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May 7, 2007

MAY 08 2007

Ms. Michelle Tipple  
New York State Department of  
Environmental Conservation  
21 South Putt Corners Road  
New Paltz, NY 12561-1696

Dear Ms. Tipple:

Attached please find 3 copies of the revised Draft Remedial Investigation Work Plan (RIWP) prepared by Leggette, Brashears & Graham, Inc. (LBG) for the Cornwall Plaza, New York project site for your review. The revisions should address the comments you and Mr. Perretta of the NYSDOH had regarding the first submission. I hope that the review process is swift and that the work plan may be submitted for public review and comment as early as the end of May.

Please let me know if you need any additional information.

Very truly yours,

LEGGETTE, BRASHEARS & GRAHAM, INC.

*Paul Woodell*  
Paul Woodell  
Senior Hydrogeologist

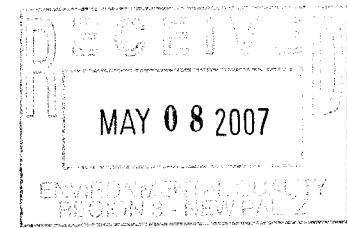
#### Attachment

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**REMEDIAL INVESTIGATION WORK PLAN  
CORNWALL PLAZA  
CORNWALL, NEW YORK  
BCP SITE ID NO. C336070**

Prepared For

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

June 2006  
Revised May 2007

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**REMEDIAL INVESTIGATION WORK PLAN  
CORNWALL PLAZA  
CORNWALL, NEW YORK  
BCP SITE ID NO. C336070**

**1.0 INTRODUCTION**

The following Remedial Investigation Work Plan (RIWP) for the Cornwall Plaza (the Site) located at 19-45 Quaker Avenue, Cornwall, New York (figure 1) was prepared by Leggette, Brashears & Graham, Inc. (LBG) on behalf of Cornwall Shopping, LLC, c/o Philips International Holding Corp., Brownfields Cleanup Program (BCP) Volunteer.

The purpose of the RIWP is to outline the methodology and investigative procedures proposed to delineate the vertical and horizontal extent of contaminants beneath the Site and adjacent areas. The RIWP is based on previous phases of work that consisted of the following:

- a Phase I/II Environmental Site Assessment (ESA) prepared by LFR Levine-Fricke (LFR); and,
- a site visit performed by LBG as documented in this Work Plan.

A Site specific Health and Safety Plan (HASP), which includes the Community Air Monitoring Plan (CAMP) (Section 3.1 of the HASP), is included as Appendix I. A Quality Assurance/Quality Control (QA/QC) Plan is attached as Appendix II and the Citizen Participation Plan (CPP) and Fact Sheet are included as Appendix III.

The objectives of this RIWP are to:

- determine the nature and extent of contamination;
- provide detailed delineation of the environmental media;
- identify contaminant sources;
- identify contaminant migration pathways;
- determine the impact or potential impact of contaminants on public health and the environment; and,
- collect data to facilitate selection and design of remedial actions, if deemed necessary.

Following the completion of the RIWP, the selection of a remediation technology will be based on the following:

- compliance with standards, criteria and guidance;
- overall protectiveness of public health and the environment;
- short-term and long-term effectiveness;
- reduction of toxicity, mobility and volume of contaminants;
- cost effectiveness; and
- community acceptance.

## **2.0 SITE DESCRIPTION AND HISTORY**

The Site is located at 19-45 Quaker Avenue in the Village of Cornwall-on-Hudson, Town of Cornwall, Orange County, New York and described at Town of Cornwall Tax Parcel Section 23, Block 3, Lot 4. The Site is approximately 4.2 acres in area, 22 percent (40,000 sq.ft. [square feet]) of which is occupied by two separate buildings, 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, Chang's Peking House (Chang's) and Key Foods (grocery store). 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 shown on figure 2 and a tax map is shown on Figure 3.

According to the LFR Phase I ESA, 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, the easternmost and the adjacent building to the west.

The focus of the investigation that is the subject of this RIWP is the area beneath the easternmost Site building; specifically, beneath the leasehold space formerly occupied by a dry cleaning establishment (Cornwall Cleaners) and now occupied by a Chinese food restaurant (Chang's Peking House). Cornwall Cleaners occupied the Chang's leasehold space from at least 1970 through 1987.

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 BCP Volunteer acquired ownership of the site on or about March 7, 2006, after the suspected release(s) from Cornwall Cleaners.

## **2.1 Future Site Usage**

Following the Remedial Investigation, and potential Remedial Action(s), the Site is intended to be used for commercial purposes as a multi-tenant strip mall consistent with applicable zoning and use requirements.

## **2.2 Local Land Usage**

The surrounding area within a one-mile radius of the Site is primarily residential with some commercial development. The Site is bordered on the north by Quaker Avenue and residential dwellings, on the east by the Cornwall Fire Department and Angola Street, on the south by Warren Court and residential dwellings and to the west by Cedar Lane, residential dwellings and State Route 9W. St. Luke's Cornwall Hospital is located 0.25 mile northwest of the Site.

## **3.0 SUMMARY OF GEOLOGY AND HYDROGEOLOGY**

### **3.1 Geology**

Description of Site geology is based on the LFR Phase II ESA and NYS Geological Survey surficial and bedrock geology maps. The Site is located in the Town of Cornwall, in the northeastern part of Orange County, New York State. This location is on the border of the Hudson Highlands and Hudson-Mohawk Lowlands physiographic provinces. The Site itself is located approximately 1.6 miles southwest of the Hudson River and 0.8 mile east of Moodna Creek. The average topographic elevation at the Site is approximately 258 feet above mean sea level (figure 1).

Regional bedrock geology in this part of Orange County consists of the Austin Glen Formation, an Ordovician-aged greywacke/shale. The bedrock is overlain by approximately 20

feet of overburden consisting of glacial outwash and till. There are no bedrock outcrops on the Site.

The overburden typically consists of approximately 8 feet of fine to medium sand. The sand is underlain by olive brown/gray silt and gravel with little clay and rock fragments. The till extends to the bedrock surface at approximately 20 ft bg (feet below grade). This glacial material generally has a low permeability and is a poor source of water.

### **3.2 Surface Water**

The Site is located approximately 500 feet west of an unnamed stream which 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.

### **3.3 Hydrogeology**

The depth to ground water in onsite monitor wells ranges between 13 and 14 ft bg. The ground-water flow direction is to the east northeast toward the unnamed stream 500 feet to the east.

According to Mr. Robert June, Superintendent of the Village of Cornwall Water Department, the town water supply is derived from a combination of surface water from the New York City Aqueduct System and ground water from a well field located 2.8 miles west of the Site.

## **4.0 SUMMARY OF ENVIRONMENTAL ACTIVITIES**

A Phase I/II ESA was completed by LFR on November 11, 2005. Based on the existence of the former Cornwall Cleaners dry-cleaning facility identified during the record review, the soil and ground-water conditions beneath the Site were investigated in August and October 2005. The investigation consisted of the advancement of soil borings, installation of monitor wells and the collection of soil and ground-water samples for laboratory analysis.

### **4.1 Soil Investigation**

In August 2005, LFR advanced six soil borings (B1 through B6) to between 18 and 20 ft bg around the perimeter of the easternmost Site building. Between one and two soil samples were collected from each boring. In October 2005, LFR collected soil samples from borings completed during the installation of three ground-water monitor wells (MW-1 through MW-3). The soil samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8620B. Boring and well locations are shown on figure 4.

Laboratory analysis indicates that soil samples from the north, east and south of the former Cornwall Cleaners contained VOCs commonly associated with the operation of a dry-cleaning business. The detected VOCs included the chlorinated solvents tetrachloroethane, tetrachloroethene (PCE), trichloroethene (TCE) and *cis*-1,2-dichloroethene as well as toluene. Detected VOC concentrations ranged between 48.4 ug/kg (micrograms per kilogram) and 6,900 ug/kg. The detection of PCE at 6,900 ug/kg in the MW-2 soil sample (from 21 ft bg) was the only sample to exceed a NYSDEC Recommended Soil Cleanup Objective (RSCO) as per Technical and Administrative Guidance Memorandum (TAGM) #4046. The Phase II soil-sample laboratory results are summarized on table 1.

#### **4.2      Ground-Water Investigation**

During the August 2005 LFR investigation, ground water was sampled from five temporary wells installed in the soil borings (B1, B2, B4, B5 and B6). In October 2005, ground water was sampled from Monitor Wells MW-1, MW-2 and MW-3 as well. The samples were analyzed for VOCs by EPA Method 8260B.

Laboratory analysis indicates that ground-water samples from all eight borings/monitor wells contained between one and three volatile compounds at concentrations above the NYSDEC Ambient Water Quality Standards (AWQS). Detected compounds in order of decreasing concentration are PCE, acetone, *cis*-1,2-dichloroethene, chloroform, toluene and TCE. Concentrations ranged between 8.57 ug/l (micrograms per liter) and 1,400 ug/l (PCE in MW-2). The highest concentrations were to the northeast of the former Cornwall Cleaners in samples from MW-2, MW-3 and B1. The Phase II ground-water sample laboratory results are summarized on table 2.

## **5.0 EVALUATION OF PRESENT ENVIRONMENTAL STATUS**

The results of soil and ground-water sample analysis indicate that the former Cornwall Cleaners facility contributed to VOCs detected beneath the Site. The release or releases were potentially the result of improper storage of bulk solvents or improper maintenance or use of the solvent-containing equipment. The most likely source area for the contaminants is within the former Cornwall Cleaners leasehold space, unless bulk storage was situated outside the rear of the space.

Because of the tendency for dense non-aqueous phase liquids (DNAPLs) (including chlorinated solvents) to migrate vertically downward through the vadose and phreatic zones, the bedrock and bedrock ground water is to be investigated at the Site. Preliminary soil quality analysis shows that the zone of greatest soil impact in the existing borings is at the soil-bedrock interface where the downward migration of DNAPLs is impeded by lower-permeability bedrock. Ground-water analysis confirms that most of the dissolved-phase solvents are found in a downgradient direction from the former cleaners.

## **6.0 PROPOSED REMEDIAL INVESTIGATION WORK PLAN (RIWP)**

A preliminary assessment of soil and ground-water quality was performed in 2005. The proposed remedial investigation work plan objectives are the following:

- define the horizontal and vertical extent of contamination in ground water, overburden and bedrock beneath the Site, and;
- define the extent of contaminants in soil gas, indoor air and ambient air.

### **Task 1 – Install Additional Overburden Monitor Wells**

Based on the reported dissolved solvent concentrations and ground-water flow direction, the contaminants appear to be migrating in a northeasterly direction from the former Cornwall Cleaners site. In order to delineate the horizontal extent of soil and ground-water impact, five soil borings will be drilled and five overburden ground-water monitor wells will be installed at the locations shown on figure 5. Three of the wells will be installed on the northern edge of the

Site parking lot and one in the parking lot of the adjacent Cornwall Fire Department property (pending property access). The fifth overburden well will be drilled adjacent to the storm-water drainage structure closest to the former Cornwall Cleaners leasehold space. This location will be determined after more field reconnaissance and with the help of as-built construction drawings that may exist at the Town of Cornwall Building Department.

The soil borings will be drilled using the hollow-stem auger drilling method. Borings will extend from grade to the soil-bedrock interface at whatever depth it may be at the drilling location. Typical bedrock depth at the Site is 20 ft bg. During the drilling, continuous split-spoon soil samples will be collected and each soil sample would be screened using a photoionization detector (PID). All borings will be recorded on a geologic log by an LBG hydrogeologist. The field screening and geologic observations will be used to determine the final depth and screen settings for each well. Select soil samples from each boring will be submitted to the laboratory for analysis of VOCs by EPA Method 8260. All laboratory analysis would be produced in accordance with the QA/QC Plan included in Appendix II. Laboratory results will be reported with ASP Category B deliverables. A utility mark out will be ordered prior to any ground-intrusive activities.

Drill cuttings will be contained in either steel 55-gallon drums and/or a dedicated lined roll-off container and temporarily stored onsite. Following completion of soil generating activities, the soil will be sampled, analyzed at the laboratory for waste classification and disposed of offsite at a licensed disposal facility according to all applicable regulations.

Immediately following the completion of each soil boring, a 2-inch diameter galvanized steel monitor well will be installed consisting of 10 feet of 0.020-slot well screen and a length of solid riser pipe necessary to extend to the surface. The annular space surrounding the well screen will be filled with quartz filter sand to 1 foot above the screen. A 1-foot bentonite seal will be placed above the filter sand and the remaining annular space will be filled with clean drill cuttings. The wells will be completed with locking plugs and cast iron road boxes mounted flush to grade in concrete pads.

## **Task 2 – Install Bedrock Monitor Wells**

The contaminants of concern (chlorinated solvents) are, in their free-phase state, denser than water. If a separate-phase source exists, it is likely to have migrated through the soil and into the bedrock. In order to investigate the ground-water quality within the bedrock, six bedrock monitor wells will be installed (figure 5). Three of the six bedrock wells will be installed adjacent to the existing overburden monitor wells (MW-1 through MW-3) where ground-water impact has already been confirmed. The remaining three bedrock wells will be installed on the north property boundary and the adjacent Cornwall Fire Department property (pending property access).

The borings for the bedrock wells will be drilled using the air-rotary drilling method. A bedrock borehole will be drilled to approximately 5 feet below the soil-bedrock interface (variable but expected to be approximately 25 ft bg). A 4-inch steel casing will be installed in the boring and grouted in place. The casing will ensure that the well samples will consist only of bedrock ground water and not overburden ground water that has infiltrated from above. After the grout has hardened, the bedrock beneath the casing will be bored with an undersized air-rotary bit to create the pathway for ground water to fill the well. The exact amount of open bedrock borehole in each well will be determined based on conditions observed in the field, specifically, how much open borehole is required to supply a reasonable quantity of water for purging and sampling purposes. The open borehole length may be between 10 and 20 feet. Drill cuttings will be contained using the same methods described in Task 1.

### **Task 3 – Install Interior Monitor Wells**

A limited-access direct-push drilling rig will be used to advance two soil borings through the floor of Chang's Restaurant in order to investigate the soil and ground-water quality at these locations. Locations are shown on figure 5. Borings will extend from grade to the soil-bedrock interface. Continuous split-spoon soil samples will be collected and each soil sample would be screened using a photoionization detector (PID). Borings will be recorded on a geologic log. Select soil samples from each boring will be submitted for laboratory analysis of VOCs by EPA Method 8260. All laboratory analysis will be performed in accordance with the QA/QC Plan included in Appendix II. Laboratory results will be reported with ASP Category B deliverables.

Immediately following the completion of each soil boring, a 1-inch diameter galvanized steel monitor well will be installed consisting of 10 feet of 0.020-slot well screen and a length of solid riser pipe necessary to extend to the surface. The annular space surrounding the well screen will be filled with quartz filter sand to 1 foot above the screen. A 1-foot bentonite seal will be placed above the filter sand and the remaining annular space will be filled with clean drill cuttings. The wells will be completed with locking plugs and cast iron manholes mounted flush to the floor.

#### **Task 4 – Top of Casing Elevation Survey**

A differential leveling survey will be conducted to determine the relative elevations of all monitor wells. The elevations will be measured with respect to a site benchmark. The survey will be conducted by a New York State licensed land surveyor.

#### **Task 5 – Ground-Water Sampling**

Ground-water samples will be collected from each of the 15 monitor wells using the low-flow sampling technique. Dedicated tubing will be set in each well at the approximate midpoint of each well screen or bedrock borehole and connected to a variable speed peristaltic pump. The peristaltic pump will be operated at a discharge rate of one quarter gallon per minute and will discharge to a flow-through cell. Geochemical parameters including pH, conductivity, dissolved oxygen and temperature will be continually monitored inside the flow through cell using a multi-parameter meter. When fluctuation of the geochemical parameters stabilizes, a ground-water sample will be collected from the dedicated tubing through an inline sampling port prior to the flow-through cell. All of the ground-water samples will be submitted to a NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory for analysis by EPA Method 8260. Laboratory results will be reported with ASP Category B deliverables. The data reporting level will be the Method Detection Limit of the analysis and the QA/QC Plan which includes the Standard Operating Procedures for the collection of ground-water samples is included as Appendix II.

### **Task 6 – Soil Vapor and Sub-Slab Vapor Sampling**

A soil vapor intrusion investigation will be conducted in order to adequately characterize the concentration and extent of VOCs present in the soil vapor beneath the Site. The investigation will consist of the installation of two soil vapor sample points to the north and south of the Chang's Restaurant leasehold space, two sub-slab vapor sample points beneath the concrete slab of Chang's Restaurant and one sub-slab vapor sample point in each of the adjacent leasehold spaces (Leo's Pizzeria and Key Foods). See figure 6 for sample locations. The soil vapor intrusion investigation will be conducted in accordance with the New York State Department of Health (NYSDOH) Center for Environmental Health, Bureau of Environmental Exposure Investigation Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006.

The soil-vapor and sub-slab sample points will be constructed using a soil gas sampling kit with dedicated polyethylene tubing. A hollow, 0.75-inch diameter stainless steel probe will be driven into the soil. The probe consists of a retractable screened point with a nipple attachment. One-quarter-inch polyethylene tubing connects to the nipple and feeds through the hollow tubing. Upon reaching the target depth (sub-slab sample points no greater than 2 inches into sub-slab material, exterior soil vapor samples at a depth comparable to the depth of foundation footings), the steel probe is pulled up a small distance to expose the screen. The point of penetration at grade will be sealed using a non-VOC-containing and non-shrinking product (e.g., inert clay, melted beeswax, etc.) to avoid short circuiting of atmospheric air to the sampling point. If agreeable to by the managers of the leasehold spaces, the 4 sub-slab sample locations will be completed as permanent monitoring points, otherwise they will be constructed as temporary points.

Prior to sampling, the probe will be purged of 1-3 volumes (of sample probe and tubing) at a rate of <0.2 l/m (liter per minute). Subsequently, a soil vapor sample will be collected using a 6 liter Summa canister fitted with a flow regulator set at a rate of <0.2 l/m. To ensure an adequate surface seal around the sample point, a tracer gas will be employed. The gas will likely be helium and a field-monitoring device will be used to analyze a soil-vapor sample. The tracer gas protocol will be based on those outlined in the NYSDOH guidance document. During the

sampling, the field personnel will include the following conditions in field notes: headspace and purge volume from each soil vapor sampling point, weather conditions (precipitation, outdoor temperature, barometric pressure, wind speeds and direction), any odor in the area and any use of VOCs in the adjacent buildings. A photographic log of sampling locations will be maintained.

The sampling will be conducted by experienced technicians and the soil vapor samples will be collected and maintained under chain-of-custody procedures. All necessary sampling information will be included on the chain-of-custody form. The sampling and laboratory analysis will be performed according to the QA/QC Plan included in Appendix II. The vapor samples will be submitted to a NYSDOH ELAP certified laboratory for analysis by EPA Method TO-15. Laboratory results will be reported with ASP Category B deliverables.

### **Task 7 – Indoor-Air Vapor Sampling**

Indoor air sampling will be conducted concurrently with the soil vapor samples described in Task 5. A total of three indoor-air samples will be collected; one from the interior of Chang's Restaurant and one from the interiors of Key Foods and Leo's Pizzeria. The indoor air quality sampling will be conducted in accordance with the NYSDOH guidance document.

The purpose of the indoor air quality sampling is to determine the following: potential for current human exposure, potential for future human exposure and appropriate (if necessary) remedial action to be implemented for removal of vapors from the indoor air.

The indoor air samples will be collected using the following procedures: a 6-liter summa canister will be placed approximately 3 feet above the ground surface. Each summa canister will be fitted with a dedicated regulator set with a sampling flow rate of 0.75 liters per hour (0.0125 l/m) therefore the samples will be collected over an 8-hour period. The indoor air samples will be analyzed by a NYSDOH ELAP certified laboratory by EPA Method TO-15. Laboratory results will be reported with ASP Category B deliverables. The sampling and laboratory analysis will be performed according to the QA/QC Plan included in Appendix II. At each indoor air sample location, an Indoor Air Quality Questionnaire and Building Inventory (as per NYSDOH Guidance for Evaluating Soil Vapor Intrusion, Appendix B) will be completed and a photographic log of sampling locations will be maintained.

Sampling results for VOCs will be compared with the NYSDOH indoor air quality guidance values for three of the five compounds which the NYSDOH have established guidance values (PCE, TCE and methylene chloride). Additionally, the NYSDOH decision matrices (*NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", pages 41-48*) will be used as a "general framework" in evaluating the potential necessity for mitigation activities in relation to additional VOCs detected in the indoor air samples. As noted above, these matrices will provide a "general framework" for potential mitigation activities because they were developed for TCE and PCE, respectively, based on their specific chemical toxicological properties.

#### **Task 8 - Outdoor Ambient Air Vapor Sampling**

Outdoor ambient air samples will be collected at two locations in front and behind Chang's Restaurant. The same Work Scope, Sampling Procedure and Analytical method used for the indoor air sampling will be followed for the outdoor ambient air sampling.

The soil vapor, indoor air and outdoor air samples will be collected concurrently. Assuming that this Work Plan is approved during early spring of 2007, the samples will be collected during the heating season.

#### **Task 9 – Video Inspection of Storm-Water Drainage System**

A subcontractor will be retained to conduct a video inspection of the storm-water drainage system closest to the former Cornwall Cleaners leasehold space. Any problems (defects, breaks, etc.) which could be contaminant-release pathways will be noted.

#### **Task 10 – Qualitative Public Health and Wildlife Exposure Assessment**

A qualitative on and offsite Public Health Exposure Assessment will be performed. The purpose of the Public Health Exposure Assessment will be to: qualitatively evaluate actual or potential exposures to site contaminants; describe the nature and size of the population exposed, or potentially exposed, to the contaminants that are present at or migrating from the Site; and, characterize the exposure setting, identify exposure pathways, and evaluate contaminant fate and

transport. The results of this exposure assessment will be used to evaluate the necessity, or lack thereof, of additional measures to protect public health.

Additionally, an on and offsite Fish and Wildlife Exposure Assessment will be performed. The purpose of the Fish and Wildlife Exposure Assessment is to: qualitatively determine the route, intensity, frequency, and duration of actual or potential exposures to chemicals; describe the nature and size of the population exposed to the contaminants that are present at or migrating from the Site; and characterize the exposure setting, identify exposure pathways, and evaluate contaminant fate and transport. The results of this exposure assessment will be used to evaluate the necessity, or lack thereof, of additional measures to protect the health of the surrounding fish and wildlife.

## **7.0 REMEDIAL INVESTIGATION REPORT (RIR)**

Following the completion of Tasks 1 thru 8, a comprehensive Remedial Investigation Report will be prepared summarizing the findings of the investigative activities. This report will include the methodologies and procedures for all field work as well as presenting data associated with all of the investigation activities in tabular and figural form. The data generated from the remedial investigation will be used to develop site specific remedial alternatives to be presented in the subsequent Remedial Action Work Plan.

Subsequent to the 30-day public review and comment period, RI field work will commence within 30 days of the acceptance of the RIWP by the NYSDEC and NYSDOH. Upon completion of the RI field work, the draft RI Report will be submitted within 90 days of the receipt of all laboratory reports. Additionally during the implementation of the Work Plan, the NYSDEC and NYSDOH will receive regular updates regarding progress.

