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September 28, 2006
Ref. No. 31128-035

Mr. Jaspal Walia
Project Manager
New York State Department of Environmental Conservation, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Subject: Supplemental Area B Indoor Air and Sub-Slab Soil Gas Sampling Plan
Leica, Inc. Site; Erie County, Cheektowaga, NY
Inactive Hazardous Waste Disposal Site No. 915156

Dear Mr. Walia:

As we discussed during our August meeting at the former Leica facility, we are providing the enclosed Supplemental Area B Indoor Air and Sub-Soil Gas Sampling Plan for your review and approval. Once we have received your approval we will implement the plan.

Please feel free to call me if you have any questions at 801-303-1092 or 860-355-8194 (dial 1 for name list and enter robertmcpeak).

Sincerely,
Energy*Solutions*, LLC

Robert E. McPeak, Jr., P.E., LEP
Department Manager, Environmental Services

cc: D. Simkowski
A. Szklany
C. Grabinski
R. Downey
G. Hollerbach
C. O'Conner
E. Doubleday

SUPPLEMENTAL AREA B INDOOR AIR AND SUB-SLAB SOIL GAS SAMPLING PLAN

FOR THE

LEICA, INC. SITE
CHEEKTOWAGA, NEW YORK

Prepared for:

LEICA, INC.
OPTICAL PRODUCTS DIVISION
2345 WAUKEGAN ROAD
BANNOCKBURN, IL 60015

PREPARED BY
Energy*Solutions*, LLC
143 WEST STREET
NEW MILFORD, CT 06776

SEPTEMBER 2006

ENERGY*SOLUTIONS*

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Robert E. McPeak, Jr., P.E., LEP
Department Manager, Environmental Services

9/28/06
Date

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1. Site Location Map, Outdoor Air Sample Location
2. Sample Location Map, Indoor Air Quality Samples

ATTACHMENT 1

Indoor Air Quality Questionnaire and Building Inventory Form

ATTACHMENT 2

Soil Gas Survey

1.0 INTRODUCTION

Energy*Solutions* has prepared this scope of work on behalf of Leica, Inc. (Leica) for the completion of a Vapor Intrusion Investigation at the Samson Distributing warehouse facility located at the intersection of Eggert and Sugar Roads in Cheektowaga, NY (the Site). The facility was formerly operated by Leica for the manufacturing of optical instruments. Samson currently utilizes the facility for warehousing of a variety of manufactured household goods. A Site Location map is provided as Figure 1.

1.1 Objectives

Vapor intrusion is the process by which volatile chemicals migrate through the soil column from a subsurface source (subsurface vapor) into the indoor air of a building. The scope of work presented in this Work Plan was designed to facilitate the collection of vapor data to evaluate the potential for vapor intrusion at the Site. Contaminants of concern detected in soils beneath the building at concentrations above the site Remedial Action Objectives (RAOs) include trichloroethylene, 1,1,1 trichloroethane, and Xylene as well as other VOCs detected in soils and soil vapor beneath the Samson facility at lower concentrations. The objective of the sampling effort will be to assess the concentrations of these contaminants within the sub-slab soil gas and also within the indoor air at the facility.

Specifically, eight sub-slab vapor samples, four indoor air samples and an outdoor air sample will be collected as part of this scope of work to characterize soil vapor below the building, and the air within, and surrounding the building. This vapor intrusion survey will be conducted in accordance with the New York State Department of Health (NYSDOH) Draft document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", dated February 2005 (NYSDOH, 2005). Sub-slab vapor samples will be collected in the locations specified in this plan which were selected based on available soil gas data, knowledge of the specific sensitive uses of the building (areas where employees congregate) and knowledge of the location of soil contamination beneath the building floor.

2.0 SCOPE OF WORK

In order to meet the objectives of this scope of work, the following tasks will be completed:

- Task 1 – Pre-Sampling Building Survey and Product Inventory; and
- Task 2 – Sample Collection and Analysis.

A detailed description of each is provided below.

