TAL) Metals in Groundwater

Four TAL Metals; Iron, Lead, Manganese, and Sodium were detected at concentrations above 6 NYCRR Part 703 Water Quality Standards.

Iron was detected above the 6 NYCRR Part 703 Water Quality Standard of 0.3 ppm at monitoring wells RIWP-4 (2.19 ppm), RIWP-5 (3.66 ppm), RIWP-6 (10.9 ppm), RIWP-8 (1.86 ppm), RIWP-9 (12.4 ppm), RIWP-10 (19.9 ppm), RIWP-13 (10.8 ppm) and RIWP-15 (24.6 ppm).

Lead was reported above the 6 NYCRR Part 703 Water Quality Standard of 0.025 ppm at monitoring wells RIWP-5 (0.0384 ppm) and RIWP-13 (0.0502 ppm) during the RI.

Manganese was reported above the 6 NYCRR Part 703 Water Quality Standard of 0.3 ppm at monitoring wells RIWP-5 (0.406 ppm), RIWP-6 (1.41 ppm), RIWP-8 (3.39 ppm), RIWP-9 (4.81 ppm), RIWP-10 (3.38 ppm), RIWP-13 (4.03 ppm), and RIWP-15 (3.23 ppm) during the RI.

Sodium was reported above the 6 NYCRR Part 703 Water Quality Standard of 20 ppm at monitoring wells RIWP-4 (99.7 ppm), RIWP-5 (150 ppm), RIWP-6 (768 ppm), RIWP-8 (183 ppm), RIWP-9 (380 ppm), RIWP-10 (364 ppm), RIWP-13 (589 ppm), and RIWP-15 (151 ppm) during the RI.

All other detections of TAL Metals did not exceed 6 NYCRR Part 703 Water Quality Standards.

Refer to Table 6 for a summary of “Remedial Investigation Groundwater Analytical Results”, Figure 5, “Part 703 Water Quality Exceedances,” and Appendix E for laboratory analytical report sheets.

#### Volatile Organic Compounds (VOCs) in Groundwater

The laboratory results indicated eight VOCs in four of the eight monitoring wells sampled (RIWP-6, RIWP-8, RIWP-9 and RIWP-15) as part of the RI.

Two exceedances of the 6 NYCRR Part 703 Water Quality Standards were reported at RIWP-8 and RIWP-9 for MTBE and benzene, respectively. The MTBE concentration at RIWP-8 is 17,000 D ppb, which exceeds the 6 NYCRR, Part 703 Water Quality Standard of 10 ppb. The benzene concentration at RIWP-9 is at 120 ppb, which exceeds the 6 NYCRR, Part 703 Water Quality Standard of 1.0 ppb. Albany SOMA entered and signed the BCA with the NYSDEC as a volunteer. By entering and signing the BCA as a volunteer, Albany SOMA under the executed BCA is not required to investigate and/or remediate off-site contamination.

Isopropylbenzene (2.2 ppb at RIWP-6), acetone (12 ppb at RIWP-15) and acetone (27 ppb), MTBE (1.7 ppb) cyclohexone (39 ppb), ethylbenzene (1.5 ppb), methylcyclohexane (18 ppb) and toluene (2.0 ppb) at RIWP-9 were also present in site groundwater. Although present in site groundwater, the concentrations were below 6 NYCRR Part 703 Water Quality Standards.

The presence of MTBE and benzene in excess of the 6 NYCRR Part 703 Water Quality Standards and the detections of other VOC compounds at location RIWP-6, RIWP-8, RIWP-9, and RIWP-15 are attributed to the nearby retail petroleum station and is likely the result of historic filling and pumping activities.

Refer to Table 6 for a summary of “Remedial Investigation Groundwater Analytical Results”, Figure 5, “Part 703 Water Quality Exceedances,” and Appendix E for laboratory analytical report sheets.

#### *Semi-volatile Organic Compounds (SVOCs) in Groundwater*

2-methylnaphthalene is present at 65.0 ppb at monitoring well RIWP-9. 2-methylnaphthalene does not have an established detection limit under 6 NYCRR Part 703.

All other SVOCs concentrations were reported at non-detect during the RI.

Refer to Table 6 for a summary of “Remedial Investigation Groundwater Analytical Results”, Figure 5, “Part 703 Water Quality Exceedances,” and Appendix E for laboratory analytical report sheets.

#### *Pesticides and Herbicides in Groundwater*

The groundwater sample collected from monitoring well RIWP-9 was analyzed for pesticides and herbicides. The analytical results indicate non-detect concentrations for both pesticides and herbicides.

Refer to Table 6 for a summary of “Remedial Investigation Groundwater Analytical Results”, Figure 5, “Part 703 Water Quality Exceedances,” and Appendix E for laboratory analytical report sheets.

### **4.5.2 October 15, 2009 Groundwater Analytical Results**

The eight groundwater monitoring wells installed during the remedial investigation were sampled during June 2008 which represents late spring conditions. Per NYSDEC requests, SPECTRA completed a second groundwater sampling event on October 15, 2009 that represents a seasonal low water table condition. All of the wells sampled in October 2009 had a lower groundwater elevation compared to the prior sampling event in June 2008. Average groundwater elevations were more than 1 ft lower with the biggest difference recorded at RIWP-4 where the water table was 2.24 ft lower in October 2009. Data collected during the October 2009 groundwater sample event is summarized below.

Adirondack Environmental Services, Inc., Inc. (Adirondack) performed the groundwater laboratory analyses for the October 15, 2009 sample event. Figure 5A, “Remedial Investigation



Part 703 Water Quality Exceedances – October 15, 2009”, illustrates the locations of each groundwater monitoring well sampled during the October 15, 2009 sample event.

Similar to the June 2008 analytical data, the October 15, 2009 groundwater analytical data were also internally reviewed by the laboratory for accuracy, precision, and completeness. A general data consistency review was also performed by SPECTRA prior to completing this RIR Addendum. The laboratory provided analytical data in the appropriate concentration units as specified under each test method and no inconsistencies were noted.

Similar to the June 2008 groundwater results, the laboratory experienced and documented elevated method detection limits (MDLs) for various petroleum constituents across all of the groundwater samples analyzed. Per the laboratory report summaries, the reported elevated MDLs are due to matrix interferences, interfering non-target compounds and/or required sample dilutions. The noted petroleum constituents that had elevated MDLs are considered to be above the applicable “ 6NYCRR Part 703 Water Quality Standards or DOW TOGs 1.1.1 Guidance Values” and are shown in bold with blue highlights on Table 6 “Remedial Investigation Groundwater Analytical Results - June 18 and 19, 2008 and October 15.”

During October 2009, seven groundwater samples were collected from site monitoring wells. All collected groundwater samples were analyzed for VOCs by USEPA Method 8260 TCL, SVOCs by USEPA Method 8270 TCL, total (non-filtered) and dissolved Metals by USEPA Method 6010B. Monitoring Well RIWP-9 was not sampled and analyzed during the October 15, 2009 sample event due to the seasonal low water table condition. RIWP-9 did not contain a sufficient volume of groundwater for the scheduled analytical testing.

Dissolved metal samples were filtered by the lab using a 0.45 micron filter prior to performing the dissolved metals analysis.

The following sections summarize the October 15, 2009 sample results.

#### Target Analyte List (TAL) Total Metals in Groundwater

Seven TAL Total Metals; antimony, cobalt, iron, lead, manganese, nickel and sodium were detected at concentrations above 6 NYCRR Part 703 Water Quality Standards.

Antimony was detected above the 6 NYCRR Part 703 Water Quality Standard of 0.0003 ppm at monitoring well RIWP-5 (0.0401 ppm).

Cobalt was detected above the 6 NYCRR Part 703 Water Quality Standard of 0.005 ppm at monitoring wells RIWP-4 (0.0059 ppm) and RIWP-8 (0.0132 ppm).

Iron was detected above the 6 NYCRR Part 703 Water Quality Standard of 0.3 ppm at monitoring wells RIWP-4 (9.20 ppm), RIWP-5 (4.34 ppm), RIWP-6 (6.47 ppm), RIWP-8 (28.2 ppm), RIWP-10 (9.39 ppm), RIWP-13 (5.62 ppm) and RIWP-15 (7.62 ppm).

Lead was detected above the 6 NYCRR Part 703 Water Quality Standard of 0.025 ppm at monitoring wells RIWP-6 (0.0266 ppm, Duplicate sample) and RIWP-8 (0.051 ppm) during the sampling event.

Manganese was reported above the 6 NYCRR Part 703 Water Quality Standard of 0.3 ppm at monitoring wells RIWP-5 (2.72 ppm), RIWP-6 (1.56 ppm), RIWP-8 (3.23 ppm), RIWP-10 (3.07 ppm), RIWP-13 (3.97 ppm), and RIWP-15 (1.89 ppm).

Nickel was detected above the 6 NYCRR Part 703 Water Quality Standard of 0.1 ppm at monitoring well RIWP-5 (0.268 ppm).

Sodium was reported above the 6 NYCRR Part 703 Water Quality Standard of 20 ppm at monitoring wells RIWP-4 (132 ppm), RIWP-5 (188 ppm), RIWP-6 (869 ppm), RIWP-8 (172 ppm), RIWP-10 (341 ppm), RIWP-13 (502 ppm), and RIWP-15 (119 ppm).

Several additional detections of TAL total metals were reported across the BCP Site and Other Lands, but at concentrations that are below 6 NYCRR Part 703 Water Quality Standards. Refer to Table 6 “Remedial Investigation Groundwater Analytical Results – October 15, 2009”, Figure 5A, “Remedial Investigation Part 703 Water Quality Exceedances – October 15, 2009,” and Appendix M Remedial Investigation Groundwater Analytical Report Sheets – October 15, 2009 Sample Event for a summary of groundwater sample results.

#### Target Analyte List (TAL) Total Dissolved Metals in Groundwater

Four TAL Dissolved Metals; Iron, Manganese, Nickel and Sodium were detected at concentrations above 6 NYCRR Part 703 Water Quality Standards.

Iron was detected above the 6 NYCRR Part 703 Water Quality Standard of 0.3 ppm at monitoring wells RIWP-10 (0.379 ppm).

Manganese was reported above the 6 NYCRR Part 703 Water Quality Standard of 0.3 ppm at monitoring wells RIWP-5 (2.51 ppm), RIWP-6 (1.51 ppm), RIWP-8 (2.43 ppm), RIWP-10 (2.96 ppm), RIWP-13 (3.55 ppm), and RIWP-15 (1.70 ppm).

Nickel was detected above the 6 NYCRR Part 703 Water Quality Standard of 0.1 ppm at monitoring well RIWP-5 (0.280 ppm).

Sodium was reported above the 6 NYCRR Part 703 Water Quality Standard of 20 ppm at monitoring wells RIWP-4 (96.5 ppm), RIWP-5 (150 ppm), RIWP-6 (696 ppm), RIWP-8 (140 ppm), RIWP-10 (364 ppm), RIWP-13 (416 ppm), and RIWP-15 (123 ppm).

Several additional detections of TAL dissolved metals were reported across the BCP Site and Other Lands, but at concentrations that are below exceed 6 NYCRR Part 703 Water Quality Standards. Refer to Table 6 “Remedial Investigation Groundwater Analytical Results – June 18 and 19, 2008 and October 15, 2009”, Figure 5A, “Remedial Investigation Part 703 Water Quality Exceedances – October 15, 2009,” and Appendix M Remedial Investigation Groundwater Analytical Report Sheets – October 15, 2009 Sample Event for a summary of groundwater sample results.

#### Volatile Organic Compounds (VOCs) in Groundwater

The laboratory results indicated five VOCs in three of the seven monitoring wells sampled (RIWP-4, RIWP-8, and RIWP-15) during October 2009.

Two exceedances of the 6 NYCRR Part 703 Water Quality Standards were reported at RIWP-4 and RIWP-8 for benzene and MTBE, respectively. The benzene concentration at RIWP-4 is at 42 ppb, which exceeds the 6 NYCRR Part 703 Water Quality Standard of 1.0 ppb. The MTBE concentration at RIWP-8 is 22,000 ppb, which exceeds the NYSDEC TOGs 1.1.1. Guidance Value of 10 ppb.

Acetone (10 ppb at RIWP-15), ethylbenzene (4.2 J ppb at RIWP-4) and m&p-xylene (5.0 ppb at RIWP-4) were also present in site groundwater at concentrations below 6 NYCRR Part 703 Water Quality Standards.

The presence of MTBE and benzene in excess of the NYSDEC Standards/Guidance Values and the detections of other VOC compounds at location RIWP-4 and RIWP-8 are likely attributed to the BCP Site’s historic petroleum storage activities and use as a gasoline service station.

Refer to Table 6 “Remedial Investigation Groundwater Analytical Results – October 15, 2009”, Figure 5A, “Remedial Investigation Part 703 Water Quality Exceedances – October 15, 2009,” and Appendix M Remedial Investigation Groundwater Analytical Report Sheets – October 15, 2009 Sample Event for a summary of groundwater sample results.

#### Semi-volatile Organic Compounds (SVOCs) in Groundwater

Chrysene is present at 1.6 J ppb above the TOGS Guidance Value of 0.002 ppb at monitoring well RIWP-5.

Acenaphthene (2.7 J ppb), acenaphthylene (1.5 J ppb), benzo (g,h,i) perylene (1.8 J ppb), carbozole (1.4 J ppb), indeno (1,2,3-cd) pyrene (1.3 J ppb), fluorene (2.4 J ppb), phenanthrene (3.3 J ppb) and pyrene (1.7 J ppb) are also present in the RIWP-4 groundwater sample. Although present in the RIWP-4 sample, these concentrations were below TOGS Guidance Values or Water Quality Standards.

Refer to Table 6 “Remedial Investigation Groundwater Analytical Results – October 15, 2009”, Figure 5A, “Remedial Investigation Part 703 Water Quality Exceedances – October 15, 2009,” and Appendix M Remedial Investigation Groundwater Analytical Report Sheets – October 15, 2009 Sample Event for a summary of groundwater sample results.

#### Pesticides and Herbicides in Groundwater

A groundwater sample for pesticides and herbicides could not be collected from monitoring well RIWP-9 due to the seasonal low water table and insufficient water volume in the well. Therefore, RIWP-9 was not analyzed for pesticides and herbicides during the October 15, 2009 sample event.

## **4.6 REMEDIAL INVESTIGATION SOIL VAPOR ANALYTICAL RESULTS**

#### Volatile Organic Compounds (VOCs) in Soil Vapor

While the NYSDOH does not have guidance values for subsurface vapors the comparison of the RI soil vapor results to the NYSDOH 2003 Study is meant only to demonstrate that the detected levels of VOCs located directly below the site and below building slabs are above normal indoor air VOC concentrations. The NYSDOH values are not regulatory standards and soil vapor values above the NYSDOH values do not represent exceedances of any regulatory Standard. The comparison of soil vapor results to this 2003 study was presented to assess the potential risk that soil vapor may present when site remediation is initiated.

The results of the investigation identified seventeen compounds above laboratory detection limits across the seven soil vapor samples collected; nine of which are above the background values (75th percentile) published by NYSDOH. Elevated concentrations of acetone, carbon tetrachloride, 1,4-dichlorobenzene, ethylbenzene, tetrachloroethene (PCE), toluene, trichloroethene (TCE), o-xylene and m&p-xylene were identified above background values published by NYSDOH across the seven vapor sample locations.

Additionally, elevated concentrations of tetrachloroethene (PCE) at vapor points: VP-1, VP-3 and VP-5) exceed the NYSDOH AGVs of 100 ppb. Table 7, “Remedial Investigation Soil Vapor Analytical Results,” and Figure 6, “NYSDOH VOC Soil Vapor Results Map,” denote sample locations with elevated VOC concentrations in exceedance of NYSDOH AGVs and expected (75th percentile) background values published by NYSDOH.

PCE was detected at a concentration of 2000 ug/m<sup>3</sup> (VP-1), 2800 D ug/m<sup>3</sup> (VP-3) and 5800 D ug/m<sup>3</sup> (VP-5), which exceeds the AGV of 100 ug/m<sup>3</sup>. Concentrations of PCE detected could require mitigation dependant on indoor air concentrations according to decision Matrices 1 and 2 published in the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

Soil vapor samples V-5 and VP-7 are located at interior building locations. However, both buildings locations are no longer occupied and there are no future plans for the buildings to be occupied. All site buildings are expected to be razed prior to the start of site remediation work.

The source of the chlorinated VOCs (PCE and TCE) is suspected to be an on-site floor drain located in the former auto repair garage. The PCE concentration at the floor drain (5,800 ug/m<sup>3</sup>) is the highest reported PCE concentration at the Site. In addition, petroleum-related VOCs (benzene, ethylbenzene, toluene, and xylene) are likely attributed to gasoline filling operations.

No additional work for trichloroethene, tetrachloroethene, and carbon tetrachloride are planned.

See Table 7, “Remedial Investigation Soil Vapor Analytical Results,” and Figure 6, “NYSDOH VOC Soil Vapor Results Map,” and Appendix F for laboratory analytical report sheets. Figure 6 “NYSDOH VOC Soil Vapor Results Map” shows soil vapor sample locations and reported concentrations relative to adjacent site buildings.

### Ambient Air Sample Findings

The ambient air sample analytical results indicates several compounds (1,4-Dichlorobenzene, ethylbenzene, tetrachloroethene, toluene, o-xylene, and m&p-xylene at concentrations above average background concentrations recorded at NYSDEC Air Monitoring Station# 4102-09 located at Troy Atrium on 4<sup>th</sup> Street in Troy New York. All other reported compounds are below average the annual background levels recorded at NYSDEC Air Monitoring Station# 4102-09.

A summary of the analytical results for VOCs detected in the ambient air sample is presented in Table 7, “Remedial Investigation Soil Vapor Analytical Results”, Figure 6, “NYSDOH VOC Soil Vapor Results Map,” and the analytical data report provided as Appendix F.

#### **4.7 REMEDIAL INVESTIGATION MONITORING WELL GAUGING RESULTS AND GROUNDWATER FLOW**

Based on the June 12<sup>th</sup>, 2008 groundwater well gauging event at the BCP Site and Other Lands, groundwater flow is interpreted to flow in a southeasterly direction towards the Hudson River. Groundwater contours and flow direction are shown on Figure 3 “Groundwater Contour Map”. Refer to Table 9, “Remedial Investigation Monitor Well Gauging Results,” for the recorded depth to groundwater measurements.

Based on the October 15, 2009 groundwater monitoring well gauging event at the BCP Site and Other Lands, groundwater flow is consistent with previous groundwater gauging events and groundwater flow continues to trend in a southeasterly direction towards the Hudson River. Calculated groundwater contours and inferred flow direction are shown on Figure 3A “Remedial Investigation Groundwater Contour Map October 15, 2009”. Refer to Table 9A “Remedial Investigation Monitor Well Gauging Results October 15, 2009”, for the recorded depth to groundwater measurements.

#### **4.8 SUMMARY OF COMMUNITY AIR MONITORING PROGRAM RESULTS**

During the five days of real time air monitoring, (June 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> and 9<sup>th</sup>, 2008), no elevated levels of VOCs or particulates were recorded. Refer to Appendix I “Remedial Investigation Community Air Monitoring Plan (CAMP) Report” for complete a documentation of CAMP activities.

## **5.0 NATURE AND EXTENT OF CONTAMINATION**

This section discusses the nature and extent of contamination identified at the BCP Site. The key element to this process is to collect sufficient quantitative data about the BCP Site so that a site-specific risk assessment and appropriate remedial alternatives can be developed. This process first requires an adequate description of the nature and extent of contamination at the BCP Site. The nature and extent of contamination provides input information to the fate and transport of contamination, the potential exposure pathways for risk, and the basis for evaluation and selection of remedial alternatives. This section describes the vertical and horizontal extent of contamination in soil, soil vapor and ground water samples.

### **5.1 CONTAMINATION SOURCES**

Several sources for the chemical compounds detected in soil, groundwater and soil vapor include existing and historical underground storage tanks, building floor drains, automotive repair operations, surface runoff from gasoline fueling areas, historical petroleum spills, historical railroad spurs and historical industrial and commercial uses (including pesticide manufacturing tin shops using solvents and meatpacking).

### **5.2 DISTRIBUTION OF CHEMICAL CONTAMINATION**

#### **5.2.1 Distribution of Soil Contamination**

The following table presents the nature and extent of chemical compounds found in BCP Site soil and on the Other Lands. Table 5.2.1 incorporates both historical and RI soil analytical results for all samples that have resulted in detectable concentrations of Metals, VOCs, SVOCs, Pesticides and Herbicides and PCBs. As shown by the table, Metals, VOC, and SVOCs are widespread throughout the BCP Site as well as the Other Lands. All soil sample locations are shown on Figure 2 “Remedial Investigation Site Plan”.

**Table 5.2.1 Distribution of Soil Contamination**

| Sample ID (Depth ft)                          | Parcel ID     | Metals | VOCs | SVOCs | Pesticides/<br>Herbicides | PCBs |
|---|---------------|--------|------|-------|---------------------------|------|
| Subsurface Soil Sample Results on BCP Site    |               |        |      |       |                           |      |
| RIWP-4 (10'-12')                              | 76.27-1-12.22 | X      | X    | ND    | ---                       | ND   |
| RIWP-5 (12'-14')                              | 76.27-1-12.1  | X      | X    | X     | ---                       | ND   |
| TP-3 (6')                                     |               | X      | X    | X     | ---                       | ---  |
| RIWP-6 (8'-10')                               | 76.27-1-18    | X      | X    | X     | ---                       | ND   |
| RIWP-7 (8'-10')                               | 76.27-1-15    | X      | X    | ND    | ---                       | ND   |
| RIWP-8 (6'-8')                                |               | X      | ND   | ND    | ---                       | X    |
| RIWP-9 (8'-9')                                | 76.27-1-12.21 | X      | X    | X     | ---                       | ND   |
| RIWP-20 (8'-9')                               | 76.27-1-17    | X      | X    | ND    | ---                       | ND   |
| TP-4 (7')                                     |               | X      | X    | X     | ---                       | ---  |
| Drain Samples                                 |               | X      | X    | X     | ---                       | ---  |
| SPSB-1 (10'-11')                              |               | ---    | ND   | X     | ---                       | ---  |
| SPSB-2 (7'-8')                                |               | ---    | ND   | X     | ---                       | ---  |
| SPSB-3 (7'-8')                                |               | ---    | ND   | X     | ---                       | ---  |
| SPSB-4 (3'-4')                                |               | ---    | ND   | X     | ---                       | ---  |
| SPSB-5 (8.5')                                 |               | ---    | X    | X     | ---                       | ---  |
| SPSB-7 (8'-11)                                |               | ---    | X    | X     | ---                       | ---  |
| Surface Soil Sample Results on BCP Site       |               |        |      |       |                           |      |
| RIWP-4 (0-2'')                                | 76.27-1-12.22 | X      | ND   | ND    | ---                       | ND   |
| RIWP-5 (0-2'')                                | 76.27-1-12.1  | X      | ND   | ND    | ---                       | ND   |
| Subsurface Soil Sample Results on Other Lands |               |        |      |       |                           |      |
| RIWP-1 (10-12')                               | 76.27-1-8     | X      | X    | X     | ND                        | ND   |
| RIWP-2 (6'-7')                                |               | X      | X    | X     | ND                        | X    |
| HA-2 (5')                                     |               | X      | ND   | ND    | ---                       | ---  |
| RIWP-3 (4'-6')                                | 76.27-1-10    | X      | X    | X     | ND                        | ND   |
| RIWP-10 (12'-14')                             | 76.27-1-7     | X      | X    | ND    | ---                       | ND   |
| RIWP-11 (6'-8')                               | 76.27-1-19    | X      | X    | X     | ---                       | ND   |
| RIWP-12 (8'-10')                              |               | X      | X    | ND    | ---                       | ND   |
| RIWP-13 (6'-10')                              |               | X      | X    | ND    | ---                       | ND   |
| TP-1 (8')                                     |               | X      | ND   | ND    | ---                       | ---  |
| RIWP-14 (12'-14')                             | 76.27-1-1     | X      | X    | X     | ---                       | ND   |
| RIWP-15 (8'-9')                               | 76.27-1-1     | X      | X    | X     | ---                       | ND   |
| TP-2 (16'-17')                                |               | X      | ND   | ND    | ---                       | ---  |
| RIWP-16 (1'-2')                               | 76.27-1-7     | X      | ND   | X     | ---                       | X    |
| RIWP-17 (8'-10')                              |               | X      | X    | ND    | ---                       | ND   |
| RIWP-18 (2'-4')                               | 76.27-1-11.1  | X      | X    | ND    |                           | X    |
| HA-1 (4.5')                                   |               | X      | ND   | X     | ---                       | ---  |
| RIWP-19 (13'-14')                             | 76.27-1-9     | X      | X    | X     | ND                        | ND   |
| Surface Soil Sample Results on Other Lands    |               |        |      |       |                           |      |
| RIWP-3 (0-2'')                                | 76.27-1-10    | X      | ND   | ND    | X                         | X    |
| RIWP-13 (0-2'')                               | 76.27-1-19    | X      | ND   | ND    | ---                       | X    |
| RIWP-14 (0-2'')                               | 76.27-1-1     | X      | ND   | ND    | ---                       | ND   |
| RIWP-17 (0-2'')                               | 76.27-1-7     | X      | ND   | X     | ---                       | ND   |
| RIWP-18 (0-2'')                               | 76.27-1-11.1  | X      | ND   | ND    | ---                       | ND   |

- Notes:**
1. Table 5.2.1 includes all sample locations where chemical compounds are reported through laboratory testing.
  2. --- Analytical Test not completed for the sample analyzed.
  3. ND-indicates chemical constituents not detected in the sample analyzed.
  4. Red highlighted cells with X's indicate sample locations having Track 1 "Unrestricted Use Criteria" Exceedances.
  5. White boxes with X's indicate sample locations with chemical constituents present at concentrations below Track1"Unrestricted Use Criteria.



|  | <b>Metals</b>       | <b>VOCs</b>         | <b>SVOCs</b>        | <b>Pesticides/<br/>Herbicides</b> | <b>PCBs</b>        |
|--|---------------------|---------------------|---------------------|-----------------------------------|--------------------|
| Frequency of Exceedances<br>Track 1 “Unrestricted Use Criteria”        | 34 of 34<br>samples | 10 of 40<br>samples | 4 of 40<br>samples  | 1 of 5<br>samples                 | 2 of 27<br>samples |
| Percentage of Samples Exceeding<br>Track 1 “Unrestricted Use Criteria” | 100 %               | 25 %                | 10%                 | 20%                               | 7.4%               |
| Frequency of Samples with Constituents<br>detected                     | 34 of 34<br>samples | 23 of 40<br>samples | 22 of 40<br>samples | 1 of 5<br>samples                 | 6 of 27<br>samples |
| Percentage of Samples with<br>Constituents detected                    | 100%                | 57%                 | 55 %                | 20%                               | 22.2 %             |

#### Distribution of Metals in Soil

100 percent of the samples analyzed for metals resulted in exceedances of Track 1 “Unrestricted Use Criteria” standards. Metals are widespread across the BCP Site as well as the Other Lands. The depth of soil samples resulting in Track 1 “Unrestricted Use Criteria” exceedances vary from the surface (0-2”) to 17 ft bgs. Individual metal concentrations are presented in Tables 1, 10, 11 and 12 and the locations of the exceedances of Track 1 “Unrestricted Use Criteria” standards are shown on Figure 4.

#### Distribution of VOCs in Soil

57% of the total soil samples collected and analyzed for VOCs resulted in multiple detections of VOC constituents with 25 % of the samples analyzed for VOCs resulting in exceedances of Track 1 “Unrestricted Use Criteria” standards. VOC detections ranged from 2 ft to 14 ft bgs in the samples collected and analyzed. VOC concentrations are presented in Tables 2, 10, 11 and 12 and the locations of Track 1 “Unrestricted Use Criteria” exceedances are shown on Figures 4 and 7.

#### Distribution of SVOCs in Soil

55% of the total soil samples collected and analyzed for SVOCs resulted in multiple detections of SVOC constituents, with 10 % of the samples analyzed for SVOCs resulting in exceedances of Track 1 “Unrestricted Use Criteria” standards. SVOC detections ranged from 0-2” inches to 14 ft bgs. SVOC concentrations and exceedance locations are presented in Tables 3, 10, 11 and 12 and are shown on Figures 4 and 7.

### Distribution of Pesticides and Herbicides in Soil

One of the five soil samples collected and analyzed for Pesticides and Herbicides resulted in detections of Pesticides above Track 1 “Unrestricted Use Criteria” standards. The pesticide detection was recorded at a depth interval of 0-2 inches bgs. Pesticide and Herbicide concentrations are presented in Table 5 and exceedance locations are shown on Figure 4.

### Distribution of PCBs in Soil

22.2% of the soil samples collected and analyzed resulted in detections of PCBs. Two (7.4%) of the twenty-seven samples resulted in concentrations above Track 1 “Unrestricted Use Criteria” standards. The PCB detections were reported at depth intervals of 0-2” bgs. PCB concentrations and exceedances are presented in Table 4 and exceedance locations are shown on Figure 4.

### **5.2.2 Distribution of Groundwater Contamination June 18 and 19, 2008 Sample Event**

The following table presents the nature and extent of chemical compounds in BCP Site and Other Lands groundwater. The table incorporates historical and current analytical results for all samples that have resulted in detectable concentrations of metals, VOCs, SVOCs, Pesticides, and Herbicides. As shown by Table 5.2.2, metal and VOCs are widespread in groundwater throughout the BCP Site as well as the Other Lands. Groundwater sample locations are shown on Figure 2, “Remedial Investigation Site Plan”. Groundwater exceedance locations are shown on Figure 5, “Remedial Investigation Part 703 Water Quality Exceedances”.

**Table 5.2.2 Distribution of Groundwater Contamination  
June 18 and 19, 2008 Sample Event**

June 18 and 19, 2008 Sample Event

| Sample ID                                 | Parcel ID     | Metals | VOCs | SVOCs | Pesticides/<br>Herbicides |
|---|---------------|--------|------|-------|---------------------------|
| Groundwater Sample Results on BCP Site    |               |        |      |       |                           |
| RIWP-4                                    | 76.27-1-12.22 | X      | ND   | ND    | ---                       |
| PES-2                                     |               | X      | X    | ND    | ---                       |
| RIWP-5                                    | 76.27-1-12.1  | X      | ND   | ND    | ---                       |
| PES-5                                     |               | X      | X    | ND    | ---                       |
| TP-3                                      |               | X      | X    | X     | ---                       |
| RIWP-6                                    | 76.27-1-18    | X      | X    | ND    | ---                       |
| RIWP-8                                    | 76.27-1-15    | X      | X    | ND    | ---                       |
| MW-2                                      |               | X      | X    | ND    | ---                       |
| MW-3                                      |               | X      | X    | ND    | ---                       |
| RIWP-9                                    | 76.27-1-12.21 | X      | X    | ND    | ND                        |
| SPMW-2                                    | 76.27-1-17    | X      | X    | ND    | ---                       |
| SPMW-3 (see note 6)                       |               | X      | X    | ND    | ---                       |
| SPMW-5                                    |               | X      | X    |       | ---                       |
| Groundwater Sample Results on Other Lands |               |        |      |       |                           |
| RIWP-10                                   | 76.27-1-7     | X      | ND   | ND    | ---                       |
| RIWP-13                                   | 76.27-1-19    | X      | ND   | ND    | ---                       |
| RIWP-15                                   | 76.27-1-1     | X      | X    | ND    | ---                       |
| TP-2                                      |               | X      | ND   | X     | ---                       |

- Notes:**
1. Table 5.2.2 includes all sample locations where chemical compounds are reported through laboratory testing.
  2. --- Analytical test not completed for the sample analyzed.
  3. ND-indicates chemical constituents not detected in the sample analyzed
  4. Red highlighted cells with X's indicate sample locations having 6 NYCRR Part 703 Water Quality Exceedances.
  5. White boxes with X's indicate sample locations with chemical constituents present at concentrations below 6 NYCRR Part 703 Water Quality Standards.
  6. Light non-aqueous phase liquid was identified at SPMW-3.

|   | Metals              | VOCs                | SVOCs              | Pesticides/<br>Herbicides |
|---|---------------------|---------------------|--------------------|---------------------------|
| Frequency of Exceedances<br>Part 703 Water Quality Standards        | 8 of 17<br>samples  | 9 of 17<br>samples  | 0 of 17<br>samples | 0 of 1<br>samples         |
| Percentage of Samples Exceeding<br>Part 703 Water Quality Standards | 47.1 %              | 52.9 %              | 0%                 | 0%                        |
| Frequency of Samples with<br>Constituents detected                  | 17 of 17<br>samples | 12 of 17<br>samples | 2 of 17<br>samples | 0 of 1<br>samples         |
| Percentage of Samples with<br>Constituents detected                 | 100%                | 70%                 | 11.8 %             | 0%                        |

#### Distribution of Metals in Groundwater

Metals are widespread across the BCP Site as well as on the Other Lands. As shown by the table above, metals are present at 100% of the groundwater sample locations, while 47.1 % of the groundwater samples show concentrations above 6 NYCRR Part 703 Water Quality standards. Metals concentrations are presented in Tables 6, 13 and 14 and sample locations with exceedances of 6 NYCRR Part 703 Water Quality Standards are shown on Figures 5 and 8.

### Distribution of VOCs in Groundwater

70% of the groundwater samples collected and analyzed resulted in detections of VOC constituents, while 52.9% of the groundwater samples indicate VOCs above 6 NYCRR Part 703 Water Quality standards. VOC concentrations are presented in Tables 6, 13 and 14 and sample locations with exceedances of 6 NYCRR Part 703 Water Quality standards are shown on Figures 5 and 8.

### Distribution of SVOCs in Groundwater

11.8% of the groundwater samples collected and analyzed resulted in detections of SVOC constituents. SVOCs were not reported above 6 NYCRR Part 703 Water Quality standards. Individual SVOC concentrations are presented in Tables 6, 13 and 14 and exceedances of 6 NYCRR Part 703 Water Quality standards are shown on Figures 5 and 8.

### Distribution of Pesticides and Herbicides in Groundwater

Pesticides and Herbicides were tested for in groundwater at RIWP-9. The analytical results were non-detect for Pesticides and Herbicides.

### Distribution of Light non-aqueous phase liquid.

LNAPL has been observed in groundwater monitoring well SPMW-3 during past groundwater gauging events. SPMW-3 is located at the southern corner of the former auto repair facility and is located on tax parcel no. 76.27-1-17. Although LNAPL is present in monitoring well SPMW-3, LNAPLs have not been detected in any of the adjacent soil boring or groundwater monitoring wells (TP-4, SPMW-2, SPMW-5 or PES-5) during any groundwater gauging or soil sampling events. As such, the documented LNAPL at SPMW-3 appears to be limited and localized to the immediate SPMW-3 location.

Figure 8 “Remedial Investigation Part 703 Historical Water Quality Groundwater Exceedances” indicates the presence of LNAPL in groundwater at SPMW-3.

### **5.2.3 Distribution of Groundwater Contamination October 15, 2009 Sample Event**

The following table presents the nature and extent of chemical compounds in BCP Site and Other Lands groundwater based on October 15, 2009 sample results. The table below provides a summary for the October 15, 2009 analytical results for all samples that resulted in detectable concentrations of total and dissolved metals, VOCs, and SVOCs. As shown by Table 5.2.3A,

total and dissolved metals, VOCs and SVOC concentrations at the RIWP monitoring wells remain consistent with the June 2008 sample results. October 15, 2009 groundwater exceedance locations and concentrations are shown on Figure 5A, “Remedial Investigation Part 703 Water Quality Exceedances – October 15, 2009”.

**Table 5.2.3 A**  
**Distribution of Groundwater Contamination June 2008**

| Sample ID  | Parcel ID     | Metals<br>(Total) | Metals<br>(Dissolved) | VOCs | SVOCs | Pesticides/<br>Herbicides |
|--|---------------|-------------------|-----------------------|------|-------|---------------------------|
| <b>Groundwater Sample Results on BCP Site</b>    |               |                   |                       |      |       |                           |
| <b>RIWP-4</b>                                    | 76.27-1-12.22 | X                 | ---                   | ND   | ND    | ---                       |
| <b>RIWP-5</b>                                    | 76.27-1-12.1  | X                 | ---                   | ND   | ND    | ---                       |
| <b>RIWP-6</b>                                    | 76.27-1-18    | X                 | ---                   | X    | ND    | ---                       |
| <b>RIWP-8</b>                                    | 76.27-1-15    | X                 | ---                   | X    | ND    | ---                       |
| <b>RIWP-9</b>                                    | 76.27-1-12.21 | X                 | ---                   | X    | ND    | ND                        |
| <b>Groundwater Sample Results on Other Lands</b> |               |                   |                       |      |       |                           |
| <b>RIWP-10</b>                                   | 76.27-1-7     | X                 | ---                   | ND   | ND    | ---                       |
| <b>RIWP-13</b>                                   | 76.27-1-19    | X                 | ---                   | ND   | ND    | ---                       |
| <b>RIWP-15</b>                                   | 76.27-1-1     | X                 | ---                   | X    | ND    | ---                       |

|  | Metals<br>(Total) | Metals<br>(Dissolved) | VOCs              | SVOCs             | Pesticides/<br>Herbicides |
|--|-------------------|-----------------------|-------------------|-------------------|---------------------------|
| Frequency of Exceedances<br>Part 703 Water Quality<br>Standards        | 8 of 8<br>samples | ---                   | 2 of 8<br>samples | 0 of 8<br>samples | 0 of 1<br>samples         |
| Percentage of Samples<br>Exceeding Part 703 Water<br>Quality Standards | 100 %             | ---                   | 25 %              | 0%                | 0%                        |
| Frequency of Samples with<br>Constituents detected                     | 8 of 8<br>samples | ---                   | 4 of 8<br>samples | samples           | 0 of 1<br>samples         |
| Percentage of Samples with<br>Constituents detected                    | 100%              | ---                   | 50%               | 0%                | 0%                        |

- Notes:** 1. Table 5.2.3A includes all sample locations where chemical compounds are reported through laboratory testing.  
2. --- Analytical test not completed.  
3. ND-indicates chemical constituents not detected in the sample analyzed  
4. Red highlighted cells with X's indicate sample locations having 6 NYCRR Part 703 Water Quality Exceedances.  
5. White boxes with X's indicate sample locations with chemical constituents present at concentrations below 6NYCRR Part 703 Water Quality Standards.

**Table 5.2.3B**  
**Distribution of Groundwater Contamination October 15, 2009**

| Sample ID  | Parcel ID     | Metals<br>(Total) | Metals<br>(Dissolved) | VOCs | SVOCs | Pesticides/<br>Herbicides |
|--|---------------|-------------------|-----------------------|------|-------|---------------------------|
| RIWP-4   | 76.27-1-12.22 | X                 | X                     | X    | ND    | ---                       |
| RIWP-5   | 76.27-1-12.1  | X                 | X                     | ND   | X     | ---                       |
| RIWP-6   | 76.27-1-18    | X                 | X                     | ND   | ND    | ---                       |
| RIWP-8   | 76.27-1-15    | X                 | X                     | X    | ND    | ---                       |
| RIWP-9   | 76.27-1-12.21 | ---               | --                    | ---  | ---   | ---                       |
| <b>Groundwater Sample Results on Other Lands</b> |               |                   |                       |      |       |                           |
| RIWP-10  | 76.27-1-7     | X                 | X                     | ND   | ND    | ---                       |
| RIWP-13  | 76.27-1-19    | X                 | X                     | ND   | ND    | ---                       |
| RIWP-15  | 76.27-1-1     | X                 | X                     | X    | ND    |                           |

|  | Metals<br>(Total) | Metals<br>Dissolved) | VOCs              | SVOCs             | Pesticides/<br>Herbicides |
|--|-------------------|----------------------|-------------------|-------------------|---------------------------|
| Frequency of Exceedances<br>Part 703 Water Quality<br>Standards        | 7 of 7<br>samples | 7 of 7<br>samples    | 2 of 7<br>samples | 1 of 7<br>samples | ---                       |
| Percentage of Samples<br>Exceeding Part 703 Water<br>Quality Standards | 100%              | 100%                 | 28 %              | 14%               | ---                       |
| Frequency of Samples with<br>Constituents detected                     | 7 of 7<br>samples | 7 of 7<br>samples    | 3 of 7<br>samples | 1 of 7<br>samples | ---                       |
| Percentage of Samples with<br>Constituents detected                    | 100%              | 100%                 | 43%               | 14 %              | ---                       |

- Notes:** 1. Table 5.2.3B includes all sample locations where chemical compounds are reported through laboratory testing.  
2. --- Analytical test not completed.  
3. ND-indicates chemical constituents not detected in the sample analyzed  
4. Red highlighted cells with X's indicate sample locations having 6 NYCRR Part 703 Water Quality Exceedances.  
5. White boxes with X's indicate sample locations with chemical constituents present at concentrations below 6NYCRR Part 703 Water Quality Standards.

#### Distribution of Total and Dissolved Metals in Groundwater October 15, 2009

October 15, 2009 groundwater analytical shows total and dissolved metals across the BCP Site as well as on the Other Lands. As shown by the table 5.2.3B above, total and dissolved metals are present in 100% of the groundwater sample locations and 100% of the groundwater samples show concentrations of total and dissolved above 6 NYCRR Part 703 Water Quality standards.

As shown by tables 5.2.2, 5.2.3A and 5.2.3B, June 2008 and October 2009 analytical results for total metals are consistent with respect to frequency of exceedances of the Part 703 Water Quality Standards, percentage of samples exceeding Part 703 Water Quality Standards, frequency of samples with constituents detected, and percentage of samples with constituents

detected. Given the high level of consistency between the June 2008 and October 2009 data sets, it is apparent that the BCP site and Other Lands contain similar concentrations of total metals in groundwater, which is indicative that the BCP site and Other Land groundwaters are both impacted by total metals.

Dissolved metals were not analyzed during the June 2008 sample event, but were analyzed during October 2009 to determine the nature of dissolved metals contamination in area groundwater. Based on the June 2009 dissolved metal results, the frequency of exceedances of Part 703 Water Quality Standards, the percentage of samples exceeding Part 703 Water Quality Standards, the frequency of samples with constituents detected, and the percentage of samples with constituents detected each equate to 100%, which is indicative that groundwater at the BCP and Other lands are also impacted by dissolved metals. However, the dissolved metal concentrations are less than the total metal concentrations in almost all cases.

Total metal concentrations are presented on Table 6 “Remedial Investigation Groundwater Analytical Results – October 15, 2009” and sample locations with exceedances of 6 NYCRR Part 703 Water Quality Standards are shown on Figure 5A “Remedial Investigation Part 703 Water Quality Exceedances – October 15, 2009”.

#### Distribution of VOCs in Groundwater October 15, 2009

43 % of the groundwater samples collected and analyzed as part of the October 15, 2009 sample event resulted in detections of VOC constituents, while 28% of the groundwater samples analyzed indicate VOCs above 6 NYCRR Part 703 Water Quality standards.

As shown by tables 5.2.2A, 5.2.3A and 5.2.3B, both the June 2008 and October 2009 analytical results for VOCs are consistent with respect to the frequency of exceedances of the Part 703 Water Quality Standards, the percentage of samples exceeding Part 703 Water Quality Standards, the frequency of samples with constituents detected, and percentage of samples with constituents detected. Given the high level of consistency between the June 2008 and October 2009 data sets, it is apparent that the BCP site and Other lands contain similar concentrations of VOCs in groundwater, which is indicative that BCP site and Other Land groundwaters are impacted by VOCs.

VOC concentrations are presented on Table 6 “Remedial Investigation Groundwater Analytical Results – October 15, 2009” and sample locations with exceedances of the 6 NYCRR Part 703 Water Quality Standards are shown on Figure 5A “Remedial Investigation Part 703 Water Quality Exceedances – October 15, 2009”.

### Distribution of SVOCs in Groundwater October 15, 2009

14% of the groundwater samples collected and analyzed resulted in detections of SVOC constituents, while 14% of the groundwater samples indicates VOCs above 6 NYCRR Part 703 Water Quality standards.

As shown by tables 5.2.2, 5.2.3A and 5.2.3B, both the June 2008 and October 2009 analytical results for SVOCs are also consistent with respect to the frequency of exceedances of the Part 703 Water Quality Standards, the percentage of samples exceeding Part 703 Water Quality Standards, the frequency of samples with constituents detected, and percentage of samples with constituents detected. The calculated SVOC increase of 14% between June 2008 and October 2009 is the result of one detected SVOC (i.e. Chrysene -1.6 J ppb) at monitoring well RIWP-5, which is above the Part 703 Water Quality Standard or Guidance Value of 0.002 ppb. Given the high level of consistency between the June 2008 and October 2009 data sets, SVOC concentrations exist in site groundwater but generally remain below MDLs.

Individual SVOC concentrations are presented in Tables 6A “Remedial Investigation Groundwater Analytical Results – October 15, 2009” and sample locations with exceedances of 6 NYCRR Part 703 Water Quality Standards are shown on Figure 5A “Remedial Investigation Part 703 Water Quality Exceedances – October 15, 2009”.

#### **5.2.4 Distribution of Soil Vapor Contamination**

The following table presents the nature and extent of soil vapor contamination. Table 5.2.4 incorporates the analytical results for all vapor samples that have resulted in detectable concentrations of VOCs, PCE and TCE. As shown by the table, detections are widespread across the BCP Site as well as the Other Lands. Soil Vapor sample concentrations are illustrated on Figure 6.