LEGGETTE, BRASHEARS & GRAHAM, INC.

Paul Woodell  
Senior Hydrogeologist

Affirmed By:

Dan C. Buzea, CPG  
Vice President

dmd  
May 4, 2007  
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## **TABLES**

TABLE 1

CORNWALL PLAZA  
15-45 QUAKER AVENUE  
CORNWALL, NEW YORK

Soil Sample Analytical Results, VOCs by EPA Method 8260B  
Collected August and October 2005

Volatile Organic Compound ( $\mu\text{g/g}$ )	Sample Identification and Depth Below Grade in Feet								NYSDEC RSCO ( $\mu\text{g/g}$ )	
	B1 0-5	B1 10-15	B2 10-15	B3 15-19	B4 10-15	B5 15-20	B6 10-15	MW-1 15-17	MW-2 20-9	
1,1,2,2-Tetrachloroethane	48.4	<116	<109	<106	<112	<115	<112	<89	<180	<100
Tetrachloroethene (PCE)	<109	<116	<109	<106	<112	1,110	<112	<89	<180	<170
Trichloroethene (TCE)	<109	<116	<109	<106	<112	<115	<112	<89	180	<100
cis-1,2-Dichloroethene	<109	<116	<109	<106	<112	<115	<112	<89	270	110
Toluene	<109	138	<109	<106	<112	<115	<112	<89	<180	<100
								<170	<170	1500

NYSDEC RSCO = New York State Dept. of Env. Conservation Recommended Soil Cleanup Objectives (Technical and Administrative Guidance Memorandum #4046)

$\mu\text{g/g}$  = micrograms per kilogram

TABLE 2

**CORNWALL PLAZA**  
**15-45 QUAKER AVENUE**  
**CORNWALL, NEW YORK**

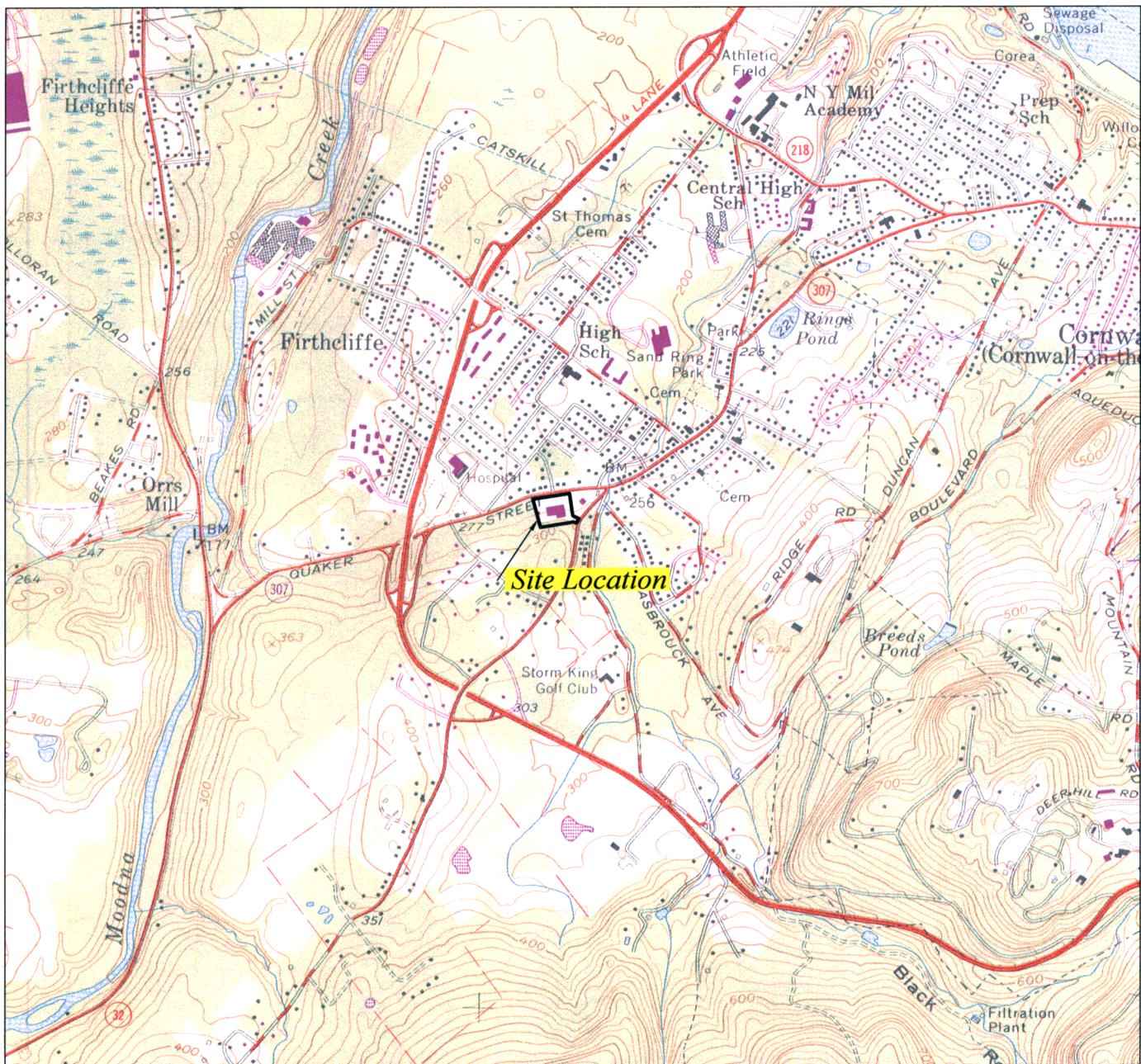
**Ground-Water Sample Analytical Results, VOCs by EPA Method 8260B**  
**Collected August and October 2005**

Volatile Organic Compound	Sample Identification and Depth Below Grade in Feet						NYSDEC AWQS
	B1	B2	B3	B4	B5	B6	
(ug/l)							
Tetrachloroethene (PCE)	165	<5.0	NS	<5.0	410	21	<10
Trichloroethene (TCE)	8.57	<5.0	NS	<5.0	<5.0	<10	<50
cis-1,2-Dichloroethene	22.6	78	NS	5.48	<5.0	<5.0	<10
Toluene	<5.0	<5.0	NS	<5.0	<5.0	<5.0	<11
Acetone	<5.0	94.4	NS	<5.0	<5.0	<5.0	<50
Chloroform	<5.0	<5.0	NS	<5.0	<5.0	12	<50
							<25
							240
							5.0

NYSDEC AWQS = New York State Dept. of Env. Conservation Ambient Water Quality Standard (Technical and Operational Guidance Series 1.1.1)

ug/l = micrograms per liter

## **FIGURES**



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



QUADRANGLE LOCATION

0 2000  
SCALE IN FEET

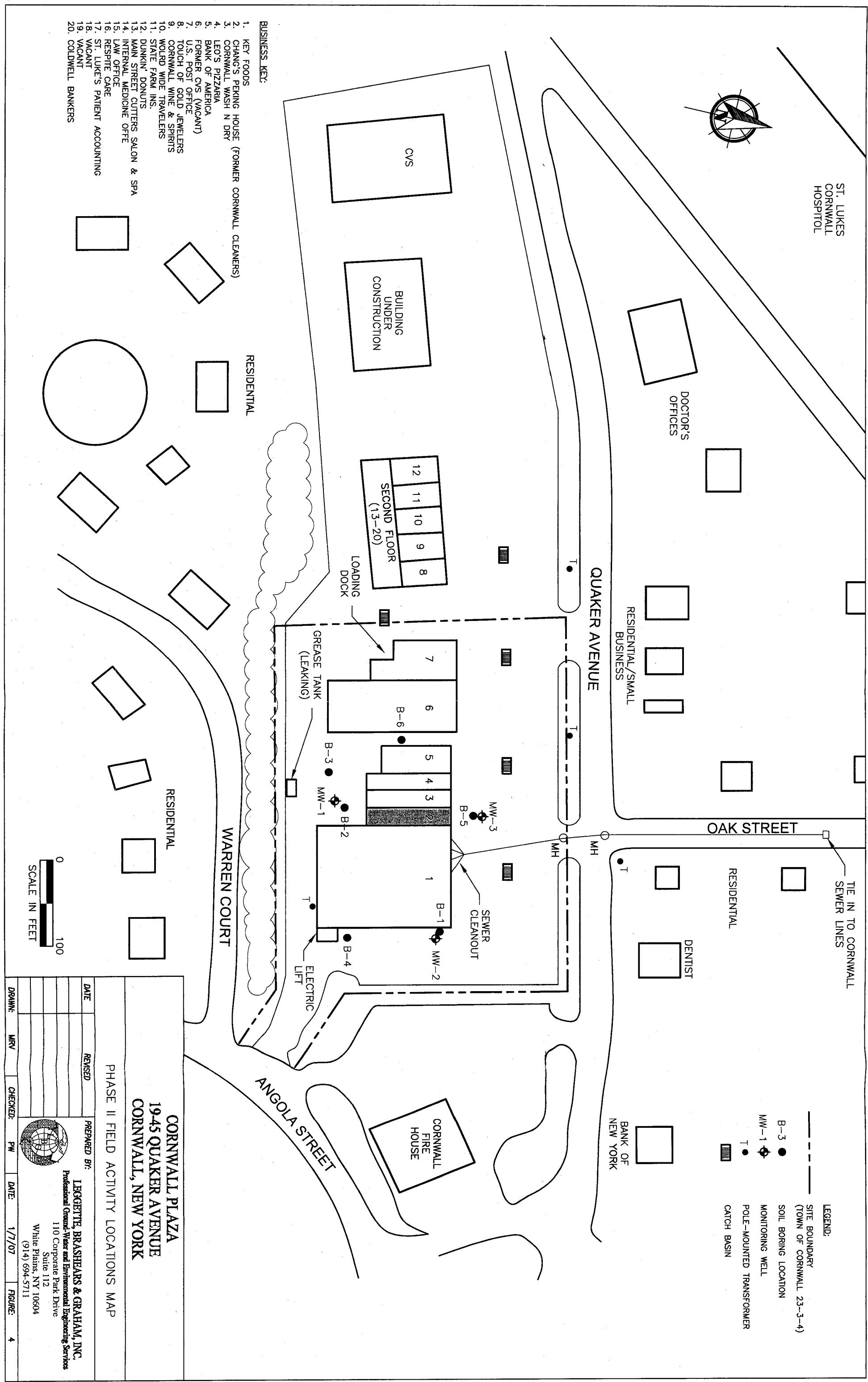
## CORNWALL PLAZA QUAKER AVENUE CORNWALL, NEW YORK

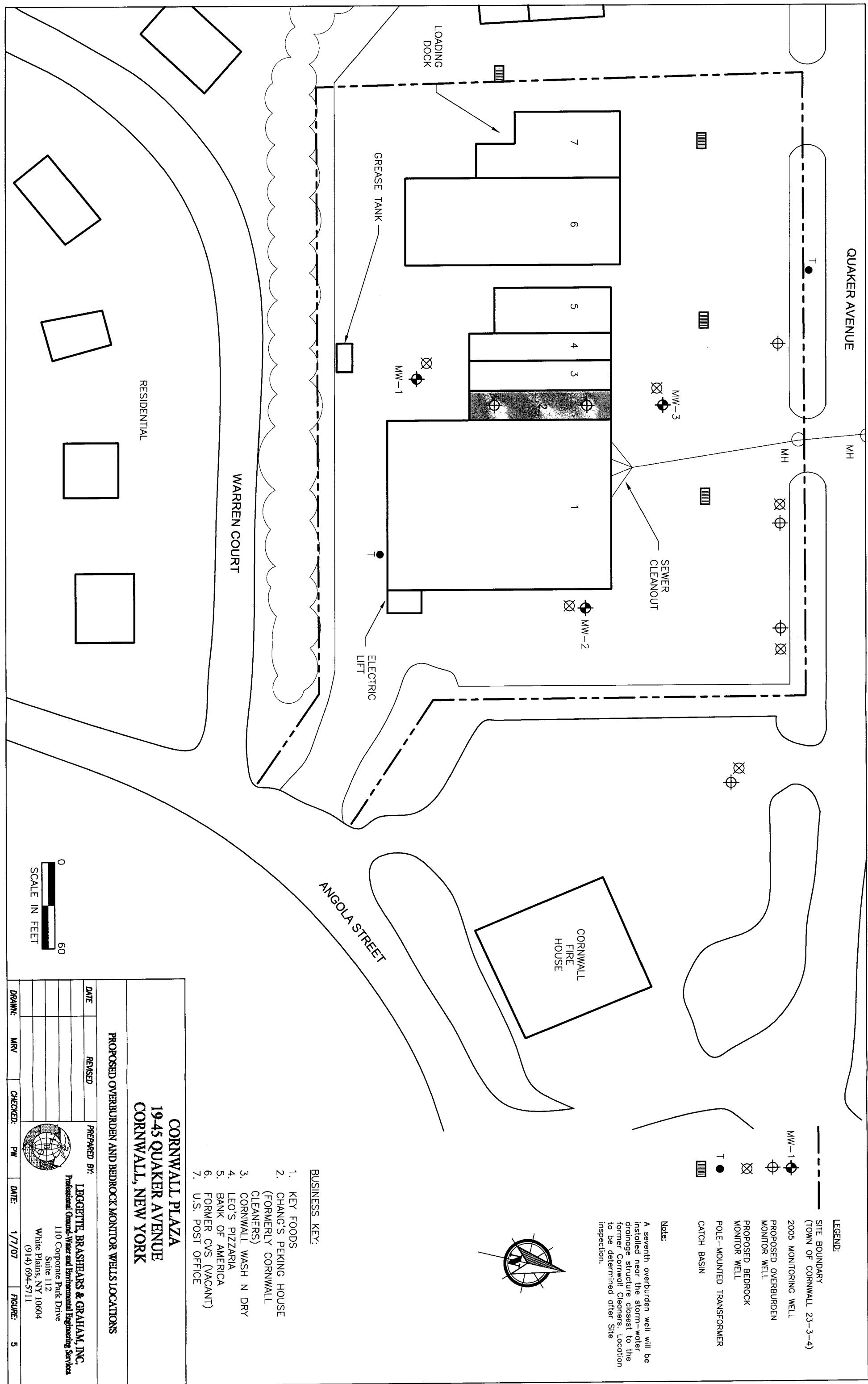
### SITE LOCATION MAP

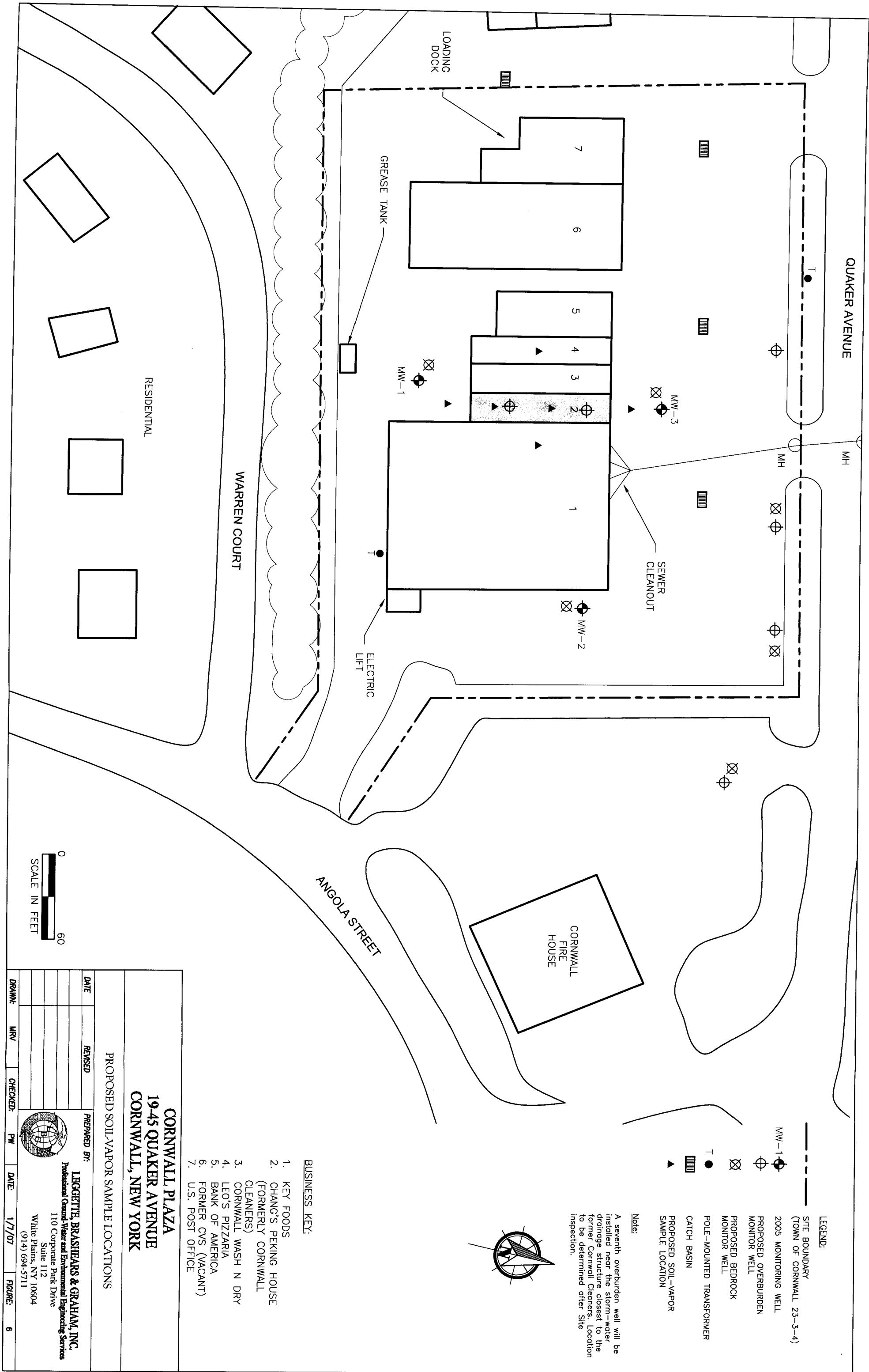
DATE	REVISED	PREPARED BY:
		LEGGETTE, BRASHEARS & GRAHAM, INC. Professional Ground-Water and Environmental Engineering Services 110 Corporate Park Drive Suite 112 White Plains, NY 10604 (914) 694-5711
DRAWN:	MRV	CHECKED: PW
		DATE: 1/9/07
		FIGURE: 1











**APPENDIX I**

**SITE SPECIFIC HEALTH AND SAFETY PLAN**  
**(INCLUDING COMMUNITY AIR MONITORING PLAN)**

**DRAFT**

**SITE SPECIFIC HEALTH AND SAFETY PLAN  
FOR ENVIRONMENTAL WORK RELATED  
TO VOLATILE ORGANIC COMPOUNDS**  
**CORNWALL PLAZA**  
**19-45 QUAKER AVENUE**  
**CORNWALL, NEW YORK**  
**BCP SITE ID NO. C336070**

Prepared For

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

June 2006  
Revised May 2007

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

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### APPENDIX A

    LBG Safety Policy and General Drug and Alcohol Policy

### APPENDIX B

    Air Monitoring Equipment Operation

### APPENDIX C

    Volatile Organic Compounds Project Work Zone Considerations

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    Contact Sheet and Map to Hospital

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**SITE SPECIFIC HEALTH AND SAFETY PLAN  
FOR ENVIRONMENTAL WORK RELATED  
TO VOLATILE ORGANIC COMPOUNDS**  
**CORNWALL PLAZA**  
**19-45 QUAKER AVENUE**  
**CORNWALL, NEW YORK**  
**BCP SITE ID NO. C336070**

This Health and Safety Plan (HASP) is intended to provide a basic framework for the safe conduct of field investigations related to the Cornwall Plaza site. The procedures provided herein are intended as a guide for all Leggette, Brashears & Graham, Inc. (LBG) and subcontractor employees who will be involved in the performance of the project.

The primary objective of the HASP is to establish work-safety guidelines, requirements and procedures before field activities begin and during the field activities. The following information was prepared specifically for field operations by personnel to enforce and adhere to the established rules as specified in the HASP. The HASP will be provided to all personnel to aid in accomplishing the following objectives:

- monitoring the effectiveness of the HASP as it is conducted in the field by performing field operation audits;
- following up on any necessary corrective actions;
- interacting with regulatory agencies and/or client representatives regarding modifications of health and safety actions; and
- stopping work should work-site conditions warrant such action.

All personnel will have had health and safety training in accordance with OSHA Interim Final Standard 29 CFR 1910 or as may be amended. A copy of LBG's Corporate Safety Policy and Drug and Alcohol Policy is attached in Appendix A.

## **1.0 ORGANIZATION AND RESPONSIBILITIES**

The organization and responsibilities for implementing safe site-investigation procedures, and specifically for the requirements contained in this manual, are described in this section.

### **1.1 Project Manager**

The LBG Project Manager will be responsible for the overall implementation and monitoring of the health and safety program by:

- ensuring appropriate protective equipment is available and properly used by all personnel, in accordance with the HASP;
- ensuring personnel health and safety awareness by providing them with proper training and familiarity with procedures and contingency plans;
- ensuring all personnel are apprised of potential hazards associated with the site conditions and operations;
- supervising and monitoring the safety performance of all personnel to ensure their work practices are conducted in accordance with the HASP;
- correcting any work practices or conditions that would expose personnel to possible injury or hazardous condition;
- communications with the onsite Health and Safety Officer (HSO);
- ensuring sufficient protective equipment is provided and used;
- promptly initiating emergency alerts; and,
- communicating with the client and/or regulatory agency representatives.

### **1.2 Onsite Health and Safety Officer**

The LBG HSO will be onsite during all field activities. The HSO will be accountable for the direct supervision of personnel from the subcontractors and other LBG personnel with regard to:

- health and safety program compliance;
- maintaining a high level of health and safety consciousness among employees at the work site;
- reporting accidents within LBG jurisdiction and undertaking corrective action; and,
- the Community Air Monitoring Plan which is described in Section 3.1 of this HASP.

### **1.3 Field Personnel**

All field personnel will report directly to the onsite HSO, and will be required to:

- be familiar with, and conform to, provisions of the HASP;

- report any accidents or hazardous conditions to the onsite HSO; and,
- have complete familiarity with their job requirements and the health and safety procedures involved.

#### **1.4 Reporting of Accidents and Unsafe Conditions**

If an accident occurs, the HSO and the injured person(s) are to complete an Accident Report for submittal to the project manager, who will forward a copy to the principal-in-charge who should ensure that follow-up action is taken to correct the situation that caused the accident.

##### **1.4.1 Disciplinary Actions for Safety Related Infractions**

If an infraction of the Health and Safety Plan is discovered by the Project Manager or the onsite HSO, each case will be dealt with individually. The infraction will be investigated and a disciplinary meeting held with the offender. Disciplinary actions may include a performance deficiency evaluation entered into the employee's personnel file, correction of problem after the disciplinary meeting or removal of the offender from the project. Repeated infractions will not be tolerated and will be dealt with accordingly.

