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REVISED REMEDIAL INVESTIGATION REPORT/REMEDIAL INVESTIGATION REPORT ADDENDUM
CORNWALL PLAZA
CORNWALL, NEW YORK
BCP SITE ID NO. C336070

Prepared For:

Cornwall Shopping, LLC
c/o Philips International Holding Corp.

January 5, 2011

ARCADIS

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Remedial Investigation
Report/Remedial Investigation Report
Addendum
Cornwall Plaza
Cornwall, New York
BCP Site ID No. C336070

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Task Manager 2

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Principal Scientist

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

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Tables

Figures

Appendices

REVISED REMEDIAL INVESTIGATION REPORT
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1.0 INTRODUCTION

The following Revised Remedial Investigation Report (RIR) for the Cornwall Plaza (the Site) located at 19-45 Quaker Avenue, Cornwall, New York (Figure 1) was initially prepared by Leggette, Brashears & Graham, Inc. (LBG) on behalf of Cornwall Shopping, LLC, c/o Philips International Holding Corp. ("Cornwall Shopping"), an innocent volunteer, and submitted in draft form by LGB to the New York State Department of Environmental Conservation (NYSDEC) in January 2010. The NYSDEC requested modifications to the RIR in correspondence dated April 7, 2010. ARCADIS U.S., Inc. (ARCADIS f/k/a LFR) was retained as the environmental consultant by Cornwall Shopping to complete the Remedial Investigation (RI) and implement the required remedial actions. ARCADIS has revised the RIR to include the information requested by NYSDEC in the April 2010 letter and implemented the additional soil characterization sampling described in NYSDEC correspondence dated June 14, 2010.

The RI was completed to determine the severity and extent of contamination by chlorinated solvents in various environmental media (soil, groundwater, soil vapor and air), both at and beneath the Site, as well as in offsite areas. The revised RIR prepared by ARCADIS contains the information provided in the draft RI with the modifications requested by NYSDEC including: 1) Comparison of soil data to values listed in proposed Commissioner Policy and those in 6 NYRCC Part 375-6 (Section 4.4), 2) inclusion of minimum reporting limits for data generated during the soil vapor intrusion investigation (Tables 3-7) and 3) Data Usability Summary Reports (DUSR) for laboratory data generated during the RI as per Section 2.2 and Appendix 2A of NYSDEC DER-10. In Item 4 of the April 7, 2010 letter, the NYSDEC indicated the concentrations of tetrachloroethene (PCE) detected in on-site sub-slab soil vapor requires mitigation and must be addressed either in the Alternatives Analysis Report (AAR) or as an interim remedial measure (IRM). This matter will be addressed in an AAR to be submitted following NYSDEC approval of the revised RIR.

The RIR Addendum (Section 7) documents the collection and analytical results of soil characterization sampling completed by ARCADIS. The soil characterization sampling was requested by NYSDEC during a June 10, 2010 site meeting, and in correspondence dated June 14, 2010.

2.0 SITE HISTORY AND PHYSICAL SETTING

2.1 Site History

The Site is located at 19-45 Quaker Avenue in the Town of Cornwall, Orange County, New York and is described at Town of Cornwall Tax Parcel Section 23, Block 3, Lot 4. The Site is approximately 4.2 acres in area. Approximately 19 percent of the total area is occupied by two separate buildings, with the remainder comprised of associated paved parking and driveway areas. The Site is currently a portion of Cornwall Plaza, a 5-building, multi-tenant strip mall. The easternmost Site building is occupied by the following businesses (from west to east): Bank of America, Leo's Pizzeria, Cornwall Wash n' Dry, Chan's Peking House (Chan's) and Key Food Grocery Store (until Summer 2010). The location of the Site, as shown on Figure 1, is at 41°26'03" north latitude and 74°02'18" west longitude. A Site plan is provided as Figure 2 and a tax map is provided as Figure 3.

According to a Phase I environmental site assessment (ESA) completed by LFR Levine Fricke (LFR) in November 2005, the Site was developed with one residential dwelling from at least 1902 through 1966 when the easternmost building was developed and occupied by Grand Union (grocery store). By 1970, the Site consisted of two buildings, as shown on Figure 2.

A Phase II ESA prepared by LFR in November 2005, concluded that chlorinated solvents were present in soil and groundwater beneath the Site. The source of these contaminants is the result of a release or releases from the Site's former dry-cleaning business (Cornwall Cleaners). Chan's is the current lessee of the former Cornwall Cleaners leasehold space. Based on documents in the Cornwall Assessor's Office, Cornwall Cleaners operated at the Cornwall Plaza as a dry cleaner and Laundromat from approximately 1967 through 1994. Records indicate that the leasehold space was converted from a dry cleaner to a restaurant in

1994. It should be noted that the Cornwall Wash n' Dry, located adjacent to Chan's, is not associated with the former Cornwall Cleaners and is a laundromat, which does not perform on-site dry cleaning.

The facility is listed on the Facility Index System (FINDS) and Resource Conservation and Recovery Act (RCRA) Small Quantity Generator (SQG) databases with EPA ID No. NYD054065735. The Brownfields Cleanup Program (BCP) Volunteer acquired ownership of the Site on or about March 7, 2006, after the suspected release(s) from Cornwall Cleaners. The Site was entered into the BCP as Site ID No. C336070 on November 13, 2006.

2.2 Physical Setting

The Site is used for retail and commercial business. The Site is almost entirely either paved with asphalt or overlain by one story buildings with slab-on-grade construction. There is a narrow brushy area along the south property line and a grass strip, which separates the Site from the adjacent Fire Department to the east. There are also small, isolated areas of unpaved landscaping along Quaker Avenue. The Site lies at an elevation of approximately 280 feet above mean sea level and is relatively flat. Surrounding land slopes topographically very gradually downward toward the north and east and upward toward the south (Figure 1).

The Site buildings contain no basements or subgrade, humanly accessible areas. The Site is served by a municipal sanitary sewer and potable water operated by the Town of Cornwall, a separate storm drainage system, subsurface natural gas (Central Hudson Energy Group, Inc.) and overhead electric supply. According to the Cornwall Water Department Superintendent Mr. Robert June, the source of the Town water is a combination of water from the New York City aqueduct system and from groundwater production wells located approximately 2.8 miles west of the Site.

The Site is bordered on the north by Quaker Avenue, beyond which are residential dwellings and small, home-based businesses (e.g. real estate, chiropractic offices), on the east by the Cornwall Fire Department property and Angola Street, on the south by Warren Court

and residential dwellings and on the west by the rest of Cornwall Plaza (more retail spaces), Cedar Lane, residential dwellings and State Route 9W. St. Luke's Cornwall Hospital is located 0.25 mile northwest of the Site.

Approximately 500 feet east of the Site is a small stream locally referred to as Idlewile (or Indelible) Creek. This creek originates in the highlands south of the Site and flows north through Cornwall to its confluence with Moodna Creek and the Hudson River (Figure 1). There are no surface-water bodies on the Site.

2.3 Prior Site Investigation

In August and October 2005, LFR collected soil and groundwater samples from borings and monitoring wells around the perimeter of the eastern Site building. Samples were analyzed for volatile organic compounds (VOCs). Laboratory analysis indicates that soil and groundwater samples contained chlorinated VOCs including tetrachloroethene (aka PCE or perc), trichloroethene (TCE), cis-1,2-dichloroethene (DCE) and vinyl chloride at levels above applicable state standards or guidance values. PCE is a common dry-cleaning chemical and TCE, DCE and vinyl chloride are known degradation products. The results of this investigation as well as prior investigations indicate that these chlorinated solvents are the Compounds of Concern (COCs) at the Site. Details regarding the LFR Phase II investigation are included in the prior LBG report entitled "Remedial Investigation Work Plan, Cornwall Plaza, Cornwall, New York, BCP Site ID No. C336070," dated August 2007.

3.0 LBG REMEDIAL INVESTIGATION

The LBG investigation was initiated in October 2007 in accordance with the Remedial Investigation Work Plan (RIWP) approved July 6, 2007. The results of the first groundwater sampling event indicated that additional downgradient monitoring wells would be needed to delineate the extent of groundwater impact. The second phase of the investigation was conducted in April, May and June of 2009 and included additional monitoring well installation and soil, groundwater and air sampling.

3.1 Soil Vapor and Sub-Slab Vapor Sampling

On October 25, 2007, LBG hydrogeologists collected soil vapor and sub-slab vapor samples at the Site. The sampling was performed in accordance with the RIWP and with New York State Department of Health (NYSDOH) protocols presented in: "Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006."

Two soil vapor samples were collected immediately north and south of the Chan's leasehold space at the locations shown on Figure 4. The samples are identified as "SVF" (Soil Vapor Front) and "SVR" (Soil Vapor Rear). The asphalt surface was penetrated by drilling to a depth of approximately 1 foot. A hollow, 0.25-inch diameter dedicated stainless steel probe was placed in the hole. The point of penetration at grade was sealed with melted bees wax. The probe was purged of approximately 3 volumes at a rate of less than 0.2 1/m (liters per minute). To ensure an adequate surface seal, helium and a helium detector were utilized. A polyethylene sheet was taped to the ground around the penetration point. Helium was introduced beneath the sheet and the helium detector was attached to the probe with dedicated tygon tubing. The surface seal was adjusted until no helium was detected exiting the probe indicating that no atmospheric short-circuiting was occurring.

After the surface seal integrity was verified, the helium detector was replaced with a 6-liter laboratory-certified Summa canister and flow controller. The flow controllers were calibrated at the laboratory to fill the canisters during a 1-hour period (soil vapor and sub-slab vapor samples), which is equivalent to 0.1 1/m. The valve on the Summa canister was opened and the time and vacuum readings were recorded. Vacuum was checked periodically to ensure that a small vacuum remained in the canister upon completion. After sample collection, the valve was closed and the canister was placed in its shipping container.

On October 25, 2007, LBG hydrogeologists collected 4 sub-slab vapor samples. The samples are identified as "KFSS1" (Key Food Sub-Slab 1), "LPSS1" (Leo's Pizza Sub-Slab 1) and "CPHSSI" and "CPHSS2" (Chan's Sub-Slab 1 and 2, front and rear of restaurant, respectively, Figure 4). Procedurally, the sampling protocol was the same as described above for

soil vapor sampling. Probes were placed approximately 0.5 foot below the floor surface into the sub-slab material. Surface seal integrity was verified with helium. Samples were collected in certificated 6-liter Summas at a flow rate of 0.1 l/m. Vapor samples were collected in laboratory-certified Suma canisters and shipped under chain of custody to Air Toxics, Ltd. of Folsom, California (Air Toxics). The samples were analyzed for VOCs by EPA Method TO-15. Results were reported with ASP Category B deliverables. Copies of all laboratory reports are included on the attached CD (Appendix III).

On April 30, 2009, the second phase of air sampling was performed. One soil vapor sample was collected from outside the Cornwall Fire Department building at a depth of 6 ft bg and identified as "CFDSV 1" (Cornwall Fire Department Soil Vapor 1). The depth of this sample corresponds approximately with the depth of the building foundation footer (the building has a partial basement). On the same date, one sub-slab vapor sample was collected from beneath the basement floor of the Fire Department building and identified as "CFDSSI" (Cornwall Fire Department Sub Slab 1). Sample locations are shown on Figure 4. Samples were collected with 6-liter Suma canisters following the procedures described above. Vapor samples were sent under chain-of-custody to York Analytical Laboratory of Stamford, Connecticut (York) where they were analyzed by TO-15. All air/vapor samples were analyzed for VOCs by EPA Method TO-15. Results were reported with ASP Category B deliverables. Copies of all laboratory reports are included on the attached CD (Appendix III).

3.2 Indoor Air Vapor Sampling

Indoor air vapor sampling was conducted concurrently with the soil vapor and sub-slab vapor sampling on October 25, 2007. A total of 3 samples were collected from within Key Food, Chan's and Leo's Pizza (Figure 4). Indoor air samples are identified as "KFIAl" (Key Food Indoor Air 1), "LPIAl" (Leo's Pizza Indoor Air 1) and "CIAl" (Chan's Indoor Air 1). A 6-liter Summa canister was placed approximately 5 feet above the floor in the retail area of each leasehold space. The canisters were fitted with laboratory-calibrated flow controllers set to approximately 0.75 liters per hour (0.0125 l/m). Each sample was collected over an 8-hour period. The samples were shipped to Air Toxics where they were analyzed by TO-15 with

selected ion monitoring analysis for the 7 compounds listed in the NYSDOH guidance document.

During the second phase of air sampling on April 30, 2009, indoor air samples were again collected from the Key Food, Chan's and Leo's Pizza leasehold spaces. These samples are identified as "KFIA2", "CIA2" and "LPIA2". Also on this date, 2 indoor air samples were collected from inside the Cornwall Fire Department building, one from the basement ("CFDIA I") and one from the first floor ("CFDIA2"). The samples were shipped to York for analysis by TO-15 with selected ion monitoring analysis.

An Indoor Air Quality Questionnaire and Building Inventory were completed at each indoor air sampling location (Key Food, Chan's, Leo's and the Fire Department) in accordance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion. The questionnaires are attached as Appendix I.

3.3 Outdoor Ambient Air Vapor Sampling

Two outdoor ambient air vapor samples were collected concurrently with the vapor samples described in Sections 3.1 and 3.2 (October 25, 2007) and are identified as "OAF" (Outdoor Air Front) and "OAR" (Outdoor Air Rear). Six-liter Summa canisters fitted with laboratory-calibrated 8-hour flow regulators were placed approximately 4 to 6 feet above the ground outside and in front of (north) and behind (south) Chan's leasehold space (Figure 4). The samples were shipped to Air Toxics for analysis by TO-15 with selected ion monitoring analysis. Results were reported with ASP Category B deliverables. Copies of all laboratory reports are included on the attached CD (Appendix III).

3.4 Soil Sampling/Monitoring Well Installation

The first phase of the investigation consisted of the drilling of 10 soil borings and installation of 7 overburden monitoring wells and 3 bedrock monitoring wells between November 12 and November 29, 2007. The overburden wells, designated as MW-1R, MW-4, MW-5, MW-6, MW-7, MW-8 and MW-9, and bedrock wells, designated as MW-2B,

MW-3B and MW-6B, are shown on Figure 5. MW-1R is a replacement for Monitoring Well MW-1, which was installed in October 2005 and was destroyed during the repair of a subsurface pipe sometime in early 2007.

The second phase of fieldwork consisted of the drilling of 8 additional soil borings and the installation of 4 overburden monitoring wells and 3 bedrock monitoring wells between April 27 and May 12, 2009. The overburden wells designated MW-10, MW-11, MW-12 and MW-13 and bedrock wells designated MW-1B, MW-11B and MW-12B are shown on Figure 5. Drill cuttings were contained in 55-gallon steel drums and stored temporarily onsite. Composite samples of the drum contents were submitted to AMRO Environmental Laboratory Corp. of Merrimack, New Hampshire (AMRO) for analysis of characteristics for disposal. A total of 27 drums were transported under manifest by Innovative Recycling Technologies of Lindenhurst, New York (Innovative). Sixteen drums were transported to CWM Chemical Services, LLC of Model City, New York on January 21, 2008 and 11 drums were transported to Vexor Technology, Inc. of Medina, Ohio on June 11, 2009. Laboratory analysis, transportation and disposal manifests are included on the attached CD (Appendix III).

3.4.1 Soil Sampling/Overburden Monitoring Well Installation

During both phases of drilling (November 2007 and April-May 2009), soil borings were drilled and monitoring wells installed by Aquifer Drilling & Testing of Troy, New York (ADT) using either the hollow-stem auger method or the drive-and-wash method. In November 2007, soil was sampled continuously from 5 ft bg (feet below grade) to the bedrock surface using a 2-foot split-spoon sampling device.

Due to the fact that offsite soil boring locations drilled during the second phase of the investigation (April-May 2009) were several hundred feet away from the former dry cleaner, no vadose soil contamination was anticipated. However, at the request of the NYSDEC, soil samples were collected for laboratory analysis from just above the water table in borings MW-11 and MW-12.

Soil samples from each boring were described on a geologic log and screened for the presence of VOCs with a photoionization detector (PID). The data is presented in Appendix II. Select soil samples from each boring were submitted to AMRO for analysis of VOCs by EPA Method 8260. Results were reported with ASP Category B deliverables.

Following completion of each soil boring, a 2-inch diameter 0.020-slot well screen was placed in the boring. A 2-inch diameter riser pipe extends from the top of the screen section to grade. Screen and riser pipe are galvanized steel in MW-1R, MW-4, MW-5 and MW-6 and Schedule 40 PVC in MW-7, MW-8 and MW-9. The annular space around each well screen is filled with #2 quartz filter sand from the bottom of the screen section to 1-2 feet above the screen. A 1-foot thick hydrated bentonite seal is placed above the filter sand. The remaining annular space is filled with cuttings. The wells were completed at grade with well plugs and an 8-inch cast iron, flush-mount roadbox set in a concrete pad. Well construction details are summarized on Table 1 and well diagrams are included in Appendix II.

3.4.2 Bedrock Monitoring Well Installation

ADT drilled the soil borings and rock boreholes using two techniques. First, 6 7/8-inch hollow-stem augers were advanced from grade to the point of auger refusal (depth was variable across the Site). Soil was collected from Borings MW-2B and MW-3B, described on the logs, screened with a PID and shipped to AMRO for analysis by EPA Method 8260. A 5-inch diameter air-operated hammer bit was then used to advance the boring at least 2 feet into competent bedrock. The depth of competent rock was determined based on the rate of boring advancement and drill cuttings characteristics. The hammer bit was then withdrawn and a 4-inch diameter steel casing was lowered into the borehole and the bedrock hole. A mixture of concrete and bentonite (grout) was pumped into the annular space surrounding the steel casing. This grout was allowed to dry for a minimum of 24 hours in order to ensure that no overburden groundwater would enter the well.

After the grout dried, an open rock hole was drilled below the bottom of the grouted steel casing. This was accomplished using a 3 7/8-inch diameter air operated hammer bit.

Cuttings were observed and the borehole was advanced until there was an indication that water-bearing fractures had been encountered.

Measurement of the well depth after hammer withdrawal indicated that the first few wells drilled into rock were not physically competent and the borings were not remaining open. The nature of the bedrock was creating partial collapse in the open borehole. Therefore, in each bedrock well, a 2-inch diameter PVC well screen was placed inside the rock borehole and the space between the screen and bedrock was filled with #2 quartz filter sand. A hydrated bentonite seal was placed above the filter sand within the 4-inch steel casing. The remaining annular space was filled with filter sand or drill cuttings. A 2-inch diameter PVC riser pipe extends from the top of the screen section to grade, within the 4-inch steel casing. The wells were completed at grade with well plugs and an 8-inch cast iron, flush-mount roadbox set in a concrete pad. Well construction details are summarized on Table 1 and well diagrams are included in Appendix II.

All monitoring wells were developed by LBG hydrogeologists on December 18, 2007 in order to clear the well screen and sand pack of fine sediment. A reciprocal pump and surge block was used within the screened interval of each well until the turbidity of the purge water decreased. Purge water was contained in 55-gallon steel drums and temporarily stored on-Site. After laboratory analysis for disposal characteristics, the water was transported under manifest by Innovative to Chemron Corporation of Avon, Ohio on January 21, 2008. Transportation and disposal manifests are included on the attached CD (Appendix III).

3.5 Top of Casing Elevation Survey

On January 11, 2008 and June 5, 2009, LBG hydrogeologists performed differential leveling surveys to determine the relative elevations of the top of each well casing. The elevations were determined with respect to an arbitrary Site-specific benchmark, which was assigned an elevation of 50.00 feet above the Site elevation datum (0.00 foot). The Site benchmark is the north bolt at the base of the easternmost parking lot light pole. An "X"

chisel cut designated the benchmark. The accuracy of the survey notes and summary table (Table 1) have been reviewed by a New York State licensed engineer.

The horizontal locations of the wells were measured with respect to various Site features plotted on a figure prepared by Shaw Engineering. The RIR Site plans are adapted from the Shaw figure.

3.6 Groundwater Gauging/Sampling

On January 10, 2008, LBG technicians gauged the depth to water and total depth of the 12 Site monitoring wells using an electronic interface measuring tape with 0.01 foot resolution. The low-flow sampling technique (described in the EPA document entitled Low-Flow [Minimal Drawdown] Groundwater Sampling Procedures, April 1996) was utilized to sample groundwater from all wells on January 10-11, 2008. Dedicated polyethylene tubing was lowered to the midpoint of the screened interval of each well and connected to a variable-speed peristaltic pump. Pump discharge was directed through a flow-through cell containing a Horiba U-22XB multiparameter instrument. The water-quality parameters of pH, conductivity, turbidity, dissolved oxygen, temperature and oxygen-reduction potential as well as water depth (measured with an electronic interface meter) were monitored and recorded on a regular basis. Low variability in these parameters between successive measurements is an indication that the withdrawn water is undisturbed formation groundwater and not stagnant water from the well or sand pack. When most or all of the parameters had stabilized to within the limits described in the EPA document, the pump discharge was directed into laboratory-supplied sample bottles.

This methodology was again utilized on June 4-5, 2009, to gauge and sample the 19 Site monitoring wells. Seven new wells had been installed subsequent to the January 2008 sampling event. Groundwater samples were submitted to AMRO (January 2008) and York (June 2009) under chain-of-custody for analysis of VOCs by EPA Method 8260 reported with ASP Category B deliverables.

3.7 Storm Water Drainage System Inspection

An LBG hydrogeologist supervised the inspection of the storm-water drainage system in the parking lot of the Site on December 4, 2007 and January 11, 2008. The purpose of the inspection was to identify whether the storm drainage system was a possible pathway by which contaminants exited the former dry cleaners and entered the environment. The inspection equipment was operated by Spagnoli Excavating of New Windsor, New York. The storm drainage in the parking lot consists of 5 catch basins, 4 in an east-west line across the parking lot north of the Site buildings (CB-1 through CB-4) and 1 to the southwest of the western Site building (CB-5). Figure 6 shows the catch basin locations.

The grate above each catch basin was removed and a remote video camera was inserted into each pipe leading from the basin. Pertinent features (cracks, breaks, changes in material, etc.) were noted and recorded on video tape. The distances of these features from the basin were also recorded.

In an effort to identify the source of the water observed flowing from the building northward into the parking lot at CB-2, dye was injected into the drains on the roof of the Key Food portion of the building and into a floor drain in the rear of the Key Food. The CB-2 basin and the sanitary sewer line at the entrance of the parking lot were monitored for dye. No floor drains were observed inside Chan's restaurant. If the former dry cleaner had a floor drain (a potential contaminant discharge point), it seems likely that it would have been piped to the same location as the Key Food floor drain.

All air/vapor samples were collected in laboratory-certified Summa canisters and shipped under chain-of-custody. The October 2007 samples were analyzed by Air Toxics, Ltd. of Folsom, California (Air Toxics) and the April 2009 samples were analyzed by York Analytical Laboratory of Stratford, Connecticut (York). All air/vapor samples were analyzed for VOCs by EPA Method TO 15. Indoor and outdoor (ambient) air samples were additionally analyzed using Selected Ion Monitoring (SIM) in order to obtain the low detection limits for 7 compounds found on the NYSDOH decision matrices (soil and groundwater analysis method). Results were

reported with ASP Category B deliverables. Copies of all laboratory reports are included on the attached CD (Appendix III).

4.0 INVESTIGATION RESULTS

4.1 Hydrogeologic Setting

The following description of the Site's hydrogeologic setting is based upon soil samples collected during drilling activities, soil cuttings from auger and air-rotary drilling and the rate of advancement of the drill stem. The general geologic conditions at the boring locations near the buildings are similar and differed slightly from those found at the north edge of the Site.

Overburden in the soil borings near the Site buildings (MW-1R, MW-2B, MW-3B, MW-4 and MW-5) is primarily composed of a gray to brown silt with lesser proportions of gravel and sand. The gravel is mostly angular pieces of gray shale although some rounded gravel of other lithologies was observed.

A 2-4 foot thick zone of dense/hard overburden, as indicated by high split-spoon blow counts, split-spoon refusal and reduced auger advancement rates, was encountered at between 8.5 and 15 ft bg in Borings MW-1R, MW-3B, MW-4 and MW-5. Lack of recovery in split-spoon samples in these zones prevents direct observation of the geology, however, it is presumed to be dense glacially-derived sediment such as a till. Local bedrock consisting of a gray shale was encountered between 16 ft bg (MW-6) and 20 ft bg (MW-1R, MW-4 and MW-5). This is based on auger refusal and cuttings observed during air-rotary drilling. A figure depicting generalized contours for the elevation of the top of the bedrock surface is provided as Figure 7. Generalized geologic cross section/of the Site is provided as Figure 8.

Monitoring wells MW-7, MW-8 and MW-9 at the north end of the parking lot were the first wells to be drilled during the investigation. Auger refusal was encountered at between 7.5 ft bg and 12 ft bg at these locations. Steel casing were set and grouted in the borings in preparation to drill bedrock boreholes. However, upon drilling below the casings with an air-operated hammer bit, the excessive formation water and the characteristics of the drill cuttings indicated that the drill bit was still in overburden. Cuttings were primarily silt and fragmented

gray shale but a portion (5-10 percent) was rounded gravel of other lithologies including quartzite and gneiss. The hammer bit was able to advance quickly but the hole would not stay open after withdrawal. The drive-and-wash drilling method was employed to temporarily hold the boring open to the bedrock surface at 20 ft bg. PVC well screen and riser pipe were placed in the boring then the drive-and-wash casing was withdrawn.