**Table 5.2.4 Distribution of Soil Vapor Contamination**

| Sample ID (depth ft)                     | Parcel ID     | VOCs | PCE | TCE |
|--|---------------|------|-----|-----|
| <b>Soil Vapor Results on BCP Site</b>    |               |      |     |     |
| VP-1 (4.5')                              | 76.27-1-17    | X    | X   | ND  |
| VP-2 (5')                                | 76.27-1-15    | X    | X   | ND  |
| VP-3 (4')                                | 76.27-1-12.1  | X    | X   | ND  |
| VP-5 (1.5' sub-slab)                     | 76.27-1-17    | X    | X   | ND  |
| VP-8 (1.5' sub-slab)                     | 76.27-1-12.21 | X    | X   | ND  |
| <b>Soil Vapor Results on Other Lands</b> |               |      |     |     |
| VP-6 (1.5' sub-slab)                     | 76.27-1-7     | X    | X   | ND  |
| VP-7 (1.5' sub-slab)                     | 76.27-1-9     | X    | X   | X   |

**Notes:**

1. Table includes all sample locations where chemical compounds are reported through laboratory testing. Includes all reported detections above and below NYSDOH Guidance Values.
2. --- Analytical test not completed for the sample analyzed.
3. ND-indicates chemical constituents not detected in the sample analyzed
4. Red highlighted cells indicate vapor sample locations having NYSDOH Air Guidance Values exceedances.
5. White boxes with X's indicate sample locations with chemical constituents detected at concentrations below NYSDOH Air Guidance Values.

|   | VOCs              | PCE               | TCE               |
|---|-------------------|-------------------|-------------------|
| Frequency of Exceedances of<br>2003 NYSDOH Study of VOCs Indoor Air<br>75 <sup>th</sup> Percentile Values and Air Guidance Values | 7 of 7<br>samples | 6 of 7<br>samples | 1 of 7<br>samples |
| Percentage of Samples Exceeding<br>NYSDOH Study of VOCs Indoor Air<br>75 <sup>th</sup> Percentile and Air Guidance Values         | 100 %             | 85.7%             | 14.3%             |
| Frequency of Samples with<br>Constituents detected  | 7 of 7<br>samples | 7 of 7<br>samples | 1 of 7<br>samples |
| Percentage of Samples with<br>Constituents detected   | 100 %             | 100%              | 14.3%             |

#### Distribution of VOCs in Soil Vapor

100% of the soil vapor points sampled resulted in VOC constituents at concentrations above the relevant regulatory guidance values. Elevated concentrations of acetone, carbon tetrachloride, 1,4-dichlorobenzene, ethylbenzene, tetrachloroethene (PCE), toluene, trichloroethene (TCE), o-xylene and m&p-xylene were identified above background values published by NYSDOH across all seven vapor sample locations. Individual VOC concentrations in soil vapor are presented in Table 7 and sample locations indicating exceedances of applicable NYSDOH guidance values are shown on Figure 6.

#### Distribution of PCE in Soil Vapor

100% of the soil vapor points sampled indicate detectable concentrations of PCE in soil vapor. 85.7% of the soil vapor samples indicate PCE concentrations above the relevant regulatory

guidance values. As shown by the table above and on Figure 6, PCE vapors ranged from directly below building slabs to 5 feet bgs. Based on the soil vapor sample results, PCE is widespread across the BCP Site and the Other Lands.

#### Distribution of TCE in Soil Vapor

One of the seven soil vapor points (VP-7) resulted in a detection of TCE above the relevant regulatory guidance values. No other detections of TCE were reported, therefore TCE generally is not widespread across the BCP Site or the Other Lands.

## 6.0 CONTAMINATION EMANATING FROM THE SITE

Historical groundwater and recent RI groundwater laboratory analytical have documented petroleum and other contamination on the BCP Site and the Other Lands due to historical activities. Documented BCP Site contamination includes Metals and VOCs. Some of these contaminants are present in wells located along the downgradient perimeter of the BCP Site and in one offsite well.

### VOCs and SVOCs in Groundwater

As outlined in the approved RIWP, the RI sought to evaluate groundwater quality downgradient of known or suspected areas of concern. Eight groundwater monitoring wells were installed as part of the RI to evaluate groundwater quality.

As shown on Figure 5, “Remedial Investigation Part 703 Water Quality Exceedances,” MTBE is reported at 17,000 ppb at monitoring well RIWP-8. Monitoring Well RIWP-8 is located directly downgradient of the existing underground storage tank field and at the southern (downgradient) boundary of tax parcel no. 76.27-1-15. In addition, other wells located near the downgradient edge of the BCP Site also contained MTBE and VOCs above 6 NYCRR Part 703 Standards. These wells, which include locations sampled during the RI and prior to the RI (2005 and 2006), are RIWP-9, TP-3, PES-5, SPMW-2, SPMW-3, SPMW-5, MW-2 and MW-3. Based on the general southward groundwater flow at the BCP Site it is highly probable that VOC contamination is migrating from the BCP Site. Two offsite wells exist downgradient (south) of the BCP Site, PES-1 and PES-2. 6 NYCRR Part 703 exceedances have been historically observed in PES-1 for VOCs and SVOCs. However, since PES-1 was located immediately south of a series of offsite USTs, it is very possible that the contamination observed is associated with those USTs and not the BCP Site. Well PES-2 did not have any exceedances during a 2005 sample event performed by SPECTRA.

In addition to the noted 6 NYCRR Part 703 Water Quality Exceedances for VOCs and SVOCs, several additional constituents are reported with elevated method detection limits. Per the laboratory report summaries, these elevated method detection limits are due to either matrix interferences, interfering non-target compounds and/or required sample dilutions due to dark sample extracts. As such, it is possible that the affected samples contain these chemical constituents in question at concentrations at or above the relevant detection limits.

The noted elevated method detection limits that are reported above Track 1 “Unrestricted Use Criteria” standards are shown in bold with blue highlights in Tables 2, 3, 4, 5, and 6.

### Metals in Groundwater

Four TAL Metals, Iron, Lead, Manganese, and Sodium, are at concentrations above 6 NYCRR Part 703 Water Quality Standards and are suspected to be attributed to fill materials that have been placed at the BCP Site or naturally elevated concentrations. Since groundwater samples were not filtered prior to lab analysis, the elevated levels may also be due to the presence of particulate matter within the groundwater sample rather than actual dissolved phase concentrations. It is possible that low concentrations of metals are migrating from the BCP Site, however, it is very likely that the constituents are less than the levels obtained from the unfiltered groundwater samples collected at the BCP Site.

### Soil Vapor and Vapor Intrusion

All buildings and locations where sub-slab soil vapor samples were collected are currently unoccupied and there are no future plans for the buildings to be occupied. All site buildings are expected to be razed prior to the start of site remediation work. Remediation and future development plans will take into account and plan for potential soil vapor intrusion.

As outlined in the approved RIWP, vapor point (VP-3) sought to evaluate soil vapor downgradient and at the property line in relation to former underground storage tank locations formerly located on tax parcel no. 76.27-1-12.1.

As shown on Figure 6, "NYSDOH Soil Vapor Results Map," organic soil vapors were detected at numerous locations at the BCP Site and the Other Lands. Several of the vapor samples were collected immediately below existing slabs (VP-5, VP-6, VP-7 and VP-8). Based on the sampling event conducted during the RI, the highest concentrations of soil vapor were detected at locations VP-1, VP-3 and VP-5. Two of these locations (VP-1 and VP-5) are located on parcels associated with gasoline refueling and automotive service. VP-3 is located immediately adjacent to a series of former USTs that were removed.

The close proximity of VP-1 and VP-3 to the site boundary and an adjacent building indicates that it is possible that soil vapors may be migrating south of the BCP Site. Adjacent property uses include warehouses, the pump station restaurant, and a visitor center.

Soil vapor samples V-5 and VP-7 are located at interior building locations. However, both buildings locations are no longer occupied and there are no future plans for the buildings to be occupied. All site buildings are expected to be razed prior to the start of site remediation work.

Therefore, no additional work for trichloroethene, tetrachloroethene, and carbon tetrachloride are planned.

Light non-aqueous phase liquid.

LNAPL has been observed in groundwater monitoring well SPMW-3 during past groundwater gauging events. SPMW-3 is located at the southern corner of the former auto repair facility and is located on tax parcel no. 76.27-1-17. Although LNAPL is present in monitoring well SPMW-3, LNAPLs have not been detected in any of the adjacent soil boring or groundwater monitoring wells (TP-4, SPMW-2, SPMW-5 or PES-5) during any groundwater gauging or soil sampling events. As such, the documented LNAPL at SPMW-3 appears to be limited and localized to the immediate SPMW-3 location.

**October 15, 2009 VOC and SVOC Groundwater Data Summary**

The October 15, 2009 groundwater sampling data is generally consistent with June 2008 monitoring data. Examining these data together indicates that the concentration levels measured at the groundwater sampling locations show very similar concentrations with slight fluctuations when compared to June 2008 sample event. Since the June 2008 and October 15, 2009 sample events were collected during a different seasons, these types of variations are expected. As such the October 15, 2009 groundwater sample event and the resulting analytical results remains consistent with the conclusions outlined in section 6.0 of the November 2008 RI Report.

**October 15, 2009 Total and Dissolved Metals in Groundwater**

Seven total TAL Metals; antimony, cobalt, iron, lead, manganese, nickel and sodium and four dissolved metals; iron, manganese, nickel and sodium are at concentrations above 6 NYCRR Part 703 Water Quality Standards and are suspected to be attributed to fill materials that have been placed at the BCP Site or naturally elevated concentrations. The groundwater samples were filtered prior to lab analysis during the October 15, 2009 sample event had generally lower concentrations, compared to the unfiltered samples. Because of this, it is likely that some of the elevated metals detected in the unfiltered samples is due to particulate matter within the samples. Total metals concentrations in the October 2009 sample event are quite similar to the June 2008 sample event, indicating that the BCP Site and Other Lands located adjacent to the BCP Site contain groundwater that is impacted with metals.

## **7.0 QUALITATIVE EXPOSURE ASSESSMENT**

A qualitative exposure assessment qualitatively determines the route, intensity, frequency and duration of actual or potential exposure of humans, fish, and wildlife to contaminants. This assessment considers the nature and size of the surrounding population that is or may be exposed, considers the reasonably anticipated future land use of the BCP Site and affected off-site areas (including the Other Lands) and the reasonably anticipated future groundwater use. This qualitative exposure assessment consists of characterization of the exposure setting, identifying current reasonably foreseeable exposure pathways, and evaluation of contaminant fate and transport. As discussed in prior sections of this RIR, various types of contaminants, primarily metals and petroleum related compounds, are present in the soil, groundwater and vapors at the BCP Site and the Other Lands.

### **7.1 EXPOSURE SETTING**

As previously described in this RIR, the current BCP Site uses primarily consist of vacant buildings and land, vehicle parking, and one commercial business (gasoline filling station). Historical uses at the BCP Site and surrounding parcels (including the Other Lands) include various commercial and industrial businesses such as meat packing/processing, a box factory, coal storage, roofing supplies, a tin shop, and an insecticide factory, and automotive repair.

The current surrounding land uses include several commercial businesses and office space in an urban setting. Commercial businesses include two restaurants, Le Canard (formerly Nicole's Bistro) and the Albany Pump Station. Office buildings include the Leo O'Brian Federal Building and the Progressive Insurance Company. A visitor's center is also located in the Quackenbush Square area.

The majority of the BCP Site and the Other Lands is enclosed by a fence that prevents public access. The surface of the BCP Site and the Other Lands is primarily covered by buildings and paved asphalt parking areas. A few small areas with gravel and dirt cover also exist at the BCP site. Municipal water and sewer is present at the BCP Site and in the surrounding area.

There are no surface water features at the BCP Site, the Other Lands, or within the immediate vicinity. The Hudson River, located approximately 900 feet southeast of the BCP Site, is the nearest surface water body. Other than a few isolated areas with grass and weeds and small growth trees, there is no vegetation present at the BCP Site or the Other Lands.

Given the urban and developed nature of the BCP Site and immediate vicinity, the BCP Site is not a significant wildlife habitat. The Corning Preserve, adjoining the Hudson River, occurs east of the BCP Site. However, the land area between the BCP Site and the preserve is physically separated by Interstate 787, a set of railroad tracks, and several parking lots that are surrounded by fencing.

## **7.2 CURRENT AND FORESEEABLE EXPOSURE PATHWAYS**

In evaluating the current and foreseeable exposure pathways, human and wildlife exposure potential was considered with respect to dermal contact with soil, surface water and groundwater; ingestion of soil, groundwater and surface water; and inhalation of particulate matter and chemical vapors.

Based upon the exposure setting, including the physical nature of the BCP Site, the Other Lands, and surrounding land uses, several of the exposure pathways are not significant with respect to the current and foreseeable uses. Specifically, given the urban nature of the BCP Site, the Other Lands, and the surrounding commercial setting, it is unlikely that the BCP Site will adversely affect fish and wildlife, since significant habitat does not occur on the BCP Site or in its immediate vicinity. In addition, there will be minimal erosion and off-site transport of surface soils from the BCP Site or the Other Lands since the soils are primarily covered by pavement and/or building foundations, and there are no surface water bodies at the BCP Site.

With regard to potential human exposure, surface water is not currently present at the BCP Site or the Other Lands and it is not anticipated in future site development plans. Groundwater from beneath the BCP Site is not currently used for drinking water, nor is it anticipated that it will be used for drinking water in the future. Therefore, dermal contact with surface water or ingestion of surface water or groundwater are unlikely exposure pathways for current or foreseeable BCP Site (and Other Lands) uses.

Further evaluation of the exposure potential at the BCP Site must also consider property use. Although the BCP Site is primarily vacant, the current use of the property does include one commercial business and therefore potential current exposure could occur to on-site commercial workers. In addition, less frequent exposure could occur with sporadic construction or utility work at the BCP Site or the Other Lands. For both of these potential receptor groups, exposure may result from inhalation and dermal contact. In addition, a construction or utility worker may potentially be exposed to soil by accidental ingestion and inhalation, in the event that good hygiene practices were not followed.

Proposed future uses of the BCP Site and the Other Lands may include mixed commercial and residential activities. However, it is significant to note that the development of the Albany Soma project may include the excavation and removal of 10 to 30 feet of soil from below the existing surface of the BCP Site in association with construction of a sub-grade parking area to be located beneath the BCP Site and the Other Lands.” Soil removal during remedial activities will require post-excavation soil analysis to confirm that soil removal action has met Track 1 “Unrestricted Use Soil Cleanup Objectives” and that all impacted soils have been removed. In addition to collecting post-remediation samples, SPECTRA will utilize all existing analytical results to establish the necessary excavation depths to meet the Cleanup Objectives.

Removal of this soil and construction of the proposed subgrade-parking garage (with proper vapor ventilation) would eliminate the inhalation and direct contact exposure potential to future occupants. Some exposure potential would remain for future construction and utility workers due to the inhalation, direct contact and ingestion pathways. If the garage is not built and soils are left in place, vapor intrusion could potentially be of concern to occupants of on-site or adjacent buildings.

Soil vapor can flow into a building due to a number of factors, including barometric pressure changes, wind load, thermal currents, or depressurization from building exhaust fans. The rate of movement of the vapors into any building (existing or proposed) is a difficult value to quantify and depends on soil type, chemical properties, building design and condition, and the pressure differential. Upon entry into a structure, soil gas mixes with the existing air through the natural or mechanical ventilation of the building. Since planned development contemplates subsurface parking and commercial and residential housing, soil vapor intrusion will require further evaluation at the completion of excavations and prior to building construction.

### **7.3 EVALUATION OF FATE AND TRANSPORT**

Various chemical constituents have been detected in the soil, groundwater and soil vapor beneath the site. The primary compounds detected at the BCP Site and the Other Lands fall within the four major chemical groups – volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Polychlorinated Biphenyls, and Metals. A small amount of LNAPL was also detected at a single monitoring well location.

The VOCs at the BCP Site are consistent with gasoline or petroleum related materials and chemical cleaners used during automotive repair activities. Specific constituents include; acetone, benzene, 2-butanone (MEK), cyclohexane, ethylbenzene, isopropylbenzene,



methylcyclohexane, Methyl *tert*-butyl ether (MTBE) o-xylene, and m&p-xylene. These compounds are soluble in groundwater to varying degrees. Compounds that become dissolved within groundwater will be transported beneath the BCP Site to locations offsite, consistent with the groundwater flow. VOCs also have a tendency to partition into the soil vapor and may therefore; move laterally in the vadose zone from their original source area. Over time, many petroleum related VOCs are subject to natural decomposition in the subsurface by biological and chemical processes.

Detected SVOCs include a series of compounds known as polyaromatic hydrocarbons (PAHs). These compounds can be associated with coal combustion, storage of fuel oils and creosote by-products. PAHs present at the BCP Site include; acenaphthene, anthracene, benzo (a) anthracene, benzo (a) pyrene, benzo (b) flouranthene, chrysene, naphthalene, and pyrene. SVOCs are generally not as soluble in groundwater and do not partition to soil vapor as readily as VOCs. SVOCs have a greater tendency to adhere to soil particles within the subsurface. Of the common SVOCs, naphthalene is more readily soluble in groundwater.

A small amount of LNAPL was detected at a single monitoring well location. However, LNAPL was not observed at several surrounding monitoring wells or a downgradient test pit location. Since small amounts of LNAPL are generally absorbed and retained by soil structure, it is not expected that LNAPL migration will be significant.

PCBs have been documented at the BCP Site and the Other Lands in soil. In general, PCBs have a low solubility in water. Since they are heavier than water and do not readily dissolve, they are readily adsorbed onto soil particles. In water, a small amount of PCBs may remain dissolved but most tend to stick to particles and sediments. PCBs in soil may become airborne in low concentrations. Once in the air, PCBs are readily adsorbed onto particles of dust where they may be dispersed. The exact fate and transport of PCBs are directly related to the specific structure of individual PCB compounds. PCBs in air can be attached to particulate matter or occur as vapors. Both forms eventually return to the land and water by settling or washout by snow and rain.

Both diffusion and advection are mechanisms of transport of subsurface soil vapor into the indoor air environment. Diffusion is the mechanism by which soil vapor moves from high concentration to low concentration due to a concentration gradient. Advection is the transport mechanism by which soil gas moves due to differences in pressure. These pressure differences can be generated by atmospheric pressure changes, temperature changes creating natural convection in the soil, or forced pressure changes due to building ventilation systems. Advective transport is likely to be the most significant at the BCP Site and the Other Lands since

contaminants are expected to be very close to a basement, parking garage or a foundation. Once soil gases enter the “building zone of influence”, they are commonly swept into buildings through foundation cracks by advection due to the indoor-outdoor building pressure differentials. The reach of the “building zone of influence” on soil vapor flow is usually less than a few feet, vertically and horizontally.

Current soil vapor results collected at the downgradient BCP site perimeter (VP-5 and VP-7) indicate PCE concentrations above regulatory values. The concentrations reported at these locations indicate a potential for off-site migration of soil vapor to locations downgradient to the BCP Site. Downgradient property uses include, several commercial businesses and office space in an urban setting. Commercial businesses include two restaurants, Le Canard (formerly Nicole’s Bistro) and the Albany Pump Station. A visitor’s center is also located in the Quackenbush Square area.

In summary, the proposed construction is anticipated to include substantial excavation to accommodate a subsurface parking garage and subsurface utilities. As such, exposure to contaminated media will be limited to construction and remediation workers. Given the nature of the chemical constituents reported, anticipated remediation and construction measures are expected to eliminate any significant exposures to soil vapor, contaminated soil, and groundwater during site remediation, proposed development, and future occupation.

## 8.0 SUMMARY OF FINDINGS

As outlined in the RIWP and the RI Report the remedial goal is to achieve Track 1 “Unrestricted Use” cleanup concentrations. To achieve a Track 1 cleanup, a complete excavation of the Albany SOMA site is currently envisioned. In addition, all buildings are currently unoccupied and scheduled for demolition and therefore the potential for any on-site current or future exposures to soil vapor do not exist.

With respect to the overall assessment of sampling results, Sections 5.0 “Nature and Extent of Contamination” and the various tables provided in 5.2.1 “Distribution of Soil Contamination”, 5.2.2 Distribution of Groundwater Contamination” and 5.2.3 Distribution of Soil Vapor Contamination” all discuss the distribution of contamination and the likely sources of contamination at the BCP Site and at the BCP Site property boundaries.

Based on our review of the groundwater, soil and soil vapor analytical, it is apparent that the source of tetrachloroethane at the BCP Site is the floor drain located in the 1-story brick building where a drain basin sample exhibited tetrachloroethane at 6,100 ppb (18” inch depth). See Figure 7 “Remedial Investigation Track 1 Historical Soil Exceedances”. The soil vapor samples collected adjacent and downgradient of the drain location (VP-5 and VP-1) exhibited similar tetrachloroethane concentrations, 5,800 ppb and 2,000 ppb, respectively.

Soil samples (RIWP-20, SPSB-1 through SPSB-7) collected near the drain and VP-5 and VP-1, indicate non-detect results for tetrachloroethane. In addition, groundwater samples (SPMW-2, SPMW-3, SPMW-5, and PES-5) collected downgradient of the drain location are also non-detect for tetrachloroethane. Refer to Tables 11 through 14 of the RI documents. As such, tetrachloroethane appears to be restricted to the unsaturated zone. No tetrachloroethane migration was noted in the saturated zone at the BCP Site. No consistent correlations were noted with respect to other VOCs reported in the soil vapor.

Section 6.0 “Contamination Emanating From the Site” summarizes the historical groundwater and recent RI groundwater laboratory analytical that have documented both petroleum and other contamination on the BCP Site and the Other Lands due to historical activities. Documented BCP Site contamination includes Metals and VOCs. These contaminants are present at the downgradient perimeter of the BCP Site at groundwater wells RIWP-8 and RIWP-9; Vapor Point VP3; and in one offsite well (PES-1). These data locations indicate MTBE and benzene in groundwater, and tetrachloroethane in soil vapor above regulatory standards or guidance values. Based on the location of these data points it is apparent that these particular contaminants are

most-likely migrating off-site. However, it is expected that contaminant concentrations will diminish downgradient of the property line at areas more distant from the BCP Site.

Section 7.0 “Qualitative Exposure Assessment” of the RI document also provides the qualitative exposure assessment as required by Part 375-3.8 (b)(2)(i), for a “volunteer”, which consists of characterization of the exposure setting, identification of current reasonably foreseeable exposure pathways, and evaluation of contaminant fate and transport, as related to the identified contaminants found in groundwater, soil and soil vapor. The findings of the exposure assessment discusses the potential exposure to VOCs and metals in groundwater, soil and soil vapor.

Together, sections 5.0, 6.0 and 7.0 conclude that VOCs in groundwater and soil vapor are emanating from the BCP site and that existing population’s located downgradient may be exposed to migrating contaminants. Additional investigation may be warranted by responsible parties or the NYSDEC to further evaluate the Qualitative Exposure Assessment performed in the RI document.

## **9.0 REMEDIAL RECOMMENDATIONS**

The completed investigation has demonstrated that the conditions at the BCP Site and Other Lands require remediation in order to meet the remedial requirements of this title. The following areas of environmental concern have been identified during this RI:

### **Surface and Subsurface Soil:**

Surface and subsurface soil concentrations for metals, VOCs, SVOCs, PCBs and Pesticides have been documented at levels above Track 1 “Unrestricted Use” Criteria at several soil sample locations. Based on the RI analytical test results the following general recommendations should be adhered to during any development of the BCP Site and Other Lands:

- If soils at the BCP Site and Other Lands are excavated during construction activities, all soils must be characterized to identify material handling requirements and for material reuse, handling and/or waste disposal requirements and be managed in accordance with federal, state and local regulations

Albany SOMA has continuously held the position that the other lands located outside of the current BCP boundary contain contaminants at concentrations that will complicate the redevelopment or reuse of the parcels. However, the Department has maintained its contention that the documented contamination on the other lands does not rise to a level that would either complicate development or adversely affect human health and environment.

Albany Soma will reuse soils from other the lands as fill on the BCP site if is determined to meet Part 375 soil cleanup objectives for the intended use of the site or transport it to other properties as fill; and

- If soils at the BCP Site and Other Lands are to remain in place as part of construction, soils to remain in place must be tested and measures taken to control vapor intrusion and to restrict human contact with contaminated soils.

### **Groundwater**

Groundwater concentrations for metals, VOCs and SVOCs have been documented at levels above 6 NYCRR Part 703 Water Quality Standards at several groundwater sample locations.

Based on the RI groundwater analytical test results the following general recommendation should be adhered to during any development of the BCP Site and Other Lands:

- All required dewatering activities will adhere to the local permitting requirements for discharging petroleum – and- metals impacted groundwater to the City of Albany municipal sewer system. If dewatering is required during remedial activities, Albany SOMA will either obtain the necessary discharge permit from the Albany City Engineering Department and the Albany County Sewer District or dispose of the water off-site at an off-site regulated facility. Specific provisions for handling impacted groundwater during remedial activities will be outlined in the Remedial Action Work Plan that will be submitted to NYSDEC and NYDOH for approval.

### **Soil Vapor**

Soil vapor analysis has documented VOC vapor constituents above NYSDOH AGVs and expected (75th percentile) background values published by NYSDOH. Based on the soil vapor results collected during the RI, the following general measures should be taken with respect to soil vapor intrusion:

- Continued implementation of the Community Air Monitoring Plan during Remedial Activities;
- If soils at the BCP Site and Other Lands are excavated during construction activities, soils remaining after excavation should be retested for soil vapor by EPA Method TO-15. If soils vapor analytical continues to show concentrations above NYSDOH AGVs and expected (75th percentile) background values published by NYSDOH then mitigation measures (i.e. vapor barrier and/or soil vapor extraction system) should be implemented to control human exposure to soil vapors; and
- If soils at the BCP Site and Other Lands are to remain in place a second soil vapor survey should be completed upon demolition and final grading of the BCP Site to evaluate soil vapor levels. If soil vapor concentrations remain, mitigation measures may be required to address vapor intrusion into newly constructed buildings. Mitigation may include excavation of hot spots and/or installation of a vapor recovery system and vapor barrier beneath concrete building slabs.

A remedial work plan should be prepared to address the general recommendations provided above. This Work Plan shall also consider the proposed future use for the property and specific site development and construction plans.

## **10.0 SUMMARY AND SCHEDULE FOR FUTURE ACTIVITIES**

The current and historic data presented in this RIR indicates that the extent of the impacted media is understood and has been sufficiently delineated to allow a remedial action to be implemented. The next phase of this project will involve the preparation of a Remedial Work Plan (“RWP”) to address those media affected by historical BCP Site and added land operations.



## **11.0 STUDY LIMITATIONS AND RESTRICTIONS**

This Remedial Investigation was limited to the scope of work outlined in Section 2.0 above, the RIWP dated November 9, 2007, and its subsequent addendum dated March 2008, as approved by DEC on May 19, 2008. This RI was restricted to soil, soil vapor and groundwater analytical testing at the BCP Site and the Other Lands as prescribed in the RIWP.

In preparing this RI Report, SPECTRA has relied upon field PID screening results, visual field observations and laboratory analytical data to draw conclusions as to the nature and extent of environmental conditions of the BCP Site and Other Lands. This Remedial Investigation was intended to provide an assessment of existing subsurface conditions at the BCP Site and Other Lands in relation to the former site activities and to close data gaps existing in historical site environmental data. It was also intended to provide sufficient background information on soil and groundwater quality for future site remediation.

This RIR for the Amos at Quackenbush Square project has been prepared for Soma in accordance with the Brownfield Cleanup Agreement, Index # A4- 0574-1106, dated October 12, 2007, between DEC and SOMA.

SPECTRA represents that, within the limitation of the agreed upon scope of work, this investigation has been undertaken and performed in a professional manner, in accordance with generally accepted investigative practices, using the degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances.

## **TABLES**

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Table 1  
Remedial Investigation Soil Analytical Results (METALS)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

|                               |       | Track 1<br>Unrestricted Use Criteria<br><br>Table 375-6.8 (a) | Parcel 76.27-1-8 |            | Parcel 76.27-1-10 |             | Parcel 76.27-1-12.22 |             |             | Parcel 76.27-1-12.1 |            | Parcel 76.27-1-18 | Parcel 76.27-1-15 |        |            | Parcel 76.27-1-12.21 | Parcel 76.27-1-7 |
|-------------------------------|-------|---|------------------|------------|-------------------|-------------|----------------------|-------------|-------------|---------------------|------------|-------------------|-------------------|--------|------------|----------------------|------------------|
|                               |       |   | Sample ID.       |            | Sample ID.        |             | Sample ID.           |             |             | Sample ID.          |            | Sample ID.        | Sample ID.        |        |            | Sample ID.           | Sample ID.       |
|                               |       |   | RIWP-1           | RIWP-2     | RIWP-3            | RIWP-3      | RIWP-4               | RIWP-4      | RIWP-5      | RIWP-5              | RIWP-6     | RIWP-7            | RIWP-8            | RIWP-9 | RIWP-10    |                      |                  |
|                               |       |   | 10'-12'          | 6'-7'      | 0-2"              | 4'-6'       | 0-2"                 | 10'-12'     | 0-2"        | 12'-14'             | 8'-10'     | 8'-10'            | 6'-8'             | 8'-9'  | 12'-14'    |                      |                  |
| TAL Metals by EPA Method 6010 |       | PPM   |                  |            |                   |             |                      |             |             |                     |            |                   |                   |        |            |                      |                  |
| Aluminum                      | mg/Kg |   | 16800            | 15700      | 7060              | 9350        | 7280                 | 18230       | 4030        | 15000               | 12900      | 11000             | 7970              |        | 14000      | 13300                |                  |
| Antimony                      | mg/Kg |   | ND (7.59)        | ND (7.37)  | ND (6.34)         | ND (7.22)   | ND (7.88)            | ND (7.40)   | ND (6.39)   | ND (7.11)           | ND (8.39)  | ND (7.53)         | ND (7.04)         |        | ND (7.75)  | ND (8.22)            |                  |
| Arsenic                       | mg/Kg | 13  | 1.33             | 1.35       | 6.48              | 4.80        | 5.48                 | 1.54        | 2.48        | 2.25                | 9.13       | 3.63              | 19.4              |        | ND (1.29)  | 2.07                 |                  |
| Barium                        | mg/Kg | 350   | 93.3             | 93         | 152               | 236         | 92.5                 | 163         | 41.5        | 117                 | 210        | 68                | 191               |        | 116        | 116                  |                  |
| Beryllium                     | mg/Kg | 7.2   | 0.885            | 0.859      | ND (0.529)        | 0.602       | ND (0.657)           | 1.07        | ND (0.532)  | 0.929               | 0.754      | 0.64              | ND (0.587)        |        | 0.736      | 0.814                |                  |
| Cadmium                       | mg/Kg | 2.5   | ND (0.632)       | ND (0.614) | 4.49              | ND (0.602)  | 0.675                | ND (0.617)  | ND (0.532)  | ND (592)            | ND (0.699) | ND (0.627)        | 5.45              |        | ND (0.646) | ND (0.685)           |                  |
| Calcium                       | mg/Kg |   | 5130             | 3050       | 65600             | 20200       | 127000               | 32.0        | 187000      | 3000                | 37200      | 16600             | 35700             |        | 7030       | 25800                |                  |
| Chromium (note 1)             | mg/Kg | 1 (hexavalent) 30 (trivalent)                                 | 26.5             | 16.5       | 26.7              | 12.8        | 20.8                 | 23.1        | 8.15        | 18.5                | 19.9       | 13.8              | 31.1              |        | 18.1       | 17.0                 |                  |
| Cobalt                        | mg/Kg |   | 11.6             | 11         | 6.64              | 6.11        | 7.1                  | 13.6        | ND (5.32)   | 12.3                | 8.95       | 10.9              | 9.8               |        | 8.66       | 10.2                 |                  |
| Copper                        | mg/Kg | 50  | 23               | 16.7       | 67.4              | 23.0        | 51.5                 | 20.3        | 8.95        | 21.3                | 28.4       | 22.6              | 8.7               |        | 25.2       | 26.2                 |                  |
| Iron                          | mg/Kg |   | 31000            | 20900      | 19700             | 18400       | 16600                | 32330       | 9520        | 27800               | 22900      | 17800             | 23400             |        | 26400      | 24700                |                  |
| Lead                          | mg/Kg | 63  | 17.3             | 20.4       | 433               | 446.0       | 53.0                 | 10.5        | 9.91        | 12.8                | 382        | 25.3              | 380               |        | 30.7       | 29.0                 |                  |
| Magnesium                     | mg/Kg |   | 5500             | 3730       | 19100             | 4800        | 19100                | 6400        | 34000       | 4570                | 7710       | 5830              | 7700              |        | 4780       | 6470                 |                  |
| Manganese                     | mg/Kg | 1,600   | 800              | 308        | 413               | 457         | 313                  | 1150        | 208         | 628                 | 523        | 600               | 4.8               |        | 491        | 671                  |                  |
| Mercury                       | mg/Kg | 0.18  | 0.147            | 0.138      | 0.332             | ND (0.0602) | 0.0933               | ND (0.0617) | ND (0.0532) | ND (0.0592)         | 1.24       | 0.0961            | 0.15              |        | 0.203      | 0.37                 |                  |
| Nickel                        | mg/Kg | 30  | 21.6             | 15.8       | 23.4              | 14.0        | 20.8                 | 30.8        | 9.58        | 22.3                | 20.6       | 18.3              | 4.7               |        | 18.9       | 21                   |                  |
| Potassium                     | mg/Kg |   | 1860             | 1890       | 1190              | 1280        | 1680                 | 2400        | 966         | 2160                | 3470       | 1690              | 1700              |        | 2040       | 3010                 |                  |
| Selenium                      | mg/Kg | 3.9   | ND (1.26)        | ND (1.23)  | ND (1.06)         | ND (1.20)   | ND (1.31)            | ND (1.23)   | ND (1.06)   | ND (1.18)           | 1.4        | ND (1.25)         | ND (1.17)         |        | ND (1.29)  | ND (1.37)            |                  |
| Silver                        | mg/Kg | 2   | ND (1.26)        | ND (1.23)  | ND (1.06)         | ND (1.20)   | ND (1.31)            | ND (1.23)   | ND (1.06)   | ND (1.18)           | ND (1.4)   | ND (1.25)         | ND (1.17)         |        | ND (1.29)  | ND (1.37)            |                  |
| Sodium                        | mg/Kg |   | 502              | 1280       | 94.6              | 551         | 147                  | 403         | 134         | 373                 | 1020       | 502               | 172               |        | 326        | 616                  |                  |
| Thallium                      | mg/Kg |   | ND (1.26)        | ND (1.23)  | ND (1.06)         | ND (1.20)   | ND (1.31)            | ND (1.23)   | 1.67        | ND (1.18)           | ND (1.40)  | ND (1.25)         | ND (1.17)         |        | ND (1.29)  | ND (1.37)            |                  |
| Vanadium                      | mg/Kg |   | 29.1             | 26.9       | 42.8              | 27.4        | 21.3                 | 32.4        | 8.29        | 30.2                | 29.9       | 21.8              | 21.8              |        | 27.4       | 25.8                 |                  |
| Zinc                          | mg/Kg | 109   | 67.8             | 61.1       | 925               | 134         | 171                  | 78.2        | 29.6        | 60.8                | 224        | 50.6              | 34                |        | 68.6       | 64.1                 |                  |

|                               |       | Track 1<br>Unrestricted Use Criteria<br><br>Table 375-6.8 (a) | Parcel 76.27-1-19 |            |             |            | Parcel 76.27-1-1 |            |                         | Parcel 76.27-1-7 |           |            |            | Parcel 76.27-1-11.1 |            | Parcel 76.27-1-9 | Parcel 76.27-1-17 |
|-------------------------------|-------|---|-------------------|------------|-------------|------------|------------------|------------|-------------------------|------------------|-----------|------------|------------|---------------------|------------|------------------|-------------------|
|                               |       |   | SAMPLE ID.        |            |             |            | SAMPLE ID.       |            |                         | SAMPLE ID.       |           |            |            | Sample ID.          |            | Sample ID.       | Sample ID.        |
|                               |       |   | RIWP-11           | RIWP-12    | RIWP-13     | RIWP-13    | RIWP-14          | RIWP-14    | RIWP-15 [Duplicate]     | RIWP-16          | RIWP-17   | RIWP-17    | RIWP-18    | RIWP-18             | RIWP-19    | RIWP-20          |                   |
|                               |       |   | 6'-8'             | 8'-10'     | 0-2"        | 6'-10'     | 0-2"             | 12'-14'    | 8'-9'                   | 1'-2'            | 0-2"      | 8'-10'     | 0-2"       | 2'-4'               | 13'-14'    | 8'-9'            |                   |
| TAL Metals by EPA Method 6010 |       | PPM   |                   |            |             |            |                  |            |                         |                  |           |            |            |                     |            |                  |                   |
| Aluminum                      | mg/Kg |   | 8570              | 11700      | 7060        | 10000      | 13700            | 13000      | 9330 [7430]             | 7160             | 8370      | 15800      | 9470       | 4420                | 15200      | 8470             |                   |
| Antimony                      | mg/Kg |   | ND (7.14)         | ND (6.67)  | ND (6.04)   | ND (8.10)  | ND (6.17)        | ND (7.37)  | ND (7.58) [ND (7.37)]   | ND (7.03)        | ND (7.48) | ND (7.91)  | ND (6.93)  | ND (7.53)           | ND (8.23)  | ND (8.19)        |                   |
| Arsenic                       | mg/Kg | 13  | 4.06              | 3.92       | 2.61        | 4.49       | 9.19             | 7.71       | 2.88 [1.98]             | 5.19             | 14.2      | 1.49       | 5.11       | 5.75                | 5.09       | 2.36             |                   |
| Barium                        | mg/Kg | 350   | 174               | 73.1       | 46.4        | 128        | 135              | 139        | 81.3 [74.4]             | 27.4             | 433       | 105        | 67.1       | 166                 | 84.5       | 84.4             |                   |
| Beryllium                     | mg/Kg | 7.2   | ND (0.595)        | 0.594      | ND (0.504)  | ND (0.675) | 0.726            | 0.719      | ND (0.631) [ND (0.614)] | ND (0.586)       | 0.678     | 0.995      | ND (0.777) | ND (0.627)          | 0.875      | ND (0.682)       |                   |
| Cadmium                       | mg/Kg | 2.5   | 0.693             | ND (0.556) | ND (0.504)  | ND (0.675) | ND (0.514)       | ND (0.614) | ND (0.631) [ND (0.614)] | 0.750            | 3.24      | ND (0.659) | ND (0.577) | ND (0.627)          | ND (0.686) | ND (0.682)       |                   |
| Calcium                       | mg/Kg |   | 78600             | 9110       | 30200       | 33500      | 13600            | 3850       | 12600 [19500]           | 116000           | 19100     | 27100      | 11700      | 93600               | 35100      | 22400            |                   |
| Chromium (Note 1)             | mg/Kg | 1 (hexavalent) 30 (trivalent)                                 | 13.5              | 17.7       | 19.3        | 15.7       | 25.2             | 20.1       | 34.8 [10.8]             | 12.4             | 42.8      | 18.8       | 1.1        | 9.64                | 22.1       | 13.3             |                   |
| Cobalt                        | mg/Kg |   | 5.98              | 6.22       | 5.73        | 7.13       | 14.4             | 9.61       | 6.97 [ND (6.14)]        | 7.44             | 10.1      | 11.6       | 8.05       | 6.42                | 12.8       | ND (6.82)        |                   |
| Copper                        | mg/Kg | 50  | 19.2              | 14.8       | 25.1        | 34.1       | 79.3             | 29         | 46.1 [51.6]             | 54.7             | 145       | 29.5       | 28.6       | 43.8                | 34.4       | 26.1             |                   |
| Iron                          | mg/Kg |   | 18200             | 28800      | 17300       | 18800      | 29700            | 32600      | 23600 [26200]           | 24000            | 36300     | 27400      | 21700      | 15600               | 31400      | 18000            |                   |
| Lead                          | mg/Kg | 63  | 276               | 54.0       | 28.6        | 340        | 36.1             | 13.5       | 426 [211]               | 28.8             | 2270      | 35.3       | 28.9       | 474                 | 21         | 46.9             |                   |
| Magnesium                     | mg/Kg |   | 29000             | 5290       | 7700        | 4910       | 10300            | 4350       | 4230 [2730]             | 6940             | 5440      | 6560       | 6800       | 7770                | 9340       | 4460             |                   |
| Manganese                     | mg/Kg | 1,600   | 377               | 362        | 333         | 355        | 865              | 1550       | 375 [183]               | 525              | 324       | 603        | 550        | 152                 | 723        | 486              |                   |
| Mercury                       | mg/Kg | 0.18  | 0.298             | 0.0859     | ND (0.0504) | 0.947      | ND (0.0514)      | 0.0635     | 0.205 [0.297]           | ND (0.0586)      | 4.55      | 0.116      | 0.105      | 0.905               | 0.0848     | 0.218            |                   |
| Nickel                        | mg/Kg | 30  | 14.3              | 19.7       | 17.7        | 15.2       | 30.8             | 27         | 13.9 [12]               | 18.2             | 33.9      | 23.7       | 20.4       | 13.4                | 29.5       | 15.8             |                   |
| Potassium                     | mg/Kg |   | 1490              | 1980       | 2200        | 1780       | 2020             | 2200       | 1820 [1120]             | 1310             | 1570      | 3110       | 1300       | 1120                | 2470       | 1790             |                   |
| Selenium                      | mg/Kg | 3.9   | ND (1.19)         | ND (1.11)  | ND (1.01)   | 1.43       | ND (1.03)        | 1.41       | ND (1.26) [ND (1.23)]   | ND (1.17)        | 1.82      | ND (1.32)  | ND (1.15)  | 1.46                | ND (1.37)  | ND (1.36)        |                   |
| Silver                        | mg/Kg | 2   | ND (1.19)         | ND (1.11)  | ND (1.01)   | ND (1.35)  | ND (1.03)        | ND (1.23)  | ND (1.26) [ND (1.23)]   | ND (1.17)        | ND (1.25) | ND (1.32)  | ND (1.15)  | ND (1.25)           | ND (1.37)  | ND (1.36)        |                   |
| Sodium                        | mg/Kg |   | 312               | 199        | 80.9        | 397        | 709              | 223        | 293 [158]               | 285              | 223       | 2080       | ND (1.15)  | 157                 | 289        | 222              |                   |
| Thallium                      | mg/Kg |   | ND (1.19)         | ND (1.11)  | ND (1.01)   | ND (1.35)  | ND (1.03)        | ND (1.23)  | ND (1.26) [ND (1.23)]   | ND (1.17)        | ND (1.25) | ND (1.32)  | ND (1.15)  | ND (1.25)           | ND (1.37)  | ND (1.36)        |                   |
| Vanadium                      | mg/Kg |   | 17.6              | 25.3       | 19.3        | 22         | 26.4             | 25.3       | 18.4 [16.3]             | 18.9             | 42.3      | 30.8       | 16.6       | 13.2                | 28.8       | 17.5             |                   |
| Zinc                          | mg/Kg | 109   | 163               | 77.1       | 76.1        | 106        | 106              | 60.1       | 135 [66.6]              | 275              | 1240      | 77.1       | 11.9       | 432                 | 85.6       | 68.6             |                   |

\*See notes on page 2



Table 1  
Remedial Investigation Soil Analytical Results (METALS)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

Notes:  
Bold and orange shaded values indicate values that Exceed Track I Unrestricted Use Criteria.  
1. Chromium analyzed as total chromium.

ND - Analyte was not detected. The number in parentheses is the associated detection limit.  
Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (volatiles, PCBs)

- J - Indicates an estimated value less than the practical quantization limit (PQL).
- P - This is a flag used for a pesticide/Aroclor target analyte when there is a greater than 40% (25% for CLP) difference for detected concentrations between the two GC columns.  
The concentration is reported on the form I and flagged with a "P" ("j" for DoD).
- D - This flag identifies all compounds identified in an analysis at secondary dilution factor. "DL" suffix is appended to the sample number on Form I for the diluted sample, and all concentrations values reported on that form I are flagged with the "D" flag.
- "\*" - This Flag identifies compounds associated with a quality control parameter which exceeds laboratory limits.

mg/Kg -milligrams/Kilogram  
ug/Kg -micrograms/Kilogram

ppm (mg/kg) - parts per million

ppb (ug/kg) - parts per billion

Table 1A  
Post Interim Remedial Measure Excavation Soil Analytical Results (Metals)  
Amos at Quackenbush, City of Albany, Albany County, New York  
Samples Collected: August 2010

|                               | Units/Depth | Track 1<br>Unrestricted Use Criteria<br><br>Table 375-6.8 (a) | Track 2<br>Commercial Restricted Use<br>Soil Cleanup Objectives<br><br>Table 375-6.8 (b) | SAMPLE IDENTIFICATION   |                         |                         |                         |                         |                         |                          |                         |
|-------------------------------|-------------|---|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|-------------------------|
|                               |             |   |  | Bottom # 3 11 ft        | Bottom # 4 13 ft        | Bottom # 1 10 ft        | Southwall 5-9 ft        | Eastwall 5-9 ft         | Northwall 5-9 ft        | Northwest Corner 5-12 ft | Westwall 5-9 ft         |
|                               |             |   |  | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10  | Date Collected 08/18/10 |
| TAL Metals by EPA Method 6010 |             | PPM   | PPM  |                         |                         |                         |                         |                         |                         |                          |                         |
| Arsenic                       | ug/g        | 13  | 16   | ND                      | 1.1                     | ND                      | 1.9                     | 3.0                     | 2.9                     | 4.0                      | 2.4                     |
| Barium                        | ug/g        | 350   | 400  | 100                     | 111                     | 135                     | 46.1                    | 46.4                    | 133                     | 61.6                     | 88.0                    |
| Cadmium                       | ug/g        | 2.5   | 9.3  | ND                      | ND                      | ND                      | 0.11                    | 0.16                    | 0.2                     | 0.3                      | 0.1                     |
| Chromium (note 1)             | ug/g        | 1 (hexavalent), 30 (trivalent)                                | 400 (Hex), 1500 (trivalent)  | 14.6                    | 17.5                    | 17.3                    | 10.4                    | 10.2                    | 10.1                    | 7.3                      | 15.8                    |
| Lead                          | ug/g        | 63  | 1,000  | ND                      | ND                      | ND                      | 5.3                     | 16.7                    | 408                     | 162                      | 11.8                    |
| Mercury                       | ug/g        | 0.18  | 2.8  | ND                      | ND                      | ND                      | ND                      | 0.32                    | 0.94                    | 0.59                     | 0.68                    |
| Selenium                      | ug/g        | 3.9   | 1,500  | ND                      | ND                      | ND                      | ND                      | ND                      | ND                      | ND                       | ND                      |
| Silver                        | ug/g        | 2   | 1,500  | ND                      | ND                      | ND                      | ND                      | ND                      | ND                      | ND                       | ND                      |

|                               |      | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Track 2<br>Commercial Restricted Use<br>Soil Cleanup Objectives<br>Table 375-6.8 (b) |                         |                         |                         |                         |                         |
|-------------------------------|------|---|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|                               |      |   |  | Sub Slab 12 ft          | Southwall 8-10 ft       | Eastwall 8-10 ft        | Northwall 8-10 ft       | Westwall 8-10 ft        |
|                               |      |   |  |                         |                         |                         |                         |                         |
| Units/Depth                   |      |   |  | Date Collected 08/31/10 | Date Collected 08/31/10 | Date Collected 08/31/10 | Date Collected 08/31/10 | Date Collected 08/31/10 |
| TAL Metals by EPA Method 6010 |      | PPM   | PPM  |                         |                         |                         |                         |                         |
| Arsenic                       | ug/g | 13  | 16   | 1.3                     | 2.8                     | 2.7                     | 5.8                     | 3.4                     |
| Barium                        | ug/g | 350   | 400  | 113                     | 44.9                    | 83.0                    | 85.9                    | 75.3                    |
| Cadmium                       | ug/g | 2.5   | 9.3  | 0.12                    | 0.23                    | 0.2                     | 0.26                    | 0.21                    |
| Chromium (note 1)             | ug/g | 1 (hexavalent), 30 (trivalent)                            | 400 (Hex), 1500 (trivalent)  | 15.4                    | 4.1                     | 10.8                    | 13.4                    | 12.7                    |
| Lead                          | ug/g | 63  | 1,000  | 1.3                     | 141                     | 12.2                    | 19.1                    | 12.1                    |
| Mercury                       | ug/g | 0.18  | 2.8  | ND                      | 1.1                     | ND                      | ND                      | ND                      |
| Selenium                      | ug/g | 3.9   | 1,500  | ND                      | ND                      | ND                      | ND                      | ND                      |
| Silver                        | ug/g | 2   | 1,500  | ND                      | ND                      | ND                      | ND                      | ND                      |

Notes:

**Bold** and yellow shaded values indicate values that Exceed Track 2 Unrestricted Use Criteria.

**Bold** and orange shaded values indicate values that Exceed Track 1 Unrestricted Use Criteria.

ND - Analyte was not detected.

