

## DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

RCRA Corrective Action  
Environmental Indicator (EI) RCRIS code (CA725)  
Current Human Exposures Under Control

Facility Name: Former Bausch & Lomb Frame Center  
Facility Address: 465 Paul Road, Rochester, NY 14624-4722  
Facility EPA ID #: NYD002207744

### **BACKGROUND**

#### **Definition of Environmental Indicators (for the RCRA Corrective Action)**

Environmental Indicators (EIs) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EIs developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

#### **Definition of “Current Human Exposures Under Control” EI**

A positive “Current Human Exposures Under Control” EI determination (“YE” status code) indicates that there are no “unacceptable” human exposures to “contamination” (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all “contamination” subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

#### **Relationship of EI to Final Remedies**

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EIs are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The “Current Human Exposures Under Control” EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program’s overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

#### **Duration / Applicability of EI Determinations**

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

  X   If yes - check here and continue with #2 below.

       If no - re-evaluate existing data, or

       If data are not available skip to #6 and enter "IN" (more information needed) status code.

### **Background**

The Bausch & Lomb, Frame Center site is located on Paul Road in the Town of Chili, Monroe County, New York. The facility is an 89 acre industrial campus comprised of one main building (Building 40) located in the northern portion of the property and a smaller building (Building 41) located adjacent to and south of Building 40. Building 40 is approximately 354,000 sq. ft. and housed the production area. Building 41 is approximately 5,000 sq. ft. and has been used for maintenance and storage. The Bausch & Lomb campus is bordered on the north by Paul Road, to the south by Conrail Railroad tracks, to the east by manufacturing facilities and to the west by residential properties and several vacant lots. The area on the north side of Paul Road is also residential. Black Creek is located less than 0.5 miles south of the site. Homes and businesses near the site are connected to public water.

This site is currently listed as site number 8-28-061 on the Registry of Inactive Hazardous Waste Disposal Sites in New York State. It is currently listed as a Class 2 site on the Registry, indicating that the site constitutes a significant threat to public health or the environment. The Registry listing includes approximately 40 acres of the 89-acre campus. The listed area is south of Building 40 and includes Building 41, parking lot, and open field.

The Bausch & Lomb Frame Center was constructed in 1961 and enlarged in 1966. From 1961 to 1997, operations at the facility included production of plastic and metal eyeglass frames involving the use of solvents and plating metals. In 1997 the facility was sold to Paul Road Industrial Center, LLC for development of an industrial park, but Bausch & Lomb retained responsibility for remediation of the site. Building 40 is currently occupied with workers (industrial/commercial tenants). Building 41 is not currently occupied, but is actively being marketed for use.

Between 1990 and 1997, Bausch & Lomb conducted a remedial investigation/feasibility study (RI/FS). The investigation involved sampling of sediment, soil, and groundwater. The primary contaminants found in sediments in an on-site drainage ditch were metals such as cadmium, chromium, lead, mercury, nickel, silver and zinc. In addition to metals, polycyclic aromatic hydrocarbons (PAHs) such as acenaphthene, phenanthrene, fluoranthene were also found in the sediment of the on-site drainage ditch. In November 1995, Bausch & Lomb removed and disposed of approximately 1,175 cubic yards of contaminated sediment and soil from the on-site drainage ditch as an Interim Remedial Measure (IRM). The investigation also revealed that

volatile organic compound (VOC) contaminated groundwater existed both in the shallow overburden soil and the overburden/top of bedrock interface zone at levels exceeding the New York State Groundwater Standards. The primary groundwater contaminants were chlorinated solvents such as trichloroethene (TCE), 1,1,1-trichloroethane, cis-1,2 dichloroethene, and vinyl chloride. Three different VOC source areas were identified.

A Record of Decision (ROD) was signed in February 1998. The ROD called for excavation of contaminated soil from three source areas and long-term groundwater monitoring. In October of 1998, an "Explanation of Significant Difference" (ESD) was signed which required groundwater extraction and treatment and excavation of a reduced volume of soil from the three source areas. Contaminated soil was excavated and removed in June of 1999. The groundwater extraction and treatment system, including on-site and off-site extraction wells, was constructed in the fall of 2000, and is currently operating.

In 2005, New York State initiated a program to evaluate the soil vapor intrusion exposure pathway at sites, like the Former Bausch & Lomb Frame Center, where a remedy to address site-related hazardous waste contamination was previously selected. The soil vapor intrusion evaluation at the Bausch and Lomb site was started in 2005. The evaluation is being conducted in phases.

- Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **“contaminated”**<sup>1</sup> above appropriately protective risk-based “levels” (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
Groundwater	<u>X</u>	___	___	<u>See attached figures for Question 2.</u> <u>Trichloroethene is primary contaminant.</u>
Air (indoors) <sup>2</sup>	___	<u>X</u>	___	<u>See attached figures for Question 2</u>
Surface Soil (e.g., <2 ft)	___	<u>X</u>	___	<u>Sample results did not indicate contamination</u>
Surface Water	___	<u>X</u>	___	<u>Sample results did not indicate contamination</u>
Sediment	___	<u>X</u>	___	<u>Contaminated sediments excavated in 1995.</u>
Subsurf. Soil (e.g., >2 ft)	<u>X</u>	___	___	<u>Trichloroethene up to 650 ppm left on-site 12-ft below ground.</u>
Air (outdoors)	___	<u>X</u>	___	<u>See attached figures for Question 2</u>

<sup>1</sup>“Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based “levels” (for the media, that identify risks within the acceptable risk range).

<sup>2</sup>Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

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- \_\_\_\_\_ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.
- X   If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.
- \_\_\_\_\_ If unknown (for any media) - skip to #6 and enter "IN" status code.

**Rationale and Reference(s):**

**Groundwater** - Groundwater contaminated with trichloroethene and related breakdown compounds is currently present on-site and has migrated off-site. Further contaminant migration is controlled by a extraction and treatment system. The extent of the groundwater plume is shown on the attached figures.

**References:**

**Annual Report**, Former Bausch & Lomb Frame Center Site, Chili, New York, prepared by Blasland, Bouck & Lee, Inc., October 2006.