##### **1.4.2 Safety Inspections**

Safety inspections will be conducted periodically by the Project Manager. The Project Manager will be familiar with the Health and Safety Plan before performing an onsite visit. While onsite, the Project Manager will evaluate the effectiveness of the plan and offer any suggestion for improvement. Although the Project Manager is responsible for periodic safety inspections and evaluation of the Health and Safety Plan, the onsite HSO is responsible for daily observation and evaluation of Health and Safety Plan effectiveness.

##### **1.4.3 Safety Meetings**

Prior to the start of field activities, a meeting will be held to discuss the potential hazards at the site, with a review of the required protective clothing and

procedures observed at this site. As needed, daily meetings will be held to discuss any changes in the hazards. A site safety briefing form will be filled out each day the HSO holds a meeting and signed by all of the attendees of the briefing.

## **2.0 HAZARD EVALUATION**

The exposure limits of chemical constituents which may be encountered are listed in Table 1. These constituents would possibly be encountered in ground water and/or soil and comprise the major concerns for personal health. The protection of personnel and the public from exposure to these substances by inhalation, oral ingestion, dermal absorption or eye contact is included as a primary purpose of this plan.

The onsite HSO is responsible for determining the level of personal protection equipment required. The HSO will perform a preliminary evaluation to confirm personal protective equipment requirements once the site has been entered. When work-site conditions warrant, the onsite HSO will modify the level of protection to be utilized. The existence of a situation more hazardous than anticipated will result in the suspension of work until the Project Manager and volunteer have been notified and appropriate instructions have been provided to the field team.

## **3.0 MONITORING REQUIREMENTS**

A photoionization detector (PID) will be used to monitor ambient air quality at the drilling or excavation sites. Records of these data will be maintained by the onsite HSO. During drilling operations or excavation activities, air quality will be monitored, especially near the top of the boreholes as samples are taken and at the perimeters of any excavations. Work operations which involve handling of potentially hazardous substances will include continuous contaminant monitoring using the PID. When deemed necessary or desirable by the onsite HSO, area monitoring will be used in potentially hazardous zones. Area monitoring will be performed as plans and conditions dictate, and in accordance with the HASP and with the goal of accident and hazardous condition prevention in mind. Instrument calibration information is included in Appendix B.

For the compounds previously identified to be most prevalent, the lowest 8-hour exposure limit is listed on Table 1.

### **3.1 Community Air Monitoring Plan**

During all field activities, a Community Air Monitoring Plan (CAMP) will be followed. The CAMP is outlined below.

Real-time air monitoring for volatile compounds and particulate levels at the perimeter of the work area is necessary. The plan includes the following:

- VOCs will be monitored in real-time at the downwind perimeter of the work area on a continuous basis using a PID. If total organic vapor levels exceed 5 ppm (parts per million) above background, work activities will be halted and monitoring continued under the provisions of a Vapor Emission Response Plan. All readings will be recorded and be available for State (DEC and DOH) personnel to review.
- Particulates will be monitored in real-time upwind, downwind and within the work area at designated particulate monitoring stations using a personal Data RAM Dust Meter capable of measuring particulate matter less than 10 micrometers in size. If the downwind particulate level is greater than the upwind particulate level by 100 ug/m<sup>3</sup> (micrograms per cubic meter) or more, dust suppression techniques will be employed and work will continue. All readings will be recorded and be available for State Agency (DEC and DOH) review.
- Should dust be observed leaving the work area, regardless of real-time particulate measurements, dust suppression techniques will be implemented.

### **3.2 Vapor Emission Response Plan**

If the ambient air concentration of organic vapors exceeds 5 ppm above background at the perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities can resume. If the organic vapor levels are greater than 5 ppm over background but less than 25 ppm over background at the perimeter of the work area, activities can resume provided:

- the organic vapor level 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown. When work shutdown occurs, downwind air monitoring as directed by the Safety Officer will be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

### **3.3 Major Vapor Emission**

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities will be halted.

If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, then the air quality will be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If efforts to abate the emission source are unsuccessful and if the following levels persist for more than 30 minutes in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect. The Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background.

### **3.4 Major Vapor Emission Response Plan**

Upon activation, the following activities will be undertaken:

1. All Emergency Response Contacts as listed in the Health and Safety Plan of the Work Plan will be notified.
2. The local police authorities will immediately be contacted by the Safety Officer and advised of the situation.
3. Frequent air monitoring will be conducted at 30 minute intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Safety Officer.

### **3.5 Soil Vapor Locations**

If the organic vapor level is more than 5 ppm above background at the work area inside of the building, an exhaust fan will be operated and monitoring will continue with a monitoring point added outside, adjacent to the exhausted air from the building. If the organic vapor levels at the work area persist even with the exhaust fan running, all work will be halted and procedures used to reduce organic vapors will be re-evaluated and submitted to New York State Department of Environmental Conservation (NYSDEC) for approval.

If the dust levels are greater than 150 ug/m<sup>3</sup> at the work area inside of the building, dust suppression techniques will be utilized and monitoring will continue. If the dust levels at the work area persist even with the dust suppression technique, all work will be halted and procedures used for dust suppression will be re-evaluated and submitted to NYSDEC for approval.

#### **4.0 LEVELS OF PROTECTION**

The level of protection anticipated to perform work on this investigation is Level D, unless otherwise upgraded. Only protective equipment deemed suitable by the onsite HSO for use at the work site will be worn. Any changes in protection levels shall be documented by the onsite HSO. Field personnel should exercise informed judgment on protective equipment requirements at active work sites or at work sites that have been repeatedly entered or occupied without apparent harm. In any case where doubt exists, the safest course of action must be taken. The protective equipment to be used by field personnel is listed below.

##### **4.1 Level D**

- hard hat;
- safety glasses, shatter-proof prescription glasses or chemical splash goggles;
- boots/shoes, leather or chemical-resistant, steel toe and shank;
- coveralls; and,
- chemical resistant gloves.

At a minimum, protective headgear, including protective hearing devices, eyewear and footwear will be worn at all times by personnel working around the drilling equipment. When work-site conditions dictate, protective gloves and chemical-resistant boots shall be required for those personnel handling contaminated soils or water.

Typically, for VOC-related work, a sustained level of 0 to 5 ppm above background as measured with a PID provides a large safety margin for the 8-hour exposure limit.

#### **4.2 Level C**

- hard hat;
- boots, leather, steel toe and shank;
- outer boots, chemical resistant;
- chemical-resistant gloves (solvex);
- Tyvek or Saranex suit; and,
- Air purifying respirator with organic vapor cartridge and dust and mist filter.

Level C protection will be considered for sustained PID readings of 5 to 100 ppm above background in the breathing zone.

Respirators for all personnel will be available with both particulate and organic vapor protection cartridges. The onsite HSO will direct when the protective clothing and respirators will be utilized based on the conditions encountered at the work site.

#### **4.3 Level B**

- pressure-demand, self-contained breathing apparatus;
- standby escape pack;
- chemical resistant clothing (Saranex suit);
- outer gloves (Solvex);
- inner gloves (surgical);
- outer boots (chemical resistant);
- inner boots (leather, steel shank and toe); and,
- hard hat.

Level B will be considered for sustained PID readings of 100 ppm above background in the breathing zone. In the event that the work space atmosphere contains in excess of 100 ppm of total ionizable compounds above background, colorimetric tubes or a portable gas chromatograph will be used to determine the levels of individual chemicals. The use of Level B equipment will be based on

the specific compounds present and will include discussions with the regulatory authorities and/or the client representative.

Level A conditions will require specialized procedures to be formulated on a case-by-case basis.

## **5.0 SAFE WORK PRACTICES AND HYGIENE**

In addition to the use of protective equipment, other procedures will be followed to minimize risk:

- all consumptive activities including eating, drinking or smoking are prohibited during the drilling, sampling and decontamination activities;
- an adequate source of potable water for emergency use will be available at the drilling sites (two liters per person per day);
- fire extinguishers will be available at the work sites for use on equipment or small fires when appropriate; and,
- an adequately stocked first-aid kit will be maintained at the work site at all times during operational hours.

### **5.1 Heat Stress**

In order to avoid heat stress several preventative measures will be observed:

- Workers will be urged to drink a 16-ounce glass of water prior to work (in the morning and after lunch). Water will be contained in a cooler, maintained at a temperature below 60°F. Workers will be encouraged to drink approximately every 20 minutes during days of extreme heat.
- In extreme hot weather, field activities will be conducted in the early mornings and late afternoons.
- Rest breaks in cool or shaded areas will be enforced as needed.
- Toilet facilities will be made available to site workers, unless transportation is readily available to nearby toilet facilities.

- Good hygiene practices will be encouraged, stressing the importance of allowing the clothing to dry during rest periods. Anyone who notices skin problems should receive medical attention immediately.
- If there are support personnel available outside the work zone, they should observe the workers in the exclusion zone to monitor signs of stress, frequency of breaks, etc.

## **5.2 Cold Stress and Exposure**

In order to avoid cold stress, several preventative measures will be observed;

- work will not take place when the temperature falls below -20°F. (The wind chill factor should be a major consideration);
- clothing should be worn in layers, so that personnel can adapt to changing conditions and various levels of physical stress;
- if possible, breaks should be taken in a heated vehicle or building, but care should be taken to remove outer clothing during the break;
- have on hand extra inner clothing in case perspiration builds up;
- keep insulated containers of warm liquids available for breaks outside of the exclusion zone;
- be aware of the signs of frostbite and take immediate remedial measures; and,
- take extra precautions around areas subject to ice buildup, such as sanding slippery surfaces.

## **6.0 WORK ZONE**

To prevent unauthorized personnel from entering areas where active operations are being performed, the area enclosing the operation will be marked.

Typically, VOC projects such as this one involve installation of wells, monitoring of wells, installation and operation of treatment systems and observation of tank and trench excavation work. Safety issues with respect to this type of work are attached in Appendix C.

## **7.0 DECONTAMINATION**

An area will be set aside within the work zone for decontamination. The type of decontamination procedures used will be based on the level of protection required. Decontamination of Level D protective wear will consist of brushing heavily soiled boots to remove soils, rinsing gloves and safety glasses (and overboots, if worn) with water, and removing and storing coveralls in plastic bags before leaving the work zone, if heavily soiled or suspected of having been in contact with site contaminants. For detailed decontamination, equipment and procedures, refer to Appendix D.

## **8.0 CONTINGENCY PLAN FOR EMERGENCIES**

In the event of a safety or health emergency, appropriate corrective measures must immediately be taken to assist those who have been injured or exposed and to protect others from hazard. The onsite HSO will be notified of the incident immediately. If necessary, first aid will be rendered. A contact sheet showing the closest police, hospital and NYSDEC office will be maintained onsite within this HASP as Appendix E.

mdm

June 28, 2006

Revised: March 12, 2007

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## TABLE

TABLE I  
Exposure Limits

COMPOUND	EXPOSURE STANDARDS			RECOGNITION QUALITIES	
	TLV/PEL (a) (ppm)	STEL (b) (ppm)	DLH (c) (ppm)	Odor/Threshold (ppm)	LEL (d) (%)
Gasoline <sup>1</sup>	300	500	1,400	—	1.4
Alachlor <sup>2</sup>	—	—	—	No odor	—
Benzene <sup>1</sup>	0.1	1	500	12	1.2
Butane	800	—	—	2,700	1.6
Chlorobenzene	75 <sup>3</sup>	—	1,000	Almonds	1.3
1,1-Dichloroethane	100	Ca <sup>5</sup>	3,000	Chloroform	5.4
1,2-Dichloroethylene	200	—	1,000	Chloroform	5.6
EDB (Ethylene dibromide) <sup>4</sup>	0.045	0.13	100	Sweet	—
EDC (Ethylene dichloride) <sup>4</sup>	1	2	50	Chloroform	6.2
Ethylbenzene	100	125	800	Aromatic	0.8
Heptane	85	440	750	150	1.05
N-Hexane	50	—	1,100	Gasoline/130	1.1
Hexanes	100	510	—	Mild gasoline	—
Methyl ethyl ketone (MEK)	0.2 <sup>4</sup>	—	—	Characteristic odor	—
Octane	75	385	1,000	Gasoline/150	1.0
Pentane	120	610	1,500	Gasoline/1000	1.5
TBA (Tert-butyl alcohol)	100	150	1,600	Camphor	2.4
					9.70

TABLE 1  
(continued)

Exposure Limits

COMPOUND	EXPOSURE STANDARDS			RECOGNITION QUALITIES		
	TLV/PEL (a) (ppm)	STEL (b) (ppm)	IDLH (c) (ppm)	Odor/Threshold (ppm)	LEL (d) (%)	Ionization Potential (eV)
Tetrachloroethylene <sup>1</sup>	Ca <sup>2</sup>	Ca <sup>2</sup>	150	Chloroform	-	9.32
Tetraethyl Lead	0.075*	-	40*	Sweet	1.8	11.10
Tetramethyl Lead	0.075*	-	40*	Fruity	-	8.50
Toluene	100	150	500	Sweet benzene like/2.9	1.1	8.82
1,1,2-Trichloroethane	Ca <sup>2</sup>	10	100	Chloroform	6.0	11.00
Trichloroethylene	Ca <sup>2</sup>	25	1,000	Chloroform	8.0	9.45
Vinyl Chloride	Ca <sup>2</sup>	Ca <sup>2</sup>	Not determined	Pleasant	3.6	9.99
Xylenes	100	150	900	Aromatic/1.1	0.9	8.56

Notes:

1/ Potential occupational carcinogen

2/ Alachlor manufacturer established internal exposure guideline of 10 ppb for 8-hour TWA

3/ OSHA guideline, NIOSH questions the adequacy of 75 ppm

4/ Ceiling REL, should not be exceeded at any time

5/ NIOSH recommends occupational exposures to carcinogens to be limited to the lowest feasible concentration  
- = No published value

\* mg/m<sup>3</sup>

(a) The more stringent of either: (1) Occupational Safety and Health Administration (OSHA) 1989 Permissible Exposure Limit (PEL), (2) American Conference Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), or (3) National Institute for Occupational Safety and Health (NIOSH) recommended exposure limits (RELS), time-weighted average concentrations for up to a 10-hour work day.

(b) Short Term Exposure Limit - 15 minute exposure.

(c) Immediately dangerous to life and health.

(d) Lower Explosive Limit.

TABLE 1  
(continued)

Exposure Limits

## **FORMS**

## SITE SAFETY BRIEFING

Job Name: Environmental Investigation Activities Work Plan  
Date: Spring 2006  
Site Location: 19-45 Quaker Avenue, Cornwall, New York

### SAFETY ISSUES (Circle appropriate information)

Tasks: Soil Boring Drilling, Ground-Water Monitoring and Delineation Well Installation, Trench Excavation

Protective Clothing/Equipment: Level D, Level C, Level B, Level A

Chemical Hazards: Benzene, Toluene, Ethylbenzene, Xylene, Tetrachloroethylene (and decay products), Acetone, Chloroform, Fuel Oil, Waste Oil

Physical Hazards: Car Traffic, Construction Equipment, Confined Space, Overhead Wires

Control Methods: Cones, Restricted Access, Traffic Control Personnel

Other: \_\_\_\_\_

Hospital Name/Address: St. Luke's Cornwall Hospital  
19 Laurel Avenue  
Cornwall, New York  
(845) 534-7711

### ATTENDEES

Print Name: \_\_\_\_\_

Sign Name: \_\_\_\_\_

Meeting conducted by: \_\_\_\_\_

## AIR MONITORING

### General Information

Name(s): \_\_\_\_\_ Background Level: \_\_\_\_\_

Date: \_\_\_\_\_ Weather Conditions: \_\_\_\_\_

Time: \_\_\_\_\_

Project: Cornwall Plaza  
19-45 Quaker Avenue  
Cornwall, New York

## Equipment Calibration

## PLAN ACCEPTANCE FORM

### PROJECT HEALTH & SAFETY PLAN

**INSTRUCTIONS:** This form is to be completed by each Leggette, Brashears & Graham, Inc. employee to work on the subject project work site and returned to the Office Safety Coordinator prior to site activities.

Client/Project: Cornwall Shopping, LLC  
Cornwall Plaza, 19-45 Quaker Avenue, Cornwall, New York

Date: \_\_\_\_\_

I represent that I have read and understand the contents of the above Plan and agree to perform my work in accordance with it.

Signed

Signed

Print Name

Print Name

Date

Date

Signed

Signed

Print Name

Print Name

Date

Date

## **EXCLUSION ZONE LOG SHEET**

**LEGGETTE, BRASHEARS & GRAHAM, INC.  
110 CORPORATE PARK DRIVE, SUITE 112  
WHITE PLAINS, NEW YORK 10604**

Client: Cornwall Shopping, LLC

Location: 19-45 Quaker Avenue, Cornwall, New York

**APPENDIX A**

**LBG SAFETY POLICY**  
**AND**  
**GENERAL DRUG AND ALCOHOL POLICY**

## LEGGETTE, BRASHEARS & GRAHAM, INC.

### SAFETY POLICY

Job safety is a common-sense part of everyone's life, but requires constant alertness to possible dangers. When we work on industrial sites, LBG employees are expected to observe the safety rules of our Client hosts.

You are the first line of defense for your own personal safety. In the field, appropriate clothing should be worn at all times. Where appropriate, work shoes with hard toes and/or ankle protection should be worn at all times. **Sneakers/tennis shoes should never be worn in the field, regardless of the circumstances.**

LBG provides hard hats that should be worn around any drilling operations and in any other "hard hat zones". Where required, safety glasses, goggles, protective gloves, respirators, and other safety clothing or equipment should be worn and disposed of as specified by the Project Safety Officer.

Periodically, LBG provides special safety seminars which satisfy the OSHA requirements for work on hazardous waste sites. In-house safety training is conducted on an ongoing basis and as dictated by case-by-case needs. There is a Corporate Safety Officer in the Trumbull, Connecticut headquarters and a designated Safety Officer in each regional office to whom questions and problems relating to job safety should be referred.

Any project that involves or may involve hazardous or toxic waste or any potentially dangerous condition requires the preparation, filing, use and compliance with a Health and Safety Plan (HASP). LBG has a petroleum related work HASP that can be readily adapted to most petroleum jobs and has numerous site-specific HASPs that comply with state and federal CERCLA requirements that can be used for guidance in developing site-specific HASPs.

dmd

June 28, 2006

Revised: March 12, 2007

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**LEGGETTE, BRASHEARS & GRAHAM, INC.**  
**GENERAL DRUG AND ALCOHOL POLICY**

In any company, certain common-sense rules of conduct and performance must be established for the employees to follow in order to avoid any misunderstanding and to protect the right of all concerned. Breaches of acceptable conduct which include, but are not limited to, abusive language, insubordination, intoxication, moral turpitude, or substance abuse/possession can lead to disciplinary action or to dismissal.

While performing any service for LBG or LBG's clients, employees, agents, and subcontractors of LBG shall not: (1) be under the influence of alcohol or any controlled substance; (2) use, possess, distribute, or sell illicit or unprescribed controlled drugs, drug paraphernalia, or alcoholic beverages; or (3) misuse legitimate prescription drugs.

LBG may remove from active project status any of its employees any time there is a reasonable basis for suspicion of alcohol/drug use, possession, or impairment involving such employee, and at any time an incident occurs where drug or alcohol use could have been a contributing factor. In such cases, employee may only be considered for return to work after LBG certifies as a result of a for-cause test, conducted immediately following removal, that said employee is in compliance with this policy.

LBG reserves the right to require drug and alcohol testing for its employees, either for its own purposes or at the direction of Clients. Such testing may take place periodically, or for specific projects. The testing will be in compliance with Department of Transportation drug testing regulations.

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**APPENDIX B**  
**AIR MONITORING EQUIPMENT OPERATION**

**LEGGETTE, BRASHEARS & GRAHAM, INC.**  
**AIR MONITORING EQUIPMENT OPERATION**

**Instrument Calibration**

All applicable instruments will be calibrated daily before use. Readings will be recorded on the Air Monitoring form.

**Background Readings**

Before any field activities commence, the background levels of the site must be read and noted. Daily background readings must be conducted away from areas of potential contamination to obtain accurate results.

**Air Monitoring Frequency**

All site readings must be noted on the Air Monitoring form along with the date, time, background level, weather conditions, wind direction and speed, and the location where the background level was recorded.

**OVM 580B Photoionization Detector Calibration**

- Turn the OVM on by pressing the ON/OFF switch.
- With the OVM running, press the MODE/STORE switch and then press the -/CRSR switch when the OVM reads if "logging is desired".
- Keep pressing the -/CRSR switch until OVM will display "reset to calibrate".
- Enter the calibration mode by pressing the RESET switch. The OVM will then display "restore backup + = Yes".
- Press the -/INC switch and the OVM will display "zero gas reset when ready".
- Connect zero gas to OVM and press RESET switch. The OVM will display "Model 580B zeroing".
- After the OVM calibrates the zero gas, it will display "span gas reset when ready".
- Connect span gas to OVM and press RESET switch.
- When OVM displays "reset to calibrate", the OVM has calibrated the span gas.
- To exit calibration mode, press MODE/STORE switch.

### **MiniRAE 2000 Photoionization Detector Calibration**

- Press [MODE] to turn on. Wait for startup to finish
- To calibrate, from “Ready” or “0.0ppm”, press and hold [N/-] and [MODE] for 3 seconds.
- “Calibration/select gas?” press [Y/+]
- “Fresh Air Cal?” press [Y/+], unit zeros in about 15 seconds, press [N/-]
- “Span Cal?” press [Y/+], unit will tell when to apply Span Gas (typically isobutylene) from Tedlar bag. Calibration takes about 30 seconds. Reading should be very near the Span Gas concentration (eg. 100 ppm). Unit will tell when to turn gas off.
- Press [MODE] twice to return to Survey Mode.

### **Thermo MIE Mod. PDR-1000AN Dust Monitor Calibration**

- Press [ON/OFF] to turn unit on. To zero-calibrate unit, press [ENTER]. Note unit must be in a dust-free environment (eg. a very clean office) to zero-calibrate.
- Unit will display “ZEROING” then “CALIBRATION: OK”.
- To start measurement run press [ENTER].

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**APPENDIX C**

**VOLATILE ORGANIC COMPOUNDS**  
**PROJECT WORK ZONE CONSIDERATIONS**

**LEGGETTE, BRASHEARS & GRAHAM, INC.**  
**VOLATILE ORGANIC COMPOUNDS**  
**PROJECT WORK ZONE CONSIDERATIONS**

**1.0 EXCAVATION**

The following requirements, which apply to all types of excavation operations, except tunnels and shafts, are taken from the U.S. Department of the Interior, Bureau of Reclamation's Construction Safety Standards. They are not intended to be an exhaustive set of requirements, but rather, a summary of current practices that are being enforced at construction activities by Federal and state government agencies and private industry. The requirements were assembled in cooperation with the Associated General Contractors of America, the American National Standards Institute, labor unions, and other interested in improving safety.

**1.1 Preliminary Inspection**

Prior to excavation, the site should be thoroughly inspected to determine conditions that require special safety measures. The location of underground utilities, such as sewer, telephone, gas, water, and electric lines, must be determined and plainly staked. Necessary arrangements must be made with the utility company or owner for the protection, removal, or relocation of the underground utilities. In such circumstances, excavation will be done in a manner that does not endanger the employees engaged in the work or the underground utility. Utilities left in place should be protected by barricading, shoring, suspension, or other measures, as necessary.