1. Chromium analyzed as total chromium.

Data Qualifiers:

J - Indicates an estimated value less than the practical quantization limit (PQL).

ug/g -micrograms/gram

mg/Kg -milligrams/Kilogram

ppm (mg/kg) - parts per million

ppb (ug/kg) - parts per billion



Table 2  
Remedial Investigation Soil Analytical Results (VOCs)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

|  |       | Track 1<br>Unrestricted Use Criteria<br><br>Table 375-6.8 (a) | Parcel 76.27-1-8 |          | Parcel 76.27-1-10 |          | Parcel 76.27-1-12.22 |         | Parcel 76.27-1-12.1 |          | Parcel 76.27-1-18          | Parcel 76.27-1-15 |          | Parcel 76.27-1-12.21 | Parcel 76.27-1-7 |
|--|-------|---|------------------|----------|-------------------|----------|----------------------|---------|---------------------|----------|----------------------------|-------------------|----------|----------------------|------------------|
|  |       |   | Sample ID.       |          | Sample ID.        |          | Sample ID.           |         | Sample ID.          |          | Sample ID.                 | Sample ID.        |          | Sample ID.           | Sample ID.       |
|  |       |   | RIWP-1           | RIWP-2   | RIWP-3            | RIWP-3   | RIWP-4               | RIWP-4  | RIWP-5              | RIWP-5   | RIWP-6 <sup>(Note 1)</sup> | RIWP-7            | RIWP-8   | RIWP-9               | RIWP-10          |
|  |       |   | 10'-12'          | 6'-7'    | 0-2"              | 4'-6'    | 0-2"                 | 10'-12' | 0-2"                | 12'-14'  | 8'-10'                     | 8'-10'            | 6'-8'    | 8'-9'                | 12'-14'          |
| Volatile Organic Compounds by EPA Method 8260B |       |   | PPB              |          |                   |          |                      |         |                     |          |                            |                   |          |                      |                  |
| Acetone  | ug/Kg | 50  | 120              | 210      | ND (21)           | 110.0    | ND (26)              | 320     | ND (21)             | ND (120) | ND (3500)                  | ND (25)           | ND (23)  | 670                  | 82               |
| Benzene  | ug/Kg | 60  | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Bromodichloromethane                           | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Bromoform                                      | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Bromomethane                                   | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 2-Butanone (MEK)                               | ug/Kg | 120   | 23               | 49       | ND (11)           | ND (12)  | ND (13)              | 140     | ND (11)             | ND (59)  | ND (1700)                  | ND (13)           | ND (12)  | ND (65)              | 15               |
| Methyl t-butyl ether (MTBE)                    | ug/Kg | 930   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | 350 D             | ND (5.9) | ND (32)              | ND (6.8)         |
| Carbon Disulfide                               | ug/Kg |   | ND (13)          | ND (12)  | ND (11)           | ND (12)  | ND (13)              | ND (62) | ND (11)             | ND (59)  | ND (1700)                  | ND (13)           | ND (12)  | ND (65)              | ND (14)          |
| Carbon tetrachloride                           | ug/Kg | 760   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Chlorobenzene                                  | ug/Kg | 1100  | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Chloroethane                                   | ug/Kg |   | ND (13)          | ND (12)  | ND (11)           | ND (12)  | ND (13)              | ND (62) | ND (11)             | ND (59)  | ND (1700)                  | ND (13)           | ND (12)  | ND (65)              | ND (14)          |
| Chloroform                                     | ug/Kg | 370   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Chloromethane                                  | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,2-Dibromo-3-chloropropane                    | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Cyclohexane                                    | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | 24       | ND (6.6)             | ND (31) | ND (5.3)            | 79       | ND (870)                   | ND (6.3)          | ND (5.9) | ND (1800) D          | ND (6.8)         |
| Dibromochloromethane                           | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,2-Dibromoethane                              | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,3-Dichlorobenzene                            | ug/Kg | 2400  | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,4-Dichlorobenzene                            | ug/Kg | 1800  | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,2-Dichlorobenzene                            | ug/Kg | 1100  | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Dichlorodifluoromethane                        | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,1-Dichloroethane                             | ug/Kg | 270   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,2-Dichloroethane                             | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,1-Dichloroethene                             | ug/Kg | 330   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| cis-1,2-Dichloroethene                         | ug/Kg | 250   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| trans-1,2-Dichloroethene                       | ug/Kg | 190   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,2-Dichloropropane                            | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| cis-1,3-Dichloropropene                        | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| trans-1,3-Dichloropropene                      | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Ethylbenzene                                   | ug/Kg | 1000  | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | 310     | ND (5.3)            | ND (30)  | ND (870)                   | 14                | ND (5.9) | ND (32)              | ND (6.8)         |
| 2-Hexanone                                     | ug/Kg |   | ND (13)          | ND (12)  | ND (11)           | ND (12)  | ND (13)              | ND (62) | ND (11)             | ND (59)  | ND (1700)                  | ND (13)           | ND (12)  | ND (65)              | ND (14)          |
| Isopropylbenzene                               | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | 59      | ND (5.3)            | 82       | ND (870)                   | 19                | ND (5.9) | ND (32)              | ND (6.8)         |
| Methyl Acetate                                 | ug/Kg |   | ND (13)          | ND (12)  | ND (11)           | ND (12)  | ND (13)              | ND (62) | ND (11)             | ND (59)  | ND (1700)                  | ND (13)           | ND (12)  | ND (65)              | ND (14)          |
| Methylecyclohexane                             | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | 370     | ND (5.3)            | 430      | ND (870)                   | 180               | ND (5.9) | 5600 D               | ND (6.8)         |
| Methylene chloride                             | ug/Kg | 50  | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 4-Methyl-2-pentanone (MIBK)                    | ug/Kg |   | ND (13)          | ND (12)  | ND (11)           | ND (12)  | ND (13)              | ND (62) | ND (11)             | ND (59)  | ND (1700)                  | ND (13)           | ND (12)  | ND (65)              | ND (14)          |
| Styrene  | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,1,2,2-Tetrachloroethane                      | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Tetrachloroethene                              | ug/Kg | 1,300   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Toluene  | ug/Kg | 700   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,2,4-Trichlorobenzene                         | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,1,1-Trichloroethane                          | ug/Kg | 680   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,1,2-Trichloroethane                          | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Trichloroethene                                | ug/Kg | 470   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Trichlorofluoromethane                         | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane          | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| Vinyl chloride                                 | ug/Kg | 20  | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | ND (31) | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| o-Xylene                                       | ug/Kg |   | ND (6.3)         | ND (6.1) | ND (5.3)          | ND (6.0) | ND (6.6)             | 280     | ND (5.3)            | ND (30)  | ND (870)                   | ND (6.3)          | ND (5.9) | ND (32)              | ND (6.8)         |
| m&p-Xylene                                     | ug/Kg | 260   | ND (6.3)         | ND (6.1) | ND (1.1)          | ND (6.0) | ND (6.6)             | 1400    | ND (5.3)            | ND (30)  | ND (870)                   | 8.8               | ND (5.9) | ND (32)              | ND (6.8)         |

\*See notes on page 3



Table 2  
Remedial Investigation Soil Analytical Results (VOCS)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

|  |       | Track 1<br>Unrestricted Use Criteria<br><br>Table 375-6.8 (a) | Parcel 76.27-1-19           |          |         |          | Parcel 76.27-1-1 |          |   | Parcel 76.27-1-7 |          |          | Parcel 76.27-1-11.1 |          | Parcel 76.27-1-9 | Parcel 76.27-1-17 |
|--|-------|---|-----------------------------|----------|---------|----------|------------------|----------|---|------------------|----------|----------|---------------------|----------|------------------|-------------------|
|  |       |   | SAMPLE ID.                  |          |         |          | SAMPLE ID.       |          |   | SAMPLE ID.       |          |          | Sample ID.          |          | Sample ID.       | Sample ID.        |
|  |       |   | RIWP-11 <sup>(Note 1)</sup> | RIWP-12  | RIWP-13 | RIWP-13  | RIWP-14          | RIWP-14  | RIWP-15 [Duplicate] <sup>(Note 1)</sup> | RIWP-16          | RIWP-17  | RIWP-17  | RIWP-18             | RIWP-18  | RIWP-19          | RIWP-20           |
|  |       |   | 6'-8'                       | 8'-10'   | 0-2"    | 6'-10'   | 0-2"             | 12'-14'  | 8'-9'                                   | 1'-2'            | 0-2"     | 8'-10'   | 0-2"                | 2'-4'    | 13'-14'          | 8'-9'             |
| Volatile Organic Compounds by EPA Method 8260B |       |   | ppb                         |          |         |          |                  |          |   |                  |          |          |                     |          |                  |                   |
| Acetone  | ug/kg | 50  | ND (3000)                   | 49.0     | ND (20) | ND (27)  | ND (21)          | 43       | ND (3200) [ND (3100)]                   | ND (23)          | ND (25)  | 38       | ND (23)             | ND (130) | 140              | 290 D             |
| Benzene  | ug/kg | 60  | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Bromodichloromethane                           | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Bromoform                                      | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Bromomethane                                   | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 2-Butanone (MEK)                               | ug/kg | 120   | ND (1500)                   | ND (11)  | ND (10) | ND (13)  | ND (10)          | ND (12)  | ND (1600) [ND (1500)]                   | ND (12)          | ND (12)  | ND (13)  | ND (12)             | ND (63)  | 15               | 60                |
| Methyl t-butyl ether (MTBE)                    | ug/kg | 930   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Carbon Disulfide                               | ug/kg |   | ND (1500)                   | ND (11)  | ND (10) | ND (13)  | ND (10)          | ND (12)  | ND (1600) [ND (1600)]                   | ND (12)          | ND (12)  | ND (13)  | ND (12)             | ND (63)  | ND (14)          | ND (14)           |
| Carbon tetrachloride                           | ug/kg | 760   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Chlorobenzene                                  | ug/kg | 1100  | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Chloroethane                                   | ug/kg |   | ND (1500)                   | ND (11)  | ND (10) | ND (13)  | ND (10)          | ND (12)  | ND (790) [ND (770)]                     | ND (12)          | ND (12)  | ND (13)  | ND (12)             | ND (63)  | ND (14)          | ND (14)           |
| Chloroform                                     | ug/kg | 370   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Chloromethane                                  | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,2-Dibromo-3-chloropropane                    | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Cyclohexane                                    | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Dibromochloromethane                           | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,2-Dibromoethane                              | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,3-Dichlorobenzene                            | ug/kg | 2400  | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,4-Dichlorobenzene                            | ug/kg | 1800  | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,2-Dichlorobenzene                            | ug/kg | 1100  | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Dichlorodifluoromethane                        | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,1-Dichloroethane                             | ug/kg | 270   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,2-Dichloroethane                             | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,1-Dichloroethene                             | ug/kg | 330   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| cis-1,2-Dichloroethene                         | ug/kg | 250   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| trans-1,2-Dichloroethene                       | ug/kg | 190   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,2-Dichloropropane                            | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| cis-1,3-Dichloropropene                        | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| trans-1,3-Dichloropropene                      | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Ethylbenzene                                   | ug/kg | 1000  | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 2-Hexanone                                     | ug/kg |   | ND (1500)                   | ND (11)  | ND (10) | ND (13)  | ND (10)          | ND (12)  | ND (1600) [ND (1600)]                   | ND (12)          | ND (12)  | ND (13)  | ND (12)             | ND (63)  | ND (14)          | ND (14)           |
| Isopropylbenzene                               | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | 11       | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Methyl Acetate                                 | ug/kg |   | ND (1500)                   | ND (11)  | ND (10) | ND (13)  | ND (10)          | ND (12)  | ND (790) [ND (1500)]                    | ND (12)          | ND (12)  | ND (13)  | ND (12)             | ND (63)  | ND (14)          | ND (14)           |
| Methylcyclohexane                              | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | 7.7      | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | 200      | ND 6.9)          | ND (6.8)          |
| Methylene chloride                             | ug/kg | 50  | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 4-Methyl-2-pentanone (MIBK)                    | ug/kg |   | ND (1500)                   | ND (11)  | ND (10) | ND (13)  | ND (10)          | ND (12)  | ND (1600) [ND (1500)]                   | ND (12)          | ND (12)  | ND (13)  | ND (12)             | ND (63)  | ND (14)          | ND (14)           |
| Styrene  | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,1,2,2-Tetrachloroethane                      | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Tetrachloroethene                              | ug/kg | 1,300   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Toluene  | ug/kg | 700   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,2,4-Trichlorobenzene                         | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,1,1-Trichloroethane                          | ug/kg | 680   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,1,2-Trichloroethane                          | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Trichloroethene                                | ug/kg | 470   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Trichlorofluoromethane                         | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane          | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| Vinyl chloride                                 | ug/kg | 20  | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| o-Xylene                                       | ug/kg |   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | ND (31)  | ND 6.9)          | ND (6.8)          |
| m&p-Xylene                                     | ug/kg | 260   | ND (740)                    | ND (5.6) | ND (5)  | ND (6.7) | ND (5.1)         | ND (6.1) | ND (790) [ND (770)]                     | ND (5.9)         | ND (6.2) | ND (6.6) | ND (5.8)            | 31       | ND 6.9)          | ND (6.8)          |

\*See notes on page 3



Table 2  
Remedial Investigation Soil Analytical Results (VOCs notes)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

Notes:  
Bold and orange shaded values indicate values that Exceed Track I Unrestricted Use Criteria.  
Samples values shown in blue indicate potential exceedances of Track I Criteria, which due to matrix interferences , required sample dilution resulting in high detection limits.  
While other compounds resulted in high detection limits, values shown in blue are only for those compounds with established Part 375 vlaues.

1. Samples RIWP-11 (6-8'), RIWP-15 (8-9'), RIWP-6 (8-10') and RIWP-Duplicate were analyzed at dilution due to high levels of interfering non-target compounds.

ND - Analyte was not detected. The number in parentheses is the associated detection limit.  
Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (volatiles, PCBs)

- J - Indicates an estimated value less than the practical quantization limit (PQL).
- P -This is a flag used for a pesticide/Aroclor target analyte when there is a greater than 40% (25% for CLP) difference for detected concentrations between the two GC columns.  
The concentration is reported on the form I and flagged with a "P" ("j" for DoD).
- D - This flag identifies all compounds identified in an analysis at secondary dilution factor. "DL" suffix is appended to the sample number on Form I for the diluted sample, and all concentrations values reported on that form I are flagged with the "D" flag.
- "\*" - This Flag indentifies compounds associated with a quality control parameter which exceeds laboratory limits.

mg/Kg -milligrams/Kilogram

ppm (mg/kg) - parts per million

ppb (ug/kg) - parts per billion

ug/Kg -micrograms/Kilogram



Table 2A  
Post Interim Remedial Measure Excavation Soil Analytical Results (VOCs)  
Amos at Quackenbush, City of Albany, Albany County, New York  
Samples Collected: August 2010

|  |       | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Track 2<br>Commercial Restricted Use<br>Soil Cleanup Objectives<br>Table 375-6.8 (b) | Sample ID.              |                         |                         |                         |                         |                         |                         |                          |
|--|-------|---|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|
|  |       |   |  | Bottom # 3 11 ft        | Bottom # 4 13 ft        | Bottom # 1 10 ft        | Southwall 5-9 ft        | Eastwall 5-9 ft         | Northwall 5-9 ft        | Westwall 5-9 ft         | Northwest Corner 5-12 ft |
|  |       |   |  | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10  |
| Volatile Organic Compounds by EPA Method 8260B |       | PPB   |  |                         |                         |                         |                         |                         |                         |                         |                          |
| Methylene chloride                             | ug/kg | 50  | 500,000  | 3.2 J                   | 4.7 J                   | 2.8 J                   | 2.6 J                   | 2.4 J                   | 3.3 J                   | 2.9 J                   | 3.8 J                    |
| Acetone  | ug/Kg | 50  | 500,000  | 14.0                    | 8.9 J                   | 9.0 J                   | 4.2 J                   | 3.7 J                   | 7.7 J                   | 10.0 J                  | 6.9 J                    |
| Methyl t-butyl ether (MTBE)                    | ug/Kg | 930   | 500,000  | 56.0                    | 98.0                    | 22.0                    | ND                      | ND                      | ND                      | ND                      | ND                       |

|  |       | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Track 2<br>Commercial Restricted Use<br>Soil Cleanup Objectives<br>Table 375-6.8 (b) |                         |                         |                         |                         |                         |
|--|-------|---|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|  |       |   |  | Sub Slab 12 ft          | Southwall 8-10 ft       | Eastwall 8-10 ft        | Northwall 8-10 ft       | Westwall 8-10 ft        |
|  |       |   |  | Date Collected 08/31/10 | Date Collected 08/31/10 | Date Collected 08/31/10 | Date Collected 08/31/10 | Date Collected 08/31/10 |
| Volatile Organic Compounds by EPA Method 8260B |       | PPB   |  |                         |                         |                         |                         |                         |
| Acetone  | ug/Kg | 50  | 500,000  | 11.0 J                  | ND                      | ND                      | ND                      | 26.0                    |
| Methyl t-butyl ether (MTBE)                    | ug/Kg | 930   | 500,000  | 130                     | ND                      | ND                      | ND                      | ND                      |

**Notes:**  
**Bold** and yellow shaded values indicate values that Exceed Track 2 Unrestricted Use Criteria.  
**Bold** and orange shaded values indicate values that Exceed Track 1 Unrestricted Use Criteria.  
ND - Analyte was not detected.

Data Qualifiers:  
J - Indicates an estimated value less than the practical quantization limit (PQL).  
ug/g -micrograms/gram  
mg/Kg -milligrams/Kilogram  
ppm (mg/kg) - parts per million  
ppb (ug/kg) - parts per billion



Table 3  
Remedial Investigation Soil Analytical Results (SVOCs)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

|   | Units/Depth | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Parcel 76.27-1-8<br>Sample ID. |           | Parcel 76.27-1-10<br>Sample ID. |           | Parcel 76.27-1-12.22<br>Sample ID. |           | Parcel 76.27-1-12.1<br>Sample ID. |           | Parcel 76.27-1-18<br>Sample ID. |           | Parcel 76.27-1-15<br>Sample ID. |           | Parcel 76.27-1-12.21<br>Sample ID. |  | Parcel 76.27-1-7<br>Sample ID. |  |
|---|-------------|---|--------------------------------|-----------|---------------------------------|-----------|------------------------------------|-----------|-----------------------------------|-----------|---------------------------------|-----------|---------------------------------|-----------|------------------------------------|--|--------------------------------|--|
|   |             |   | RIWP-1 <sup>(Note 1)</sup>     |           | RIWP-2 <sup>(Note 1)</sup>      |           | RIWP-3                             |           | RIWP-4                            |           | RIWP-5                          |           | RIWP-6                          |           | RIWP-7                             |  | RIWP-8                         |  |
|   |             |   | 10'-12'                        | 6'-7'     | 0'-2"                           | 4'-6'     | 0'-2"                              | 10'-12'   | 0'-2"                             | 12'-14'   | 8'-10'                          | 8'-10'    | 6'-8'                           | 8'-9'     | 12'-14'                            |  |                                |  |
| Semi-Volatile Organic Compounds by EPA Method 8270C |             |   |                                |           |                                 |           |                                    |           |                                   |           |                                 |           |                                 |           |                                    |  |                                |  |
| Acenaphthene  | ug/Kg       | 20000   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | 1500      | 780                             | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Acenaphthylene                                      | ug/Kg       | 100,000   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Acetophenone  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Anthracene  | ug/Kg       | 100,000   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | 4500      | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Atrazine  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Benzaldehyde  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Benz(a)anthracene                                   | ug/Kg       | 1,000   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | 440       | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Benz(a)pyrene                                       | ug/Kg       | 1,000   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Benz(b)fluoranthene                                 | ug/Kg       | 1,000   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Benz(o)fluoranthene                                 | ug/Kg       | 100,000   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Benzofluoranthene                                   | ug/Kg       | 800   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 1,1'-Biphenyl                                       | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Benzyl butyl phthalate                              | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Di-n-Butylphthalate                                 | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Caprolactam   | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Carbazole   | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Indeno(1,2,3-cd)pyrene                              | ug/Kg       | 500   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 4-Chloroaniline                                     | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Bis(2-chloroethoxy)methane                          | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Bis(2-chloroethyl)ether                             | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2-Chloronaphthalene                                 | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2-Chlorophenol                                      | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2,2'-Oxybis (1-Chloropropane)                       | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Chrysene  | ug/Kg       | 1,000   | ND (420)                       | ND (410)  | ND (7000)                       | 420       | ND (11000)                         | ND (410)  | ND (350)                          | 900       | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Dibenz(a,h)anthracene                               | ug/Kg       | 330   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Dibenzofuran  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | 850       | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 3,3'-Dichlorobenzidine                              | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2,4-Dimethylphenol                                  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Diethylphthalate                                    | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Dimethyl phthalate                                  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2,4-Dimethylphenol                                  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2,4-Dinitrophenol                                   | ug/Kg       |   | ND (2100)                      | ND (2100) | ND (36000)                      | ND (2000) | ND (56000)                         | ND (2100) | ND (1800)                         | ND (2000) | ND (2400)                       | ND (2100) | ND (10000)                      | ND (2200) | ND (2300)                          |  |                                |  |
| 2,4-Dinitrotoluene                                  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2,6-Dinitrotoluene                                  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Bis(2-ethylhexyl)phthalate                          | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Fluoranthene  | ug/Kg       | 100,000   | ND (420)                       | ND (410)  | ND (7000)                       | 950       | ND (11000)                         | ND (410)  | ND (350)                          | 590       | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Fluorene  | ug/Kg       | 30,000  | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | 1700      | 1200                            | ND (410)  | ND (1900)                       | 470       | ND (450)                           |  |                                |  |
| Hexachlorobenzene                                   | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Hexachlorobutadiene                                 | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Hexachlorocyclopentadiene                           | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Hexachloroethane                                    | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Isophorone  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2-Methylnaphthalene                                 | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | 6000      | ND (460)                        | ND (410)  | ND (1900)                       | 3600      | ND (450)                           |  |                                |  |
| 4,6-Dinitro-2-methylphenol                          | ug/Kg       |   | ND (2100)                      | ND (2100) | ND (36000)                      | ND (2000) | ND (56000)                         | ND (2100) | ND (1800)                         | ND (2000) | ND (2400)                       | ND (2100) | ND (10000)                      | ND (2200) | ND (2300)                          |  |                                |  |
| 4-Chloro-3-methylphenol                             | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2-Methylphenol (o-cresol)                           | ug/Kg       | 330   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 4-Methylphenol                                      | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Naphthalene   | ug/Kg       | 12,000  | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2-Nitroaniline                                      | ug/Kg       |   | ND (2100)                      | ND (2100) | ND (36000)                      | ND (2000) | ND (56000)                         | ND (2100) | ND (1800)                         | ND (2000) | ND (2400)                       | ND (2100) | ND (10000)                      | ND (2200) | ND (2300)                          |  |                                |  |
| 3-Nitroaniline                                      | ug/Kg       |   | ND (2100)                      | ND (2100) | ND (36000)                      | ND (2000) | ND (56000)                         | ND (2100) | ND (1800)                         | ND (2000) | ND (2400)                       | ND (2100) | ND (10000)                      | ND (2200) | ND (2300)                          |  |                                |  |
| 4-Nitroaniline                                      | ug/Kg       |   | ND (2100)                      | ND (2100) | ND (36000)                      | ND (2000) | ND (56000)                         | ND (2100) | ND (1800)                         | ND (2000) | ND (2400)                       | ND (2100) | ND (10000)                      | ND (2200) | ND (2300)                          |  |                                |  |
| Nitrobenzene  | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 2-Nitrophenol                                       | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| 4-Nitrophenol                                       | ug/Kg       |   | ND (2100)                      | ND (2100) | ND (36000)                      | ND (2000) | ND (56000)                         | ND (2100) | ND (1800)                         | ND (2000) | ND (2400)                       | ND (2100) | ND (10000)                      | ND (2200) | ND (2300)                          |  |                                |  |
| N-Nitrosodiphenylamine                              | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Di-n-octylphthalate                                 | ug/Kg       |   | ND (420)                       | ND (410)  | ND (7000)                       | ND (400)  | ND (11000)                         | ND (410)  | ND (350)                          | ND (390)  | ND (460)                        | ND (410)  | ND (1900)                       | ND (430)  | ND (450)                           |  |                                |  |
| Pentachlorophenol                                   | ug/Kg       | 800   | ND (2100)                      | ND (2100) | ND (36000)                      | ND (2000) | ND (56000)                         | ND (2100) | ND (1800)                         | ND (2000) | ND (2400)                       | ND (2100) | ND (10000)                      | ND (2200) | ND (2300)                          |  |                                |  |
| Phenanthrene  | ug/Kg       | 100,000   | ND (420)                       | ND (410)  | ND (7000)                       | 6         |                                    |           |                                   |           |                                 |           |                                 |           |                                    |  |                                |  |



Table 3  
Remedial Investigation Soil Analytical Results (SVOCs)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

|   | Units/Depth | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Parcel 76.27-1-19<br>SAMPLE ID. |            |            |           | Parcel 76.27-1-1<br>SAMPLE ID. |           |                        | Parcel 76.27-1-7<br>SAMPLE ID. |            |           | Parcel 76.27-1-11.1<br>Sample ID. |            | Parcel 76.27-1-9<br>Sample ID. | Parcel 76.27-1-17<br>Sample ID. |
|---|-------------|---|---------------------------------|------------|------------|-----------|--------------------------------|-----------|------------------------|--------------------------------|------------|-----------|-----------------------------------|------------|--------------------------------|---------------------------------|
|   |             |   | RIWP-11                         | RIWP-12    | RIWP-13    | RIWP-13   | RIWP-14                        | RIWP-14   | RIWP-15 [Duplicate]    | RIWP-16                        | RIWP-17    | RIWP-17   | RIWP-18                           | RIWP-18    | RIWP-19                        | RIWP-20                         |
|   |             |   | 6'-8'                           | 8'-10'     | 0-2"       | 6'-10'    | 0-2"                           | 12'-14'   | 8'-9'                  | 1'-2'                          | 0-2"       | 8'-10'    | 0-2"                              | 2'-4'      | 13'-14'                        | 8'-9'                           |
| Semi-Volatile Organic Compounds by EPA Method 8270C |             |   | PPB                             |            |            |           |                                |           |                        |                                |            |           |                                   |            |                                |                                 |
| Acenaphthene  | ug/Kg       | 20000   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | 660                            | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Acenaphthylene                                      | ug/Kg       | 100,000   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Acetophenone  | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Anthracene  | ug/Kg       | 100,000   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | 960                            | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Atrazine  | ND (390)    |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Benzaldehyde  | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Benz(a)anthracene                                   | ug/Kg       | 1,000   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | 1800                           | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Benz(a)pyrene                                       | ug/Kg       | 1,000   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | 1400                           | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Benz(b)fluoranthene                                 | ug/Kg       | 1,000   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | 1300                           | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Benz(g,h,i)perylene                                 | ug/Kg       | 100,000   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | 910                            | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Benz(k)fluoranthene                                 | ug/Kg       | 800   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | 1300                           | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 1,1'-Biphenyl                                       | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Benzyl butyl phthalate                              | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Di-n-Butylphthalate                                 | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Caprolactam   | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Carbazole   | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | 600                            | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Indeno(1,2,3-cd)pyrene                              | ug/Kg       | 500   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | 860                            | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 4-Chloroaniline                                     | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Bis(2-chloroethoxy)methane                          | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Bis(2-chloroethyl)ether                             | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 2-Chloronaphthalene                                 | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 2-Chlorophenol                                      | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 2,2'-Oxybis (1-Chloropropane)                       | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Chrysene  | ug/Kg       | 1,000   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | 1800                           | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Dibenz(a,h)anthracene                               | ug/Kg       | 330   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Dibenzofuran  | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 3,3'-Dichlorobenzidine                              | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 2,4-Dimethylphenol                                  | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Diethylphthalate                                    | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Dimethyl phthalate                                  | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 2,4-Dimethylphenol                                  | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 2,4-Dinitrophenol                                   | ug/Kg       |   | ND (2000)                       | ND (19000) | ND (17000) | ND (2300) | ND (8700)                      | ND (2100) | ND (6400) [ND (10000)] | ND (2000)                      | ND (21000) | ND (2200) | ND (2000)                         | ND (21000) | ND (2300)                      | ND (12000)                      |
| 2,4-Dinitrotoluene                                  | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 2,6-Dinitrotoluene                                  | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Bis(2-ethylhexyl)phthalate                          | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Fluoranthene  | ug/Kg       | 100,000   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | 1400 [ND (2000)]       | 4800                           | ND (430)   | ND (380)  | ND (4100)                         | ND (450)   | ND (2300)                      |                                 |
| Fluorene  | ug/Kg       | 30,000  | 390                             | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | 1300 [ND (2000)]       | 490                            | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Hexachlorobenzene                                   | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Hexachlorobutadiene                                 | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Hexachlorocyclopentadiene                           | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Hexachloroethane                                    | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| Isophorone  | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 2-Methylnaphthalene                                 | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | 450       | 13000 [17000]          | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 4,6-Dinitro-2-methylphenol                          | ug/Kg       |   | ND (2000)                       | ND (19000) | ND (17000) | ND (2300) | ND (8700)                      | ND (2100) | ND (6400) [ND (10000)] | ND (2000)                      | ND (21000) | ND (2200) | ND (2000)                         | ND (21000) | ND (2300)                      | ND (12000)                      |
| 4-Chloro-3-methylphenol                             | ug/Kg       |   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (410)  | ND (1300) [ND (2000)]  | ND (390)                       | ND (4100)  | ND (430)  | ND (380)                          | ND (4100)  | ND (450)                       | ND (2300)                       |
| 2-Methylphenol (o-cresol)                           | ug/Kg       | 330   | ND (390)                        | ND (3700)  | ND (3300)  | ND (450)  | ND (1700)                      | ND (41    |                        |                                |            |           |                                   |            |                                |                                 |



Table 3  
Remedial Investigation Soil Analytical Results (SVOCs notes)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

Notes:

**Bold** and orange shaded values indicate values that Exceed Track I Unrestricted Use Criteria.

Samples values shown in blue indicate potential exceedances of Track I Criteria, which due to matrix interferences , required sample dilution resulting in high detection limits.

While other compounds resulted in high detection limits, values shown in blue are only for those compounds with established Part 375 vlaues.

- 1. Samples RIWP-1 (10-12'), RIWP-2 (6-7') and RIWP 3 (4-6') were anlyazed at dilution due to sample matrix interference.
- 2. All samples were analyzed at dilution due to either high levels of interfering non-target compounds or dark extracts.

ND - Analyte was not detected. The number in parentheses is the associated detection limit.

Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (volatiles, PCBs)

J - Indicates an estimated value less than the practical quantization limit (PQL).

P -This is a flag used for a pesticide/Aroclor target analyte when there is a greater than 40% (25% for CLP) difference for detected concentrations between the two GC columns.

The concentration is reported on the form I and flagged with a "P" ("J" for DoD).

D - This flag identifies all compounds identified in an analysis at secondary dilution factor. "DL" suffix is appended to the sample number on Form I for the diluted sample, and all concentrations values reported on that form I are flagged with the "D" flag.

\*\*\* - This Flag indentifies compounds associated with a quality control parameter which exceeds laboratory limits.

mg/Kg-milligrams/Kilogram

ppm (mg/kg) - parts per million

ppb (ug/kg) - parts per billion

ug/Kg -micrograms/Kilogram

Table 3A  
Post Interim Remedial Measure Excavation Soil Analytical Results (SVOCs)  
Amos at Quackenbush, City of Albany, Albany County, New York  
Samples Collected: August 2010

|   | Units/Depth | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Track 2<br>Commercial Restricted Use<br>Soil Cleanup Objectives<br>Table 375-6.8 (b) |                         |                         |                         |                         |                         |                         |                         |                          |
|---|-------------|---|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|
|   |             |   |  | Bottom # 3 11 ft        | Bottom # 4 13 ft        | Bottom # 1 10 ft        | Southwall 5-9 ft        | Eastwall 5-9 ft         | Northwall 5-9 ft        | Westwall 5-9 ft         | Northwest Corner 5-12 ft |
|   |             |   |  | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10 | Date Collected 08/18/10  |
| Semi-Volatile Organic Compounds by EPA Method 8270C |             |   |  | PPB                     |                         |                         |                         |                         |                         |                         |                          |
| Phenol  | ug/Kg       | 330   | 500,000  | ND                      | ND                      | ND                      | ND                      | ND                      | 86 J                    | ND                      | ND                       |
| 4-Methylphenol                                      | ug/Kg       |   |  | ND                      | ND                      | ND                      | ND                      | ND                      | 130 J                   | ND                      | ND                       |
| Naphthalene   | ug/Kg       | 12,000  | 500,000  | ND                      | ND                      | ND                      | ND                      | ND                      | 250 J                   | ND                      | ND                       |
| 2-Methylnaphthalene                                 | ug/Kg       |   |  | ND                      | ND                      | ND                      | ND                      | ND                      | 120 J                   | ND                      | ND                       |
| Dimethyl phthalate                                  | ug/Kg       |   |  | 320 J                   | 300 J                   | 270 J                   | 200 J                   | 190 J                   | 320 J                   | 380                     | 160 J                    |
| Acenaphthylene                                      | ug/Kg       | 100,000   | 500,000  | ND                      | ND                      | ND                      | ND                      | ND                      | 330 J                   | ND                      | ND                       |
| Dibenzofuran  | ug/Kg       |   |  | ND                      | ND                      | ND                      | ND                      | ND                      | 160 J                   | ND                      | ND                       |
| Fluorene  | ug/Kg       | 30,000  | 500,000  | ND                      | ND                      | ND                      | ND                      | ND                      | 320 J                   | ND                      | ND                       |
| Phenanthrene  | ug/Kg       | 100,000   | 500,000  | ND                      | ND                      | 100 J                   | ND                      | ND                      | 1900                    | 130 J                   | 97 J                     |
| Anthracene  | ug/Kg       | 100,000   | 500,000  | ND                      | ND                      | ND                      | ND                      | ND                      | 750                     | ND                      | ND                       |
| Carbazole   | ug/Kg       |   |  | ND                      | ND                      | ND                      | ND                      | ND                      | 590                     | ND                      | ND                       |
| Fluoranthene  | ug/Kg       | 100,000   | 500,000  | ND                      | ND                      | 230 J                   | ND                      | ND                      | 2,100                   | 370                     | 390                      |
| Pyrene  | ug/Kg       | 100,000   | 500,000  | ND                      | ND                      | 190 J                   | ND                      | ND                      | 1,500                   | 310 J                   | 350 J                    |
| Benzo(a)anthracene                                  | ug/Kg       | 1,000   | 5,600  | ND                      | ND                      | 130 J                   | ND                      | ND                      | 1,100                   | 220 J                   | 190 J                    |
| Chrysene  | ug/Kg       | 1,000   | 56,000   | ND                      | ND                      | 120 J                   | ND                      | ND                      | 1,200                   | 210 J                   | 180 J                    |
| Benzo(b)fluoranthene                                | ug/Kg       | 1,000   | 5,600  | ND                      | ND                      | 100 J                   | ND                      | ND                      | 1,000                   | 200 J                   | 160 J                    |
| Benzo(k)fluoranthene                                | ug/Kg       | 800   | 56,000   | ND                      | ND                      | 110 J                   | ND                      | ND                      | 930                     | 160 J                   | 150 J                    |
| Benzo(a)pyrene                                      | ug/Kg       | 1,000   | 1,000  | ND                      | ND                      | ND                      | ND                      | ND                      | 280 J                   | 180 J                   | 180 J                    |
| Indeno(1,2,3-cd)pyrene                              | ug/Kg       | 500   | 5,600  | ND                      | ND                      | 88 J                    | ND                      | ND                      | 890                     | 130 J                   | 140 J                    |
| Dibenzo(a,h)anthracene                              | ug/Kg       | 330   | 560  | ND                      | ND                      | ND                      | ND                      | ND                      | 250 J                   | ND                      | ND                       |
| Benzo(g,h,i)perylene                                | ug/Kg       | 100,000   | 500,000  | ND                      | ND                      | ND                      | ND                      | ND                      | 750                     | 120 J                   | 100 J                    |

|   | Units/Depth | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Track 2<br>Commercial Restricted Use<br>Soil Cleanup Objectives<br>Table 375-6.8 (b) |                         |                         |                         |                         |                         |
|---|-------------|---|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|   |             |   |  | Sub Slab 12 ft          | Southwall 8-10 ft       | Eastwall 8-10 ft        | Northwall 8-10 ft       | Westwall 8-10 ft        |
|   |             |   |  | Date Collected 08/31/10 | Date Collected 08/31/10 | Date Collected 08/31/10 | Date Collected 08/31/10 | Date Collected 08/31/10 |
| Semi-Volatile Organic Compounds by EPA Method 8270C |             |   |  | PPB                     |                         |                         |                         |                         |
| Naphthalene   | ug/Kg       | 12,000  | 500,000  | ND                      | 760                     | ND                      | ND                      | ND                      |
| 2-Methylnaphthalene                                 | ug/Kg       |   |  | ND                      | 1,900                   | ND                      | ND                      | 170 J                   |
| Dimethyl phthalate                                  | ug/Kg       |   |  | 430                     | 470                     | 330 J                   | 380                     | 310 J                   |
| Phenanthrene  | ug/Kg       |   |  | ND                      | 85 J                    | ND                      | ND                      | ND                      |

Notes:  
**Bold** and yellow shaded values indicate values that Exceed Track 2 Unrestricted Use Criteria.  
**Bold** and orange shaded values indicate values that Exceed Track 1 Unrestricted Use Criteria.  
ND - Analyte was not detected.

Data Qualifiers:  
J - Indicates an estimated value less than the practical quantization limit (PQL).  
ug/g -micrograms/gram  
mg/Kg -milligrams/Kilogram  
ppm (mg/kg) - parts per million  
ppb (ug/kg) - parts per billion



Table 4  
Remedial Investigation Soil Analytical Results (PCBs)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

|  |       | Track 1<br>Unrestricted Use Criteria<br><br>Table 375-6.8 (a) | Parcel 76.27-1-8 |         | Parcel 76.27-1-10 |         | Parcel 76.27-1-12.22 |         | Parcel 76.27-1-12.1 |         | Parcel 76.27-1-18 | Parcel 76.27-1-15 |         | Parcel 76.27-1-12.21 | Parcel 76.27-1-7 |
|--|-------|---|------------------|---------|-------------------|---------|----------------------|---------|---------------------|---------|-------------------|-------------------|---------|----------------------|------------------|
|  |       |   | Sample ID.       |         | Sample ID.        |         | Sample ID.           |         | Sample ID.          |         | Sample ID.        | Sample ID.        |         | Sample ID.           | Sample ID.       |
|  |       |   | RIWP-1           | RIWP-2  | RIWP-3            | RIWP-3  | RIWP-4               | RIWP-4  | RIWP-5              | RIWP-5  | RIWP-6            | RIWP-7            | RIWP-8  | RIWP-9               | RIWP-10          |
|  |       |   | 10'-12'          | 6'-7'   | 0-2"              | 4'-6'   | 0-2"                 | 10'-12' | 0-2"                | 12'-14' | 8'-10'            | 8'-10'            | 6'-8'   | 8'-9'                | 12'-14'          |
| Polychlorinated Biphenyls by EPA Method 8082 |       | PPB   |                  |         |                   |         |                      |         |                     |         |                   |                   |         |                      |                  |
| PCB-1016                                     | ug/Kg | 100   | ND (42)          | ND (41) | ND (34)           | ND (40) | ND (35)              | ND (41) | ND (35)             | ND (39) | ND (46)           | ND (41)           | ND (39) | ND (43)              | ND (45)          |
| PCB-1221                                     | ug/Kg |   | ND (85)          | ND (82) | ND (69)           | ND (81) | ND (71)              | ND (83) | ND (71)             | ND (79) | ND (94)           | ND (84)           | ND (79) | ND (87)              | ND (92)          |
| PCB-1232                                     | ug/Kg |   | ND (42)          | ND (41) | ND (34)           | ND (40) | ND (35)              | ND (41) | ND (35)             | ND (39) | ND (46)           | ND (41)           | ND (39) | ND (43)              | ND (45)          |
| PCB-1242                                     | ug/Kg |   | ND (42)          | ND (41) | ND (34)           | ND (40) | ND (35)              | ND (41) | ND (35)             | ND (39) | ND (46)           | ND (41)           | ND (39) | ND (43)              | ND (45)          |
| PCB-1248                                     | ug/Kg |   | ND (42)          | ND (41) | ND (34)           | ND (40) | ND (35)              | ND (41) | ND (35)             | ND (39) | ND (46)           | ND (41)           | ND (39) | ND (43)              | ND (45)          |
| PCB-1254                                     | ug/Kg |   | ND (42)          | 45      | ND (34)           | ND (40) | ND (35)              | ND (41) | ND (35)             | ND (39) | ND (46)           | ND (41)           | ND (39) | ND (43)              | ND (45)          |
| PCB-1260                                     | ug/Kg |   | ND (42)          | ND (41) | 140               | ND (40) | ND (35)              | ND (41) | ND (35)             | ND (39) | ND (46)           | ND (41)           | 72      | ND (43)              | ND (45)          |
| PCB-1268                                     | ug/Kg |   | ND (42)          | ND (41) | ND (34)           | ND (40) | ND (35)              | ND (41) | ND (35)             | ND (39) | ND (46)           | ND (41)           | ND (39) | ND (43)              | ND (45)          |
| Total PCBs                                   | ug/Kg |   | ND (42)          | 45      | 140               | ND (40) | ND (35)              | ND (41) | ND (35)             | ND (39) | ND (46)           | ND (41)           | 72      | ND (43)              | ND (45)          |

|  |       | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Parcel 76.27-1-19 |         |                             |         | Parcel 76.27-1-1 |         |                     | Parcel 76.27-1-7 |           |         | Parcel 76.27-1-11.1 |         | Parcel 76.27-1-9 | Parcel 76.27-1-17 |
|--|-------|---|-------------------|---------|-----------------------------|---------|------------------|---------|---------------------|------------------|-----------|---------|---------------------|---------|------------------|-------------------|
|  |       |   | SAMPLE ID.        |         |                             |         | SAMPLE ID.       |         |                     | SAMPLE ID.       |           |         | Sample ID.          |         | Sample ID.       | Sample ID.        |
|  |       |   | RIWP-11           | RIWP-12 | RIWP-13 <sup>(Note 1)</sup> | RIWP-13 | RIWP-14          | RIWP-14 | RIWP-15 [Duplicate] | RIWP-16          | RIWP-17   | RIWP-17 | RIWP-18             | RIWP-18 | RIWP-19          | RIWP-20           |
|  |       |   | 6'-8'             | 8'-10'  | 0-2"                        | 6'-10'  | 0-2"             | 12'-14' | 8'-9'               | 1'-2'            | 0-2"      | 8'-10'  | 0-2"                | 2'-4'   | 13'-14'          | 8'-9'             |
| Polychlorinated Biphenyls by EPA Method 8082 |       |   | PPB               |         |                             |         |                  |         |                     |                  |           |         |                     |         |                  |                   |
| PCB-1016                                     | ug/Kg | 100   | ND (39)           | ND (37) | ND (33)                     | ND (45) | ND (33)          | ND (41) | ND (42) [ND (41)]   | ND (39)          | ND (4100) | ND (43) | ND (38)             | ND (41) | ND (45)          | ND (45)           |
| PCB-1221                                     | ug/Kg |   | ND (80)           | ND (74) | ND (68)                     | ND (90) | ND (67)          | ND (82) | ND (85) [ND (82)]   | ND (79)          | ND (4100) | ND (88) | ND (77)             | ND (84) | ND (92)          | ND (91)           |
| PCB-1232                                     | ug/Kg |   | ND (39)           | ND (37) | ND (33)                     | ND (45) | ND (33)          | ND (41) | ND (42) [ND (41)]   | ND (39)          | ND (4100) | ND (43) | ND (38)             | ND (41) | ND (45)          | ND (45)           |
| PCB-1242                                     | ug/Kg |   | ND (39)           | ND (37) | ND (33)                     | ND (45) | ND (33)          | ND (41) | ND (42) [ND (41)]   | ND (39)          | ND (4100) | ND (43) | ND (38)             | ND (41) | ND (45)          | ND (45)           |
| PCB-1248                                     | ug/Kg |   | ND (39)           | ND (37) | 34                          | ND (45) | ND (33)          | ND (41) | ND (42) [ND (41)]   | ND (39)          | ND (4100) | ND (43) | ND (38)             | ND (41) | ND (45)          | ND (45)           |
| PCB-1254                                     | ug/Kg |   | ND (39)           | ND (37) | 73 P                        | ND (45) | ND (33)          | ND (41) | ND (42) [ND (41)]   | ND (39)          | ND (4100) | ND (43) | ND (38)             | ND (41) | ND (45)          | ND (45)           |
| PCB-1260                                     | ug/Kg |   | ND (39)           | ND (37) | ND (33)                     | ND (45) | ND (33)          | ND (41) | ND (42) [ND (41)]   | 39               | ND (4100) | ND (43) | ND (38)             | 51      | ND (45)          | ND (45)           |
| PCB-1268                                     | ug/Kg |   | ND (39)           | ND (37) | ND (33)                     | ND (45) | ND (33)          | ND (41) | ND (42) [ND (41)]   | ND (39)          | ND (4100) | ND (43) | ND (38)             | ND (41) | ND (45)          | ND (45)           |
| Total PCBs                                   | ug/Kg |   | ND (39)           | ND (37) | 107 P                       | ND (45) | ND (33)          | ND (41) | ND (42) [ND (41)]   | 39               | ND (4100) | ND (43) | ND (38)             | 51      | ND (45)          | ND (45)           |

Notes:

Bold and orange shaded values indicate values that Exceed Track 1 Unrestricted Use Criteria.

Samples values shown in blue indicate potential exceedances of Track 1 Criteria, which due to matrix interferences , required sample dilution resulting in high detection limits.