The Fire Department Chief has indicated that the land in the vicinity of the Site and the Fire Department was once at a lower elevation and that a small stream once flowed from west to east parallel to Quaker Avenue beneath what is now the north end of the Cornwall Plaza and Fire Department parking lots. Reportedly, this stream was channelized and the Site grade elevation was raised through importation of fill. The former stream is presumed to be at the same approximate location as the large storm drainage conduit observed during the drainage inspection. Based on drilling activities in the vicinity of this conduit (MW-7, MW-8, MW-9, MW-10), the area may have been filled with heavy rock debris (rip-rap). The drilling was difficult with very slow advancement. Observations during drilling indicate a preferential pathway for the migration of groundwater.

The depth to groundwater ranged between 5.92 ft bg (MW-1R) and 11.10 ft bg (MW-3B) on January 10, 2008 and between 7.22 ft bg (MW-1R) and 13.43 ft bg (MW-3) on June 4, 2009. Table 1 summarizes these measurements. Groundwater elevation contour maps for the January 8, 2008 and June 4, 2009 gauging dates are provided as Figures 9 and 10. Based on these contour maps, groundwater beneath the Site flows to the north and northeast. The water-table gradient is approximately 0.04 ft/ft beneath the eastern Site building and 0.005 ft/ft across the parking lot.

A vertical component to groundwater flow may be indicated by the head difference between an overburden well and an adjacent bedrock well. In the case of the MW-3, MW-3B group, the water in the bedrock well was 0.37 foot lower in elevation indicating a slight downward component to flow. However, the MW-2, MW-2B and MW-6, MW-6B groups both have water higher in the bedrock wells (by 0.14 foot and 0.22 foot respectively). This indicates a slightly upward component to flow, from bedrock to overburden.

4.2 October 2007 Vapor Sample Analysis Results (Cornwall Plaza)

The results of analysis of the October 25, 2007 sub-slab vapor, soil vapor, indoor air and outdoor air samples are summarized on Tables 2 through 4. The results on Table 4 are grouped into columns in such a way that each sub-slab or soil vapor sample is followed by the respective indoor air or outdoor air sample collected from the same area. In this way the impact of the subgrade vapor on the ambient air can be more easily compared. Additionally, compound names have been grouped into those detected in both ambient air and soil vapor (pink), only in ambient air (blue) and only in soil vapor (yellow). Those compounds detected only in ambient air but not in soil vapor (blue) presumably have a source not associated with subsurface contaminants. Similarly, those compounds detected in soil vapor but not in ambient air (yellow) appear not to pose a current threat to ambient (indoor) air quality.

4.2.1 Soil Vapor (Cornwall Plaza)

Soil vapor sample locations are shown on Figure 4 identified as "SVF" and "SVR". Analytical results are summarized on Table 2. A total of 20 VOCs were detected in the 2 soil-vapor samples. Prevalent compounds detected in soil vapor, in order of decreasing concentration, include acetone, ethanol, tetrahydrofuran, carbon disulfide and PCE.

Of the COCs, PCE was detected at 28 ug/m^3 (micrograms per cubic meter) and vinyl chloride was detected at 7.5 ug/m^3 in "SVR". Neither TCE or DCE was detected in either soil-vapor sample.

4.2.2 Sub-Slab Vapor (Cornwall Plaza)

Sub-slab vapor sample locations are shown on Figure 4 identified as CPHSS1, CPHSS2, KFSS1 and LPSS1. Analytical results are summarized on Table 2. A total of 20 VOCs were detected in the 4 sub-slab vapor samples. Prevalent compounds detected in sub-slab vapor, in order of decreasing concentration, include PCE, ethanol, acetone and tetrahydrofuran.

Of the COCs, PCE was the most prevalent, detected at 4,700 ug/m^3, 3,300 ug/m^3 and 1,800 ug/m^3 in CPHSS1, KFSS1 and CPHSS2, respectively. The LPSS1 sample contained 51 ug/m^3 PCE. TCE was detected at between 24 and 54 ug/m^3 in CPHSS 1, CPHSS2 and KFSS1. Neither dichloroethene nor vinyl chloride was detected above the laboratory detection limit (LDL).

4.2.3 Indoor Air (Cornwall Plaza)

Indoor air sample locations are shown on Figure 4 identified as CIA1, KFIA 1 and LPIA1. Analytical results are summarized on Table 3.

A total of 16 VOCs were detected in the 3 indoor air samples. Prevalent compounds detected in the indoor-air samples include ethanol, tert-butyl alcohol, freon, 1,4-dichlorobenzene, hexane, toluene and 2-butanone. The KFIA1 air sample contained the greatest total VOC concentration (65.05 ug/m^3) followed by the LPIA1 air sample (23.9 ug/m^3) and the CIA1 air sample (10.15 uglm^3).

PCE was the only COC detected above the LDL and was only detected in one sample (KFIA1) at 1.4 ug/m^3.

4.2.4 Outdoor Air (Cornwall Plaza)

Outdoor air sample locations are shown on Figure 4 identified as OAF and OAR. Analytical results are summarized on Table 3.

A total of 16 VOCs were detected in the 2 outdoor air samples. Prevalent compounds were petroleum components likely associated with vehicle emissions: xylenes, toluene, ethanol and tert-butyl alcohol.

Trichloroethene was the only COC detected above the LDL and only in one sample (OAF) at an estimated concentration of 0.30 ug/m^3.

4.3 April 2009 Vapor Sample Analysis Results

4.3.1 Soil Vapor (Fire Department)

The single soil vapor sample location collected in April 2009 is shown on Figure 4 identified as CFDSV. Analytical results are summarized on Table 5. A total of 14 VOCs were detected at concentrations above the LDL. Prevalent compounds detected, in order of decreasing concentration, include xylenes, toluene, methyl isobutyl ketone (MIBK), and 1,3,5-trimethylbenzene. No chlorinated solvents (the COCs) were detected above the LDL.

4.3.2 Sub-slab Vapor (Fire Department)

The single sub-slab vapor sample location is shown on Figure 4 identified as CFDSS1. Analytical results are summarized on Table 5. A total of 15 VOCs were detected at concentrations above the LDL. Prevalent compounds detected, in order of decreasing concentration, include ethyl acetate, benzene, toluene, xylenes and tetrahydrofuran.

Of the COCs, only PCE was detected at 22.8 ug/m^3 in CFDSS1. Other chlorinated solvents were not detected above the LDL.

4.3.3 Indoor Air (Fire Department Cornwall Plaza)

The 5 indoor air sample locations are shown on Figure 4 identified as CFDIA 1, CFDIA2, CIA2, KFIA2 and LPIA2. Analytical results are summarized on Table 6.

A total of 20 VOCs were detected in the 5 indoor air samples at concentrations above the LDL. For the 2 Cornwall Fire Department samples, prevalent compounds detected include xylenes, toluene, 1,2,4- and 1,3,5-trimethylbenzene and 2-butanone. The highest concentration compound detected was m,p-xylenes at 24.3 ug/m^3 (CFDIA2).

The COCs PCE, TCE and DCE were detected in the Cornwall Fire Department indoor air samples at concentrations less than 2 ug/m^3.

4.4 Soil Sample Analysis Results

The results of analysis of the November 2007 (onsite drilling) and May 2009 (offsite drilling) soil samples are summarized on Table 7.

In November 2007, 14 soil samples were collected from 9 soil borings. Laboratory analysis of these onsite soil samples indicates that 7 of the 14 samples contained at least one VOC. These 7 soil samples came from 4 of the 9 soil borings (MW-2B, MW-3B, MW-4 and MW-6). Three different VOCs were detected and in order of decreasing maximum concentration they were PCE, methylene chloride and carbon disulfide. PCE, detected at 2,100 micrograms per kilogram (ug/kg) in the MW-3B (15-17 ft bg) soil sample was the only detection of this compound to exceed the Recommended Soil Cleanup Objective (RSCO) of 1,400 ug/kg as outlined in Technical and Administrative Guidance Memorandum /14046 (TAGM 4046). The detection of PCE in sample MW-3B (15-17 ft bg) also exceeded the 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objective (UUSCO) of 1,300 ug/kg and the Restricted Use Protection of Groundwater (RUPG) standard of 1,300 ug/kg. The detected levels of methylene chloride in soil samples from MW-2B, MW-3B, MW-4 and MW-6 (see Table 7 for sample depths) also exceeded the TAGM 4046 RSCO of 100 ug/kg and the NYCRR Part 375 UUSCO and RUPG of 50 ug/kg.

In May 2009, 2 soil samples were collected from 2 offsite soil borings (Table 7). Laboratory analysis of these offsite soil samples indicates that neither of the 2 samples contained any VOC.

4.5 Groundwater Sample Analysis Results

The results of analysis of the January 2008 (first sampling event) and June 2009 (second sampling event) groundwater samples are summarized on Tables 8 and 9, respectively.

In January 2008, groundwater was sampled from the existing 12 monitoring wells. Groundwater from 7 of the 12 wells contained at least one VOC. A total of 4 COCs (PCE, TCE, DCE and vinyl chloride) were detected at concentrations which exceeded the NYS Ambient Water Quality Standards and Guidance Values (AWQS & GV) as described in the NYSDEC Division of Water Technical & Operational Guidance Series 1.1.1 (TOGS 1.1.1). Six of the 12 wells sampled contained contaminant concentrations on groundwater exceeding the AWQS & GV. These samples were from wells MW-2, MW-3, MW-4, MW-6, MW-7 and MW-8. No samples from bedrock monitoring wells contained detectable levels of VOCs.

The most prevalent compound detected was PCE followed by DCE, TCE and vinyl chloride. Detected concentrations of PCE ranged from 1,200 micrograms per liter (ug/l) (MW-2 and MW-6 samples) to 55 ugl (MW-7 sample). Total VOCs in each groundwater sample ranged from non-detect (MW-1R, MW-2B, MW-6B and MW-9) to 1,296 ug/l (MW-2).

In June 2009, groundwater was sampled from 19 existing monitoring wells. With the exception of methylene chloride (a common laboratory contaminant), groundwater from 9 of the 19 wells contained at least one VOC. The same 4 compounds (PCE, TCE, DCE and vinyl chloride) detected in January 2008, were again detected at concentrations which exceeded the AWQS & GV. For the groundwater samples which existed on both dates, concentrations of these compounds were similar with the exception of the MW-6 sample in which PCE decreased from 1,200 to 2 ug/l. Nine of the 12 wells sampled contained groundwater contaminant concentrations exceeding the AWQS & GV (again with the exception of methylene chloride). The AWQS & GV were exceeded in groundwater samples from offsite wells MW-10, MW-11 and MW-12 but not in MW-11B, MW-12B or MW-13.

4.6 Storm Water Drainage System Inspection Results

Based on observed size and orientations of the inlet and outlet pipes within each basin, it appears that surface runoff collected at CB-5 flows through a 30-inch diameter corrugated metal pipe (CMP) to CB-4 (Figure 6). Surface runoff collected at CB-4 combines with flow from CB-5 and flows into another 30-inch CMP. This appears to flow to CB-3 where both a 30-inch CMP inlet and outlet are observed. Additionally, an 8-inch CMP inlet enters CB-3 from the south. CB-2 contains a 6-inch PVC inlet entering from the south and a 12-inch CMP exiting toward the north. Finally, CB-1 contains only a 12-inch CMP existing toward the north. The outlets of CB-1, CB-2 and CB-3 flow to a 36-inch CMP in which water flows from west to east across the Site and then offsite, presumably under the Cornwall Fire Department parking lot.

The camera inspection of the 6-inch PVC inlet to CB-2 indicated that it changes to clay pipe then cast iron pipe along its length. The junction from clay pipe to cast iron pipe occurs 62

feet south of the catch basin. The camera could not be advanced beyond this point. A "Y" fitting was observed just upstream of this junction. The junction between the clay and cast iron pipe was not completely sealed and some leakage is possible. All other pipes which were inspected with the camera were in good condition with no holes or joint separations observed.

While the camera was in the 6-inch pipe extending south from CB-2, dye placed in the roof drains above Key Food was observed to flow through the 6-inch pipe and into CB-2. A different dye was placed in a floor drain inside Key Food and was observed flowing through a sanitary sewer manhole at the parking lot entrance along Quaker Avenue. Based on these tests it appears that floor drains inside the buildings are attached to the sanitary sewer system and the roof drains are attached to the parking lot storm drainage system. The discharge point of the storm drainage system is not known but is presumed to be the Idlewile Creek east of the Site.

As discussed previously in Section 4.1, there are verbal accounts that the Site grade may have been raised through the import of artificial fill some time in the past. A former water course may have once existed beneath the north portion of the Site and Fire Department parking lots. This former water course is presumed to be at the same approximate location as the 36-inch CMP, running east-west along the north end of the parking lot.

4.7 Data Usability Summary Report – Sampling Performed by LBG

Data Usability Summary Reports (DUSR) following the guidelines provided in Section 2.2 and Appendix 2B of NYSDEC DER-10 for each of the laboratory data deliverables submitted with this RIR are provided herein. Air analysis was completed by Air Toxics Ltd (NY NELAP-11291) and York Analytical Laboratories (York - NY NELAP-10854). Soil analysis and January 2008 groundwater analysis was completed by AMRO (NY NELAP-11278). The June 2009 groundwater analysis was performed by York Analytical. Overall the data met the requirements of the NYSDEC and are regarded as accurate and reliable. Specific quality control (QC) exceedances and discussions are noted for each of the laboratory reports in the following sections:

Air Toxics -0710735B-October 25, 2007 Sub-slab and Soil Vapor Analysis

Sub-slab and soil vapor samples collected on October 25, 2007 were received by the laboratory on October 31, 2007 in proper condition. All analyses were completed within hold times.

The reported result for 4-ethyltoluene in sample Soil Vapor Rear may be biased high, due to co-elution with a non-target compound with similar characteristic ions. Both the primary and secondary ion for 4-ethyltoluene exhibited potential interference. 4-ethyltoluene is not a COC.

In samples KFSS-1 (0710735B-06A), LPSS-1 (0710735B-07A), CPHSS-1 (0710735B-08A), CPHSS-1 lab duplicate (0710735B-08AA), CPHSS-2 (071070735B-09A), Soil Vapor Front (0710735B-10A), Soil Vapor Rear (0710735B-11A) and Lab Blank (0710735B-12A), MTBE and alpha-chlorotoluene are flagged UJ indicating a non-detected compound associated with the low bias in the continuing calibration verification (CCV); therefore a low bias is assumed with regard to the results. A low bias means that due to the failure of the laboratory instruments to meet the CCV criteria for MTBE and alpha-chlorotoluene, the concentrations of these compounds may actually be higher than what was detected and reported by the lab. In this case, neither compound was detected and they are not Site contaminants of concern. If these compounds were contaminants of concern and detected at concentrations near, but below a regulatory limit, the low bias would make the results questionable; however, this is not the case and the results for the samples in question are deemed valid.

In samples CPHSS-1 (07107735B-08A) and CPHSS-1, lab duplicate (0710735B-08AA), the result for ethanol was flagged with an E indicating the detected concentration exceeds the instrument calibration range. Ethanol is not a COC

In sample CPHSS-1 lab duplicate (0710735B-08AA) the result for PCE was flagged with an E indicating the detected concentration exceeds the instrument calibration range. The laboratory collected a duplicate sample from the CPHSS-1 sample to test for precision. The

CPHSS-1 lab duplicate sample result for PCE is flagged to note that the actual concentration of PCE in the sample may vary from the reported concentration because the detected concentration exceeded the instrument calibration range for that sample. The PCE result for sample CPHSS-1 was similar to the PCE result of the lab duplicate sample but remained within the instrument calibration range; therefore, no qualifiers for the CPHSS-1 sample were needed and the PCE result for sample CPHSS-1 is deemed valid.

Air Toxics - 07107345AR1-October 25, 2007 Indoor Air Analysis

Air samples collected on October 25, 2007 were received by the laboratory on October 31, 2007 in proper condition. Laboratory analysis was completed within holding times. The samples were analyzed via EPA Method TO-15 using gas chromatography-mass spectrometry (GC/MS).

The laboratory report was reissued on January 25, 2009, to report estimated values for PCE, vinyl chloride and carbon tetrachloride that were detected below the reporting limit but greater than the method detection limit. Concentrations below the level at which the canister was certified (at the reporting limit) may be false positives.

The CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds.

The percent recovery of alpha-chlorotoluene in the laboratory control sample (LCS-0710735AR1-08A) was outside control limits. Alpha-chlorotoluene is not a COC.

Calibration level 4 was reanalyzed due to unacceptable peak resolution for vinyl chloride and 1,3-butadiene during the initial calibration.

The detected concentration of ethanol in CPH indoor air lab duplicate exceeded the instrument calibration range. The result is flagged with an E in the laboratory report. Ethanol is not a COC.

AMRO -0711073-November 12, 2007 Soil Analysis

Soil samples collected November 12 through November 15 were received by the laboratory on November 16, 2010 under the required conditions. All sample holding times were met. Soil samples MW-7 (7-9), MW-8 (7-9), MW-9 (5-7), MW-4 (11-13), MW-4 (13-15), MW-1R (18-20), MW-5 (11-13), MW-5 (15-17), MW-2 BDRX (11-13), MW-2 BDRX (13-15), MW-3 BDRX (10-12), MW-3 BDRX (15-17), MW-6 (10-12) and MW-6 (12-14) were analyzed for VOC via EPA Method 8260 by GC/MS and EPA Method 5035.

A matrix spike (MS) and matrix spike duplicate (MSD) were performed on sample B-1 (7-9) 0711073-01A Batch ID: R38666.

- The percent recovery for cis-1,2 dichloroethene, 1,1 dichloropropene and 1,2-dichloropropene in the MS was outside the laboratory control limits; however, the percent recoveries for the analytes were within acceptable limits in the laboratory control sample (LCS). The compounds were not detected in the associated sample. The overall quality and reliability of the laboratory data do not appear to be impacted.
- The percent recovery for trans-1,2-dichloroethene, cis-1,2-dichloroethene and 1,1-dichloropropene in the MSD was outside laboratory control limits; however, the percent recoveries for the analytes were within acceptable limits in the LCS. The compounds were not detected in the associated sample. The overall quality and reliability of the laboratory data do not appear to be impacted.

The percent recovery for 2-hexanone, chlorobenzene, 1,1,2,2-tetrachloroethane, 1,2,3-trichloropropane, bromobenzene and 1,4-dichlorobenzene were outside the laboratory control limits for the LCS performed on November 23, 2007 (Batch ID: R38666). The associated samples were non-detect for the compounds; therefore, the batch was not re-processed. The overall quality and reliability of the laboratory data do not appear to be impacted.

The percent recovery for m,p xylenes, o-xylene and styrene were outside the laboratory control limits for the LCS performed on November 27, 2007 (Batch ID: R38695). The associated samples were non-detect for the compounds; therefore, the batch was not re-

processed. The overall quality and reliability of the laboratory data do not appear to be impacted.

AMRO –0801043-January 2008-Groundwater Analysis

Groundwater samples collected on January 10 and 11, 2008 were received by the laboratory on January 15, 2008. All sample holding times were met and received in required conditions. Groundwater samples were analyzed for VOC via EPA Method 8260 by GC/MS.

A labeling discrepancy was identified by the laboratory and corrected via electronic mail correspondence with LBG. The affected samples were MW-4 and MW-9. A copy of the electronic mail is included with the laboratory report which is provided on the enclosed CD (Appendix III).

Sample MW-9 (0801043-12A) had an initial pH of 4, which is above the method recommended pH of 2. Nitric acid was added to the sample by the laboratory.

A MS and MSD were performed on sample MW-9 (Batch ID R39096).

- The percent recovery for one analyte (1,3,5-trimethylbenzene) out of the 65 analytes in the MS was outside the laboratory control limits. The associated samples were non-detect for the compound. The overall quality and reliability of the laboratory data do not appear to be impacted.
- The percent recovery for one analyte (4-isopropyltoluene) out of the 65 analytes in the MSD was outside the quality control limits. The associated samples were non-detect for 4-isopropyltoluene. The overall quality and reliability of the laboratory data do not appear to be impacted.

A MS and MSD were performed on sample MW-6D (Batch ID R39101).

- The percent recovery for one analyte (1,1-dichloropropene) out of 65 analytes in the MSD was outside the laboratory control limits. The associated samples were non-detect for 1,1-dichloropropene. The overall quality and reliability of the laboratory data do not appear to be impacted.

The percent recovery for four analytes (1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, sec-butylbenzene and 4-isopropyltoluene) out of 65 was outside laboratory control limits for the LCS performed on January 23, 2008 (Batch ID: R39096). The compounds were not detected in associated samples; therefore the batch was not re-processed. The overall quality and reliability of the laboratory data do not appear to be impacted.

The percent recovery for one analyte (1,2,4-trimethylbenzene) out of 65 analytes was outside the laboratory control limits for the LCS performed on January 24, 2008 (Batch ID: R#93101). The compound was not detected in associated samples; therefore, the batch was not re-processed. The overall reliability of the laboratory data do not appear to be impacted.

The PCE concentration for sample MW-2 and MW-4 were reported with a dilution factor of 20. The PCE concentrations for samples MW-3 was reported with a dilution factor of 10.

York -09050093-April 30, 2009 Indoor Air, Soil Vapor and Sub-slab Analysis

Air samples collected on April 30, 2009 were received by the laboratory on May 4, 2009. The samples were received within holding times and in proper conditions.

Pressurization of the canisters with nitrogen to introduce the sample to the cryogenic preconcentration system slightly dilutes the sample. The resulting dilution factors are shown on each Form I in the laboratory data report.

Contaminants detected at estimated concentrations are flagged with a J. Samples requiring dilution were flagged with a D.

During initial calibration, 1,3,5-trimethylbenzene and 4-ethyltoluene were originally identified incorrectly. The initial calibration was corrected and the samples were re-quantitated for these compounds. The correct results for these compounds are reflected in the Form Is and the revised report. This affects samples Y-43 FD Upstairs Indoor Air, Y51 FD Basement Sub-slab, and Y-56 Parking Lot Soil Vapor.

In sample S-06 Chans Indoor Air SIM, ug/cm^3 results for the compounds 1,1-dichloroethene, cis-1,2-dichloroethene, and vinyl chloride were originally reported without a J

flag. As these compounds were detected below the reporting limit, the J flag is necessary. The corrected results are reflected in the Form I of the revised report.

In sample Y51 FD Basement Sub-slab, toluene was incorrectly reported at 93 ppbv/357 ug/cm^3. The correct results for this compound are 91 ppbv/349 ug/cm^3. These results are reflected in the Form I and the revised report.

In sample Y51 FD Basement Sub-slab 25DX, the surrogate 4-bromoflourobenzene recovered below the 70% lower recovery limit (64%). The surrogate was recovered within laboratory limits for the duplicate analysis and the undiluted analysis of this sample.

Sample Y51 FD Basement Sub-slab required a dilution due to levels of target compounds.

Sample S-10 Key Food Indoor Air was used for the SIM duplicate for this project. It is noted that PRD calculations for compounds that are reported with J values are not applicable for SIM analyzed samples. Cis-1,2-dichloroethene, 1,1,1-trichloroethane, 1,2-dichloroethane, and trichloroethene are reported with J values.

Sample Y51 FD Basement Sub-slab 25X was used for the scan duplicate for this project. All criteria were met.

Sample S-30 Leos Indoor Air was the spiked sample for this project. In the spiked sample, methylene chloride, p & m xylenes, 1,2,4-trichlorobenzene, and hexachloro-1,3-butadiene recovered below the 70% lower recovery limit. 1,2,4-trichlorobenzene and hexachloro-1,3-butadiene were not detected in samples collected on April 30, 2009. Methylene chloride is a common laboratory contaminant and not a COC. Xylenes are not considered a COC. The overall quality and reliability of the data does not appear to be impacted.

The LCS recovery limits for methylene chloride, trans-1,3-dichloropropylene, 1,2,4-trichlorobenzene and hexachloro-1,3-butadiene are outside laboratory control limits for Batch QBT0051209A. Methylene chloride was detected in air samples collected on April 30, 2009; however is not a COC and is a common laboratory contaminant. Trans-1,3-dichloropropylene, 1,2,4-trichlorobenzene and hexachloro-1,3-butadiene were not detected in associated samples.

The overall quality and reliability of the data does not appear to be impacted.

AMRO-0905035-May 6, 2009 Soil Analysis

Soil samples MW-11 (9-11') and MW-12 (9-11') were collected on May 6, 2009 and received by the laboratory on May 13, 2009. The samples were received within holding time and under the required conditions. The samples were analyzed for VOC via EPA Method 8260 by GC/MS and EPA Method 5035. The samples were submitted as bulk soil samples and were preserved with methanol upon receipt by the laboratory.

A MS and MSD were performed on sample MW-11 (9-11') (0905035-01A) (Batch ID: R42382). The percent recovery for three (chloroethane, trichloroethane and 1,1,2-trichloroethane) out of 65 analytes in the MSD were outside control limits. The percent recoveries for the compounds were within control limits in the LCS. The samples were not detected in the associated samples. The overall quality and reliability of the laboratory data does not appear to be impacted.

Acetone was detected below quantitation limits in the laboratory control spike duplicate (Batch ID R42382). The result was qualified with a J. Acetone was not detected in the associated samples. The overall quality and reliability of the laboratory data does not appear to be affected.