**Indoor Air** - On-site and off-site vapor intrusion evaluations were conducted. Off-site, two soil vapor samples were collected along the property line of two houses in 2006. These samples were selected because the corresponding residences were located closest to the groundwater plume. Site related contaminants were not detected in either sample. One sample was determined to be invalid due to the presence of elevated concentrations of the helium tracer gas in the sample indicating that the surface seal was leaking. Confirmatory off-site soil vapor sampling was performed in June 2007, and site-related contaminants were not detected in these samples. Based on the soil vapor results, it appears that the soil vapor plume is not migrating to the residential properties and thus indoor air sampling at the residences is not planned at this time. The off-site soil vapor results are summarized in Tables 1, 2, and 3.

On-site, sub-slab soil vapor samples were collected in several locations in Building 40 and Building 41 in April 2006. Based solely on the sub-slab soil vapor results for trichloroethene and tetrachloroethene, several sub-slab depressurization systems were installed in both buildings. The purpose of these depressurization systems would be to limit the migration of vapors from the sub-slab area. The depressurization system for Building 41 is currently complete. In March 2007, additional sub-slab soil vapor and indoor air samples were collected from new locations within Building 40. Although trichloroethene and other chlorinated compounds were found in the subslab soil vapor at concentrations that exceeded NY State standards, their concentrations in the indoor air were not at levels considered contaminated according to New York State Department of Health guideline values. The April 2006 and March 2007 indoor air results are

summarized in the attached Figure 6. In August 2007, Bausch & Lomb installed additional sub-slab depressurization systems in two areas of Building 40 due to the presence of contaminants in the sub-slab soil vapor. Radius of influence tests should be completed shortly for Building 40, followed by verification sampling by December 2007.

**References:**

E-mail message from Frank Sower of NYSDEC to Carol Stein of EPA, regarding on-site indoor air sampling at Bausch & Lomb, dated September 10, 2007

Analytical Laboratory Report - June 2007 Off-Site Resampling, prepared by STL Burlington for Arcadis BBL, June 29, 2007.

**DRAFT** Interim Vapor Mitigation Report for Pilot Study Evaluation and Additional Sampling Former Bausch & Lomb Frame Center Chili, New York, prepared by Arcadis of New York, Inc., June 8, 2007.

Letter from Frank Chiappone of Bausch & Lomb to Frank Sowers of NYSDEC regarding Potential Vapor Pathway Evaluation, Carriage House Estate Properties, Former Bausch & Lomb Frame Center, Chili, New York, dated August 11, 2006.

**Surface Soil** - Surface soil sample results in the referenced reports did not demonstrate the presence of surface soil contamination.

**References:**

**Remedial Investigation Report;** Bausch & Lomb Frame Center, Chili, New York, prepared by Blasland & Bouck Engineers, P.C., October 1993.

**Remedial Investigation Addendum Report;** Bausch & Lomb Frame Center, Chili, New York, prepared by Blasland, Bouck & Lee, Inc., June 1995.

**Source Area Delineation Program,** Bausch & Lomb Frame Center, Chili, New York, prepared by McLaren/Hart, Inc. (undated, but received by NYSDEC on May 15, 1997).

**Surface Water** - Surface water sample results in the referenced reports did not demonstrate the presence of surface water contamination.

**References:**

**Remedial Investigation Report;** Bausch & Lomb Frame Center, Chili, New York, prepared by Blasland & Bouck Engineers, P.C., October 1993.

Letter from Frank Chiappone of Bausch & Lomb to Dylan Keenen of NYSDEC regarding Surface-Water and Sediment Sampling Results, Former Bausch & Lomb Frame Center Site, Chili, New York, dated November 27, 2000.

**Sediment** - Contaminated sediments were excavated in 1995.

**References:**

**Record Of Decision**, Bausch & Lomb Frame Center Site, Chili, Monroe County, New York, Site Number 8-28-061, February 1998.

**Sub-surface Soil** - Soil excavation in each of the three source areas was completed in 1999. After the excavation was finished, trichloroethene remained at concentrations up to 650 ppm in the BL-9S source area starting at approximately 12-ft below grade.

**References:**

**Final Engineering Report Source Area Remedial Measure Addendum**, Bausch & Lomb Frame Center, Chili, New York, prepared by Blasland, Bouck & Lee, Inc., January 2001).

**Outdoor Air** - Outdoor air samples collected on March 13, 2007 and analyzed for volatile organic compounds. Results did not indicate site related outdoor air contamination (see attached figures).

**References:**

**DRAFT** Interim Vapor Mitigation Report for Pilot Study Evaluation and Additional Sampling Former Bausch & Lomb Frame Center Chili, New York, prepared by Arcadis of New York, Inc., June 8, 2007.

3. Are there **complete pathways** between “contamination” and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential **Human Receptors** (Under Current Conditions)

<b>“Contaminated” Media</b>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food <sup>3</sup>
Groundwater	No	No	No	No	No	No	No
Air (indoors)	No	No	No	No	No	No	No
Soil (surface, e.g., <2 ft)	No	No	No	No	No	No	No
Surface Water	No	No	No	No	No	No	No
Sediment	No	No	No	No	No	No	No
Soil (subsurface e.g., >2 ft)	No	No	No	No	No	No	No
Air (outdoors)	No	No	No	No	No	No	No

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors’ spaces for Media which are not “contaminated”) as identified in #2 above.
2. Enter “yes” or “no” for potential “completeness” under each “Contaminated” Media -- Human Receptor combination (Pathway).

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<sup>3</sup> Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

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Note: In order to focus the evaluation to the most probable combinations some potential “Contaminated” Media - Human Receptor combinations (Pathways) do not have check spaces (“\_\_\_”). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

- If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter “YE” status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).
- If yes (pathways are complete for any “Contaminated” Media - Human Receptor combination) - continue after providing supporting explanation.
- If unknown (for any “Contaminated” Media - Human Receptor combination) - skip to #6 and enter “IN” status code

**Rationale and Reference(s):**

The groundwater plume does not extend to existing residences and the area is served by public water. Additionally, site-related contaminants were not found in off-site soil vapor samples collected adjacent to residences in sampling conducted during 2006/2007. There is currently no day-care at the former Bausch & Lomb site. Construction activities at the site are controlled by deed restrictions and there is no off-site construction currently taking place within the contaminated area. There currently are no residences located on the off-site lots located directly above the groundwater plume. Trespassers and recreational users are not expected to encounter contaminated groundwater or subsurface soils and the contaminated area is not currently used for food production.