2.1 Task 1 – Pre-Sampling Building Survey and Product Inventory

In accordance with the NYSDOH Draft Guidance (NYSDOH, 2005), a pre-sampling building survey will be performed prior to sampling within the building. The purpose of this pre-sampling building survey is to identify, and minimize conditions that may interfere with the collection of accurate and representative samples. Potential conditions that may interfere with sample collection may include, but are not limited to the storage of products containing volatile organic compounds (VOCs), freshly painted surfaces, new carpet, the use of petroleum products, etc. The building survey will evaluate the type of building structure, floor layout, airflow patterns, and the physical condition of the building. Additionally, a product inventory will be completed to identify any potential sources of indoor air contamination by characterizing the occurrence and use of chemicals and products throughout the building. All information gathered during the pre-sampling building survey and the product inventory will be recorded on the NYSDOH Indoor Air Quality Questionnaire and Building Inventory Form (provided as Attachment 1). As shown on Attachment 1, the following information will be recorded:

- Owner or landlord information;
- Building characteristics (e.g., residential type, number of units, number of floors, building age, etc.);
- Construction characteristics, including foundation cracks and utility penetrations, ceiling construction and firewall separations, or other openings that may serve as preferential pathways for gas intrusion;
- Heating, ventilation, and air conditioning systems, including the type of heating system(s), type of fuel used, presence of a boiler/furnace, presence of aboveground or underground storage tanks, type(s) of air conditioning, and the presence of air distribution ducts;

- Factors that may influence indoor air quality, petroleum-powered machines stored in the basement, workshop area, smoking in the basement, exhaust fans in the basement, new carpets, fresh paints, chemical storage, etc.; and
- Type of water supply and sewage disposal.

As part of the product inventory, if available, specific chemical ingredients for each product will be listed. If specific chemical ingredients are not presented on the product label, the products full name, and the manufacturer's name and contact information will be recorded. Photographs will be taken as appropriate to document the building survey and product inventory activities.

A portable photoionization detector (PID) will be used as part of the pre-sampling building survey and product inventory to help identify potential sources of VOCs. If any chemicals on-site are found to be stored in a questionable manner (i.e., open container, yield positive PID screening results, emit odor, etc.) they will be controlled to eliminate potential interference. Control options may include removal of the container or ensuring containers are tightly closed. If corrective actions are required, sampling will not be conducted for a period of 24-hours following the corrective action to allow the building to equilibrate. Additionally, as specified in the NYSDOH Draft Guidance (NYSDOH, 2005), it will be requested that building occupants refrain from the activities listed below for a period of 24-hours prior to, and during the sampling activities:

- Opening any windows, openings or vents within the building;
- Operating any ventilation fans within the building;
- Smoking in the building;
- Painting within the building;
- Using air fresheners or scented candles;
- Allowing containers of gasoline or oil to remain within the building, except for fuel oil tanks;
- Cleaning, waxing or polishing furniture, floors or other woodwork with petroleum or oil-based products within the building;

- Engaging in any activities that use materials containing VOCs within the building;
- Lawn mowing or paving;
- Applying pesticides; and
- Using building repair or maintenance products, such as caulk or roofing tar.

2.2 Task 2 – Sample Collection and Analysis

The collection of eight sub-slab vapor samples and four indoor air samples is proposed from within the approximate 6000 square foot footprint of the building in the immediate vicinity of the contaminated sub-surface soils. Additionally, one outdoor air sample will be collected from a representative unaffected location, near the building structure. All samples will be collected in 6 litre SUMA canisters equipped with a pre-calibrated regulator designed to restrict flow to allow sample collection over a 24-hour period.

Specific Q/A procedure normally used to maintain the samples at 4°C are not required with SUMMA canisters. Valves on the canisters will be closed tight and the canisters will be transported to the Columbia Analytical Services of Rochester, NY via courier under standard chain of custody. A description of the sampling methods, Q/A samples and analysis for each type of sample is provided below.

2.2.1 Sub-Slab Vapor Samples

Sub-Slab vapor samples will be collected in the locations shown on Figure 2. Sample locations are focused in the general vicinity of the loading dock at the northeast corner of the facility. This area is known to be the locus of elevated contaminant concentrations in soil and soil gas based on previous sampling. A soil gas survey which provided contaminant results in total mass was performed in June of 2005. Results of this survey are included in Attachment 2. Based on these results, it is clear that the concentrations of soil gas are highest near the south end of the loading dock and the basement and are significantly reduce within approximately 50 feet to the west toward the central areas of the building. Based on these results, areas of the building which are of particular concern include Areas 1, 2, 3, 4, 5, 6, 7 and 8 as shown on Figure 2. Most of the areas are representative of smaller confined rooms within the building located above the detected elevated concentrations. Areas were also selected based on knowledge regarding locations of foundation walls and other sub-floor structures such as the loading dock and the basement. Interior walls dividing these rooms are shown in the Figure. Areas 1 and 7 are representative of larger open warehousing areas to the west of these smaller rooms.