York -09060328-June 4-5, 2009 Groundwater Analysis

Groundwater samples collected on June 4 and 5, 2009 were received by the laboratory on June 8, 2009. All samples were received within holding times and in proper condition. Samples were analyzed for VOC via EPA Method 8260. The results were reported in an ASP Category B deliverable.

The laboratory provided a list of qualifiers used in their data and all estimated results are qualified with a J.

The method blank for analytical batch QBV3061109BA contained methylene chloride at 8 parts per billion (ppb) and naphthalene at 2 ppb. The affected samples include MW-12B,

MW-12, MW-11B, MW-11, MW-10, MW-7 and MW-6. The method blank for analytical batch QBV3061209AA contained methylene chloride at 8 ppb and naphthalene at 2 ppb. The affected samples include MW-6B, MW-5, MW-1B, and MW-1R. The method blank for analytical batch QBV3061209BA contained methylene chloride at 6 ppb and naphthalene at 2 ppb. The affected samples include MW-13, MW-9, MW-8, MW-3, MW-3B, MW-4, MW-2, and MW-2B. The method blank for analytical batch QBV3061609AA contained methylene chloride at 9 ppb, 1,2,4-trichlorobenzene at 2 ppb, naphthalene at 4 ppb and 1,2,3-trichlorobenzene at 2 ppb. The affected samples include MW-3RE, MW-4RE and MW-2RE. PCE was the only compound reported from samples analyzed in batch QBV3061609AA. Detections of methylene chloride and naphthalene in groundwater samples collected on June 8 and 9, 2009 are attributed to laboratory contamination and flagged with a B. Methylene chloride and naphthalene are not COC at the Site. The overall quality of the data and reliability of the laboratory data does not appear to be affected.

In method V3C186A, the lowest standard for methylene chloride was 10.0 parts per billion (ppb). The reporting limits have been adjusted accordingly. This affects all samples. Detections of methylene chloride are attributed to laboratory contamination.

Tetrahydrofuran was outside control limits in LCS for batch QBV3061109B, QBV3061209A, QBV3061209B, QBV3061609A. Tetrahydrofuran was not detected in the associated samples; therefore the batch was not re-processed. The overall quality of the data and reliability do not appear to be affected.

5.0 DISCUSSION OF INVESTIGATION RESULTS

5.1 Potential for Soil Vapor Intrusion

The NYSDOH, in their 2006 guidance document, provides several means of evaluating the results of indoor-air, sub-slab and soil-vapor sampling and analysis and how these parameters relate to current and potential soil vapor intrusion. The goals of the evaluation are as follows:

- to determine what chemicals are present in the media;

- to identify the likely causes of their presence; and
- to identify completed and potential human exposure and whether actions to address exposures should be taken.

Air and vapor concentrations are to be evaluated in context with the nature and extent of contamination in all media, the factors affecting vapor migration, background levels of VOCs in air, relevant standards, criteria and guidance values and past, current and future land use.

The first evaluation method is by direct comparison of select individual compound concentrations in breathing air (indoor or outdoor) to Guideline Values derived on the basis of toxicity and exposure assessments. The Guideline Values are based on the assumption of a lifetime of continuous exposure to the compound in question. Based on the recognized COCs at the Site, the Guideline Values for methylene chloride (60 ug/m^3), TCE (5 ug/m^3) and PCE (100 ug/m^3) are applicable. None of the indoor or outdoor air concentrations at the Site or at the Fire Department building exceeded the NYSDOH Guideline Values. Note that New York State does not currently have any standards, criteria or guidance values for compounds in soil vapor.

The NYSDOH has developed a pair of decision matrices to provide guidance about actions that could be taken to address current and potential exposures related to soil vapor intrusion. The matrices work by comparison of sub-slab vapor and indoor air concentrations from a location. The matrices help take into account the attenuation factor (the ratio of indoor air to sub-slab vapor concentrations). Seven chemicals have been assigned to the 2 matrices. Use of the decision matrices will produce recommended actions which include: (I) *No further action, (2) Take reasonable and practical actions to identify sources and reduce exposure, (3) Monitor, (4) Mitigate* or (5) *Monitor/Mitigate.*

Table 10 has been prepared to summarize the quantitative results of indoor air and sub-slab vapor samples at 3 Site locations (Key Food, Chan's and Leo's Pizza) and at 1 offsite location (Cornwall Fire Department building). Table 10 also summarizes the recommended action(s) based on NYSDOH Matrices 1 and 2. As can be seen, most of the compounds at

most of the sampling locations have a matrix recommendation of *"No further action"* based on low or non-detect concentrations in either sub-slab vapor, indoor air or both.

The compound carbon tetrachloride has a Matrix I recommendation of *"Take actions to ID sources and reduce exposure"* at all sample locations. This compound was detected only in indoor air and one outdoor air sample, at low concentrations and not in sub-slab vapor. Thus, it does not appear to be a subsurface contaminant. Additionally, carbon tetrachloride is not a dry-cleaning solvent nor is it a degradation product of a dry-cleaning solvent.

Despite the fact that TCE was detected only in sub-slab vapor samples onsite and not in any of the indoor air samples, the Matrix 1 recommendation for Chan's leasehold space is *"Monitor"* based on the TCE concentration in CPHSS1. Matrix 1 recommends *"No further action"* for the Key Food and Leo's Pizza leasehold spaces.

The offsite (Fire Department) samples resulted in the opposite condition in which TCE was detected in the indoor air samples but not in the sub-slab vapor sample. In this case, the Matrix 1 recommendation was *"Take actions to ID sources and reduce exposure."* As the sub-slab vapor beneath the Fire Department did not contain TCE and the basement indoor air sample concentration was less than the first floor indoor air sample, the TCE source is presumed to be some chemical or product used inside the building and not from volatilization of contaminated groundwater which migrated from beneath the Site.

The compound PCE was detected at relatively high concentrations in the sub-slab vapor beneath the Chan's and Key Food leasehold spaces. As a result, the recommendation of Matrix 2 is *"Mitigate."* It should be noted that despite the high sub-slab PCE vapor concentrations, the indoor air PCE was non-detect (Chan's) and 1.4 ug/m3 (Key Food), indicating a high attenuation factor for the building and that very little vapor intrusion is occurring.

5.2 Soil Quality and Distribution

Volatile compounds detected in soil samples from beneath the Site include PCE, carbon disulfide and methylene chloride. Methylene chloride is a common laboratory cross contaminant and although the compound was not detected in the method blank there is no

known source for this compound resulting from past Site activities. It was not found in significant concentrations in groundwater samples. Neither methylene chloride nor carbon disulfide is considered a COC.

The compound PCE was detected in soil samples collected along the front (south side) of the building (soil borings MW-2B, MW-3B and MW-4). The depth of these soil samples was between 11 and 17 ft bg, which is below the static water level, measured to be approximately 11 ft bg in January 2008. Therefore the PCE in these samples is likely to have been adsorbed from contaminated groundwater which migrated to these areas. The area of soil impact as defined by these samples is approximately 150 feet east to west and 60 to 80 feet north to south (assuming it extends beneath the building) (Figure 11). The area is approximately 4 feet thick and the approximate soil volume is 1,560 cubic yards. PCE was not detected in other Site soil samples collected from beneath the north side of the building, beneath the south side of the parking lot or beneath the Fire Department parking lot.

5.3 Groundwater Quality and Distribution

Volatile compounds detected in overburden groundwater samples from beneath the Site and offsite include PCE and the degradation products TCE, DCE and vinyl chloride. These are the contaminants of concern based on past Site use.

The COCs are found in overburden groundwater beneath the parking lot to the south and southwest of Chan's leasehold space (location of former Cornwall Cleaners) as well as beneath the Fire Department parking lot. PCE is the most prevalent chlorinated solvent in all groundwater samples. The compounds TCE, DCE and vinyl chloride are detected at between 0 and 3 orders of magnitude less than PCE. Vinyl chloride has only been detected at the locations of MW-2 and MW-4 and at low concentrations (between 2.9 and 8 ug/l). Figures 12 through 15 graphically depict the distribution of groundwater impact and isoconentration contour maps for the 2 sample dates.

The distribution pattern of chlorinated solvents in overburden groundwater matches the pattern of groundwater flow as derived from measured groundwater elevations (Figures 9 and

10). The center of the plume extends from the former location of Cornwall Cleaners, past the locations of MW-2 and MW-4 then toward MW-6 and MW-12. The highest total VOC concentrations in overburden groundwater are found at the locations of MW-2, MW-4 and MW-6 southwest of Key Food. VOC concentrations decrease toward the north and west from these locations.

No significant levels of chlorinated solvents were detected in any bedrock groundwater samples. This indicates that the soil-bedrock interface or the depth where bedrock becomes competent (below the weathered zone) is preventing vertically downward migration of dissolved contaminants. Also this would appear to support the position that there is not an accumulation of DNAPL (dense non-aqueous phase liquid) at the soil-bedrock interface as can often occur due to the specific density of chlorinated solvents. If DNAPL had accumulated at the interface, then bedrock groundwater contamination would be much more likely.

The plume is delineated toward the north and east of the former Cornwall Cleaners location based on the absence of VOCs in overburden groundwater at MW-9 and MW-13. The plume is also delineated vertically and extends to a depth no greater than approximately 20 ft bg based on the absence of chlorinated solvents in bedrock groundwater. The reduced levels of PCE and relative absence of degradation products in MW-7, MW-8 and MW-10 indicate that the plume likely does not extend significantly north of Quaker Avenue. Groundwater investigation north of Quaker Avenue is hampered by extensive overhead and underground utilities and the lack of other public rights-of-way for some distance in this direction. In the northeast direction, laboratory analysis indicates a 79 percent decrease in total VOC concentration between the MW-6 and MW-12 locations. Thus based on the contaminant concentration gradient (measured toward the northeast), the plume margin is adequately delineated and likely does not extend more than 200-300 feet farther from the Site than the location of MW-12.

5.4 Qualitative Human Health Exposure Assessment

As stated in Appendix 3B of The NYSDEC Division of Environmental Remediation Draft Technical Guidance Document DER-10, a qualitative human health exposure assessment

"consists of characterizing the exposure setting (including the physical environment and potentially exposed human populations), identifying exposure pathways and evaluating contaminate fate and transport."

The exposure pathway or means by which an individual may be exposed to a Site contaminant consists of 5 elements: (1) a *contaminant source* either the point of release to the environment or the contaminated environmental medium, (2) a *contaminant release and transport mechanism* which carries the contaminant from the source to points where people may be exposed, (3) a *point of exposure* where actual or potential human contact may occur, (4) a *route of exposure* or manner in which the contaminant actually enters or contacts the body and (5) a *receptor population* who are or may be exposed to contaminants. The exposure pathway is considered to be complete when all 5 elements are documented. A potential exposure pathway exists when any of the 5 elements is not documented.

Based on the nature of the COCs found in the Site environmental media (chlorinated solvents) and the known past uses of the Site (a commercial dry cleaner), the contaminant source is presumed to be the release of solvents to the subsurface. The exact mechanism and location of the release(s) is not known but may include: defective equipment which may have released solvents to the subsurface, solvents or water containing solvents spilled on to the ground surface (either inside or outside the leasehold space), or solvents entering floor drains or sanitary lines which subsequently leaked to the subsurface. Through the transport mechanisms described below, the soil, groundwater and soil vapor beneath the Site, and to a limited extent, the indoor air of one Site building has become impacted by the COCs.

The contaminant transport mechanisms at the Site include vertical migration of contaminants under the influence of gravity through the vadose zone to the water table, the lateral and vertical migration of contaminants along the path of groundwater flow, the volatilization of solvents from soil and groundwater into soil vapor, the migration of soil vapor under the influence of subsurface pressure gradients and the infiltration of soil vapor into indoor air.

The point of exposure and route of exposure is somewhat dependent upon the particular receptor population in question. The receptor population is based both on the present use of the Site and on planned future use as communicated by the Site owners (present use and future use is as a commercial property). The first two potential receptors are an employee or patron of any of the Site businesses. These receptors may be considered together as the only difference between the two is the duration of exposure (the employee would have greater exposure duration). The only contaminated media to which an employee or patron might be exposed is indoor or outdoor air. There is no potential for an employee to be exposed to contaminated soil or soil vapor (the Site is paved) nor to contaminated groundwater (which is 12 feet below grade). The outdoor air exposure point can be eliminated from consideration due to the absence of COCs in the analysis of outdoor air samples collected in October 2007. The point of exposure of an employee or patron would be inside the leasehold spaces, specifically Key Food, Chan's and Leo's Pizza. The route of exposure for an employee or patron would be by inhalation of indoor air. Onsite and offsite indoor air sampling found no concentrations of COCs that approached NYDOH Guidance Values for Indoor Air.

A third potential receptor at the Site is a construction worker performing ground-intrusive activities. In the case of this receptor, there is potential to be exposed to soil vapor, soil or groundwater impacted by the COCs. The point of exposure to contaminated soil would be in the immediate vicinity of the eastern Site building based on the distribution discussed in Section 5.2. Similarly, the point of exposure to contaminated groundwater would pertain to activities which result in excavation to below approximately 12 ft bg and only in the areas described in Section 5.3. The routes of exposure for a construction worker would be by inhalation of soil vapor or soil particulates, ingestion of soil particulates or groundwater or dermal contact with soil or groundwater.

Offsite potential receptors would be limited to employees and construction workers at the Cornwall Fire Department Contaminated environmental media to which these offsite receptors may be exposed are indoor air (employees) and groundwater (construction workers). The COCs were not identified in soil or soil vapor samples collected from beneath the Fire

Department property. The TCE detected in indoor air samples from the Fire Department building is presumed to be from a source inside the building and not from soil vapor intrusion. The point of exposure to contaminated groundwater would pertain to ground-intrusive activities resulting in excavation to below approximately 12 ft bg. The route of exposure for an employee at the Fire Department property would be by inhalation of indoor air. The routes of exposure for a construction worker at the Fire Department property would be by inhalation of soil vapor, ingestion of groundwater or dermal contact with groundwater.

There is no known groundwater extraction point (potable, commercial, irrigation, etc.) which is a potential receptor of groundwater from the Site. There is the potential that shallow groundwater from the Site may eventually discharge to the Idlewile Creek approximately 500 feet east of the Site. It is unlikely that due to the distance to this surface water body and the measured contaminant concentrations that there would be impacts on aquatic life.

6.0 SUMMARY AND RECOMMENDATIONS

The following is a summary of the findings of this Remedial Investigation, as described in detail previously in this Report:

- The Site is a 4.2 acre commercial property occupied by a shopping plaza (Cornwall Plaza). The investigation has shown that the operation of a former dry cleaning business (Cornwall Cleaners) has resulted in the release of chlorinated solvents (PCE) to the environment.
- Investigation fieldwork completed between October 2007 and May 2009 includes the drilling and installation of 17 groundwater monitoring wells and the collection of soil, groundwater, air and soil vapor samples. Additionally the Site storm water drainage system was inspected.
- The hydrogeologic setting consists of gray to brown silt with some sand and gravel from grade to between 8.5 and 15 ft bg. There were indications of a former stream which may have existed along the north side of the Site parking

lot in which a storm culvert was placed and the area was backfilled. A gray shale bedrock was encountered at between 16 and 20 ft bg. Groundwater is encountered at between 6 and 11 ft bg in the overburden above the bedrock. Groundwater flows in the overburden to the north and northeast at a gradient of 0.005 ft/ft.

- Sub-slab vapor and indoor air sampling on the Site indicate the presence of COCs in the soil vapor. The lack of significant levels of the COCs in indoor air samples however indicates that vapor intrusion does not appear to be an issue.
- One soil sample collected 40 feet north of the former Cornwall Cleaners exceeded TAGM 4046 RSCO and the NYCRR Part 375 UUSCO of 1,300 ug/kg and the RUPG standard of 1,300 ug/kg for PCE. Five other soil samples contained methylene chloride at levels above the TAGM 4046 RSCO and the NYCRR Part 375 UUSCO and RUPG but this is not a contaminant associated with dry cleaning operations.
- Two rounds of groundwater sampling and analysis indicate that between 6 and 9 monitoring wells contained groundwater with VOCs at concentrations greater than the AWQS & GV. Total chlorinated solvent concentrations in groundwater range between 500 to 1,300 ug/1, near the eastern Site building and between 30 to 260 ug/l under the Site and the Fire Department parking lots. The dissolved plume extends laterally from the former Cornwall Cleaners at least 300 feet downgradient to the northeast. No significant levels of chlorinated solvents were detected in bedrock groundwater samples thus the plume is bounded vertically by the soil bedrock interface. No free phase product (DNAPL) was detected.

Based on the human health exposure assessment herein, the Site does not appear to pose a significant threat to public health or the environment. This is based upon the determination that the only impacted media to which the receptor population (primarily business employees and patrons) is exposed is indoor air. It has been demonstrated that this indoor air is minimally

impacted by Site contaminants at levels well below any NYSDOH standards. Groundwater and soil contamination poses a threat only to construction workers conducting ground-intrusive activities over a limited Site area. These threats are easily mitigated through the use of standard personal protective equipment.

Following the review and approval of this revised RIR by the NYSDEC and NYSDOH, a Fact Sheet will be prepared which summarizes the findings of the investigation. The draft Fact Sheet will be submitted for review and approval. Upon approval, the RIR and Fact Sheet will be mailed to the document repository and the Fact Sheet will be mailed to the Brownfield Site Contact List.

The environmental data gathered are sufficient to develop a set of remedial alternatives. Various remedial approached will be evaluated and submitted as an Alternatives Analysis Report (AAR) which may be combined with the Remedial Work Plan (RAWP). The selected remedy or remedies will be protective of public health and the environment, taking into account the current and anticipated future use of the Site. The AAR and the RAWP will be designed to address the various impacted environmental media and will include proposals for source removal and/or containment, plume stabilization and institutional and engineering controls to limit human exposure.

7.0 REMEDIAL INVESTIGATION REPORT ADDENDUM

The NYSDEC directed Cornwall Shopping to collect soil samples to characterize the environmental quality of the soils that will remain below the cap at the Site during the June 10, 2010 site meeting and in the June 14, 2010 correspondence. ARCADIS submitted proposed soil sample locations to the NYSDEC via electronic mail on July 9, 2010. The NYSDEC approved the boring locations during a July 14, 2010 telephone conversation and in an electronic mail.

7.1 Soil Characterization Sampling – August 19, 2010

ARCADIS collected a total of ten soil samples from nine boring locations (SB-1 through SB-9) on August 19, 2010. Borings were located throughout the Site to achieve general site

coverage. The boring locations are shown on Figure 16. The soil borings were installed using a direct push drill rig operated by Hawk Drilling of Washington, New Jersey. All borings were screened with a PID to detect potential VOCs. No readings above background levels were detected; therefore, samples for VOC analysis were not collected. No visual or olfactory indications of soil impact were observed in borings SB-1 through SB-9. Soil samples were collected at various depths to characterize the various soil types encountered at the Site. A general description of soils observed during the characterization sampling include gray to brown silt from six inches to approximately seven feet bgs and gray silt with clay from about seven feet to 12 feet bgs. Detailed soil boring logs are included in Appendix IV. The soil sample identifications which include the sample depths are provided below:

- SB-1 3-3.5
- SB-2 1-1.5
- SB-3 1.5-2
- SB-3 9-9.5
- SB-4 5.5-6
- SB-5 1-1.5
- SB-6 2-2.5
- SB-7 1.5-2
- SB-8 0.5-1
- SB-9 0.5-1

All samples were analyzed for Priority Pollutant (PP) Metals via USEPA Methods 6010 and 7471, polychlorinated biphenyls (PCB) via USEPA Method 8082, semi-volatile organic compounds (SVOC) via USEPA Method 8270 and pesticides via USEPA Method 8081 by Alpha Analytical Labs (NY NELAC 11148).

7.2 Summary of Soil Characterization Results – August 19, 2010

The soil analytical results are summarized and compared to the NYSDEC TAGM 4046 and 6 NYCRR Part 375 in Table 11. Results were reported with ASP Category B deliverables. A copy of the laboratory report is included in Appendix V. A summary of the soil analytical results is provided below:

Pesticides

No pesticides were detected at concentrations above the New York TAGM SCO, the NYCRR Part 375 UUSCO, Residential Soil Cleanup Objective (RSCO) and RUPG. The

laboratory method detection limit (MDL) for 4,4 DDT in sample SB-5 1-1.5 was 0.0033 mg/kg which is the Brownfields Guidance UUSCO; however, 4,4 DDT was not detected at the MDL in sample SB-5 1-1.5 or in any other sample collected on August 19, 2010.

Semivolatile Organic Compounds

Benzo(a)pyrene (0.092 mg/kg) and Dibenzo(a,h)anthracene (0.017 mg/kg) were detected at concentrations above TAGM SCO in soil sample SB-2 1-1.5; however, the concentrations did not exceed the NYCRR Part 375 UUSCO, RSCO or RUPG.

PCB

No PCB were detected above the laboratory MDL in any soil samples collected on August 19, 2010.

Metals

No metals were detected at concentrations above the NYCRR Part 375 UUSCO, RSCO or RUPG in any samples. Beryllium, chromium, nickel and zinc were detected at concentrations above the New York TAGM SCO in all soil samples collected August 19, 2010; however, the concentrations of beryllium, chromium and nickel in all soil samples are within the typical background ranges for the Eastern United States. The concentration of zinc detected in sample SB-3 9-9.5 is also within the background range and all other zinc detections are slightly above the Eastern United States background ranges. Although the zinc concentrations slightly exceed the typical Eastern United States background range, the detected concentrations are consistent with background conditions at this Site and are not indicative of a release. Copper was detected at concentrations above the TAGM SCO in samples SB-1 1-1.5, SB-3 1.5-2, 1.5-2, SB-4 5.5-6, SB-5 1-1.5, SB-6 2-2.5, SB-7 1.5-2, SB-8 0.5-1, and SB-9 0.5-1. All concentrations of copper detected are within the background range for the Eastern United States. The highest concentration of each metal is provided in the following table:

Metal	Maximum Concentration Detected (mg/kg)	Sample ID
Arsenic	6.6	SB-3_1.5-2
Beryllium	0.65	SB-2_1-1.5
Chromium	16	SB-2_1-1.5, SB-3_1.5-2, SB-3_9-9.5, SB-4_5.5-6, SB-5_1-1.5, SB-6_2-2.5
Copper	29	SB-9_0-1.5
Lead	42	SB-5_1-1.5
Nickel	22	SB-2_1-1.5, SB-4_5.5-6, SB-6_2-2.5, SB-9_0.5-1
Zinc	86	SB-5_1-1.5

7.3 Data Usability Summary Report

Soil samples collected on August 19, 2010 were analyzed by Alpha Analytical Labs (NY NELAC 11148). The samples were received by the laboratory on August 20, 2010 in the proper conditions and all analysis were performed within required holding times,

Semivolatile Organic Compounds

The WG429065-2/-3 LCS/LCSD recoveries associated with L1012962-02, -03, -05, -06, -09, -10, -12, -14, -16 and -17, were above the acceptance criteria for 2,4-dinitrotoluene (102%/99%) and 4-nitrophenol (LCS at 117%); however, the associated samples were non-detect for these target compounds. The results of the original analysis are reported. The overall quality and reliability of the laboratory does not appear to be affected.

The WG429159-2 LCS recovery associated with L1012962-19 was above the acceptance criteria for 2,4-dinitrotoluene (LCS at 97%); however, the associated sample was non-detect for this target compound. The results of the original analysis are reported. The overall quality and reliability of the laboratory does not appear to be affected.

The WG429159-2/-3 LCS/LCSD RPD associated with L1012962-19 are above the acceptance criteria for 1,2,4-trichlorobenzene (43%), 1,2-dichlorobenzne (38%) and 1,4-dichlorobenzene (40%); however, the individual LCS/LCSD recoveries are within method limits. The overall quality and reliability of the laboratory does not appear to be affected.

The MDL for nitrobenzene, 4-chloroaniline, P-chloro-M-cresol, 2,4-dichlorophenol, 2-nitrophenol, 4-nitrophenol, 2,4-dinitrophenol, phenol, 2-methylphenol and 2,4,5-trichlorophenol were at or slightly above the TAGM RSCO in at least one of the samples collected on August 19, 2010; however, all MDLs were below applicable NYCRR SCOs. The laboratory can generally detect a compound at an estimated concentration of up to 1/10 the laboratory MDL if it is present. The estimated concentrations are then flagged with a J qualifier. Since the laboratory did not flag these compounds with a J qualifier, it is not likely that these compounds are actually present in the samples.

Overall the semivolatile organic compound data met the requirements of the NYSDEC and is considered accurate and reliable.

Semivolatile Organic Compounds – SIM

L1012962-03, -05, -06, -12 and 18 have elevated detection limits due to the dilutions required by the sample matrix.

The surrogate recoveries for L1012962-18 are below the acceptance criteria for 2-fluorophenol, phenol-d6, nitrobenzene-d5, 2-fluorobiphenyl and 4-terphenyl (not all 0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported. The surrogate recoveries for WG430777-1 Method Blank associated with L1012962-18 are above the acceptance criteria for 2-fluorophenol (121%) and 4-terphenyl-d14 (123%). Since the blank was non-detect for all target analytes, re-analysis was not required. The overall quality and reliability of the laboratory does not appear to be affected.

Overall the semivolatile organic compound - SIM data met the requirements of the NYSDEC and considered accurate and reliable.