**1.2 Protection of the Public**

Necessary barricades, walkways, lighting, and posting should be provided for the protection of the public prior to the start of excavation. Excavation operations on or near state, county, or city streets, accessways, or other locations where there is extensive interface with the public and/or motorized equipment will not start until all of the following actions have been taken:

- The contractor has contacted the authority having jurisdiction and obtained written permission to proceed with protective measures required.

- The contractor, using the authority's instructions and these standards, has developed an extensive and detailed standard operating plan.
- The plan has been discussed with affected employees, and applicable protective measures are in place and functioning.

### **1.3 Access and Lighting**

Safe access will be provided for employees, including installation of walkways, stairs, ladders, etc. When operations are conducted during hours of darkness, adequate lighting will be provided at the excavation, borrow pits, and waste areas.

Where employees are required to enter excavations over 4 feet in depth, stairs, ladders, or ramps must be provided, so as to require no more than 25 feet of lateral travel. When access to excavations exceeds 20 feet vertically, ramps, stairs, or personnel hoists should be provided. Ladders extending from the bottom of the trench to at least 3 feet above the top must be placed within 25 feet of workers in the trench.

### **1.4 Personal Protective Equipment**

PPE will be provided and used in accordance with the specific requirements set forth in the plan. Drillers and helpers must wear approved safety goggles or safety glasses with side shields, hearing protection, hard hats, and safety shoes.

### **1.5 Removal of Trees and Brush**

Prior to excavation, trees, brush, boulders, and other surface obstacles that present a hazard to employees should be removed.

### **1.6 Slide Prevention and Trenching Requirements**

All trench excavations over 5 feet in depth must be shored, shielded, or sloped to the angle of repose from the bottom of the trench, but never less than 3/4 horizontal to 1 vertical (i.e., 37 degrees from vertical), or supported by structures designed by a professional engineer. Excavations should be inspected following rainstorms or other hazardous events. Additional protection against possible slides or cave-ins shall be provided, as necessary.

### **1.7 Angle of Repose**

The determination of the angle of repose and design of supporting systems should be based on a thorough evaluation of all pertinent factors, including depth of cut; possible variation in water content of the material; anticipated changes in the material from exposure to air, sun, water, or freezing; loading imposed by structures, equipment, or overlying or stored material; and vibrations from sources such as traffic, equipment, and blasting. The angle of repose for all excavations, including trenching, should be determined by a professional engineer, but in no event should the slope be less than 3/4 horizontal to 1 vertical (i.e., 37 degrees from vertical) from the bottom of the excavation.

### **1.8 Support Systems**

Materials used for support systems, such as sheeting, piling, cribbing, bracing, shoring, and underpinning, should be in good serviceable condition, and timbers should be sound and free of large or loose knots. The design of support systems should be based on calculations of the forces and their directions, with consideration for surcharges, the angle of internal friction of materials, and other pertinent characteristics of the material to be retained.

When tight sheeting or sheet piling is used; full loading due to the ground-water table should be assumed unless relieved by weep holes, drains, or other means. Cross braces and trench jacks should be placed in true horizontal position and secured to prevent sliding, falling, or kickouts. Additional stingers, ties, and bracing should be provided to allow for any necessary temporary removal of individual supports. Support systems should be planned and designed by a professional engineer competent in the field.

Backfilling and removal of trench support systems should progress together from the bottom of the trench. Jacks or braces should be released slowly. In unstable soil, ropes or other safe means will be used to remove the braces from the surface after workers have left the trench.

Special precaution must be taken in sloping or shoring the sides of excavations adjacent to a previously backfilled excavation or fill area. The use of compacted backfill as backforms on slopes that are steeper than the angle of repose of the compacted material in its natural state is prohibited.

### **1.9    Structural Foundations and Footings**

Except in hard rock, excavations below the level of the base of any foundation, footing, or retaining wall will not be permitted unless the wall is underpinned and all necessary precautions are taken to ensure the stability of adjacent walls. If the excavation endangers the stability of adjacent buildings or structures, shoring, bracing, or underpinning designed by a qualified person will be installed. Such supporting systems must be inspected at least daily by qualified persons to ensure that protection is adequate and effectively maintained.

Small diameter footings that workers are required to enter, including bell-bottomed footings over 4 feet deep, must be provided with a steel casing or support system of sufficient strength to support the earth walls and prevent cave-ins. The casing or support system shall be provided for the full depth, except for the bell portion of bell footings.

Fixed or portable ladders must be provided for access. A lifeline, securely attached to a shoulder harness, should be worn by every employee entering the footing. The lifeline should be manned from above and should be separate from any line used to raise or lower materials.

### **1.10    Vertical Cuts and Slopes**

Before a slope or vertical cut is undercut, the residual material must be adequately supported and the undercutting method and support system must be inspected.

When exposed to falling, rolling, or sliding rocks, earth, or other materials, employees working below or on slopes or cuts should be protected in the following manner:

- By effective scaling performed prior to exposure and at intervals necessary to eliminate the danger.
- By the installation of rock bolting, wire mesh, or equivalent support if the material continues to ravel and fall after scaling.
- By the installation of protective timber or wire mesh barricades at the slope of the cut and at necessary intervals down the slope. Wherever practical, benching sufficient to retain falling material may be used in lieu of barricades.
- By ensuring that personnel do not work above one another where there is danger of falling rock or earth. Personnel performing work on vertical cuts or slopes where balance depends on a supporting system must wear appropriate safety equipment.

### **1.11 Ground Water**

Ground water should be controlled. Freezing, pumping, draining, and other major control measures should be planned. Full consideration should be given to the existing moisture balance in surrounding soil and the effects on foundations and structures if it is disturbed. When continuous operation of ground-water control equipment is necessary, an emergency power source should be provided.

### **1.12 Surface Water**

The accumulation of surface water in excavations must not be permitted and should be controlled by diversion ditches, dikes, dewatering sumps, or other effective means.

### **1.13 Excavated Materials**

Excavated materials should be laced and retained at least 2 feet from the depth of the excavation, or at a greater distance when required to prevent hazardous loading on the face of the excavation.

### **1.14 Protective Devices**

Guardrails, fences, barricades, and warning lights or other illumination systems will be maintained from sunset to sunrise on excavations adjacent to walkways, driveways, and other pedestrian or vehicle thoroughfares. Walkways or bridges that are protected by standard guardrails should be provided where employees are required or permitted to cross over excavations.

Wells, calyx holes, pits, shafts, and all similar hazardous excavations must be effectively barricaded or covered and posted. All temporary excavations of this type should be backfilled as soon as possible. When mobile equipment is permitted adjacent to excavations with steep slopes or cuts, substantial stoplogs or barricades should be installed.

### **1.15 Equipment Operation**

Equipment that is operated on loading or waste areas must be equipped with an automatic backup alarm. Additionally, when employees are on foot or otherwise endangered by equipment in

dumping or waste areas, a competent signalman should be used to direct traffic. The signalman must have no other assignment that interferes with signaling duties. If the equipment or truck cab is not shielded, the operator should stand clear of the vehicle during loading. Excavating or hoisting equipment should not be allowed to raise, lower, or swing loads over workers unless effective overhead protection is provided.

### **1.16 Drilling Operations**

When drilling in rock or other dust-producing material, the dust should be controlled within the OSHA Permissible Exposure Limits (PELs). Except in shaft and tunnel excavation, dust control devices are not required on jackhammers as long as the operators wear approved dust respirators.

## **2.0 DRILLING SAFETY**

### **2.1 Basic Requirements**

Employees will not proceed with work on, or in the proximity of, hazardous equipment until they have been properly trained and have received a safety briefing. If drilling is at a hazardous substance site, the site-specific safety plan must be reviewed onsite and discussed in the safety briefing.

Potential hazards (e.g., overhead or underground power, oil, or gas lines in the immediate vicinity of the drilling location) must be removed, avoided by relocating the drill site, or adequately barricaded to eliminate the hazard.

The use of unsafe or defective equipment is not permitted. Equipment must be inspected regularly and, if found to be defective, must be immediately removed from use and either repaired or replaced.

Employees will be familiar with the location of first-aid kits and fire extinguishers. Telephone numbers for emergency assistance must be prominently posted and kept current.

## **2.2 General Requirements at Drilling Operations**

### **2.2.1 Housekeeping**

Good housekeeping conditions should be observed in and around the work area. Suitable storage places should be provided for all materials and supplies. Pipe, drill rods, etc., must be securely stacked on solid, level sills.

Work surfaces, platforms, stairways, walkways, scaffolding, and accessways will be kept free of obstructions. All debris will be collected and stored in piles or containers for removal and disposal.

### **2.2.2 Salamander Heaters**

Salamanders will be used only with approved fuels (e.g., do not use gasoline). Salamander heaters must not be refueled or moved until they have been extinguished and permitted to cool. Heaters will be equipped with exhaust stacks and will not be set on or placed near combustible material. They should be equipped with metal stands that will provide adequate stability and permit at least a 2-inch clearance under the unit.

Burning salamanders must be attended at all times, with suitable fire extinguishers available to each attendant. If tarpaulins or other flexible materials are used to form a heating enclosure, they must be fire resistant and installed to prevent contact with the heater. Worn salamanders that have developed holes or have been otherwise damaged will be replaced and removed from service.

### **2.2.3 Lighting**

In addition to providing required or recommended illumination intensities of at least 5 foot-candles, consideration should be given to the selection and placement of lighting equipment. Proper lighting should provide minimum glare, eliminate harsh shadows, and provide adequate illumination to perform work efficiently and safely.

Light bulbs should be of the heavy duty, outdoor, nonshattering type.

All lighting circuits, including drop cords, should be grounded and have ground fault interrupters. Lighting circuits will be inspected periodically, and defective wiring or fixtures will be removed from service.

#### **2.2.4 Flammable Liquids**

All highly flammable liquids should be stored and handled only in approved containers. Portable containers must be the approved red safety containers equipped with flame arresters and self-closing lids.

Approved hand pumps will be used to dispense gasoline from barrels. Gasoline must not be used for degreasing or to start fires. Also, gasoline containers should be clearly labeled, and storage areas should be posted with "No Smoking" signs. Fire extinguishers should be installed in all areas that contain flammable liquids.

#### **2.2.5 Public Safety**

Work areas will be regulated so that the public will be protected from injury or accident. Adequate danger signs, barriers, etc., will be placed to effectively warn the public of hazards as well as to restrict access to dangerous areas.

### **2.3 Off-Road Movement of Drill Rigs**

The following rules apply to the off-road movement of drill rigs:

- Before moving a drill rig, an inspection should be made of the route of travel for depressions, slumps, gullies, ruts, and similar obstacles.
- The brakes of a drill rig carrier should always be checked before traveling, particularly on rough, uneven, or hilly ground.
- All passengers should be discharged before a drill rig is moved on rough or hilly terrain.
- The front axle of 4 x 4 or 6 x 6 vehicles or carriers should be engaged when traveling off-road on hilly terrain.
- Caution should be used when traveling on a hillside. The hillside capability of drill rigs should be evaluated conservatively, because the addition of drilling tools may raise the center of mass. When possible, travel should be made directly uphill or downhill.
- Obstacles such as small logs, small erosion channels, or ditches should be crossed squarely, not at an angle.

- When lateral or overhead clearance is close, someone on the ground should act as a guide.
- After the drill rig has been moved to a new drilling site, all brakes or locks should be set. Wheels should be blocked on steep grades.
- The mast (derrick) of the drill rig should not be in the raised or partially raised position during off-road travel.
- Loads on the drill rig and supporting trucks should be tied down during transport.

## **2.4 Drilling Equipment**

### **2.4.1 Skid-Mounted Units**

Labels clearly indicating the function and direction of control levers should be posted on the lower unit controls of all drills.

An emergency safety power shutoff device should be installed within reach of the operator on all units. The device should be clearly labeled or otherwise made readily identifiable and checked daily to ensure that it is operable. The power unit should be operated only by authorized and qualified personnel.

Equipment will be shut down during manual lubrication and while repairs or adjustments are being made. Equipment such as internal combustion engines will not be refueled while running. Where practical, the gasoline tank should be positioned or shielded to avoid accidental spillage of fuel on the engine or exhaust manifold during refueling operations. Hazardous gears and moving parts also should be shielded to prevent accidental contact.

A dry chemical or carbon dioxide fire extinguisher, rated 5 pounds or larger, should be carried on the unit and removed to a position within 25 feet of the work site during drilling operations. Extinguishers will be inspected and tagged at least once every 3 months.

Engine exhaust systems should be equipped with spark arresters when operated in areas where sparks constitute a fire hazard.

### **2.4.2 Overhead and Underground Utilities**

Special precaution must be taken when using a drill rig on a site within the vicinity of electrical power lines and other utilities. Electricity can shock, burn, and cause death.

Overhead and underground utilities should be located, noted, and emphasized on all boring location plans and assignment sheets. When overhead electrical power lines exist at or near a drilling site, all wires should be considered dangerous.

A check should be made for sagging power lines before a site is entered. Power lines should not be lifted to gain entrance. The appropriate utility company should be contacted and a request should be made that it lift or raise and cut off power to the lines.

The area around the drill rig should be inspected before the drill rig mast (derrick) is raised at a site in the vicinity of power lines. The minimum distance from any point on the drill rig to the nearest power line should be determined when the mast is raised or is being raised. The mast should not be raised and the drill rig should not be operated if this distance is less than 20 feet, because hoist lines and overhead power lines can be moved toward each other by the wind.

The existence of underground utilities, such as electric power, gas, petroleum, telephone, sewer, and water lines, should always be suspected. These underground electric lines are as dangerous as overhead lines, so a utility locating service should always be contacted.

There are generally two types of utility locating services. One is a "free" service that is paid for by companies with underground pipes, lines, etc., to protect the public and to prevent costly repairs. However, these services have access only to drawings for primary pipes or lines, typically on public property or right-of-way easements, but not to drawings showing supply or feeder lines from a primary system to the interior of a property. Therefore, they are not required, and in fact hesitate, to locate interior lines. Sites can be cleared for drilling by such services, but without the drill operator's knowledge of the locations of underground feeder or supply lines.

A second type of locating service is provided by a paid subcontractor who physically sweeps or clears interior locations using locating equipment. Locating costs can be minimized by obtaining all available maps, drawings, and employee interview information before contracting with the locating company. This is especially important at large industrial plants or military bases, which can have an intricate network of underground utilities. It is important that every location be cleared, even those for hand-auger borings.

If a sign warning of underground utilities is located on a site boundary, it should not be assumed that underground utilities are located on or near the boundary or property line under the

sign; they may be a considerable distance from the sign. The utility company should be contacted to check it out.

The owners of utility lines or the nearest underground utility location service should always be contacted before drilling is started. However, remember that some services provide information on utilities going to, but not within, a site. Metal detectors or other locating equipment may be necessary to determine the presence of shallow (surface) utilities onsite. The utility personnel should mark or flag the location of the underground lines and determine what specific precautions must be taken to ensure safety.

#### **2.4.3 Site Selection and Working Platforms**

In preparing a work site located on adverse topography, precautions must be taken against cave-ins, slides, and loose boulders. The drill platform should be stabilized by outriggers or adequate timbering.

Prior to drilling, adequate site clearing and leveling should be performed to accommodate the drill rig and supplies and to provide a safe working area. Drilling should not commence when tree limbs, unstable ground, or site obstructions result in unsafe tool-handling conditions.

Suitable storage locations should be provided that allow for the convenient handling of tools, materials, and supplies without danger that they could fall and injure anyone. Storing or transporting tools, materials, or supplies within or on the drilling mast (derrick) should be avoided. Pipes, drill rods, bits, casings, augers, and similar drilling tools should be securely stacked in an orderly manner on racks or sills.

Penetration hammers or other types of driving hammers should be placed at a safe location on the ground or secured when unattended on a platform. Work areas, platforms, walkways, scaffolding, and other accessways should be kept free of obstructions and substances such as ice, grease, or oil that could create a hazardous surface. All controls, control linkages, and warning and operation lights and lenses also should be kept free of ice, grease, or oil.

In the vicinity of power transmission or distribution lines, drills should be adequately grounded and set with at least a 15-foot clearance between any part of the drill or mast and the power lines.

Toilet facilities will be convenient to drill crews, or transportation will be readily available to nearby toilet facilities. Toilets will be either the chemical type or constructed over ground pits, which will be backfilled when abandoned. They should be fly tight and maintained in a sanitary condition.

Mud pits and drainage excavations should be safely sloped and located to provide minimum interference with work. Where necessary, suitable barricades, catwalks, etc., should be provided to reduce the possibility of personal injury. Ladders will be positioned in pits or excavations that are 5 or more feet deep. Such excavations should be periodically inspected to ensure safe operation and adequate maintenance.

Truck-mounted drills will be equipped with a "safetyline" or with clearly marked and conspicuously located emergency switches. The safetyline emergency stop consists of a taut wire that runs around the back of the machine and connects to a special switch that turns off the power unit when the line is contacted. When emergency switches are used in lieu of a safetyline, there should be a minimum of two switches--one located within easy reach of the operator, and one located within easy reach of workers at ground level near the drill or auger head.

Trucks should not be moved backward unless the driver has personally inspected the area behind the truck. In restricted or congested areas, or areas where workmen are located, the assistance of a "spotter" is mandatory. Also, trucks will be equipped with serviceable automatic backup alarms.

Before the mast is raised, personnel will be cleared from the immediate area--with the exception of the operator and a helper, when necessary. A check should be made to ensure safe clearance from energized power lines or equipment. Unsecured equipment must be removed from the mast, and cables, mud lines, and catline ropes must be adequately secured to the mast before raising. After it is raised, the mast must be secured to the rig in an upright position with steel pins.

Drill equipment will not be moved until a thorough inspection has been made to ensure that the mast, drill rods, tools, and other equipment are secured. A check will also be made of the steering mechanism, brakes, lights, load limits, and proper flagging and lighting of load extensions. Applicable traffic laws will be observed when moving drill equipment over public roads.

## 2.5 Surface Drilling Operations

Before the mast of a drill rig is raised and drilling is commenced, the drill rig must first be leveled and stabilized with leveling jacks and/or solid cribbing. The drill rig should be leveled if it settles after the initial setup. The mast should only be lowered when the leveling jacks are down, and the leveling jack pads should not be raised until the mast is completely lowered. Before drilling operations start, the mast should be secured or locked, if required by the drill's manufacturer.

Before the power unit is started, all gears should be disengaged, the cable drum brake should be set, and no rope should be in contact with the cathead.

Before the mast is raised, a check should be made for overhead obstructions. Everyone (with the exception of the operator) should be cleared from the areas immediately to the rear and sides of the mast and informed that the mast is being raised. The drill rig should not be driven from hole to hole with the mast in the raised position.

The drill rig should only be operated from the position of the controls. The operator should shut down the drill engine before leaving the vicinity of the drill. "Horsing around" in the vicinity of the drill rig and tool and supply storage areas is strictly prohibited, even when the drill rig is shut down. Caution should be taken when mounting/dismounting the platform.

Drill operations should be terminated during an electrical storm.

The consumption of alcoholic beverages, depressants, stimulants, or any other chemical substance while on the job is strictly prohibited. All unattended boreholes must be adequately covered or protected to prevent people or animals from stepping or falling into the hole. When the drilling project has been completed, all open boreholes should be adequately covered, protected, or backfilled, according to local or state regulations.

A safety chain and cable arrangement should be used to prevent water swivel and mud line whip. All water swivels and hoisting plugs should be checked for possible frozen bearings and should be properly lubricated before use. A frozen bearing could cause mud line whip, which could injure the operator.

Only drill operators should brake or set the chucks to prevent engagement of the transmission prior to removal of the chuck wrench. Also, the chuck jaws should be periodically checked and replaced as necessary.

A string of drill rods should not be braked by the chuck jaws during lowering into the hole. A catline or hoisting cable and plug should be used for braking prior to tightening of the chuck. Failure

to follow this procedure could result in steel slivers on the rods, possible hand injuries, and loss of the rods into the hole. Following braking, drill rods should be allowed to drain completely before removal from the working area.

Drill rods will not be lowered into the hole with a pipe wrench. Serious back and hand injuries may result if the rods are lowered by this method.

When using drilling fluids, a rubber or other suitable wiper should be used to remove the material from the drill rods when removing them from the drill hole. When drilling with air, the exhaust and cuttings should be directed away from workers with devices such as diverter heads, the use of which should be stipulated on drilling agreements where appropriate.

Care must be exercised by the operator to avoid a sudden hoist release of the drill rod while the rod is being carried from the hole. The hoisting capacity and weight of the drill rod must be known to prevent collapse of the mast during drill string removal from the hole. The operating capacity of the mast and hoist also must be known and must not be exceeded.

When tool joints are broken on the ground or on a drilling platform, fingers should be positioned so they will not be caught between the wrench handle and the ground or the platform if the wrench slips or the joint suddenly lets go. Pipe wrench jaws should be checked periodically and replaced as they become worn.

## 2.6 Use of Augers

The use of mismatched auger sections should be avoided. Different brands and different weights should not be used in the same auger flight.

Because some pins lose their temper after very little use, causing the spring or clip section to fail, only tight-fitting pins designed for the auger should be used.

A daily inspection--to include a thorough check of the hydraulic hoses, connections, and valves--will be made before equipment is used. Deficiencies should be corrected or safe condition verified before the equipment is started.

A durable sign containing the following wording should be installed on all equipment in full view of the operator:

- All personnel must be clear before starting this machine
- Stop the auger to clean it

- Stop engine when repairing, lubricating, or refueling
- Do not wear loose-fitting clothing or gauntlet-type gloves.

The following general procedures should be used when advancing a boring with continuous flight or hollow-stem augers:

- An auger boring should be started with the drill rig level, the clutch or hydraulic rotation control disengaged, the transmission in low gear, and the engine running at low revolutions per minute (rpm).
- A system of responsibility should be established for the series of activities required for auger drilling, such as connecting or disconnecting auger sections and inserting or removing the auger fork. The operator must be sure that the tool handler is well away from the auger column and that the auger fork has been removed before rotation is started.
- Only the manufacturer's recommended method of securing the auger to the power coupling should be used. The coupling or the auger should not be touched with the hands, a wrench, or any other tool during rotation.
- Tool hoists should be used to handle auger sections whenever possible. Hands or fingers should never be placed under the bottom of an auger section when the auger is being hoisted over the top of the auger section in the ground or other hard surface, such as the drill rig platform. Feet should never be allowed to get under the auger section that is being hoisted.
- Workers should stay clear of the auger and other rotating components of the drill rig. Workers should never reach behind or around a rotating auger for any reason.
- Hands or feet should never be used to remove cuttings from the auger.
- Augers should be cleaned only when the drill rig is in neutral and the augers have stopped rotating. A special paddle should be designed for cleaning auger flights; if available, pressurized water is recommended for jet cleaning.