In addition to the soil gas survey completed in June of 2005, additional sampling of soils beneath the building and the paved area to the east of the loading dock was also completed in December of 2005 and March of 2006. Results of this sub-slab soil sampling are shown on Figure 2 in light text. Soil sampling results corroborated the results of the soil gas survey, indicating that contaminant concentrations were focused in the vicinity of the south end of the loading dock and the basement and declined significantly within about 50 feet to the west. These results confirmed our conclusions that Areas 1, 2, 3, 4, 5, 6, 7 and 8 were of greatest concern, and that areas to the west further into the facility should not be problematic. Samples collected at Areas 1 and 7 will be collected in large open areas of the building and should be representative of a significant area of the building to the west of the smaller rooms represented by Areas 2, 3, 4, 5, 6 and 8.

Sub-slab vapor samples will be collected from the two-inch soil or aggregate interval located immediately below the slab in the various areas of the building. Sub-slab vapor samples will not be collected in close proximity to cracks or drains in order to minimize potential ambient air infiltration. Temporary sub-slab vapor probe installations will be constructed by first drilling a one-inch diameter borehole through the concrete slab using an electric rotary hammer drill. Teflon™ tubing will then be inserted through the borehole, to a maximum of two inches into the sub-slab soil or aggregate. The annular space will then be backfilled with clean, coarse sand to within approximately 1-inch of the floor slab. The borehole will then be sealed to the surface elevation with non-VOC emitting modeling clay. This seal will ensure that the sub-slab vapor sample is not diluted with air from within the building. The end of the tubing located above grade will be connected to a 3-way valve assembly. One length of Teflon™ tubing coming off of the 3-way valve will be connected to a PID with a low-flow vacuum air pump, and the other length of Teflon™ tubing will be connected to a laboratory cleaned and evacuated SUMMA canister. The SUMMA canister will be equipped with a laboratory provided flow regulator calibrated to allow sample collection over a 24-hour period of time.

The 3-way valve will be opened towards the PID vacuum pump, and the vacuum pump will be turned on to purge the tubing. PID readings will be monitored during this purging process. Approximately three volumes of the tubing will be purged. Following purging activities, the vacuum pump will be turned off, and the 3-way valve will be opened to allow airflow towards the SUMMA canister. The valve on the SUMMA canister will then be opened to allow for the sub-slab vapor sample collection. The pre-calibrated regulator on the SUMMA canister will restrict flow to allow sample collection over a 24-hour period.

Following sample collection, the valves on the SUMMA canisters will be tightly closed, and the sub-slab vapor samples will be submitted to a NYSDOH Environmental Laboratory Approved Program (ELAP) certified laboratory under chain-of-custody procedures for analysis. Sub-slab vapor samples will be analyzed for VOCs using United States Environmental Protection Agency (USEPA) Method TO-15. One field duplicate sample will be collected using a pre-cleaned, laboratory provided stainless steel "T" assembly. This stainless steel "T" assembly will allow two SUMMA canisters to collect samples from the same sub-slab installation.

Following the collection of sub-slab vapor samples, the sample tubing will be removed from both locations, and the borings will be backfilled with clean sand. The penetration through the concrete slab will be patched and sealed with a shallow topping of mortar so that it will easy to regain access to the hole in the future if necessary.

2.2.2 Indoor and Outdoor Air Samples

Both indoor and outdoor air samples will be collected concurrently with the sub-slab vapor samples. The up gradient outdoor ambient air sample is used to establish background regional air quality conditions. The indoor air samples will be collected from selected locations in close proximity to four of the sub-slab vapor sample collection locations, at a height approximately three feet above the floor (the height at which occupants are normally seated). These sample locations are shown on Figure 2. The outdoor air sample will be collected from a representative, upwind location at a height of approximately four feet above the ground (a height representing the approximate breathing zone). The outdoor air sample location will be away from active motor vehicle areas, such as parking areas, driveways, etc as shown on Figure 1.

Both the indoor air and outdoor air samples will be collected using a pre-cleaned 6-liter SUMMA canister equipped with a laboratory provided regulator, calibrated to collect samples over a continuous 24-hour period. Both the indoor and outdoor air sample will be submitted for analysis for VOCs using USEPA Method TO-15.