Metals

The WGD428979-4MS recoveries performed on L1012962-02 are below the acceptance criteria for antimony (45%) and lead (49%). A post digestion spike was performed with acceptable recoveries of antimony (96%) and lead (94%).

The WG428979-9 MS recovery performed on L1012962-02 is below the acceptance criteria for zinc (36%). A post digestion spike was performed with an unacceptable recovery of 64%. This has been attributed to sample matrix

The overall quality of the laboratory data for metals does not appear to be impacted by the QC exceedances and is considered accurate and reliable.

8.0 SUMMARY AND RECOMMENDATIONS

The following is a summary of the findings of the Site Characterization completed by ARCADIS.

- No PCB were detected at concentrations above laboratory MDL.
- No pesticides were detected at concentrations above the TAGM SCO or NYCRR Part 375 SCO.
- Benzo(a)pyrene and Dibenzo(a,h)anthracene were detected at concentrations above the TAGM SCO in soil sample SB-2 1-1.5; however, the concentrations did not exceed the NYCRR Part 375 UUSCO, RSCO or RUPG which are the applicable SCO for the Site.
- Beryllium, chromium, nickel, zinc and copper were detected at concentrations above the New York TAGM SCO in soil samples collected for Site characterization; however, none of the detected concentrations exceeded the NYCRR Part 375 SCO which is the applicable SCO for the Site. Additionally, the concentrations of beryllium, chromium, nickel and copper are within typical Eastern United States background ranges. The concentrations of zinc are within or slightly above the typical Eastern United States background ranges, but are typical of Site background conditions and not a release to the environment.
- The soil characterization samples were collected from areas capped with asphalt pavement and/or buildings, which prevents a direct contact exposure pathway to soil with SVOC and metal concentrations slightly exceeding the TAGM SCO.
- None of the SVOC or metals concentrations detected in soil samples collected from borings SB-1 through SB-9 exceeded the NYCRR Part 375 RUPG.

- Based on the findings of the additional site characterization soil sampling, no further investigation is warranted. Soil remediation as related to the residual chlorinated VOC impacts will be addressed in the AAR and RAWP to be prepared following NYSDEC approval of this document.

ARCADIS

TABLES

TABLE 1

FORMER CORNWALL CLEANERS
CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
Monitoring Wells Construction Details
Water Level Measurements
January 10, 2008 and June 4, 2009

Well ID	Total Depth (feet)	Screen		TOC[2] Elevation (ft asd)	January 10, 2008		June 4, 2009	
		Diameter (inches)	Setting(ft bg)1)		Depth to Water (ft btoc)[4]	Corrected Ground Water Elevation (ft asd)	Depth to Water (ft btoc)	Corrected Ground Water Elevation (ft asd)
MW-1R	20_00	2.00	10 to 20	49.69	5.92	43.77	7.23	42.46
MW-1B	35.00	2.00	18 to35*	49.79	NA	---	8.72	41.07
MW-2	20.00	2.00	15 to 20	47.62	10.45	37.17	11.64	35.98
MW-2B	42.00	2.00	27 to 42*	47.98	10.67	37.31	12.82	35.16
MW-3	21_00	2.00	16 to 21	48.22	10.68	37.54	13.43	34.79
MW-3B	37.00	2.00	27 to 37*	48.27	11.10	37.17	12.15	36.12
MW-4	20.00	2.00	10 to 20	48.48	10.92	37.56	11.75	36.73
MW-5	20.00	2.00	10 to 20	49.92	7.82	42.10	9.91	40.01
MW-6	16.00	2.00	6 to 16	47.20	10.52	36.68	11.65	35.55
MW-6B	45_00	2.00	25 to 45*	46.80	9.90	36.90	11.55	35.25
MW-7	20.00	2.00	10 to 20	47_29	10.65	36.64	11.07	36.22
MW-8	20.00	2.00	10 to 20	48.24	10.97	37.27	11.6	36.64
MW-9	19.00	2.00	9 to 19	47.98	10.21	37.77	11.31	36.67
MW-10	20.00	2.00	10 to 20	45.75	NA	---	10.55	35.20
MW-11	15.50	2.00	5.5 to 15.5	44-23	NA		8.93	35.30
MW-11B	37.00	2.00	22 to 37*	44_25	NA		8.6	35.65
MW-12	15.00	2.00	5 to 15	44.62	NA	---	10.24	34.38
MW-12B	40.00	2.00	20 to 40*	44.40	NA	---	12.4	32.00
MW-13	20.00	2.00	5 to 20	47.68	NA	---	10.9	36.78

Well IN ending in "B" are screened within competent bedrock
1) - Feet below grade
- Top of casing
- Feet above Site datum
- Feet below top of casing
NA - Not Available, well did not exist on date of measurement
PVC well screen set within bedrock borehole

TABLE 2

FORMER CORNWALL CLEANERS
CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. 0336070

Soil Vapor / Sub-slab Vapor Analytical Results, VOCs by EPA Method TO-15
Collected October 25, 2007

Compound	ug/m³					
	Chaos Subslab 1 (CPHSS1)	Chaos Subslab 2 (CPHSS2)	Key Foods Subslab 1 (KFSS1)	Leos Pizza Subslab 1 (LPSS1)	Soil Vapor Front (SVF)	Soil Vapor Rear (SVR)
1,2,4-Trimethylbenzene	ND (13)	4.8 (3.5)	ND (6.9)	6.1 (3.6)	ND (3.6)	6.4 (3.7)
2-Butanone (Methyl Ethyl Ketone)	33 (8.0)	5.3 (2.1)	ND (4.2)	3.5 (2.2)	47 (2.2)	56 (2.2)
Benzene	ND (8.7)	ND (2.2)	ND (4.5)	ND (2.3)	12 (2.3)	14 (2.4)
Chloroform	20 (13)	18 (3.4)	ND (6.9)	ND (3.6)	ND (3.6)	ND (3.6)
Cyclohexane	ND (9.4)	ND (2.4)	ND (4.8)	ND (2.5)	ND (2.5)	2.9 (2.6)
Ethanol	2,800E 3 (20)	270 (5.3)	11 (11)	150 (5.5)	10 (5.5)	110 (5.6)
Ethylbenzene	ND (12)	3.4 (3.1)	ND (6.1)	4.0 (3.2)	5.3 (3.2)	3.4 (3.2)
Freon 11	ND (15)	ND (4.0)	8.4 (7.9)	ND (4.1)	ND (4.1)	ND (4.2)
Freon 12	ND (13)	ND (3.5)	ND (7.0)	5.6 (3.6)	ND (3.6)	ND (3.7)
Hexane	12 (9.6)	5.4 (2.5)	ND (5.0)	ND (2.6)	7 (2.6)	ND (2.6)
m,p-Xylenes	14 (12)	13 (3.1)	8.1 (6.1)	18 (3.2)	20 (3.2)	12 (3.2)
o-Xylenes	ND (12)	4.4 (3.1)	ND (6.1)	6.2 (3.2)	6.7 (3.2)	4.9 (3.2)
Styrene	22 (12)	4.1 (3.0)	ND (6.0)	4.6 (3.1)	ND (3.1)	ND (3.2)
Tetrachloroethene	4700 (18)	1800 (4.8)	3300 (9.6)	51 (5.0)	ND (5.0)	28 (5.0)
Toluene	44 (10)	12 (2.6)	15 (5.3)	12 (2.8)	16 (2.8)	12 (2.8)
1,3 ,5- Trimethylbenzene	ND (13)	ND (3.5)	ND (6.9)	ND (3.6)	ND (3.6)	ND (3.7)
1,4-Dichlorobenzene	ND (16)	ND (4.2)	ND (8.5)	ND (4.4)	ND (4.4)	ND (4.5)
Carbon Tetrachloride	ND (17)	ND (4.4)	ND (8.9)	ND (4.6)	ND (4.6)	ND (4.7)
Chloromethane	ND (22)	ND (5.8)	ND (12)	ND (6.0)	ND (6.0)	ND (6.2)
Freon 113	ND (21)	ND (5.4)	ND (11)	ND (5.6)	ND (5.6)	ND (5.7)
tert-Butyl alcohol	NA	NA	NA	NA	NA	NA
1,3-Butadiene	ND (6.0)	ND (1.6)	ND (3.1)	ND (1.6)	6.3 (1.6)	ND (4.5)
2,2 ,4-Trimethylpentane	ND (13)	ND (3.3)	ND (6.6)	ND (3.4)	ND (3.4)	4 (3.5)
2-Propanol	ND (27)	ND (6.9)	ND (14)	8.3 (7.2)	12 (7.2)	ND (7.3)
4-Ethyltoluene	ND (13)	ND (3.5)	ND (6.9)	ND (3.6)	ND (3.6)	3.8 (3.7)
Acetone	500 (26)	49 (6.7)	24 ((13)	21 (6.9)	230 (6.9)	350 (7.1)
Carbon disulfide	ND (8.5)	2.7 (2.2)	ND (4.4)	ND (2.3)	73 (2.3)	14 (2.3)
Heptane	61 (11)	47 (2.9)	ND (5.8)	8.2 (3.0)	29 (3.0)	10 (3.0)
Tetrahydrofuran	110 (8.0)	17 (2.1)	ND (4.2)	4.4 (2.2)	100 (2.2)	14 (2.2)
Trichloroethene	54 (15)	37 (3.8)	24 (7.6)	ND (3.9)	ND (3.9)	ND (4.0)
Vinyl chloride	ND (7.0)	ND (1.8)	ND (3.6)	ND (1.9)	ND (1.9)	7.5 (1.9)

Compounds on BOLD are primary Site contaminants
Reporting Limit Provided in Parethesis (0.86)

1 - micrograms per cubic meter

2 - not detected above the laboratory detection limit

3 - not established

4 -exceeds instrument calibration range

Compound detected in both ambient air and soil vapor
Compound detected in ambient air only
Compound detected in soil vapor only

TABLE 3

FORMER CORNWALL CLEANERS
CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

Ambient Air Analytical Results, VOCs by EPA Method TO.15
Collected October 25, 2007

Compound	ug/m^{3n}					
	Chan's Indoor Air 1 (CIAI)	Key Foods Indoor Air 1 (KFIA1)	Leo's Pizza Indoor Air I (LPIA1)	Outdoor Air Front (OAF)	Outdoor Air Rear (OAR)	NYSDOH Indoor Air Guidance Values
1,2,4-Trimethylbenzene	ND (0.86)	ND (0.76)	ND (0.79)	3.5 (0.78)	4.1 (0.84)	NE
2-Butanone (Methyl Ethyl Ketone)	1 8 (0.52)	3.9 (0.46)	3.3 (0.47)	5.2 (0.46)	5.6 (0.50)	NE
Benzene	1.6 (0.56)	0.66 (0.50)	3.7 (0.51)	0.99 (0.50)	1.0 (0.55)	NE
Chloroform	ND (0.85)	0.92 (0.76)	ND (0.79)	ND (0.77)	ND (0.83	NE
Cyclohexane	ND (0.60)	ND (0.53)	1.5 (0.55)	ND (0.54)	ND (0.59)	NE
Ethanol	240 **E[4] (1.6)**	350E (1.5)	3900E (1.5)	11 (1.5)	12 (1.6)	NE
Ethyl benzene	ND (0.76)	ND (0.67)	ND (0.70)	4 (0.69)	3.6 (0.74)	NE
Freon 11	1.2 (0.49)	10 (0.44)	1.2 (0.45)	1.4 (0.44)	1.2 (0.48)	NE
Freon 12	2.2 (0.43)	3 (0.38)	2.8 (0.40)	2 (0.39)	2.2 (0.42)	NE
Hexane	ND (0.62)	0.85 (0.55)	4.8 (0.57)	ND (0.56)	ND (0.60)	NE
m,p- Xylenes	ND (0.76)	ND (0.67)	1.1 (0.70)	22 (0.69)	17 (0.74)	NE
o-Xylenes	ND (0.76)	ND (0.67)	ND (0.70)	6.3 (0.69)	5.1 (0.74)	NE
Styrene	ND (0.74)	ND (0.66)	ND (0.68)	0.79 (0.67)	ND (0.73)	NE
Tetrachloroethene	ND (0.59)	1.4 (0.52)	ND (0.55)	ND (0.54)	ND (0.58)	100
Toluene	1.6 (0.66)	5.6 (0.58)	3.4 (0.61)	18 (0.60)	12 (0.64)	NE
1,3,5-Trimethylbenzene	ND (0.86)	ND (0.76)	ND (0.79)	1.3 (0.78)	1.2 (0.84)	NE
1,4-Dichlorobenzene	ND (0.53)	6.4 (0.46)	ND (0.48)	ND (0.48)	ND (0.51)	NE
Carbon Tetrachloride	0.81 (0.55)	0.76 (0.49)	0.6 (0.51)	0.46 J (0.50)	0.72 (0.54)	NE
Chloromethane	0.94 (0.36)	0.80 (0.32)	1.5 (0.33)	0.63 (0.60)	1.0 (0.35)	NE
Freon 113	ND (0.67)	0.76 (0.59)	ND (0.62)	0.62 (0.60)	ND (0.66)	NE
tert-Butyl alcohol	ND (2.6)	30.0 (2.3)	ND (2.4)	5.0 (2.4)	6.0 (2.6)	NE
1,3-Butadiene	---	---	---	---	---	NE
2,2,4-Trimethylpentane	ND (0.82)	ND (0.72)	ND (0.75)	ND (0.74)	ND (0.80)	NE
2-Propanol	---	---	---	---	---	NE
4-Ethyltoluene	---	---	---	---	---	NE
Acetone	---	---	---	---	---	NE
Carbon disulfide	---	---	---	---	---	NE
Heptane	---	---	---	---	---	NE
Tetrahydrofuran	---	---	---	---	---	NE
Trichloroethene	ND (0.47)	ND (0.42)	ND (0.43)	0.30 J (0.42)	ND (0.46)	5
Vinyl chloride	ND (0.45)	ND (0.40)	ND (0.41)	ND (0.40)	ND (0.44)	NE

Compounds on BOLD are primary Site contaminants
Reporting Limit Provided in Parethesis (0.86)

1 - micrograms per cubic meter

2 - not detected above the laboratory detection limit

3 - not established

4 -exceeds instrument calibration range

Compound detected in both ambient air and soil vapor
Compound detected in ambient air only
Compound detected in soil vapor only

TABLE 4

FORMER CORNWALL CLEANERS
CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

Indoor Air / Soil Vapor / Sub-slab Vapor Analytical Results, VOCs by EPA Method TO-15
Collected October 25, 2007

Compound	ug/m3/1											
	Chan's Subslab 1 (CPHSS1)	Chan's Subslab 2 (CPHSS2)	Chan's Indoor Air 1 (CIA1)	Key Foods Subslab 1 (KFSS1)	Key Foods Indoor Air 1 (KFIA1)	Leos Pizza Subslab 1 (LPSS1)	Leo's Pizza Indoor Air 1 (LPIA1)	Soil Vapor Front (SVF)	Outdoor Air Front (OAF)	Soil Vapor Rear (SVR)	Outdoor Air Rear (OAR)	NYSDOH Indoor Air Guidance Values
1,2,4-Trimethylbenzene	ND (13)	4.8 (3.5)	ND (0.86)	ND (6.9)	ND (0.76)	6.1 (3.6)	ND (0.79)	ND (3.6)	3.5 (0.78)	6.4 (3.7)	4.1 (0.84)	NE [3]
2-Butanone (Methyl Ethyl Ketone)	33 (8.0)	5.3 (2.1)	1 8 (0.52)	ND (4.2)	3.9 (0.46)	3.5 (2.2)	3.3 (0.47)	47 (2.2)	5.2 (0.46)	56 (2.2)	5.6 (0.50)	NE
Benzene	ND (8.7)	ND (2.2)	1.6 (0.56)	ND (4.5)	0.66 (0.50)	ND (2.3)	3.7 (0.51)	12 (2.3)	0.99 (0.50)	14 (2.4)	1.0 (0.55)	NE
Chloroform	20 (13)	18 (3.4)	ND (0.85)	ND (6.9)	0.92 (0.76)	ND (3.6)	ND (0.79)	ND (3.6)	ND (0.77)	ND (3.6)	ND (0.83	NE
Cyclohexane	ND (9.4)	ND (2.4)	ND (0.60)	ND (4.8)	ND (0.53)	ND (2.5)	1.5 (0.55)	ND (2.5)	ND (0.54)	2.9 (2.6)	ND (0.59)	NE
Ethanol	2,800E 3 (20)	270 (5.3)	240 **E[4] (1.6)**	11 (11)	350E (1.5)	150 (5.5)	3900E (1.5)	10 (5.5)	11 (1.5)	110 (5.6)	12 (1.6)	NE
Ethylbenzene	ND (12)	3.4 (3.1)	ND (0.76)	ND (6.1)	ND (0.67)	4.0 (3.2)	ND (0.70)	5.3 (3.2)	4 (0.69)	3.4 (3.2)	3.6 (0.74)	NE
Freon 11	ND (15)	ND (4.0)	1.2 (0.49)	8.4 (7.9)	10 (0.44)	ND (4.1)	1.2 (0.45)	ND (4.1)	1.4 (0.44)	ND (4.2)	1.2 (0.48)	NE
Freon 12	ND (13)	ND (3.5)	2.2 (0.43)	ND (7.0)	3 (0.38)	5.6 (3.6)	2.8 (0.40)	ND (3.6)	2 (0.39)	ND (3.7)	2.2 (0.42)	NE
Hexane	12 (9.6)	5.4 (2.5)	ND (0.62)	ND (5.0)	0.85 (0.55)	ND (2.6)	4.8 (0.57)	7 (2.6)	ND (0.56)	ND (2.6)	ND (0.60)	NE
m,p-Xylenes	14 (12)	13 (3.1)	ND (0.76)	8.1 (6.1)	ND (0.67)	18 (3.2)	1.1 (0.70)	20 (3.2)	22 (0.69)	12 (3.2)	17 (0.74)	NE
o-Xylenes	ND (12)	4.4 (3.1)	ND (0.76)	ND (6.1)	ND (0.67)	6.2 (3.2)	ND (0.70)	6.7 (3.2)	6.3 (0.69)	4.9 (3.2)	5.1 (0.74)	NE
Styrene	22 (12)	4.1 (3.0)	ND (0.74)	ND (6.0)	ND (0.66)	4.6 (3.1)	ND (0.68)	ND (3.1)	0.79 (0.67)	ND (3.2)	ND (0.73)	NE
Tetrachloroethene	4700 (18)	1800 (4.8)	ND (0.59)	3300 (9.6)	1.4 (0.52)	51 (5.0)	ND (0.55)	ND (5.0)	ND (0.54)	28 (5.0)	ND (0.58)	100
Toluene	44 (10)	12 (2.6)	1.6 (0.66)	15 (5.3)	5.6 (0.58)	12 (2.8)	3.4 (0.61)	16 (2.8)	18 (0.60)	12 (2.8)	12 (0.64)	NE
1,3,5-Trimethylbenzene	ND (13)	ND (3.5)	ND (0.86)	ND (6.9)	ND (0.76)	ND (3.6)	ND (0.79)	ND (3.6)	1.3 (0.78)	ND (3.7)	1.2 (0.84)	NE
1,4-Dichlorobenzene	ND (16)	ND (4.2)	ND (0.53)	ND (8.5)	6.4 (0.46)	ND (4.4)	ND (0.48)	ND (4.4)	ND (0.48)	ND (4.5)	ND (0.51)	NE
Carbon Tetrachloride	ND (17)	ND (4.4)	0.81 (0.55)	ND (8.9)	0.76 (0.49)	ND (4.6)	0.6 (0.51)	ND (4.6)	0.46 J (0.50)	ND (4.7)	0.72 (0.54)	NE
Chloromethane	ND (22)	ND (5.8)	0.94 (0.36)	ND (12)	0.80 (0.32)	ND (6.0)	1.5 (0.33)	ND (6.0)	0.63 (0.60)	ND (6.2)	1.0 (0.35)	NE
Freon 113	ND (21)	ND (5.4)	ND (0.67)	ND (11)	0.76 (0.59)	ND (5.6)	ND (0.62)	ND (5.6)	0.62 (0.60)	ND (5.7)	ND (0.66)	NE
tert-Butyl alcohol	NA	NA	ND (2.6)	NA	30.0 (2.3)	NA	ND (2.4)	NA	5.0 (2.4)	NA	6.0 (2.6)	NE
1,3-Butadiene	ND (6.0)	ND (1.6)	---	ND (3.1)	---	ND (1.6)	---	6.3 (1.6)	---	ND (4.5)	---	NE
2,2,4-Trimethylpentane	ND (13)	ND (3.3)	ND (0.82)	ND (6.6)	ND (0.72)	ND (3.4)	ND (0.75)	ND (3.4)	ND (0.74)	4 (3.5)	ND (0.80)	NE
2-Propanol	ND (27)	ND (6.9)	---	ND (14)	---	8.3 (7.2)	---	12 (7.2)	---	ND (7.3)	---	NE
4-Ethyltoluene	ND (13)	ND (3.5)	---	ND (6.9)	---	ND (3.6)	---	ND (3.6)	---	3.8 (3.7)	---	NE
Acetone	500 (26)	49 (6.7)	---	24 ((13)	---	21 (6.9)	---	230 (6.9)	---	350 (7.1)	---	NE
Carbon disulfide	ND (8.5)	2.7 (2.2)	---	ND (4.4)	---	ND (2.3)	---	73 (2.3)	---	14 (2.3)	---	NE
Heptane	61 (11)	47 (2.9)	---	ND (5.8)	---	8.2 (3.0)	---	29 (3.0)	---	10 (3.0)	---	NE
Tetrahydrofuran	110 (8.0)	17 (2.1)	---	ND (4.2)	---	4.4 (2.2)	---	100 (2.2)	---	14 (2.2)	---	NE
Trichloroethene	54 (15)	37 (3.8)	ND (0.47)	24 (7.6)	ND (0.42)	ND (3.9)	ND (0.43)	ND (3.9)	0.30 J (0.42)	ND (4.0)	ND (0.46)	5
Vinyl chloride	ND (7.0)	ND (1.8)	ND (0.45)	ND (3.6)	ND (0.40)	ND (1.9)	ND (0.41)	ND (1.9)	ND (0.40)	7.5 (1.9)	ND (0.44)	NE

Compounds on BOLD are primary Site contaminants
1 - micrograms per cubic meter
2 - not detected above the laboratory detection limit
3 - not established
4 - exceeds instrument calibration range

Compound detected in both ambient air and soil vapor
Compound detected in ambient air only
Compound detected in soil vapor only

TABLE 5

FORMER CORNWALL CLEANERS CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

Soil Vapor Sub-slab Vapor Analytical Results, VOCs by EPA Method TO-15
Collected April 30, 2009

Compound	uorn S fl	
	Cornwall Fire Dept Subslab 1 (Basement) (CFDSS1)	Cornwall Fire Dept Soil Vapor 1 (Parking lot) (CFDSV1)
1,2,4-Trimethylbenzene	13.5 (7.08)	22.5 (4.65)
1,3,5-Trimethylbenzene	4.70 (4.52)	25.5 (4.65)
2-Butanone (Methyl Ethyl Ketone)	26.4 (2.71)	23.7 (2.79)
4-Ethyltoluene	4.84 (4.52)	25.5 (4.65)
Benzene	390 D [3] (73.1)	9.75 (3.01)
Ethylbenzene	9.27 (4.00)	15.5 (4.11)
Heptane	7.07 (3.76)	12.9 (3.87)
Hexane	5.01 (3.24)	10 (3.33)
m,p-Xylenes	44.2 (4.00)	75.1 (4.11)
o-Xylenes	14.6 (4.00)	26.1 (4.11)
Tetrachloroethene	22.8 (6.24)	ND (6.42)
Toluene	349 D (86.7)	72.8 (3.57)
1,1,1-Trichloroethane	ND (5.01)	ND (5.15)
1,1-Dichloroethene	ND (3.66)	ND (3.76)
1,2-Dichloroethane	ND (3.73)	ND (3.83)
2,2,4-Trimethylpentane	ND (4.34)	ND (4.43)
Carbon Tetrachloride	ND (5.79)	ND (5.95)
cis-1,2-Dichloroethene	ND (3.66)	ND (3.76)
Methylene chloride	ND (3.20)	ND (3.29)
Trichloroethene	ND (4.94)	ND (5.08)
Trichlorofluoromethane	ND (5.18)	ND (5.32)
Vinyl chloride	ND (2.35)	ND (2.42)
Carbon disulfide	ND (2.86)	2.31 J [4] (2.94)
Chloroform	18.4 (4.49)	ND (4.61)
Ethyl acetate	2,590 D (84.4)	5.62 (3.48)
MIBK	ND (3.76)	62.5 (3.87)
Tetrahydrofuran	33 (2.71)	6.3 (2.79)

Compounds on **BOLD** *are* primary Site contaminants
- micrograms per cubic meter

2 - not detected above the laboratory detection limit
3 - result reported based on a diluted sample. due either to high concentration or matrix interference
4 - indicates an estimated value

Compound detected in both ambient air and soil vapor
Compound detected in ambient air only
Compound detected in soil vapor only

TABLE 6
FORMER CORNWALL CLEANERS
CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

Ambient Air Analytical Results, VOCs by EPA Method TO-15
Collected April 30, 2009