While other compounds resulted in high detection limits, values shown in blue are only for those compounds with established Part 375 vlaues.

1. The Aroclor 1253 result is "P" flagged for sample RIWP-13 (0-2") due to the difference in results between two columns being greater than 40%. Matrix interference is suspected.

ND - Analyte was not detected. The number in parentheses is the associated detection limit.

Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (volatiles, PCBs)

J - Indicates an estimated value less than the practical quantization limit (PQL).

P -This is a flag used for a pesticide/Aroclor target analyte when there is a greater than 40% (25% for CLP) difference for detected concentrations between the two GC columns.

The concentration is reported on the form I and flagged with a "P" ("J" for DoD).

D - This flag identifies all compounds identified in an analysis at secondary dilution factor. "DL" suffix is appended to the sample number on Form I for the diluted sample, and all concentrations values reported on that form I are flagged with the "D" flag.

\*\*\* - This Flag identifies compounds associated with a quality control parameter which exceeds laboratory limits.

ug/Kg -micrograms/Kilogram

mg/Kg -milligrams/Kilogram

ppm (mg/kg) - parts per million

ppb (ug/kg) - parts per billion



Table 5  
Remedial Investigation Soil Analytical Results (Pesticides and Herbicides)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

|  | Units/Depth | Track 1<br>Unrestricted Use Criteria<br><br>Table 375-6.8 (a) | Parcel 76.27-1-8 |          | Parcel 76.27-1-10    |          | Parcel 76.27-1-12.22 |           | Parcel 76.27-1-12.1 |            | Parcel 76.27-1-18 | Parcel 76.27-1-15 |            | Parcel 76.27-1-12.21 | Parcel 76.27-1-7 |            |
|--|-------------|---|------------------|----------|----------------------|----------|----------------------|-----------|---------------------|------------|-------------------|-------------------|------------|----------------------|------------------|------------|
|  |             |   | Sample ID.       |          | Sample ID.           |          | Sample ID.           |           | Sample ID.          |            | Sample ID.        | Sample ID.        |            |                      | Sample ID.       | Sample ID. |
|  |             |   | RIWP-1           | RIWP-2   | RIWP-3               | RIWP-3   | RIWP-4               | RIWP-4    | RIWP-5              | RIWP-5     | RIWP-6            | RIWP-7            | RIWP-8     | RIWP-9               | RIWP-10          |            |
|  |             |   | 10'-12'          | 6'-7'    | 0-2"                 | 4'-6'    | 0-2"                 | 10'-12'   | 0-2"                | 12'-14'    | 8'-10'            | 8'-10'            | 6'-8'      | 8'-9'                | 12'-14'          |            |
| Organochlorine Pesticides by EPA Method 8081A          |             |   | PPB              |          |                      |          |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Aldrin   | ug/Kg       | 5   | ND (11)          | ND (10)  | ND (87) [ND (24)]    | ND (10)  | Not Tested           | No Tested | Not Tested          | Not Tested | Not Tested        | Not Tested        | Not Tested | Not Tested           | Not Tested       |            |
| Alpha-BHC  | ug/Kg       | 20  | ND (11)          | ND (10)  | ND (87) [ND (24)]    | ND (10)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Delta BHC  | ug/Kg       | 40  | ND (11)          | ND (10)  | ND (87) [ND (24)]    | ND (10)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Gamma-BHC (Lindane)                                    | ug/Kg       | 100   | ND (11)          | ND (10)  | ND (87) [ND (24)]    | ND (10)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Alpha-Chlordane  | ug/Kg       | 94  | ND (11)          | ND (10)  | ND (87) [ND (24)]    | ND (10)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Gamma-Chlordane  | ug/Kg       |   | ND (11)          | ND (10)  | ND (87) [ND (24)]    | ND (10)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| 4,4' DDD   | ug/Kg       | 3.3   | ND (21)          | ND (20)  | 550 [ND (47)]        | ND (20)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| 4,4' DDE   | ug/Kg       | 3.3   | ND (21)          | ND (20)  | 730 [51]             | ND (20)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| 4,4' DDT   | ug/Kg       | 3.3   | ND (21)          | ND (20)  | 1100 [120]           | ND (20)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Dieldrin   | ug/Kg       | 5   | ND (21)          | ND (20)  | ND (170) [ND (47)]   | ND (20)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Alpha-Endosulfan (Endosulfan I)                        | ug/Kg       | 2,400   | ND (11)          | ND (10)  | ND (87) [ND (24)]    | ND (10)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Beta-Endosulfan (Endosulfan II)                        | ug/Kg       | 2,400   | ND (21)          | ND (20)  | ND (170) [ND (47)]   | ND (20)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Endosulfan Sulfate                                     | ug/Kg       | 2,400   | ND (21)          | ND (20)  | ND (170) [ND (47)]   | ND (20)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Endrin   | ug/Kg       | 14  | ND (21)          | ND (20)  | ND (170) [ND (47)]   | ND (20)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Endrin Aldohyde  | ug/Kg       |   | ND (21)          | ND (20)  | ND (170) [ND (47)]   | ND (20)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Endrin Ketone  | ug/Kg       |   | ND (21)          | ND (20)  | ND (170) [ND (47)]   | ND (20)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Heptachlor   | ug/Kg       | 42  | ND (11)          | ND (10)  | ND (87) [ND (24)]    | ND (10)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Heptachlor Epoxide                                     | ug/Kg       |   | ND (11)          | ND (10)  | ND (87) [ND (24)]    | ND (10)  |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Methoxychlor   | ug/Kg       |   | ND (110)         | ND (100) | ND (870) [ND (240)]  | ND (100) |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Toxaphene  | ug/Kg       |   | ND (210)         | ND (200) | ND (1700) [ND (470)] | ND (200) |                      |           |                     |            |                   |                   |            |                      |                  |            |
| Chlorophenoxy Herbicides By EPA Method 8151 A (Note 3) |             |   | PPB              |          |                      |          |                      |           |                     |            |                   |                   |            |                      |                  |            |
| 2,4-D  | ug/Kg       |   | ND (130)         | ND (120) | Not Tested           | ND (120) | Not Tested           | No Tested | Not Tested          | Not Tested | Not Tested        | Not Tested        | Not Tested | Not Tested           | Not Tested       |            |
| Dicamba  | ug/Kg       |   | ND (130)         | ND (120) |                      | ND (120) |                      |           |                     |            |                   |                   |            |                      |                  |            |
| 2,4,5 -T   | ug/Kg       |   | ND (130)         | ND (120) |                      | ND (120) |                      |           |                     |            |                   |                   |            |                      |                  |            |
| 2,4,5-TP   | ug/Kg       | 3,800   | ND (130)         | ND (120) |                      | ND (120) |                      |           |                     |            |                   |                   |            |                      |                  |            |

|  | Units/Depth | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Parcel 76.27-1-19 |            |            |            | Parcel 76.27-1-1 |            |                     | Parcel 76.27-1-7 |            |            |            | Parcel 76.27-1-11.1 |            | Parcel 76.27-1-9 | Parcel 76.27-1-17 |
|--|-------------|---|-------------------|------------|------------|------------|------------------|------------|---------------------|------------------|------------|------------|------------|---------------------|------------|------------------|-------------------|
|  |             |   | SAMPLE ID.        |            |            |            | SAMPLE ID.       |            |                     | SAMPLE ID.       |            |            |            | Sample ID.          |            | Sample ID.       | Sample ID.        |
|  |             |   | RIWP-11           | RIWP-12    | RIWP-13    | RIWP-13    | RIWP-14          | RIWP-14    | RIWP-15 [Duplicate] | RIWP-16          | RIWP-17    | RIWP-17    |            | RIWP-18             | RIWP-18    | RIWP-19          | RIWP-20           |
|  |             |   | 6'-8'             | 8'-10'     | 0-2"       | 6'-10'     | 0-2"             | 1'-14'     | 8'-9'               | 1'-2'            | 0-2"       | 8'-10'     |            | 0-2"                | 2'-4'      | 13'-14'          | 8'-9'             |
| <b>Organochlorine Pesticides by EPA Method 8081A</b> |             | <b>PBB</b>  |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            |                  |                   |
| Aldrin   | ug/Kg       | 5   | Not Tested        | Not Tested | Not Tested | Not Tested | Not Tested       | Not Tested | Not Tested          | Not Tested       | Not Tested | Not Tested | Not Tested | Not Tested          | Not Tested | ND (1.9)         | Not Tested        |
| Alpha-BHC  | ug/Kg       | 20  |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (1.9)         |                   |
| Delta BHC  | ug/Kg       | 40  |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (1.9)         |                   |
| Gamma-BHC (Lindane)                                  | ug/Kg       | 100   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (1.9)         |                   |
| Alpha-Chlordane                                      | ug/Kg       | 94  |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (1.9)         |                   |
| Gamma-Chlordane                                      | ug/Kg       |   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (1.9)         |                   |
| 4,4' DDD   | ug/Kg       | 3.3   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (3.8)         |                   |
| 4,4' DDE   | ug/Kg       | 3.3   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (3.8)         |                   |
| 4,4' DDT   | ug/Kg       | 3.3   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (3.8)         |                   |
| Dieldrin   | ug/Kg       | 5   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (3.8)         |                   |
| Alpha-Endosulfan                                     | ug/Kg       | 2,400   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (1.9)         |                   |
| Beta-Endosulfan                                      | ug/Kg       | 2,400   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (3.8)         |                   |
| Endosulfan Sulfate                                   | ug/Kg       | 2,400   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (3.8)         |                   |
| Endrin   | ug/Kg       | 14  |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (3.8)         |                   |
| Endrin Aldohyde                                      | ug/Kg       |   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (3.8)         |                   |
| Endrin Ketone  | ug/Kg       |   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (3.8)         |                   |
| Heptachlor   | ug/Kg       | 42  |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (1.9)         |                   |
| Heptachlor Epoxide                                   | ug/Kg       |   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (1.9)         |                   |
| Methoxychlor   | ug/Kg       |   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (19)          |                   |
| Toxaphene  | ug/Kg       |   |                   |            |            |            |                  |            |                     |                  |            |            |            |                     |            | ND (38)          |                   |

Table 5  
Remedial Investigation Soil Analytical Results (Pesticides and Herbicides)  
Amos at Quackenbush, City of Albany, Albany County New York  
Samples Collected: June 3 through 6, 2008

Notes:

**Bold** and orange shaded values indicate values that Exceed Track I Unrestricted Use Criteria.

Samples values shown in blue indicate potential exceedances of Track I Criteria, which due to matrix interferences , required sample dilution resulting in high detection limits.

While other compounds resulted in high detection limits, values shown in blue are only for those compounds with established Part 375 viaues.

1. All herbicide samples were analyzed at dilution due to sample matrix interference.

ND - Analyte was not detected. The number in parentheses is the associated detection limit.

Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (volatiles, PCBs)

J - Indicates an estimated value less than the practical quantization limit (PQL).

P -This is a flag used for a pesticide/Aroclor target analyte when there is a greater than 40% (25% for CLP) difference for detected concentrations between the two GC columns.

The concentration is reported on the form I and flagged with a "P" ("J" for DoD).

D - This flag identifies all compounds identified in an analysis at secondary dilution factor. "DL" suffix is appended to the sample number on Form I for the diluted sample, and all concentrations values reported on that form I are flagged with the "D" flag.

\*\* - This Flag indentifies compounds associated with a quality control parameter which exceeds laboratory limits.

mg/kg -milligrams/Kilogram

ppm (mg/kg) - parts per million

ppb (ug/kg) - parts per billion

ug/kg -micrograms/Kilogram



Table 6  
Remedial Investigation Groundwater Analytical Results  
Amos at Quackenbush, City of Albany, Albany County, New York  
Samples Collected: June 18 and 19, 2008

| Parameter                                      | Units | Division of Water<br>Technical and Operational<br>Guidance Series (1.1.1) | Title 6 NYCRR Part 703<br>Water Quality Standards for Groundwater | Parcel 76.27-1-12.22 | Parcel 76.27-1-12.1         | Parcel 76.27-1-18 | Parcel 76.27-1-15     | Parcel 76.27-1-12.21 | Parcel 76.17-1-7 | Parcel 76.27-1-19 | Parcel 76.27-1-1 |
|--|-------|---|---|----------------------|-----------------------------|-------------------|-----------------------|----------------------|------------------|-------------------|------------------|
|  |       |   |   | RIWP-4               | RIWP-5 [Duplicate]          | RIWP-6            | Sample Identification |                      | RIWP-9           | RIWP-10           | RIWP-13          |
| TAL Metals by EPA Method 6010                  |       |   |   |                      |                             |                   |                       |                      |                  |                   |                  |
| PPM  |       |   |   |                      |                             |                   |                       |                      |                  |                   |                  |
| Aluminum                                       | mg/L  |   |   | 1.11                 | 2.31 (3.14)                 |                   | 0.124                 | 2.3                  | 1.05             | 12.7              | 8.15             |
| Antimony                                       | mg/L  | 0.0003  | 0.0003  | ND (0.0001)          | ND (0.0001) ND (0.0001)     | ND (0.0001)       | ND (0.0001)           | ND (0.0001)          | ND (0.0001)      | ND (0.0001)       | ND (0.0001)      |
| Arsenic  | mg/L  | 0.025   | 0.025   | ND (0.0100)          | ND (0.0100) ND (0.0100)     | ND (0.0100)       | ND (0.0100)           | ND (0.0100)          | ND (0.0100)      | ND (0.0100)       | 0.0213           |
| Barium   | mg/L  | 1   | 1   | 0.0462               | 0.115 (0.126)               | 0.171             | 0.0884                | 0.218                | 0.32             | 0.198             | 0.835            |
| Beryllium                                      | mg/L  | 0.011   | 0.011   | ND (0.00500)         | ND (0.00500) ND (0.00500)   | ND (0.00500)      | ND (0.00500)          | ND (0.00500)         | ND (0.00500)     | ND (0.00500)      | ND (0.00500)     |
| Cadmium  | mg/L  | 0.005   | 0.005   | ND (0.00500)         | ND (0.00500) ND (0.00500)   | ND (0.00500)      | ND (0.00500)          | ND (0.00500)         | ND (0.00500)     | ND (0.00500)      | ND (0.00500)     |
| Calcium  | mg/L  |   |   | 68.2                 | 129 (126)                   | 352               | 172                   | 193                  | 120              | 408               | 171              |
| Chromium                                       | mg/L  | 0.05  | 0.05  | ND (0.0100)          | ND (0.0100) ND (0.0100)     | ND (0.0100)       | ND (0.0100)           | ND (0.0100)          | ND (0.0100)      | ND (0.0100)       | 0.0136           |
| Cobalt   | mg/L  | 0.005   | 0.005   | ND (0.00500)         | ND (0.00500) ND (0.00500)   | ND (0.00500)      | ND (0.00500)          | ND (0.00500)         | ND (0.00500)     | ND (0.00500)      | ND (0.00500)     |
| Copper   | mg/L  | 0.2   | 0.2   | ND (0.0200)          | ND (0.0200) ND (0.0200)     | ND (0.0200)       | ND (0.0200)           | ND (0.0200)          | ND (0.0200)      | ND (0.0200)       | ND (0.0200)      |
| Iron   | mg/L  | 0.3   | 0.3   | 2.19                 | 3.66 (4.86)                 | 10.9              | 3.86                  | 12.4                 | 19.7             | 10.8              | 24.6             |
| Lead   | mg/L  | 0.025   | 0.025   | ND (0.00500)         | 0.0384 (0.0517)             | 0.0140            | ND (0.00500)          | 0.0103               | 0.0075           | 0.0502            | ND (0.00500)     |
| Magnesium                                      | mg/L  |   |   | 14.7                 | 19.5 (20.1)                 | 180               | 117                   | 44                   | 41.5             | 87.7              | 96               |
| Manganese                                      | mg/L  | 0.3   | 0.3   | 0.113                | 2.46 (1.42)                 | 1.41              | 2.39                  | 4.81                 | 3.38             | 4.83              | 3.23             |
| Mercury  | mg/L  | 0.00007   | 0.00007   | ND (0.000300)        | ND (0.000300) ND (0.000300) | ND (0.000300)     | ND (0.000300)         | ND (0.000300)        | ND (0.000300)    | ND (0.000300)     | ND (0.000300)    |
| Nickel   | mg/L  | 0.1   | 0.1   | ND (0.0400)          | ND (0.0400) ND (0.0400)     | ND (0.0400)       | ND (0.0400)           | ND (0.0400)          | ND (0.0400)      | ND (0.0400)       | 0.04             |
| Potassium                                      | mg/L  |   |   | 4.17                 | 11.1 (11.1)                 | 50                | 4.17                  | 24.7                 | 56.2             | 39.8              | 65.3             |
| Selenium                                       | mg/L  | 0.01  | 0.01  | ND (0.0100)          | ND (0.0100) ND (0.0100)     | ND (0.0100)       | ND (0.0100)           | ND (0.0100)          | ND (0.0100)      | ND (0.0100)       | ND (0.0100)      |
| Silver   | mg/L  | 0.05  | 0.05  | ND (0.0100)          | ND (0.0100) ND (0.0100)     | ND (0.0100)       | ND (0.0100)           | ND (0.0100)          | ND (0.0100)      | ND (0.0100)       | ND (0.0100)      |
| Sodium   | mg/L  | 20  | 20  | 29.7                 | 188 (1.47)                  | 29.7              | 183                   | 580                  | 304              | 589               | 181              |
| Thallium                                       | mg/L  |   |   | ND (0.0100)          | ND (0.0100) ND (0.0100)     | ND (0.0100)       | ND (0.0100)           | ND (0.0100)          | ND (0.0100)      | ND (0.0100)       | ND (0.0100)      |
| Vanadium                                       | mg/L  |   |   | ND (0.0500)          | ND (0.0500) ND (0.0500)     | ND (0.0500)       | ND (0.0500)           | ND (0.0500)          | ND (0.0500)      | ND (0.0500)       | ND (0.0500)      |
| Zinc   | mg/L  | 2.000   |   | ND (0.0200)          | 0.0486 (0.0592)             | ND (0.0200)       | ND (0.0200)           | 0.118                | 0.089            | 0.0234            | 0.0223           |
| Volatile Organic Compounds by EPA Method 8260B |       |   |   |                      |                             |                   |                       |                      |                  |                   |                  |
| PPB  |       |   |   |                      |                             |                   |                       |                      |                  |                   |                  |
| Acetone  | ug/L  | 50  |   | ND (10)              | ND (10) ND (10)             | ND (10)           | ND (10)               | 27                   | ND (10)          | ND (10)           | 12               |
| Benzene  | ug/L  |   | 1   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | 120                  | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Bromodichloromethane                           | ug/L  |   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Bromoform                                      | ug/L  | 50  |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Bromomethane                                   | ug/L  | 5   | 5   | ND (2.0)             | ND (2.0) ND (2.0)           | ND (2.0)          | ND (2.0)              | ND (2.0)             | ND (2.0)         | ND (2.0)          | ND (2.0)         |
| 2-Butanone (MEK)                               | ug/L  |   |   | ND (5.0)             | ND (5.0) ND (5.0)           | ND (5.0)          | ND (5.0)              | ND (5.0)             | ND (5.0)         | ND (5.0)          | ND (5.0)         |
| Methyl t-butyl ether (MTBE)                    | ug/L  |   | 10  | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | 17000 D               | 1.7                  | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Carbon Disulfide                               | ug/L  |   | 60  | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Carbon tetrachloride                           | ug/L  |   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Chlorobenzene                                  | ug/L  |   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Chloroethane                                   | ug/L  |   | 5   | ND (2.0)             | ND (2.0) ND (2.0)           | ND (2.0)          | ND (2.0)              | ND (2.0)             | ND (2.0)         | ND (2.0)          | ND (2.0)         |
| Chloroform                                     | ug/L  |   | 7   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Chloromethane                                  | ug/L  |   |   | ND (2.0)             | ND (2.0) ND (2.0)           | ND (2.0)          | ND (2.0)              | ND (2.0)             | ND (2.0)         | ND (2.0)          | ND (2.0)         |
| 1,2-Dibromo-3-chloropropane                    | ug/L  |   | 0.04  | ND (2.0)             | ND (2.0) ND (2.0)           | ND (2.0)          | ND (2.0)              | ND (2.0)             | ND (2.0)         | ND (2.0)          | ND (2.0)         |
| Cyclohexane                                    | ug/L  |   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | 39                   | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Dibromochloromethane                           | ug/L  | 50  |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,2-Dibromochloroethane                        | ug/L  |   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,3-Dichlorobenzene                            | ug/L  | 3   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,4-Dichlorobenzene                            | ug/L  | 3   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,2-Dichlorobenzene                            | ug/L  | 3   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Dichlorodifluoromethane                        | ug/L  | 5   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,1-Dichloroethane                             | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,2-Dichloroethane                             | ug/L  | 0.6   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,1-Dichloroethene                             | ug/L  | 5   | 0.6   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| cis-1,2-Dichloroethene                         | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| trans-1,2-Dichloroethene                       | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,2-Dichloropropane                            | ug/L  | 1   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| cis-1,3-Dichloropropene                        | ug/L  | 0.4   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| trans-1,3-Dichloropropene                      | ug/L  | 0.4   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Ethylbenzene                                   | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 2-Hexanone                                     | ug/L  | 50  |   | ND (5.0)             | ND (5.0) ND (5.0)           | ND (5.0)          | ND (5.0)              | ND (5.0)             | ND (5.0)         | ND (5.0)          | ND (5.0)         |
| Isopropylbenzene                               | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | 2.6                  | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Methyl Acetate                                 | ug/L  |   |   | ND (10.0)            | ND (10.0) ND (10.0)         | ND (10.0)         | ND (10.0)             | ND (10.0)            | ND (10.0)        | ND (10.0)         | ND (10.0)        |
| Methylcyclohexane                              | ug/L  |   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | 18                   | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Methylene chloride                             | ug/L  | 5   |   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 4-Methyl-2-pentanone (MIBK)                    | ug/L  |   |   | ND (5.0)             | ND (5.0) ND (5.0)           | ND (5.0)          | ND (5.0)              | ND (5.0)             | ND (5.0)         | ND (5.0)          | ND (5.0)         |
| Styrene  | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,1,2,2-Tetrachloroethane                      | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Tetrachloroethene                              | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Toluene  | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | 2                    | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,2,4-Trichlorobenzene                         | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,1,1-Trichloroethane                          | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,1,2-Trichloroethane                          | ug/L  | 1   | 1   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Trichloroethene                                | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Trichlorofluoromethane                         | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane          | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| Vinyl chloride                                 | ug/L  | 2   | 2   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| m-Xylene                                       | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |
| m,p-Xylene                                     | ug/L  | 5   | 5   | ND (1.0)             | ND (1.0) ND (1.0)           | ND (1.0)          | ND (1.0)              | ND (1.0)             | ND (1.0)         | ND (1.0)          | ND (1.0)         |

\* See notes on page 3



Table 6  
Remedial Investigation Groundwater Analytical Results  
Amos at Quackenbush, City of Albany, Albany County, New York  
Samples Collected: June 18 and 19, 2008

| Parameter   | Units | Division of Water<br>Technical and Operational<br>Guidance Series (1.1.1) | Title 6 NY CRR Part 703<br>Water Quality Standards for Groundwater | Parcel 76.27-1-12.22 | Parcel 76.27-1-12.1 | Parcel 76.27-1-18 | Parcel 76.27-1-15     | Parcel 76.27-1-12.21 | Parcel 76.27-1-7 | Parcel 76.27-1-19 | Parcel 76.27-1-1 |
|---|-------|---|--|----------------------|---------------------|-------------------|-----------------------|----------------------|------------------|-------------------|------------------|
|   |       |   |  | RIWP-4               | RIWP-5 [Duplicate]  | RIWP-6            | Sample Identification |                      | RIWP-9           | RIWP-10           | RIWP-13          |
| Semi-Volatile Organic Compounds by EPA Method 8270C |       |   |  |                      |                     |                   |                       |                      |                  |                   |                  |
| PPB   |       |   |  |                      |                     |                   |                       |                      |                  |                   |                  |
| Aceanaphthene                                       | ug/L  | 20  | 20   | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Aceanaphthylene                                     | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Acetophenone  | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Anthracene  | ug/L  | 50  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Atrazine  | ug/L  | 7.5   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Benzaldehyde  | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Benz(a)anthracene                                   | ug/L  | 0.002   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Benz(a)pyrene                                       | ug/L  | ND  | ND   | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Benzofluoranthene                                   | ug/L  | 0.002   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Benzophenanthrene                                   | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Benzothiazeprene                                    | ug/L  | 0.002   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 1,1-Bisphenyl                                       | ug/L  | 5   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Benzyl butyl phthalate                              | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Di-n-Butylphthalate                                 | ug/L  |   | 50   | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Caprolactam   | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Carbazole   | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Indeno(1,2,3-cd)pyrene                              | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 4-Chloroaniline                                     | ug/L  | 5   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Bis(2-chloroethyl) methane                          | ug/L  | 5   | 1  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Bis(2-chloroethyl) ether                            | ug/L  | 1   | 1  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2-Chloronaphthalene                                 | ug/L  | 10  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2-Chlorophenol                                      | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2,2'-Oxybis (1-Chloropropane)                       | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Chrysene  | ug/L  | 0.002   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Dibenz(a,h)anthracene                               | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Dibenzofuran  | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 3,3'-Dichlorobenzidine                              | ug/L  | 5   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2,4-Dimethylphenol                                  | ug/L  | 50  | 1000   | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Diethylphthalate                                    | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Dimethyl phthalate                                  | ug/L  | 50  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2,4-Dimethylphenol                                  | ug/L  | 10  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2,4-Dinitrophenol                                   | ug/L  | 10  | 1  | ND (47)              | ND (48) [ND (49)]   | ND (48)           | ND (49)               | ND (49)              | ND (47)          | ND (47)           | ND (47)          |
| 2,4-Dinitrotoluene                                  | ug/L  | 5   | 1  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2,6-Dinitrotoluene                                  | ug/L  | 5   | 1  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Bis(2-ethylhexyl) phthalate                         | ug/L  | 5   | 5  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Fluoranthene  | ug/L  | 50  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Fluorene  | ug/L  | 50  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Hexachlorobenzene                                   | ug/L  | 0.04  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Hexachlorobutadiene                                 | ug/L  | 0.5   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Hexachlorocyclopentadiene                           | ug/L  | 0.5   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Hexachloroethane                                    | ug/L  | 5   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Isophorene  | ug/L  | 50  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2-Methylnaphthalene                                 | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | 65                   | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 4,6-Dinitro-2-methylphenol                          | ug/L  |   |  | ND (47)              | ND (48) [ND (49)]   | ND (48)           | ND (49)               | ND (49)              | ND (47)          | ND (47)           | ND (47)          |
| 4-Chloro-3-methylphenol                             | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2-Methylphenol (o-cresol)                           | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 4-Methylphenol                                      | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Naphthalene   | ug/L  | 10  | 10   | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2-Nitroaniline                                      | ug/L  | 5   | 5  | ND (47)              | ND (48) [ND (49)]   | ND (48)           | ND (49)               | ND (49)              | ND (47)          | ND (47)           | ND (47)          |
| 3-Nitroaniline                                      | ug/L  | 5   | 5  | ND (47)              | ND (48) [ND (49)]   | ND (48)           | ND (49)               | ND (49)              | ND (47)          | ND (47)           | ND (47)          |
| 4-Nitroaniline                                      | ug/L  | 5   | 50   | ND (47)              | ND (48) [ND (49)]   | ND (48)           | ND (49)               | ND (49)              | ND (47)          | ND (47)           | ND (47)          |
| Nitrobenzene  | ug/L  | 0.4   | 0.4  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2-Nitrophenol                                       | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 4-Nitrophenol                                       | ug/L  |   |  | ND (47)              | ND (48) [ND (49)]   | ND (48)           | ND (49)               | ND (49)              | ND (47)          | ND (47)           | ND (47)          |
| N-Nitrosodiphenylamine                              | ug/L  | 50  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Di-n-octylphthalate                                 | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Pentachlorophenol                                   | ug/L  | 1   | 1  | ND (47)              | ND (48) [ND (49)]   | ND (48)           | ND (49)               | ND (49)              | ND (47)          | ND (47)           | ND (47)          |
| Phenanthrene  | ug/L  | 50  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Phenol  | ug/L  | 1   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 4-Bromophenyl phenyl ether                          | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 4-Chlorophenyl phenyl ether                         | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| N-Nitrosodi-n-propylamine                           | ug/L  |   |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| Pyrene  | ug/L  | 50  |  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2,4,6-Trichlorophenol                               | ug/L  | 1   | 1  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |
| 2,4,5-Trichlorophenol                               | ug/L  | 1   | 1  | ND (9.4)             | ND (9.5) [ND (9.8)] | ND (9.6)          | ND (9.7)              | ND (9.7)             | ND (9.4)         | ND (9.4)          | ND (9.4)         |

\* See notes on page 3



Table 6  
Remedial Investigation Groundwater Analytical Results  
Amos at Quackenbush, City of Albany, Albany County, New York  
Samples Collected: June 18 and 19, 2008

| Parameter  | Units | Division of Water<br>Technical and Operational<br>Guidance Series (1.1.1) | Title 6 NYCRR Part 703<br>Water Quality Standards for Groundwater | Parcel 76.27-1-12.22 | Parcel 76.27-1-12.1 |            | Parcel 76.27-1-18 | Parcel 76.27-1-15     | Parcel 76.27-1-12.21 | Parcel 76.27-1-7 | Parcel 76.27-1-19 | Parcel 76.27-1-1 |
|--|-------|---|---|----------------------|---------------------|------------|-------------------|-----------------------|----------------------|------------------|-------------------|------------------|
|  |       |   |   | RIWP-4               | RIWP-5 [Duplicate]  |            | RIWP-6            | Sample Identification |                      | RIWP-9           | RIWP-10           | RIWP-13          |
| Organochlorine Pesticides by EPA Method 8081A          |       |   |   |                      |                     |            |                   |                       |                      |                  |                   |                  |
| PPB  |       |   |   |                      |                     |            |                   |                       |                      |                  |                   |                  |
| Aldrin   | ug/L  |   | ND  | Not Tested           | Not Tested          | Not Tested | Not Tested        | Not Tested            | ND (0.063)           | Not Tested       | Not Tested        | Not Tested       |
| Alpha-BHC  | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.063)           |                  |                   |                  |
| Delta BHC  | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.063)           |                  |                   |                  |
| Gamma-BHC (Lindane)                                    | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.063)           |                  |                   |                  |
| Alpha-Chlordane  | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.063)           |                  |                   |                  |
| Gamma-Chlordane  | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.063)           |                  |                   |                  |
| 4,4' DDD   | ug/L  |   | 0.3   |                      |                     |            |                   |                       | ND (0.13)            |                  |                   |                  |
| 4,4' DDE   | ug/L  |   | 0.2   |                      |                     |            |                   |                       | ND (0.13)            |                  |                   |                  |
| 4,4' DDT   | ug/L  |   | 0.2   |                      |                     |            |                   |                       | ND (0.13)            |                  |                   |                  |
| Dieldrin   | ug/L  |   | 0.0004  |                      |                     |            |                   |                       | ND (0.13)            |                  |                   |                  |
| Alpha-Endosulfan (Endosulfan I)                        | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.063)           |                  |                   |                  |
| Beta-Endosulfan (Endosulfan II)                        | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.13)            |                  |                   |                  |
| Endosulfan Sulfate                                     | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.13)            |                  |                   |                  |
| Endrin   | ug/L  |   | ND  |                      |                     |            |                   |                       | ND (0.13)            |                  |                   |                  |
| Endrin Aldehyde  | ug/L  |   | 5   |                      |                     |            |                   |                       | ND (0.13)            |                  |                   |                  |
| Endrin Ketone  | ug/L  |   | 5   |                      |                     |            |                   |                       | ND (0.13)            |                  |                   |                  |
| Heptachlor   | ug/L  |   | 0.04  |                      |                     |            |                   |                       | ND (0.13)            |                  |                   |                  |
| Heptachlor Epoxide                                     | ug/L  |   | 0.03  |                      |                     |            |                   |                       | ND (0.063)           |                  |                   |                  |
| Methoxychlor   | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.063)           |                  |                   |                  |
| Toxaphene  | ug/L  |   |   |                      |                     |            |                   |                       | ND (1.3)             |                  |                   |                  |
| Chlorophenoxy Herbicides By EPA Method 8151 A (Note 2) |       |   |   |                      |                     |            |                   |                       |                      |                  |                   |                  |
| PPB  |       |   |   |                      |                     |            |                   |                       |                      |                  |                   |                  |
| 2,4-D  | ug/L  |   |   | Not Tested           | Not Tested          | Not Tested | Not Tested        | Not Tested            | ND (0.53)            | Not Tested       | Not Tested        | Not Tested       |
| Dicamba  | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.53)            |                  |                   |                  |
| 2,4,5 -T   | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.53)            |                  |                   |                  |
| 2,4,5-TP   | ug/L  |   |   |                      |                     |            |                   |                       | ND (0.53)            |                  |                   |                  |

Notes:  
Bold and orange shaded values indicate values that Exceed Title 6 NYCRR 703 Water Quality Standards  
Bold and Blue shaded values indicate elevated detection limits due to analytical circumstances. Refer to laboratory narratives.  
Samples values shown in blue indicate potential exceedances of Groundwater Standards and/or Criteria.  
Values shown in blue are for compounds with established Standards and/or Criteria values.  
ND - Analyte was not detected. The number in parentheses is the associated detection limit.  
Field duplicate sample results are presented in brackets.  
Data Qualifiers:  
Organics (volatiles, PCBs)  
J - Indicates an estimated value less than the practical quantization limit (PQL).  
P - This is a flag used for a pesticide/Aroclor target analyte when there is a greater than 40% (25% for CLP) difference for detected concentrations between the two GC columns. The concentration is reported on the form I and flagged with a "P" ("J" for DoD).  
D - This flag identifies all compounds identified in an analysis at secondary dilution factor. If a sample or extract is reanalyzed at a higher dilution factor, the "DL" suffix is appended to the sample number on Form I for the diluted sample, and all concentrations values reported on that form I are flagged with the "D" flag.  
mg/L - milligrams/Liter  
ppm (mg/L) - parts per million  
ppb (ug/L) - parts per billion -micrograms/Liter

**Table 7**  
**Remedial Investigation Soil Vapor and Ambient Analytical Results**  
**Amos at Quackenbush, City of Albany, Albany County, New York**  
**Samples Collected: June 17, 2008**

| Parameter                                      | Note 1<br>Troy Atrium<br>(Outdoor)<br>2003<br>Average Annual VOC<br>Summary Table Data | Parcel 76.27-1-1<br>Outdoor<br>Ambient<br>Sample | (Note 2)<br>NYSDOH 2003<br>Study of VOCs in Air<br>in Fuel Oil Heated Homes<br>Indoor Air<br>75th Percentile | (Note 3)<br>NYSDOH<br>Air Guideline Value | units             | Parcel 76.27-1-17                  | Parcel 76.27-1-15 | Parcel 76.27-1-12.1 | Parcel 76.27-1-17 | Parcel 76.27-1-7 | Parcel 76.27-1-9 | Parcel 76.27-1-12.21 |
|--|--|--|--|---|-------------------|------------------------------------|-------------------|---------------------|-------------------|------------------|------------------|----------------------|
|  |  |  |  |   |                   | SAMPLE IDENTIFICATION (Soil Vapor) |                   |                     |                   |                  |                  |                      |
|  |  |  |  |   |                   | VP-1                               | VP-2              | VP-3                | VP-5              | VP-6             | VP-7             | VP-8                 |
| Volatile Organic compounds by EPA Method TO-15 |  |  |  |   |                   |                                    |                   |                     |                   |                  |                  |                      |
| Acetone  |  | 21 D   | 52   |   | µg/m <sup>3</sup> | 180                                | 350               | 70                  | 110               | 13               | 29               | 18                   |
| Benzene  | 0.558  | ND (0.17)  | 5.9  |   | µg/m <sup>3</sup> | ND (10)                            | ND (5.2)          | ND (9.4)            | ND (9.3)          | ND (0.48)        | ND (5.1)         | ND (0.96)            |
| Bromodichloromethane                           |  | ND (0.034)                                       |  |   | µg/m <sup>3</sup> | ND (4.2)                           | ND (2.2)          | ND (3.9)            | ND (3.9)          | ND (0.20)        | 17               | 0.68                 |
| Bromoform                                      |  | ND (0.17)  |  |   | µg/m <sup>3</sup> | ND (32)                            | ND (17)           | ND (30)             | ND (30)           | ND (1.6)         | ND (16)          | ND (3.1)             |
| Bromomethane                                   | 0.014  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (12)                            | ND (6.4)          | ND (11)             | ND (11)           | ND (0.59)        | ND (6.2)         | ND (1.2)             |
| 2-Butanone (MEK)                               |  | 1.3  |  |   | µg/m <sup>3</sup> | ND (18)                            | 10                | ND (17)             | 19                | 2.1              | 10               | 2.8                  |
| Methyl t-butyl ether (MTBE)                    | 0.256  | ND (0.34)  | 5.6  |   | µg/m <sup>3</sup> | ND (22)                            | ND (12)           | ND (21)             | ND (21)           | ND (1.1)         | ND (11)          | ND (2.2)             |
| Carbon Disulfide                               |  | ND (0.17)  |  |   | µg/m <sup>3</sup> | 12                                 | ND (5.1)          | ND (9.2)            | ND (9.1)          | ND (0.47)        | 12               | 3.9                  |
| Carbon tetrachloride                           | 0.116  | 0.11   | 0.6  |   | µg/m <sup>3</sup> | ND (3.9)                           | ND (2.1)          | ND (3.7)            | ND (3.7)          | 0.65             | 2.1              | ND (0.38)            |
| Chlorobenzene                                  |  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (14)                            | ND (7.5)          | ND (14)             | ND (13)           | ND (0.70)        | ND (7.3)         | ND (1.4)             |
| Chloroethane                                   |  | ND (0.34)  | <0.25  |   | µg/m <sup>3</sup> | ND (16)                            | ND (8.6)          | ND (16)             | ND (15)           | ND (0.80)        | ND (8.4)         | ND (1.6)             |
| Chloroform                                     | 0.036  | ND (0.17)  | 0.5  |   | µg/m <sup>3</sup> | ND (15)                            | ND (8.0)          | ND (14)             | ND (14)           | ND (0.74)        | 470              | 4.5                  |
| Chloromethane                                  | 0.799  | 0.59   | 1.8  |   | µg/m <sup>3</sup> | ND (13)                            | ND (6.8)          | ND (12)             | ND (12)           | 0.76             | ND (6.6)         | ND (1.2)             |
| Dibromochloromethane                           |  | ND (0.34)  |  |   | µg/m <sup>3</sup> | ND (5.3)                           | ND (2.8)          | ND (5.0)            | ND (5.0)          | ND (0.26)        | ND (2.7)         | ND (0.51)            |
| 1,2-Dibromoethane                              | 0.012  | ND (0.34)  | <0.25  |   | µg/m <sup>3</sup> | ND (4.8)                           | ND (2.5)          | ND (4.5)            | ND (4.5)          | ND (0.23)        | ND (2.5)         | ND (0.46)            |
| 1,3-Dichlorobenzene                            | 0.009  | ND (0.34)  | <0.25  |   | µg/m <sup>3</sup> | ND (37)                            | ND (20)           | ND (35)             | ND (35)           | ND (1.8)         | ND (19)          | ND (3.6)             |
| 1,4-Dichlorobenzene                            | 0.086  | 1.2  | 0.5  |   | µg/m <sup>3</sup> | ND (37)                            | ND (20)           | ND (35)             | ND (35)           | 3.8              | ND (19)          | 6.9                  |
| 1,2-Dichlorobenzene                            | 0.01   | ND (0.34)  | <0.25  |   | µg/m <sup>3</sup> | ND (37)                            | ND (20)           | ND (35)             | ND (35)           | ND (1.8)         | ND (19)          | ND (3.6)             |
| 1,1-Dichloroethane                             |  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (13)                            | ND (6.6)          | ND (12)             | ND (12)           | ND (0.61)        | ND (6.5)         | ND (1.2)             |
| 1,2-Dichloroethane                             | 0.014  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (13)                            | ND (6.6)          | ND (12)             | ND (12)           | ND (0.61)        | ND (6.5)         | ND (1.2)             |
| 1,1-Dichloroethene                             |  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (12)                            | ND (6.5)          | ND (12)             | ND (12)           | ND (0.60)        | ND (6.3)         | ND (1.2)             |
| trans-1,2-Dichloroethene                       |  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (12)                            | ND (6.5)          | ND (12)             | ND (12)           | ND (0.60)        | ND (6.3)         | ND (1.2)             |
| cis-1,2-Dichloroethene                         |  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (12)                            | ND (6.5)          | ND (12)             | ND (12)           | ND (0.60)        | ND (6.3)         | ND (1.2)             |
| 1,2-Dichloropropane                            |  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (14)                            | ND (7.6)          | ND (14)             | ND (14)           | ND (0.70)        | ND (7.4)         | ND (1.4)             |
| cis-1,3-Dichloropropene                        | 0.015  | ND (0.34)  | <0.25  |   | µg/m <sup>3</sup> | ND (28)                            | ND (15)           | ND (27)             | ND (27)           | ND (1.4)         | ND (14)          | ND (2.7)             |
| trans-1,3-Dichloropropene                      | 0.014  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (14)                            | ND (7.4)          | ND (13)             | ND (13)           | ND (0.69)        | ND (7.2)         | ND (1.4)             |
| Ethylbenzene                                   | 0.151  | 0.72   | 2.8  |   | µg/m <sup>3</sup> | ND (27)                            | ND (14)           | ND (26)             | ND (25)           | 1.5              | ND (14)          | 3.8                  |
| 2-Hexanone                                     |  | ND (0.17)  |  |   | µg/m <sup>3</sup> | ND (13)                            | ND (6.7)          | ND (12)             | ND (12)           | ND (0.62)        | ND (6.5)         | ND (1.2)             |
| Methylene chloride                             |  | ND (0.17)  | 6.6  |   | µg/m <sup>3</sup> | ND (11)                            | ND (5.7)          | ND (10)             | ND (10)           | ND (0.53)        | ND (5.5)         | ND (1.0)             |
| 4-Methyl-2-pentanone (MIBK)                    |  | ND (0.34)  |  |   | µg/m <sup>3</sup> | ND (25)                            | ND (13)           | ND (24)             | ND (24)           | ND (1.2)         | ND (13)          | ND (2.5)             |
| Styrene  | 0.044  | ND (0.34)  | 0.6  |   | µg/m <sup>3</sup> | ND (26)                            | ND (14)           | ND (25)             | ND (25)           | ND (1.3)         | ND (14)          | ND (2.6)             |
| 1,1,2,2-Tetrachloroethane                      | 0.013  | ND (0.034)                                       | <0.25  |   | µg/m <sup>3</sup> | ND (4.3)                           | ND (2.2)          | ND (4.0)            | ND (4.0)          | ND (0.21)        | ND (2.2)         | ND (0.41)            |
| Tetrachloroethene                              | 0.035  | 0.10   | 1.1  | 100                                       | µg/m <sup>3</sup> | 2000                               | 8.9               | 2800 D              | 5800 D            | 0.58             | 4.3              | 35                   |
| Toluene  | 1.274  | 4.3  | 25   |   | µg/m <sup>3</sup> | 22                                 | 61                | ND (11)             | 110               | 10               | 13               | 20                   |
| 1,1,1-Trichloroethane                          |  | ND (0.17)  | 1.1  |   | µg/m <sup>3</sup> | ND (17)                            | ND (8.9)          | ND (16)             | ND (16)           | ND (0.83)        | ND (8.7)         | 7.9                  |
| 1,1,2-Trichloroethane                          |  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (17)                            | ND (8.9)          | ND (16)             | ND (16)           | ND (0.83)        | ND (8.7)         | ND (1.6)             |
| Trichloroethene                                | 0.027  | ND (0.034)                                       | <0.025   | 5   | µg/m <sup>3</sup> | ND (3.3)                           | ND (1.8)          | ND (3.2)            | ND (3.1)          | ND (0.16)        | 2.9              | ND (0.32)            |
| Trichlorofluoromethane                         |  | 0.29   | 5.4  |   | µg/m <sup>3</sup> | ND (17)                            | ND (9.2)          | ND (17)             | ND (16)           | 1.8              | ND (9.0)         | 5.1                  |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane          |  | 0.094  | ND (4.8)   |   | µg/m <sup>3</sup> | ND (4.8)                           | ND (2.5)          | ND (4.5)            | ND (4.5)          | 0.67             | ND (2.4)         | 0.84                 |
| Vinyl Acetate                                  |  | ND (0.85)  |  |   | µg/m <sup>3</sup> | ND (55)                            | ND (29)           | ND (52)             | ND (51)           | ND (2.7)         | ND (28)          | ND (5.3)             |
| Vinyl Chloride                                 |  | ND (0.17)  | <0.25  |   | µg/m <sup>3</sup> | ND (7.9)                           | ND (4.2)          | ND (7.5)            | ND (7.5)          | ND (0.39)        | ND (4.1)         | ND (0.77)            |
| o-Xylene                                       | 0.164  | 1.3  | 3.1  |   | µg/m <sup>3</sup> | ND (27)                            | 15                | ND (26)             | ND (25)           | 2.5              | ND (14)          | 7.7                  |
| m&p-Xylene                                     | 0.494  | 3.9  | 4.6  |   | µg/m <sup>3</sup> | ND (54)                            | 49                | ND (51)             | 84                | 8.5              | ND (28)          | 21                   |

**Notes:**

- Orange and bold indicates Ambient Concentration exceeds Annual Average compound concentration recorded at NYSDEC Air Monitoring Station No. 4102-09 (Troy Atrium, Annual VOC data 1999-2003).
- Gray and bold indicates vapor concentrations above NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated homes Table C1.
- NYSDOH Air Guideline Values exist for Tetrachloroethene and Trichloroethene.