### **3.0 REMEDIATION SYSTEM EQUIPMENT**

LBG operates remediation system equipment at various sites. Remediation equipment includes but is not limited to pump and treat, soil vapor extraction, two-phase vapor extraction, liquid and vapor phase granular activated carbon, thermal destruction and air stripping tower systems. This brief list of safety requirements cover hazards specific to this type of operation. The list assumes that safety requirements for standard operations inherent in SVE operations are already being followed, such as 29 CFR 1910.120 "Hazwoper" planning, training, and other requirements; or drilling, trenching, and shoring safety practices.

The components of a typical remediation system equipment can include an electric or gasoline powered motor, a carbon absorption bed, and various filters, piping, and controls.

#### **3.1 Basic Requirements**

##### **3.1.1 General**

Employees will not proceed with work on, or in the proximity of, the remediation equipment until they have been properly trained and have attended a safety briefing covering the hazards involved. This may in the form of a "tailgate" safety briefing or a more extensive session, depending upon the extent of the hazards, the employees' safety knowledge, and site-specific exposures.

The use of unsafe or defective equipment is not permitted. Equipment must be inspected regularly and, if found to be defective, immediately removed from use and repaired or replaced.

Employees should be familiar with the location of first-aid kits and fire extinguishers. Telephone numbers or radio frequencies for emergency assistance must also be prominently posted and kept current.

##### **3.1.2 Housekeeping**

Good housekeeping practices should be observed in and around the work area. Suitable storage should be provided for all materials and supplies.

Any work surfaces, platforms, stairways, walkways, scaffolding, or accessways should be kept free of obstructions. Any debris should be collected and stored in piles or containers for removal and proper disposal.

### **3.1.3 Flammable Liquids**

All highly flammable liquids should be stored and handled only in approved containers. Portable containers must be of the approved, red safety container type, equipped with flame arresters and self-closing lids.

Approved hand pumps should be used to dispense gasoline from drums. Gasoline must not be used for degreasing or starting fires. Also, gasoline containers should be clearly labeled, and any storage areas should be posted with "No Smoking" signs. Fire extinguishers should be installed in all areas that contain flammable liquids.

### **3.1.4 Public Safety**

Work areas should be regulated so that the public will be protected from injury or accident. Adequate danger signs, barriers, etc., should be placed to effectively warn the public of hazards as well as to restrict access to dangerous areas.

### **3.1.5 Drilling Safety**

Construction of soil-vapor extraction systems requires installation of soil-vapor extraction wells and separate air inlet wells. Safety requirements for drilling operations should be followed.

## **3.2 Specific Requirements**

### **3.2.1 Chemical Hazards**

Some of the primary chemical hazards at remediation operations are site contaminants related to volatile organic compounds. Typically, contaminants are drawn from extraction wells and treated with carbon absorption units and/or are incinerated. Additional chemical hazards associated with these treatment technologies include fuel for the incinerator and activated carbon saturated with site contaminants. Manufacturers' Material Safety Data Sheets should be available on site for all neat chemical compounds used.

Personnel can be exposed to site contaminants during sampling and equipment maintenance. Because soil-vapor extraction systems are typically closed systems terminating in contaminant oxidization or absorption apparatus, chances of exposure incidents during normal operations are minimal. If chemical exposure occurs, however, it is most likely during sampling or equipment

maintenance. Sampling typically includes sampling of site soils or ground water to measure the long-term effectiveness of remediation activities, or sampling process water or vapors to determine the efficiency of treatment technologies in capturing or destroying the contaminants.

A potential for exposure exists during maintenance procedures because of cleaning sediment from knockout pots and from general piping system repairs.

In order to minimize the potential hazards associated with chemical exposure, all site workers should have a knowledge of particular site hazards and contaminants. Based upon site conditions, proper personal protective equipment should be worn such as hard hats, chemical protective clothing, and safety shoes.

### **3.2.2 Physical Hazards**

Physical hazards can be managed by general housekeeping in work areas and routine equipment maintenance. Scaffolding may be erected around water stripping towers and incinerators and should be inspected periodically, as part of a routine maintenance procedure.

### **3.2.3 Pressure**

Remediation systems typically recover soil vapors or ground water from beneath the ground surface. Remedial equipment should be shut off when maintenance activities or repairs occur.

### **3.2.4 Electric Hazards**

Because several types of equipment in remediation systems are commonly powered by electricity, electrical hazards exist at these remedial sites. Liquid ring vacuum pumps, knockout pumps, air stripper holding tanks and pumps, and other elements of the treatment units are frequently powered by electricity. General housekeeping and equipment maintenance are necessary to prevent electrical safety hazards. Worn switches and wiring should be quickly repaired, use of water should be controlled, and unnecessary spills prevented. Ground fault interrupters (GFI) should be used on all circuits carrying power from a nearby indoor source to outdoor equipment or from an outdoor portable generator to equipment. Equipment should also be properly grounded as a protection against shocks, static electricity, and lightning if an electrical storm occurs.

### **3.2.5 Lighting**

In addition to providing required or recommended illumination intensities of at least 5 foot-candles for nighttime operation, consideration should be given to the selection and placement of lighting equipment. Proper lighting should provide minimum glare, eliminate harsh shadows, and provide adequate illumination to perform work efficiently and safely. Light bulbs should be of the heavy duty, outdoor, nonshattering type.

All lighting circuits, including extension cords, should be grounded and have GFI protection. Circuits and extension cords should be inspected periodically.

### **3.2.6 Incinerator/Treatment System**

Thermal hazards exist with incinerators, and boundaries should be set up to prevent contact with heated surfaces. Additionally, proper thermal protection should be available for personnel working at the incinerator. Vapor extractor pumps should be set to shut off automatically if the incinerator shuts off, to prevent accumulation of high concentrations of volatile compounds that could result in an explosion hazard.

### **3.2.7 Carbon Bed Temperature**

A hazard related to carbon absorption units is the heat of reaction, which is high for some materials, such as ketones, treated in high concentrations. SVE equipment should be designed to take this into account when carbon absorption is employed and the bed temperature must be monitored.

Typically, but not limited to, two carbon units will be piped in series to treat the recovered vapors. Carbon units will be changed out according to the air permit guidelines.

When carbon units are changed out, the primary unit will be taken off line, the secondary unit will become the primary unit, and a fresh carbon vessel will become the secondary unit.

All field activities will be initiated in Level D. If the action levels specified in Table 5-1 are reached, an upgrade will be made to Level C.

### **3.2.8 Vapor Emission Response Plan**

If the air concentration of (chlorinated) organic vapors exceeds 5 ppm above background in the exhaust of the treatment system, the system exhaust will be continuously monitored and necessary actions will be taken to reduce system emissions to 5 ppm--for example, by bleeding air into the system, changing carbon canisters, etc. If the organic vapor levels measured in the treatment system exhaust are between 5 ppm and 50 ppm above background, continue site activities and perform continuous monitoring. If the organic vapor level exceeds 50 ppm above background in the treatment system exhaust, shut down work activities until the system is repaired.

Prior to beginning construction activities, notify fire departments and police as well as the local emergency facility of planned site activities. These organizations should be briefed on the nature of planned site work and given a schedule of the proposed tasks. Changes or modifications to the planned work or schedule which could affect the need for emergency services shall be communicated to these organizations. LBG shall communicate to the local hospital and fire department what types of materials may be encountered at the site.

Should the level of total (chlorinated) hydrocarbons exceed 100 ppm for any single reading, or should the explosimeter indicate in excess of 10 percent of the lower explosive limit on any single reading, work in that area will be shut down and personnel will be evacuated upwind. Work will not resume there until authorized by the Site Safety Officer.

### **3.2.9 System Start-Up and Initial Operating Period**

The VE system is designed to operate unattended 24 hours per day, 7 days per week. Once the electrical connections are complete, LBG will begin system start-up.

LBG will monitor the system on a weekly basis during the month of operation. LBG field personnel will use a photoionization detector (PID) to monitor the VE system emissions before GAC treatment. LBG will monitor between GAC units and at the point of vapor emissions to determine GAC breakthrough and compare those concentrations to air emissions standards. These measurements will be used to estimate the amount of VOCs removed from the soil and the rate at which the GAC is being used to treat vapor phase emissions. As part of the daily monitoring, LBG will follow the Vapor Emission Response Plan.

### **3.2.10 Continued Operations and Maintenance**

After the first month of operation, LBG will monitor the system biweekly for the second and third month. From the beginning of the fourth month to the remainder of the treatment period, LBG will monitor the system once a month. The following data will be recorded on each visit:

- operating time;
- applied vacuum at blower inlet;
- induced vacuum at air inlet wells;
- vapor temperature at blower inlet;
- vapor temperature at blower outlet;
- pressure at blower outlet;
- concentrations of VOCs at blower outlet; and,
- concentrations of VOCs in treated emissions.

LBG field personnel will analyze and record the vapor-phase VOC concentrations before and after GAC treatment.

dmd

June 28, 2006

Revised: March 12, 2007

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**APPENDIX D**  
**DECONTAMINATION PROCEDURES**

## DECONTAMINATION PROCEDURES

### **Procedure for Level C Decontamination**

Level C decontamination, if required, will take place on plastic sheeting so all contaminated material can be contained for proper disposal.

#### **Station 1: Segregated Equipment Drop**

Deposit equipment used onsite (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Segregation at the drop reduces the probability of cross-contamination.

Equipment: various size containers  
plastic liners  
plastic drop cloths

#### **Station 2: Suit/Safety Boot Wash**

Thoroughly wash splash suit and safety boots. Scrub with long-handle, soft-bristle scrub brush and copious amounts of decon solution or detergent/water. Repeat as many times as necessary.

Equipment: container (30-50 gallons)  
decon solution  
or  
detergent/water  
2-3 long-handle, soft-bristle scrub brushes

#### **Station 3: Suit/Safety Boot Rinse**

Rinse off decon solution or detergent/water using copious amounts of water. Repeat as many times as necessary.

Equipment: container (30-50 gallons)  
or  
high-pressure spray unit  
water  
2-3 long-handle, soft-bristle scrub brushes

#### **Station 4: Canister or Mask Change**

If worker leaves Exclusion Zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canisters will be exchanged, depositing the old canisters in containers with plastic liners. The worker will enter the work area and return to duty.

Equipment: canister (or mask)

boot covers

gloves

### **Station 5:**

#### **Step 1 - Tape, Safety Boot and Outer Glove Removal**

Remove safety boots and gloves and deposit in container with plastic liner.

Equipment: container (30-50 gallons)

plastic liners

bench or stool

boot jack

#### **Step 2 - Splash Suit Removal**

With assistance of helper, remove splash suit. Deposit in container with plastic liner.

Equipment: container (30-50 gallons)

bench or stool

liner

#### **Step 3 - Facepiece Removal**

Remove facepiece. Avoid touching face with gloves. Deposit facepiece in container with plastic liner.

Equipment: container (30-50 gallons)

plastic liners

Masks will be collected at a central location. Decontamination will be performed as follows:

- remove all cartridges, canisters and filters, plus gaskets or seals not affixed to their seats;

- remove elastic headbands;
- remove exhalation cover;
- remove speaking diaphragm or speaking diaphragm-exhalation valve assembly;
- remove inhalation valves;
- wash facepiece and breathing tube in cleaner mixed with warm water, preferably at 120°F to 140°F; wash components separately from the face mask; remove heavy soil from surfaces with a hand brush;
- remove all parts from the wash water and rinse twice in clean warm water;
- air dry parts in a designated clean area; and,
- wipe facepiece, valves and seats with a damp lint-free cloth to remove any remaining soap or other foreign materials.

#### **Station 6: Inner Glove Removal**

Remove inner gloves and deposit in container with plastic liner.

Equipment:    container (20-30 gallons)  
                  plastic liners

#### **Station 7: Inner Clothing Removal (optional)**

Remove clothing soaked with perspiration. Place in container with plastic liner. Do not wear inner clothing offsite if there is a possibility small amounts of contaminants might have been transferred in removing splash suit.

Equipment:    container (30-50 gallons)  
                  plastic liners

#### **Station 8: Field Wash (optional)**

Shower if highly toxic, skin-corrosive or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.

Equipment:    water  
                  soap  
                  tables

wash basins/buckets  
field showers

#### **Station 9: Redress**

Put on clean clothes. A dressing trailer is needed in inclement weather.

#### **Procedure for Level B Decontamination**

Level B decontamination, if required, will take place on plastic sheeting so all contaminated material can be contained for proper disposal.

#### **Station 1: Segregated Equipment Drop**

Deposit equipment used onsite (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Each will be contaminated to a different degree. Segregation at the drop reduces the probability of cross-contamination.

Equipment: various size containers  
plastic liners  
plastic drop cloths

#### **Station 2: Suit/Safety Boot Wash**

Thoroughly wash chemical-resistant splash suit, SCBA, gloves, and safety boots. Scrub with long-handle, soft-bristle scrub brush and copious amounts of decon solution or detergent/water. Wrap SCBA regulator (if belt-mounted type) with plastic to keep out water. Wash backpack assembly with sponges or cloths.

Equipment: container (30-50 gallons)  
decon solution  
or  
detergent/water  
2-3 long-handle, soft-bristle scrub brushes  
sponges or cloths

### **Station 3: Suit/SCBA/Boot/Glove Rinse**

Rinse off decon solution or detergent/water using copious amounts of water. Repeat as many times as necessary.

Equipment: container (30-50 gallons)

or

high-pressure spray unit

water

small buckets

2-3 long-handle, soft-bristle scrub brushes

sponges or cloths

### **Station 4: Tank Change**

If worker leaves Exclusion zone to change air tank, this is the last step in the decontamination procedure. Worker's air tank is exchanged and worker returns to duty.

Equipment: air tanks

tape

boot covers

gloves

### **Station 5: Tape, Safety Boot and Outer Glove Removal**

Remove safety boots and gloves and deposit in container with plastic liner.

Equipment: container (30-50 gallons)

plastic liners

bench or stool

boot jack

### **Station 6: SCBA Backpack Removal**

While still wearing facepiece, remove backpack and place on table. Disconnect hose from regulator valve and proceed to next station.

Equipment: table

#### **Station 7: Splash Suit Removal**

With assistance of helper, remove splash suit. Deposit in container with plastic liner.

Equipment: container (30-to gallons)  
plastic liners  
bench or stool

#### **Station 8: Facepiece Removal**

Remove facepiece. Avoid touching face with gloves. Deposit in container with plastic liner.

Equipment: container (30-50 gallons)  
plastic liners

Masks will be collected at a central location. Decontamination will be performed as follows:

- remove all cartridges, canisters and filters, plus gaskets or seals not affixed to their seats;
- remove elastic headbands;
- remove exhalation cover;
- remove speaking diaphragm or speaking diaphragm-exhalation valve assembly;
- remove inhalation valves;
- wash facepiece and breathing tube in cleaner mixed with warm water, preferably 120°F to 140°F; wash components separately from the face mask; remove heavy soil from surfaces with a hand brush;
- remove all parts from the wash water and rinse twice in clean warm water;
- air dry parts in a designated clean area; and,
- wipe facepiece, valves and seats with a damp lint-free cloth to remove any remaining soap or other foreign materials.

#### **Station 9: Inner Glove Removal**

Remove inner gloves and deposit in container with plastic liner.

Equipment: container (20-30 gallons)  
plastic liners

**Station 10: Inner Clothing Removal (optional)**

Remove clothing soaked with perspiration. Place in container with plastic liner. Do not wear inner clothing offsite since there is a possibility small amounts of contaminants might have been transferred in removing fully encapsulating suit.

Equipment: container (30-50 gallons)  
plastic liners

**Station 11: Field Wash (optional)**

Shower if highly toxic, skin-corrosive, or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.

Equipment: water  
soap  
small tables  
basins or buckets  
field showers

**Station 12: Redress**

Put on clean clothes. A dressing trailer is needed in inclement weather.

Equipment: tables  
chairs  
lockers  
clothes

**Procedures for Level A Decontamination**

(to be formulated on a case-by-case basis)

dmd

June 28, 2006

Revised: March 12, 2007

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**APPENDIX E**  
**CONTACT SHEET AND MAP TO HOSPITAL**

## CONTACT SHEET

Client: Cornwall Shopping, LLC  
Project: Cornwall Plaza  
Location: 19-45 Quaker Avenue  
              Cornwall, New York  
Client Contact: Scott Furman, (Tannenbaum Helpern Syracuse & Hirschtritt LLP)

Leggette, Brashears & Graham, Inc.

(914) 694-5711 (914) 694-5744 (fax)

Field Supervisor (HSO): Mike DeFelice/Dave Morelli

Project Manager: Paul Woodell

Principal-in-Charge: Dan C. Buzea

Local Police Headquarters: Cornwall-on-Hudson Police Dept.  
325 Hudson Street  
Cornwall-On-Hudson, NY 12520  
(845) 534-8100

Local Hospital: St. Luke's Cornwall Hospital  
19 Laurel Avenue  
Cornwall, NY  
(845)534-7711

State Police: New York State Police, Troop F,  
55 Crystal Run Road, Middletown, New York,  
(845) 344-5300

Miscellaneous: New York State Department of Environmental Conservation  
(NYSDEC) Region 3, 21 South Putt Corners, New Paltz, New  
York 12561, (845) 256-3000

## **Directions to the Hospital**

St. Luke's Cornwall Hospital

19 Laurel Avenue

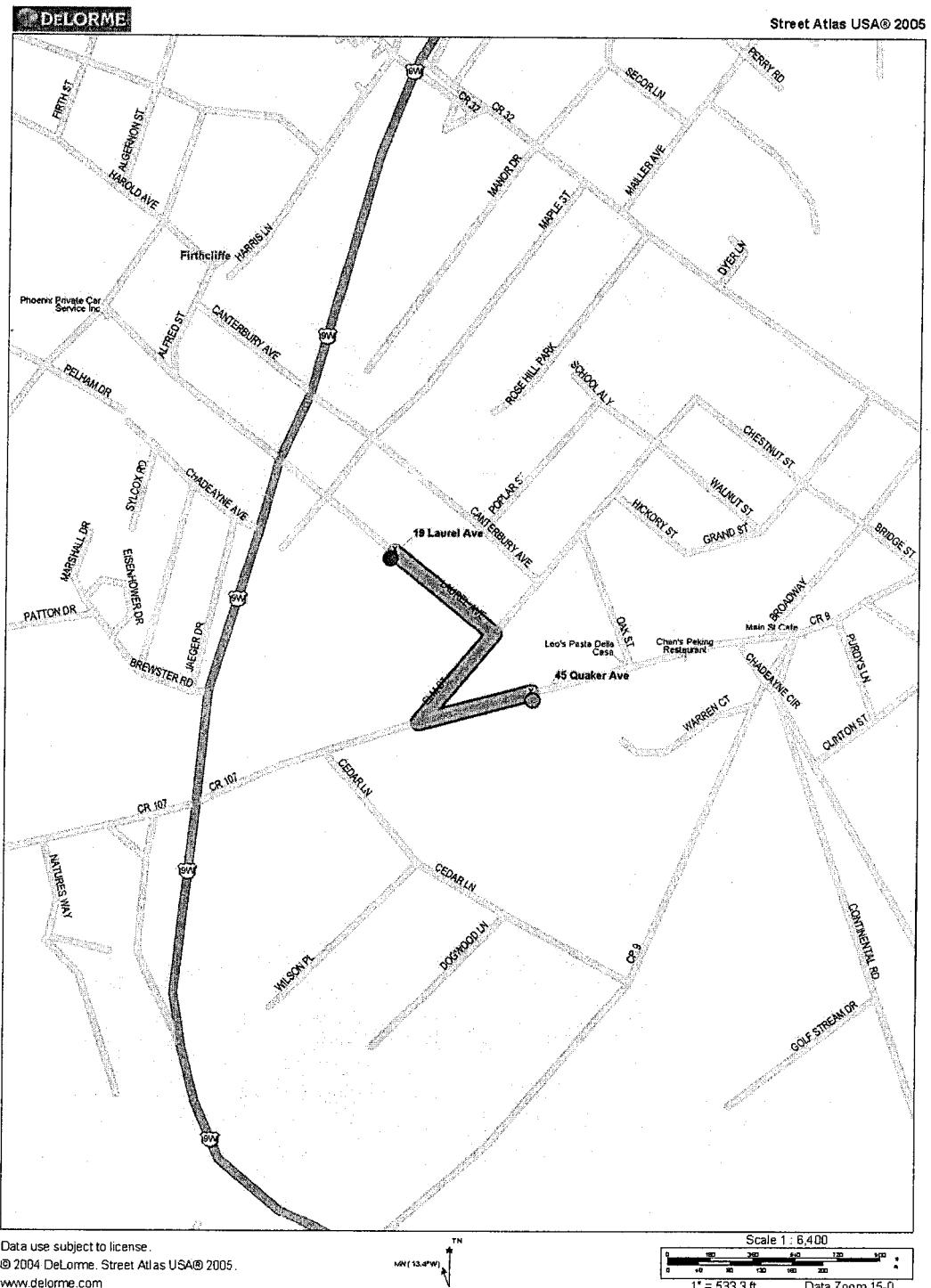
Cornwall, New York

Total Distance: 0.3 miles

Approximate Travel Time: 3 minutes

- Turn left (west) on Quaker Avenue.
- Turn first right onto Elm Street.
- Turn first left onto Laurel Avenue, Hospital on the left.

## Driving Directions to St. Luke's Hospital



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**APPENDIX II**  
**QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PLAN**

# **DRAFT**

**QUALITY ASSURANCE/QUALITY  
CONTROL (QA/QC) PLAN  
CORNWALL PLAZA  
19-45 QUAKER AVENUE  
CORNWALL, NEW YORK  
BCP SITE ID NO. C336070**

Prepared For

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

June 2006  
Revised May 2007

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

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**QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PLAN**  
**CORNWALL PLAZA**  
**19-45 QUAKER AVENUE**  
**CORNWALL, NEW YORK**  
**BCP SITE ID NO. C336070**

**QUALITY ASSURANCE/QUALITY CONTROL**

During soil, ground-water and soil gas/indoor air sampling, latex gloves will be worn and changed between sampling locations. All of the samples will be preserved for holding time (if necessary) and properly labeled in the field. This includes the following:

- name of collector;
- date and time of collection;
- place of collection; and,
- sample identification and/or number.

Chain-of-Custody Record will be completely filled out for every shipment and every sample to trace sample possession including:

- sample number and/or identification;
- signature of sample collector;
- date and time of sample collection;
- place of sample collection;
- sample type (water, soil, etc.);
- sample preservatives;
- sample container;
- requested analysis;
- signature of person involved with sample possession;
- inclusive dates of sample possession; and,
- pertinent comments and/or notes.

The laboratory portion of the Chain-of-Custody Form will be completed by the designated analytical laboratory person and contain the following information:

- inclusive dates of sample possession;
- pertinent comments and/or notes;
- name of person receiving the sample;
- laboratory sample number;
- date of sample receipt;
- analysis requested; and,
- sample condition and temperature.

Detailed field records for all site activities will be kept by the personnel performing or supervising the work. Recordkeeping will be completed in a field notebook and/or preprinted date sheets used by LBG. The field notebook and/or preprinted date sheets will be used to record pertinent observations (odors, visual observation, matters of interest, weather), all field measurements (water levels, pH, specific conductance) and any irregularities or deviations from the prescribed sampling procedures. All entries into the field book and/or preprinted date sheets will be with waterproof ink pen, initialed by the person completing the measurements/observations, and the pages of the field book numbered.