- 4 Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be “**significant**”<sup>4</sup> (i.e., potentially “unacceptable” because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable “levels” (used to identify the “contamination”); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable “levels”) could result in greater than acceptable risks)?

- If no (exposures can not be reasonably expected to be significant (i.e., potentially “unacceptable”) for any complete exposure pathway) - skip to #6 and enter “YE” status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to “contamination” (identified in #3) are not expected to be “significant.”

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<sup>4</sup> If there is any question on whether the identified exposures are “significant” (i.e., potentially “unacceptable”) consult a human health Risk Assessment specialist with appropriate education, training and experience.

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\_\_\_\_\_ If yes (exposures could be reasonably expected to be “significant” (i.e., potentially “unacceptable”) for any complete exposure pathway) - continue after providing a description (of each potentially “unacceptable” exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to “contamination” (identified in #3) are not expected to be “significant.”

\_\_\_\_\_ If unknown (for any complete pathway) - skip to #6 and enter “IN” status code

**Rationale and Reference(s):**

N/A

5 Can the “significant” **exposures** (identified in #4) be shown to be within **acceptable** limits?

\_\_\_\_\_ If yes (all “significant” exposures have been shown to be within acceptable limits) - continue and enter “YE” after summarizing and referencing documentation justifying why all “significant” exposures to “contamination” are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

\_\_\_\_\_ If no (there are current exposures that can be reasonably expected to be “unacceptable”)- continue and enter “NO” status code after providing a description of each potentially “unacceptable” exposure.

\_\_\_\_\_ If unknown (for any potentially “unacceptable” exposure) - continue and enter “IN” status code

**Rationale and Reference(s):**

N/A

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

  **X**   YE - Yes, “Current Human Exposures Under Control” has been verified. Based on a review of the information contained in this EI Determination, “Current Human Exposures” are expected to be “Under Control” at the Bausch & Lomb Frame Center facility, EPA ID # NYD002207744, located at 465 Paul Road, in the Town of Chili, NY under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

\_\_\_\_\_ NO - “Current Human Exposures” are NOT “Under Control.”

\_\_\_\_\_ IN - More information is needed to make a determination.



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Completed by: Carol Stein Date: 9/26/07  
Carol Stein, P.E.  
Environmental Engineer  
RCRA Programs Branch  
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Chief: Adolph Everett Date: 9/27/07  
Adolph Everett, P.E.  
Chief  
RCRA Programs Branch  
USEPA Region 2

Director: Walter Mugdan Date: 9/27/07  
Walter Mugdan, Director.  
Division of Environmental Planning and Policy  
USEPA Region 2

**Locations where References may be found:**

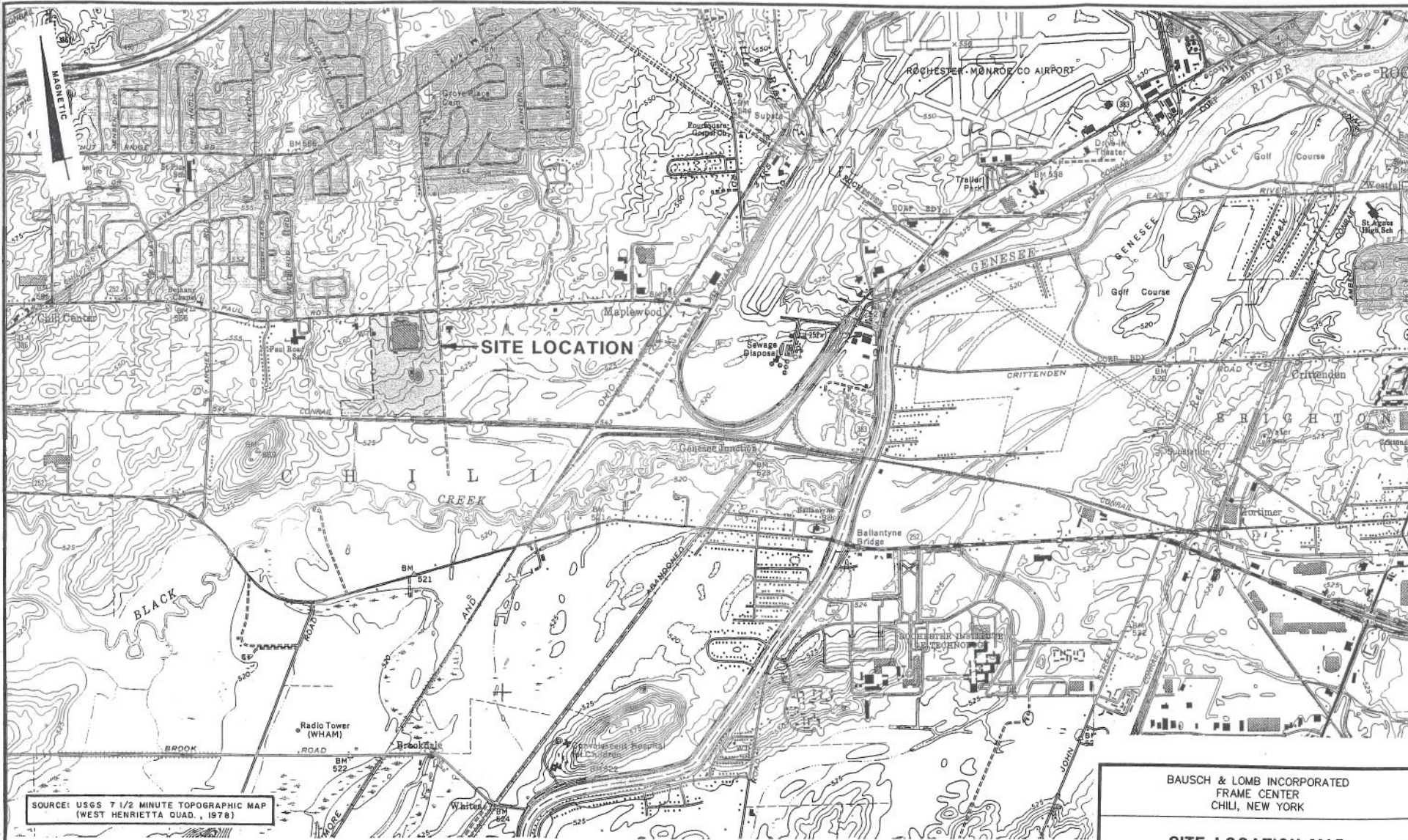
Region 8  
New York State Department of Environmental Conservation  
6274 E. Avon-Lima Road  
Avon, New York 14414-9519