**Table 8**  
**Remedial Investigation**  
**Soil Photoionization Screening Results (PPM)**  
**Amos at Quackenbush, City of Albany, Albany County, New York**

| Photo-Ionization Detector Readings (ppm) |                                   |          |     |  |  |                      |   |          |   |          |   |                        |    |                        |    |          |    |     |
|--|-----------------------------------|----------|-----|--|--|----------------------|---|----------|---|----------|---|------------------------|----|------------------------|----|----------|----|-----|
| Soil boring Identification               | Depth Below Ground Surface (Feet) |          |     |  |  |                      |   |          |   |          |   |                        |    |                        |    |          |    |     |
|  | 0-2 inch Surface Sample           | 0        | 1   | 2  | 3  | 4                    | 5 | 6        | 7 | 8        | 9 | 10                     | 11 | 12                     | 13 | 14       | 15 | 16  |
| RIWP-1                                   | Concrete                          | 0.0      |     | 0.0                                      |  | 0.0                  |   | 0.0 (GW) |   | 0.0      |   | 0.0                    |    | Geoprobe Refusal (BOH) |    |          |    |     |
| RIWP-2                                   | Concrete                          | 0.0      |     | 0.0                                      |  | 0.0                  |   | 0.0 (GW) |   | 0.0      |   | 0.0                    |    | Geoprobe Refusal (BOH) |    |          |    |     |
| RIWP-3                                   | 0.0                               | 0.0      |     | 0.0                                      |  | 0.0 (GW)             |   | 0.0      |   | 0.0      |   | Geoprobe Refusal (BOH) |    |                        |    |          |    |     |
| RIWP-4                                   | 0.0                               |          | 0.0 |  |  | 0.0                  |   | 55.7     |   | 13.4     |   | 1276.0                 |    | 0.0                    |    | 0.0      |    | BOH |
| RIWP-5                                   | 0.0                               | 0.0      |     | 0.0                                      |  | 0.0                  |   | 0.0      |   | 16.8     |   | 3.8                    |    | 50.8                   |    | 12.4     |    | BOH |
| RIWP-6                                   | Asphalt                           | 0.0      |     | 0.0                                      |  | 0.0                  |   | 0.0      |   | 43.7     |   | 0.0                    |    | 0.0                    |    | 0.0      |    | BOH |
| RIWP-7                                   | Asphalt                           | Asphalt  |     | 1.2                                      |  | 0.0                  |   | 106.0    |   | 232.0    |   | 38.9                   |    | Geoprobe Refusal (BOH) |    |          |    |     |
| RIWP-8                                   | Asphalt                           | 0.3      |     | 5.5                                      |  | 0.0                  |   | 20.0     |   | 0.0      |   | 0.0                    |    | 0.0                    |    | 0.0      |    | BOH |
| RIWP-9                                   | Concrete                          | 0.7      |     | 1.1                                      |  | 416.0                |   | 3679.0   |   | 485.0    |   | Geoprobe Refusal (BOH) |    |                        |    |          |    |     |
| RIWP-10                                  | Concrete                          | 0.0      |     | 0.0                                      |  | 0.0                  |   | 0.0      |   | 0.0      |   | 0.0                    |    | 0.0 (GW)               |    | 0.0      |    | BOH |
| RIWP-11                                  | Asphalt                           | 0.0      |     | 0.0                                      |  | 0.0                  |   | 71.8     |   | 26.1     |   | 0.0                    |    | 0.0                    |    | 0.0      |    | BOH |
| RIWP-12                                  | Asphalt                           | 0.0      |     | 0.0                                      |  | 0.0                  |   | 0.0      |   | 0.0 (GW) |   | 0.0                    |    | 0.0                    |    | 0.0      |    | BOH |
| RIWP-13                                  | 0.0                               | 0.0      |     | 0.0                                      |  | 0.0                  |   | 30.1     |   | 14.8     |   | 0.0                    |    | No Recovery            |    | 0.0      |    | BOH |
| RIWP-14                                  | 0.0                               | 0.0      |     | 0.0                                      |  | 0.0                  |   | 0.0      |   | 0.0      |   | 0.0                    |    | 6.7                    |    | 0.0      |    | BOH |
| RIWP-15                                  | Asphalt                           | 0.0      |     | 0.0                                      |  | 0.0                  |   | 27.8     |   | 106.0    |   | 0.0                    |    | 0.0                    |    | 0.0      |    | BOH |
| RIWP-16                                  | Asphalt                           | 0.0 *    |     | 0.0                                      |  | 0.0                  |   | 0.0      |   | 0.0      |   | 0.0                    |    | 0.0                    |    | 0.0      |    | BOH |
| RIWP-17                                  | 0.0                               | 0.0      |     | 0.0                                      |  | 0.0                  |   | 0.0      |   | 0.0 (GW) |   | 0.0                    |    | 0.0                    |    | 0.0      |    | BOH |
| RIWP-18                                  | 0.0                               | 3.9      |     | 145.0                                    |  | 57.7                 |   | 2.0      |   | 2.3      |   | 0.0                    |    | 0.0                    |    | 0.0      |    | BOH |
| RIWP-19                                  | Concrete                          |          |     | 0.0                                      |  | 0.0                  |   | 0.0      |   | 0.0      |   | 0.0                    |    | 0.0                    |    | 0.0 (GW) |    | BOH |
| RIWP-20                                  | Asphalt                           | 0.0      |     | 0.0                                      |  | 0.0                  |   | 0.0      |   | 3.8      |   | 0.0                    |    | 0.0                    |    | 0.0      |    | BOH |
|  |                                   |          |     |  |  |                      |   |          |   |          |   |                        |    |                        |    |          |    |     |
| VP-1                                     | NA                                | 0.0      |     | 0.0                                      | VP Set at 3.5 ft bgs (Groundwater at 4.5 ft bgs/with visible free product) |                      |   |          |   |          |   |                        |    |                        |    |          |    |     |
| VP-2                                     | NA                                | 0.0      |     | 0.0                                      | VP Set at 3.5 ft bgs   |                      |   |          |   |          |   |                        |    |                        |    |          |    |     |
| VP-3                                     | NA                                | 0.0      |     | 0.0                                      | VP Set at 5.0 ft bgs   |                      |   |          |   |          |   |                        |    |                        |    |          |    |     |
| VP-4                                     | NA                                | 0.0      |     | 0.0                                      | 0.0  | VP Set at 5.0 ft bgs |   |          |   |          |   |                        |    |                        |    |          |    |     |
| VP-5                                     | NA                                | Concrete | 0.0 | Vapor Point Directly Below Concrete Slab |  |                      |   |          |   |          |   |                        |    |                        |    |          |    |     |
| VP-6                                     | NA                                | Concrete | 1.0 | Vapor Point Directly Below Concrete Slab |  |                      |   |          |   |          |   |                        |    |                        |    |          |    |     |
| VP-7                                     | NA                                | Concrete | 0.0 | Vapor Point Directly Below Concrete Slab |  |                      |   |          |   |          |   |                        |    |                        |    |          |    |     |
| VP-8                                     | NA                                | Concrete | 0.7 | Vapor Point Directly Below Concrete Slab |  |                      |   |          |   |          |   |                        |    |                        |    |          |    |     |

**Notes:**

Photoionization Detector (PID) meter calibrated to 100.0 using 100 Isobutylene calibration gas on 6/3, 6/4, 6/5, 6/6 and 6/9 2008.

GW= Documented Groundwater Table Depth.

Bold and Shaded Values represent soil samples submitted for laboratory Analysis (Surface and subsurface sample intervals).

\* Sample collected from 1-2 feet below basement slab that equates to 8-10 feet below existing grade.

Solid black lines represent bottom of boring.

ppm - part per million

**Table 9**  
**Remedial Investigation Monitoring Well Gauging Results**  
**Amos at Quackenbush, City of Albany, Albany County, New York**

| Well ID:                                       | Well Gauging Date | PID Well Head Space Reading (PPM) | Depth to Product (Ft) | Depth to Water (Ft) | Bottom of Boring (Ft) | Casing Elevation (Ft AMSL) | Groundwater Elevation (Ft AMSL) |
|--|-------------------|-----------------------------------|-----------------------|---------------------|-----------------------|----------------------------|---------------------------------|
| <b>Existing Site Monitoirng Wells</b>          |                   |                                   |                       |                     |                       |                            |                                 |
| MW-2   | 6/12/2008         | 0.0                               | NA                    | 6.90                | 12.0                  | 110.34                     | 103.44                          |
| MW-3   | 6/12/2008         | 0.0                               | NA                    | 6.45                | 13.8                  | 110.18                     | 103.73                          |
| MW-1   | 6/12/2008         | 0.0                               | NA                    | 9.35                | 14.0                  | 109.60                     | 100.25                          |
| PES-1  | 6/12/2008         | 0.0                               | NA                    | 6.7                 | 15.0                  | 102.00                     | 95.30                           |
| PES-2  | 6/12/2008         | 0.0                               | NA                    | 3.2                 | 10.0                  | 100.74                     | 97.50                           |
| PES-5  | 6/12/2008         | 0.0                               | NA                    | 4.88                | 17.8                  | 107.74                     | 102.86                          |
| PES-7  | 6/12/2008         | 0.1                               | NA                    | 16.56               | 19.0                  | 102.82                     | 86.26                           |
| SPMW-2   | 6/12/2008         | 0.2                               | NA                    | 6.83                | 13.5                  | 110.21                     | 103.38                          |
| SPMW-3   | 6/12/2008         | 6.0                               | 5.82                  | 5.90                | 12.0                  | 109.19                     | 103.29                          |
| SPMW-5   | 6/12/2008         | 0.2                               | NA                    | 8.37                | 11.45                 | 109.85                     | 101.48                          |
| <b>Remedial Investigation Monitoring Wells</b> |                   |                                   |                       |                     |                       |                            |                                 |
| RIMW-4   | 6/12/2008         | 0.1                               | NA                    | 2.76                | 12.0                  | 102.16                     | 99.40                           |
| RIMW-5   | 6/12/2008         | 0.1                               | NA                    | 5.94                | 15.0                  | 105.41                     | 99.47                           |
| RIMW-6   | 6/12/2008         | 0.0                               | NA                    | 7.30                | 12.8                  | 111.16                     | 103.86                          |
| RIMW-8   | 6/12/2008         | 0.0                               | NA                    | 9.35                | 15.0                  | 109.66                     | 100.31                          |
| RIMW-9   | 6/12/2008         | 0.0                               | NA                    | 9.35                | 14.71                 | 107.27                     | 97.92                           |
| RIMW-10  | 6/12/2008         | 0.0                               | NA                    | 6.9                 | 13.62                 | 104.73                     | 97.83                           |
| RIMW-13  | 6/12/2008         | 0.0                               | NA                    | 7.33                | 14.3                  | 110.00                     | 102.67                          |
| RIMW-15  | 6/12/2008         | 0.4                               | NA                    | 6.56                | 14.5                  | 107.16                     | 100.60                          |

**Notes:**

AMSL - Above Mean Sea Level

Ft - Feet



**Table 9A**  
**Remedial Investigation Monitoring Well Gauging Results October 15, 2009**  
**Amos at Quackenbush, City of Albany, Albany County, New York**

| Well ID:                                       | Well Gauging Date | PID Well Head Space Reading (ppm) | Depth to Product (Ft) | Depth to Water (Ft) | Bottom of Boring (Ft) | Casing Elevation (Ft AMSL) | Groundwater Elevation (Ft AMSL) |
|--|-------------------|-----------------------------------|-----------------------|---------------------|-----------------------|----------------------------|---------------------------------|
| <b>Existing Site Monitoring Wells</b>          |                   |                                   |                       |                     |                       |                            |                                 |
| MW-2   | 10/15/2009        | 0.0                               | NA                    | 7.10                | 12.0                  | 110.34                     | 103.24                          |
| MW-3   | 10/15/2009        | 0.0                               | NA                    | 6.52                | 13.8                  | 110.18                     | 103.66                          |
| MW-1   | 10/15/2009        | 0.0                               | NA                    | 10.19               | 14.0                  | 109.60                     | 99.41                           |
| PES-1  | 10/15/2009        | 0.0                               | NA                    | 6.9                 | 15.0                  | 102.00                     | 95.10                           |
| PES-2  | 10/15/2009        | 0.0                               | NA                    | 5.61                | 10.0                  | 100.74                     | 95.13                           |
| PES-5  | 10/15/2009        | 0.0                               | NA                    | 6.52                | 17.8                  | 107.74                     | 101.22                          |
| PES-7  | 10/15/2009        | 0.0                               | NA                    | 16.81               | 19.0                  | 102.82                     | 86.01                           |
| SPMW-2   | 10/15/2009        | 0.0                               | NA                    | 7.92                | 13.5                  | 110.21                     | 102.29                          |
| SPMW-3   | 10/15/2009        | 0.0                               | 6.00                  | 6.10                | 12.0                  | 109.19                     | 103.09                          |
| SPMW-5   | 10/15/2009        | 0.0                               | NA                    | 8.82                | 11.45                 | 109.85                     | 101.03                          |
| <b>Remedial Investigation Monitoring Wells</b> |                   |                                   |                       |                     |                       |                            |                                 |
| RIWP-4   | 10/15/2009        | 0.0                               | NA                    | 5.00                | 12.0                  | 102.16                     | 97.16                           |
| RIWP-5   | 10/15/2009        | 0.0                               | NA                    | 7.13                | 15.0                  | 105.41                     | 98.28                           |
| RIWP-6   | 10/15/2009        | 0.0                               | NA                    | 7.43                | 12.8                  | 111.16                     | 103.73                          |
| RIWP-8   | 10/15/2009        | 0.0                               | NA                    | 10.43               | 15.0                  | 109.66                     | 99.23                           |
| RIWP-9   | 10/15/2009        | 0.0                               | NA                    | 12.02               | 14.71                 | 107.27                     | 95.25                           |
| RIWP-10  | 10/15/2009        | 0.0                               | NA                    | 7.50                | 13.62                 | 104.73                     | 97.23                           |
| RIWP-13  | 10/15/2009        | 0.0                               | NA                    | 8.20                | 14.3                  | 110.00                     | 101.80                          |
| RIWP-15  | 10/15/2009        | 0.0                               | NA                    | 8.38                | 14.5                  | 107.16                     | 98.78                           |

**Notes:**

AMSL - Above Mean Sea Level

Ft - Feet

**Table 10**  
**Historical Soil Analytical Results**  
**Amos at Quackenbush, City of Albany, Albany County New York**  
**Samples Collected: October 19, 2005**

| Parameter                                 | Units | Tack 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Sample Identification |                  |                   |                  |                     |                   |
|---|-------|--|-----------------------|------------------|-------------------|------------------|---------------------|-------------------|
|   |       |  | Parcel 76.27-1-11.1   | Parcel 76.27-1-8 | Parcel 76.27-1-19 | Parcel 76.27-1-1 | Parcel 76.27-1-12.1 | Parcel 76.27-1-17 |
|   |       |  | HA-1                  | HA-2             | TP-1              | TP-2             | TP-3                | TP-4              |
|   |       |  | Sample Depth (feet)   |                  |                   |                  |                     |                   |
|   |       |  | 4.5                   | 5                | 8                 | 16-17            | 6                   | 7                 |
| <b>Volatile Organic Compounds by EPA</b>  |       |  | <b>PPB</b>            |                  |                   |                  |                     |                   |
| Acetone                                   | ug/kg | 50   | ND                    | ND               | ND                | ND               | ND                  | 83.6              |
| Benzene                                   | ug/kg | 60   | ND                    | ND               | ND                | ND               | 9.27                | ND                |
| Ethyl Benzene                             | ug/kg | 1000   | ND                    | ND               | ND                | ND               | 53.2                | ND                |
| m/p-Xylenes                               | ug/kg | 260 (mixed)  | ND                    | ND               | ND                | ND               | 16.8                | ND                |
| <b>Semi Volatile Organic Compounds by</b> |       |  | <b>PPB</b>            |                  |                   |                  |                     |                   |
| 2-Methylnaphthalene                       | ug/kg | NE   | 3090                  | ND               | ND                | ND               | 1600                | ND                |
| Acenaphthene                              | ug/kg | 20000  | 6030                  | ND               | ND                | ND               | ND                  | 1.07              |
| Acenaphthylene                            | ug/kg | 100000   | 2290                  | ND               | ND                | ND               | ND                  | ND                |
| Anthracene                                | ug/kg | 100000   | 2100                  | ND               | ND                | ND               | ND                  | 1.52              |
| Benzo(a)anthracene                        | ug/kg | 1000   | 12500                 | ND               | ND                | ND               | ND                  | 2020              |
| Benzo(a)pyrene                            | ug/kg | 1000   | ND                    | ND               | ND                | ND               | ND                  | 1330              |
| Benzo(b)fluoranthene                      | ug/kg | 1000   | 4880                  | ND               | ND                | ND               | ND                  | 1150              |
| Benzo(g,h,i)perylene                      | ug/kg | 100000   | ND                    | ND               | ND                | ND               | ND                  | 1                 |
| Benzo(k)fluoranthene                      | ug/kg | 800  | 4710                  | ND               | ND                | ND               | ND                  | 1110              |
| Carbazole                                 | ug/kg | NE   | 3900                  | ND               | ND                | ND               | ND                  | ND                |
| Chrysene                                  | ug/kg | 1000   | 8290                  | ND               | ND                | ND               | ND                  | 1210              |
| Dibenzofuran                              | ug/kg | 7000   | 4520                  | ND               | ND                | ND               | ND                  | ND                |
| Fluoranthene                              | ug/kg | 100000   | 44500                 | ND               | ND                | ND               | 891                 | 4350              |
| Fluorene                                  | ug/kg | 30000  | 7770                  | ND               | ND                | ND               | ND                  | ND                |
| Indeno(1,2,3-cd)pyrene                    | ug/kg | 500.0  | 3080                  | ND               | ND                | ND               | ND                  | ND                |
| Naphthalene                               | ug/kg | 12000  | 883                   | ND               | ND                | ND               | ND                  | ND                |
| Phenanthrene                              | ug/kg | 100000   | 68100                 | ND               | ND                | ND               | 1050                | ND                |
| Pyrene                                    | ug/kg | 100000   | 33900                 | ND               | ND                | ND               | ND                  | 2520              |
| <b>RCRA Metals</b>                        |       |  | <b>PPM</b>            |                  |                   |                  |                     |                   |
| Arsenic                                   | mg/Kg | 13   | 10.3                  | 6.73             | 6.82              | 3.53             | 4.96                | 7.67              |
| Barium                                    | mg/Kg | 350  | 81.8                  | 89.9             | 174               | 50.2             | 73.9                | 101               |
| Chromium                                  | mg/Kg | 1 (hexavalent), 30 (trivalent)                           | 17.1                  | 15.9             | 13.4              | 14.8             | 17.6                | 20.3              |
| Lead                                      | mg/Kg | 63   | 724                   | 130              | 234               | 19.3             | 49.9                | 117               |
| Mercury                                   | mg/Kg | 0.18 (total)   | 0.117                 | 0.744            | 1.43              | 0.0772           | 0.209               | 0.288             |
| Silver                                    | mg/Kg | 2  | ND                    | ND               | 0.674             | ND               | ND                  | ND                |

**Notes:**

Only parameters with reportable

Gray shade indicates value exceeds Unrestricted Use Criteria established in 375-6.8 (a).

For Chromium, it has been assumed that reported concentrations are hexavalent.

ND - Not Detected

NE = Not Established

(1) Standard represents total xylene

ug -micrograms/Kilogram

ppb - parts per billion

NYSDEC - New York State Department of Environmental Conservation.

MDL= Method Detection Limit



**Table 11**  
**Historical Floor Drain Soil Analytical Results**  
**Broadway Auto Clinic**  
**705 Broadway Albany, New York**  
**Samples Collected: June 23, 2006**

| Parameter  | Units | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a) | Sample Identification |              |                   |
|--|-------|---|-----------------------|--------------|-------------------|
|  |       |   | Parcel 76.27-1-17     |              |                   |
|  |       |   | Drain Sample          | Drain Sample | Drain Line Sludge |
|  |       |   | Sample Depth (inches) |              |                   |
|  |       |   | 3"                    | 18"          |                   |
| <b>Volatile Organic Compounds by EPA Method 8260B CLP List</b> |       | <b>PPB</b>  |                       |              |                   |
| cis-1,2-Dichloroethene   | ug/kg | 250   | 13                    | 1000         | ND                |
| tetrachloroethene  | ug/kg | 1300  | 100                   | 6100         | ND                |
| All other parameter non-detect                                 |       |   |                       |              |                   |
| <b>Semi Volatile Organic Compounds by EPA Method 8270C</b>     |       | <b>PPB</b>  |                       |              |                   |
| Bis(2-ethylhexyl)phthalate                                     | ug/kg | NE  | 4000                  | 1500         | 6.6               |
| Fluoranthene   | ug/kg | 100000  | 690                   | 5400         | ND                |
| Anthracene   | ug/kg | 100000  | ND                    | 1400         | ND                |
| Benz(a)anthracene  | ug/kg | 1000  | ND                    | 1600         | ND                |
| Benzo(a)pyrene   | ug/kg | 1000  | ND                    | 1400         | ND                |
| Benzo(b) fluoranthene  | ug/kg | 1000  | ND                    | 1500         | ND                |
| Benzo(g, h, i) perylene  | ug/kg | 100000  | ND                    | 910          | ND                |
| Benzo(k) Fluoranthene  | ug/kg | 800   | ND                    | 680          | ND                |
| Chrysene   | ug/kg | 1000  | ND                    | 1300         | ND                |
| Indeno(1,2,3-cd)pyrene   | ug/kg | 500   | ND                    | 720          | ND                |
| Phenanthrene   | ug/kg | 100   | ND                    | 5700         | ND                |
| Pyrene   | ug/kg | 100   | ND                    | 4200         | ND                |
| All other parameter non-detect                                 |       |   |                       |              |                   |
| <b>RCRA Metals</b>   |       | <b>PPM</b>  |                       |              |                   |
| Arsenic  | mg/Kg | 13.0  | 4.45                  | 5.84         | 1.58              |
| Barium   | mg/Kg | 350.0   | 99.4                  | 122          | 55.1              |
| Cadmium  | mg/Kg | 2.5   | ND                    | ND           | 1.84              |
| Chromium   | mg/Kg | 1 (hexavalent), 30 (trivalent)                            | 11.8                  | 12.8         | 19.7              |
| Lead   | mg/Kg | 63.0  | 22.0                  | 28.4         | 69.4              |
| Mercury  | mg/Kg | 0.18 (total)  | 0.15                  | 0.33         | ND                |
| Silver   | mg/Kg | 2.0   | ND                    | 2.5          | ND                |

**Notes:**

Only parameters with reportable concentrations are included in this table.

Gray shade indicates value exceeds Unrestricted Use Criteria established in 375-6.8 (a).

For Chromium, it has been assumed they reported concentrations are hexavalent.

ND - Not Detected

NE = Not Established

ppb - parts per billion

NYSDEC - New York State Department of Environmental Conservation.

**Table 12**  
**Historical Soil Boring Analytical Results**  
**Broadway Auto Clinic**  
**705 Broadway, Albany, New York**  
**Samples Collected: July 13 and 14, 2006**

| Parameter   | Units | Track 1<br>Unrestricted Use Criteria<br>Table 375-6.8 (a)<br><br>PPB | Sample Identification |        |        |        |        |        |          |
|---|-------|--|-----------------------|--------|--------|--------|--------|--------|----------|
|   |       |  | Parcel 76.27-1-17     |        |        |        |        |        |          |
|   |       |  | SPSB-1                | SPSB-2 | SPSB-3 | SPSB-4 | SPSB-5 | SPSB-7 | SPSB-7   |
|   |       |  | 10-11 ft              | 7-8 ft | 7-8 ft | 3-4 ft | 8.5 ft | 8-9 ft | 10-11 ft |
| Volatile Organic Compounds by EPA Method 8260B CLP List |       |  |                       |        |        |        |        |        |          |
| 1,2,4-Trimethylbenzene                                  | ug/kg | 360  | ND                    | ND     | ND     | ND     | 1400   | 85     | 450      |
| Isopropylbenzene  | ug/kg | NE   | ND                    | ND     | ND     | ND     | 100    | 61     | ND       |
| Methyl t-butyl ether (MTBE)                             | ug/kg | 930  | ND                    | ND     | ND     | ND     | 170    | 130    | ND       |
| n-Butylbenzene  | ug/kg | 12000  | ND                    | ND     | ND     | ND     | 320    | 560    | ND       |
| n-Propylbenzene   | ug/kg | 3900   | ND                    | ND     | ND     | ND     | 70     | 190    | ND       |
| sec-Butylbenzene  | ug/kg | 11000  | ND                    | ND     | ND     | ND     | 97     | 340    | ND       |
| all other parameters non-detect                         |       |  |                       |        |        |        |        |        |          |
| Semi Volatile Organic Compounds by EPA Method 8270C     |       |  |                       |        |        |        |        |        |          |
| 2-Methylnapthalene                                      | ug/kg | NE   | ND                    | ND     | 3500   | ND     | 3500   | ND     | 850      |
| Acenaphthene  | ug/kg | 20000  | ND                    | ND     | 380    | ND     | ND     | ND     | ND       |
| Fluoranthene  | ug/kg | 100000   | 350                   | 950    | 4400   | 530    | ND     | ND     | ND       |
| Fluorene  | ug/kg | 30000  | ND                    | ND     | 660    | ND     | ND     | ND     | ND       |
| Anthracene  | ug/kg | 100000   | ND                    | ND     | 980    | ND     | ND     | ND     | ND       |
| Benz(a)anthracene                                       | ug/kg | 1000   | ND                    | 550    | 1900   | ND     | ND     | ND     | ND       |
| Benzo(a)pyrene  | ug/kg | 1000   | ND                    | 480    | 1500   | ND     | ND     | ND     | ND       |
| Benzo(b) fluoranthene                                   | ug/kg | 1000   | ND                    | 530    | 1700   | ND     | ND     | ND     | ND       |
| Benzo(g, h, i) perylene                                 | ug/kg | 100000   | ND                    | 350    | 1      | ND     | ND     | ND     | ND       |
| Benzo(k) Fluoranthene                                   | ug/kg | 800  | ND                    | ND     | 1      | ND     | ND     | ND     | ND       |
| Chrysene  | ug/kg | 1000   | ND                    | 540    | 1800   | ND     | ND     | ND     | ND       |
| Indeno(1,2,3-cd)pyrene                                  | ug/kg | 500  | ND                    | ND     | 890    | ND     | ND     | ND     | ND       |
| Napthalene  | ug/kg | 12000  | ND                    | ND     | ND     | ND     | 430    | ND     | ND       |
| Phenanthrene  | ug/kg | 100000   | 370                   | 400    | 4900   | 340    | 430    | ND     | ND       |
| Pyrene  | ug/kg | 100000   | ND                    | 790    | 3600   | 430    | ND     | ND     | ND       |
| all other parameter non-detect                          |       |  |                       |        |        |        |        |        |          |

**Notes:**

Only parameters with reportable concentrations are included in this table.  
Gray shade indicates value exceeds Unrestricted Use Criteria established in 375-6.8 (a).  
For Chromium, it has been assumed they reported concentrations are hexavalent.  
ND - Not Detected  
NE = Not Established  
NYSDEC - New York State Department of Environmental Conservation.



**Table 13**  
**Historical Groundwater Analytical Results**  
**Amos at Quackenbush, City of Albany, Albany County, New York**  
**Samples Collected: October 19, 2005**

| Parameter  | Units      | Title 6 NYCRR Part 703<br>Water Quality Standards for<br>Groundwater<br>ug/L (PPB) | Sample Identification |       |                   |                   |       |                  |                     |
|--|------------|--|-----------------------|-------|-------------------|-------------------|-------|------------------|---------------------|
|  |            |  | Parcel 76.27-1-12.22  |       | Parcel 76.27-1-17 | Parcel 76.27-1-17 |       | Parcel 76.27-1-1 | Parcel 76.27-1-12.1 |
|  |            |  | PES-1                 | PES-2 | PES-5             | MW-2              | MW-3  | TP-2             | TP-3                |
| Volatile Organic Compounds by EPA Method 8260)     |            |  |                       |       |                   |                   |       |                  |                     |
| Benzene  | ug/L       | 1.0  | 44.9                  | ND    | 14.5              | 1.7               | 5.2   | ND               | 13.7                |
| MTBE   | ug/L       | 10.0   | ND                    | 5.12  | 36.7              | 17.7              | 12.7  | ND               | 11.1                |
| Toluene  | ug/L       | 5.0  | 14.6                  | ND    | ND                | ND                | ND    | ND               | 1.3                 |
| Ethylbenzene                                       | ug/L       | 5.0  | 536                   | ND    | ND                | ND                | ND    | ND               | 24.8                |
| m/p-Xylenes  | ug/L       | 5.0  | 83.1                  | ND    | ND                | ND                | 2.2   | ND               | 56.4                |
| o-Xylene   | ug/L       | 5.0  | 3.3                   | ND    | ND                | ND                | ND    | ND               | 3.7                 |
| Semi-Volatile Organic Compounds by EPA Method 8270 |            |  |                       |       |                   |                   |       |                  |                     |
| 2-Methylnaphthalene                                | ug/L       | 4.7 <sup>(1)</sup>   | 107                   | ND    | ND                | ND                | ND    | ND               | 39.8                |
| Acenaphthene                                       | ug/L       | 20.0   | ND                    | ND    | ND                | ND                | ND    | ND               | 13.6                |
| Anthracene   | ug/L       | 50.0   | ND                    | ND    | ND                | ND                | ND    | ND               | 16.5                |
| Fluoranthene                                       | ug/L       | 50.0   | ND                    | ND    | ND                | ND                | ND    | 10.1             | 15.1                |
| Naphthalene  | ug/L       | 10.0   | 271                   | ND    | ND                | ND                | ND    | ND               | 16.3                |
| Phenanthrene                                       | ug/L       | 50.0   | ND                    | ND    | ND                | ND                | ND    | ND               | 23.4                |
| Chrysene   | ug/L       | .002 <sup>(1)</sup>  | ND                    | ND    | ND                | ND                | ND    | ND               | 10                  |
| RCRA Metals (filtered) PPM                         |            |  |                       |       |                   |                   |       |                  |                     |
| Barium   | mg/L (ppm) | 1  | 0.11                  | 0.108 | 0.112             | 0.0334            | 0.212 | 0.157            | 0.0938              |

**Notes:**

(1) NYSDEC Division of Water, Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

Only parameters with reported concentrations are include in this table.

**Bold** indicates value exceeds applicable water quality standards or guidance values.

NA - Not Analyzed

ND - Not Detected above the method detection limits.

NYSDEC - New York State Department of Environmental Conservation.

ug/L - micrograms/liter (ppb)

**Table 14**  
**Historical Groundwater Analytical Results**  
**Broadway Auto Clinic**  
**705 Broadway, Albany, New York**  
**Samples Collected: July 19, 2006**

| Parameter   | Units | 6 NYCRR Part 703<br>Water Quality Standards<br>for Groundwater<br>(ppb) | Sample Identification |        |        |
|---|-------|---|-----------------------|--------|--------|
|   |       |   | Parcel 76.27-1-17     |        |        |
|   |       |   | SPMW-2                | SPMW-3 | SPMW-5 |
| Volatile Organic Compounds by EPA Method 8260B CLP List |       |   |                       |        |        |
| 1,2,4-Trimethylbenzene                                  | ug/L  | 5   | ND                    | ND     | 270    |
| Isopropylbenzene  | ug/L  | 5   | ND                    | ND     | 270    |
| Methyl t-butyl ether (MTBE)                             | ug/L  | 10  | 30                    | 12     | 620    |
| n-Butylbenzene  | ug/L  | 5   | ND                    | ND     | 11     |
| n-Propylbenzene   | ug/L  | 5   | ND                    | ND     | 45     |
| p-Isopropytoluene                                       | ug/L  | 5   | ND                    | ND     | 7      |
| sec-Butylbenzene  | ug/L  | 5   | ND                    | ND     | 11     |
| all other parameters non-detect                         |       |   |                       |        |        |
| Semi Volatile Organic Compounds by EPA Method 8270C     |       |   |                       |        |        |
| all parameters non-detect                               | ug/L  |   | ND                    | ND     | NT     |
| TPH by GC (Extractable Products) TPH 8100               |       |   |                       |        |        |
| Aviation Fuel/Kerosene                                  | ug/L  |   |                       | ND     |        |
| Fuel Oil/Diesel Fuel                                    | ug/L  |   |                       | ND     |        |
| Fuel Oil # 6  | ug/L  |   |                       | ND     |        |
| Fuel Oil # 5  | ug/L  |   |                       | ND     |        |
| Motor Oil   | ug/L  |   |                       | ND     |        |
| Other Oil (Cutting & Lubrication)                       | ug/L  |   |                       | ND     |        |
| Unidentified  | ug/L  |   |                       | 8600*  |        |

**Notes:**

Only parameters with reportable concentrations are included in this table.

**Bold** indicates value exceeds standards.

ND - Not Detected

NT - Not Tested

ug/L or ppb - parts per billion

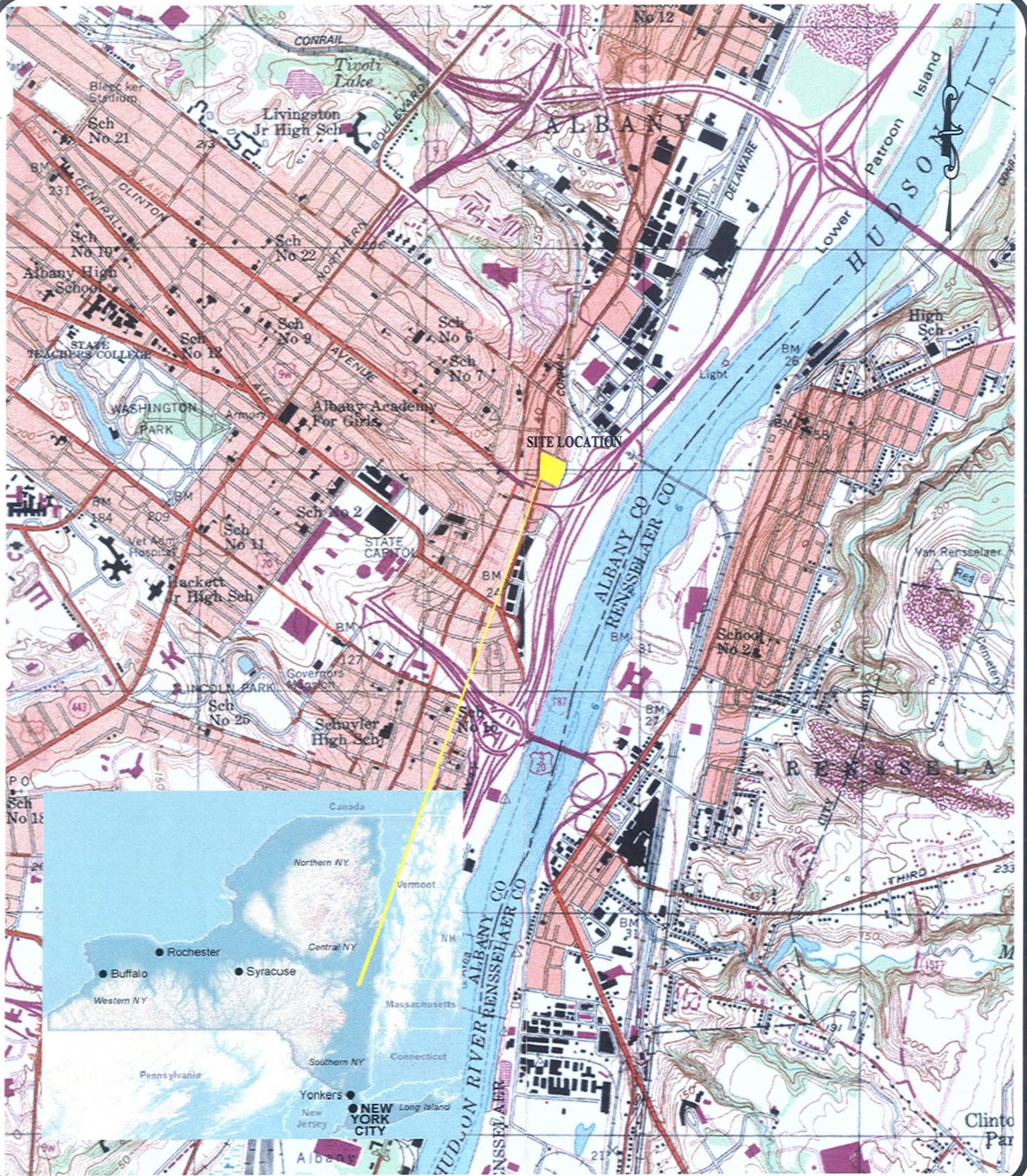
\* Petroleum Hydrocarbon chromatogram was not a perfect match with any of the standards.

The sample contains a mixture of two petroleum distributions in the diesel/fuel #2 to motor oil range (C12 to C36). The sample was quantified against a C9-C36 standard.

## **FIGURES**

- FIGURE 1 SITE LOCATION MAP**
- FIGURE 2 REMEDIAL INVESTIGATION SITE PLAN**
- FIGURE 3 REMEDIAL INVESTIGATION GROUNDWATER CONTOUR MAP**
- FIGURE 3A REMEDIAL INVESTIGATION GROUNDWATER CONTOUR MAP  
OCTOBER 15, 2009**
- FIGURE 4 REMEDIAL INVESTIGATION TRACK 1 SOIL EXCEEDANCES**
- FIGURE 4A POST IRM EXCAVATION TRACK 1 SOIL EXCEEDANCES**
- FIGURE 5 REMEDIAL INVESTIGATION PART 703 WATER QUALITY  
EXCEEDANCES**
- FIGURE 5A REMEDIAL INVESTIGATION PART 703 WATER QUALITY  
EXCEEDANCES OCTOBER 15, 2009**
- FIGURE 6 REMEDIAL INVESTIGATION NYSDOH SOIL VAPOR RESULTS MAP**
- FIGURE 7 REMEDIAL INVESTIGATION TRACK 1 HISTORICAL SOIL  
EXCEEDANCES**
- FIGURE 8 REMEDIAL INVESTIGATION PART 703 HISTORICAL WATER  
QUALITY GROUNDWATER EXCEEDANCES**
- FIGURE 8A REVISED REMEDIAL INVESTIGATION PART 703 HISTORICAL  
WATER QUALITY GROUNDWATER EXCEEDANCES**
- FIGURE 9 INTERIM RESPONSE MEASURE SITE PLAN**





SPECTRA ENVIRONMENTAL GROUP, INC.  
19 British American Blvd  
Latham, NEW YORK 13202

# SITE LOCATION MAP AMOS AT QUACKENBUSH

ALBANY COUNTY

NEW YORK

PROJ. No.: 08081

DATE: 12-12-2011

SCALE:

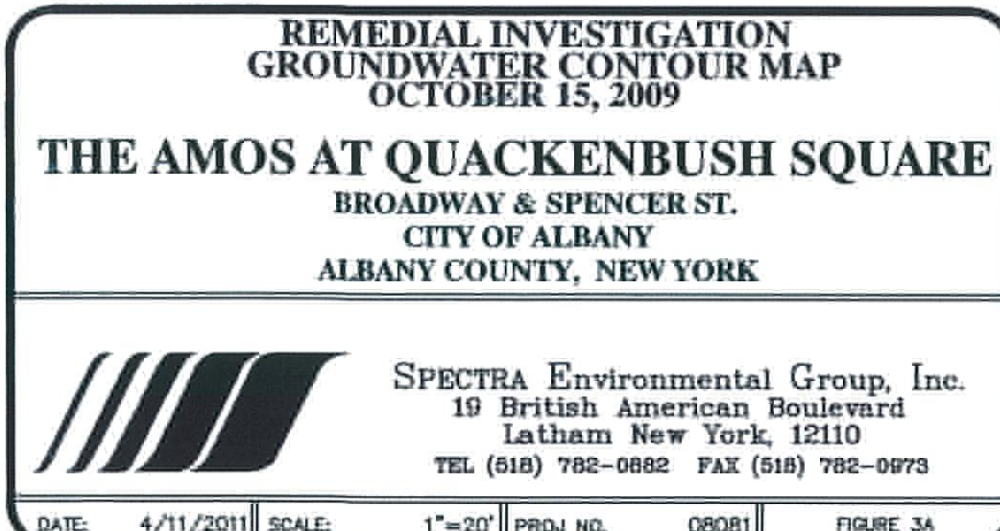
1"=2000'

DWG. NO. 08081

FIGURE

1

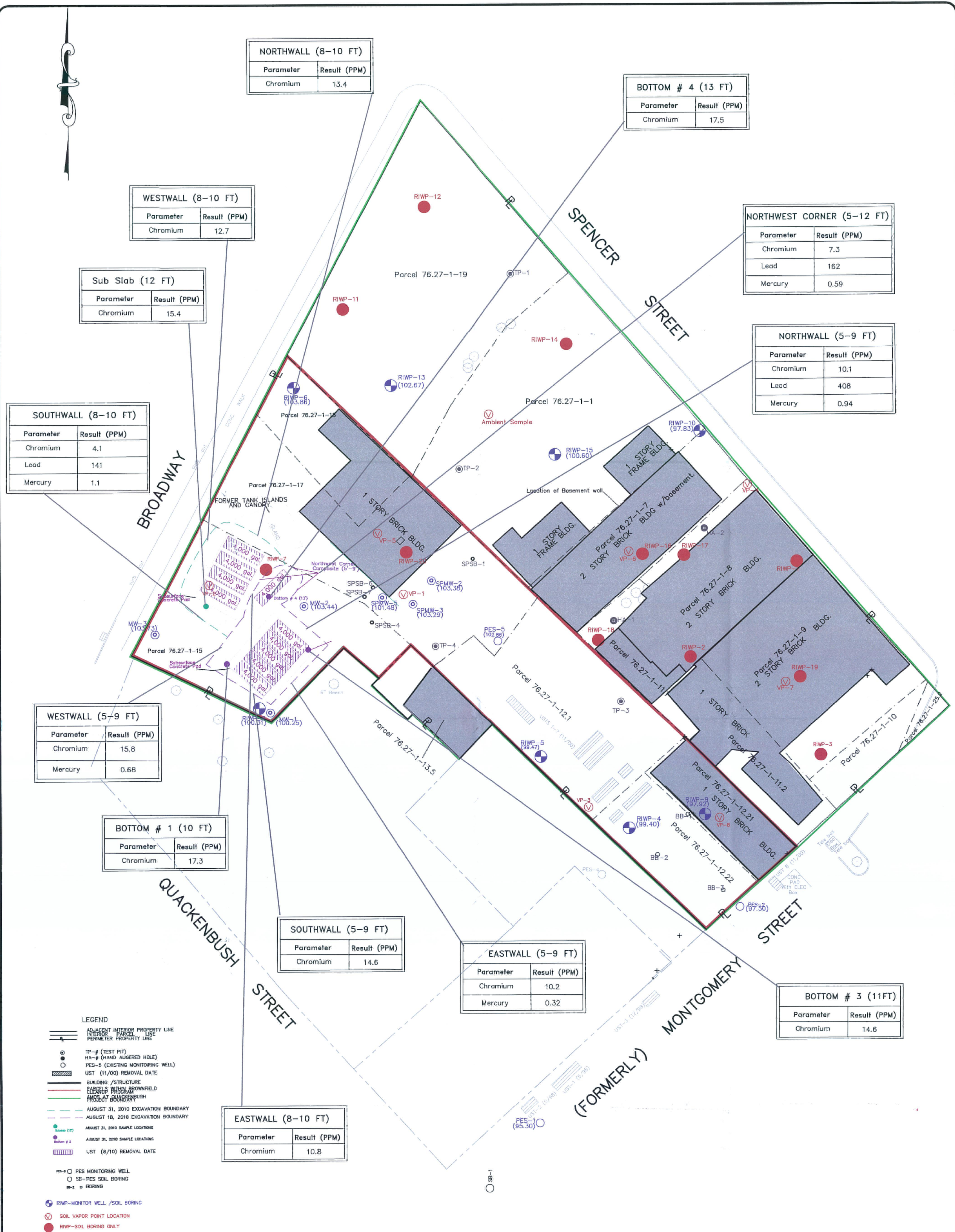












- NOTES: 1. ALL ELEVATIONS ARE REFERENCED TO AN ASSUMED DATUM. SUBTRACT 79.17 FT. TO CONVERT TO THE NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.)
2. NOT ALL UNDERGROUND UTILITIES ARE SHOWN. LOCATION OF UTILITIES IS APPROXIMATE. ACTUAL UTILITY LOCATIONS SHOULD BE CONFIRMED PRIOR TO FINAL DESIGN AND GROUND DISTURBANCE.
3. SURVEY DONE WITHOUT A TITLE REPORT. NO PHYSICAL BOUNDS UNLESS OTHERWISE SPECIFIED.
4. TOTAL PROJECT AREA IS 78,278 SQ. FT. (1.797 ACRES.)
5. DUPLICATE SAMPLE RESULTS ARE PRESENTED IN BRACKETS.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

| NO. | DATE      | REVISIONS         | DRN | APPR |
|-----|-----------|-------------------|-----|------|
| 1   | 5/25/2011 | RESCALED TO 1:20' | MGR |      |

| PROJECT                    |
|----------------------------|
| PROJ. ENGR:                |
| DESIGNED BY:               |
| DRAWN BY: C.H., R.K.       |
| CHECKED BY: C.R., J.C.     |
| APPROVED BY:               |
| CONTOUR INTERVAL: ONE FOOT |
| DATUM: ASSUMED             |
| 0 5 10 20 40               |
| 1"=20'                     |

POST IMMEDIATE RESPONSE ACTION EXCAVATION  
TRACK 1 SOIL EXCEEDANCES  
**THE AMOS AT QUACKENBUSH SQUARE**  
BROADWAY & SPENCER ST.  
CITY OF ALBANY  
ALBANY COUNTY, NEW YORK

 SPECTRA Environmental Group, Inc.  
19 British American Boulevard  
Latham New York, 12110  
TEL (518) 782-0882 FAX (518) 782-0973

DATE: 5/25/2011 SCALE: 1"=20' PROJ NO. 08081 FIGURE 4A







| RIWP-13             |              |
|---------------------|--------------|
| Parameter           | Result (PPM) |
| Total Iron          | 5.62         |
| Total Manganese     | 3.97         |
| Total Sodium        | 502          |
| Dissolved Manganese | 3.55         |
| Dissolved Sodium    | 416          |

| RIWP-15             |              |
|---------------------|--------------|
| Parameter           | Result (PPM) |
| Total Iron          | 7.62         |
| Total Manganese     | 1.89         |
| Total Sodium        | 119          |
| Dissolved Sodium    | 123          |
| Dissolved Manganese | 1.70         |

| RIWP-6 [Duplicate]  |                 |
|---------------------|-----------------|
| Parameter           | Result (PPM)    |
| Total Iron          | 6.47 [11.9]     |
| Total Manganese     | 1.56 [1.62]     |
| Total Lead          | 0.0065 [0.0266] |
| Total Sodium        | 869 [722]       |
| Dissolved Manganese | 1.51 [1.50]     |
| Dissolved Sodium    | 696 [699]       |

| RIWP-10             |              |
|---------------------|--------------|
| Parameter           | Result (PPM) |
| Total Iron          | 9.39         |
| Total Manganese     | 3.07         |
| Total Sodium        | 341          |
| Dissolved Iron      | 0.379        |
| Dissolved Manganese | 2.96         |
| Dissolved Sodium    | 364          |

| RIWP-8              |                |
|---------------------|----------------|
| Parameter           | Result (units) |
| VOCs                | Results (PPB)  |
| MTBE                | 22,000         |
| Metals              | Results (PPM)  |
| Total Cobalt        | 0.0132         |
| Total Iron          | 28.2           |
| Total Manganese     | 3.23           |
| Total Lead          | 0.051          |
| Total Sodium        | 172            |
| Dissolved Manganese | 2.43           |
| Dissolved Sodium    | 140            |

| RIWP-5              |               |
|---------------------|---------------|
| Parameter           | Result (PPM)  |
| Total Antimony      | 0.0401        |
| Total Iron          | 4.34          |
| Total Nickel        | 0.268         |
| Total Manganese     | 2.72          |
| Total Sodium        | 188           |
| Dissolved Nickel    | 0.280         |
| Dissolved Manganese | 2.51          |
| Dissolved Sodium    | 150           |
| SVOCs               | Results (PPB) |
| Chrysene            | 1.6 J         |

| RIWP-4           |               |
|------------------|---------------|
| Parameter        | Result (PPM)  |
| Total Cobalt     | 0.0059        |
| Total Iron       | 9.20          |
| Total Sodium     | 132           |
| Dissolved Sodium | 96.5          |
| VOCs             | Results (PPB) |
| Benzene          | 42.0          |

| RIWP-9      |  |
|-------------|--|
| Not Sampled |  |

# LEGEND


- TP-# (TEST PIT)
- HA-# (HAND AUGERED HOLE)
- PES-5 (EXISTING MONITORING WELL)
- GROUND WATER TOPOGRAPHY 10-15-09
- UST (11/00) REMOVAL DATE
- ADJACENT INTERIOR PROPERTY LINE
- INTERIOR PARCEL LINE
- PERIMETER PROPERTY LINE
- BUILDING /STRUCTURE
- PARCELS WITHIN BROWNFIELD CLEANUP PROGRAM
- AMOS AT QUACKENBUSH PROJECT BOUNDARY
- PES MONITORING WELL
- PES SOIL BORING
- BORING
- RIWP-SOIL BORING ONLY
- RIWP-MONITOR WELL /SOIL BORING
- EXISTING BUILDING FOOTPRINT
- SOIL VAPOR POINT LOCATION

- NOTES: 1. ALL ELEVATIONS ARE REFERENCED TO AN ASSUMED DATUM. SUBTRACT 79.17 FT. TO CONVERT TO THE NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.).
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3. SURVEY DONE WITHOUT A TITLE REPORT. NO PHYSICAL BOUNDS UNLESS OTHERWISE SPECIFIED.
4. TOTAL PROJECT AREA IS 78,278 SQ. FT. (1.797 ACRES.)