During sample collection, extreme care should be taken in order to ensure that high quality data are obtained. The sampling team should avoid fueling vehicles, using permanent marking pens or any other materials containing volatile organic compounds (VOCs) which can cause sample interference in the field.

Analytical data control checks will be established by utilizing trip blanks and field blanks. Trip blanks will be prepared in the laboratory using organic free water. Trip blanks will accompany a batch of samples from the start of sampling to delivery of samples to the laboratory for analysis, remaining unopened. The purpose of the trip blank is to measure possible cross contamination of samples during the shipping and handling stages. The Field Blank is prepared in the field by passing the analyte-free water from the full bottle to the empty Field Blank container. The purpose of the Field Blank is to demonstrate ambient field conditions and/or equipment conditions that may potentially affect the quality of the samples. One field blank and one trip blank will be collected per twenty sampling locations for VOCs in ground water.

Sample storage should be in an appropriate shipping container such as a cooler. The sample storage container should be secured to ensure that the samples have not been disturbed during transport.

Unless otherwise stated in the Work Plan, laboratory analysis of soil and ground-water samples will consist of Category A (as defined in the ASP) or Category Spills laboratory data deliverables for all sampling performed at the Site with the exception of confirmatory (post remediation) samples and final delineation samples. For all confirmatory (post remediation) samples and final delineation samples, Category B laboratory data deliverables as defined in the analytical services protocol (ASP) will be submitted. In addition, a Data Usability Summary Report (DUSR) will be prepared by a party independent from the laboratory performing the analysis.

For all soil gas and indoor air quality sampling, Category B laboratory data deliverables as defined in the analytical services protocol (ASP) will be submitted. In addition, a DUSR will be prepared by a party independent from the laboratory performing the analysis.

In accordance with the DER-10 guidance document, analytical results without all quality control documentation and raw data may be provided for all intermediate sampling events and for all long-term ground-water monitoring samples where the Site has Department of Environmental Remediation oversight, provided the following information is submitted:

- a cover page, including facility name and address, laboratory name and address, laboratory certification number, if applicable, date of analytical report preparation and signature of laboratory director;
- a listing of all field sample identification numbers and corresponding laboratory sample identification numbers;
- a listing of all analytical methods used, including matrix cleanup method;
- the method detection limit and practical quantitation level for each analyte for each sample analysis;
- all sample results including date of analysis;
- all method blank results; and
- all chain-of-custody documentation.

## SOIL SAMPLING PROCEDURES

Soil samples will be collected throughout the duration of this project. Soil samples may be collected several ways: grab sample, hand auger, geoprobe macrocore and split-spoon sampling.

### **Grab Sampling**

Grab samples will be collected from exposed surficial soil and from stockpiled soil. Collection of a grab sample will be performed with the field personnel using latex or nitrile sampling gloves. The soil sample(s) will be placed into laboratory prepared sampling containers and stored on ice. The sample will then be shipped to the laboratory under chain-of-custody procedures.

### **Hand Auger Sampling**

Pending access to the subsurface, the hand auger will be advanced from grade to the designated termination depth. Samples will be removed from the hand auger and placed on polyethylene liner for observation. During advancement of the hand auger, the samples obtained will be screened in the field for VOCs using a photoionization detector (PID). The soil samples will be handled by field personnel using new latex or nitrile sampling gloves for each sampling interval. Pending review of all samples collected, the previously collected soil samples will be stored in plastic Ziploc bags to prevent off-gassing of VOCs. The soil sample(s) selected for analysis will be placed into laboratory prepared sampling containers and stored on ice. The sample will then be shipped to the laboratory under chain-of-custody procedures.

Following completion of each individual boring, the hand auger sampling point and extension rods will be decontaminated using alconox and water.

### **Geoprobe Macrocore Sampling**

Soil samples will be collected from several locations throughout the Site using a Geoprobe drill rig. This rig uses direct push technology to recover 4-foot long macrocore samples. The samples are collected in dedicated polyethylene liners. The liners are then cut open to expose the soil cross-section. The soil is then characterized on a geologic log. The soil samples will be handled by field personnel using new latex or nitrile sampling gloves for each sampling interval. Pending review of all samples collected, the previously collected soil samples

will be stored in plastic Ziploc bags to prevent off-gassing of VOCs. The soil sample(s) selected for analysis will be placed into laboratory prepared sampling containers and stored on ice. The sample will then be shipped to the laboratory under chain-of-custody procedures.

Following completion of each macrocore sample, the macrocore will be decontaminated using alconox and water and a new dedicated polyethylene sleeve will be used.

### **Split-Spoon Sampling**

Soil samples will be collected from several locations throughout the Site using a stainless steel split-spoon sampler in association with a hollow-stem auger and/or mud-rotary drill rig. This technique involves sending a 2-foot sampling device to the termination depth of a drill boring and hammering the sampler through the soil. The samples are collected within the split-spoon sampler and prevented from falling out of the sampler with a plastic basket at the bottom. After the split-spoon sampler is advanced two feet, it is removed from the boring. The split-spoon sampler is then taken apart exposing the soil sample. The soil is then characterized on a geologic log. The soil samples will be handled by field personnel using new latex or nitrile sampling gloves for each sampling interval. Pending review of all samples collected, the previously collected soil samples will be stored in plastic Ziploc bags to prevent off-gassing of VOCs. The soil sample(s) selected for analysis will be placed into laboratory prepared sampling containers and stored on ice. The sample will then be shipped to the laboratory under chain-of-custody procedures.

Following completion of each split-spoon sample, the split-spoon sampler will be decontaminated using alconox and water.

## **GROUND-WATER SAMPLING PROCEDURES**

In the interest of generating additional ground-water parameter information, a low-flow sample technique will be used. Ground water will be sampled from onsite monitor wells using either a peristaltic sampling pump or an inertial (Waterra©) sampling pump. The pump intake will be placed at predetermined positions within each well and, if necessary, lowered as pumping progresses. The pump intake positions within each well will be determined from geologic logs.

The low flow purge and sample methodology will be utilized for the collection of ground-water samples. Prior to sampling, the depth to water with respect to the top of well casing and total depth of each well will be measured with an electric tape and weighted steel tape, respectively. Both measurements will be recorded in a field logbook. Dedicated Tygon tubing will be set within each well at the approximate mid-point of each well screen and connected to a sampling pump. The sampling pump will be operated at a discharge rate of 100-500 milliliters per minute and will discharge to a Flow-Through Cell. Geochemical parameters of the associated ground water such as pH, conductivity, dissolved oxygen and temperature will be continuously monitored inside the Flow-Through Cell using a Horiba multi-parameter meter. Once all of the above geochemical parameters stabilize ( $\pm 5\%$ ), a ground-water sample will be collected from the dedicated Tygon tubing through an inline sampling port prior to the Flow-Through Cell. During the sampling, latex gloves will be worn and changed between sampling locations.

All of the samples will be preserved for holding time and properly labeled in the field. A chain-of-custody form will be filled out and the samples will be placed in a cooler with ice. The sample will then be shipped to the laboratory under chain-of-custody procedures.

## **SOIL GAS, INDOOR AIR AND SVE SYSTEM SAMPLING PROCEDURES**

The purpose of soil gas and indoor air sampling is to determine the following:

- potential for current human exposure;
- potential for future human exposure;
- necessary measures to be implemented for removal of vapors from the subsurface and/or indoor air;
- potential for offsite soil vapor contamination;
- determine any offsite preferential migration pathways;
- characterize the vapors in the vadose zone; and,
- investigate the relationship between contaminated ground water and soil vapor.

### **Soil Gas**

Soil gas samples will be collected from temporary soil gas probes. The following procedure will be used for the installation of temporary points:

- a 1-inch diameter probe will be installed at predetermined locations to approximately 6 ft bg (feet below grade);
- the probe will be fitted with inert polyethylene tubing of 1/8 inch to 1/4 inch diameter from the sampling zone to the surface; and,
- soil gas probes will be sealed above the sampling zone with a bentonite or other inert clay to avoid outdoor air infiltration.

Soil gas samples will be collected from the soil gas probes using the following procedures.

- a soil gas sample will be collected from the temporary probe after one to three volumes of the sample probe and the tube are purged using a peristaltic pump;
- flow rates for both purging and sampling will not exceed 0.2 liters per minute; and,
- each sample will be collected using a Summa canister with a regulator set to a flow rate of 0.1 liters per minute.

The indoor air sample will be analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory by EPA Method TO-15 and the laboratory results will be reported with ASP Category B deliverables.

The indoor air sample will then be sent to the laboratory via overnight courier service under chain-of-custody procedures.

#### Indoor Air

Indoor air samples will be collected from predetermined locations throughout the interior of the building. A 6-liter Summa canister will be placed in the sample location at a slightly elevated height. Each Summa canister used for collecting indoor air samples will be fitted with a dedicated regulator calibrated to allow 1 liter of air flow over an 8-hour sampling period. The indoor air sample will be analyzed by a NYSDOH ELAP certified laboratory by EPA Method TO-15 and the laboratory results will be reported with ASP Category B deliverables.

The indoor air sample will then be sent to the laboratory via overnight courier service under chain-of-custody procedures.

### **KEY PROJECT PERSONNEL**

LBG will be responsible for all soil sampling, ground-water sampling, soil gas and indoor air sampling, waste disposal classification, health and safety, reporting and oversight aspects of the project. Subcontractors will be used to perform onsite soil borings; install the onsite ground-water monitoring wells, extraction wells and soil-vapor extraction wells; perform onsite pilot tests; and dispose of any waste generated on Site. Additionally, all laboratory analysis will be subcontracted to a New York State certified laboratory which maintains current NYSDOH ELAP Certification. LBG project personnel are listed below along with brief descriptions of their experience and anticipated project responsibilities.

#### **Dan C. Buzea, Vice President, Principal-in-Charge**

Mr. Buzea is one of the managing partners of LBG and has been with the firm since 1978. Mr. Buzea has over 37 years of experience with ground-water supply and contamination projects (including several Voluntary Cleanup/Brownfield projects) in the U. S. and overseas and he has been in charge of the New York office since it opened in 1995.

As Principal-in-Charge, Mr. Buzea's responsibilities would include contract execution and overall quality assurance and quality control. He will be briefed regularly by the Project Manager and will review all final work products.

#### **Paul Woodell, Senior Hydrogeologist, Site Manager**

Mr. Woodell has been with LBG since 1999 and has been a Senior Hydrogeologist with the company since 2002. Mr. Woodell's hydrogeologic experience includes but is not limited to ground-water, surface-water and soil sampling; drilling supervision during installation of monitor wells; the maintenance of hydrocarbon remediation systems; supervision of underground storage tank removals; supervision of pumping tests and the analysis of test data; stream gauging and quantitative dye tracing.

As Project Manager, Mr. Woodell would be the primary contact for the project and would be responsible for coordinating and conducting all tasks necessary to complete the required scope of work. Mr. Woodell would work with all associated subcontractors and would report directly to the Principal-in-Charge.

**Sean Groszkowski, Senior Hydrogeologist, Health and Safety Officer/Sampling Technician**

Mr. Groszkowski has been with LBG since 2000 and has been a Senior Hydrogeologist with the company since 2004. Mr. Groszkowski has worked on many contaminated site remediation projects in New York for both public and private entities. Additionally, Mr. Groszkowski has experience with completing long-term hazardous soil remediation projects in conjunction with state regulatory agencies. As such, he is very familiar with Federal and state regulations governing hazardous waste remediation projects.

As Health and Safety Officer/Sampling Technician, Mr. Groszkowski would be responsible for implementation, enforcement and monitoring of the Health and Safety Plan. The Health & Safety Officer/Sampling Technician would also be responsible for the pre-decontamination indoctrination and periodic training of all personnel entering and/or working at the Site with regard to the Health and Safety Plan (HASP). Mr. Groszkowski would assist the field personnel as well as work with all associated subcontractors and would report directly to the Project Manager.

**Michael De Felice, Hydrogeologist, Field Personnel**

Mr. De Felice has been with LBG since 2002 and has been a Hydrogeologist II with the company since 2004. Mr. De Felice's hydrogeologic experience includes but is not limited to collection of soil and ground-water samples; drilling supervision and formation sampling during

the installation of ground-water monitor and recovery wells; development and test pumping of recovery wells, monitor well design; supervision of hazardous soil removals, and air monitoring.

As field personnel, Mr. De Felice would be responsible for monitor well installation oversight, soil sampling, ground-water sampling and additional sampling should it become necessary. Mr. De Felice would work with all associated subcontractors and would report directly to the Project Manager.

mdm

June 28, 2006

Revised: March 13, 2007

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**APPENDIX III**  
**FACT SHEET**  
**AND**  
**CITIZEN PARTICIPATION PLAN (CPP)**



# FACT SHEET

## Brownfield Cleanup Program

**Cornwall Plaza**  
**BCP Site ID No. C336070**  
**Cornwall, NY**

**May 2007**

### Draft Remedial Investigation Work Plan Available for Public Comment

The New York State Department of Environmental Conservation (NYSDEC) requests public comments as it reviews a draft work plan to investigate Cornwall Plaza (the Site) located at 19-45 Quaker Avenue in the Village of Cornwall-on-Hudson, Town of Cornwall, Orange County. See the attached map for the location of the Site. The draft Remedial Investigation Work Plan was submitted by Cornwall Shopping, LLC (Cornwall Shopping), the owner of the Site, under the New York State Brownfield Cleanup Program (BCP).

NYSDEC previously accepted an application submitted by Cornwall Shopping to participate in the BCP. The application proposes that the Site will continue to be used for commercial purposes.

#### Public Comments About the Draft Remedial Investigation Work Plan

NYSDEC is accepting written public comments about the draft Remedial Investigation (RI) Work Plan for 30 days, from May \_\_\_, 2007 through June \_\_\_, 2007. The draft RI Work Plan is available for public review at the document repositories identified in this Fact Sheet.

Written comments should be submitted to:

Michelle Tipple, Division of Environmental Remediation  
NYSDEC; 21 South Putt Corners Road  
New Paltz, New York 12561-1620

**Brownfield Cleanup Program:** New York's Brownfield Cleanup Program (BCP) encourages the voluntary cleanup of contaminated properties known as "brown-fields" so that they can be reused and redeveloped. These uses include recreation, housing and business.

A **brownfield** is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination.

For more information about the BCP, visit: [www.dec.state.ny.us/website/der/bcp](http://www.dec.state.ny.us/website/der/bcp)

#### Highlights of the Proposed Remedial Investigation

The Cornwall Plaza site was the subject of a preliminary sub-surface investigation based on the existence of a former dry-cleaning facility (Cornwall Cleaners) located in the easternmost Site building.

The remedial investigation at the site under the BCP will have several goals:

- 1) define the present nature and extent of contamination in soil, ground-water and soil vapor;
- 2) detail the sources of the contamination;
- 3) assess the impact of present levels of contamination on public health and the environment;
- 4) provide information to support the formulation of a Remedial Work Plan under the BCP to address the contamination.

The investigation will be performed by Cornwall Shopping with oversight by NYSDEC and the New York State Department of Health (NYSDOH). Cornwall Shopping acquired the Site on or about March 7, 2006, after the suspected release(s) to the environment.

Previous Site investigations found on-site soil was impacted by volatile organic contaminants, specifically chlorinated solvents commonly used in the dry-cleaning industry. These solvents include tetrachloroethene (PCE), trichloroethene (TCE), 1,1,2,2-tetrachloroethane and cis-1,2-dichloroethene. Similarly, ground water beneath the site has been impacted by PCE, TCE, cis-1,2-dichloroethene, toluene, acetone and chloroform.

The investigation will assess on-site conditions as well as an adjacent property. Significant investigation activities identified in the draft RI Work Plan are:

- Soil sampling and analysis;
- Installation of ten ground-water monitoring wells;
- Ground-water sampling and analysis;
- Concurrent soil vapor, sub-slab vapor, indoor air and ambient air sampling;
- Exposure Assessment for Public Health and Fish and Wildlife.

### **Next Steps**

NYSDEC will consider public comments when it completes its review, has made any necessary revisions, and approves the RI Work Plan. NYSDOH must concur in the approval of the RI Work Plan. The approved RI Work Plan will be placed in the document repository (see below). After the RI Work Plan is approved, Cornwall Shopping may proceed with the remedial investigation of the Site.

Cornwall Shopping will develop a Remedial Investigation Report that summarizes the results of the remedial investigation.

NYSDEC will keep the public informed during the investigation and remediation of the Cornwall Plaza site.

### **What are People Likely to See During the Investigation**

Cornwall Shopping's environmental consultant, Leggette, Brashears & Graham, Inc. (LBG) will have staff at the Site collecting the environmental samples and supervising the work of all subcontractors. One of LBG's subcontractors will be a drilling company. The drilling company will use a truck or track mounted drilling rig which you will see around the building. The drill rig is the technology used to install the soil borings, collect soil samples, and install monitoring wells. LBG staff will be at the Site using hand-held equipment to monitor the air around the work area. The soil and ground-water removed from the ground during the investigation and all other generated wastes, such as washwater, will be placed into drums which will be temporarily stored on site and disposed by LBG at the conclusion of the investigation. It is estimated that the remedial investigation will take about three months to complete.

### **Background**

The Site, identified as Town of Cornwall Tax ID Section 23, Block 3, Lot 4, comprises approximately 4.2 acres and is a portion of the Cornwall Plaza, a multi-tenant strip mall. The Site is occupied by 2 buildings and associated paved parking and driveway areas. The area surrounding the Site is primarily residential with some commercial development. The Site and surrounding area is supplied by a public water system. See the attached Site Map.

The Site was developed with one residential building from at least 1902 to 1966 when the easternmost building was developed and occupied by Grand Union. By 1970, the site consisted of 2 buildings.

The focus of the remedial investigation is beneath the easternmost Site building where a dry cleaning business (Cornwall Cleaners) operated from at least 1967 to 1994. The former Cornwall Cleaners leasehold space is currently occupied by Changs Peking House.

LFR Levine-Fricke completed a Phase I/II Environmental Site Assessment in November 2005. Based on the existence of a former dry-cleaning facility at the Site, a preliminary subsurface investigation was conducted in August and October 2005. The investigation consisted of the drilling of 9 soil borings, the installation of 3 ground-water monitor wells and the collection of soil and ground-water samples.

The results of laboratory analyses of these samples indicate the presence of various volatile organic contaminants, some of which are associated with dry-cleaning activities, in both the soil and ground water. Contaminants were detected to the north and northeast of the former Cornwall Cleaners leasehold space as well as behind the leasehold space to the south. One of 11 soil samples contained contaminants at concentrations which exceeded NYSDEC Recommended Soil Cleanup Objectives. All ground-water samples contained at least one contaminant at a concentration exceeded the NYSDEC Ambient Water Quality Standard.

### **Document Repository**

Two document repositories have been established at the following locations to help the public to review important project documents. These documents include the draft RI Work Plan and the application to participate in the BCP accepted by NYSDEC:

Cornwall Public Library  
395 Hudson Street  
Cornwall, NY  
(845) 534-8282

NYSDEC - Region 3 Headquarters  
21 South Putt Corners Road  
New Paltz, NY 12561-1620  
(845) 256-3154

### **Who to Contact**

Comments and questions are always welcome and should be directed as follows:

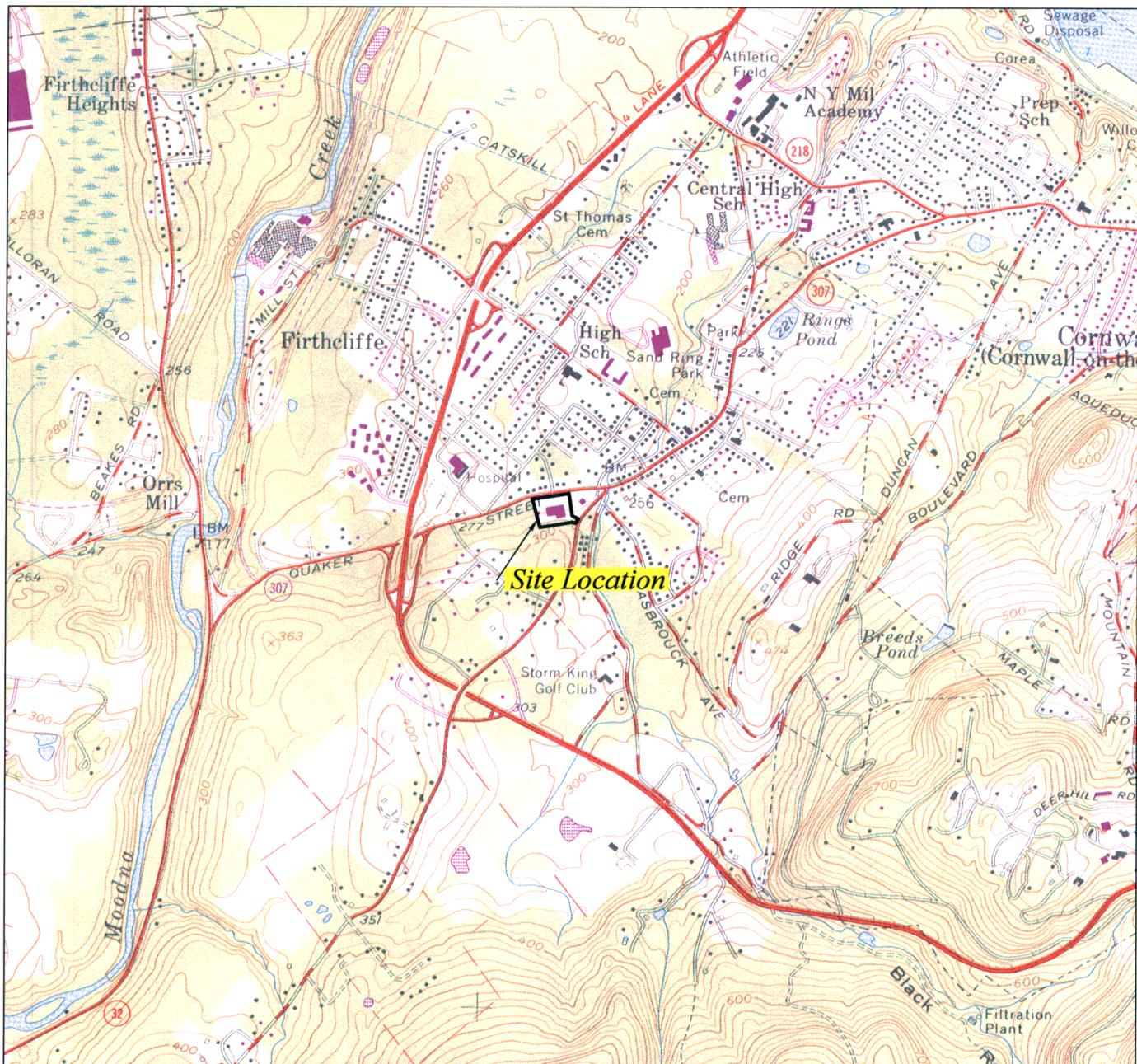
#### Project Related Questions

Michelle Tipple, NYSDEC Project Manager  
New York State Department of  
Environmental Conservation  
21 S. Putt Cors. Rd.; New Paltz, NY 12561  
(845) 256-3153  
e-mail: [mxtipple@gw.dec.state.ny.us](mailto:mxtipple@gw.dec.state.ny.us)

#### Health Related Questions

Anthony C. Perretta, NYSDOH Project  
Manager  
New York State Department of Health  
547 River Street; Troy, NY 12180-2116  
(518) 402-7880  
e-mail: [BEEI@health.state.ny.us](mailto:BEEI@health.state.ny.us)

If you know someone who would like to be added to the project mailing list, have them contact the NYSDEC project manager above. We encourage you to share this Fact Sheet with neighbors and tenants, and/or post this Fact Sheet in a prominent area of your building for others to see.