**Contact telephone and e-mail numbers:**

NYSDEC  
Mr. Frank Sowers  
(585) 226-5357  
[flsowers@gw.dec.state.ny.us](mailto:flsowers@gw.dec.state.ny.us)

USEPA  
Carol Stein  
(212) 637-4181  
[stein.carol@epa.gov](mailto:stein.carol@epa.gov)

**FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.**



SOURCE: USGS 7 1/2 MINUTE TOPOGRAPHIC MAP  
(WEST HENRIETTA QUAD., 1978)



BAUSCH & LOMB INCORPORATED  
FRAME CENTER  
CHILI, NEW YORK

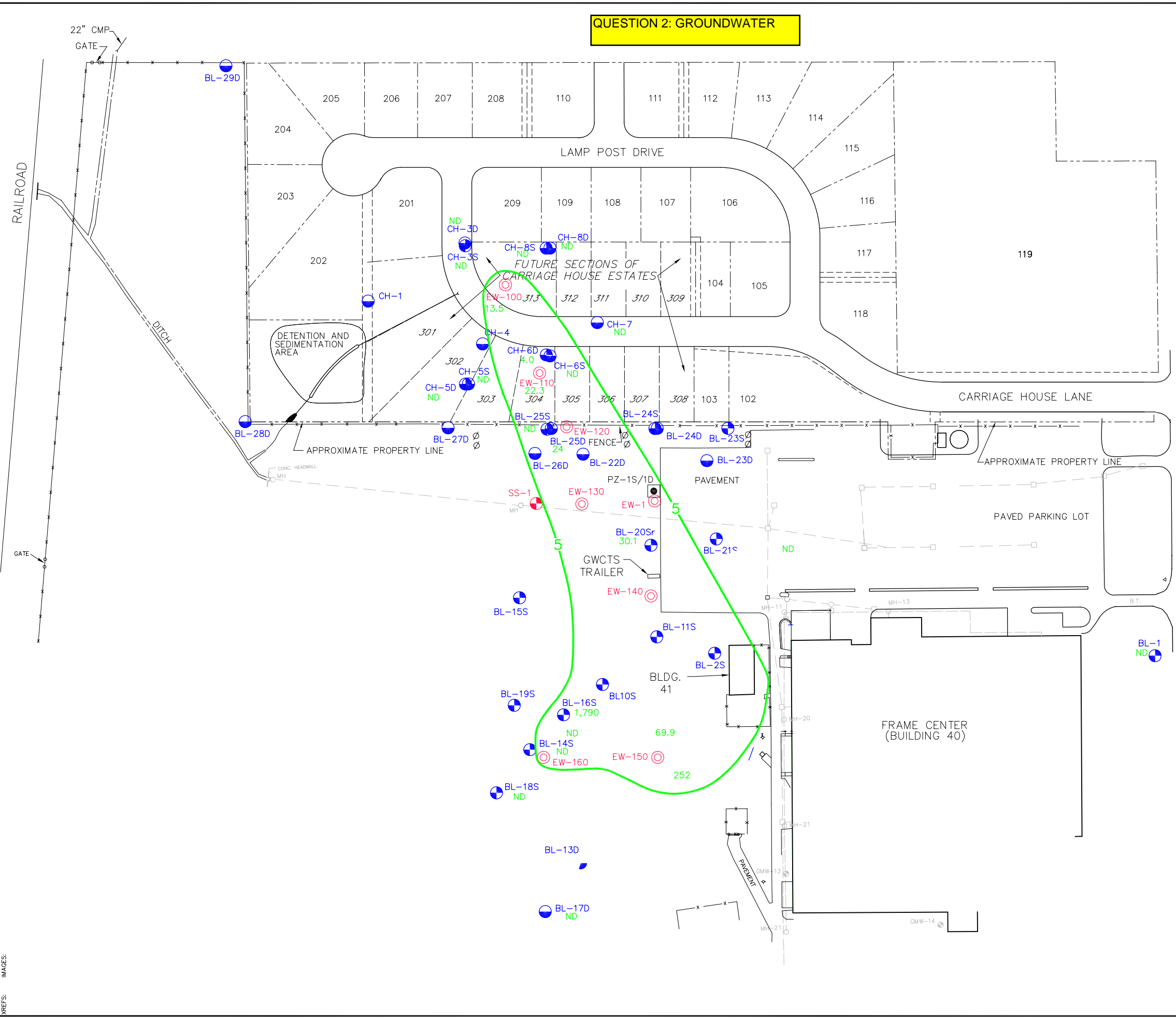
SITE LOCATION MAP

**BBL** BLASLAND, BOUCK & LEE, INC.  
engineers & scientists

FIGURE  
1



**QUESTION 2: GROUNDWATER**



- LEGEND**
- MONITORING WELL INSTALLED IN SHALLOW OVERBURDEN
  - MONITORING WELL INSTALLED AT BASE OF OVERBURDEN/TOP OF ROCK
  - STAINLESS STEEL WELL POINT
  - CATCH BASIN
  - MANHOLE
  - 6"Ø EXTRACTION WELL
  - 1"Ø NESTED PIEZOMETER
  - APPROXIMATE ADJACENT TRACT BOUNDARY
  - APPROXIMATE PROPOSED LOT BOUNDARY
  - APPROXIMATE EXISTING LOT BOUNDARY
  - APPROXIMATE EASEMENT BOUNDARY
  - FENCE
  - RG&E POWER POLE
  - 5 INFERRED TCE ISOCONCENTRATION CONTOUR (IN PARTS PER BILLION [ppb]). BASED ON FIGURE 4 OF THE BBL OCTOBER 2000 GROUNDWATER REMEDIAL DESIGN/REMOVAL ACTION WORK PLAN MODIFIED WITH THE RESULTS OF THE APRIL 2005 QUARTERLY SAMPLING RESULTS.
  - 160 TCE CONCENTRATION IN ppb AS MEASURED IN THE RESPECTIVE GROUNDWATER MONITORING WELL (ND) - NOT DETECTED AT OR ABOVE THE CONCENTRATION AS SHOWN IN TABLE 1.