Compound	ughn3 n					
	Chans Indoor Air 2 (CIA2)	Key Foods Indoor Air 2 (KFIA2)	Leo's Indoor Air 2 (LPIA2)	Cornwall Fire Dept Indoor Air 1 (Basement) (CFDIA1)	Cornwall Fire Dept Indoor Air 2 (Upstairs) (CFDIA2)	NYSDOB Indoor Air Guidance Values
1,2,4-Trimethylbenzene	ND (4.45)	ND (4.40)	ND (4.52)	ND (4.38)	12.5 (4.95)	NE [3]
1,3,5-Trimethylbenzene	ND (4.45)	ND (4.40)	ND (4.52)	ND (4.38)	11.5 (4.95)	NE
2-Butanone (Methyl Ethyl Ketone)	ND (2.67)	3.3 (2.64)	1.53 J (2.71)	6.0 (2.62)	6 (2.97)	NE
4-Ethyltoluene	ND (4.45)	ND (4.40)	ND (4.52)	ND (4.38)	3.69 J (4.95)	NE
Benzene	2.63 J (2.88)	ND (2.85)	ND (2.93)	ND (2.84)	3.57 (3.21)	NE
Ethylbenzene	ND (3.93)	ND (3.89)	ND (4.00)	2.21 J (3.87)	6.18 (4.38)	NE
Heptane	ND (3.70)	ND (3.66)	1.87 J (3.76)	ND (3.64)	3.45 J (4.12)	NE
Hexane	2.90 J (3.19)	ND (3.15)	1.93 J (3.24)	3.00 J (3.13)	5.37 (5.37)	NE
m,p-Xylenes	ND (3.93)	ND (3.89)	ND (4.00)	8.83 (3.87)	24.3 (4.38)	NE
o-Xylenes	ND (3.93)	ND (3.89)	ND (4.00)	3.09 J(3.87)	8.83 (4.38)	NE
Tetrachloroethene	1.52 (0.61) (SIM) *	0.90 (0.60) (SIM)	0.62 (SIM) (0.62)	1.03 (0.60) (SIM)	1.52 (0.67)	100
Toluene	ND (3.42)	ND (3.38)	ND (3.48)	12.3 (3.36)	31.1 (3.80)	NE
1,1,1-Trichloroethane	0.50 (0.50) (SIM)	0.11 J (0.49) (SIM)	0.22 J (0.51) (SIM)	1.55 (0.49) (SIM)	1.55 (0.55) (SIM)	NE
1,1-Dichloroethene	0.24 J(0.36)(SIM)	ND (3.56)	0.12J (0.36) (SIM)	ND (0.35)	ND (0.40)	NE
1,2-Dichloroethane	0.45 (0.37)(SIM)	0.16 J (0.37)(SIM)	0.25 J (0.38) (SIM)	0.16 J (0.37) (SIM)	0.161 (0.42) (SIM)	NE
2,2,4-Trimethylpentane	ND (4.24)	ND (4.19)	ND (4.31)	ND (4.16)	4.13 J (4.71)	NE
Carbon Tetrachloride	1.22 (0.57) (SIM)	0.90 (0.56) (SIM)	0.83 (0.58) (SEM)	0.83 (0.56) (SIM)	0.77 (6.34)	NE
cis-1,2-Dichloroethene	0.32 J (0.36) (SIM)	0.08 J (0.35) (SIM)	0.16 J (0.36) (SIM)	0.08 J (0.35) (SIM)	0.08 J (0.40) (SIM)	NE
Methylene chloride	4.95 (3.15)	ND (3.12)	ND (3.20)	4.24 (3.10)	ND (3.50)	NE
Trichloroethene	0.60 (0.48) (SIM)	0.16 J (0.48) (SIM)	0.27 , (0.49) (SIM)	0.38 J (0.47) (SIM)	1.26 (0.53) (SIM)	5
Trichlorofluoromethane	ND (5.09)	ND (5.03)	ND (5.18)	6.29 (5.01)	ND (5.66)	NE
Vinyl chloride	0.13 J (0.23) (SIM)	ND (2.29)	0.08 , (0.24) (SIM)	ND (2.28)	ND (2.57)	NE
Carbon disulfide	ND (2.81)	ND (2.29)	ND (2.86)	ND (2.27)	ND (3.13)	NE
Chloroform	ND (4.41)	ND (4.36)	ND (4.49)	ND (4.34)	ND (4.91)	NE
Ethyl acetate	ND (3.33)	ND (3.29)	ND (3.38)	ND (3.27)	ND (4.97)	NE
MIBK	ND (3.70)	ND (3.66)	ND (3.76)	ND (3.64)	ND (4.12)	NE
Tetrahydrofuran	ND (2.67)	ND (2.64)	ND (2.71)	ND (2.62)	ND (2.97)	NE

Compounds on BOLD are primary Site contaminants
Reporting limit provided in parenthesis (4.40)
1 - micrograms per cubic meter
2 - not detected above the laboratory detection limit
3 - not established
4 - indicates an estimated value
5 - selected ion monitoring
7 1
Compound detected in both ambient air and soil vapor
Compound detected in ambient air only
Compound detected in soil vapor only

TABLE 7

FORMER CORNWALL CLEANERS
CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

Summary of Volatile Organic Compounds Detected in Soil
VOCs by EPA Method 8260 modified to include MTBE
Collected October 25, 2007 and May 6, 2009
(All concentrations expressed in micrograms per kilogram [ug/kg])

Compound	Sample ID															NYSDEC TAGM #4046 RSCO [2]	6 NYCRR Part 375 [3]		
	MW-1R	MW-2B		MW-3B		MW-4		MW-5		MW-6		MW-7	MW-8	MW-9	MW-11	MW-12		Unrestricted Use Soil Cleanup Objective	Restricted Use Commercial	Restricted Use Protection of Groundwater
	Sampled Oct 25, 2007														Sampled May 6, 2009					
	12-20 ftbg[1]	11-13 ftbg	13-15 ftbg	10-12 ftbg	15-17 ftbg	11-13 ftbg	13-15 ftbg	11-13 ftbg	15-17 ftbg	10-12 ftbg	12-14 ftbg	7-9 ftbg	7-9 ftbg	5-7 ftbg	9-11 ftbg	9-11 ftbg				
Dichlorodifluoromethane	<51	<52	<52	<62	<2.0	<59	<50	<50	<54	<16	<59	<45	<53	<57	<46	<61	NS [4]	NS	NS	NS
Chloromethane	<51	<52	<52	<62	<50	<59	<50	<52	<54	<56	<59	<45	<53	<57	<46	<61	NS	NS	NS	NS
Vinyl chloride	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	200	20	13,000	20
Chloroethane	<51	<52	<52	<62	<50	<59	<50	<52	<54	<56	<59	<45	<53	<57	<46	<61	1,900	NS	NS	NS
Trichlorofluoromethane	<51	<52	<52	<62	<50	<59	<50	<52	<54	<56	<59	<45	<53	<57	<46	<61	NS	NS	NS	NS
Acetone	<250	<260	<260	<310	<250	<290	<250	<260	<270	<280	<290	<220	<260	<280	<230	<300	200	50	500,000	50
1 1-Dichloroethene	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	400	330	500,000	330
Carbon disulfide	<51	<52	<52	<62	<50	<59	85	<52	<54	<.56	<59	<45	<53	<57	<46	<61	2,700	NS	NS	NS
Methylene chloride	<51	<52	**600**	**270**	<50	<59	**140**	<52	<54	**150**	**620**	<45	<53	<57	<46	<61	100	50	500,000	50
Methyl tert-butyl ether (MTBE)	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	26	<28	<23	<30	NS	930	500,000	930
trans-1,2-Dichloroethene	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	300	190	500,000	190
1,1-Dichloroethane	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	200	270	240,000	270
2-Butanone	<250	<260	<260	<310	<250	<290	<250	<260	<270	<280	<290	<220	<260	<280	<230	<300	300	120	500,000	120
cis-1,2-Dichloroethene	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	26	<28	<23	<30	NS	250	500,000	250
Chloroform	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	300	370	350,000	370
1,1,1-Trichloroethane	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	800	680	500,000	680
Carbon tetrachloride	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	28	<23	<30	600	760	22,000	760
1,2-Dichloroethane	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	100	20	30,000	20
Benzene	:25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	60	60	44,000	60
Trichloroethene (TCE)	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	700	470	200,000	470
Toluene	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	1,500	700	500,000	700
1 1,2-Trichloroethane	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	NS	NS	NS	NS
Tetrachloroethene (PCE)	<25	<26	170	<31	**2,100**	620	490	<26	<27	<28	<29	<22	<26	<28	<23	<30	1,400	1,300	150,000	1,300
Chlorobenzene	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	1,700	1,100	500,000	1,100
Ethylbenzene	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	22	<26	<28	<23	<30	5,500	1,000	390,000	1,000
m,p-Xylene	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	1,200	260 (mixed)	500,000	1,600
o Xylene	<25	<26	<26	<3i	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	1,200			
1,3,5-Trimethylbenzene	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	3,300	8,400	190,000	8,400
1,2,4-Trimethylbenzene	<25	<26	<26	<31	<25	<29	<25	<26	<27	<28	<29	<22	<26	<28	<23	<30	10,000	3,600	190,000	3,600
Naphthalene	<51	<52	<52	<62	<50	<59	<50	<52	<54	<56	<59	<45	<53	<57	<46	<61	13,000	12,000	500,000	12,000

Concentrations in BOLD are above the laboratory detectection limit

1) feet below grade
2) New York State Dept. of Env. Con.Technical and Administrative Guidance Memorandum 4046 Recommended Soil Cleanup Objectives, Jan. 24, 1994
3) New York State Codes, Rules and Regulations, Chapter IV, Part 375: Environmental Remediation Programs, Subpart 375-6: Remedial Program Soil Cleanup Objectives, Dec. 14, 2006
4) No Standard

600 Concentration exceeds TAGM 4046 RSCO

TABLE 8

FORMER CORNWALL CLEANERS
CORNWALL PLAZA
QUAKER AVENUE
CORNWALL , NEW YORK
BCP SITE NO. C336070

Summary of Volatile Organic Compounds Detected in Groundwater
VOCs by EPA Method 8260 modified to include MTBE
Collected January 11-12, 2008
(All concentrations expressed in micrograms per liter [ug/I])

Compound	Sample ID													AWQS&GV [1]
	MW-1R	MW-2	MW-2B	MW-3	MW-3B	MW-4	MW-5	MW-6	MW-6B	MW-7	MW-8	MW-9	Trip Blank	
Dichlorodifluoromethane	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Chloromethane	<5.0	<.5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS [2]
Vinyl chloride	<2.0	**2.9**	**<2.0**	<2.0	2.0	**6.2**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2
Chloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Trichlorofluoromethane	<2.0	2.0	<2.0	<2.0	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
Acetone	< to	< io	<10	<10	**13**	**<10**	<10	<10	<10	<10	<10	<10	<10	50
1,1-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	.0	<1.0	<1.0	5
Carbon disulfide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NS
Methylene chloride	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Methyl tert-butyl ether (MTBE)	<2.0	<2.0		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	10
trans-1,2-Dichloroethene	<2.0	<2.0	<2.0	<2.0	<<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	<2.0	<2.0	5
1 ,1-Dichloroethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
2-Butanone	**<10**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	50
cis-1,2-Dichloroethene	<2.0	**66**	<2.0	**19**	<2.0	**140**	<2.0	**7.0**	<2.0	**3.3**	**4.2**	**<20**	<2.0	5
Chloroform	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	7
1, 1, 1-Trichloroethane	<2.0	<2.0	<2.0	<2.0	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
Carbon tetrachloride	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
1,2-Dichloroethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	0.6
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1
Trichloroethene (TCE)	<2.0	**27**	**<2.0**	**51**	<2.0	**75**	<2.0	**28**	<2.0	<2.0	**2.8**	<2 0	<2.0	5
Toluene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	<2.0	<2.0	5
1,1,2-Trichloroethane	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NS
Tet achloroethene (PCE)	<2.0	**1,200**	**<2.0**	**450**	<2.0	**870**	<2.0	**1,200**	**<2.0**	**55**	**100**	<2.0	<2.0	5
Chlorobenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
Ethylbenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
m,p-Xylene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
o-Xylene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
1,3,5-Trimethylbenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
1,2,4-Trimethylbenzene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
Naphthalene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	10

Concentrations in BOLD are above the laboratory detectection limit
1) - Ambient Water Quality Standards & Guidance Values, Class GA Groundwater as per Division of Water Technical & Operational Guidance Series (1.1.1)
2) - No Standard
1,200 1 Exceeds AWQS for Class GA groundwater

TABLE 9

FORMER CORNWALL CLEANERS
CORNWALL PLAZA
QUAKER AVENUE
CORNWALL , NEW YORK
BCP SITE NO. C336070

Summary of Volatile Organic Compounds Detected in Groundwater
VOCs by EPA Method 8260 modified to include MTBE
Collected June 4-5, 2009
(All concentrations expressed in micrograms per liter [ug/1])

Compound	Sample ID																			AWQS&GV 1)
	MW-1R	MW-1B	MW-2	MW-2B	MW-3	MW-3B	MW-4	MW-5	MW.6	MW.6B	MW-7	MW-8	MW-9	MW-10	MW-11	MW.11B	MW.12	MW.12B	MW.13	
Dichlorodifluoromethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Chloromethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS 4)
Vinyl chloride	<5.0	<5.0	<5.0	<5.0	1 J	<5.0	8	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	2
Chloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Trichlorofluoromethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Acetone	NA[2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50
1 ,1-Dichloroethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS
Methylene chloride	6 JB 3)	6 JB	6 JB	6 JB	6 JB	6 JB	6 JB	7 JB	5 JB	7 JB	6 JB	6 JB	7 JB	7 JB	7 JB	6 JB	7 JB	7 JB	6 Ill	5
Methyl tert-butyl ether (MTBE)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	4 J	<s.o	<5.0	<5.0	4 J	<5.0	1 J	<5.0	<5.0	10
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5
1 ,1-Dichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50
cis-1,2-Dichloroethene	16	<5.0	52	<5.0	17	<5.0	130	<5.0	1 **J**	**<s.o**	2	<5.0	<5.0	26	43	<5.0	23	<5.0	<5.0	5
Chloroform	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**3 J**	**<5.0**	<5.0	7
1,1,1-Trichloroethane	<5.0	<5.0	<5.0	<5.0	**1 J**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Carbon tetrachloride	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
1,2-Dichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0.6
Benzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	1
Trichloroethene (TCE)	<5.0	<5.0	28	<5.0	37	<5.0	**120**	**<5.0**	, **1 J**	**<5.0**	1 J	3 J	<5.0	**10**	**20**	**<5.0**	16	<5.0	<5.0	5
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
1,1,2-Trichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS
Tetrachloroethene (PCE)	<5.0	<5.0	**1000**	3 J	420	2 J	420	<5.0	2 J	<5.0	31	68	<5.0	75	120	<5.0	220	2 J	<5.0	5
Chlorobenzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Ethylbenzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
m,p-Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
o-Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
1,3 ,5-Trimethylbenzene	<5.0	<s.o	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<s.o	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
1,2,4-Trimethylbenzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< '5 0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5
Naphthalene	<5.0	<5.0	<5.0	<5.0	1 JB	1 **JB**	<5.0	<5.0	<5.0	**1 JB**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	10

Concentrations in BOLD are above the laboratory detectection limit
1) - Ambient Water Quality Standards & Guidance Values, Class GA Groundwater as per Division of Water Technical & Operational Guidance Series (1.1.1)
2) - Not Analyzed
3) - I qualifier = estimated value less than the reporting limit, B qualifier = analyte detected in associated method blank
4) - No Standard
1,000 Exceeds AWQS for Class GA groundwater

TABLE 10

FORMER CORNWALL CLEANERS
CORNWALL PLAZA
QUAKER AVENUE
CORNWALL , NEW YORK
BCP SITE NO. C336070

Soil Vapor and Indoor Air Analysis Results
Evaluated Using the NYSDOH Decision Matrices 1 & 2
"Guidance for Evaluating Soil Vapor Intrusion in the State of New York", October 2009

NYSDOH Decision Matrix	Compound	Location #1		Location #2			Location #3		Location #4		
		sample date 10/30/07							sample date 4/30/08		
		Key Foods Subslab Vapor (KFSS1)	Key Foods Indoor Air (KFIA1)	Chans Subslab Vapor 1 (CPHSS1)	Chans Subslab Vapor 2 (CPHSS2)	Chans Indoor Air (CIA1)	Leo's Pizza Subslab Vapor (LPSS1)	Leo's Pizza Indoor Air (LPIA1)	Cornwall Fire Dept Subslab Vapor 1 (CFDSS1)	Cornwall Fire Dept Indoor Air 1, Basement (CFDIAI)	Cornwall Fire Dept Indoor Air 2, First Floor (CFDIA2)
Matrix 1	Carbon Tetrachloride	<8.9'	0.76	<17	<4.4	0.81	<4.6	0.60	<5.79	0.83	0.77
		Matrix 1 Conclusion: Take actions to ID source(s) and reduce exposure		Matrix 1 Conclusion: Take actions to ID source(s and reduce exposure			Matrix 1 Conclusion: Take actions to ID source(s) and reduce exposure		Matrix 1 Conclusion: Take actions to ID source(s) and reduce exposure		
	Trichloroethene	24	<0.22	54	37	<0.24	<3.9	<0.22	<4.94	0.38 J	1.26
		Matrix 1 Conclusion: No Further Action		Matrix 1 Conclusion: Monitor (based on CPHSS1) and NFA (based on CPHSS2)			Matrix 1 Conclusion: No Further Action		Matrix 1 Conclusion: Take actions to ID source(s) and reduce exposure		
	Vinyl Chloride	<3.6	<0.08	<7.0	<1.8	<0.09	<1.9	<0.21	<2.35	<0.23	<0.26
		Matrix I Conclusion: No Further Action		Matrix 1 Conclusion: No Further Action			Matrix 1 Conclusion: No Further Action		Matrix 2 Conclusion: No Further Action		
Matrix 2	Tetrachloroethene	3,300	1.4	4,700	1,800	<0.59	51	<0.55	22.8	1.03	1.52
		Matrix 2 Conclusion: Mitigate		Matrix 2 Conclusion: Mitigate			Matrix 2 Conclusion: No Further Action		Matrix 2 Conclusion: No Further Action		
	1,1,1-Trichloroethane	<7.7	<0.42	<15	<3.8	<0.48	<4.0	<0.44	<5.01	1.55	1.55
		Matrix 2 Conclusion: No Further Action		Matrix 2 Conclusion: No Further Action			Matrix 2 Conclusion: No Further Action		Matrix 2 Conclusion: No Further Action		
	1,1-Dichloroethene	<5.6	<0.61	<11	<2.8	<0.69	<2.9	<0.64	<3.66	<0.35	<0.40
		Matrix 2 Conclusion: No Further Action		Matrix 2 Conclusion: No Further Action			Matrix 2 Conclusion: No Further Action		Matrix 2 Conclusion: No Further Action		
	cis-1,2-Dichloroethene	<5.6	<0.61	<11	<2.8	<0.69	<2.9	<0.64	<3.66	0.08 J	0.08 J
		Matrix 2 Conclusion: No Further Action		Matrix 2 Conclusion: No Further Action			Matrix 2 Conclusion: No Further Action		Matrix 2 Conclusion: No Further Action		

1 . Subslab vapor and indoor air sample concentrations expressed in micrograms per cubic meter (ug/m^3)

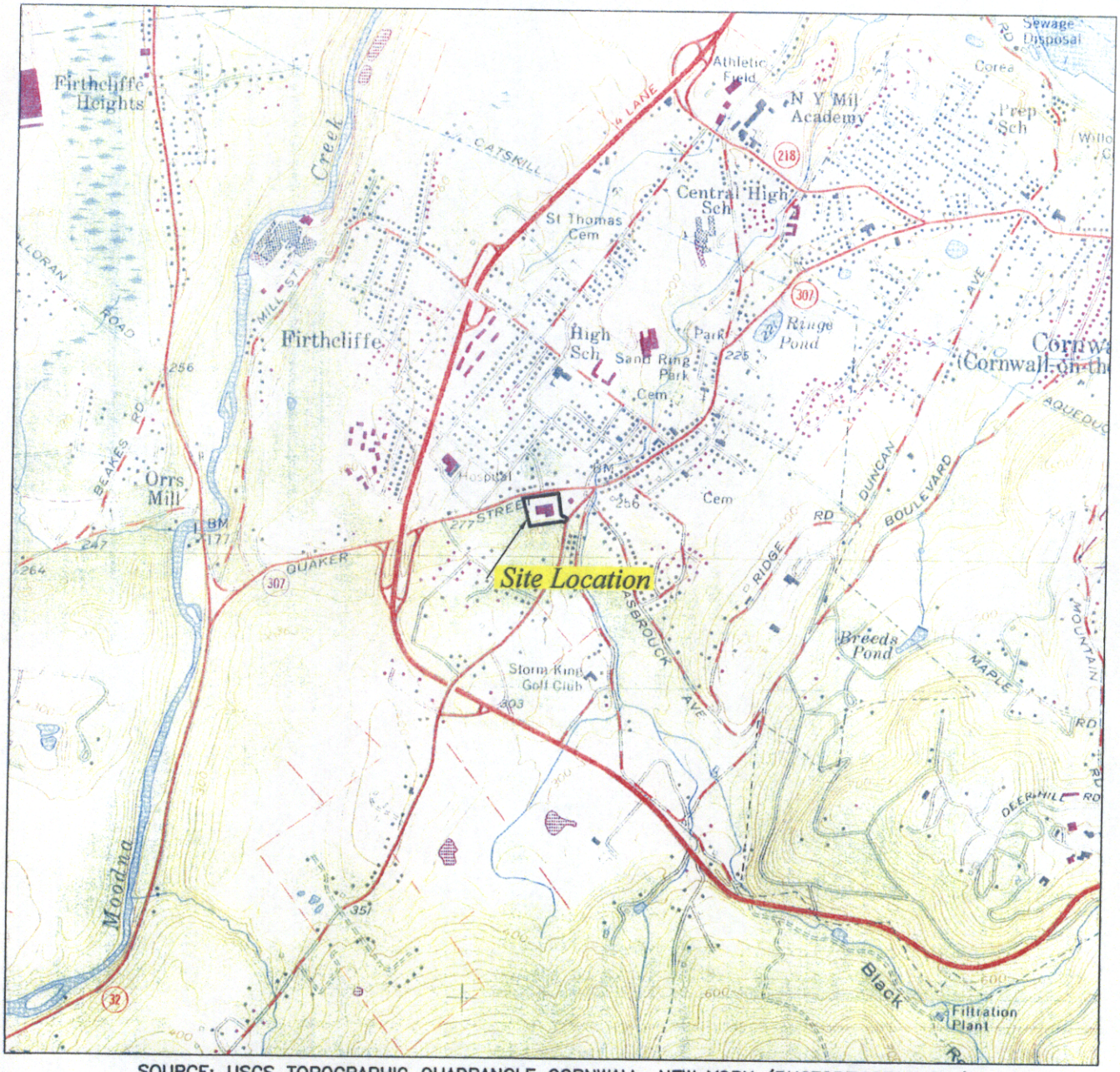
Table 11
Summary of Soil Analytical Results
Soil Characterization Samples - August 19, 2010
Cornwall Plaza
Cornwall, New York
BCP Site ID No. C336070