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

| NO. | DATE      | REVISIONS         | DRN | APPR |
|-----|-----------|-------------------|-----|------|
| 1   | 5/25/2011 | RESCALED TO 1:20' | MGR |      |

| PROJECT           |            |
|-------------------|------------|
| PROJ. ENGR.       |            |
| DESIGNED BY:      |            |
| DRAWN BY:         | C.H., R.K. |
| CHECKED BY:       | C.R., J.C. |
| APPROVED BY:      |            |
| CONTOUR INTERVAL: | ONE FOOT   |
| DATUM:            | ASSUMED    |
| 0 5 10 20 40      |            |
| 1"=20'            |            |

| REMEDIAL INVESTIGATION<br>PART 703 WATER QUALITY EXCEEDANCES<br>OCTOBER 15, 2009<br>THE AMOS AT QUACKENBUSH SQUARE<br>BROADWAY & SPENCER ST.<br>CITY OF ALBANY<br>ALBANY COUNTY, NEW YORK                                    |               |
|--|---------------|
|  SPECTRA Environmental Group, Inc.<br>19 British American Boulevard<br>Latham, New York, 12110<br>TEL (518) 782-0862 FAX (518) 782-0873 |               |
| DATE: 4/11/11  | SCALE: 1"=20' |
| PROJ. NO. 08081  | FIGURE 5A     |









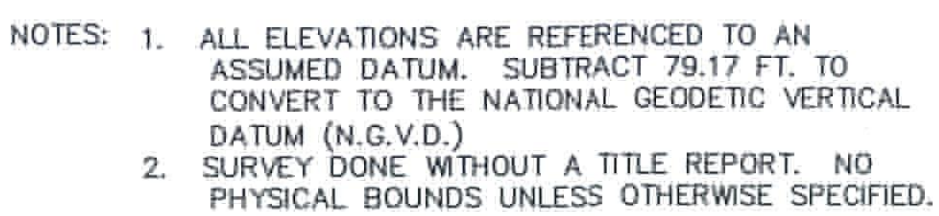











[illegible]

|                   |            |
|-------------------|------------|
| PROJECT           |            |
| PROJ. ENGR.:      |            |
| DESIGNED BY:      |            |
| DRAWN BY:         | C.H., R.K. |
| CHECKED BY:       | C.R., J.C. |
| APPROVED BY:      |            |
| CONTOUR INTERVAL: | ONE FOOT   |
| DATUM:            |            |
| ASSUMED           |            |
|                   |            |

**INTERIM RESPONSE ACTION SITE PLAN**  
**THE AMOS AT QUACKENBUSH SQUARE**  
BROADWAY & SPENCER ST.  
CITY OF ALBANY  
ALBANY COUNTY, NEW YORK



**SPECTRA Environmental Group, Inc.**  
 19 British American Boulevard  
 Latham New York, 12110  
 TEL (518) 782-0882 FAX (518) 782-0973

|       |          |        |        |           |       |          |
|-------|----------|--------|--------|-----------|-------|----------|
| DATE: | 11/20/10 | SCALE: | 1"=20' | PROJ. NO. | 08051 | FIGURE 9 |
|-------|----------|--------|--------|-----------|-------|----------|

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TO THIS DRAWING IS A VIOLATION OF  
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NEW YORK STATE EDUCATION LAW.



**APPENDIX A**  
**REMEDIAL INVESTIGATION SOIL BORING LOGS**



## TEST BORING LOG

Borehole No: RIWP-1  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
 Client Name: Querri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp: 70 Degrees, Rainy

Project No: 8081  
 Date: 6/6/2008  
 Logged By: MGR/HN  
 Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
 Equipment and Sample Method: Geoprobe 4' Cores  
 Date Started: 6/4/2008  
 Date Ended: 6/4/2008

Surface Elev.: NA  
 Datum: NA  
 Depth to Water: NA  
 Water Elev.: NA

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification        |
|--------|--------------|------------|-------------------|----------------------|---|------------------------------------|
| 1      | 0-2          | 0.0        | 12                | Dense                | 0-1': Black Medium to Coarse GRAVEL and<br>Fine to Medium SAND  | Poorely Graded Gravel with<br>Sand |
|        |              | 0.0        | 12                | Stiff                | 1-2': Brown CLAY  | Lean Clay                          |
| 2      | 2'-4'        | 0.0        | 24                | Soft/Moist           | Greyish Black CLAY  | Lean Clay                          |
| 3      | 4'-6'        | 0          | 24                | Soft/Moist           | Brown CLAY  | Lean Clay                          |
| 4      | 6'-8'        | 0          | 24                | Stiff                | Grey CLAY   | Lean Clay                          |
| 5      | 8'-10'       | 0          | 24                | Soft/Moist           | Grey CLAY, little Fine Gravel and Fine Sand   | Lean Clay with Gravel              |
| 6      | 10'-12'      | 0.0        | 24                | Stiff/Moist          | Dark Grey CLAY  | Lean Clay                          |
|        |              |            |                   |                      |   |                                    |
|        |              |            |                   |                      |   |                                    |
|        |              |            |                   |                      |   |                                    |
|        |              |            |                   |                      |   |                                    |





## TEST BORING LOG

Borehole No: RIWP-2  
MW No:

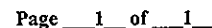
Project Name: Albany Soma: "The Amos at Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp: 70 Degrees, Rainy

Project No: 8081  
 Date: 6/4/2008  
 Logged By: MGR/HN  
 Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
 Equipment and Sample Method: Geoprobe 4' Cores  
 Date Started: 6/4/2008  
 Date Ended: 6/4/2008

Surface Elev.: NA  
 Datum: NA  
 Depth to Water: NA  
 Water Elev.: NA

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification |
|--------|--------------|------------|-------------------|----------------------|---|-----------------------------|
| 1      | 0-2          | 0.0        | 12                | Medium/Moist         | Brown CLAY, some Fine Sand and Fine Gravel  | Lean Clay with Sand         |
| 2      | 2'-4'        | 0.0        | 12                | Medium/Moist         | Same As Above   | Lean Clay with Sand         |
| 3      | 4'-6'        | 0.0        | 12                | Medium/Moist         | 4-5': Same As Above   | Lean Clay with Sand         |
|        |              | 0.0        | 12                | Stiff/Moist          | 5-6': Greyish Brown CLAY  | Lean Clay                   |
| 4      | 6'-8'        | 0.0        | 12                | Loose/Moist          | 6-7': Dark Grey Fine SAND   | Well Graded Sand            |
|        |              | 0.0        | 12                | Stiff/Moist          | 7-8': Dark Grey CLAY, trace Fine Sand   |                             |
| 5      | 8'-10'       | 0.0        | 24                | Stiff/Moist          | Grey CLAY   | Lean Clay                   |
| 6      | 10'-12'      | 0.0        | 24                | Stiff/Moist          | Same As Above   | Lean Clay                   |
|        |              |            |                   |                      | Refusal at 11.5'  |                             |
|        |              |            |                   |                      |   |                             |
|        |              |            |                   |                      |   |                             |
|        |              |            |                   |                      |   |                             |
|        |              |            |                   |                      |   |                             |



**Borehole No: RIWP-3**  
**MW No:**

Project No: 8081  
Date: 6/4/2008  
Logged By: MGR/HN  
Checked By: MGR

Surface Elev.: NA  
Datum: NA  
Depth to Water: 6'  
Water Elev.: NA

| Sample | Depth (Feet) | PID Screen        | Recovery (inches) | Density/<br>Moisture                | Soil Description<br>texture, color, roundness.<br>(and ≈35-50 %, some = 20-30 %, little 10-20<br>%, trace ≈1-10%) | Unified Soil Classification                               |
|--------|--------------|-------------------|-------------------|-------------------------------------|---|---|
| 1      | 0-2          | 0.0<br>0.0        | 2<br>12           | Dry<br>Dry                          | 0-2": Brown Fine to Medium SAND<br>Fill: BRICK and Brown Fine to Medium SAND                                      | Well Graded Sand  |
| 2      | 2'-4'        | 0.0               | 12                | Loose/Dry                           | Same As Above   | Well Graded Sand  |
| 3      | 4'-6'        | 0.0               | 24                | Dense/Wet                           | Grey Medium to Coarse SAND and Fine to<br>Medium GRAVEL, some Clay  | Well Graded Sand with Silt<br>and Gravel                  |
| 4      | 6'-8'        | 0.0<br>0.0<br>0.0 | 6<br>6<br>12      | Dense/Wet<br>Stiff/Wet<br>Stiff/Wet | 6-6.5': Same As Above<br>6.5-7': Grey SILT lens<br>7-8': Grey CLAY  | Well Graded Sand with Silt<br>and Gravel<br><br>Lean Clay |
| 5      | 8'-10'       | 0.0               | 18                | Stiff/Wet                           | Grey CLAY<br><br>Refusal at 9.5'  | Lean Clay   |
|        |              |                   |                   |                                     |   |   |
|        |              |                   |                   |                                     |   |   |
|        |              |                   |                   |                                     |   |   |
|        |              |                   |                   |                                     |   |   |
|        |              |                   |                   |                                     |   |   |





# TEST BORING LOG

Borehole No: RIWP-4  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
Client Name: Queri Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp: 80 Degrees, Sunny

Project No: 8081  
Date: 6/5/2008  
Logged By: MGR/HN  
Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
Equipment and Sample Method: Geoprobe 4' Cores  
Date Started: 6/5/2008  
Date Ended: 6/5/2008

Surface Elev.: NA  
Datum: NA  
Depth to Water: 5'  
Water Elev.: NA

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/ Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification     |
|--------|--------------|------------|-------------------|-------------------|---|---------------------------------|
| 1      | 0-2          | 0.0        | NC                | NC                | BACKFILL: Brown Medium to Coarse SAND   | Well Graded Sand                |
| 2      | 2'-4'        | 0.0        | NC                | NC                | Same As Above   | Well Graded Sand                |
| 3      | 4'-6'        | 2.2        | NC                | Wet               | BACKFILL: Grey Fine to Medium GRAVEL,<br>Wet  | Well Graded Gravel              |
| 4      | 6'-8'        | 557        | 12                | Stiff/Moist       | 6-7': Same As Above<br>7-8': Brownish Grey CLAY   | Well Graded Gravel<br>Lean Clay |
| 5      | 8'-10'       | 13.4       | 24                | Wet               | Grey Fine to Medium GRAVEL  | Well Graded Gravel              |
| 6      | 10'-12'      | 1,276      | 24                | Stiff             | Brown CLAY  | Lean Clay                       |
|        |              |            |                   |                   |   |                                 |
|        |              |            |                   |                   |   |                                 |
|        |              |            |                   |                   |   |                                 |
|        |              |            |                   |                   |   |                                 |



# TEST BORING LOG

Borehole No: RIWP-5  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp: 95 Degrees, Sunny

Project No: 8081  
 Date: 6/9/2008  
 Logged By: MGR/HN  
 Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
 Equipment and Sample Method: Geoprobe 4' Cores  
 Date Started: 6/9/2008  
 Date Ended: 6/9/2008

Surface Elev.: NA  
 Datum: NA  
 Depth to Water: NA  
 Water Elev.: NA

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/ Moisture | Soil Description<br>texture, color, roundness.<br>(and ≈35-50 %, some = 20-30 %, little 10-20 %, trace ≈1-10%) | Unified Soil Classification  |
|--------|--------------|------------|-------------------|-------------------|--|------------------------------|
| 1      | 0-2          | 0.0        | 2<br>24           |                   | 0-2": SAND and GRAVEL<br>Same As Above   | Well Graded Gravel with Sand |
| 2      | 2'-4'        | 0.0        | 24                |                   | SAND and GRAVEL, some Medium Gravel  | Well Graded Gravel with Sand |
| 3      | 4'-6'        | 0.0        | 24                | Wet/Moist         | Brown Coarse SAND and GRAVEL   | Well Graded Sand and Gravel  |
| 4      | 6'-8'        | 0.0        | 18                | Wet/Moist         | Same As Above  | Well Graded Sand and Gravel  |
| 5      | 8'-10'       | 16.9       | 18                | Saturated         | Brown Coarse SAND and GRAVEL   | Well Graded Sand and Gravel  |
| 6      | 10'-12'      | 3.8        |                   | Saturated         | Same As Above  | Well Graded Sand and Gravel  |
| 7      | 12'-14'      | 50.8       |                   |                   | Grey SAND and CLAY   | Clayey Sand                  |
| 8      | 14'-16'      | 12.4       |                   |                   | Tan CLAY   | Lean Clay                    |
|        |              |            |                   |                   |  |                              |
|        |              |            |                   |                   |  |                              |





## TEST BORING LOG

 Borehole No: RIWP-6  
 MW No:

|                              |   |                 |          |
|------------------------------|---|-----------------|----------|
| Project Name:                | Albany Soma: "The Amos at Quackenbush"  | Project No:     | 8081     |
| Client Name:                 | Queri Development Company               | Date:           | 6/5/2008 |
| Location:                    | Broadway and Spencer Street Albany, NY. | Logged By:      | MGR/HN   |
| Weather/Temp:                | 80 Degrees, Sunny                       | Checked By:     | MGR      |
| Contractor:                  | Aquifer Drilling and Testing, Inc.      | Surface Elev.:  | NA       |
| Equipment and Sample Method: | Geoprobe 4' Cores                       | Datum:          | NA       |
| Date Started:                | 6/5/2008                                | Depth to Water: | 9'       |
| Date Ended:                  | 6/5/2008                                | Water Elev.:    | NA       |

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification           |
|--------|--------------|------------|-------------------|----------------------|---|---------------------------------------|
| 1      | 0-2          | NC         | 12                | Loose/Dry            | FILL: Asphalt, Gravel, Bricks   |                                       |
| 2      | 2'-4'        | NC         | 12                | Loose/Dry            | Same As Above   |                                       |
| 3      | 4'-6'        | NC         | 12                | Loose/Dry            | Same As Above   |                                       |
| 4      | 6'-8'        | 0          | 12                | Loose/Dry            | Same As Above   |                                       |
| 5      | 8'-10'       | 43.7       | 24                | Loose/Wet            | Black Medium to Coarse SAND, trace Clay and Fine Gravel, wet  | Well Graded Sand with Clay and Gravel |
| 6      | 10'-12'      | 0          | 24                | Stiff                | Brownish Grey CLAY  | Lean Clay                             |
| 7      | 12'-14'      | NC         | NC                | Stiff                | Same As Above   | Lean Clay                             |
| 8      | 14'-16'      | NC         | NC                | Stiff                | Same As Above   | Lean Clay                             |
|        |              |            |                   |                      |   |                                       |
|        |              |            |                   |                      |   |                                       |



# TEST BORING LOG

Borehole No: RIWP-7  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp: 70 Degrees, Rainy

Project No: 8081  
 Date: 6/6/2008  
 Logged By: MGR/HN  
 Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
 Equipment and Sample Method: Geoprobe 4' Cores  
 Date Started: 6/6/2008  
 Date Ended: 6/6/2008

Surface Elev.: NA  
 Datum: NA  
 Depth to Water: 7  
 Water Elev.: NA

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification                |
|--------|--------------|------------|-------------------|----------------------|---|--|
| 1      | 0-2          | 1.2        | 24                | Dry                  | Brown Fine SAND   | Poorly Graded Sand                         |
| 2      | 2'-4'        | NC         | 24                | Dry                  | Same As Above   | Poorly Graded Sand                         |
| 3      | 4'-6'        | NC         | NC                |                      | FILL: Brick and Rocky   |  |
| 4      | 6'-8'        | 106        | 24                | Medium/Moist         | Brownish Grey CLAY, little Fine Gravel<br>2" Weather rock at bottom of spoon                                      | Lean Clay with Gravel                      |
| 5      | 8'-10'       | 232        | 24                | Wet                  | Dark Grey Fine SAND, some Medium to Coarse<br>Gravel, little Clay   | Poorly Graded Sand with Clay<br>and Gravel |
| 6      | 10'-12'      | 38.9       | 24                | Stiff/Moist          | Brown CLAY  | Lean Clay                                  |
| 7      | 12'-14'      | 0.0        | 24                | Stiff/Moist          | Same As Above   | Lean Clay                                  |
| 8      | 14'-16'      | 0.0        | 24                | Stiff/Moist          | Same As Above   | Lean Clay                                  |
|        |              |            |                   |                      |   |  |
|        |              |            |                   |                      |   |  |





# TEST BORING LOG

Borehole No: RIWP-8  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
Client Name: Queri Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp: 95 Degrees, Sunny

Project No: 8081  
Date: 6/9/2008  
Logged By: MGR/HN  
Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
Equipment and Sample Method: Geoprobe 4' Cores  
Date Started: 6/9/2008  
Date Ended: 6/9/2008

Surface Elev.: NA  
Datum: NA  
Depth to Water: 9  
Water Elev.: NA

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification |
|--------|--------------|------------|-------------------|----------------------|---|-----------------------------|
| 1      | 0-2          | 0.3        | 24                | Dry                  | Brown Fine SAND   | Poorly Graded Sand          |
| 2      | 2'-4'        | 5.5        | 24                | Moist                | Black Fine SAND   | Poorly Graded Sand          |
| 3      | 4'-6'        | 0.0        | 24                | Moist                | Tannish Brown CLAY and SILT   | Lean Clay and Silt          |
| 4      | 6'-8'        | 20         | 24                | Wet/Moist            | Black Fine SAND   | Poorly Graded Sand          |
| 5      | 8'-10'       | 0.0        | 24                | Moist                | Tannish Brown CLAY and SILT   | Lean Clay and Silt          |
| 6      | 10'-12'      | 0.0        | 24                | Moist                | Tannish Brown CLAY and SILT   | Lean Clay and Silt          |
| 7      | 12'-14'      | 0.0        | 24                | Moist                | Tannish Brown CLAY and SILT   | Lean Clay and Silt          |
| 8      | 14'-16'      | 0.0        | 24                | Moist                | Tannish Brown CLAY and SILT   | Lean Clay and Silt          |
|        |              |            |                   |                      |   |                             |
|        |              |            |                   |                      |   |                             |



## TEST BORING LOG

Borehole No: RIWP-9  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp: 80 Degrees, Sunny

Project No: 8081  
 Date: 6/5/2008  
 Logged By: MGR/HN  
 Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
 Equipment and Sample Method: Geoprobe 4' Cores  
 Date Started: 6/5/2008  
 Date Ended: 6/5/2008

Surface Elev.: NA  
 Datum: NA  
 Depth to Water: 8'  
 Water Elev.: NA

| Sample | Depth (Feet) | PID Screen   | Recovery (inches) | Density/<br>Moisture       | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification                |
|--------|--------------|--------------|-------------------|----------------------------|---|--|
| 1      | 0-2          | 0.7          | NC                | Dense/Dry                  | 0-1": Concrete<br>Brown Fine to Medium SAND and Medium GRAVEL   | Well Graded Sand with Gravel               |
| 2      | 2'-4'        | 1.1          | NC                | Dense/Dry                  | Same As Above   | Well Graded Sand with Gravel               |
| 3      | 4'-6'        | NC           | NC                | Dense/Dry                  | Same As Above   | Well Graded Sand with Gravel               |
| 4      | 6'-8'        | NC<br>416    | NC<br>NC          | Dense/Dry<br>Soft/Moist    | Same As Above<br>Dark Grey SILT and Fine SAND   | Well Graded Sand with Gravel<br>Sandy Silt |
| 5      | 8'-10'       | 3,679<br>485 | NC<br>NC          | Stiff/Moist<br>Stiff/Moist | Dark Grey CLAY and Fine SAND, trace Clay<br>Light Grey CLAY   | Sandy Lean Clay<br>Lean Clay               |
|        |              |              |                   |                            | Refusal at 10.5'  |  |
|        |              |              |                   |                            |   |  |
|        |              |              |                   |                            |   |  |
|        |              |              |                   |                            |   |  |
|        |              |              |                   |                            |   |  |





## TEST BORING LOG

Borehole No: **RIWP-10**  
MW No:

|                                     |  |                        |                 |
|-------------------------------------|--|------------------------|-----------------|
| <b>Project Name:</b>                | <u>Albany Soma: "The Amos at Quackenbush"</u>  | <b>Project No:</b>     | <u>8081</u>     |
| <b>Client Name:</b>                 | <u>Queri Development Company</u>               | <b>Date:</b>           | <u>6/4/2008</u> |
| <b>Location:</b>                    | <u>Broadway and Spencer Street Albany, NY.</u> | <b>Logged By:</b>      | <u>MGR/HN</u>   |
| <b>Weather/Temp:</b>                | <u>70 Degrees, Rainy</u>                       | <b>Checked By:</b>     | <u>MGR</u>      |
| <b>Contractor:</b>                  | <u>Aquifer Drilling and Testing, Inc.</u>      | <b>Surface Elev.:</b>  | <u>NA</u>       |
| <b>Equipment and Sample Method:</b> | <u>Geoprobe 4' Cores</u>                       | <b>Datum:</b>          | <u>NA</u>       |
| <b>Date Started:</b>                | <u>6/4/2008 9:15</u>                           | <b>Depth to Water:</b> | <u>8'</u>       |
| <b>Date Ended:</b>                  | <u>6/4/2008</u>                                | <b>Water Elev.:</b>    | <u>NA</u>       |

| Sample | Depth (Feet) | PID Screen | Recovery (Inches) | Density/Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20 %, trace =1-10%) | Unified Soil Classification                   |
|--------|--------------|------------|-------------------|------------------|--|---|
| 1      | 0-2          | 0.0        | 12                | Stiff/Dry        | 0-8": CONCRETE<br>Dark Brown CLAY, some Fine Sand and Fine Gravel  | Gravelly Lean Clay with Sand                  |
| 2      | 2'-4'        | 0.0        | 24                | Stiff/Moist      | Dark Brownish Grey CLAY, little Fine Sand  | Sandy Lean Clay                               |
| 3      | 4'-6'        | 0.0        | 24                | Stiff/Moist      | Same As Above  | Sandy Lean Clay                               |
| 4      | 6'-8'        | 0.0        | 24                | Stiff/Moist      | Grey CLAY, trace Fine Sand   | Sandy Lean Clay                               |
| 5      | 8'-10'       | 0.0        | 24                | Soft/Wet         | 8-9': Same As Above<br>9-10': Black Fine to Medium SAND, little Clay   | Sandy Lean Clay<br>Well Graded Sand with Clay |
| 6      | 10'-12'      | 0.0        | 24                | Very Stiff/Moist | Brownish Grey CLAY, some Fine to Medium Sand and Gravel  | Gravelly Lean Clay with Sand                  |
| 7      | 12'-14'      | 0.0        | 24                | Soft/Wet         | Brownish Grey CLAY, trace Fine Sand  | Lean Clay with Sand                           |
| 8      | 14'-16'      | 0.0        | 24                | Very Stiff       | Brownish Grey CLAY, some Fine to Medium Sand and Gravel  | Gravelly Lean Clay with Sand                  |
|        |              |            |                   |                  |  |   |
|        |              |            |                   |                  |  |   |



# TEST BORING LOG

Borehole No: RIWP-11  
MW No:

|                              |  |   |  |  |                   |  |
|------------------------------|--|---|--|--|-------------------|--|
| Project Name:                |  | Albany Soma: "The Amos at Quackenbush"  |  |  | Project No: 8081  |  |
| Client Name:                 |  | Queri Development Company               |  |  | Date: 6/3/2008    |  |
| Location:                    |  | Broadway and Spencer Street Albany, NY. |  |  | Logged By: MGR/HN |  |
| Weather/Temp:                |  | 80 Degrees, Sunny                       |  |  | Checked By: MGR   |  |
| Contractor:                  |  | Aquifer Drilling and Testing, Inc.      |  |  | Surface Elev.: NA |  |
| Equipment and Sample Method: |  | Geoprobe 4' Cores                       |  |  | Datum: NA         |  |
| Date Started:                |  | 6/3/2008                                |  |  | Depth to Water: 8 |  |
| Date Ended:                  |  | 6/3/2008                                |  |  | Water Elev.: NA   |  |

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification  |
|--------|--------------|------------|-------------------|----------------------|---|------------------------------|
| 1      | 0-2          | 0.0        | 12                |                      | 0-2": ASPHALT<br>FILL: Red Brick  |                              |
| 2      | 2'-4'        | 0.0        | 12                | Stiff                | 2-3': Brown CLAY, trace Fine Gravel   | Lean Clay with Gravel        |
|        |              | 0.0        | 12                | Stiff/Moist          | 3-4': Brown CLAY, some Fine Sand and Gravel   | Gravelly Lean Clay with Sand |
| 3      | 4'-6'        | NC         | 24                | Stiff/Moist          | Same As Above   | Gravelly Lean Clay with Sand |
| 4      | 6'-8'        | 71.8       | 24                | Loose/Moist          | Blackish Brown Fine to Medium SAND and Fine<br>to Medium GRAVEL   | Well Sorted Sand with Gravel |
| 5      | 8'-10'       | 26.1       | 24                | Loose/Moist          | 8-9.5': Same As Above   | Well Sorted Sand with Gravel |
|        |              |            |                   |                      | Brown CLAY  | Lean Clay                    |
| 6      | 10'-12'      | 0.0        | 24                | Stiff                | Same As Above   | Lean Clay                    |
| 7      | 12'-14'      | 0.0        | 24                | Loose/Wet            | 12-13': Brown CLAY, little Fine Sand and Fine<br>Gravel   | Gravelly Lean Clay with Sand |
|        |              |            |                   |                      | 13-14': Brown CLAY  | Lean Clay                    |
| 8      | 14'-16'      | 0.0        | 24                | Stiff                | Same As Above   | Lean Clay                    |
|        |              |            |                   |                      |   |                              |
|        |              |            |                   |                      |   |                              |





# TEST BORING LOG

Borehole No: RIWP-12  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
Client Name: Queri Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp: 80 Degrees, Sunny

Project No: 8081  
Date: 6/3/2008  
Logged By: MGR/HN  
Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
Equipment and Sample Method: Geoprobe 4' Cores  
Date Started: 6/3/2008  
Date Ended: 6/3/2008

Surface Elev.: NA  
Datum: NA  
Depth to Water: 9'  
Water Elev.: NA

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture     | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification             |
|--------|--------------|------------|-------------------|--------------------------|---|---|
| 1      | 0-2          | 0.0        | 12                |                          | Brown Fine SAND   | Poorly Sorted Sand                      |
| 2      | 2'-4'        | 0.0        | 12<br>12          |                          | Brown Fine SAND, some Silt, trace Fine Gravel<br>ASPHALT  | Poorly Graded Sand with Silt and Gravel |
| 3      | 4'-6'        | NC         | NC                |                          | FILL: Red Brick and Organic Material  |   |
| 4      | 6'-8'        | 0.0<br>0.0 | 12<br>12          | Soft/Moist<br>TiStiffght | Dark Grey CLAY<br>Brown CLAY  | Lean Clay<br>Lean Clay                  |
| 5      | 8'-10'       | 0.0        | 24                | Soft/Wet                 | 8-9': Dark Grey CLAY and Medium to Coarse SAND<br>Brown CLAY  | Lean Clay with Sand<br>Lean Clay        |
| 6      | 10'-12'      | 0.0        | 24                | Stiff/Wet                | Same As Above   | Lean Clay                               |
| 7      | 12'-14'      | 0.0        | 24                | Stiff/Moist              | Brown CLAY, little Fine Sand  | Lean Clay with Sand                     |
| 8      | 14'-16'      | 0.0        | 24                | Stiff/Moist              | Brown CLAY  | Lean Clay                               |
|        |              |            |                   |                          |   |   |
|        |              |            |                   |                          |   |   |



# TEST BORING LOG

Borehole No: **RIWP-13**  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
Client Name: Quer Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp: 80 Degrees, Sunny

Project No: 8081  
Date: 6/3/2008  
Logged By: MGR/HN  
Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
Equipment and Sample Method: Geoprobe 4' Cores  
Date Started: 6/3/2008  
Date Ended: 6/3/2008

Surface Elev.: NA  
Datum: NA  
Depth to Water: 8-9'  
Water Elev.: NA

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture   | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification                      |
|--------|--------------|------------|-------------------|------------------------|---|--|
| 1      | 0-2          | 0.0        | 2<br>22           | Loose/Dry<br>Loose/Dry | 0-2": Brown Fine to Medium SAND<br>Fill: BRICK and Brown Fine to Medium SAND                                      | Well Graded Sand                                 |
| 2      | 2'-4'        | 0.0        | 24                | Loose/Dry              | Same As Above   | Well Graded Sand                                 |
| 3      | 4'-6'        | 0.0        | 12                | Loose/Dry              | Same As Above   | Well Graded Sand                                 |
| 4      | 6'-8'        | 30.1       | 12                | Loose/Wet              | 6-7.5': Same As Above<br>7.5-8': Black Fine to Medium SAND and Fine to Medium GRAVEL                              | Well Graded Sand<br>Well Graded Sand with Gravel |
| 5      | 8'-10'       | 14.8       | 12                | Loose/Wet              | Same As Above   | Well Graded Sand with Gravel                     |
| 6      | 10'-12'      | 0.0        | 24                | Medium/Moist           | Blackish Brown CLAY, some Fine Gravel and Fine to Medium Sand   | Gravelly Lean Clay with Sand                     |
| 7      | 12'-14'      | NA         | NA                | NA                     | No Recovery: COBBLES  |  |
| 8      | 14'-16'      | 0.0        | 24                | Medium/Moist           | Blackish Brown CLAY, some Fine Gravel and Fine to Medium Sand   | Gravelly Lean Clay with Sand                     |
|        |              |            |                   |                        |   |  |
|        |              |            |                   |                        |   |  |





# TEST BORING LOG

Borehole No: **RIWP-14**  
MW No:

|                              |  |   |  |  |                            |  |
|------------------------------|--|---|--|--|----------------------------|--|
| Project Name:                |  | Albany Soma: "The Amos at Quackenbush"  |  |  | Project No: <b>8081</b>    |  |
| Client Name:                 |  | Queri Development Company               |  |  | Date: <b>6/3/2008</b>      |  |
| Location:                    |  | Broadway and Spencer Street Albany, NY. |  |  | Logged By: <b>MGR/HN</b>   |  |
| Weather/Temp:                |  | 80 Degrees, Sunny                       |  |  | Checked By: <b>MGR</b>     |  |
| Contractor:                  |  | Aquifer Drilling and Testing, Inc.      |  |  | Surface Elev.: <b>NA</b>   |  |
| Equipment and Sample Method: |  | Geoprobe 4' Cores                       |  |  | Datum: <b>NA</b>           |  |
| Date Started:                |  | 6/3/2008                                |  |  | Depth to Water: <b>12'</b> |  |
| Date Ended:                  |  | 6/3/2008                                |  |  | Water Elev.: <b>NA</b>     |  |

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification  |
|--------|--------------|------------|-------------------|----------------------|---|------------------------------|
| 1      | 0-2          | 0          | 2<br>12           | Dry<br>Dry           | 0-2": Grey Fine SAND<br>Dark Brown Fine to Medium SAND and Fine to Medium GRAVEL                                  | Well Graded Sand with Gravel |
| 2      | 2'-4'        | NC         | 24                | Dry                  | Fill: Red Brick   |                              |
| 3      | 4'-6'        | 0          | 24                | Stiff/Moist          | Brown CLAY, trace Fine Sand   | Sandy Lean Clay              |
| 4      | 6'-8'        | 0          | 12                | Soft/Moist           | 6-7': Dark Grey CLAY, trace Fine Sand   | Lean Clay with Sand          |
|        |              | 0          | 12                | Soft/Moist           | 7-8': Dark Grey Fine SAND, trace Silt   | Silty Sand                   |
| 5      | 8'-10'       | 0          | 12                | Medium/Moist         | Dark Brown CLAY, trace Fine Sand  | Lean Clay with Sand          |
| 6      | 10'-12'      | 0          | 12                | Medium/Moist         | Dark Greyish Black CLAY<br>Brick Fill Observed  | Lean Clay                    |
| 7      | 12'-14'      | 6.7        | NC                | Soft/Wet             | Brownish Grey CLAY, some Fine to Medium Gravel and Fine Sand  | Gravelly Lean Clay with Sand |
| 8      | 14'-16'      | 0          | NC                | Soft/Wet             | 14-15': Brown CLAY and Fine SAND, little Fine Gravel  | Gravelly Lean Clay with Sand |
|        |              | 0          | NC                | Dense/Wet            | 15-16': Dark Grey Fine to Medium SAND and Fine to Medium GRAVEL   | Well Graded Sand with Gravel |
|        |              |            |                   |                      |   |                              |
|        |              |            |                   |                      |   |                              |



## TEST BORING LOG

Borehole No: RIWP-15  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp: 80 Degrees, Sunny

Project No: 8081  
 Date: 6/3/2008  
 Logged By: MGR/HN  
 Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
 Equipment and Sample Method: Geoprobe 4' Cores  
 Date Started: 6/3/2008  
 Date Ended: 6/3/2008

Surface Elev.: NA  
 Datum: NA  
 Depth to Water: 9'  
 Water Elev.: NA

| Sample | Depth (Feet) | PID Screen  | Recovery (Inches) | Density/<br>Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification                                  |
|--------|--------------|-------------|-------------------|----------------------|---|--|
| 1      | 0-2          | 0.0         | 24                | Dry                  | Dark Grey Fine to Medium SAND and Fine to Medium GRAVEL   | Well Graded Sand with Gravel                                 |
| 2      | 2'-4'        | 0.0         | 24                | Moist                | Dark Brown Fine SAND, some Fine Gravel, trace Clay  | Well Graded Sand with Clay and Gravel                        |
| 3      | 4'-6'        | 0.0         | 24                | Stiff                | Dark Brown CLAY, trace Fine Sand  | Silty Sand   |
| 4      | 6'-8'        | 0.0<br>27.8 | 24                | Stiff<br>Stiff       | 6-7': Dark Brown CLAY and Fine SAND<br>7-8': Black Fine SAND, trace Clay  | Clayey Sand<br>Poorly Graded Sand with Clay                  |
| 5      | 8'-10'       | 106<br>15.8 | 24                | Moist<br>Wet         | 8-9': Same As Above<br>9-10': Same As Above, wet  | Poorly Graded Sand with Clay<br>Poorly Graded Sand with Clay |
| 6      | 10'-12'      | 0.0         | 24                | Stiff/Moist          | Black CLAY and SILT   | Lean Clay and Silt   |
| 7      | 12'-14'      | 0.0         | 24                | Stiff/Moist          | 12-13': Same As Above<br>13-14': Dark Grey CLAY   | Lean Clay and Silt<br>Lean Clay                              |
| 8      | 14'-16'      | 0.0         | 24                | Stiff                | 14-15': Same As Above<br>15-16': Black Fine SAND  | Lean Clay<br>Poorly Graded Sand                              |
|        |              |             |                   |                      |   |  |
|        |              |             |                   |                      |   |  |







# TEST BORING LOG

Borehole No: RIWP-17  
MW No:

|                              |  |   |  |  |                    |  |
|------------------------------|--|---|--|--|--------------------|--|
| Project Name:                |  | Albany Soma: "The Amos at Quackenbush"  |  |  | Project No: 8081   |  |
| Client Name:                 |  | Queri Development Company               |  |  | Date: 6/4/2008     |  |
| Location:                    |  | Broadway and Spencer Street Albany, NY. |  |  | Logged By: MGR/HN  |  |
| Weather/Temp:                |  | 70 Degrees, Rainy                       |  |  | Checked By: MGR    |  |
| Contractor:                  |  | Aquifer Drilling and Testing, Inc.      |  |  | Surface Elev.: NA  |  |
| Equipment and Sample Method: |  | Geoprobe 4' Cores                       |  |  | Datum: NA          |  |
| Date Started:                |  | 6/4/2008                                |  |  | Depth to Water: 9' |  |
| Date Ended:                  |  | 6/4/2008                                |  |  | Water Elev.: NA    |  |

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture   | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification                      |
|--------|--------------|------------|-------------------|------------------------|---|--|
| 1      | 0-2          | 0          | 2<br>12           | Loose/Moist            | Brown Fine to Medium SAND<br>Black Medium to Coarse GRAVEL, some Fine to Medium Sand                              | Well Graded Sand<br>Well Graded Gravel With Sand |
| 2      | 2'-4'        | 0          | 24                | Stiff/Moist            | Brownish Grey CLAY  | Lean Clay  |
| 3      | 4'-6'        | 0          | 24                | Stiff/Moist<br>Elastic | Same As Above   | Lean Clay  |
| 4      | 6'-8'        | 0          | 24                | Stiff/Moist<br>Elastic | Same As Above   | Lean Clay  |
| 5      | 8'-10'       | 0          | 24                | Soft/Wet               | Brownish Grey CLAY, trace Fine Sand   | Lean Clay With Sand                              |
| 6      | 10'-12'      | 0          | 24                | Stiff/Moist            | Brownish Grey CLAY<br>Refusal at 11.5'  | Lean Clay  |
|        |              |            |                   |                        |   |  |
|        |              |            |                   |                        |   |  |
|        |              |            |                   |                        |   |  |
|        |              |            |                   |                        |   |  |





# TEST BORING LOG

Borehole No: RIWP-18  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
Client Name: Queri Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp: 70 Degrees, Rainy

Project No: 8081  
Date: 6/6/2008  
Logged By: MGR/HN  
Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
Equipment and Sample Method: Geoprobe 4' Cores  
Date Started: 6/6/2008  
Date Ended: 6/6/2008

Surface Elev.: NA  
Datum: NA  
Depth to Water: 8'  
Water Elev.: NA

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/ Moisture      | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20 %, trace =1-10%) | Unified Soil Classification              |
|--------|--------------|------------|-------------------|------------------------|--|--|
| 1      | 0-2          | 3.9        | 2<br>22           | Medium<br>Dense/Moist  | Top Soil<br>Brown CLAY, some Fine to Medium Sand, little<br>Fine Gravel  | Organic Soil<br><br>Sandy Lean Clay      |
| 2      | 2'-4'        | 145        | 24                | Medium<br>Dense/Moist  | Black Fine to Medium SAND and Fine to<br>Medium GRAVEL, little Clay  | Well Graded Sand With Clay and<br>Gravel |
| 3      | 4'-6'        | 57.7       | 24                | Medium<br>Dense/Moist  | Same As Above  | Well Graded Sand With Clay and<br>Gravel |
| 4      | 6'-8'        | 20<br>2.3  | 12<br>12          | Stiff<br><br>Loose/Wet | Dark Grey CLAY<br><br>Black Fine SAND  | Lean Clay<br><br>Poorly Graded Sand      |
| 5      | 8'-10'       | 0.0        | 24                | Soft/Wet               | Black Fine SAND and SILT   | Poorly Graded Sand with Silt             |
| 6      | 10'-12'      | 0.0<br>0.0 | 12<br>12          | Soft<br><br>Stiff      | 10-11': Dark Grey CLAY, some Silt<br><br>11-12': Brownish Grey CLAY  | Lean Clay<br><br>Lean Clay               |
|        |              |            |                   |                        |  |  |
|        |              |            |                   |                        |  |  |
|        |              |            |                   |                        |  |  |
|        |              |            |                   |                        |  |  |



## TEST BORING LOG

Borehole No: RIWP-19  
MW No:

|                              |  |   |  |  |                    |  |
|------------------------------|--|---|--|--|--------------------|--|
| Project Name:                |  | Albany Soma: "The Amos at Quackenbush"  |  |  | Project No: 5218   |  |
| Client Name:                 |  | Queri Development Company               |  |  | Date: 6/6/2008     |  |
| Location:                    |  | Broadway and Spencer Street Albany, NY. |  |  | Logged By: MGR/HN  |  |
| Weather/Temp:                |  | 80 Degrees, Rainy                       |  |  | Checked By: MGR    |  |
| Contractor:                  |  | Aquifer Drilling and Testing, Inc.      |  |  | Surface Elev.: NA  |  |
| Equipment and Sample Method: |  | Geoprobe 4' Cores                       |  |  | Datum: NA          |  |
| Date Started:                |  | 6/6/2008                                |  |  | Depth to Water: NA |  |
| Date Ended:                  |  | 6/6/2008                                |  |  | Water Elev.: NA    |  |

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification              |
|--------|--------------|------------|-------------------|----------------------|---|--|
| 1      | 0-2          | 1.1        | NC                |                      | 1-8": CONCRETE<br>Dark Brown Medium to Coarse SAND and<br>Medium to Coarse GRAVEL                                 | Well Graded Sand With Gravel             |
| 2      | 2'-4'        | NC         | NC                |                      | Same As Above   | Well Graded Sand With Gravel             |
| 3      | 4'-6'        | 0          | 24                |                      | FILL: Brick and Grey Fine to Medium SAND<br>and Fine to Medium GRAVEL, some Clay                                  | Well Graded Sand With Clay and<br>Gravel |
| 4      | 6'-8'        | 0          | 24                | Stiff                | Greyish Brown CLAY  | Lean Clay                                |
| 5      | 8'-10'       | 0          | 24                | Soft/Moist           | Grey CLAY and SILT  | Lean Clay and Silt                       |
| 6      | 10'-12'      | 0          | 24                | Stiff                | Grey CLAY   | Lean Clay                                |
| 7      | 12'-14'      | 0          | 12                | Stiff                | 12-13': Same As Above   | Lean Clay                                |
|        |              | 0          | 12                | Moist                | 13-14': Brownish Grey CLAY and Medium<br>GRAVEL, some Fine to Medium Sand   | Sandy Lean Clay with Gravel              |
| 8      | 14'-16'      | 0          | 24                | Stiff                | Grey CLAY, some Medium to Coarse Gravel   | Lean Clay with Gravel                    |
|        |              |            |                   |                      |   |  |
|        |              |            |                   |                      |   |  |





# TEST BORING LOG

Borehole No: RIWP-20  
MW No:

Project Name: Albany Soma: "The Amos at Quackenbush"  
Client Name: Queri Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp: 80 Degrees, Sunny

Project No: 8081  
Date: 6/3/2008  
Logged By: MGR/HN  
Checked By: MGR

Contractor: Aquifer Drilling and Testing, Inc.  
Equipment and Sample Method: Geoprobe 4' Cores  
Date Started: 6/3/2008  
Date Ended: 6/3/2008

Surface Elev.: NA  
Datum: NA  
Depth to Water: 8  
Water Elev.: NA

| Sample | Depth (Feet) | PID Screen | Recovery (inches) | Density/<br>Moisture | Soil Description<br>texture, color, roundness.<br>(and =35-50 %, some = 20-30 %, little 10-20<br>%, trace =1-10%) | Unified Soil Classification  |
|--------|--------------|------------|-------------------|----------------------|---|------------------------------|
| 1      | 0-2          | 0.0        | 14                | Dry                  | 1-2": CONCRETE<br>Brown Fine to Medium SAND, some Fine Gravel   | Well Graded Sand With Gravel |
| 2      | 2'-4'        | 0.0        | 24                | Dry                  | Brown Fine SAND   | Poorly Graded Sand           |
| 3      | 4'-6'        | 0.0        | 24                | Dry                  | Brownish Tan Medium to Coarse SAND and<br>Fine to Medium GRAVEL   | Well Graded Sand With Gravel |
| 4      | 6'-8'        | 0.0        | 24                | Dry                  | FILL: Brick and Rock  |                              |
| 5      | 8'-10'       | 2.8<br>0.0 | 24                | Loose<br>Stiff       | 8-9': Black Fine SAND<br>9-10': Black Fine SAND and CLAY  | Poorly Graded Sand           |
| 6      | 10'-12'      | 0.0        | 24                | Stiff                | Dark Grey CLAY  | Poorly Graded Sand With Clay |
| 7      | 12'-14'      | 0.0        | 24                | Stiff                | Brown CLAY  | Lean Clay                    |
| 8      | 14'-16'      | 0.0        | 24                | Stiff                | Brown CLAY  | Lean Clay                    |
|        |              |            |                   |                      |   |                              |
|        |              |            |                   |                      |   |                              |

Borehole No: VP-1  
MW No:

Project No: 5218  
Date: 6/6/2008  
Logged By: MGR/HN  
Checked By: MGR

Surface Elev.: NA  
Datum: NA  
Depth to Water: NA  
Water Elev.: NA

[illegible]



# TEST BORING LOG

Borehole No: VP-2  
MW No:

**Project Name:** Albany Soma: "The Amos at Quackenbush"  
**Client Name:** Queri Development Company  
**Location:** Broadway and Spencer Street Albany, NY.  
**Weather/Temp:** \_\_\_\_\_