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



QUADRANGLE LOCATION

0 2000  
SCALE IN FEET

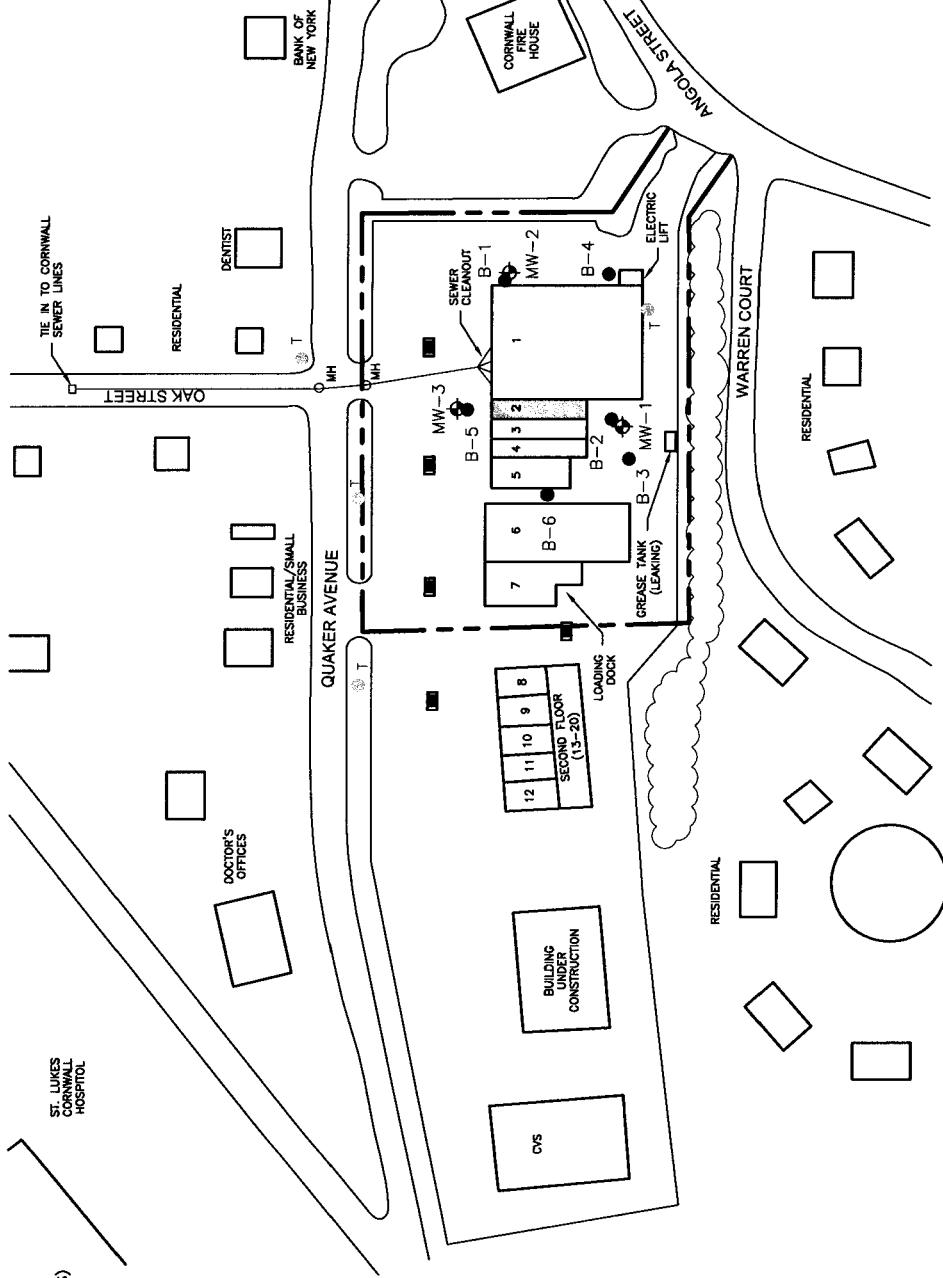
## CORNWALL PLAZA QUAKER AVENUE CORNWALL, NEW YORK

### 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

**BUSINESS KEY:**

- KEY FOODS
- CHANG'S PEKING HOUSE (FORMER CORNWALL CLEANERS)
- CORNWALL WASH N DRY
- LEO'S PIZZERIA
- BANK OF AMERICA
- FORMER CVS (VACANT)
- U.S. POST OFFICE
- TOUCH OF GOLD JEWELERS
- CORNWALL WINE & SPIRITS
- WORLD WIDE TRAVELERS
- STATE FARM INS.
- DUNKIN' DONUTS
- MAIN STREET CUTTERS SALON & SPA
- INTERNAL MEDICINE OFFICE
- LAW OFFICE
- RESPIRE CARE
- ST. LUKE'S PATIENT ACCOUNTING
- VACANT
- COLDWELL BANKERS



**CORNWALL PLAZA**  
**19-45 QUAKER AVENUE**  
**CORNWALL, NEW YORK**

**PHASE II FIELD ACTIVITY LOCATIONS MAP**

<b>DATE</b>	<b>REVISED</b>	<b>PREPARED BY:</b>
		LEGGETTE, BRASHEARS & GRAHAM, INC.
		Professional Ground-Water and Environmental Engineering Services
		110 Corporate Park Drive
		Suite 112
		White Plains, NY 10604
		(914) 694-5711

**SCALE IN FEET**  
 0 100

**LEGEND:**  
 SITE BOUNDARY (TOWN OF CORNWALL 23-3-4)  
 B-3 ● MONITORING WELL  
 T Ⓜ SOIL BORING LOCATION  
 MW-2 ♦ POLE-MOUNTED TRANSFORMER  
 CATCH BASIN

B-3 ●  
 T Ⓜ  
 MW-2 ♦  
 CATCH BASIN

<b>DRAWN:</b>	<b>MRV</b>	<b>CHECKED:</b>	<b>PW</b>	<b>DATE:</b>	<b>FIGURE:</b>
				1/7/07	2

**DRAFT**

**CITIZEN PARTICIPATION PLAN  
CORNWALL PLAZA  
19-45 QUAKER AVENUE  
CORNWALL, NEW YORK  
BCP SITE ID NO. C336070**

Prepared For

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

Revised May 2007

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

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    Project Contact List

### APPENDIX B

    Public Contact List

### APPENDIX C

    Identification of Citizen Participation Activities

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**CITIZEN PARTICIPATION PLAN  
CORNWALL PLAZA  
19-45 QUAKER AVENUE  
CORNWALL, NEW YORK  
BCP SITE ID NO. C336070**

**INTRODUCTION**

Cornwall Shopping LLC, an innocent owner volunteer, in cooperation with the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH), will inform and involve the public during the investigation and remediation of the Cornwall Plaza site (the Site). The purpose of this Citizen Participation Plan (CPP) is to provide a framework for disseminating information to the public relative to this Site. This plan will provide the public with an opportunity to become informed and involved during the remediation of the Site.

This CPP provides summary information regarding the background related to the contamination identified to date, the anticipated phases of the investigation and remediation process, the opportunities for citizen participation, the primary contacts for various state and local agencies, information on how to find out and access available documents and the list of affected and interested parties (the Public Contact List).

The investigation and any subsequent remediation activities at the Site will be conducted under the NYSDEC Brownfield Cleanup Program. This CPP is designed to provide an area-wide comprehensive approach to citizen participation and achieve the following objectives:

- keep the public informed of planned or ongoing actions, the nature of environmental conditions, the environmental and/or public health threats the contamination may pose, the responses under consideration and the progress being made;
- create opportunities for the public to provide information, opinions and perspectives on the work being conducted; and
- ensure open communication between the public and project staff throughout the investigation and remediation process.

Cornwall Shopping LLC, in cooperation with the NYSDEC and the NYSDOH, will implement the activities described in this plan. Implementation of this CPP may evolve during

the investigation and remediation process and changes may be made to the plan as conditions warrant.

## **SITE BACKGROUND**

The Site is located at 19-45 Quaker Avenue in the Village of Cornwall-on-Hudson, Town of Cornwall, Orange County, New York. The Site is currently a portion of Cornwall Plaza, a 5-building, multi-tenant strip mall. The Site contains 2 buildings and associated paved parking and driveway areas. The easternmost building is occupied by the following businesses (from west to east): Bank of America, Leo's Pizzeria, Cornwall Wash n' Dry, Chang's Peking House and Key Foods (grocery store).

The surrounding area within a 1-mile radius of the Site is primarily residential with some commercial development. The location of the Site is shown on figure 1. The Site is bordered on the north by Quaker Avenue and residential dwellings, on the east by the Cornwall Fire Department and Angola Street, on the south by Warren Court and residential dwellings and on the west by the remainder of the Cornwall Plaza, Cedar Lane, residential dwellings and State Route 9W. St. Luke's Cornwall Hospital is located 0.25 mile northwest of the Site. Following the Remedial Investigation, and potential Remedial Action(s), the Site is intended to be used for commercial purposes as a multi-tenant strip mall consistent with applicable zoning and use requirements. The property is described by the Town of Cornwall Tax Assessor as Section 23, Block 3, Lot 4. A tax map for the Site is presented on figure 2.

### **Site History**

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, the easternmost and the adjacent building to the west.

The focus of the investigation is beneath the easternmost Site building; specifically, beneath the leasehold space formerly occupied by a dry cleaning establishment (Cornwall Cleaners) and now occupied by a Chinese food restaurant (Chang's Peking House). A dry cleaner (Cornwall Cleaners) occupied the Chang's leasehold space from at least 1967 to 1994.

### **Investigation Activities**

A Phase I/II Environmental Site Assessment was completed by LFR Levine-Fricke (LFR) on November 11, 2005. Based on the existence of the former Cornwall Cleaners dry cleaning facility identified during the record review, the soil and ground-water conditions beneath the Site were investigated in August and October 2005. The investigation consisted of the advancement of soil borings, installation of monitor wells and the collection of soil and ground-water samples for laboratory analysis.

In August 2005, LFR advanced six soil borings (B1 through B6) to between 18 and 20 ft bg around the perimeter of the easternmost Site building. Between one and two soil samples were collected from each boring. In October 2005, LFR collected soil samples from borings completed during the installation of three ground-water monitor wells (MW-1 through MW-3). The soil samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8620B. Boring and well locations are shown on figure 3.

Laboratory analysis indicates that soil samples from the north, east and south of the former Cornwall Cleaners contained VOCs commonly associated with the operation of a dry cleaning business. The detected VOCs included the chlorinated solvents tetrachloroethane, tetrachloroethene (PCE), trichloroethene (TCE) and cis-1,2-dichloroethene as well as toluene. Detected VOC concentrations ranged between 48.4 ug/kg (micrograms per kilogram) and 6,900 ug/kg. The detection of PCE at 6,900 ug/kg at 21 feet below grade (ft bg) in the MW-2 soil sample, was the only sample to exceed a NYSDEC Recommended Soil Cleanup Objective (RSCO) as per Technical and Administrative Guidance Memorandum (TAGM) #4046. The Phase II soil-sample laboratory results are summarized on table 1.

During the August 2005 LFR investigation, ground water was sampled from five temporary wells installed in the soil borings (B1, B2, B4, B5 and B6). In October 2005, ground water was sampled from Monitor Wells MW-1, MW-2 and MW-3 as well. The samples were analyzed for VOCs by EPA Method 8260B.

Laboratory analysis indicates that ground-water samples from all eight borings/monitor wells contained between one and three volatile compounds at concentrations above the NYSDEC Ambient Water Quality Standards (AWQS). Detected compounds in order of decreasing

concentration are PCE, acetone, cis-1,2-dichloroethene, chloroform, toluene and TCE. Concentrations ranged between 8.57 ug/l (micrograms per liter) and 1,400 ug/l (PCE in MW-2). The highest concentrations were to the northeast of the former Cornwall Cleaners in samples from MW-2, MW-3 and B1, the measured ground-water flow direction. The Phase II ground-water sample laboratory results are summarized on table 2.

## **PROJECT DESCRIPTION**

The Remedial Investigation (RI) and remediation of the Site will involve several phases and tasks as follows:

- creation and approval of the Remedial Investigation Work Plan (RIWP);
- mobilization and completion of the remedial investigation field work;
- completion and approval of the Remedial Investigation Report (RIR);
- creation, public comment and formal approval of the Remedial Action Work Plan (RAWP);
- mobilization and construction of the selected remedial action;
- operation, maintenance and monitoring (OM&M) of the constructed remedial action; and,
- issuance of Certificate of Completion (COC).

The primary purpose of the investigative phase is to obtain additional information regarding the horizontal and vertical distribution of impacted soil, soil vapor and dissolved-phase contamination in ground water beneath the Site. A secondary purpose of this phase is to obtain data to aid in the selection and design of a feasible remedial technology. The first step of the RI is preparation and submittal of a RIWP. This document serves as the blueprint for the Site investigation activities, generally outlining how and where data will be collected to characterize the Site. The Work Plan also typically includes other documents such as a Site Health and Safety Plan (HASP) and a CPP. Once the Work Plan is approved by the regulatory agencies, the actual Site investigation will be implemented. The Site investigation may involve several phases of

field work including but not limited to well drilling, soil, ground-water, soil vapor (sub-slab and otherwise) and ambient air sampling, and surveying.

When the Site investigation is completed, the data will be used to determine whether delineation is complete. Additionally, the potential effectiveness of various remedial alternatives will be evaluated. The Site investigation results and analysis of remedial alternatives will be presented in an RIR. Based on the results of the RIR, a RAWP, which will summarize the proposed remedy for the Site, will be submitted to the NYSDEC for approval. The final RAWP stipulates the remedy for the Site, based on comments received from the public and other interested parties or agencies. After the RAWP is finalized and approved, the selected remedy would begin.

## **ISSUES OF PUBLIC CONCERN**

In order to define the issues of public concern in connection with the Site, an exposure assessment was performed. An exposure assessment is an evaluation of the potential exposures to humans and the environment from the production, distribution, use, disposal and recycling of a chemical substance.

The likelihood of exposure to the environment is high. Based on previous investigations performed on the Site, contamination of VOCs is present in the subsurface (soil, ground water and soil gas). As such, a comprehensive delineation of the zone of contamination is to be conducted to determine the contaminant concentrations in the subsurface in the soil, ground water as well as the soil gas. All subsequent additional investigations or remediation efforts will be contingent upon the location and concentrations of contamination throughout the Site.

The likelihood of exposure on the Site is low for people. The contamination beneath the Site is the result of previous Site use. The current workplace activities at the Site do not include the use of the contaminants. As such, the possible contamination exposure on Site is considered an environmentally-mediated exposure, whereby exposure is the result of a product finding its way into food, water or air supplies. The physical location of the contamination is in the subsurface, beneath the Site. The area surrounding the Site is paved and/or covered with buildings. Additionally, all workers involved in environmental investigative activities will

follow the standard operating procedures outlined in the HASP to minimize possible exposure. As such, the likelihood of people being exposed through ingestion and/or dermal contact is minimal. Exposure to ground water is not expected because the area is served by public water.

For the general public surrounding the Site, the possible environmentally-mediated exposure route is through the air. The possibility of being exposed to the inhalation hazard presents itself in the form of soil gas intrusion through the basements of buildings surrounding the Site and through the migration of particulates from the Site during ground invasive activities. The particulates will be monitored and controlled with the procedures outlined in the Community Air Monitoring Plan (CAMP). Estimating exposures from the soil gas source requires knowledge of the environmental fate of the substance and information on human intake. Alternatively, direct measurement of contaminant concentrations may be made. The latter approach will be taken by LBG. In order to determine the extent of this possible exposure source, LBG will perform both soil vapor (sub-slab and otherwise) sampling and ambient/indoor air quality sampling on the Site. Due to the distances that neighboring structures are from the contamination source, offsite vapor intrusion is not anticipated. However, if soil gas sampling indicates high VOC concentrations along the perimeter of the Site, the survey radius may be expanded to include offsite structures.

## **CITIZEN PARTICIPATION ACTIVITIES**

An important and required part of this project will be informing and involving the public throughout the various phases described above. This will be accomplished through the Citizen Participation Activities described below. These activities are the minimum which will be implemented for this project. This list is flexible and additional activities may be added as the project progresses, if deemed necessary.

### **Project Contact List**

A Project Contact List has been prepared and is included as Appendix A. This list contains people that can be contacted by the public for general and technical information on the

project. The list also includes a designated Citizen Participation Specialist who can be contacted regarding citizen participation activities.

### **Public Contact List**

A Public Contact List has also been prepared and is included as Appendix B. This list identifies affected and interested parties including: owners of properties adjacent to the site; local news media and local government officials. This list will be used to disseminate information to the public regarding the status of the project and the availability of site related documents.

### **Document Repositories**

Two document repositories have been established at the locations below, where Site related documents will be made available to the public. Documents currently available include the proposed RIWP.

Cornwall Public Library  
395 Hudson Street  
Cornwall, NY 12518  
Telephone: (845) 534-8282  
Hours: Monday thru Thursday - 10 a.m. to 8 p.m.  
Friday - 10 a.m. to 6 p.m.  
Saturday - 10 a.m. to 4 p.m.  
Sunday - 1 p.m. to 4 p.m.

New York State Department of Environmental Conservation,  
Region 3 Office  
21 South Putt Corners Road  
New Paltz, NY 12561-1620  
Telephone: (845) 256-3154  
Hours: Monday - Friday - 9 a.m. to 4:30 p.m.

These document repositories will be regularly inspected to ensure that all material related to the Site investigation and remediation activities are available for review.

## **Public Notices**

Public notices will be made at several key points during the Site investigation and remediation activities. A public notice was mailed to the Brownfield Cleanup Program application list on May 25, 2006 announcing the application for the Site to the Brownfield Cleanup Program. This notice was also published in The Cornwall Local on May 26, 2006. Additional Fact Sheets will be sent to this Site's Public Contact List at each stage of the process as set forth in the Brownfield Cleanup Program Identification of Citizen Participation Activities (Appendix C).

For more information about the New York State Brownfield Cleanup Program, visit [www.dec.state.ny.us/website/der/bcp](http://www.dec.state.ny.us/website/der/bcp).

dmd

January 9, 2007

Revised: March 13, 2007

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## **TABLES**

TABLE 1

CORNWALL PLAZA  
15-45 QUAKER AVENUE  
CORNWALL, NEW YORK

Soil Sample Analytical Results, VOCs by EPA Method 8260B  
Collected August and October 2005

Volatile Organic Compound ( $\mu\text{g}/\text{kg}$ )	Sample Identification and Depth Below Grade in Feet								NYSDEC RSCO ( $\mu\text{g}/\text{kg}$ )
	B1	B1	B2	B3	B4	B5	B6	MW-1	
	0-5	10-15	10-15	15-19	10-15	15-20	10-15	15-17	
1,1,2,2-Tetrachloroethane	48.4	<116	<109	<106	<112	<115	<112	<89	<180
Tetrachloroethene (PCE)	<109	<116	<109	<106	<112	1,110	<112	<89	<180
Trichloroethene (TCE)	<109	<116	<109	<106	<112	<115	<112	<89	6,900
cis-1,2-Dichloroethene	<109	<116	<109	<106	<112	<115	<112	<89	1,100
Toluene	<109	138	<109	<106	<112	<115	<112	<89	1400
									600
									700
									no standard
									1500
									1500

NYSDEC RSCO = New York State Dept. of Env. Conservation Recommended Soil Cleanup Objectives (Technical and Administrative Guidance Memorandum #4046)  
 $\mu\text{g}/\text{kg}$  = micrograms per kilogram

TABLE 2

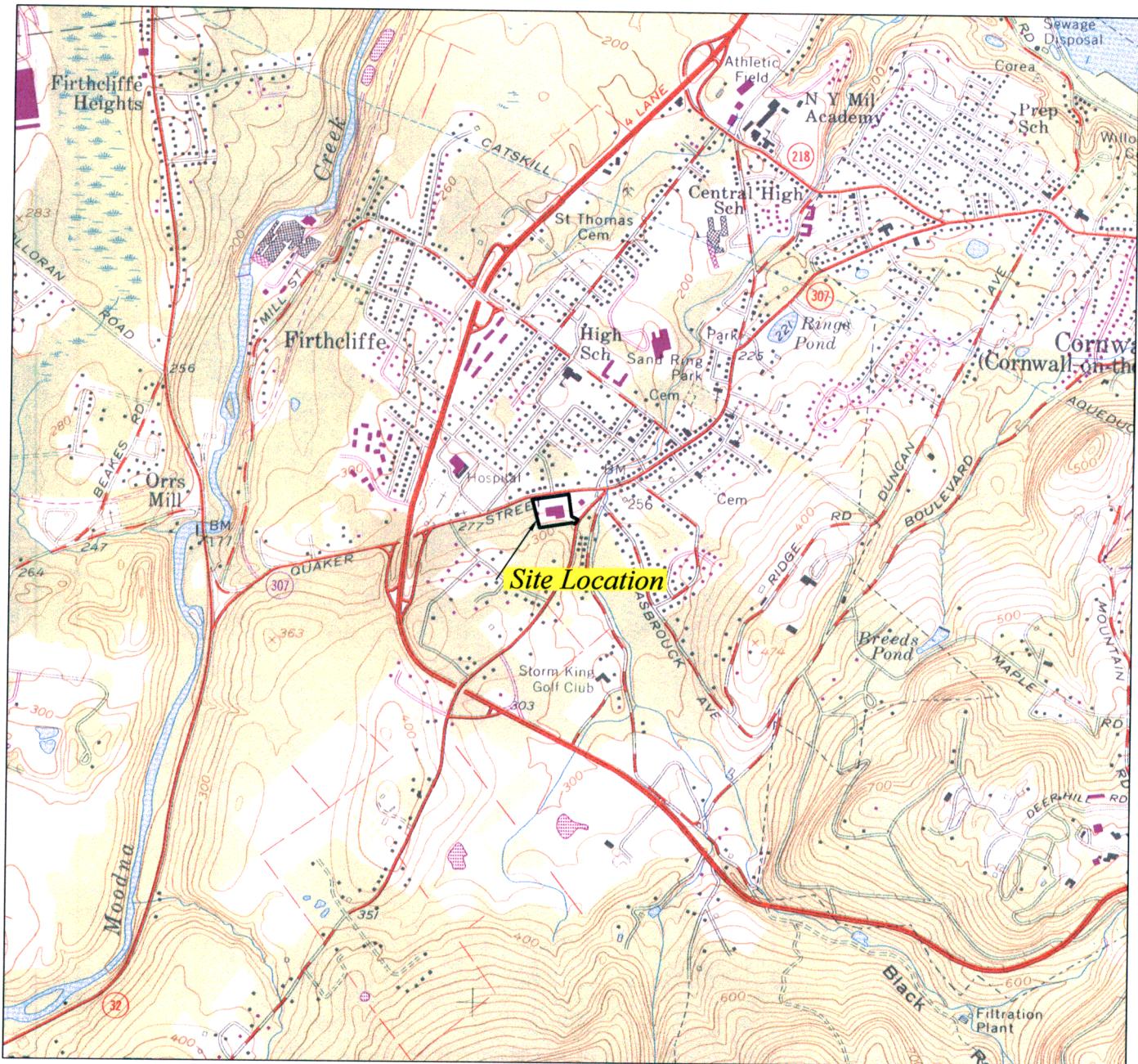
**CORNWALL PLAZA  
15-45 QUAKER AVENUE  
CORNWALL, NEW YORK**

**Ground-Water Sample Analytical Results, VOCs by EPA Method 8260B**  
**Collected August and October 2005**

Volatile Organic Compound (ng/l)	Sample Identification and Depth Below Grade in Feet						NYSDEC AWQS			
	B1	B2	B3	B4	B5	B6	MW-1	MW-2	MW-3	
Tetrachloroethene (PCE)	165	<5.0	NS	<5.0	410	21	<10	1400	240	5.0
Trichloroethene (TCE)	8.57	<5.0	NS	<5.0	<5.0	<5.0	<10	<50	<25	5.0
cis-1,2-Dichloroethene	22.6	78	NS	5.48	<5.0	<5.0	<10	48	<25	5.0
Toluene	<5.0	<5.0	NS	<5.0	<5.0	<5.0	11	<50	<25	5.0
Acetone	<5.0	94.4	NS	<5.0	<5.0	<5.0	<10	<50	<25	50.0
Chloroform	<5.0	<5.0	NS	<5.0	<5.0	<5.0	12	<50	<25	7.0