During the sub-slab sampling, indoor, and outdoor air sampling activities, the following observations will be documented:

- Uses or presence of volatile chemicals during building maintenance will be identified;
- The use of heating or air conditioning systems during sampling will be noted;
- Floor plan sketches that include the floor layout with sample locations, chemical storage areas, garages, doorways, stairways, location of basement sumps or subsurface drains and utility perforations through building foundations, HVAC system air supply and return registers, compass orientation (north), and any other pertinent information should be noted;
- If possible, photographs will accompany floor plan sketches;
- Weather conditions (e.g., precipitation, indoor and outdoor temperature, and barometric pressure) and ventilation conditions (e.g., heating system active and windows closed) will be reported; and

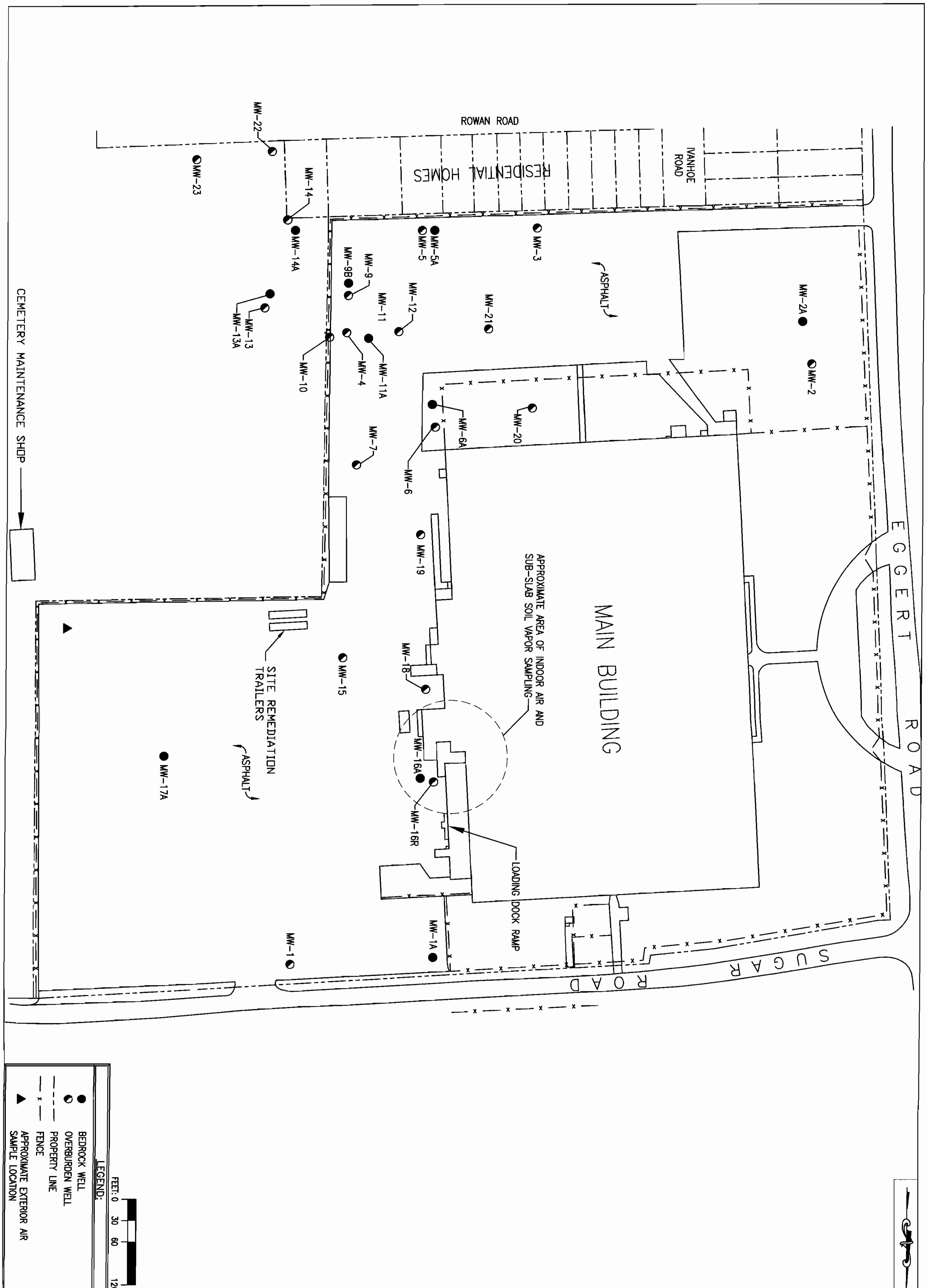
Any pertinent observations, such as spills, floor stains, and odors will be recorded.