Project No: 5218  
Date: 6/9/2008  
Logged By: MGR/HN  
Checked By: MGR

|                              |   |
|------------------------------|---|
| Contractor:                  | <u>Aquifer Drilling and Testing, Inc.</u> |
| Equipment and Sample Method: | <u>Geoprobe 5' Cores</u>                  |
| Date/Time Started:           | <u>6/9/2008</u>                           |
| Date/Time Ended:             | <u>6/9/2008</u>                           |

Surface Elev.: NA  
 Datum: NA  
 Depth to Water: NA  
 Water Elev.: NA

[illegible]

















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## APPENDIX B

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**APPENDIX B**  
**REMEDIAL INVESTIGATION MONITORING WELL**  
**DETAILS**



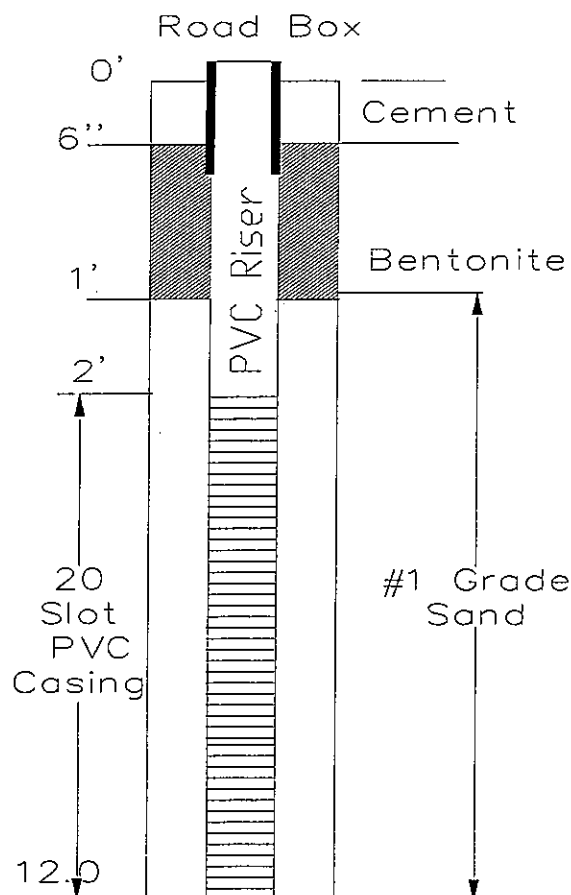
# MONITORING WELL COMPLETION LOG

Well I.D.: RIWP-4

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp. Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/9/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



## INSPECTION NOTES

Inspector: Matthew RootContractor: ADT Drilling

### Drilling Method:

Type: OverburdenEquipment: Geoprobe Hydraulic PushType of Well: 1" overburdenStatic Water Level: 2.76 feetMeasuring Point: TOC= 102.16 feet AMSLTotal Depth of Well: 12 feetSampling Method: 10 feetType: Geoprobe Macro CoreWeight: NAInterval: 10-12 feet bgs

### Riser Pipe Left in Place:

Material: Schedule 40 PVCLength: 2 feetDiameter: 1 inch

### Screen:

Material: prefabricated well screen 20 slotSlot Size: 20-slotStratigraphic Unit Screened: 2-12 feet bgs

### Filter Pack:

Sand: 1-12 feet bgsGrade: No. 2Amount: 11 feet

### Seals:

Type: Bentonite seal 1-0.6 feet bgs

Not To Scale



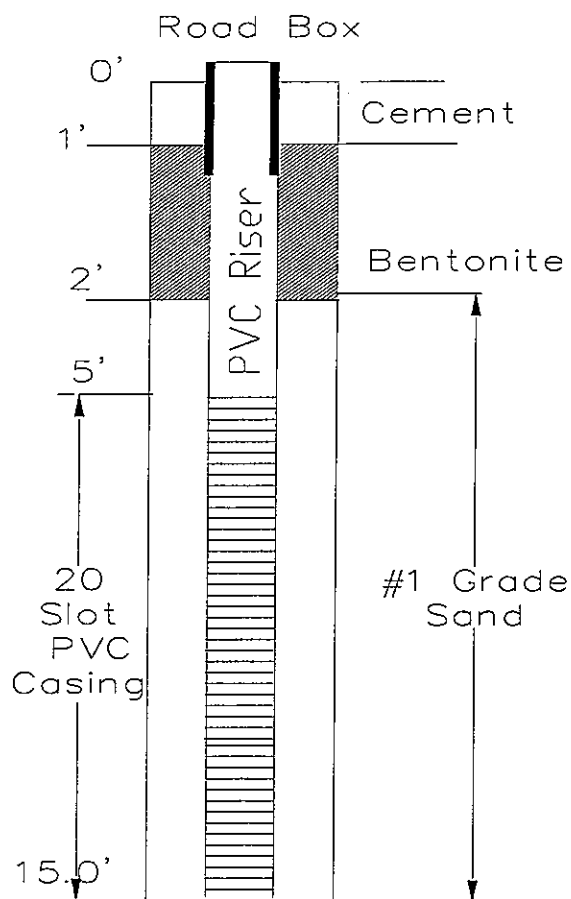
# MONITORING WELL COMPLETION LOG

Well I.D.: RIWP-5

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp: Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/9/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



## INSPECTION NOTES

Inspector: Matthew RootContractor: ADT Drilling

### Drilling Method:

Type: OverburdenEquipment: Geoprobe Hydraulic PushType of Well: 1" overburdenStatic Water Level: 5.94 feet bgsMeasuring Point: TOC= 105.41 Feet AMSLTotal Depth of Well: 15 feet

### Sampling Method:

Type: Geoprobe Macro CoreWeight: NAInterval: 12-14 feet bgs

### Riser Pipe Left in Place:

Material: Schedule 40 PVCLength: 5 feetDiameter: 1 inch

### Screen:

Material: prefabricated well screen 20 slotSlot Size: 20-slotStratigraphic Unit Screened: 5-15 feet bgs

### Filter Pack:

Sand: 2-15 feet bgsGrade: No. 2Amount: 13 feet

### Seals:

Type: Bentonite seal 2-1 foot bgs

Not To Scale





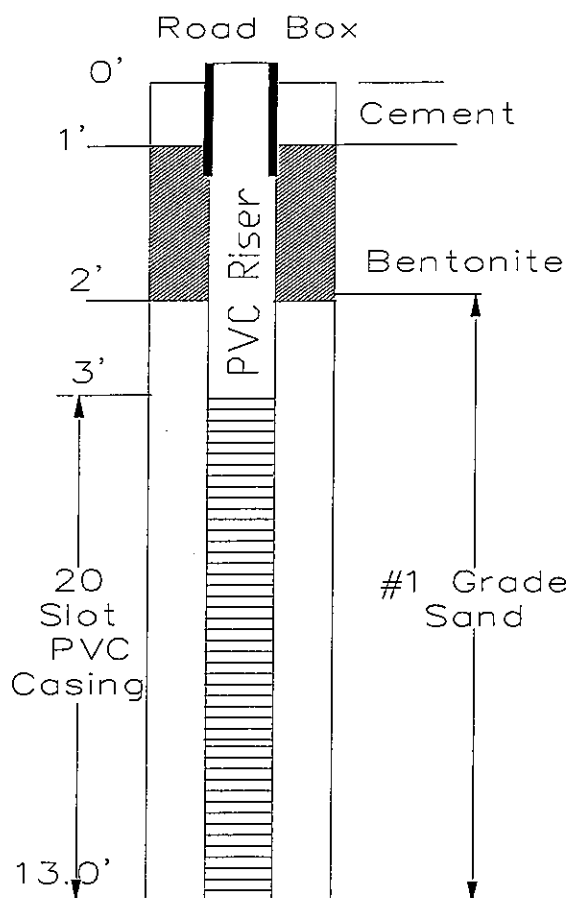
# MONITORING WELL COMPLETION LOG

Well I.D.: RIWP-6

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp. Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/3/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



Not To Scale

## INSPECTION NOTES

Inspector: Matthew RootContractor: ADT Drilling

## Drilling Method:

Type: OverburdenEquipment: Geoprobe Hydraulic PushType of Well: 1" overburdenStatic Water Level: 7.30 feet bgsMeasuring Point: TOC= 111.16 Feet AMSLTotal Depth of Well: 13.0 feet

## Sampling Method:

Type: Geoprobe Macro CoreWeight: NAInterval: 8-10 feet bgs

## Riser Pipe Left in Place:

Material: Schedule 40 PVCLength: 5 feetDiameter: 1 inch

## Screen:

Material: prefabricated well screen 20 slotSlot Size: 20-slotStratigraphic Unit Screened: 2-13 feet bgs

## Filter Pack:

Sand: 2-13 feet bgsGrade: No. 2Amount: 11 feet

## Seals:

Type: Bentonite seal 2-1 foot bgs



# MONITORING WELL COMPLETION LOG

Well I.D.: RIWP-8

Project Name: Albany SOMA: "The Amos At Quackenbush"

Project No: 8081

Client Name: Queri Development Company

Date: 6/9/2008

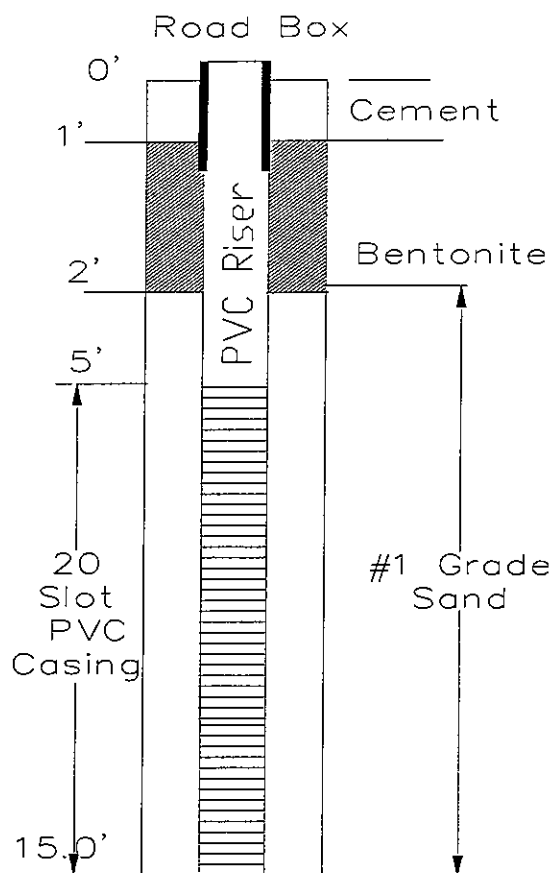
Location: Broadway and Spencer Street Albany, NY.

Logged By: MGR/HN

Weather/Temp. Hazy Hot and Humid 95 degrees

Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



## INSPECTION NOTES

Inspector: Matthew Root

Contractor: ADT Drilling

### Drilling Method:

Type: Overburden

Equipment: Geoprobe Hydraulic Push

Type of Well: 1" overburden

Static Water Level: 9.35 feet bgs

Measuring Point: TOC= 109.66 Feet AMSL

Total Depth of Well: 15 feet

### Sampling Method:

Type: Geoprobe Macro Core

Weight: NA

Interval: 6-8 feet bgs

### Riser Pipe Left in Place:

Material: Schedule 40 PVC

Length: 5 feet

Diameter: 1 inch

### Screen:

Material: prefabricated well screen 20 slot

Slot Size: 20-slot

Stratigraphic Unit Screened: 5-15 feet bgs

### Filter Pack:

Sand: 2-15 feet bgs

Grade: No. 2

Amount: 13 feet

### Seals:

Type: Bentonite seal 2-1 foot bgs

Not To Scale



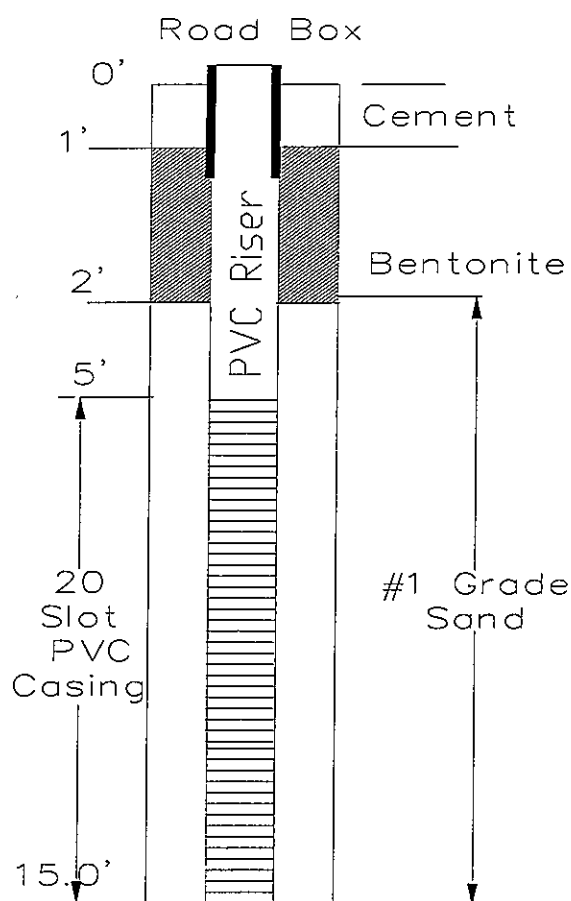
# MONITORING WELL COMPLETION LOG

Well I.D.: RIWP-9

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp: Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/6/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



Not To Scale

## INSPECTION NOTES

Inspector: Matthew RootContractor: ADT Drilling

### Drilling Method:

Type: OverburdenEquipment: Geoprobe Hydraulic PushType of Well: 1" overburdenStatic Water Level: 9.35 feet bgsMeasuring Point: TOC= 107.27 Feet AMSLTotal Depth of Well: 15 feet

### Sampling Method:

Type: Geoprobe Macro CoreWeight: NAInterval: 8-9 feet bgs

### Riser Pipe Left in Place:

Material: Schedule 40 PVCLength: 5 feetDiameter: 1 inch

### Screen:

Material: prefabricated well screen 20 slotSlot Size: 20-slotStratigraphic Unit Screened: 5-15 feet bgs

### Filter Pack:

Sand: 2-15 feet bgsGrade: No. 2Amount: 13 feet

### Seals:

Type: Bentonite seal 2-1 foot bgs





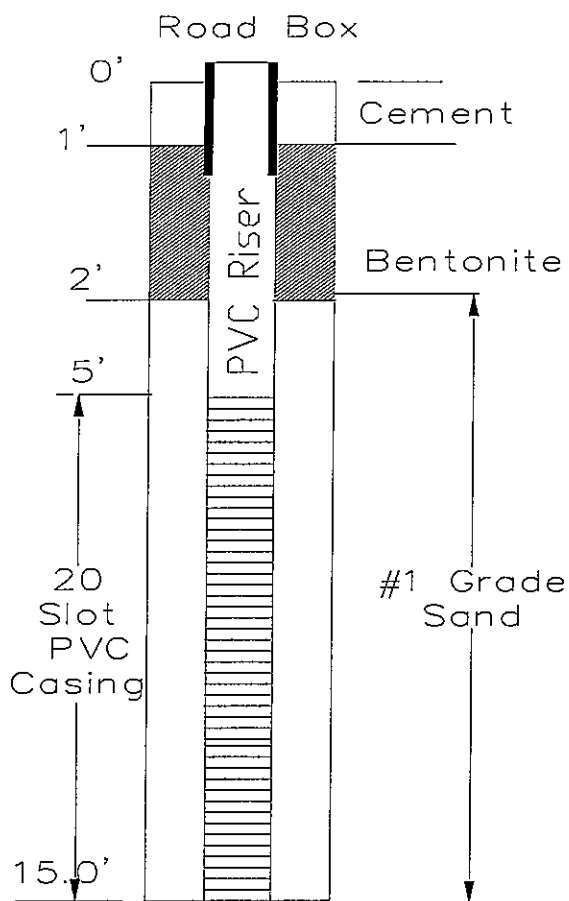
# MONITORING WELL COMPLETION LOG

Well I.D.: RIWP-10

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp. Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/4/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



## INSPECTION NOTES

Inspector: Matthew RootContractor: ADT Drilling

### Drilling Method:

Type: OverburdenEquipment: Geoprobe Hydraulic PushType of Well: 1" overburdenStatic Water Level: 6.9 feet bgsMeasuring Point: TOC= 104.73 Feet AMSLTotal Depth of Well: 15.0 feet bgs

### Sampling Method:

Type: Geoprobe Macro CoreWeight: NAInterval: 12-14 feet bgs

### Riser Pipe Left in Place:

Material: Schedule 40 PVCLength: 5 feetDiameter: 1 inch

### Screen:

Material: prefabricated well screen 20 slotSlot Size: 20-slotStratigraphic Unit Screened: 5-15 feet bgs

### Filter Pack:

Sand: 2-15 feet bgsGrade: No. 2Amount: 13 feet

### Seals:

Type: Bentonite seal 2-1 foot bgs

Not To Scale



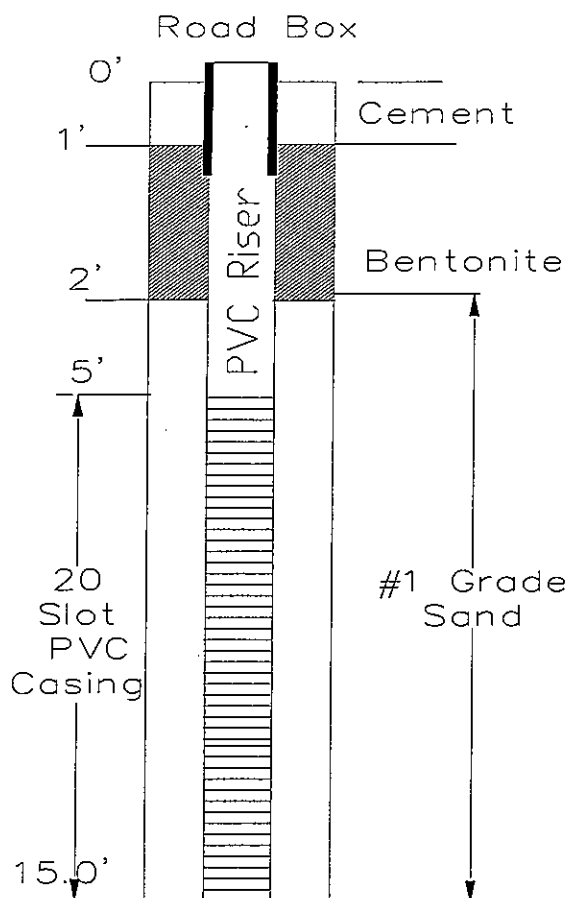
# MONITORING WELL COMPLETION LOG

Well I.D.: RIWP-13

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp: Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/6/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



## INSPECTION NOTES

Inspector: Matthew RootContractor: ADT Drilling

### Drilling Method:

Type: OverburdenEquipment: Geoprobe Hydraulic PushType of Well: 1" overburdenStatic Water Level: 7.33 feet bgsMeasuring Point: TOC= 110.00 Feet AMSLTotal Depth of Well: 15.0 feet bgs

### Sampling Method:

Type: Geoprobe Macro CoreWeight: NAInterval: 6-10 feet bgs

### Riser Pipe Left in Place:

Material: Schedule 40 PVCLength: 5 feetDiameter: 1 inch

### Screen:

Material: prefabricated well screen 20 slotSlot Size: 20-slotStratigraphic Unit Screened: 5-15 feet bgs

### Filter Pack:

Sand: 2-15 feet bgsGrade: No. 2Amount: 13 feet

### Seals:

Type: Bentonite seal 2-1 foot bgs

Not To Scale





## APPENDIX C

**APPENDIX C**  
**REMEDIAL INVESTIGATION VAPOR POINT DETAILS**



# VAPOR POINT COMPLETION LOG

Well I.D.: VP-1

Project Name: Albany SOMA: "The Amos At Quackenbush"

Project No: 8081

Client Name: Queri Development Company

Date: 6/6/2008

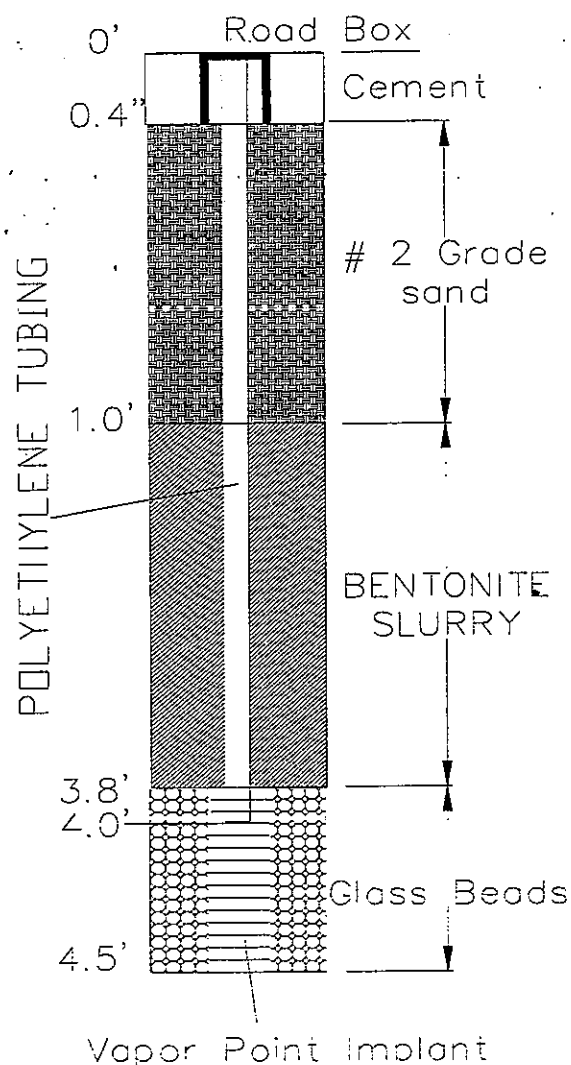
Location: Broadway and Spencer Street Albany, NY.

Logged By: MGR/HN

Weather/Temp. Hazy Hot and Humid 95 degrees

Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



Not To Scale

## INSPECTION NOTES

Inspector: Matthew Root

Contractor: ADT Drilling

### Drilling Method:

Type: Overburden

Equipment: Geoprobe Hydraulic Push

Type of Well: Vapor Point

Static Water Level: NA

Measuring Point: NA

Total Depth of Vapor Point: 4.5 feet bgs

### Sampling Method:

Type: 6 Liter Suma Canister

Weight: NA

Interval: 4-4.5 feet bgs

### Riser tubing Left in Place:

Material: Polyethylene tubing

Length: 5 feet

Diameter: 1/4 inch O.D.

### Screen:

Material: Stainless steel implant

Slot Size: NA

Stratigraphic Unit Screened: 4-4.5 feet bgs

### Filter Pack:

Sand: 0.4" - 1 feet bgs

Grade: No. 2

Amount: 6 inches

### Seals:

Type: Bentonite Slurry 1.0-4.3 feet bgs//Clay seal during sampling





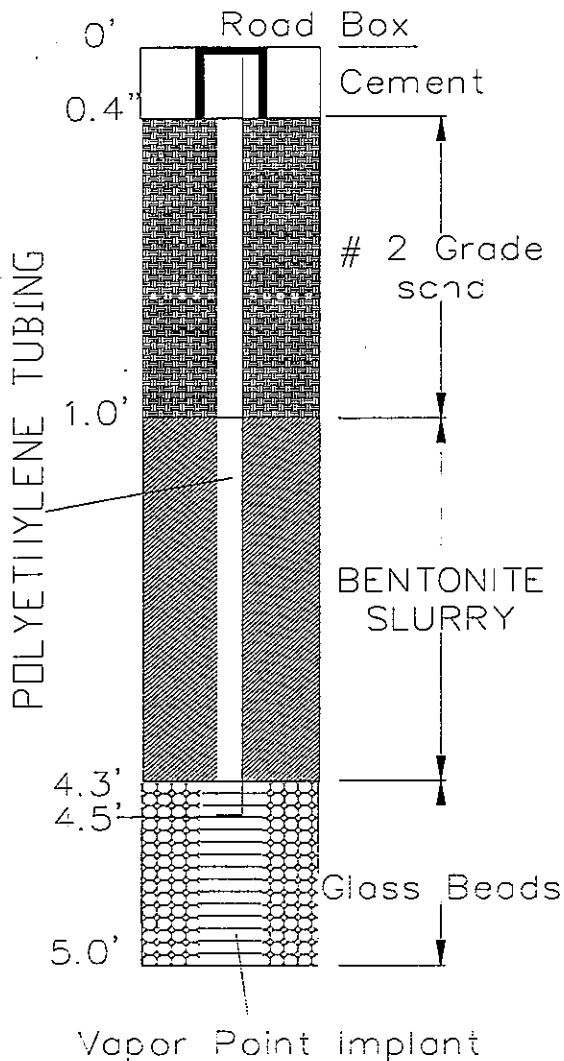
# VAPOR POINT COMPLETION LOG

Well I.D.: VP-2

**Project Name:** Albany SOMA: "The Amos At Quackenbush"  
**Client Name:** Queri Development Company  
**Location:** Broadway and Spencer Street Albany, NY.  
**Weather/Temp.** Hazy Hot and Humid 95 degrees

**Project No:** 8081  
**Date:** 6/9/2008  
**Logged By:** MGR/HN  
**Checked By:** M. ROOT

## WELL CONSTRUCTION DETAILS



Not To Scale

## INSPECTION NOTES

Inspector: Matthew RootContractor: ADT Drilling

### Drilling Method:

Type: OverburdenEquipment: Geoprobe Hydraulic PushType of Well: Vapor PointStatic Water Level: NAMeasuring Point: NATotal Depth of Vapor Point: 5.0 feet bgs

### Sampling Method:

Type: 6 Liter Suma CanisterWeight: NAInterval: 4.5-5 feet bgs

### Riser tubing Left in Place:

Material: Polyethylene tubingLength: 5 feetDiameter: 1/4 inch O.D.

### Screen:

Material: Stainless steel implantSlot Size: NAStratigraphic Unit Screened: 4-4.5 feet bgs

### Filter Pack:

Sand: 0.4 " - 1 feet bgsGrade: No. 2Amount: 6 inches

### Seals:

Type: Bentonite Slurry 1.0-4.3 feet bgs//Clay seal during sampling



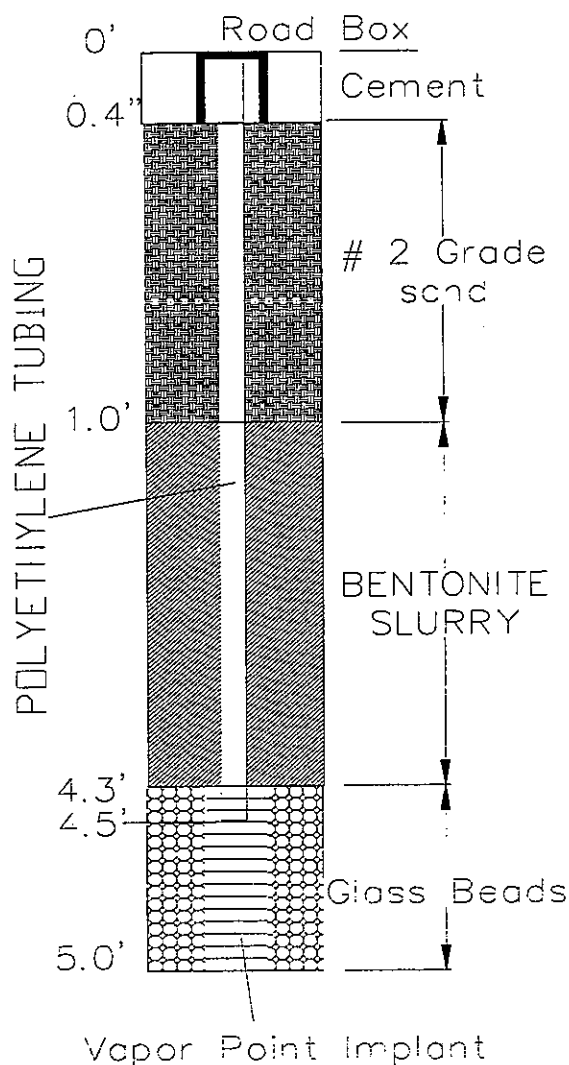
# VAPOR POINT COMPLETION LOG

Well I.D.: VP-4

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp. Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/9/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



Not To Scale

## INSPECTION NOTES

Inspector: Matthew RootContractor: ADT Drilling

### Drilling Method:

Type: OverburdenEquipment: Geoprobe Hydraulic PushType of Well: Vapor PointStatic Water Level: NAMeasuring Point: NATotal Depth of Vapor Point: 5.0 feet bgs

### Sampling Method:

Type: 6 Liter Suma CanisterWeight: NAInterval: 4.5-5 feet bgs

### Riser tubing Left in Place:

Material: Polyethylene tubingLength: 5 feetDiameter: 1/4 inch O.D.

### Screen:

Material: Stainless steel implantSlot Size: NAStratigraphic Unit Screened: 4-4.5 feet bgs

### Filter Pack:

Sand: 0.4 " - 1 feet bgsGrade: No. 2Amount: 6 inches

### Seals:

Type: Bentonite Slurry 1.0-4.3 feet bgs//Clay seal during sampling



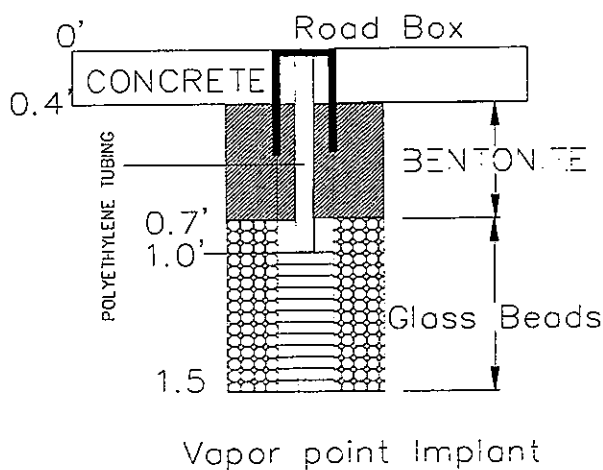
# VAPOR POINT COMPLETION LOG

Well I.D.: VP-5

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp. Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/5/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



## INSPECTION NOTES

Inspector: Matthew Root  
 Contractor: ADT Drilling  
 Drilling Method:  
 Type: Overburden  
 Equipment: Geoprobe Hydraulic Push  
 Type of Well: Vapor Point  
 Static Water Level: NA  
 Measuring Point: NA  
 Total Depth of Vapor Point: 1.5 Feet bgs (directly below concret slab)  
 Sampling Method:  
 Type: 6 Liter Suma Canister  
 Weight: NA  
 Interval: 1'-1.5 feet bgs  
 Riser tubing Left in Place:  
 Material: Polyethylene tubing  
 Length: 2 feet  
 Diameter: 1/4 inch O.D.  
 Screen:  
 Material: Stainless steel implant  
 Slot Size: NA  
 Stratigraphic Unit Screened: 1-1.5 feet bgs  
 Filter Pack:  
 Sand: Glass Beads 1' - 1.5' feet bgs;  
 Grade: No. 2  
 Amount: 6 inches  
 Seals:  
 Type: Bentonite Slurry 1.0-4.3 feet bgs//Clay seal during sampling

Not To Scale





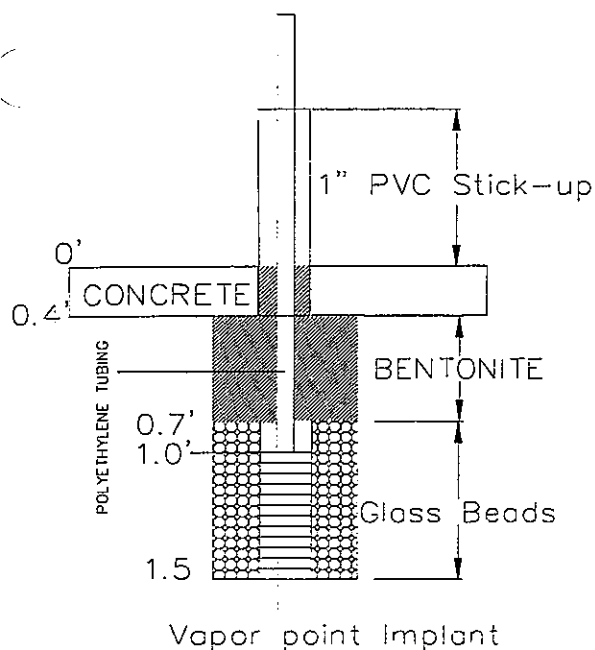
# VAPOR POINT COMPLETION LOG

Well I.D.: VP-6

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp. Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/5/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



Not To Scale

## INSPECTION NOTES

Inspector: Matthew Root  
 Contractor: ADT Drilling  
 Drilling Method:  
 Type: Overburden  
 Equipment: Geoprobe Hydraulic Push  
 Type of Well: Vapor Point  
 Static Water Level: NA  
 Measuring Point: NA  
 Total Depth of Vapor Point: 1.5 Feet bgs (directly below concret slab)  
 Sampling Method:  
 Type: 6 Liter Suma Canister  
 Weight: NA  
 Interval: 1'-1.5 feet bgs  
 Riser tubing Left in Place:  
 Material: Polyethylene tubing  
 Length: 2 feet  
 Diameter: 1/4 inch O.D.  
 Screen:  
 Material: Stainless steel implant  
 Slot Size: NA  
 Stratigraphic Unit Screened: 1-1.5 feet bgs  
 Filter Pack:  
 Sand: Glass Beads 1' - 1.5' feet bgs;  
 Grade: No. 2  
 Amount: 6 inches  
 Seals:  
 Type: Bentonite Slurry 1.0-4.3 feet bgs//Clay seal during sampling



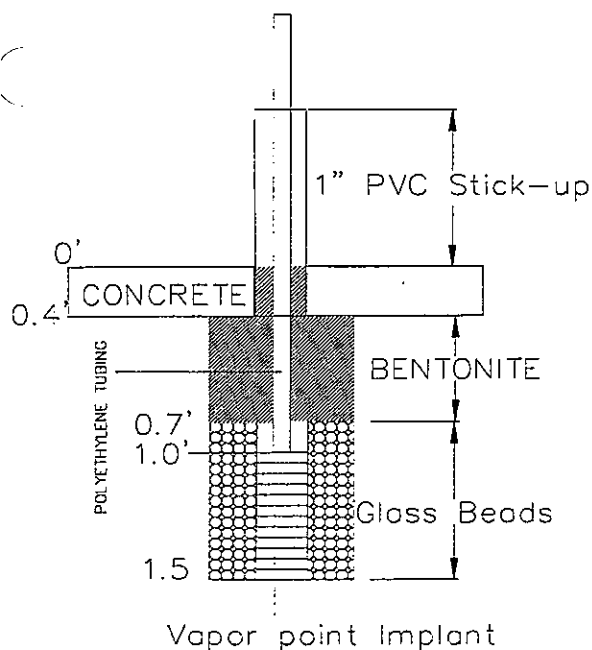
# VAPOR POINT COMPLETION LOG

Well I.D.: VP-7

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp. Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/5/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



Not To Scale

## INSPECTION NOTES

Inspector: Matthew Root  
 Contractor: ADT Drilling  
 Drilling Method:  
 Type: Overburden  
 Equipment: Geoprobe Hydraulic Push  
 Type of Well: Vapor Point  
 Static Water Level: NA  
 Measuring Point: NA  
 Total Depth of Vapor Point: 1.5 Feet bgs (directly below concret slab)  
 Sampling Method:  
 Type: 6 Liter Suma Canister  
 Weight: NA  
 Interval: 1'-1.5 feet bgs  
 Riser tubing Left in Place:  
 Material: Polyethylene tubing  
 Length: 2 feet  
 Diameter: 1/4 inch O.D.  
 Screen:  
 Material: Stainless steel implant  
 Slot Size: NA  
 Stratigraphic Unit Screened: 1-1.5 feet bgs  
 Filter Pack:  
 Sand: Glass Beads 1' - 1.5' feet bgs;  
 Grade: No. 2  
 Amount: 6 inches  
 Seals:  
 Type: Bentonite Slurry 1.0-4.3 feet bgs//Clay seal during sampling



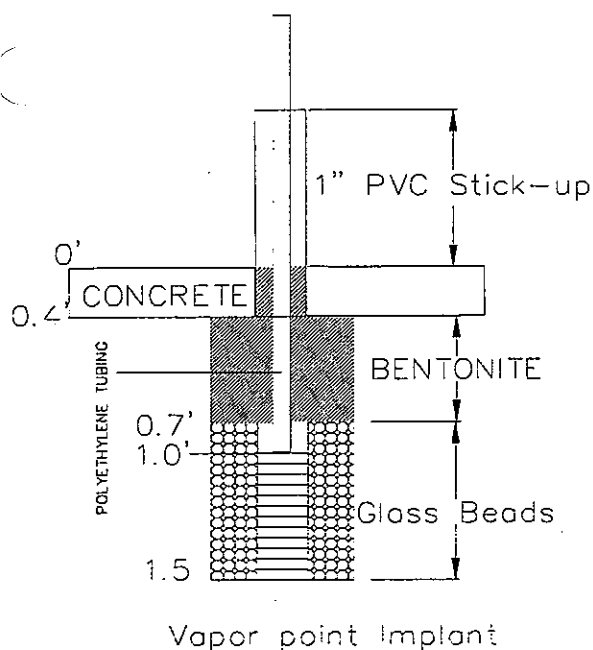
# VAPOR POINT COMPLETION LOG

Well I.D.: VP-8

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Queri Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp. Hazy Hot and Humid 95 degrees

Project No: 8081  
 Date: 6/5/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL CONSTRUCTION DETAILS



Not To Scale

## INSPECTION NOTES

Inspector: Matthew Root  
 Contractor: ADT Drilling  
 Drilling Method:  
 Type: Overburden  
 Equipment: Geoprobe Hydraulic Push  
 Type of Well: Vapor Point  
 Static Water Level: NA  
 Measuring Point: NA  
 Total Depth of Vapor Point: 1.5 Feet bgs (directly below concret slab)  
 Sampling Method:  
 Type: 6 Liter Suma Canister  
 Weight: NA  
 Interval: 1'-1.5 feet bgs  
 Riser tubing Left in Place:  
 Material: Polyethylene tubing  
 Length: 2 feet  
 Diameter: 1/4 inch O.D.  
 Screen:  
 Material: Stainless steel implant  
 Slot Size: NA  
 Stratigraphic Unit Screened: 1-1.5 feet bgs  
 Filter Pack:  
 Sand: Glass Beads 1' - 1.5' feet bgs;  
 Grade: No. 2  
 Amount: 6 inches  
 Seals:  
 Type: Bentonite Slurry 1.0-4.3 feet bgs//Clay seal during sampling



## APPENDIX G

**APPENDIX G**  
**REMEDIAL INVESTIGATION MONITORING WELL**  
**DEVELOPMENT LOGS**

**WELL DEVELOPMENT LOG**Well I.D.: **RIWP-4**

|               |  |             |                     |
|---------------|--|-------------|---------------------|
| Project Name: | <u>Albany SOMA: "The Amos At Quackenbush"</u>  | Project No: | <u>8081</u>         |
| Client Name:  | <u>Queri Development Company</u>               | Date:       | <u>6/12/2008</u>    |
| Location:     | <u>Broadway and Spencer Street Albany, NY.</u> | Logged By:  | <u>MGR/Rutledge</u> |
| Weather/Temp. | <u>Sunny 85 degrees</u>                        | Checked By: | <u>M. ROOT</u>      |

**WELL INFORMATION**

|                                       |               |                |
|---------------------------------------|---------------|----------------|
| Total Casing and Screen Length (ft):  | <u>12.0</u>   | <u>feet</u>    |
| Casing Internal Diameter (in.):       | <u>1</u>      | <u>inches</u>  |
| Water Level Below Top of Casing (ft): | <u>2.76</u>   | <u>feet</u>    |
| Volume of Water in Casing (gal):      | <u>0.7854</u> | <u>Gallons</u> |

1" well = 0.085 gallons per foot

**DEVELOPMENT TECHNIQUE**

|             |                     |                  |                 |                         |           |
|-------------|---------------------|------------------|-----------------|-------------------------|-----------|
| Bailer      | <u>-----</u>        | Bailer Material: | <u>-----</u>    | Bailer Diameter (I.D.): | <u>NA</u> |
| Lift Pump   | <u>Peristaltic</u>  | Flow Rate:       | <u>Variable</u> |                         |           |
| Air Lift    | <u>-----</u>        | Flow Rate:       | <u>-----</u>    |                         |           |
| Submersible | <u>-----</u>        | Flow Rate:       | <u>-----</u>    |                         |           |
| Surge       | <u>-----</u>        | Surge Method:    | <u>-----</u>    |                         |           |
| Other       | <u>Over pumping</u> |                  |                 |                         |           |

| PARAMETER              | ACCUMULATED VOLUME PURGED     |                       |  |
|------------------------|-------------------------------|-----------------------|--|
| Gallons                | Beginning: <u>0.0 gallons</u> | End: <u>5 gallons</u> |  |
| Time                   | Beginning: <u>1:45 PM</u>     | End: <u>2:30 PM</u>   |  |
| Conductivity (mohm/cm) | Beginning: <u>NA</u>          | End: <u>NA</u>        |  |
| Dissolved Oxygen (ppm) | Beginning: <u>NA</u>          | End: <u>NA</u>        |  |
| pH                     | Beginning: <u>NA</u>          | End: <u>NA</u>        |  |
| Tiurbidity (NTU)       | Beginning: <u>180</u>         | End: <u>117</u>       |  |
| Temp (°C)              | Beginning: <u>NA</u>          | End: <u>NA</u>        |  |
| PID Reading (PPM)      | Beginning: <u>0.3</u>         | End: <u>0.0</u>       |  |

**NOTES**

1. PID screening result during well purging = 0.0 ppm.
2. Groundwater appears cloudy due to crusher run backfill within historical UST removal area.
3. Gasoline and/or fule oil odor from well water.
4. Trace sheen on purge water.





## WELL DEVELOPMENT LOG

Well I.D.: **RIWP-5**

|               |  |             |                     |
|---------------|--|-------------|---------------------|
| Project Name: | <u>Albany SOMA: "The Amos At Quackenbush"</u>  | Project No: | <u>8081</u>         |
| Client Name:  | <u>Queri Development Company</u>               | Date:       | <u>6/12/2008</u>    |
| Location:     | <u>Broadway and Spencer Street Albany, NY.</u> | Logged By:  | <u>MGR/Rutledge</u> |
| Weather/Temp. | <u>Sunny 85 degrees</u>                        | Checked By: | <u>M. ROOT</u>      |

### WELL INFORMATION

|                                       |               |                |                                  |
|---------------------------------------|---------------|----------------|----------------------------------|
| Total Casing and Screen Length (ft):  | <u>15.0</u>   | <u>feet</u>    |                                  |
| Casing Internal Diameter (in.):       | <u>1</u>      | <u>inches</u>  |                                  |
| Water Level Below Top of Casing (ft): | <u>5.94</u>   | <u>feet</u>    |                                  |
| Volume of Water in Casing (gal):      | <u>0.7701</u> | <u>Gallons</u> | 1" well = 0.085 gallons per foot |

### DEVELOPMENT TECHNIQUE

|             |                     |                  |                 |                         |           |
|-------------|---------------------|------------------|-----------------|-------------------------|-----------|
| Bailer      | <u>-----</u>        | Bailer Material: | <u>-----</u>    | Bailer Diameter (I.D.): | <u>NA</u> |
| Lift Pump   | <u>Peristaltic</u>  | Flow Rate:       | <u>Variable</u> |                         |           |
| Air Lift    | <u>-----</u>        | Flow Rate:       | <u>-----</u>    |                         |           |
| Submersible | <u>-----</u>        | Flow Rate:       | <u>-----</u>    |                         |           |
| Surge       | <u>-----</u>        | Surge Method:    | <u>-----</u>    |                         |           |
| Other       | <u>Over pumping</u> |                  |                 |                         |           |

| PARAMETER              | ACCUMULATED VOLUME PURGED |                    |      |                  |  |
|------------------------|---------------------------|--------------------|------|------------------|--|
| Gallons                | Beginning:                | <u>0.0 gallons</u> | End: | <u>5 gallons</u> |  |
| Time                   | Beginning:                | <u>1:45 PM</u>     | End: | <u>2:30 PM</u>   |  |
| Conductivity (mohm/cm) | Beginning:                | <u>NA</u>          | End: | <u>NA</u>        |  |
| Dissolved Oxygen (ppm) | Beginning:                | <u>NA</u>          | End: | <u>NA</u>        |  |
| pH                     | Beginning:                | <u>NA</u>          | End: | <u>NA</u>        |  |
| Tiurbidity (NTU)       | Beginning:                | <u>890</u>         | End: | <u>248</u>       |  |
| Temp (°C)              | Beginning:                | <u>NA</u>          | End: | <u>NA</u>        |  |
| PID Reading (PPM)      | Beginning:                | <u>0</u>           | End: | <u>0.0</u>       |  |

### NOTES

1. PID screening result during well purging = 0.0 ppm.
2. Groundwater appears cloudy due to crusher run backfill within historical UST removal area.
3. Gasoline and/or fule oil odor from well water.
4. Trace sheen on purge water.
5. Well goes dry and recharges in 5 minutes.



# WELL DEVELOPMENT LOG

Well I.D.: RIWP-6

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Quer Development Company                | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

## WELL INFORMATION

|                                       |        |         |                                  |
|---------------------------------------|--------|---------|----------------------------------|
| Total Casing and Screen Length (ft):  | 12.8   | feet    |                                  |
| Casing Internal Diameter (in.):       | 1      | inches  |                                  |
| Water Level Below Top of Casing (ft): | 7.3    | feet    |                                  |
| Volume of Water in Casing (gal):      | 0.4675 | Gallons | 1" well = 0.085 gallons per foot |

## DEVELOPMENT TECHNIQUE

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |                       |      |                       |
|------------------------|---------------------------|-----------------------|------|-----------------------|
| Gallons                | Beginning:                | 0.0 gallons           | End: | 5 gallons             |
| Time                   | Beginning:                | 10:30 AM              | End: | 11:15 AM              |
| Conductivity (mohm/cm) | Beginning:                | NA                    | End: | NA                    |
| Dissolved Oxygen (ppm) | Beginning:                | NA                    | End: | NA                    |
| pH                     | Beginning:                | NA                    | End: | NA                    |
| Tiurbidity (NTU)       | Beginning:                | over instrument range | End: | over instrument range |
| Temp (°C)              | Beginning:                | NA                    | End: | NA                    |
| PID Reading (PPM)      | Beginning:                | 3.0                   | End: | 0.0                   |

## NOTES

- PID screening result during well purging = 1.0 ppm.
- Groundwater appears black and oily due to in historical UST removal area.
- Gasoline and/or fule oil odoromitting from from well purge water.
- Oily heen on purge water.