- NOTES:**
1. SITE PLAN FOR THE ON-SITE AREAS COMPILED FROM EXISTING SITE PLANS PROVIDED BY BAUSCH & LOMB AND SITE SURVEYS TO LOCATE ALL MONITORING WELLS BY BB&L DATED 6/17/92, REVISED 4/13/94, 8/13/98, 10/28-29/98, AND 10/11/00.
  2. LOCATIONS OF PROPERTY LINES, SUBSURFACE UTILITIES AND LIMITS OF BUILDINGS AND PARKING AREAS ARE APPROXIMATE.
  3. ADJACENT PROPERTY INFORMATION FROM TRACT MAPS PREPARED BY LADIEU ASSOCIATES P.C.; LOT NUMBERS 101 TO 118 AND 201 TO 208 WERE DESIGNATED BY LADIEU ASSOCIATES P.C.; LOTS IDENTIFIED AS 301 TO 313 ARE IDENTIFIED HERE FOR CONVENIENCE ONLY. INVERT ELEVATION DATUM IS UNKNOWN.



**BAUSCH & LOMB INCORPORATED**  
FORMER FRAME CENTER  
CHILI, NEW YORK  
**ANNUAL REPORT**

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**5 ppb TCE DISTRIBUTION**  
**APRIL 2006**

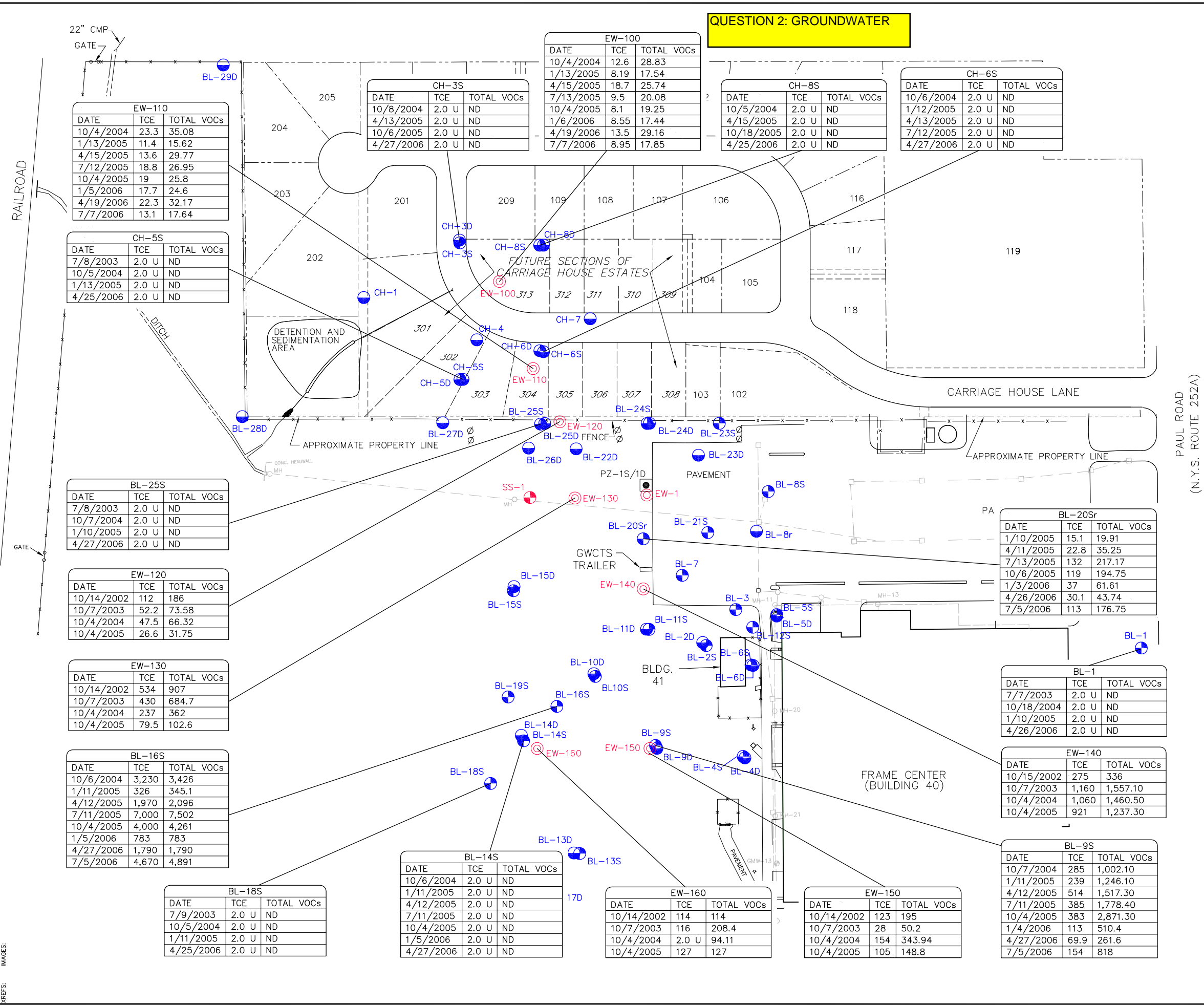
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**BBL**  
an ARCADIS company

FIGURE  
**1**

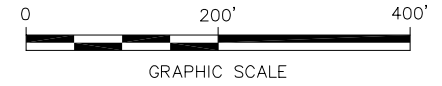
SVR-95-RCB MLT AMS L: ON= REF= PENTABLE.PLT FULL CTB PRINTED: 11/2/2006 10:26 AM BY: WONES  
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 AREFS: IMAGES:

**QUESTION 2: GROUNDWATER**



- LEGEND:**
- MONITORING WELL INSTALLED IN SHALLOW OVERBURDEN
  - MONITORING WELL INSTALLED AT BASE OF OVERBURDEN/TOP OF ROCK
  - STAINLESS STEEL WELL POINT
  - CATCH BASIN
  - MANHOLE
  - 6"Ø EXTRACTION WELL
  - 1"Ø NESTED PIEZOMETER
  - APPROXIMATE ADJACENT TRACT BOUNDARY
  - APPROXIMATE PROPOSED LOT BOUNDARY
  - APPROXIMATE EXISTING LOT BOUNDARY
  - APPROXIMATE EASEMENT BOUNDARY
  - FENCE
  - RG&E POWER POLE
- ALL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L) EQUIVALENT TO PARTS PER BILLION (ppb)  
 ND = NOT DETECTED  
 U = NOT DETECTED BELOW GIVEN INSTRUMENT DETECTION LIMIT

- NOTES:**
- SITE PLAN FOR THE ON-SITE AREAS COMPILED FROM EXISTING SITE PLANS PROVIDED BY BAUSCH & LOMB AND SITE SURVEYS TO LOCATE ALL MONITORING WELLS BY BB&L DATED 6/17/92, REVISED 4/13/94, 8/13/98, 10/28-29/98, AND 10/11/00.
  - LOCATIONS OF PROPERTY LINES, SUBSURFACE UTILITIES AND LIMITS OF BUILDINGS AND PARKING AREAS ARE APPROXIMATE.
  - ADJACENT PROPERTY INFORMATION FROM TRACT MAPS PREPARED BY LADIEU ASSOCIATES P.C.; LOT NUMBERS 101 TO 118 AND 201 TO 208 WERE DESIGNATED BY LADIEU ASSOCIATES P.C.; LOTS IDENTIFIED AS 301 TO 313 ARE IDENTIFIED HERE FOR CONVENIENCE ONLY. INVERT ELEVATION DATUM IS UNKNOWN.



**BAUSCH & LOMB INCORPORATED**  
 FORMER FRAME CENTER  
 CHILI, NEW YORK  
**ANNUAL REPORT**  
**QUARTERLY GROUNDWATER**  
**ANALYTICAL RESULTS SUMMARY**  
**SHALLOW OVERBURDEN**

an ARCADIS company

FIGURE  
**2**

SVR-R5-RCB LIP WLJ L: ON\* OFF # REF\*  
 F: ACTIVE-DWG-ACT-34216090-34216221.DWG SAVED:10/3/2006 11:18 AM LAYOUT:Layout1 PAGESETUP:PAGESETUP PENTABLE:PLT-FULL.CTB PRINTED:11/3/2006 10:27 AM BY:WJONES  
 AREFS:





**QUESTION 2: OFF-SITE INDOOR AIR**

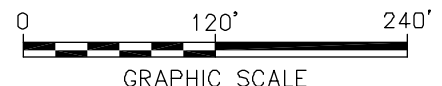


**LEGEND**

- SOIL VAPOR SAMPLING LOCATION
- MONITORING WELL INSTALLED IN SHALLOW OVERBURDEN
- MONITORING WELL INSTALLED AT BASE OF OVERBURDEN/TOP OF ROCK
- ABANDONED WELL (SEE NOTE 5)
- CATCH BASIN
- MANHOLE
- 6"Ø EXTRACTION WELL
- APPROXIMATE ADJACENT TRACT BOUNDARY
- APPROXIMATE PROPOSED LOT BOUNDARY
- APPROXIMATE EXISTING LOT BOUNDARY
- APPROXIMATE EASEMENT BOUNDARY
- FENCE
- RG&E POWER POLE

**NOTES:**

1. SITE PLAN FOR THE ONSITE AREAS COMPILED FROM EXISTING SITE PLANS PROVIDED BY BAUSCH & LOMB AND SITE SURVEYS TO LOCATE ALL MONITORING WELLS BY BB&L DATED 6/17/92, REVISED 4/13/94, 8/13/98, 10/28-29/98, AND 10/11/00.
2. LOCATIONS OF PROPERTY LINES, SUBSURFACE UTILITIES AND LIMITS OF BUILDINGS AND PARKING AREAS ARE APPROXIMATE.
3. ADJACENT PROPERTY INFORMATION FROM TRACT MAPS PREPARED BY LADIEU ASSOCIATES P.C.; LOT NUMBERS 101 TO 118 AND 201 TO 208 WERE DESIGNATED BY LADIEU ASSOCIATES P.C.; LOTS IDENTIFIED AS 301 TO 313 ARE IDENTIFIED HERE FOR CONVENIENCE ONLY.
4. AERIAL PHOTOGRAPH FROM NYS GIS CLEARINGHOUSE WEB SITE, DATED APRIL 2002.
5. MONITORING WELL CH-2 WAS DECOMMISSIONED ON 12/4/98 AS PER PROPERTY OWNER.



BAUSCH & LOMB INCORPORATED  
FORMER FRAME CENTER  
CHILI, NEW YORK

**SUBSURFACE SOIL VAPOR SAMPLING**



FIGURE  
**1**

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**TABLE 1  
SUBSURFACE VAPOR ANALYTICAL RESULTS  
CARRIAGE HOUSE ESTATE PROPERTIES**

**FORMER BAUSCH & LOMB FRAME CENTER  
CHILI, NEW YORK**

Location Sample Date Area	VI Sample Locations		
	CHSV-1 6/21/06 Carriage House	CHSV-1 (DUP) 6/21/06 Carriage House	CHSV-2 6/21/06 Carriage House
<b>VOCs</b>			
1,1,1-Trichloroethane	2 U	2 U	2 U
1,1-Dichloroethane	2 U	2 U	2 U
cis-1,2-Dichloroethene	2 U	2 U	2 U
Freon 113	2 U	2 U	2 U
Trichloroethene	2 U	2 U	2 U
Vinyl chloride	2 U	2 U	2 U
Total VOCs	--	--	--
<b>Tracer Gas (%)</b>			
Helium (tracer gas)	3.7UJ	5.0J	17J

**Notes:**

-- = Not Detected.

U = The compound was analyzed for but not detected. The associated number is the quantitation limit.

J = The concentration is estimated.

Volatile organic compound (VOC) results in micrograms per cubic meter (ug/m3).



TABLE 2

TO-14/15  
Result Summary

CLIENT SAMPLE NO.