ARCADIS
Infrastructure, environment, buildings

LOCATION		New York	New York	New York	New York Brownfields	New York Brownfields	Eastern USA		SB-1_3-3.5		SB-2_1-1.5		SB-3_1.5-2		SB-3_9-9.5		SB-4_5.5-6		SB-5_1-1.5		SB-6_2-2.5		SB-7_1.5-2		SB-8_0.5-1		SB-9_0.5-1	
SAMPLING DATE		TAGM Rec. Soil	Commercial Criteria	Groundwater Criteria	Guidance Un-Restricted	Guidance Residential	Background		8/19/2010		8/19/2010		8/19/2010		8/19/2010		8/19/2010		8/19/2010		8/19/2010		8/19/2010		8/19/2010		8/19/2010	
LAB SAMPLE ID		Cleanup Objective	Restricted Use	Restricted Use	Soil Cleanup Objective	Soil Cleanup Objective	Range		L1012962-16		L1012962-17		L1012962-05		L1012962-06		L1012962-09		L1012962-02		L1012962-03		L1012962-10		L1012962-12		L1012962-14	
SAMPLE DEPTH (ft.)																												
	CasNum							Units		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q
Organochlorine Pesticides by GC - Westborough Lab																												
Lindane	58-89-9	0.06	9.2	0.1	0.1	0.28	NS	mg/kg	0.0007	U	0.000706	U	0.000705	U	0.000731	U	0.00177		0.00137		0.00071	U	0.000684	U	0.000698	U	0.000702	U
4,4'-DDT	50-29-3	2.1	47	136	0.0033	1.7	NS	mg/kg	0.00315	U	0.00318	U	0.00317	U	0.00329	U	0.00323	U	0.0033	U	0.00319	U	0.00308	U	0.00314	U	0.00316	U
Endosulfan sulfate	1031-07-8	1	200	1000	2.4	4.8	NS	mg/kg	0.0007	U	0.000706	U	0.000705	U	0.000731	U	0.00121		0.000734	U	0.00071	U	0.000684	U	0.000698	U	0.000702	U
Semivolatile Organics by GC/MS - Westborough Lab																												
Nitrobenzene	98-95-3	0.2	NS	NS	NS	NS	NS	mg/kg	0.21	U	0.22	U	0.22	U	0.24	U	0.22	U	0.23	U	0.21	U	0.22	U	0.23	U	0.22	U
4-Chloroaniline	106-47-8	0.22	NS	NS	NS	NS	NS	mg/kg	0.21	U	0.22	U	0.22	U	0.24	U	0.22	U	0.23	U	0.21	U	0.22	U	0.23	U	0.22	U
P-Chloro-M-Cresol	59-50-7	0.24	NS	NS	NS	NS	NS	mg/kg	0.21	U	0.22	U	0.22	U	0.24	U	0.22	U	0.23	U	0.21	U	0.22	U	0.23	U	0.22	U
2,4-Dichlorophenol	120-83-2	0.4	NS	NS	NS	NS	NS	mg/kg	0.43	U	0.44	U	0.44	U	0.47	U	0.45	U	0.46	U	0.43	U	0.44	U	0.45	U	0.43	U
2-Nitrophenol	88-75-5	0.33	NS	NS	NS	NS	NS	mg/kg	0.85	U	0.89	U	0.89	U	0.94	U	0.9	U	0.92	U	0.85	U	0.89	U	0.9	U	0.87	U
4-Nitrophenol	100-02-7	0.1	NS	NS	NS	NS	NS	mg/kg	0.43	U	0.44	U	0.44	U	0.47	U	0.45	U	0.46	U	0.43	U	0.44	U	0.45	U	0.43	U
2,4-Dinitrophenol	51-28-5	0.2	NS	NS	NS	NS	NS	mg/kg	0.85	U	0.89	U	0.89	U	0.94	U	0.9	U	0.92	U	0.85	U	0.89	U	0.9	U	0.87	U
Phenol	108-95-2	0.03	500	0.33	0.33	100	NS	mg/kg	0.3	U	0.31	U	0.31	U	0.33	U	0.31	U	0.32	U	0.3	U	0.31	U	0.32	U	0.3	U
2-Methylphenol	95-48-7	0.1	500	0.33	0.33	100	NS	mg/kg	0.26	U	0.27	U	0.27	U	0.28	U	0.27	U	0.28	U	0.26	U	0.26	U	0.27	U	0.26	U
2,4,5-Trichlorophenol	95-95-4	0.1	NS	NS	NS	NS	NS	mg/kg	0.21	U	0.22	U	0.22	U	0.24	U	0.22	U	0.23	U	0.21	U	0.22	U	0.23	U	0.22	U
Semivolatile Organics by GC/MS-SIM - Westborough Lab																												
Fluoranthene	206-44-0	50	500	1000	100	100	NS	mg/kg	0.013		0.24		0.035	U	0.038	U	0.009	U	0.036		0.034	U	0.0089	U	0.036	U	0.0087	U
Benzo(a)anthracene	56-55-3	0.224	5.6	1	1	1	NS	mg/kg	0.0085	U	0.09		0.035	U	0.038	U	0.009	U	0.021		0.034	U	0.0089	U	0.036	U	0.0087	U
Benzo(a)pyrene	50-32-8	0.061	1	22	1	1	NS	mg/kg	0.01		**0.092**		0.035	U	0.038	U	0.009	U	0.024		0.034	U	0.0089	U	0.036	U	0.0087	U
Benzo(b)fluoranthene	205-99-2	1.1	5.6	1.7	1	1	NS	mg/kg	0.013		0.13		0.035	U	0.038		0.009	U	0.032		0.034	U	0.0089	U	0.036	U	0.0087	U
Benzo(k)fluoranthene	207-08-9	1.1	56	1.7	0.8	1	NS	mg/kg	0.0085	U	0.053		0.035	U	0.038	U	0.009	U	0.012		0.034	U	0.0089	U	0.036	U	0.0087	U
Chrysene	218-01-9	0.4	56	1	1	1	NS	mg/kg	0.0085	U	0.1		0.035	U	0.038	U	0.009	U	0.022		0.034	U	0.0089	U	0.036	U	0.0087	U
Anthracene	120-12-7	50	500	1000	100	100	NS	mg/kg	0.0085	U	0.016		0.035	U	0.038	U	0.009	U	0.0092	U	0.034	U	0.0089	U	0.036	U	0.0087	U
Benzo(ghi)perylene	191-24-2	50	500	1000	100	100	NS	mg/kg	0.0085	U	0.076		0.035	U	0.038	U	0.009	U	0.019		0.034	U	0.0089	U	0.036	U	0.0087	U
Phenanthrene	85-01-8	50	500	1000	100	100	NS	mg/kg	0.0085	U	0.12		0.035	U	0.038	U	0.009	U	0.012		0.034	U	0.0089	U	0.036	U	0.0087	U
Dibenzo(a,h)anthracene	53-70-3	0.0143	0.56	1000	0.33	0.33	NS	mg/kg	0.0085	U	**0.017**		0.035	U	0.038	U	0.009	U	0.0092	U	0.034	U	0.0089	U	0.036	U	0.0087	U
Indeno(1,2,3-cd)Pyrene	193-39-5	3.2	5.6	8.2	0.5	0.5	NS	mg/kg	0.014		0.078		0.035	U	0.054		0.009	U	0.024		0.034	U	0.0089	U	0.036	U	0.0087	U
Pyrene	129-00-0	50	500	1000	100	100	NS	mg/kg	0.011		0.2		0.035	U	0.038	U	0.009	U	0.033		0.034	U	0.0089	U	0.036	U	0.0087	U
Polychlorinated Biphenyls by GC - Westborough Lab																												
Aroclor 1016	1336-36-3	1	1	3.2	0.1	1	NS	mg/kg	0.0388	U	0.0392	U	0.0345	U	0.0356	U	0.0358	U	0.0368	U	0.0365	U	0.0378	U	0.0388	U	0.0361	U
Aroclor 1221	1336-36-3	1	1	3.2	0.1	1	NS	mg/kg	0.0388	U	0.0392	U	0.0345	U	0.0356	U	0.0358	U	0.0368	U	0.0365	U	0.0378	U	0.0388	U	0.0361	U
Aroclor 1232	1336-36-3	1	1	3.2	0.1	1	NS	mg/kg	0.0388	U	0.0392	U	0.0345	U	0.0356	U	0.0358	U	0.0368	U	0.0365	U	0.0378	U	0.0388	U	0.0361	U
Aroclor 1242	1336-36-3	1	1	3.2	0.1	1	NS	mg/kg	0.0388	U	0.0392	U	0.0345	U	0.0356	U	0.0358	U	0.0368	U	0.0365	U	0.0378	U	0.0388	U	0.0361	U
Aroclor 1248	1336-36-3	1	1	3.2	0.1	1	NS	mg/kg	0.0388	U	0.0392	U	0.0345	U	0.0356	U	0.0358	U	0.0368	U	0.0365	U	0.0378	U	0.0388	U	0.0361	U
Aroclor 1254	1336-36-3	1	1	3.2	0.1	1	NS	mg/kg	0.0388	U	0.0392	U	0.0345	U	0.0356	U	0.0358	U	0.0368	U	0.0365	U	0.0378	U	0.0388	U	0.0361	U
Aroclor 1260	1336-36-3	1	1	3.2	0.1	1	NS	mg/kg	0.0388	U	0.0392	U	0.0345	U	0.0356	U	0.0358	U	0.0368	U	0.0365	U	0.0378	U	0.0388	U	0.0361	U
Total Metals - Westborough Lab																												
Arsenic, Total	7440-38-2	7.5	16	16	13	16	3.0 - 12 *	mg/kg	3.9		5.1		6.6		1.8		5.2		4.5		3.8		4.5		4.8		5	
Beryllium, Total	7440-41-7	0.16	590	47	7.2	14	0 - 1.75	mg/kg	**0.5**		**0.65**		**0.59**		**0.58**		**0.64**		**0.64**		**0.63**		**0.47**		**0.53**		**0.54**	
Chromium, Total	7440-47-3	10	NS	NS	NS	NS	1.5 - 40 *	mg/kg	**13**		**16**		**16**		**16**		**16**		**16**		**16**		**15**		**15**		**14**	
Copper, Total	7440-50-8	25	270	1720	50	270	1.0 - 50	mg/kg	22		**28**		**26**		4.6		**28**		**27**		**28**		**25**		**28**		**29**	
Lead, Total	7439-92-1	NS	1000	450	63	400	NS	mg/kg	20		25		25		15		22		42		22		20		21		20	
Mercury, Total	7439-97-6	0.1	2.8	0.73	0.18	0.81	0.001 - 0.2	mg/kg	0.09	U	0.09	U	0.09	U	0.1	U	0.09	U	0.09	U	0.09	U	0.09	U	0.09	U	0.09	U
Nickel, Total	7440-02-0	13	310	130	30	140	0.5 - 25	mg/kg	**20**		**22**		**20**		**13**		**22**		**20**		**22**		**20**		**20**		**22**	
Zinc, Total	7440-66-6	20	10000	2480	109	2200	9.0 - 50	mg/kg	**59**		**66**		**65**		**43**		**70**		**86**		**69**		**66**		**65**		**69**	

** - N.Y. State Background Range
Bold shaded concentrations indicates an exceedance of the cooresponding Cleanup Objective or Background Range.
Gray shaded concentrations indicate that the analyte was not detected yet the MDL exceeded the Cleanup Objective.

FIGURES



SOURCE: USGS TOPOGRAPHIC QUADRANGLE CORNWALL, NEW YORK (PHOTOREVISED 1981).

QUADRANGLE LOCATION

0 2000

SCALE IN FEET

F:\DWG\Furman\Cornwall Plaza\RIR 2009\1 site location topographic.dwg

CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

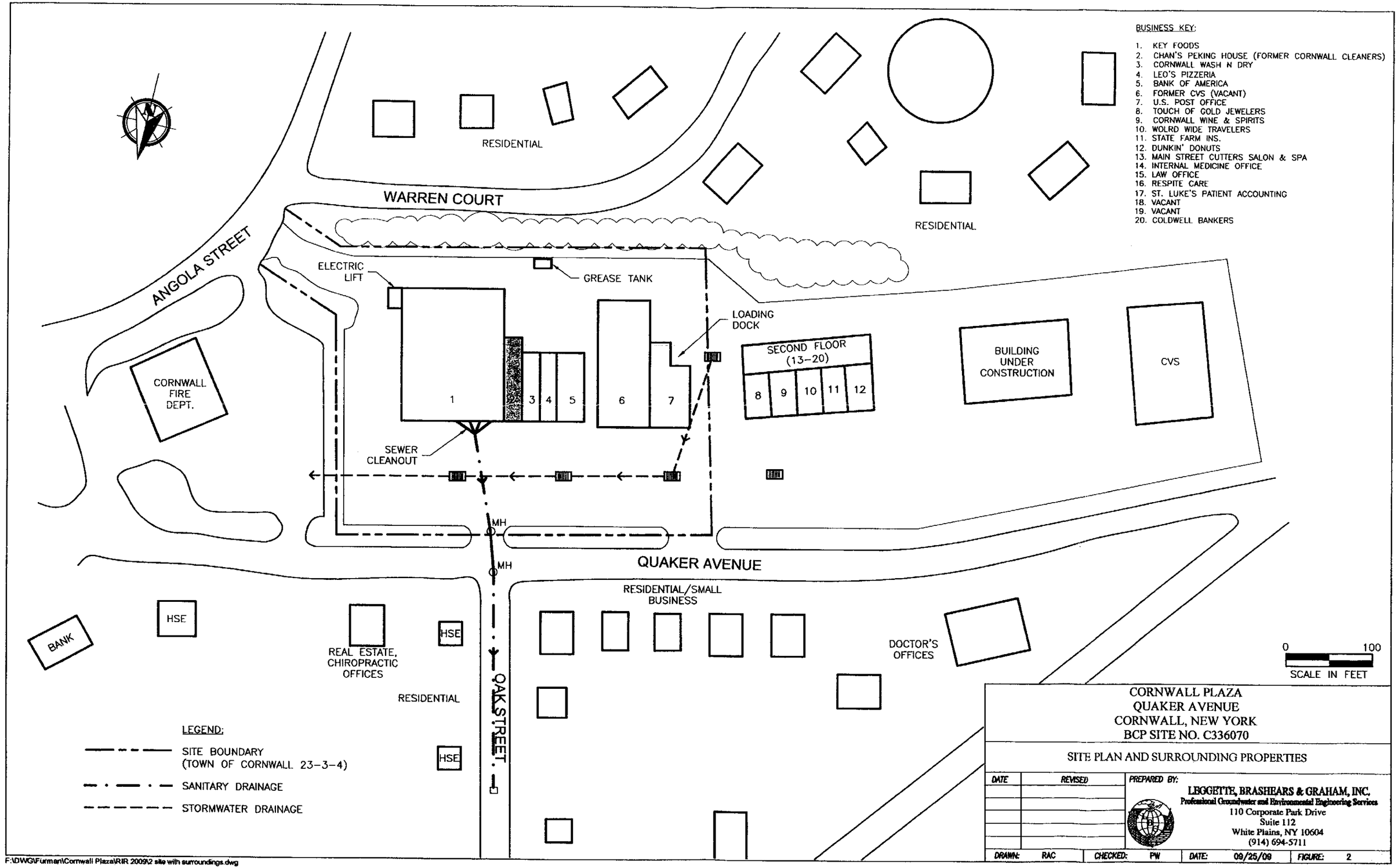
SITE LOCATION MAP

DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Ground-Water and Environmental Engineering Services
110 Corporate Park Drive
Suite 112
White Plains, NY 10604
(914) 694-5711

DRAWN:	MRV	CHECKED:	PW	DATE:	1/9/07	FIGURE:	1



CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

SITE PLAN AND SURROUNDING PROPERTIES

DATE	REVISED

PREPARED BY:
LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Groundwater and Environmental Engineering Services
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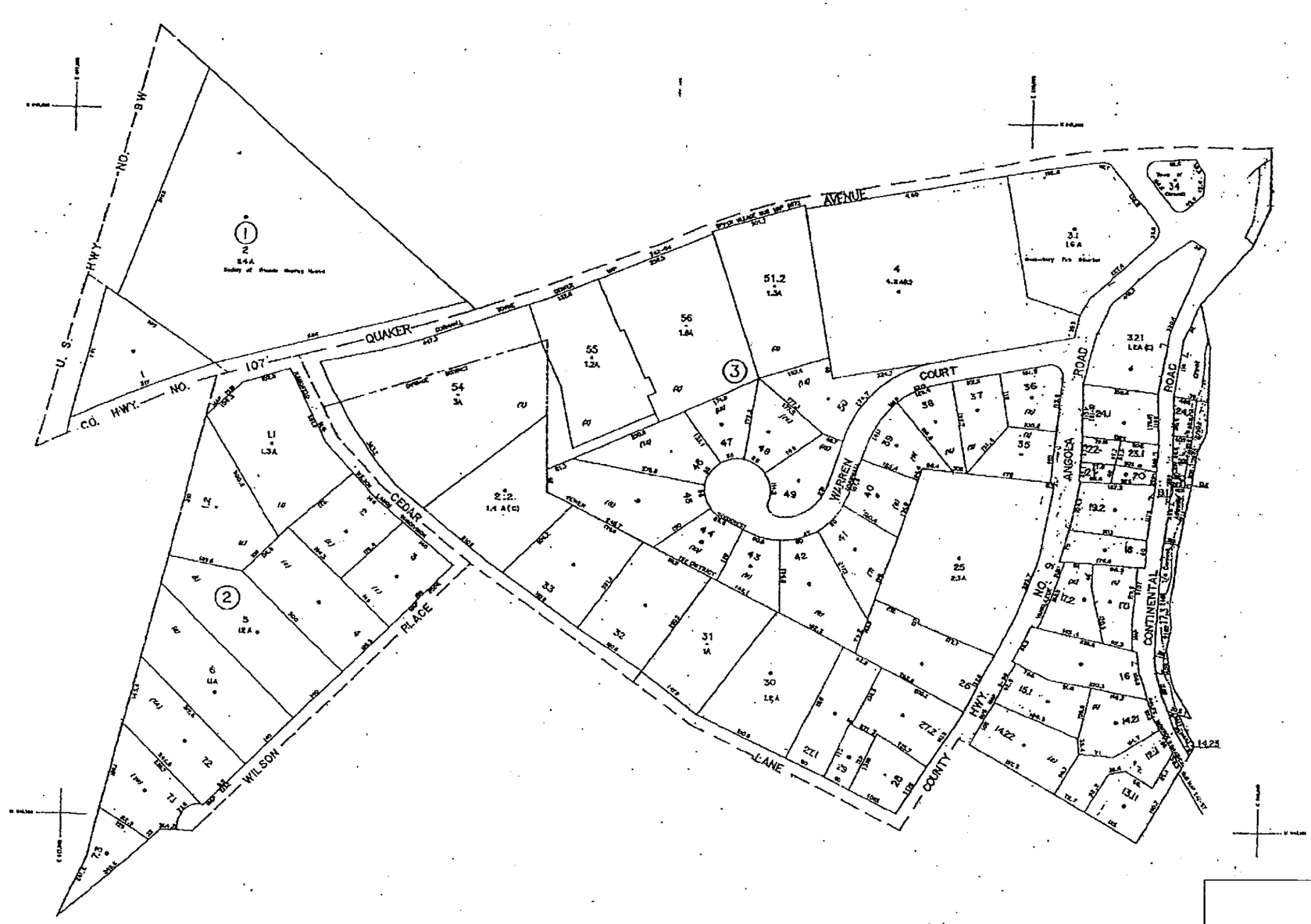
(914) 694-5711

DRAWN:	RAC	CHECKED:	PW	DATE:	09/25/09	FIGURE:	2

F:\DWG\Furman\Cornwall Plaza\RIR 2009\2 site with surroundings.dwg



CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK

TAX MAP

DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Ground-Water and Environmental Engineering Services
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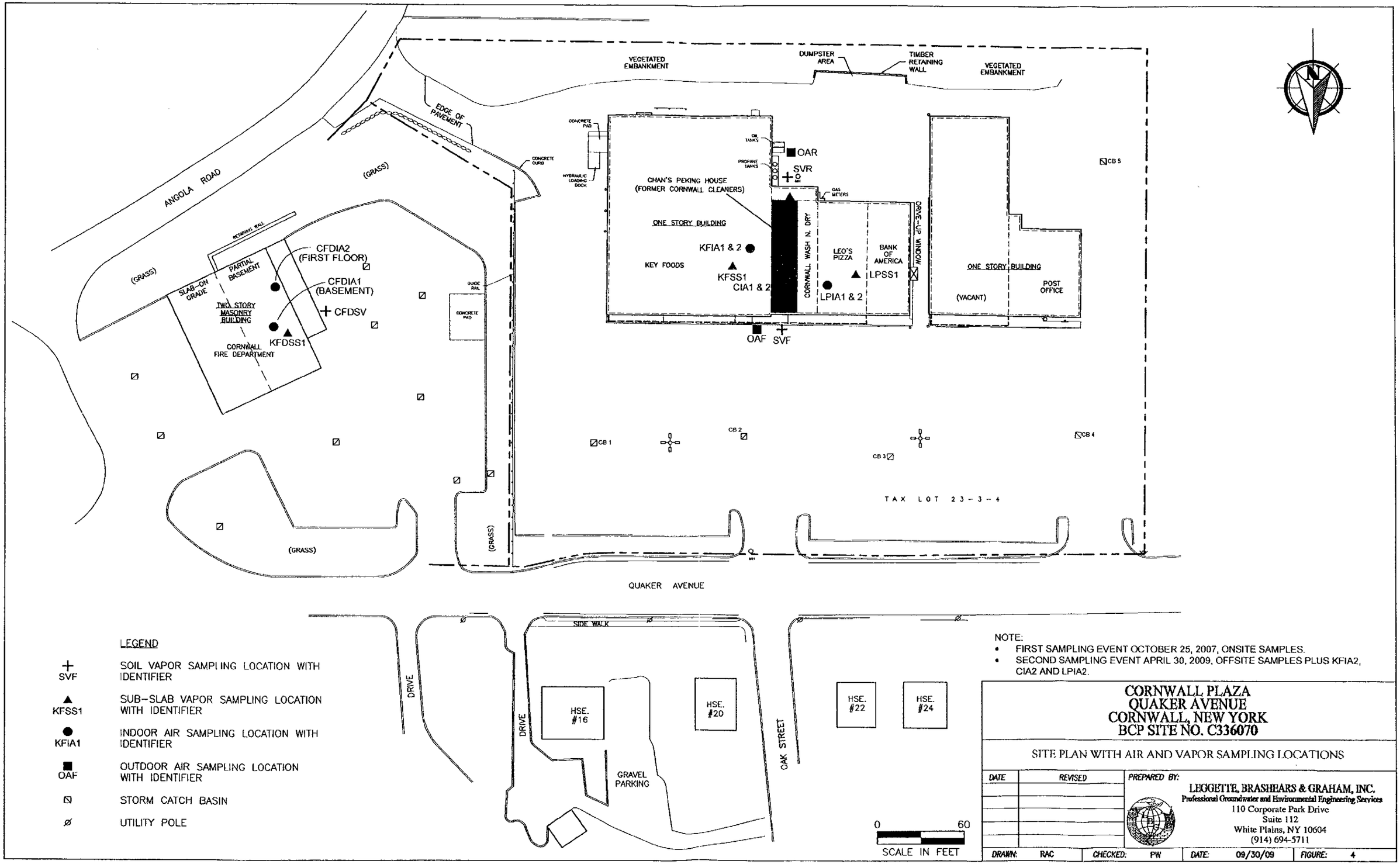
(914) 694-5711

DRAWN:	JRW	CHECKED:	PW	DATE:	5/16/06	FIGURE:	3

F:\DWG\Furman\Cornwall Plaza\RIR 2009\3 tax map.dwg



LEGEND

+ SVF	SOIL VAPOR SAMPLING LOCATION WITH IDENTIFIER
▲ KFSS1	SUB-SLAB VAPOR SAMPLING LOCATION WITH IDENTIFIER
● KFIA1	INDOOR AIR SAMPLING LOCATION WITH IDENTIFIER
■ OAF	OUTDOOR AIR SAMPLING LOCATION WITH IDENTIFIER
⊠	STORM CATCH BASIN
⌀	UTILITY POLE

NOTE:
- FIRST SAMPLING EVENT OCTOBER 25, 2007, ONSITE SAMPLES.
- SECOND SAMPLING EVENT APRIL 30, 2009, OFFSITE SAMPLES PLUS KFIA2, CIA2 AND LPIA2.

CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

SITE PLAN WITH AIR AND VAPOR SAMPLING LOCATIONS

DATE	REVISED

PREPARED BY:
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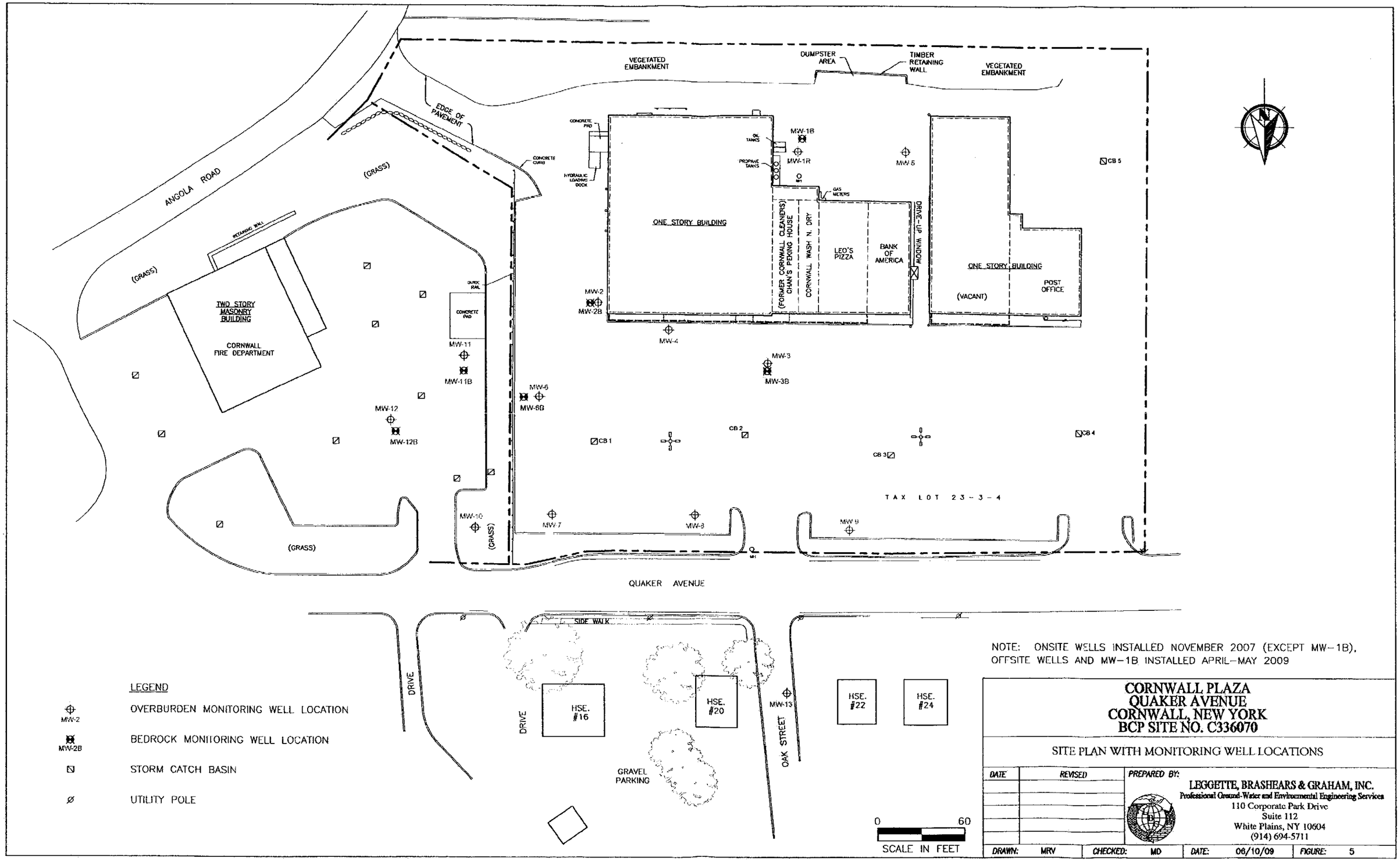
DRAWN:	RAC	CHECKED:	PW	DATE:	09/30/09	FIGURE:	4

F:\DWG\Furman\Cornwall Plaza\RIR 2009\4 Vapor Air Samples.dwg



NOTE: ONSITE WELLS INSTALLED NOVEMBER 2007 (EXCEPT MW-1B), OFFSITE WELLS AND MW-1B INSTALLED APRIL-MAY 2009

LEGEND

- MW-2 — OVERBURDEN MONITORING WELL LOCATION
- MW-2B — BEDROCK MONITORING WELL LOCATION
- STORM CATCH BASIN
- UTILITY POLE

0 60
SCALE IN FEET

CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

SITE PLAN WITH MONITORING WELL LOCATIONS

DATE	REVISED

PREPARED BY:

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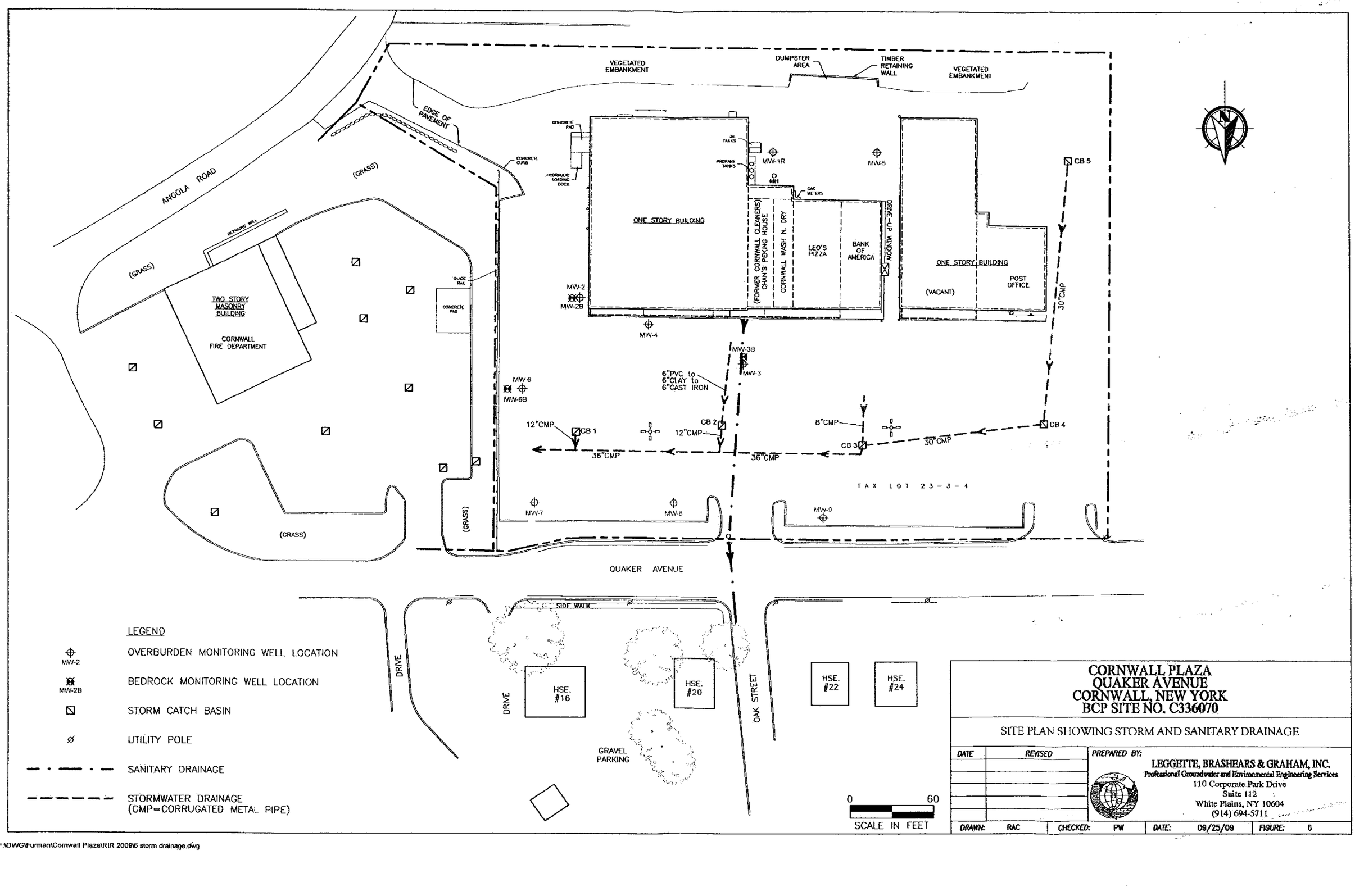
DRAWN:	MRV	CHECKED:	MD	DATE:	06/10/09	FIGURE:	5

F:\DWG\Furman\Cornwall Plaza\RIR 2009\5 site plan w well locations.dwg



LEGEND

- MW-2 — OVERBURDEN MONITORING WELL LOCATION
- MW-2B — BEDROCK MONITORING WELL LOCATION
- STORM CATCH BASIN
- UTILITY POLE
- SANITARY DRAINAGE
- STORMWATER DRAINAGE (CMP=CORRUGATED METAL PIPE)

CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

SITE PLAN SHOWING STORM AND SANITARY DRAINAGE

DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Groundwater and Environmental Engineering Services
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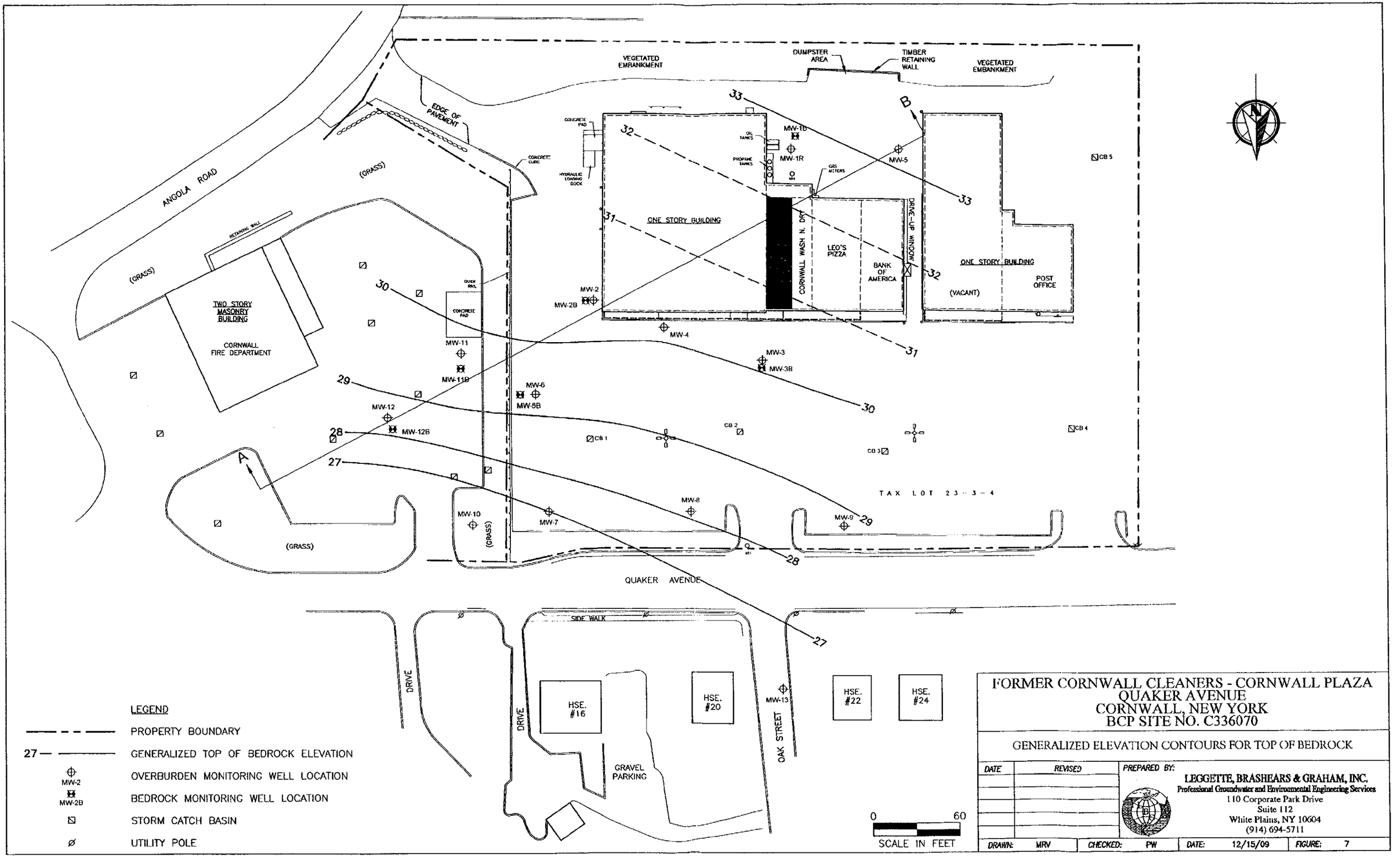
White Plains, NY 10604
(914) 694-5711

DRAWN:	RAC	CHECKED:	PW	DATE:	09/25/09	FIGURE:	6

F:\DWG\Furman\Cornwall Plaza\RIR 2009\6 storm drainage.dwg



LEGEND

- PROPERTY BOUNDARY
- 27 GENERALIZED TOP OF BEDROCK ELEVATION
- MW-2 OVERBURDEN MONITORING WELL LOCATION
- MW-2B BEDROCK MONITORING WELL LOCATION
- STORM CATCH BASIN
- UTILITY POLE

0 60
SCALE IN FEET

FORMER CORNWALL CLEANERS - CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

GENERALIZED ELEVATION CONTOURS FOR TOP OF BEDROCK

DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
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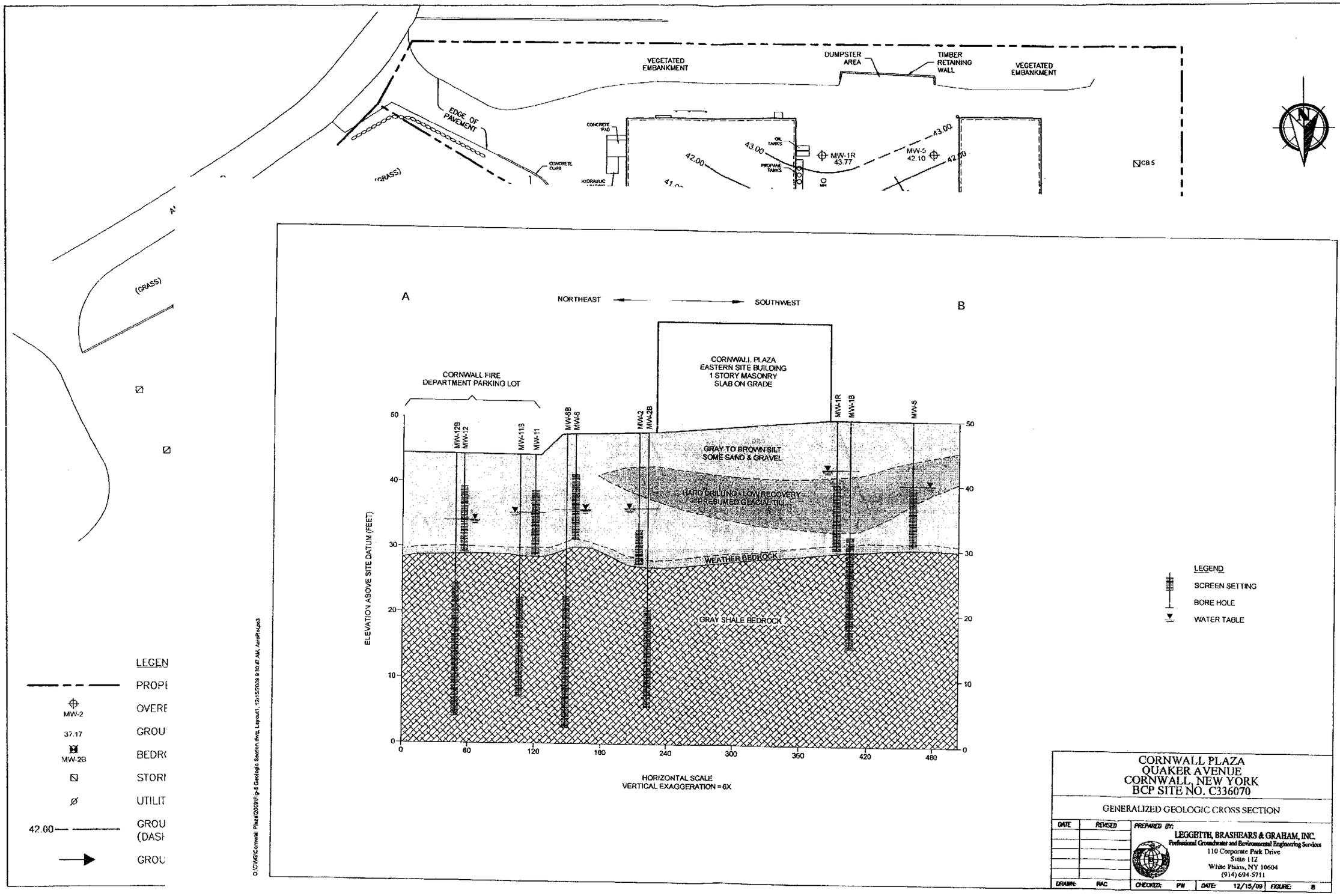
DRAWN:	MRV	CHECKED:	PW	DATE:	12/15/09	FIGURE:	7

F:\DWG\Furman\Cornwall Plaza\RIR 2009\7 - Bedrock Contour Map.dwg



CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

GENERALIZED GEOLOGIC CROSS SECTION

DATE	REVISED

PREPARED BY:
LEGGETTE, BRASHEARS & GRAHAM, INC.
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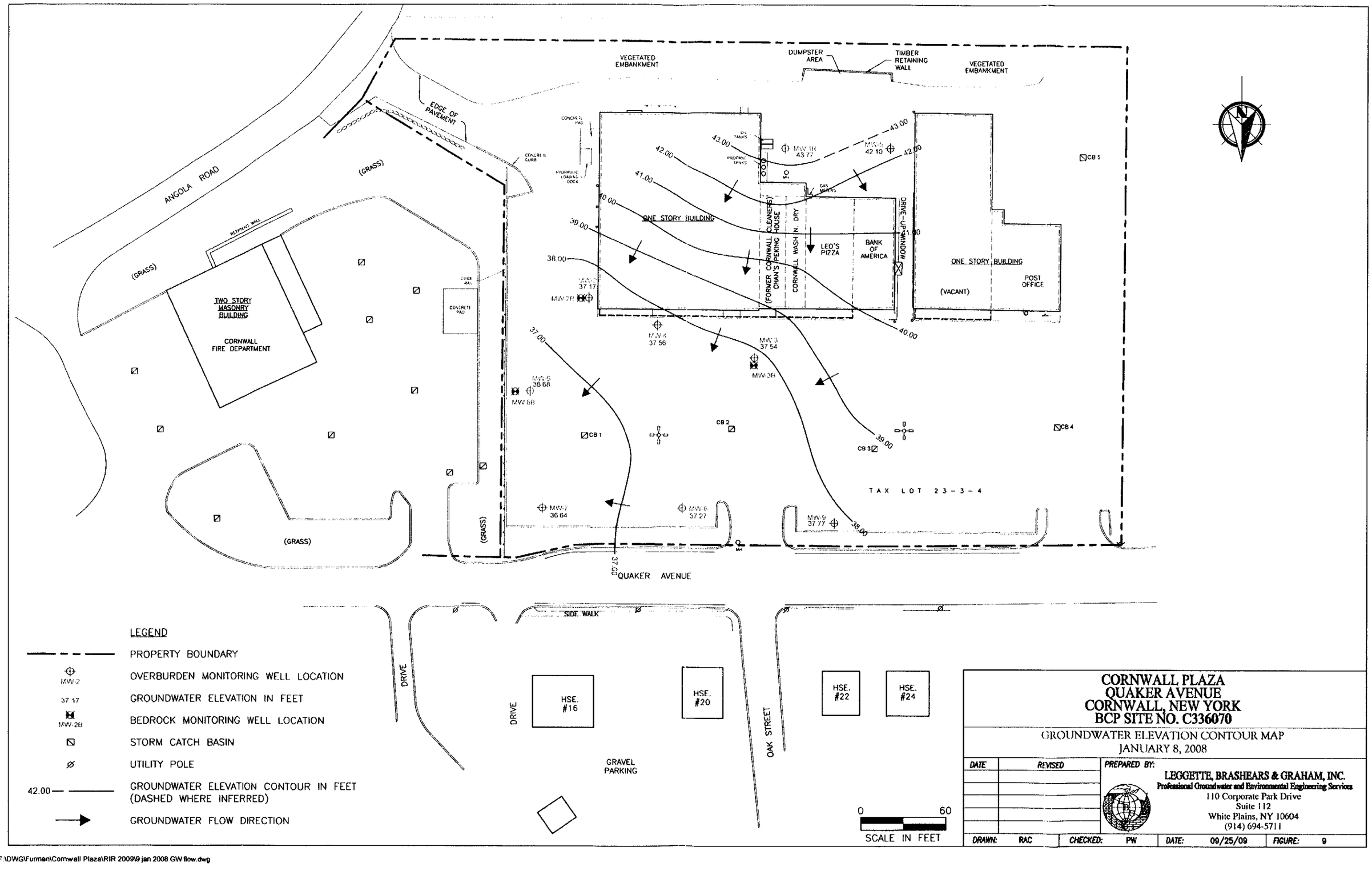
(914) 694-5711

DRAWN: RAC | CHECKED: PW | DATE: 12/15/09 | FIGURE: 8



CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

GROUNDWATER ELEVATION CONTOUR MAP
JANUARY 8, 2008

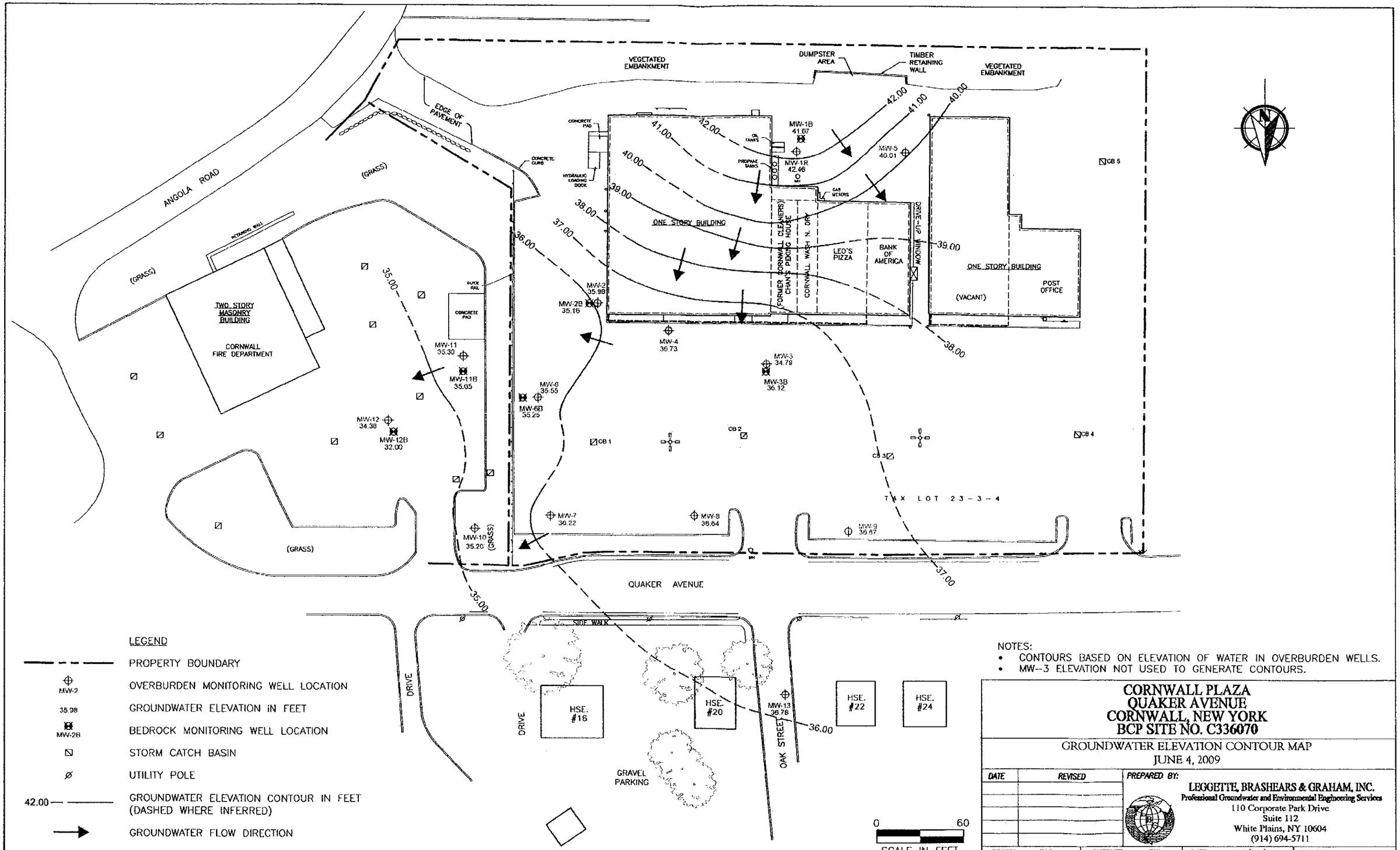
DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Groundwater and Environmental Engineering Services
110 Corporate Park Drive
Suite 112
White Plains, NY 10604
(914) 694-5711

DRAWN:	RAC	CHECKED:	PW	DATE:	09/25/09	FIGURE:	9

F:\DWG\Furman\Cornwall Plaza\RIR 2009\9 jan 2008 GW flow.dwg



LEGEND

- PROPERTY BOUNDARY
- MW-2 — OVERBURDEN MONITORING WELL LOCATION
- 35.98 — GROUNDWATER ELEVATION IN FEET
- MW-2B — BEDROCK MONITORING WELL LOCATION
- STORM CATCH BASIN
- UTILITY POLE
- 42.00 — GROUNDWATER ELEVATION CONTOUR IN FEET (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION

NOTES:

- CONTOURS BASED ON ELEVATION OF WATER IN OVERBURDEN WELLS.
- MW--3 ELEVATION NOT USED TO GENERATE CONTOURS.

CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

GROUNDWATER ELEVATION CONTOUR MAP
JUNE 4, 2009

DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
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Suite 112
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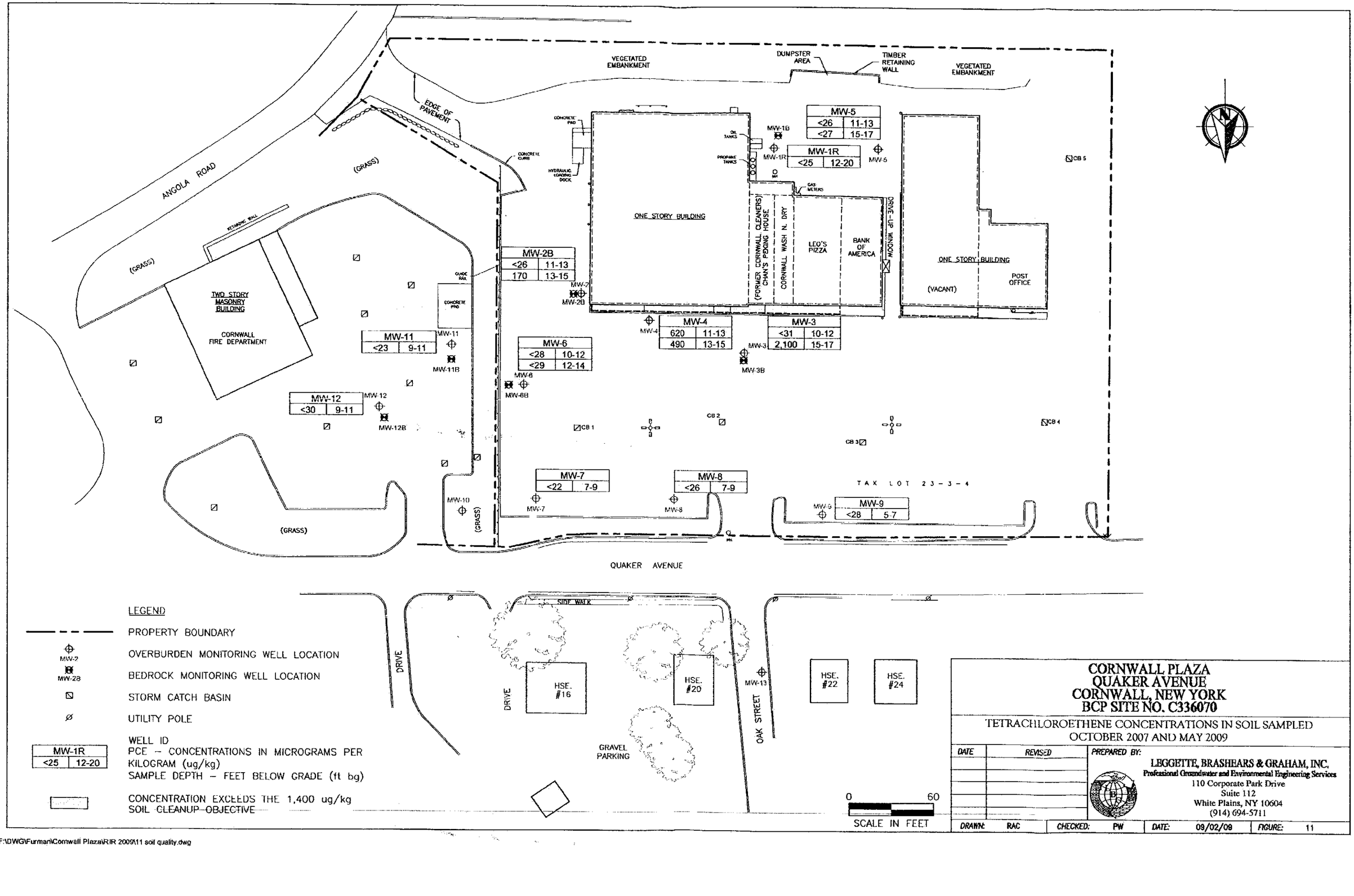
(914) 694-5711

DRAWN:	RAC	CHECKED:	PW	DATE:	09/02/09	FIGURE:	10

F:\DWG\Furman\Cornwall Plaza\RIR 2009\10 june 2009 GW flow.dwg



CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

TETRACHLOROETHENE CONCENTRATIONS IN SOIL SAMPLED OCTOBER 2007 AND MAY 2009

DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Groundwater and Environmental Engineering Services
110 Corporate Park Drive
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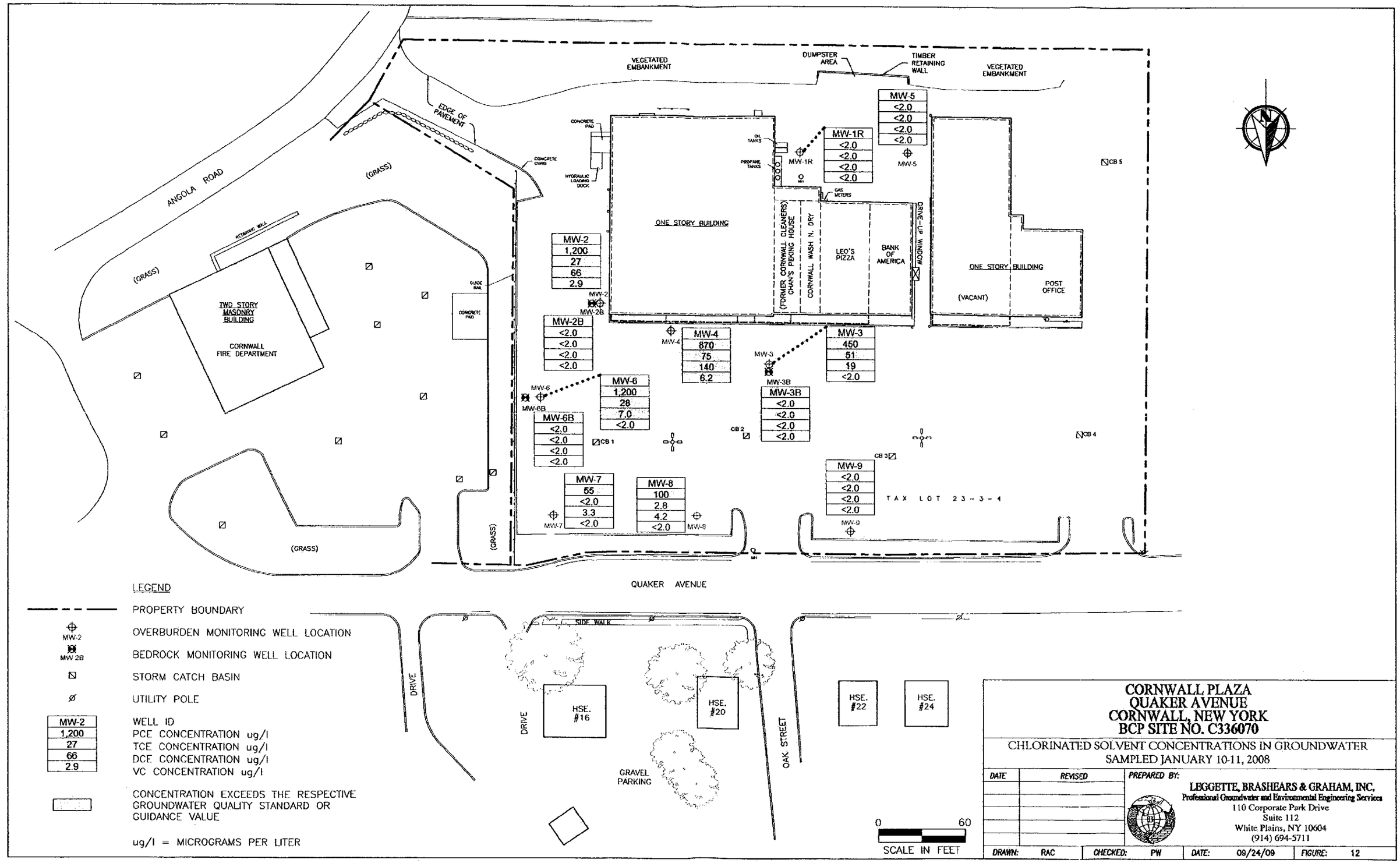
White Plains, NY 10604
(914) 694-5711

DRAWN:	RAC	CHECKED:	PW	DATE:	09/02/09	FIGURE:	11

F:\DWG\Furman\Cornwall Plaza\RIR 2009\11 soil quality.dwg



LEGEND

- PROPERTY BOUNDARY
- MW-2 — OVERBURDEN MONITORING WELL LOCATION
- MW 2B — BEDROCK MONITORING WELL LOCATION
- STORM CATCH BASIN
- UTILITY POLE

MW-2
1,200
27
66
2.9

WELL ID
PCE CONCENTRATION ug/l
TCE CONCENTRATION ug/l
DCE CONCENTRATION ug/l
VC CONCENTRATION ug/l

CONCENTRATION EXCEEDS THE RESPECTIVE GROUNDWATER QUALITY STANDARD OR GUIDANCE VALUE

ug/l = MICROGRAMS PER LITER

CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

CHLORINATED SOLVENT CONCENTRATIONS IN GROUNDWATER
SAMPLED JANUARY 10-11, 2008

DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
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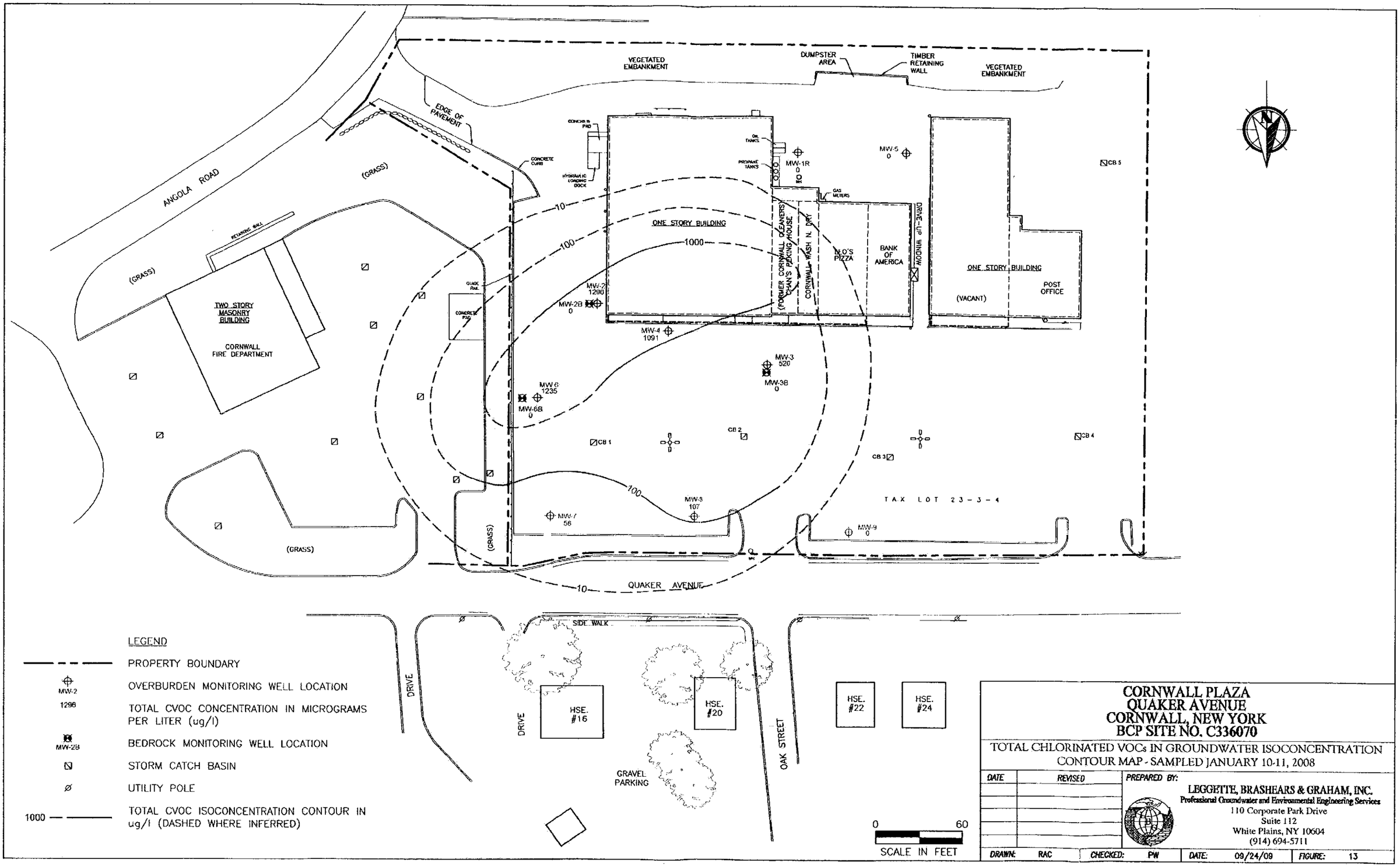
DRAWN:	RAC	CHECKED:	PW	DATE:	09/24/09	FIGURE:	12

F:\DWG\Furman\Cornwall Plaza\RIR 2009\12 jan 2008 GW quality.dwg



LEGEND

———	PROPERTY BOUNDARY
MW-2	OVERBURDEN MONITORING WELL LOCATION
1296	TOTAL CVOC CONCENTRATION IN MICROGRAMS PER LITER (ug/l)
MW-2B	BEDROCK MONITORING WELL LOCATION
	STORM CATCH BASIN
	UTILITY POLE
1000	TOTAL CVOC ISOCONCENTRATION CONTOUR IN ug/l (DASHED WHERE INFERRED)

CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

TOTAL CHLORINATED VOCs IN GROUNDWATER ISOCONCENTRATION CONTOUR MAP - SAMPLED JANUARY 10-11, 2008

DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
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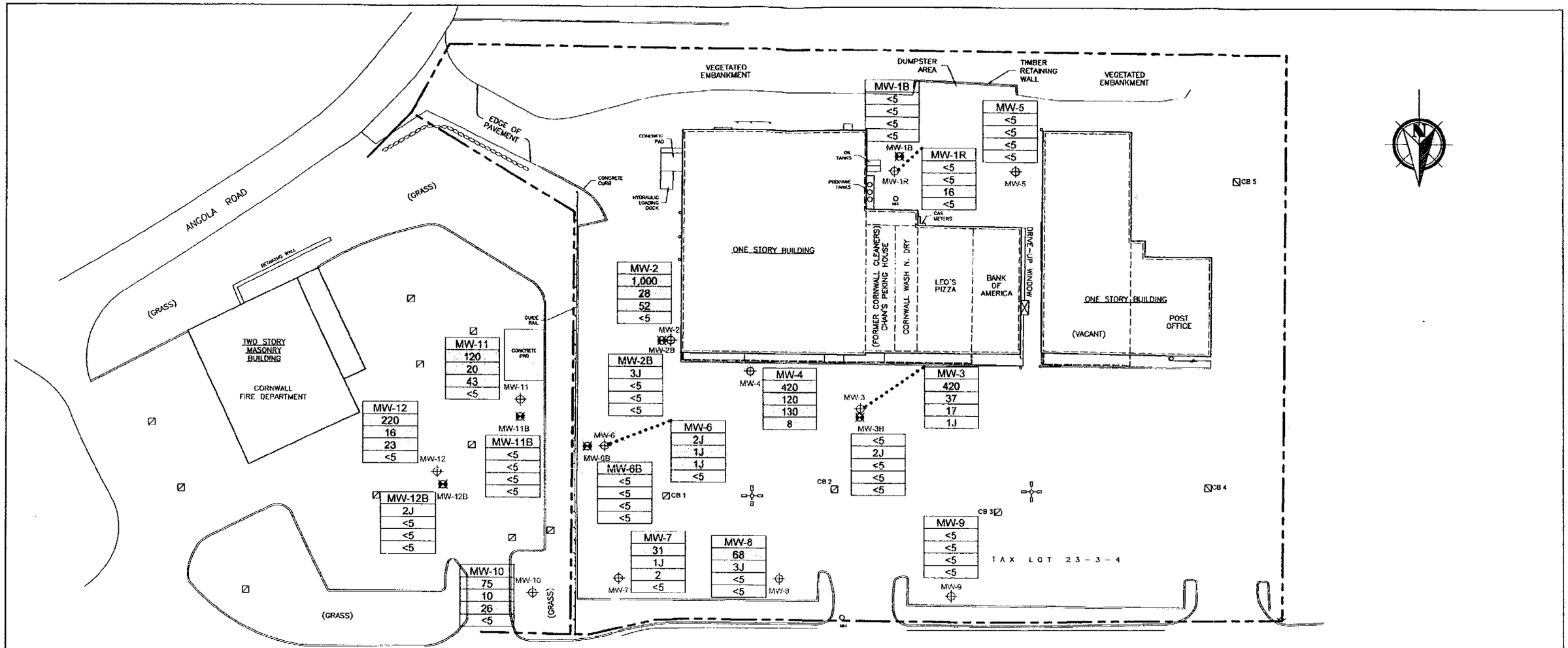
DRAWN:	RAC	CHECKED:	PW	DATE:	09/24/09	FIGURE:	13

F:\DWG\Furman\Cornwall Plaza\RIR 2009\13 jan 2008 GW iso.dwg



LEGEND

- PROPERTY BOUNDARY
- MW-2 — OVERBURDEN MONITORING WELL LOCATION
- MW-2B — BEDROCK MONITORING WELL LOCATION
- STORM CATCH BASIN
- UTILITY POLE

MW-2
1,000
28
52
<5

WELL ID
PCE CONCENTRATION ug/l
TCE CONCENTRATION ug/l
DCE CONCENTRATION ug/l
VC CONCENTRATION ug/l

CONCENTRATION EXCEEDS THE RESPECTIVE GROUNDWATER QUALITY STANDARD OR GUIDANCE VALUE

ug/l = MICROGRAMS PER LITER

CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

CHLORINATED SOLVENT CONCENTRATIONS IN GROUNDWATER
SAMPLED JUNE 4-5, 2009

DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Groundwater and Environmental Engineering Services
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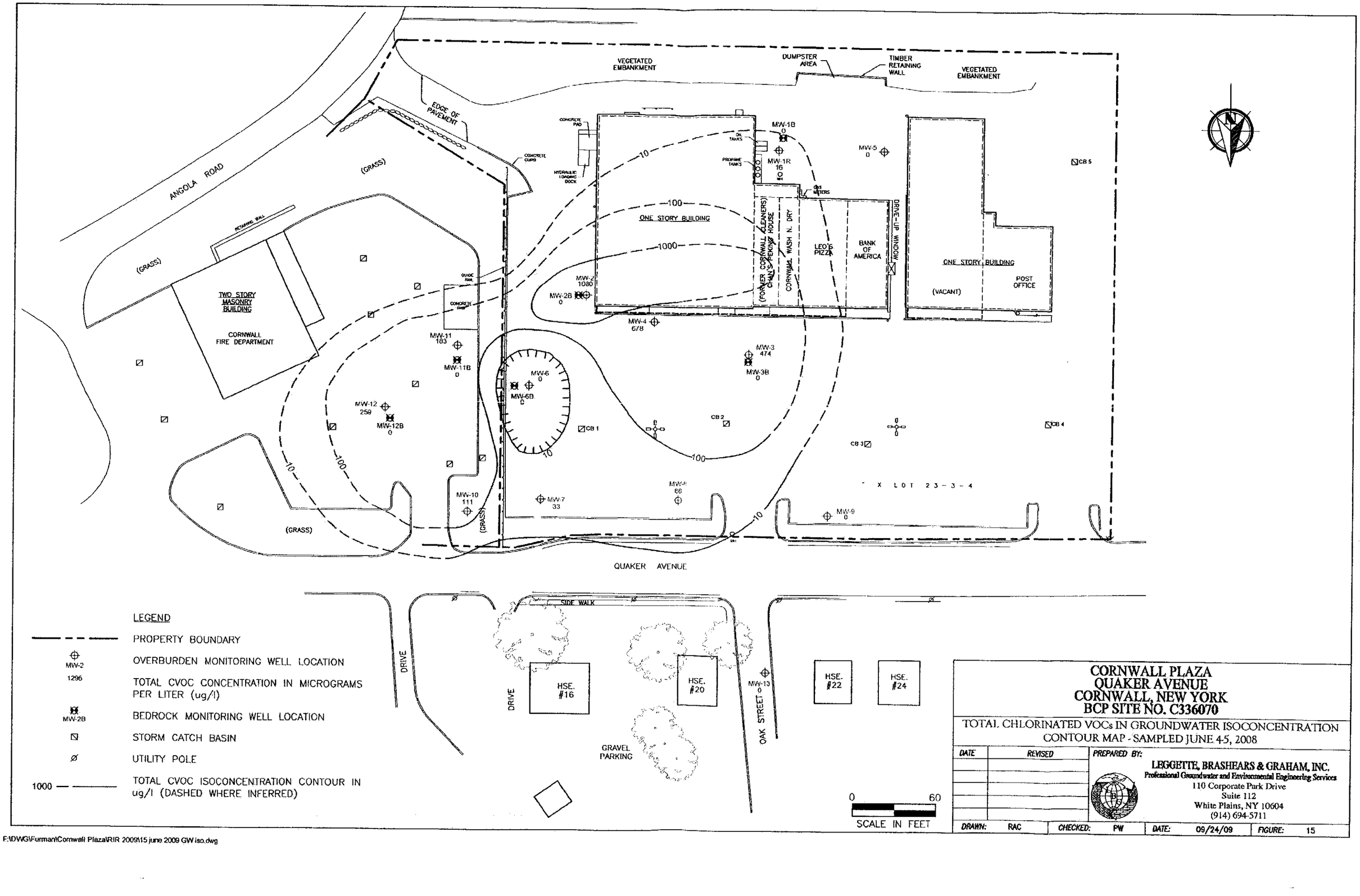
DRAWN:	RAC	CHECKED:	PW	DATE:	09/24/09	FIGURE:	14

F:\DWG\Furman\Cornwall Plaza\RIR 2009\14 june 2009 GW quality.dwg



LEGEND

———	PROPERTY BOUNDARY
MW-2 1296	OVERBURDEN MONITORING WELL LOCATION TOTAL CVOC CONCENTRATION IN MICROGRAMS PER LITER (ug/l)
MW-2B	BEDROCK MONITORING WELL LOCATION
	STORM CATCH BASIN
	UTILITY POLE
1000	TOTAL CVOC ISOCONCENTRATION CONTOUR IN ug/l (DASHED WHERE INFERRED)

CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

TOTAL CHLORINATED VOCs IN GROUNDWATER ISOCONCENTRATION CONTOUR MAP - SAMPLED JUNE 4-5, 2008

DATE	REVISED

PREPARED BY:

LEGGETTE, BRASHEARS & GRAHAM, INC.
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DRAWN:	RAC	CHECKED:	PW	DATE:	09/24/09	FIGURE:	15

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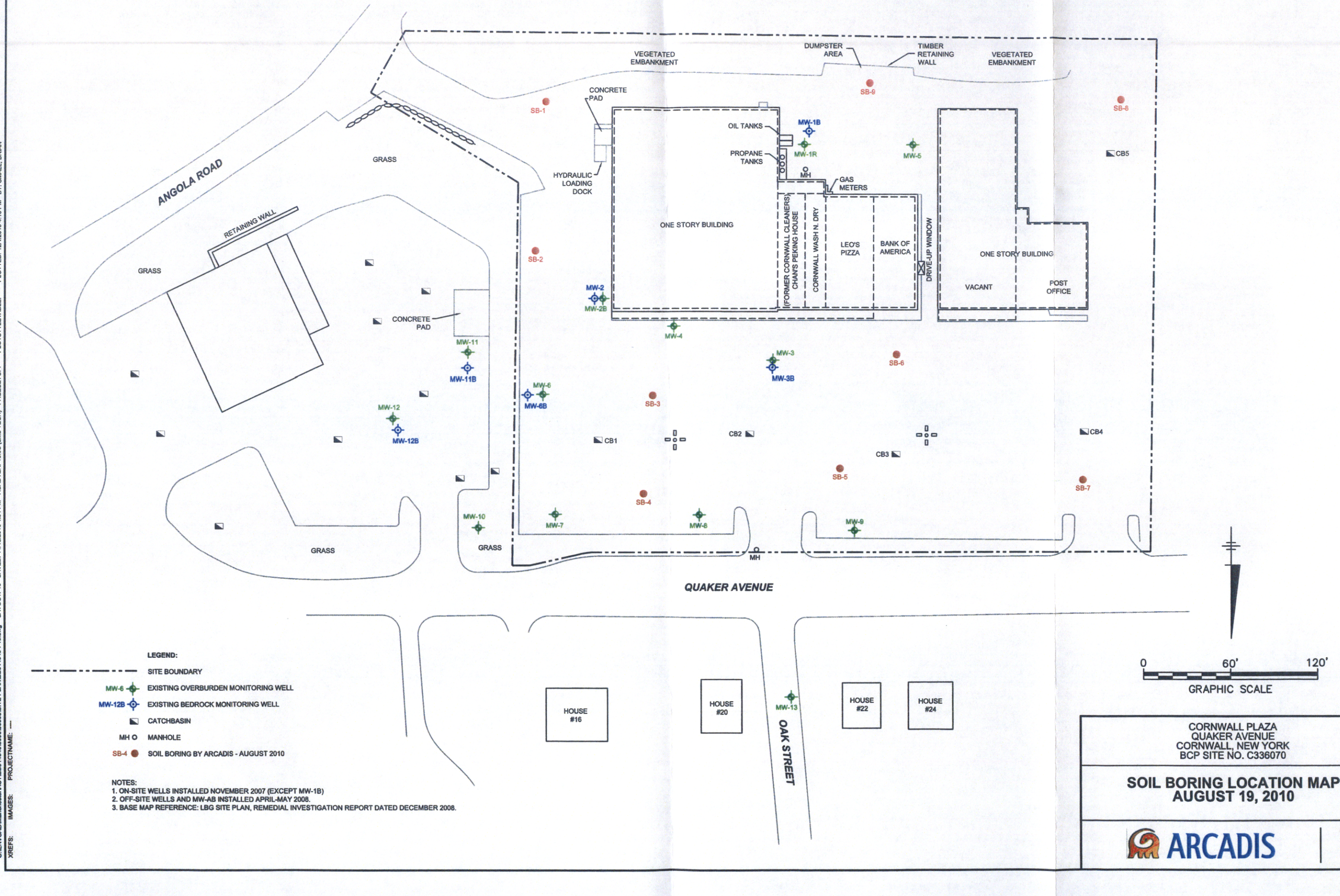

CORNWALL PLAZA
QUAKER AVENUE
CORNWALL, NEW YORK
BCP SITE NO. C336070

SOIL BORING LOCATION MAP
AUGUST 19, 2010

ARCADIS

FIGURE
16

CITY:MANCHESTER DIV/GROUP:ENVCAD DB:T.HALLIWELL
G:\ENVCAD\Manchester\ACTIB\B014949\0000000003\SITE PLAN\B014949-F16.dwg LAYOUT: 16 SAVED: 11/18/2010 1:54 PM ACADVER: 18.0S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 12/1/2010 4:16 PM BY: SMALL, BRIAN
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