The field sampling team will maintain a sample log sheet summarizing the sample identification, date and time of sample collection, identity of samplers, sampling methods and devices utilized, vacuum of canisters before and after samples are collected, and sample analyses.

FIGURES

FIGURE 1 Site Location Map

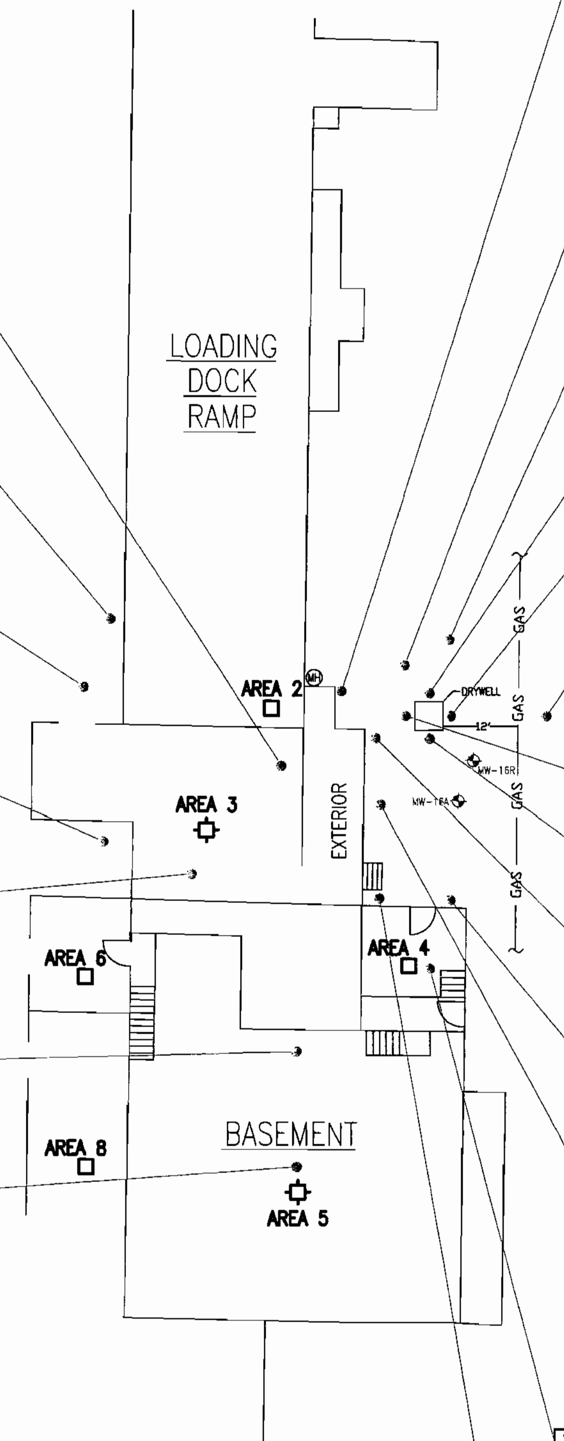
FIGURE 2 Sample Location Map



PROJECT NO.: 2528 FILE NAME: 2528-OASL-06 SCALE: 1"=120' DATE: 08/24/06 BY: MC CK: RM FIGURE # 1	EnergySolutions THE BLEACHERY 143 WEST STREET NEW MILFORD, CT. 06776 (860) 210-3000	PROJECT: LEICA, INC. EGGERT & SUGAR ROADS CHEEKTOWAGA, NEW YORK
		DRAWING: SITE LOCATION MAP OUTDOOR AIR SAMPLE LOCATION

REVISION NO.

DOCUMENT CONTROL NO.



SAMPLE ID: [redacted] ABSR 3				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-1'	9.8	NA	NA	NA
1'-5'	7.8	NA	NA	NA
5'-6'	8.4	NA	NA	NA
6'-9'	5.4	NA	NA	NA
9'-12'	10.5	2,200	ND	180
12'-13.5'	4.5	220	12	100

SAMPLE ID: [redacted] ABSR 1				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-2'	0	NA	NA	NA
2'-3'	0	NA	NA	NA
3'-6'	0	NA	NA	NA
6'-9'	0	NA	NA	NA
9'-11'	0	2,600	ND	85

SAMPLE ID: [redacted] ABSR 2				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-1'	0	NA	NA	NA
1'-5'	0	NA	NA	NA
5'-7'	0	NA	NA	NA
7'-9.5'	0	37	26.1	ND