NYSDEC AWQS = New York State Dept. of Env. Conservation Ambient Water Quality Standard (Technical and Operational Guidance Series 1.1.1)  
ug/l = micrograms per liter

## **FIGURES**



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



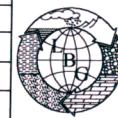
QUADRANGLE LOCATION

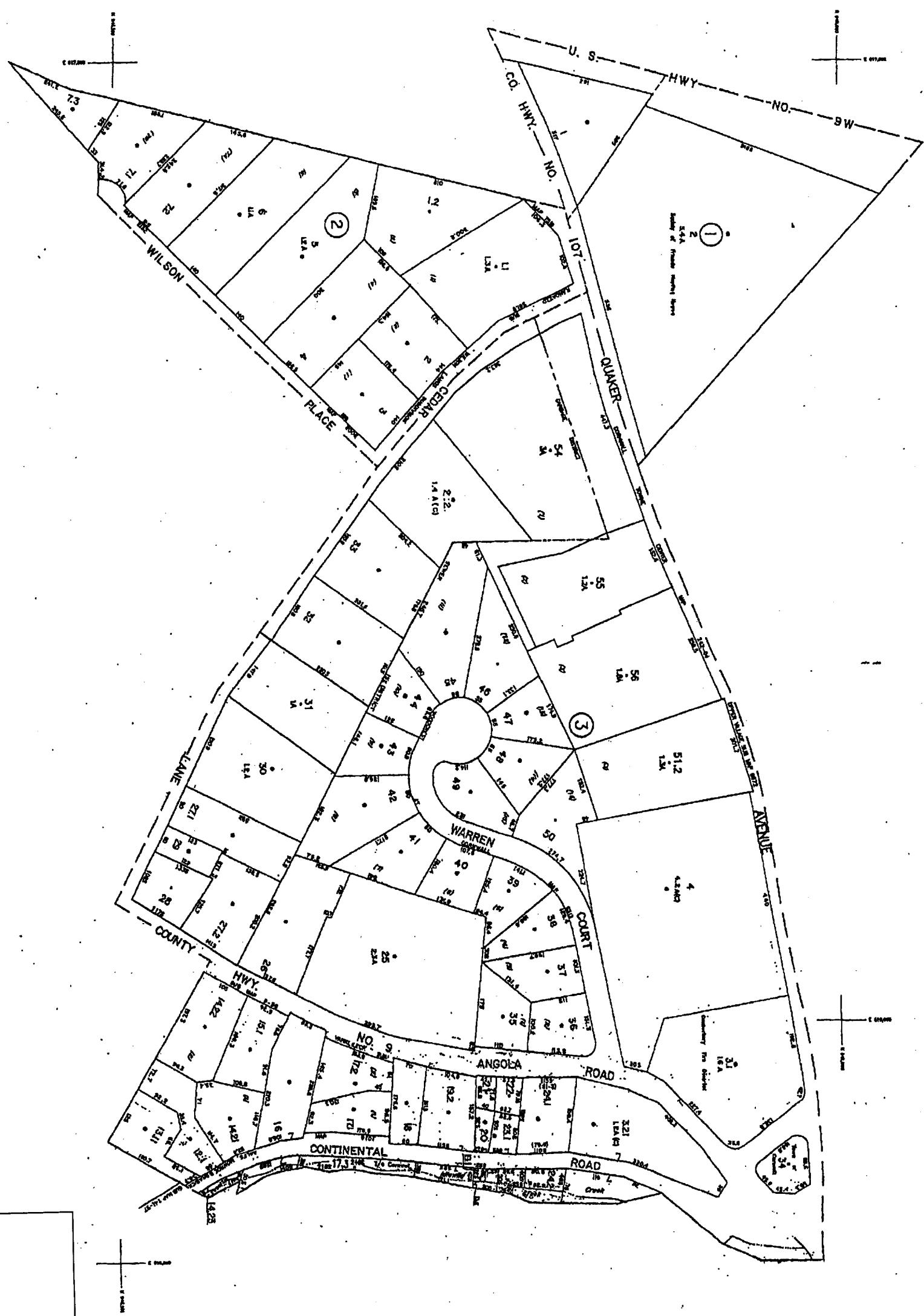
0 2000  
SCALE IN FEET

## CORNWALL PLAZA QUAKER AVENUE CORNWALL, NEW YORK

### 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

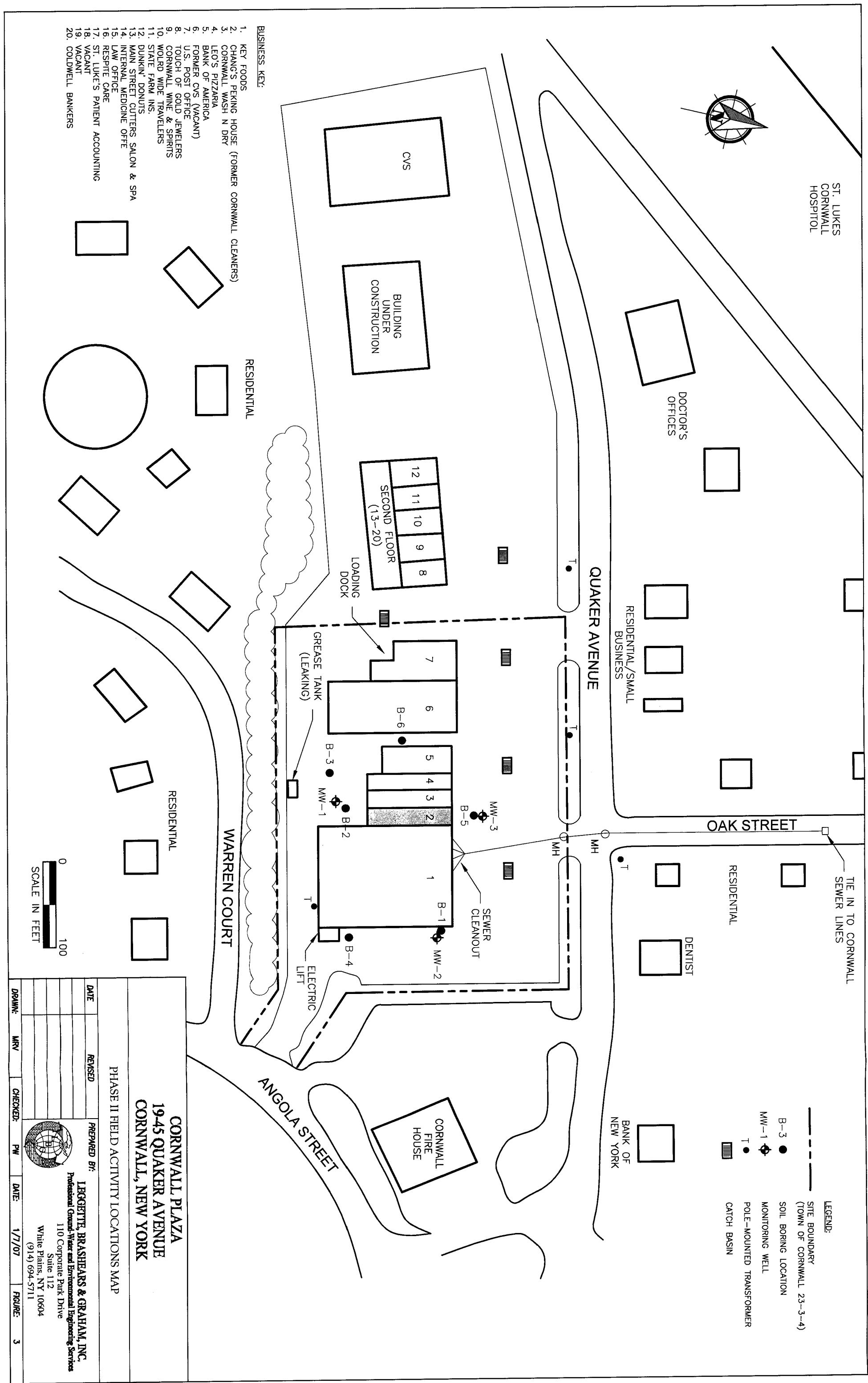




CORNWALL PLAZA  
QUAKER AVENUE  
CORNWALL, NEW YORK

TAX MAP

DATE	REVISED	PREPARED BY:
		LEGGETTE, BRASHEARS & GRAHAM, INC.
		Professional Ground-Water and Environmental Engineering Services
		110 Corporate Park Drive
		Suite 1112
		White Plains, NY 10604
		(914) 694-5711
DRAWN:	JRW	CHECKED:
		PW
DATE:	5/16/06	FIGURE:
		2



**APPENDIX A**  
**Project Contact List**

## PROJECT CONTACT LIST

### New York State Department of Environmental Conservation

#### Project Manager

Michelle Tipple, Project Manager  
New York State Department of Environmental Conservation,  
Division of Environmental Remediation - Region 3  
21 South Putt Corners Road  
New Paltz, NY 12561  
Telephone: (845) 256-3153  
e-mail address: [mxtipple@gw.dec.state.ny.us](mailto:mxtipple@gw.dec.state.ny.us)

#### Citizen Participation Specialist

Michael Knipfing  
New York State Department of Environmental Conservation  
Citizen Participation Specialist  
21 South Putt Corners Road  
New Paltz, NY 12561-1620  
Telephone: (845) 256-3154

### New York State Department of Health

#### Public Health Specialist

Anthony C. Perretta, Health Specialist II  
New York State Department of Health  
Bureau of Environmental Exposure Investigation  
547 River Street  
Troy, NY 12180-2216  
Telephone: (518) 402-7880  
e-mail address: [BEEI@health.state.ny.us](mailto:BEEI@health.state.ny.us)

### Cornwall Shopping, LLC

#### Project Contact

Scott Furman  
Tannenbaum Helpern Syracuse & Hirschtritt LLP  
900 Third Avenue  
New York, NY 11724  
Telephone: (212) 508-6750  
Fax: (212) 371-1084  
e-mail address: [furman@thshlaw.com](mailto:furman@thshlaw.com)

Project Consultant

Dan C. Buzea  
Leggette, Brashears & Graham, Inc.  
110 Corporate Park Drive, Suite 112  
White Plains, NY 10604  
Telephone: (914) 694-5711  
e-mail address: [buzea@lbgny.com](mailto:buzea@lbgny.com)  
[woodell@lbgny.com](mailto:woodell@lbgny.com)

## **APPENDIX B**

### **Public Contact List**

## PUBLIC CONTACT LIST

### **Former Property Owner**

Coranda, Inc. (New York Corporation)  
54 Garden Street  
Poughkeepsie, NY 12601

### **Current Site Owner**

Cornwall Shopping, LLC  
c/o Philips International Holding Corp.  
295 Madison Avenue  
New York, NY 10017

### **Current Site Occupants**

Tenant Name/Tenant Address	Tenant Contact/Tenant Telephone
ANNE R. MULLIN, M.D. 45 Quaker Avenue Suite 202 Cornwall, NY 12518	Dr. Anne Mullin
BANK OF AMERICA Cornwall Plaza 45 Quaker Avenue Cornwall, NY 12518	Sienna Wyniemko, Lease Admin. Al Teetsel, Property Manager BANK OF AMERICA Attn: NYQUAA000 NC1-023-03 525 N. Tryon Street Charlotte, NC 28255
BERKSHIRE ICE CREAM (STATE FARM INSURANCE) 45 Quaker Avenue, Suite 104 Cornwall, NY 12518	Bruce Bryan, Owner
CANTERBURY LIQUOR INC. 45 Quaker Avenue, Suite 102 Cornwall, NY 12518	Ken Brokmerkl

Tenant Name/Tenant Address	Tenant Contact/Tenant Telephone
CHAN'S PEKING (MING QIANG WANG & DAN NIANG ZHENG) Cornwall Plaza 45 Quaker Avenue Cornwall, NY 12518	Zhao Lin
ST. LUKES CORNWALL HOSPITAL 45 Quaker Avenue Suites 100, 205, 206, 207, 208 Cornwall, NY 12518	Michelle, A/P Robert Ross, VP Operations 70 Dubois Street Accounts Payable Newburgh, NY 12550
CURRIER & LAZIER REALTORS Cornwall Plaza 45 Quaker Avenue Cornwall, NY 12518	Peter H. Lazier, VP Operations 367-371 E. Main Street Middletown, NY 10940
DUNKIN DONUTS (AMISH PATEL) 45 Quaker Lane, Suite 105 Cornwall, NY 12518	Amish Patel, Owner
KEY FOOD (GRAND UNION CO.) Cornwall Plaza 45 Quaker Avenue Cornwall, NY 12518	J.G.S. Supermarket Corp. Sam Peltz or Martin Eidelstein 6620 Avenue U Brooklyn, NY 11234
LEO'S RESTAURANT (LEONARDO MANISCHALCHI) Cornwall Plaza 45 Quaker Avenue, Cornwall, NY 12518	Frank of Gaspar 23 Quaker Avenue Cornwall, NY 12518
MAIN STREET CUTTERS SALON (JOHN & MELANIE ANTONELLI) 45 Quaker Avenue, Suite 201 Cornwall, NY 12518	Melanie Antonelli, Owner Sandy, Receptionist

Tenant Name/Tenant Address	Tenant Contact/Tenant Telephone
RDB LAUNDRIES Cornwall Plaza 45 Quaker Avenue Cornwall, NY 12518	Mark Baumgarten, Owner 3505 Wispering Hill Drive Chester, NY 10918
RESPITE CARE HELP FOR THE CAREGIVER (ALLI LANKFORD) 45 Quaker Avenue, Suite 204 Cornwall, NY 12518	Aldethia Lankford
SAPPHIRE SETTLEMENT AGENCY 45 Quaker Avenue, Suite 203 Cornwall, NY 12518	Patricia Cocchia, Esq. Bedrock Title Agency, LLC
TOUCH OF GOLD (ANN PALMERONE) 45 Quaker Avenue, Suite 101 Cornwall, CT 12518	Ann Palmerone
US POSTAL SERVICE Cornwall Plaza 45 Quaker Avenue Cornwall, NY 12518	Bob Donnelly, Postmaster Manager Realty Branch 2 Hudson Place, 5 <sup>th</sup> Floor Hoboken, NJ 07030
WORLD WIDE TRAVEL 45 Quaker Avenue, Suite 103 Cornwall, NY 12518	Nancy or Lucy Gillmire
CVS 29 Quaker Avenue Cornwall, NY 12518	Peter Pery, Lease Admin. Christine, Store Manager Occupancy Expense Dept. 1 CVS Drive Woonsocket, RI 02895

**Adjacent Property Owners**

Lot 3.1 (Firehouse)	Board of Fire Commission Canterbury Fire District 1 Quaker Avenue Cornwall, NY 12518
Lot 47 (Residence)	Frederick and Ann Diehl 18 Warren Court Cornwall, NY 12518
Lot 48 (Residence)	Kevin and Kristine Butler 16 Warren Court Cornwall, NY 12518
Lot 50 (Residence)	Richard Laferera and Iris Thompson 8 Warren Court Cornwall, NY 12518
Lot 56 (Vacant Commercial Land)	Dan Z. Cornwall Holdings Corp. 1 Shinev Court Monroe, NY 10950

**Local Newspaper**

*Cornwall Local*  
35 Hasbrouck Avenue  
Cornwall, NY 12518  
Telephone: (845) 534-7771

**Local TV News Channel**

Cable 6 TV  
27 Industrial Drive  
Middletown, NY 10941  
Telephone: (845) 692-6781

Cable 6 TV  
P.O. Box 887  
Middletown, NY 10940  
Telephone: (845) 692-6781

**Public Water Supplier**

The Village of Cornwall on Hudson  
325 Hudson Street  
Cornwall on Hudson, NY 12520  
Telephone: (845) 534-4200

**Federal and State Elected Officials**

Senator Hillary Rodham Clinton  
United States Senate  
476 Russell Senate Office Building  
Washington, DC 20510

Senator Charles Schumer  
United States Senate  
Senate Office Building  
Washington, DC 20510

Hon. John Hall  
United States House of Representatives  
Washington, DC 20515

Hon. Nancy Calhoun, Assemblyperson  
New York State Assembly  
World Trade Way  
Stewart International Airport  
New Windsor, New York 12553

Hon. Bill Larkin, Senator  
New York State Senate  
1093 Little Britain Road  
New Windsor, New York 12553

**Local Government**

**Town of Cornwall**

Richard Randazzo, Town Supervisor  
Cornwall Town Hall  
183 Main Street  
Cornwall, NY 12518  
Telephone: (845) 534-3760

Neil Novesky, Chairperson  
Planning Board  
Cornwall Town Hall  
183 Main Street  
Cornwall, NY 12518  
Telephone: (845) 534-4200

Alexander Mazzocca, Councilperson  
Cornwall Town Hall  
183 Main Street  
Cornwall, NY 12518  
Telephone: (845) 534-4200

Randolph Clark, Councilperson  
Cornwall Town Hall  
183 Main Street  
Cornwall, NY 12518

Mary Beth Green-Krafft, Councilperson  
Cornwall Town Hall  
183 Main Street  
Cornwall, NY 12518

J Kerry McGuiness, Councilperson  
Cornwall Town Hall  
183 Main Street  
Cornwall, NY 12518

Elaine Tilford Schneer, Town Clerk,  
Registrar  
Cornwall Town Hall  
183 Main Street  
Cornwall, NY 12518

Gary Haugland, Chairman  
Conservation Board  
Cornwall Town Hall  
183 Main Street  
Cornwall, NY 12518

**Orange County**

Hon. Edward A. Diana, County Executive  
Orange County Government Center  
255 Main Street  
Goshen, New York 10924

Donna L. Benson  
County Clerk  
Orange County Government Center  
255 Main Street  
Goshen, New York 10924

Community Development Office  
223 Main Street  
Goshen, New York 10924

Jean M. Hudson, Commissioner  
Health Department  
124 Main Street  
Goshen, New York 10924

Christopher J. Dunleavy, Deputy Commissioner  
Health Department  
124 Main Street  
Goshen, New York 10924

M. William Lahey, Chairman  
Legislature  
Orange County Government Center  
255 Main Street  
Goshen, New York 10924

Laurie M. Whighsil  
Clerk of the Legislature  
Orange County Government Center  
255 Main Street  
Goshen, New York 10924

J. Brett Simmons, Commissioner  
Parks, Recreation & Conservation  
211 Route 416  
Montgomery, New York 12549

David Church, Commissioner

Planning Department  
124 Main Street  
Goshen, New York 10924

Edmund A. Fares, Commissioner  
Public Works Department  
2455-2459 Route 17  
Goshen, New York 10924

**APPENDIX C**  
**Identification of Citizen Participation Activities**

## IDENTIFICATION OF CITIZEN PARTICIPATION ACTIVITIES

Required Citizen Participation (CP) Activities	CP Activity (ies) Occur at this Point
<b>Application Process:</b>	
<ul style="list-style-type: none"> <li>• Prepare Brownfield Site Contact List (BSCL)</li> <li>• Establish document repositories</li> </ul>	At time of preparation of application to participate in BCP
<ul style="list-style-type: none"> <li>• Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day comment period</li> <li>• Publish above ENB content in local newspaper</li> <li>• Publish above ENB content to BSCL</li> </ul>	When NYSDEC determines that BCP application is complete. The 30-day comment period begins on date of publication of notice in ENB. End date of comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice and notice to the BSCL should be provided to the public at the same time.
<b>After Execution of Brownfield Site Cleanup Agreement:</b>	
<ul style="list-style-type: none"> <li>• Prepare Citizen Participation (CP) Plan</li> </ul>	Draft CP Plan must be submitted within 20 days of entering Brownfield Site Cleanup Agreement. CP Plan must be approved by NYSDEC before distribution.
<b>After Remedial Investigation (RI) Work Plan Received:</b>	
<ul style="list-style-type: none"> <li>• Mail fact sheet to BSCL about proposed RI activities and announce 30-day public comment period on draft RI Work Plan</li> </ul>	Before NYSDEC approves RI Work Plan. If RI Work Plan is submitted with application, comment periods will be combined and public notice will include fact sheet. 30-day comment period begins/ends as per dates identified in Fact Sheet.
<b>After RI Completion:</b>	
<ul style="list-style-type: none"> <li>• Mail Fact Sheet to BSCL describing results of RI</li> </ul>	Before NYSDEC approves RI Report.
<b>After Remedial Work Plan (RWP) Received:</b>	
<ul style="list-style-type: none"> <li>• Mail Fact Sheet to BSCL about proposed RWP and announcing 45-day comment period</li> <li>• Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager in consultation with other NYSDEC staff as appropriate)</li> </ul>	Before NYSDEC approves RWP. 45-day comment period begins/ends as per dates identified in Fact Sheet. Public meeting would be held within the 45-day comment period.

<b>Required Citizen Participation (CP) Activities</b>	<b>CP Activity (ies) Occur at this Point</b>
<b>After Approval of RWP:</b> <ul style="list-style-type: none"><li>• Mail Fact Sheet to BSCL summarizing upcoming remedial construction</li></ul>	Before the start of remedial construction.
<b>After Remedial Action Completed:</b> <ul style="list-style-type: none"><li>• Mail Fact Sheet to BSCL announcing that remedial construction has been completed</li><li>• Mail Fact Sheet to BSCL announcing issuance of Certificate of Completion (COC)</li></ul>	At the time NYSDEC approves Final Engineering Report. These two Fact Sheets should be combined when possible if there is not a delay in issuance of COC.