## WELL DEVELOPMENT LOG

Well I.D.: RIWP-8

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Queri Development Company               | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

## WELL INFORMATION

|                                       |         |         |
|---------------------------------------|---------|---------|
| Total Casing and Screen Length (ft):  | 15.0    | feet    |
| Casing Internal Diameter (in.):       | 1       | inches  |
| Water Level Below Top of Casing (ft): | 9.35    | feet    |
| Volume of Water in Casing (gal):      | 0.48025 | Gallons |

1" well = 0.085 gallons per foot

## DEVELOPMENT TECHNIQUE

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED        |      |           |
|------------------------|----------------------------------|------|-----------|
| Gallons                | Beginning: 0.0 gallons           | End: | 4 gallons |
| Time                   | Beginning: 10:30 AM              | End: | 11:15 AM  |
| Conductivity (mohm/cm) | Beginning: NA                    | End: | NA        |
| Dissolved Oxygen (ppm) | Beginning: NA                    | End: | NA        |
| pH                     | Beginning: NA                    | End: | NA        |
| Tiurbidity (NTU)       | Beginning: over instrument range | End: | 410       |
| Temp (°C)              | Beginning: NA                    | End: | NA        |
| PID Reading (PPM)      | Beginning: 0.0                   | End: | 0.0       |

## NOTES

1. PID screening result during well purging = 0.0 ppm.



**WELL DEVELOPMENT LOG**

Well I.D.: RIWP-9

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Queri Development Company               | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

**WELL INFORMATION**

|                                       |        |         |
|---------------------------------------|--------|---------|
| Total Casing and Screen Length (ft):  | 14.7   | feet    |
| Casing Internal Diameter (in.):       | 1      | inches  |
| Water Level Below Top of Casing (ft): | 9.35   | feet    |
| Volume of Water in Casing (gal):      | 0.4556 | Gallons |

1" well = 0.085 gallons per foot

**DEVELOPMENT TECHNIQUE**

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |      |           |
|------------------------|---------------------------|------|-----------|
| Gallons                | Beginning: 0.0 gallons    | End: | 3 gallons |
| Time                   | Beginning: 1:45 PM        | End: | 2:30 PM   |
| Conductivity (mohm/cm) | Beginning: NA             | End: | NA        |
| Dissolved Oxygen (ppm) | Beginning: NA             | End: | NA        |
| pH                     | Beginning: NA             | End: | NA        |
| Turbidity (NTU)        | Beginning: 248            | End: | 97        |
| Temp (°C)              | Beginning: NA             | End: | NA        |
| PID Reading (PPM)      | Beginning: 0.0            | End: | 0.0       |

**NOTES**

1. PID screening result during well purging = 0.0 ppm.
2. Well goes dry and recharges in 5-10 minutes.
3. Trace sheen on purge water.



# WELL DEVELOPMENT LOG

Well I.D.: RIWP-10

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Queri Development Company               | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

## WELL INFORMATION

|                                       |        |         |                                  |
|---------------------------------------|--------|---------|----------------------------------|
| Total Casing and Screen Length (ft):  | 15.0   | feet    |                                  |
| Casing Internal Diameter (in.):       | 1      | inches  |                                  |
| Water Level Below Top of Casing (ft): | 6.9    | feet    |                                  |
| Volume of Water in Casing (gal):      | 0.6885 | Gallons | 1" well = 0.085 gallons per foot |

## DEVELOPMENT TECHNIQUE

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |             |      |             |
|------------------------|---------------------------|-------------|------|-------------|
| Gallons                | Beginning:                | 0.0 gallons | End: | 2.5 gallons |
| Time                   | Beginning:                | 1:45 PM     | End: | 2:30 PM     |
| Conductivity (mohm/cm) | Beginning:                | NA          | End: | NA          |
| Dissolved Oxygen (ppm) | Beginning:                | NA          | End: | NA          |
| pH                     | Beginning:                | NA          | End: | NA          |
| Turbidity (NTU)        | Beginning:                | 828         | End: | 158         |
| Temp (°C)              | Beginning:                | NA          | End: | NA          |
| PID Reading (PPM)      | Beginning:                | 0.0         | End: | 0.0         |

## NOTES

- PID screening result during well purging = 0.0 ppm.
- Well goes dry and recharges in 5-10 minutes.

**WELL DEVELOPMENT LOG**

Well I.D.: RIWP-13

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Querri Development Company              | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

**WELL INFORMATION**

|                                       |         |         |
|---------------------------------------|---------|---------|
| Total Casing and Screen Length (ft):  | 14.3    | feet    |
| Casing Internal Diameter (in.):       | 1       | inches  |
| Water Level Below Top of Casing (ft): | 7.33    | feet    |
| Volume of Water in Casing (gal):      | 0.59245 | Gallons |

1" well = 0.085 gallons per foot

**DEVELOPMENT TECHNIQUE**

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |      |             |
|------------------------|---------------------------|------|-------------|
| Gallons                | Beginning: 0.0 gallons    | End: | 5.0 gallons |
| Time                   | Beginning: 12:00 AM       | End: | 12:45 PM    |
| Conductivity (mohm/cm) | Beginning: NA             | End: | NA          |
| Dissolved Oxygen (ppm) | Beginning: NA             | End: | NA          |
| pH                     | Beginning: NA             | End: | NA          |
| Tiurbidity (NTU)       | Beginning: 352            | End: | 236         |
| Temp (°C)              | Beginning: NA             | End: | NA          |
| PID Reading (PPM)      | Beginning: 0.0            | End: | 0.0         |

**NOTES**

1. PID screening result during well purging = 0.0 ppm.
2. Well water clears but becomes tubid at times during pumping.





# WELL DEVELOPMENT LOG

Well I.D.: RIWP-15

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Queri Development Company               | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

## WELL INFORMATION

|                                       |         |         |                                  |
|---------------------------------------|---------|---------|----------------------------------|
| Total Casing and Screen Length (ft):  | 14.5    | feet    |                                  |
| Casing Internal Diameter (in.):       | 1       | inches  |                                  |
| Water Level Below Top of Casing (ft): | 7.33    | feet    |                                  |
| Volume of Water in Casing (gal):      | 0.60945 | Gallons | 1" well = 0.085 gallons per foot |

## DEVELOPMENT TECHNIQUE

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |             |      |             |
|------------------------|---------------------------|-------------|------|-------------|
| Gallons                | Beginning:                | 0.0 gallons | End: | 3.0 gallons |
| Time                   | Beginning:                | 12:00 AM    | End: | 12:45 PM    |
| Conductivity (mohm/cm) | Beginning:                | NA          | End: | NA          |
| Dissolved Oxygen (ppm) | Beginning:                | NA          | End: | NA          |
| pH                     | Beginning:                | NA          | End: | NA          |
| Turbidity (NTU)        | Beginning:                | 352         | End: | 236         |
| Temp (°C)              | Beginning:                | NA          | End: | NA          |
| PID Reading (PPM)      | Beginning:                | 0.0         | End: | 0.0         |

## NOTES

- PID screening result during well purging = 0.0 ppm.
- Well water clears but becomes turbid at times during pumping.



## WELL DEVELOPMENT LOG

Page 1 of 3

Well ID: 1187-4

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Queri Development Company               | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

### WELL INFORMATION

|                                       |        |         |                                  |
|---------------------------------------|--------|---------|----------------------------------|
| Total Casing and Screen Length (ft):  | 12.0   | feet    |                                  |
| Casing Internal Diameter (in.):       | 1      | inches  |                                  |
| Water Level Below Top of Casing (ft): | 2.76   | feet    |                                  |
| Volume of Water in Casing (gal):      | 0.7854 | Gallons | 1" well = 0.085 gallons per foot |

### DEVELOPMENT TECHNIQUE

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |      |           |  |
|------------------------|---------------------------|------|-----------|--|
| Gallons                | Beginning: 0.0 gallons    | End: | 5 gallons |  |
| Time                   | Beginning: 1:45 PM        | End: | 2:30 PM   |  |
| Conductivity (mohm/cm) | Beginning: NA             | End: | NA        |  |
| Dissolved Oxygen (ppm) | Beginning: NA             | End: | NA        |  |
| pH                     | Beginning: NA             | End: | NA        |  |
| Tiurbidity (NTU)       | Beginning: 180            | End: | 117       |  |
| Temp (°C)              | Beginning: NA             | End: | NA        |  |
| PID Reading (PPM)      | Beginning: 0.3            | End: | 0.0       |  |

### NOTES

1. PID screening result during well purging = 0.0 ppm.
2. Groundwater appears cloudy due to crusher run backfill within historical UST removal area.
3. Gasoline and/or fule oil odor from well water.
4. Trace sheen on purge water.



## WELL DEVELOPMENT LOG

Well I.D.: RJWP-5

|               |  |             |                     |
|---------------|--|-------------|---------------------|
| Project Name: | <u>Albany SOMA: "The Amos At Quackenbush"</u>  | Project No: | <u>8081</u>         |
| Client Name:  | <u>Queri Development Company</u>               | Date:       | <u>6/12/2008</u>    |
| Location:     | <u>Broadway and Spencer Street Albany, NY.</u> | Logged By:  | <u>MGR/Rutledge</u> |
| Weather/Temp. | <u>Sunny 85 degrees</u>                        | Checked By: | <u>M. ROOT</u>      |

### WELL INFORMATION

|                                       |               |                |                                  |
|---------------------------------------|---------------|----------------|----------------------------------|
| Total Casing and Screen Length (ft):  | <u>15.0</u>   | <u>feet</u>    |                                  |
| Casing Internal Diameter (in.):       | <u>1</u>      | <u>inches</u>  |                                  |
| Water Level Below Top of Casing (ft): | <u>5.94</u>   | <u>feet</u>    |                                  |
| Volume of Water in Casing (gal):      | <u>0.7701</u> | <u>Gallons</u> | 1" well = 0.085 gallons per foot |

### DEVELOPMENT TECHNIQUE

|             |                     |                  |                 |                         |           |
|-------------|---------------------|------------------|-----------------|-------------------------|-----------|
| Bailer      | <u>-----</u>        | Bailer Material: | <u>-----</u>    | Bailer Diameter (I.D.): | <u>NA</u> |
| Lift Pump   | <u>Peristaltic</u>  | Flow Rate:       | <u>Variable</u> |                         |           |
| Air Lift    | <u>-----</u>        | Flow Rate:       | <u>-----</u>    |                         |           |
| Submersible | <u>-----</u>        | Flow Rate:       | <u>-----</u>    |                         |           |
| Surge       | <u>-----</u>        | Surge Method:    | <u>-----</u>    |                         |           |
| Other       | <u>Over pumping</u> |                  |                 |                         |           |

| PARAMETER              | ACCUMULATED VOLUME PURGED |                    |      |                  |  |
|------------------------|---------------------------|--------------------|------|------------------|--|
| Gallons                | Beginning:                | <u>0.0 gallons</u> | End: | <u>5 gallons</u> |  |
| Time                   | Beginning:                | <u>1:45 PM</u>     | End: | <u>2:30 PM</u>   |  |
| Conductivity (mohm/cm) | Beginning:                | <u>NA</u>          | End: | <u>NA</u>        |  |
| Dissolved Oxygen (ppm) | Beginning:                | <u>NA</u>          | End: | <u>NA</u>        |  |
| pH                     | Beginning:                | <u>NA</u>          | End: | <u>NA</u>        |  |
| Tiurbidity (NTU)       | Beginning:                | <u>890</u>         | End: | <u>248</u>       |  |
| Temp (°C)              | Beginning:                | <u>NA</u>          | End: | <u>NA</u>        |  |
| PID Reading (PPM)      | Beginning:                | <u>0</u>           | End: | <u>0.0</u>       |  |

### NOTES

1. PID screening result during well purging = 0.0 ppm.
2. Groundwater appears cloudy due to crusher run backfill within historical UST removal area.
3. Gasoline and/or fule oil odor from well water.
4. Trace sheen on purge water.
5. Well goes dry and recharges in 5 minutes.





## WELL DEVELOPMENT LOG

Well I.D.: **RIWP-6**

|   |                                |
|---|--------------------------------|
| Project Name: <u>Albany SOMA: "The Amos At Quackenbush"</u> | Project No: <u>8081</u>        |
| Client Name: <u>Queri Development Company</u>               | Date: <u>6/12/2008</u>         |
| Location: <u>Broadway and Spencer Street Albany, NY.</u>    | Logged By: <u>MGR/Rutledge</u> |
| Weather/Temp. <u>Sunny 85 degrees</u>                       | Checked By: <u>M. ROOT</u>     |

### WELL INFORMATION

|                                       |               |                |                                  |
|---------------------------------------|---------------|----------------|----------------------------------|
| Total Casing and Screen Length (ft):  | <u>12.8</u>   | <u>feet</u>    |                                  |
| Casing Internal Diameter (in.):       | <u>1</u>      | <u>inches</u>  |                                  |
| Water Level Below Top of Casing (ft): | <u>7.3</u>    | <u>feet</u>    |                                  |
| Volume of Water in Casing (gal):      | <u>0.4675</u> | <u>Gallons</u> | 1" well = 0.085 gallons per foot |

### DEVELOPMENT TECHNIQUE

|             |                     |                  |                 |                         |           |
|-------------|---------------------|------------------|-----------------|-------------------------|-----------|
| Bailer      | <u>-----</u>        | Bailer Material: | <u>-----</u>    | Bailer Diameter (I.D.): | <u>NA</u> |
| Lift Pump   | <u>Peristaltic</u>  | Flow Rate:       | <u>Variable</u> |                         |           |
| Air Lift    | <u>-----</u>        | Flow Rate:       | <u>-----</u>    |                         |           |
| Submersible | <u>-----</u>        | Flow Rate:       | <u>-----</u>    |                         |           |
| Surge       | <u>-----</u>        | Surge Method:    | <u>-----</u>    |                         |           |
| Other       | <u>Over pumping</u> |                  |                 |                         |           |

| PARAMETER              | ACCUMULATED VOLUME PURGED               |                                   |  |  |  |
|------------------------|---|-----------------------------------|--|--|--|
| Gallons                | Beginning: <u>0.0 gallons</u>           | End: <u>5 gallons</u>             |  |  |  |
| Time                   | Beginning: <u>10:30 AM</u>              | End: <u>11:15 AM</u>              |  |  |  |
| Conductivity (mohm/cm) | Beginning: <u>NA</u>                    | End: <u>NA</u>                    |  |  |  |
| Dissolved Oxygen (ppm) | Beginning: <u>NA</u>                    | End: <u>NA</u>                    |  |  |  |
| pH                     | Beginning: <u>NA</u>                    | End: <u>NA</u>                    |  |  |  |
| Turbidity (NTU)        | Beginning: <u>over instrument range</u> | End: <u>over instrument range</u> |  |  |  |
| Temp (°C)              | Beginning: <u>NA</u>                    | End: <u>NA</u>                    |  |  |  |
| PID Reading (PPM)      | Beginning: <u>3.0</u>                   | End: <u>0.0</u>                   |  |  |  |

### NOTES

1. PID screening result during well purging = 1.0 ppm.
2. Groundwater appears black and oily due to in historical UST removal area.
3. Gasoline and/or fule oil odoromitting from from well purge water.
4. Oily heen on purge water.



# WELL DEVELOPMENT LOG

Well I.D.: RIWP-8

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Queri Development Company               | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

## WELL INFORMATION

|                                       |         |         |                                  |
|---------------------------------------|---------|---------|----------------------------------|
| Total Casing and Screen Length (ft):  | 15.0    | feet    |                                  |
| Casing Internal Diameter (in.):       | 1       | inches  |                                  |
| Water Level Below Top of Casing (ft): | 9.35    | feet    |                                  |
| Volume of Water in Casing (gal):      | 0.48025 | Gallons | 1" well = 0.085 gallons per foot |

## DEVELOPMENT TECHNIQUE

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |                       |      |           |
|------------------------|---------------------------|-----------------------|------|-----------|
| Gallons                | Beginning:                | 0.0 gallons           | End: | 4 gallons |
| Time                   | Beginning:                | 10:30 AM              | End: | 11:15 AM  |
| Conductivity (mohm/cm) | Beginning:                | NA                    | End: | NA        |
| Dissolved Oxygen (ppm) | Beginning:                | NA                    | End: | NA        |
| pH                     | Beginning:                | NA                    | End: | NA        |
| Tiurbidity (NTU)       | Beginning:                | over instrument range | End: | 410       |
| Temp (°C)              | Beginning:                | NA                    | End: | NA        |
| PID Reading (PPM)      | Beginning:                | 0.0                   | End: | 0.0       |

## NOTES

- PID screening result during well purging = 0.0 ppm.



# WELL DEVELOPMENT LOG

Well I.D.: RIWP-9

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Queri Development Company               | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

## WELL INFORMATION

|                                       |        |         |                                  |
|---------------------------------------|--------|---------|----------------------------------|
| Total Casing and Screen Length (ft):  | 14.7   | feet    |                                  |
| Casing Internal Diameter (in.):       | 1      | inches  |                                  |
| Water Level Below Top of Casing (ft): | 9.35   | feet    |                                  |
| Volume of Water in Casing (gal):      | 0.4556 | Gallons | 1" well = 0.085 gallons per foot |

## DEVELOPMENT TECHNIQUE

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |             |      |           |
|------------------------|---------------------------|-------------|------|-----------|
| Gallons                | Beginning:                | 0.0 gallons | End: | 3 gallons |
| Time                   | Beginning:                | 1:45 PM     | End: | 2:30 PM   |
| Conductivity (mohm/cm) | Beginning:                | NA          | End: | NA        |
| Dissolved Oxygen (ppm) | Beginning:                | NA          | End: | NA        |
| pH                     | Beginning:                | NA          | End: | NA        |
| Turbidity (NTU)        | Beginning:                | 248         | End: | 97        |
| Temp (°C)              | Beginning:                | NA          | End: | NA        |
| PID Reading (PPM)      | Beginning:                | 0.0         | End: | 0.0       |

## NOTES

- PID screening result during well purging = 0.0 ppm.
- Well goes dry and recharges in 5-10 minutes.
- Trace sheen on purge water.





## WELL DEVELOPMENT LOG

Well I.D.: RIWP-10

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Queri Development Company               | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

## WELL INFORMATION

|                                       |        |         |
|---------------------------------------|--------|---------|
| Total Casing and Screen Length (ft):  | 15.0   | feet    |
| Casing Internal Diameter (in.):       | 1      | inches  |
| Water Level Below Top of Casing (ft): | 6.9    | feet    |
| Volume of Water in Casing (gal):      | 0.6885 | Gallons |

1" well = 0.085 gallons per foot

## DEVELOPMENT TECHNIQUE

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |             |      |             |
|------------------------|---------------------------|-------------|------|-------------|
| Gallons                | Beginning:                | 0.0 gallons | End: | 2.5 gallons |
| Time                   | Beginning:                | 1:45 PM     | End: | 2:30 PM     |
| Conductivity (mohm/cm) | Beginning:                | NA          | End: | NA          |
| Dissolved Oxygen (ppm) | Beginning:                | NA          | End: | NA          |
| pH                     | Beginning:                | NA          | End: | NA          |
| Turbidity (NTU)        | Beginning:                | 828         | End: | 158         |
| Temp (°C)              | Beginning:                | NA          | End: | NA          |
| PID Reading (PPM)      | Beginning:                | 0.0         | End: | 0.0         |

## NOTES

1. PID screening result during well purging = 0.0 ppm.
2. Well goes dry and recharges in 5-10 minutes.



## WELL DEVELOPMENT LOG

Well I.D.: **RIWP-13**

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Queri Development Company               | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

### WELL INFORMATION

|                                       |         |         |                                  |
|---------------------------------------|---------|---------|----------------------------------|
| Total Casing and Screen Length (ft):  | 14.3    | feet    |                                  |
| Casing Internal Diameter (in.):       | 1       | inches  |                                  |
| Water Level Below Top of Casing (ft): | 7.33    | feet    |                                  |
| Volume of Water in Casing (gal):      | 0.59245 | Gallons | 1" well = 0.085 gallons per foot |

### DEVELOPMENT TECHNIQUE

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |             |      |             |
|------------------------|---------------------------|-------------|------|-------------|
| Gallons                | Beginning:                | 0.0 gallons | End: | 5.0 gallons |
| Time                   | Beginning:                | 12:00 AM    | End: | 12:45 PM    |
| Conductivity (mohm/cm) | Beginning:                | NA          | End: | NA          |
| Dissolved Oxygen (ppm) | Beginning:                | NA          | End: | NA          |
| pH                     | Beginning:                | NA          | End: | NA          |
| Tiurbidity (NTU)       | Beginning:                | 352         | End: | 236         |
| Temp (°C)              | Beginning:                | NA          | End: | NA          |
| PID Reading (PPM)      | Beginning:                | 0.0         | End: | 0.0         |

### NOTES

1. PID screening result during well purging = 0.0 ppm.
2. Well water clears but becomes tubid at times during pumping.



# WELL DEVELOPMENT LOG

Well I.D.: RIWP-15

|               |   |             |              |
|---------------|---|-------------|--------------|
| Project Name: | Albany SOMA: "The Amos At Quackenbush"  | Project No: | 8081         |
| Client Name:  | Queri Development Company               | Date:       | 6/12/2008    |
| Location:     | Broadway and Spencer Street Albany, NY. | Logged By:  | MGR/Rutledge |
| Weather/Temp. | Sunny 85 degrees                        | Checked By: | M. ROOT      |

## WELL INFORMATION

|                                       |         |         |                                  |
|---------------------------------------|---------|---------|----------------------------------|
| Total Casing and Screen Length (ft):  | 14.5    | feet    |                                  |
| Casing Internal Diameter (in.):       | 1       | inches  |                                  |
| Water Level Below Top of Casing (ft): | 7.33    | feet    |                                  |
| Volume of Water in Casing (gal):      | 0.60945 | Gallons | 1" well = 0.085 gallons per foot |

## DEVELOPMENT TECHNIQUE

|             |              |                  |          |                         |    |
|-------------|--------------|------------------|----------|-------------------------|----|
| Bailer      | -----        | Bailer Material: | -----    | Bailer Diameter (I.D.): | NA |
| Lift Pump   | Peristaltic  | Flow Rate:       | Variable |                         |    |
| Air Lift    | -----        | Flow Rate:       | -----    |                         |    |
| Submersible | -----        | Flow Rate:       | -----    |                         |    |
| Surge       | -----        | Surge Method:    | -----    |                         |    |
| Other       | Over pumping |                  |          |                         |    |

| PARAMETER              | ACCUMULATED VOLUME PURGED |             |      |             |
|------------------------|---------------------------|-------------|------|-------------|
| Gallons                | Beginning:                | 0.0 gallons | End: | 3.0 gallons |
| Time                   | Beginning:                | 12:00 AM    | End: | 12:45 PM    |
| Conductivity (mohm/cm) | Beginning:                | NA          | End: | NA          |
| Dissolved Oxygen (ppm) | Beginning:                | NA          | End: | NA          |
| pH                     | Beginning:                | NA          | End: | NA          |
| Tiurbidity (NTU)       | Beginning:                | 352         | End: | 236         |
| Temp (°C)              | Beginning:                | NA          | End: | NA          |
| PID Reading (PPM)      | Beginning:                | 0.0         | End: | 0.0         |

## NOTES

- PID screening result during well purging = 0.0 ppm.
- Well water clears but becomes tubid at times during pumping.



## APPENDIX H

**APPENDIX H**  
**REMEDIAL INVESTIGATION MONITORING WELL**  
**SAMPLING LOGS**



## Well SAMPLING LOG

Page 1 of 1Well I.D.: RIWP-4

Project Name: Albany SOMA: "The Amos At Quackenbush"  
Client Name: Quer Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp. Sunny 83 degrees

Project No. 8081  
Date: 6/18/2008  
Logged By: MGR/HN  
Checked By: M. ROOT

## WELL INFORMATION

Riser Diameter (I.D.) 1 inches  
Screen Diameter (I.D.) 1 ft  
Screened Interval: 2'-12' ft  
Reported Well Depth: 12 ft

## FIELD MEASUREMENTS

Field Well Depth: 12 ft  
Sand/Silt Accumulation: NA ft  
Depth to Water: 2.76 ft  
Well Water Volume ( $V=(0.17)(I.D. d^2)(\text{Bottom of Boring} - \text{Depth to Water})$ ): 0.79 gallons  
Total Volume Removed: 3 volumes 2.36 gallons  
Purge Time 17.8 minutes

| Purge Duration | PID (PPM) | Turbidity (NTU) | Notes:                       | Sample Date                       | Misc. Well Information |
|----------------|-----------|-----------------|------------------------------|-----------------------------------|------------------------|
| 0              | 0.00      | 120.00          |                              | June 18, 2008                     |                        |
| 1              |           |                 |                              |                                   |                        |
| 2              |           |                 |                              | Start Time: 9:55 AM               | 1"=0.08gal/ft          |
| 3              |           |                 |                              |                                   | 2"=0.17 gal/ft         |
| 4              |           |                 |                              | End Time 10:15 AM                 | 3"=0.38gal/ft          |
| 5              |           |                 |                              |                                   | 4"=0.66 gal/ft         |
| 6              |           |                 |                              |                                   | 5"=1.04 gal/ft         |
| 7              |           |                 |                              | Purging Equipment Used            | 6"=1.50 gal/ft         |
| 8              | 0.0       |                 |                              | Grundfos Pump                     | 8"=2.60 gal/ft         |
| 9              |           |                 |                              | Geotech Pump XX 500 ml per minute |                        |
| 10             |           |                 |                              | Watterra Pump                     |                        |
| 11             |           |                 |                              | Baller                            |                        |
| 12             |           |                 |                              | Bladder Pump                      |                        |
| 13             |           |                 |                              | Analytical Tests Conducted        |                        |
| 14             |           |                 |                              | VOCs 8260 and 8270 TCL            |                        |
| 15             |           |                 |                              | TAL Metals                        |                        |
| 16             |           |                 |                              | Laboratory Completing Tests       |                        |
| 17             |           |                 |                              | Columbia Analytical               |                        |
| 18             | 0         | 43              | Groundwater sample is cloudy |                                   |                        |
| 19             |           |                 |                              |                                   |                        |
| 20             |           |                 |                              | Samples Delivered Via:            |                        |
| 21             |           |                 |                              | Courier FED EX Overnight          |                        |
| 22             |           |                 |                              | Drop off                          |                        |
| 23             |           |                 |                              |                                   |                        |
| 24             |           |                 |                              |                                   |                        |
| 25             |           |                 |                              |                                   |                        |
|                |           |                 |                              | Sample Time: 10:15 AM             |                        |

## Notes:

Initial PID upon opening well: 0.0 ppm  
During Purging Activities: 0.0 ppm





# Well SAMPLING LOG

Page 1 of 1Well I.D.: RIWP-5

Project Name: Albany SOMA: "The Amos At Quackenbush"  
Client Name: Queri Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp. Sunny 85 degrees

Project No. 8081  
Date: 6/19/2008  
Logged By: MGR/HN  
Checked By: M. ROOT

## WELL INFORMATION

Riser Diameter (I.D.) 1 inches  
Screen Diameter (I.D.) 1 ft  
Screened Interval: 5'-15' ft  
Reported Well Depth: 15 ft

## FIELD MEASUREMENTS

Field Well Depth: 15 ft  
Sand/Silt Accumulation: NA ft  
Depth to Water: 5.45 ft  
Well Water Volume ( $V=(0.17)(I.D. d^2)(\text{Bottom of Boring} - \text{Depth to Water})$ ): 0.81 gallons  
Total Volume Removed: 3 volumes 2.44 gallons  
Purge Time 18.4 minutes

| Purge Duration | PID (PPM) | Turbidity (NTU) | Notes:                       | Sample Date          | Misc. Well Information |
|----------------|-----------|-----------------|------------------------------|----------------------|------------------------|
| 0              | 0.00      | 380.00          | Groundwater sample is cloudy | June 19, 2008        | 1"=0.08 gal/ft         |
| 1              |           |                 |                              |                      | 2"=0.17 gal/ft         |
| 2              |           |                 |                              | Start Time: 12:43 PM | 3"=0.38 gal/ft         |
| 3              |           |                 |                              | End Time: 1:00 PM    | 4"=0.66 gal/ft         |
| 4              |           |                 |                              |                      | 5"=1.04 gal/ft         |
| 5              |           |                 |                              |                      | 6"=1.50 gal/ft         |
| 6              |           |                 |                              |                      | 8"=2.60 gal/ft         |
| 7              |           |                 |                              |                      |                        |
| 8              |           |                 |                              |                      |                        |
| 9              | 0.0       |                 |                              |                      |                        |
| 10             |           |                 |                              |                      |                        |
| 11             |           |                 |                              |                      |                        |
| 12             |           |                 |                              |                      |                        |
| 13             |           |                 |                              |                      |                        |
| 14             |           |                 |                              |                      |                        |
| 15             |           |                 |                              |                      |                        |
| 16             |           |                 |                              |                      |                        |
| 17             |           |                 |                              |                      |                        |
| 18             | 0.0       | 43              | Groundwater sample is cloudy |                      |                        |
| 19             |           |                 |                              |                      |                        |
| 20             |           |                 |                              |                      |                        |
| 21             |           |                 |                              |                      |                        |
| 22             |           |                 |                              |                      |                        |
| 23             |           |                 |                              |                      |                        |
| 24             |           |                 |                              |                      |                        |
| 25             |           |                 |                              |                      |                        |

Notes:

Initial PID upon opening well: 0.0 ppm  
During Purging Activities: 0.0 ppm  
Duplicate Sample collected from RIWP-5 6/19/2008



## Well SAMPLING LOG

Page 1 of 1Well I.D.: RIWP-6

Project Name: Albany SOMA: "The Amos At Quackenbush"  
Client Name: Queri Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp. Sunny 85 degrees

Project No. 8081  
Date: 6/19/2008  
Logged By: MGR/HN  
Checked By: M. ROOT

## WELL INFORMATION

Riser Diameter (I.D.) 1 inches  
Screen Diameter (I.D.) 1 ft  
Screened Interval: 3'-13' ft  
Reported Well Depth: 13 ft

## FIELD MEASUREMENTS

Field Well Depth: 13 ft  
Sand/Silt Accumulation: NA ft  
Depth to Water: 7.28 ft  
Well Water Volume ( $V=(0.17)(I.D. d^2)(Bottom\ of\ Boring - Depth\ to\ Water)$ ): 0.49 gallons  
Total Volume Removed: 3 volumes 1.46 gallons  
Purge Time 11.0 minutes

| Purge Duration | PID (PPM) | Turbidity (NTU) | Notes:   | Sample Date          | Misc. Well Information |
|----------------|-----------|-----------------|--|----------------------|------------------------|
| 0              | 0.50      | over range      | Groundwater sample is cloudy                           | June 19, 2008        | 1"=0.08gal/ft          |
| 1              |           |                 |  |                      | 2"=0.17 gal/ft         |
| 2              |           |                 |  | Start Time: 12:29 PM | 3"=0.38gal/ft          |
| 3              |           |                 |  | End Time: 12:45 PM   | 4"=0.66 gal/ft         |
| 4              |           |                 |  |                      | 5"=1.04 gal/ft         |
| 5              | 0.0       |                 |  |                      | 6"=1.50 gal/ft         |
| 6              |           |                 |  |                      | 8"=2.60 gal/ft         |
| 7              |           |                 |  |                      |                        |
| 8              |           |                 |  |                      |                        |
| 9              |           |                 |  |                      |                        |
| 10             |           |                 |  |                      |                        |
| 11             | 0.0       | over range      | Groundwater sample is black with trace sheen on water. |                      |                        |
| 12             |           |                 |  |                      |                        |
| 13             |           |                 |  |                      |                        |
| 14             |           |                 |  |                      |                        |
| 15             |           |                 |  |                      |                        |
| 16             |           |                 |  |                      |                        |
| 17             |           |                 |  |                      |                        |
| 18             |           |                 |  |                      |                        |
| 19             |           |                 |  |                      |                        |
| 20             |           |                 |  |                      |                        |
| 21             |           |                 |  |                      |                        |
| 22             |           |                 |  |                      |                        |
| 23             |           |                 |  |                      |                        |
| 24             |           |                 |  |                      |                        |
| 25             |           |                 |  |                      |                        |

Notes:

Initial PID upon opening well: 0.05ppm  
During Purging Activities: 0.0 ppm



# Well SAMPLING LOG

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Well I.D.: RIWP-8

Project Name: Albany SOMA: "The Amos At Quackenbush"  
Client Name: Queri Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp: Sunny 85 degrees

Project No. 8081  
Date: 6/18/2008  
Logged By: MGR/HN  
Checked By: M. ROOT

## WELL INFORMATION

Riser Diameter (I.D.) 1 inches  
Screen Diameter (I.D.) 1 ft  
Screened Interval: 5'-15' ft  
Reported Well Depth: 15 ft

## FIELD MEASUREMENTS

Field Well Depth: 15 ft  
Sand/Silt Accumulation: NA ft  
Depth to Water: 9.18 ft  
Well Water Volume ( $V=(0.17)(I.D. d^2)(\text{Bottom of Boring} - \text{Depth to Water})$ ): 0.49 gallons  
Total Volume Removed: 3 volumes 1.48 gallons  
Purge Time 11.2 minutes

| Purge Duration | PID (PPM) | Turbidity (NTU) | Notes:                       | Sample Date          | Misc. Well Information |
|----------------|-----------|-----------------|------------------------------|----------------------|------------------------|
| 0              | 0.00      | 410.00          |                              | June 18, 2008        |                        |
| 1              |           |                 |                              |                      |                        |
| 2              |           |                 |                              |                      |                        |
| 3              |           |                 |                              | Start Time: 12:49 PM | 1"=0.08gal/ft          |
| 4              |           |                 |                              |                      | 2"=0.17 gal/ft         |
| 5              | 0.0       |                 |                              | End Time: 1:00 PM    | 3"=0.38gal/ft          |
| 6              |           |                 |                              |                      | 4"=0.66 gal/ft         |
| 7              |           |                 |                              |                      | 5"=1.04 gal/ft         |
| 8              |           |                 |                              |                      | 6"=1.50 gal/ft         |
| 9              |           |                 |                              |                      | 8"=2.60 gal/ft         |
| 10             |           |                 |                              |                      |                        |
| 11             | 0.0       | 220             | Groundwater sample is cloudy |                      |                        |
| 12             |           |                 |                              |                      |                        |
| 13             |           |                 |                              |                      |                        |
| 14             |           |                 |                              |                      |                        |
| 15             |           |                 |                              |                      |                        |
| 16             |           |                 |                              |                      |                        |
| 17             |           |                 |                              |                      |                        |
| 18             |           |                 |                              |                      |                        |
| 19             |           |                 |                              |                      |                        |
| 20             |           |                 |                              |                      |                        |
| 21             |           |                 |                              |                      |                        |
| 22             |           |                 |                              |                      |                        |
| 23             |           |                 |                              |                      |                        |
| 24             |           |                 |                              |                      |                        |
| 25             |           |                 |                              |                      |                        |

Notes:

Initial PID upon opening well: 0.0 ppm  
During Purging Activities: 0.0 ppm





# Well SAMPLING LOG

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Well I.D.: RIWP-9

Project Name: Albany SOMA: "The Amos At Quackenbush"  
Client Name: Querl Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp. Sunny 85 degrees

Project No. 8081  
Date: 6/18/2008  
Logged By: MGR/HH  
Checked By: M. ROOT

## WELL INFORMATION

Riser Diameter (I.D.) 1 inches  
Screen Diameter (I.D.) 1 ft  
Screened Interval: 5'-15' ft  
Reported Well Depth: 15 ft

## FIELD MEASUREMENTS

Field Well Depth: 15 ft  
Sand/Silt Accumulation: NA ft  
Depth to Water: 8.98 ft  
Well Water Volume ( $V=(0.17)(I.D. d^2)(\text{Bottom of Boring} - \text{Depth to Water})$ ): 0.51 gallons  
Total Volume Removed: 3 volumes 1.54 gallons  
Purge Time 11.6 minutes

| Purge Duration | PID (PPM) | Turbidity (NTU) | Notes:                       | Sample Date          | Misc. Well Information |
|----------------|-----------|-----------------|------------------------------|----------------------|------------------------|
| 0              | 0.00      | 248.00          |                              | June 18, 2008        |                        |
| 1              |           |                 |                              |                      |                        |
| 2              |           |                 |                              |                      |                        |
| 3              |           |                 |                              | Start Time: 12:49 PM | 1"=0.08gal/ft          |
| 4              |           |                 |                              |                      | 2"=0.17 gal/ft         |
| 5              | 0.0       |                 |                              | End Time: 10:05 AM   | 3"=0.38gal/ft          |
| 6              |           |                 |                              |                      | 4"=0.66 gal/ft         |
| 7              |           |                 |                              |                      | 5"=1.04 gal/ft         |
| 8              |           |                 |                              |                      | 6"=1.50 gal/ft         |
| 9              |           |                 |                              |                      | 8"=2.60 gal/ft         |
| 10             |           |                 |                              |                      |                        |
| 11             | 0.0       | 134             | Groundwater sample is cloudy |                      |                        |
| 12             |           |                 |                              |                      |                        |
| 13             |           |                 |                              |                      |                        |
| 14             |           |                 |                              |                      |                        |
| 15             |           |                 |                              |                      |                        |
| 16             |           |                 |                              |                      |                        |
| 17             |           |                 |                              |                      |                        |
| 18             |           |                 |                              |                      |                        |
| 19             |           |                 |                              |                      |                        |
| 20             |           |                 |                              |                      |                        |
| 21             |           |                 |                              |                      |                        |
| 22             |           |                 |                              |                      |                        |
| 23             |           |                 |                              |                      |                        |
| 24             |           |                 |                              |                      |                        |
| 25             |           |                 |                              |                      |                        |

Notes:

Initial PID upon opening well: 0.0 ppm  
During Purging Activities: 0.0 ppm



# Well SAMPLING LOG

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Well I.D.: RIWP-10

Project Name: Albany SOMA: "The Amos At Quackenbush"  
 Client Name: Quer Development Company  
 Location: Broadway and Spencer Street Albany, NY.  
 Weather/Temp: Sunny 85 degrees

Project No. 8081  
 Date: 6/18/2008  
 Logged By: MGR/HN  
 Checked By: M. ROOT

## WELL INFORMATION

Riser Diameter (I.D.) 1 inches  
 Screen Diameter (I.D.) 1 ft  
 Screened Interval: 5'-15' ft  
 Reported Well Depth: 15 ft

## FIELD MEASUREMENTS

Field Well Depth: 15 ft  
 Sand/Silt Accumulation: NA ft  
 Depth to Water: 7.72 ft  
 Well Water Volume ( $V=(0.17)(I.D. d^2)(\text{Bottom of Boring} - \text{Depth to Water})$ ): 0.62 gallons  
 Total Volume Removed: 3 volumes 1.86 gallons  
 Purge Time: 14.0 minutes

| Purge Duration | PID (PPM) | Turbidity (NTU) | Notes:                       | Sample Date          | Misc. Well Information |
|----------------|-----------|-----------------|------------------------------|----------------------|------------------------|
| 0              | 0.00      | 398.00          |                              | June 18, 2008        | 1"=0.08 gal/ft         |
| 1              |           |                 |                              |                      | 2"=0.17 gal/ft         |
| 2              |           |                 |                              | Start Time: 11:45 AM | 3"=0.38 gal/ft         |
| 3              |           |                 |                              | End Time: 12:00 AM   | 4"=0.66 gal/ft         |
| 4              |           |                 |                              |                      | 5"=1.04 gal/ft         |
| 5              |           |                 |                              |                      | 6"=1.50 gal/ft         |
| 6              |           |                 |                              |                      | 8"=2.60 gal/ft         |
| 7              | 0.0       |                 |                              |                      |                        |
| 8              |           |                 |                              |                      |                        |
| 9              |           |                 |                              |                      |                        |
| 10             |           |                 |                              |                      |                        |
| 11             |           |                 |                              |                      |                        |
| 12             |           |                 |                              |                      |                        |
| 13             |           |                 |                              |                      |                        |
| 14             |           |                 |                              |                      |                        |
| 15             | 0.0       | 125             | Groundwater sample is cloudy |                      |                        |
| 16             |           |                 |                              |                      |                        |
| 17             |           |                 |                              |                      |                        |
| 18             |           |                 |                              |                      |                        |
| 19             |           |                 |                              |                      |                        |
| 20             |           |                 |                              |                      |                        |
| 21             |           |                 |                              |                      |                        |
| 22             |           |                 |                              |                      |                        |
| 23             |           |                 |                              |                      |                        |
| 24             |           |                 |                              |                      |                        |
| 25             |           |                 |                              |                      |                        |

Notes:

Initial PID upon opening well: 0.0 ppm  
 During Purging Activities: 0.0 ppm



# Well SAMPLING LOG

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Well I.D.: RIWP-13

Project Name: Albany SOMA: "The Amos At Quackenbush"  
Client Name: Queri Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp: Sunny 85 degrees

Project No. 8081  
Date: 6/18/2008  
Logged By: MGR/HN  
Checked By: M. ROOT

## WELL INFORMATION

Riser Diameter (I.D.) 1 inches  
Screen Diameter (I.D.) 1 ft  
Screened Interval: 5'-15' ft  
Reported Well Depth: 15 ft

## FIELD MEASUREMENTS

Field Well Depth: 15 ft  
Sand/Silt Accumulation: NA ft  
Depth to Water: 6.03 ft  
Well Water Volume ( $V=(0.17)(I.D. d^2)(\text{Bottom of Boring} - \text{Depth to Water})$ ): 0.76 gallons  
Total Volume Removed: 3 volumes 2.29 gallons  
Purge Time: 17.3 minutes

| Purge Duration | PID (PPM) | Turbidity (NTU) | Notes:                       | Sample Date | June 18, 2008 | Misc. Well Information |
|----------------|-----------|-----------------|------------------------------|-------------|---------------|------------------------|
| 0              | 0.00      | 397.00          |                              |             |               | 1"=0.08gal/ft          |
| 1              |           |                 |                              |             |               | 2"=0.17 gal/ft         |
| 2              |           |                 |                              | Start Time: | 11:50 AM      | 3"=0.38gal/ft          |
| 3              |           |                 |                              | End Time:   | 11:10 AM      | 4"=0.66 gal/ft         |
| 4              |           |                 |                              |             |               | 5"=1.04 gal/ft         |
| 5              |           |                 |                              |             |               | 6"=1.50 gal/ft         |
| 6              |           |                 |                              |             |               | 8"=2.60 gal/ft         |
| 7              | 0.0       |                 |                              |             |               |                        |
| 8              |           |                 |                              |             |               |                        |
| 9              |           |                 |                              |             |               |                        |
| 10             |           |                 |                              |             |               |                        |
| 11             |           |                 |                              |             |               |                        |
| 12             |           |                 |                              |             |               |                        |
| 13             |           |                 |                              |             |               |                        |
| 14             |           |                 |                              |             |               |                        |
| 15             |           |                 |                              |             |               |                        |
| 16             |           |                 |                              |             |               |                        |
| 17             | 0.0       | 238             | Groundwater sample is cloudy |             |               |                        |
| 18             |           |                 |                              |             |               |                        |
| 19             |           |                 |                              |             |               |                        |
| 20             |           |                 |                              |             |               |                        |
| 21             |           |                 |                              |             |               |                        |
| 22             |           |                 |                              |             |               |                        |
| 23             |           |                 |                              |             |               |                        |
| 24             |           |                 |                              |             |               |                        |
| 25             |           |                 |                              |             |               |                        |

Notes:

Initial PID upon opening well: 0.0 ppm  
During Purging Activities: 0.0 ppm





# Well SAMPLING LOG

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Well I.D.: RIWP-15

Project Name: Albany SOMA: "The Amos At Quackenbush"  
Client Name: Querl Development Company  
Location: Broadway and Spencer Street Albany, NY.  
Weather/Temp: Sunny 85 degrees

Project No. 8081  
Date: 6/18/2008 - 6/19/2008  
Logged By: MGR/HN  
Checked By: M. ROOT

## WELL INFORMATION

Riser Diameter (I.D.) 1 inches  
Screen Diameter (I.D.) 1 ft  
Screened Interval: 5'-15' ft  
Reported Well Depth: 15 ft

## FIELD MEASUREMENTS

Field Well Depth: 15 ft  
Sand/Silt Accumulation: NA ft  
Depth to Water: 6.56 ft  
Well Water Volume ( $V=(0.17)(I.D. d^2)(Bottom\ of\ Boring - Depth\ to\ Water)$ ): 0.72 gallons  
Total Volume Removed: 3 volumes 2.15 gallons  
Purge Time 16.3 minutes

| Purge Duration | PID (PPM) | Turbidity (NTU) | Notes:                       | Sample Date  | June 18, 2008                     | Misc. Well Information |
|----------------|-----------|-----------------|------------------------------|--------------|-----------------------------------|------------------------|
| 0              | 0.00      | 215.00          |                              |              |                                   | 1"=0.08gal/ft          |
| 1              |           |                 |                              |              |                                   | 2"=0.17 gal/ft         |
| 2              |           |                 |                              | Start Time:  | 11:58 AM                          | 3"=0.38gal/ft          |
| 3              |           |                 |                              | End Time:    | 11:15 AM                          | 4"=0.66 gal/ft         |
| 4              |           |                 |                              |              |                                   | 5"=1.04 gal/ft         |
| 5              |           |                 |                              |              |                                   | 6"=1.50 gal/ft         |
| 6              |           |                 |                              |              |                                   | 8"=2.60 gal/ft         |
| 7              | 0.0       |                 |                              |              | Purging Equipment Used            |                        |
| 8              |           |                 |                              |              | Grundfos Pump                     |                        |
| 9              |           |                 |                              |              | Geotech Pump XX 500 ml per minute |                        |
| 10             |           |                 |                              |              | Watterra Pump                     |                        |
| 11             |           |                 |                              |              | Bailer                            |                        |
| 12             |           |                 |                              |              | Bladder Pump                      |                        |
| 13             |           |                 |                              |              | Analytical Tests Conducted        |                        |
| 14             |           |                 |                              |              | VOCs 8260 and 8270 TCL            |                        |
| 15             |           |                 |                              |              | TAL Metals                        |                        |
| 16             |           |                 |                              |              | Laboratory Completing Tests       |                        |
| 17             | 0.0       | 78.7            | Groundwater sample is cloudy |              | Columbia Analytical               |                        |
| 18             |           |                 |                              |              |                                   |                        |
| 19             |           |                 |                              |              |                                   |                        |
| 20             |           |                 |                              |              | Samples Delivered Via:            |                        |
| 21             |           |                 |                              |              | Courier FED EX Overnight          |                        |
| 22             |           |                 |                              |              | Drop off                          |                        |
| 23             |           |                 |                              |              |                                   |                        |
| 24             |           |                 |                              |              |                                   |                        |
| 25             |           |                 |                              |              |                                   |                        |
|                |           |                 |                              | Sample Time: | 11:15 AM                          |                        |

Notes:

Initial PID upon opening well: 0.0 ppm  
During Purging Activities: 0.0 ppm