CHSV-2R

Lab Name: STL Burlington

SDG Number: NY120583

Case Number:

Sample Matrix: AIR

Lab Sample No.: 715236

Date Analyzed: 6/26/2007

Date Received: 6/22/2007

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86



Table 3  
 TO-14/15  
 Result Summary

CLIENT SAMPLE NO.

CHSV-DUP062107

Lab Name: STL Burlington

SDG Number: NY120583

Case Number:

Sample Matrix: AIR

Lab Sample No.: 715237

Date Analyzed: 6/26/2007

Date Received: 6/22/2007

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86

**QUESTION 2: ON-SITE INDOOR AIR and OUTDOOR AIR**

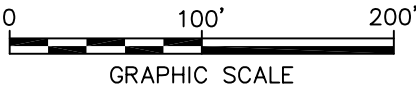
**LEGEND:**

- INTERIOR WALL
- LIMIT OF OCCUPANCY
- ⊙ BUILDING COLUMN AND IDENTIFIER
- PROPOSED ADDITION SYSTEM LOCATION
- APPROXIMATE SYSTEM LOCATION
- SUB-SLAB VAPOR SAMPLING LOCATION (APRIL 2006)
- ▲ SUB-SLAB SAMPLING LOCATION (MARCH 2007)
- ▲ INDOOR AIR SAMPLING LOCATION (MARCH 2007)
- ▲ AMBIENT AIR SAMPLING LOCATION (MARCH 2007)
- E CONCENTRATION IS BEYOND THE CALIBRATION RANGE
- J ESTIMATED CONCENTRATION

SAMPLING LOCATION WHERE MONITORING AND/OR MITIGATION IS REQUIRED BASED ON COMPARISON TO NYSDOH DECISION MATRICES (OCTOBER 2006).

**NOTES:**

1. ALL LOCATIONS APPROXIMATE.
2. BASE MAP PREPARED FROM FIGURE 3 OF THE REMEDIAL INVESTIGATION REPORT (REVISED OCTOBER 1993) PREPARED BY BLASLAND, BOUCK & LEE, INC. MODIFIED BY SITE OBSERVATIONS ON DECEMBER 13, 2005.



**BAUSCH & LOMB  
FORMER FRAME CENTER  
CHILI, NEW YORK  
VAPOR INTRUSION PILOT STUDY**

**DETECTED VOCs IN INDOOR AIR  
AND SUB-SLAB SOIL VAPOR**



SV-9	
CONSTITUENT	3/13/2007
1,1,1-Trichloroethane	8.21
1,2,4-Trimethylbenzene	21.6 E J
2-Butanone	2.68
Acetone	45.1 E J
Benzene	0.995
Freon 113	41.8 E J
Tetrachloroethene	1.96
Toluene	40.3 E J
Trichloroethene	0.522

IA-3	
CONSTITUENT	3/13/2007
1,2,4-Trimethylbenzene	3.2
2-Butanone	5.04 J
Acetone	93.2 E J
Benzene	0.536
Methylene chloride	1.75
Tetrachloroethene	2.45
Toluene	5.08
Vinyl Chloride	1.19 J

IA-4	
CONSTITUENT	3/13/2007
1,2,4-Trimethylbenzene	1.72 J
2-Butanone	2.05 J
2-Hexanone	0.863
Acetone	55.5 E J
Benzene	0.699
Tetrachloroethene	1.22
Toluene	4.89
Trichloroethene	0.307

SV-4	
CONSTITUENT	4/6/2006
1,1,1-Trichloroethane	13.9
1,1-Dichloroethane	51.7
1,2,4-Trimethylbenzene	69.2
Acetone	115
Benzene	108
Chloroform	95.1
cis-1,2-Dichloroethene	13.9
Freon 113	125,000 E J
Methylene Chloride	41.9
Tetrachloroethene	7,040 E J
Toluene	380
Trichloroethene	925 E J

SV-12	
CONSTITUENT	3/13/2007
1,1,1-Trichloroethane	4.32
1,2,4-Trimethylbenzene	36.6 E J
2-Butanone	3.59 J
Acetone	24.9 E J
Benzene	1.66
Freon 113	1,210 E J
Tetrachloroethene	1.32
Toluene	90.7 E J
Trichloroethene	1.82

SV-13	
CONSTITUENT	3/13/2007
1,1,1-Trichloroethane	2.9
1,2,4-Trimethylbenzene	6.23
Acetone	33.7 E J
Benzene	1.13
Freon 113	129 E
Tetrachloroethene	62
Toluene	7.71
Trichloroethene	17.1

SV-3	
CONSTITUENT	4/7/2006
1,1,1-Trichloroethane	19.2
1,2,4-Trimethylbenzene	12.9
Benzene	7.82
Carbon Disulfide	9.45
Freon 113	386
Tetrachloroethene	114
Toluene	27.5
Trichloroethene	21.8

IA-5	
CONSTITUENT	3/13/2007
1,2,4-Trimethylbenzene	3.83
2-Butanone	3.18
Acetone	21.8 E J
Benzene	0.957 J
Freon 113	2.98
Tetrachloroethene	1.33
Toluene	3.16

SV-11	
CONSTITUENT	3/13/2007
1,2,4-Trimethylbenzene	16
trans-1,2-Dichloroethene	1.48
1,1-Dichloroethane	1.89
1,1-Dichloroethene	16.4
2-Butanone	7.24
Acetone	218 E J
Benzene	2.32
Freon 113	11,300 E J
Methylene chloride	3.18
Tetrachloroethene	372 E J
Toluene	55.3 E J
Trichloroethene	27.4

SV-2	
CONSTITUENT	4/7/2006
1,2,4-Trimethylbenzene	31.4
2-Butanone	33.9
Acetone	174
Benzene	103
Carbon Disulfide	21.3
Chloroform	15.1
Freon 113	55.8
Toluene	284

IA-1	
CONSTITUENT	3/13/2007
1,2,4-Trimethylbenzene	1.28
2-Butanone	2.23
Acetone	9.47
Benzene	0.654 J
Toluene	2.08
Trichloroethene	0.264

SV-6	
CONSTITUENT	3/13/2007
1,1,1-Trichloroethane	2.27
1,2,4-Trimethylbenzene	12.6 J
cis-1,2-Dichloroethene	5.18
2-Hexanone	3.96
Acetone	19.7
Benzene	1.49
Tetrachloroethene	20.3
Toluene	174 E J
Trichloroethene	55.8 E

SV-1	
CONSTITUENT	4/7/2006
1,1-Dichloroethane	589 E J
1,1-Dichloroethene	942 E J
1,2,4-Trimethylbenzene	33.9 J
Benzene	202 J
Carbon Disulfide	15.8 J
cis-1,2-Dichloroethene	9,420 E J"
Methylene Chloride	79.7 J
Toluene	374 J
trans-1,2-Dichloroethene	1,400 E J
Trichloroethene	1,460 E J

SV-5	
CONSTITUENT	4/6/2006
Benzene	59
Freon 113	81,400 E J
Toluene	105
Trichloroethene	1,170 E J

IA-2	
CONSTITUENT	3/13/2007
1,2,4-Trimethylbenzene	3.98
2-Butanone	10.2 J
2-Hexanone	3.72 J
Acetone	51.5 E J
Toluene	3.04 J

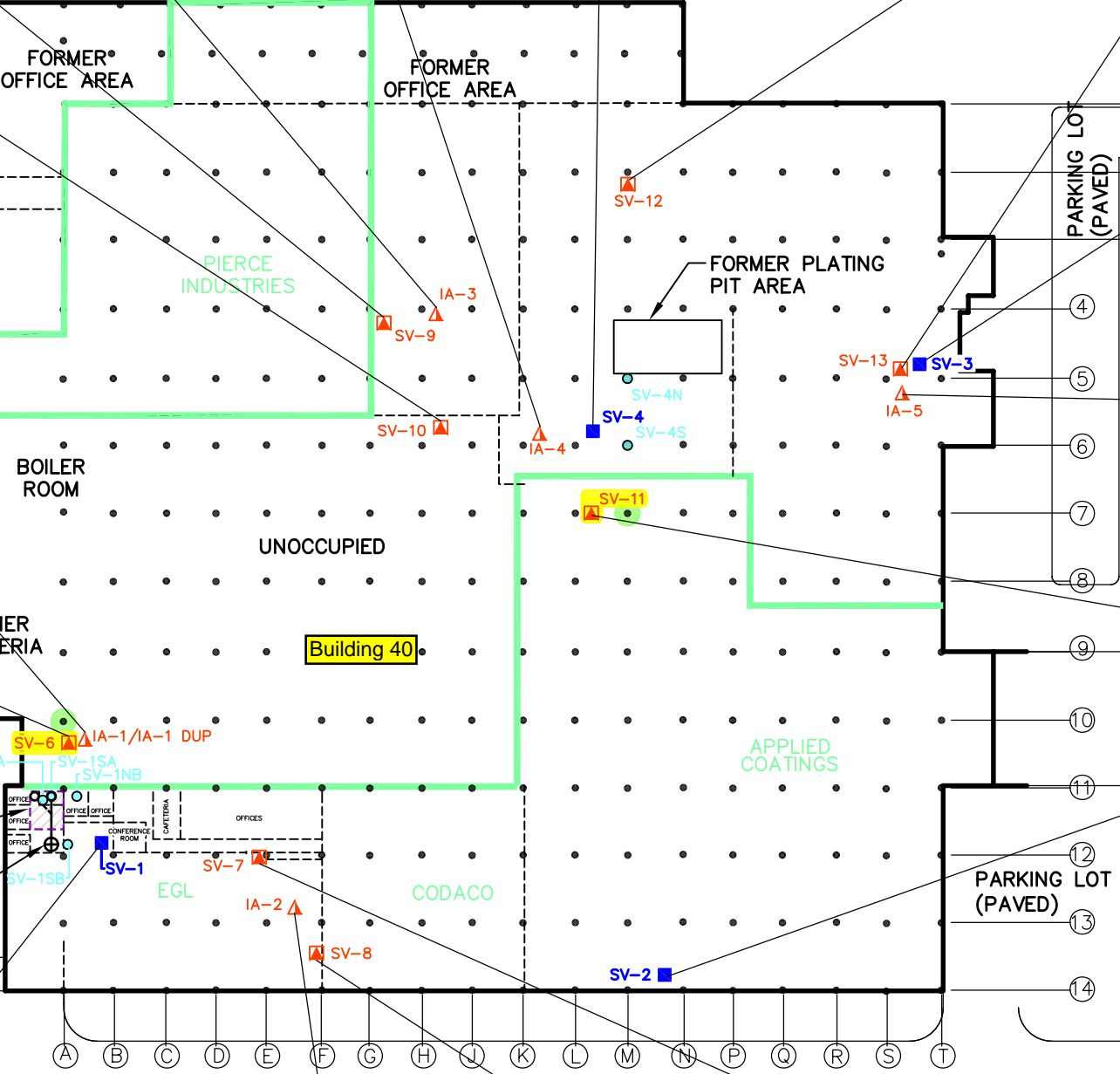
SV-8	
CONSTITUENT	3/13/2007
1,2,4-Trimethylbenzene	9.77
2-Butanone	2.87
Acetone	135 E J
Benzene	3.13
Tetrachloroethene	5.31
Toluene	123 E J
Trichloroethene	2.81

SV-7	
CONSTITUENT	3/13/2007
1,1,1-Trichloroethane	1.84
1,2,4-Trimethylbenzene	4.25
2-Butanone	2.52
2-Hexanone	2.32
Acetone	26.8 E J
Benzene	0.405
Toluene	8.77
Trichloroethene	0.824

AA-1	
CONSTITUENT	3/13/2007
1,2,4-Trimethylbenzene	1.17 J
2-Butanone	0.695 J
Acetone	9.32 J
Benzene	0.348 J
Toluene	0.685 J

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FORMER OFFICE AREA  
FORMER OFFICE AREA  
PIERCE INDUSTRIES  
FORMER PLATING PIT AREA  
PARKING LOT (PAVED)  
BOILER ROOM  
UNOCCUPIED  
FORMER CAFETERIA  
FORMER ACID AND SOLVENT STORAGE ROOMS  
APPROXIMATE LOCATION OF FORMER DRY WELL AND DRAINS  
EGE  
CODACO  
APPLIED COATINGS  
PARKING LOT (PAVED)



**Building 40**

**Building 41**