SAMPLE ID: [redacted] ABSR 5				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-3'	3.3	NA	NA	NA
3'-6'	5.2	14	ND	6
6'-10'	14.6	NA	NA	NA
10'-12.5'	48.7	6	1,620	98

SAMPLE ID: [redacted] ABSR 4				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-2'	1.3	NA	NA	NA
2'-5'	3.3	NA	NA	NA
5'-7'	28.2	NA	NA	NA
7'-10'	120	210	32,600	1,200
10'-12.5'	77.4	9.2	573	93

SAMPLE ID: [redacted] ABSR 6				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-3'	44.5	2,300	ND	930
3'-7'	75.6	4,700	30	4,900

SAMPLE ID: [redacted] ABSR 7				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	33.2	NA	NA	NA
4'-7'	43.8	680	ND	41

SAMPLE ID: [redacted] ABSR 16				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	46	NA	NA	NA
7'-9'	7.2	<30	<60	<30

SAMPLE ID: [redacted] ABSR 17				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	0	NA	NA	NA
7.5'-11'	3	390	<58	<29

SAMPLE ID: [redacted] ABSR 19				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	2	NA	NA	NA
8'-10'	7.8	230	<11.4	<5.7

SAMPLE ID: [redacted] ABSR 10				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	0	NA	NA	NA
10'	0	29	<11.6	<5.9

SAMPLE ID: [redacted] ABSR 12				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	0	NA	NA	NA
10'	0	150	<11.6	6.4

SAMPLE ID: [redacted] ABSR 20				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	0	NA	NA	NA
8'-10'	0	220	<24	<12

SAMPLE ID: [redacted] ABSR 9				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7'	0	NA	NA	NA
10'	0	40	<11.8	<5.9

SAMPLE ID: [redacted] ABSR 11				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	0	NA	NA	NA
8'-9'	27	<5.9	113	<5.9

SAMPLE ID: [redacted] ABSR 18				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	0	NA	NA	NA
10'	7.2	45	235	40

SAMPLE ID: [redacted] ABSR 15				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	0	NA	NA	NA
10'	23	<5.8	<11.6	<5.8

SAMPLE ID: [redacted] ABSR 13				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	0	NA	NA	NA
8'	136	<720	11,500	<720

SAMPLE ID: [redacted] ABSR 8				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-2'	31.3	NA	NA	NA
2'-4'	37.4	NA	NA	NA
4'-7.5'	82.1	2,900	ND	1,400
7.5'-9.5'	34.3	67	ND	45

SAMPLE ID: [redacted] ABSR 14				
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	0	NA	NA	NA
4'-7.5'	0	NA	NA	NA
10'	139	340	1,000	450

1" = 30'

FEET: 0 7.5 15 30

LEGEND:
- □ SUB-SLAB SOIL GAS SAMPLING
- ⯐ SUB-SLAB SOIL, GAS AND INDOOR SAMPLING
- MONITORING WELL
- SOIL SAMPLE LOCATIONS
- —-—-— PROPERTY LINE
- — x — FENCE

DOCUMENT CONTROL NO.

REVISION NO.

PROJECT: LEICA INC.
EGGERT & SUGAR ROADS
CHEEKTOWAGA, NEW YORK

DRAWING: SAMPLE LOCATION MAP
INDOOR AIR QUAITLY SAMPLING

ENERGYSOLUTIONS
THE BLEACHERY
143 WEST STREET
NEW MILFORD, CT. 06776
(860) 210-3000

PROJECT NO.: 2528
FILE NAME: 2528_IAQS
SCALE: SHOWN | DATE: 05/30/06
BY: MC | CK: RM
FIGURE # 2

ENERGYSOLUTIONS

ATTACHMENTS

ATTACHMENT 1 Indoor Air Quality Questionnaire And Building Inventory Form

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name ________________________ Date/Time Prepared ____________

Preparer's Affiliation ______________________ Phone No.______________

Purpose of Investigation_______________________________________

1. OCCUPANT:

Interviewed: Y / N

Last Name: ________________ First Name: ________________

Address: ____

County: ___________

Home Phone: _____________ Office Phone: _____________

Number of Occupants/persons at this location _____ Age of Occupants _______________

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / N

Last Name: ________________ First Name: ________________

Address: ____

County: ___________

Home Phone: _____________ Office Phone: _____________

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other: ___________

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_______________

If multiple units, how many? ________

If the property is commercial, type?

Business Type(s) ____

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors______ Building age______

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

____

____

____

Airflow near source

____

____

____

Outdoor air infiltration

____

____

____

Infiltration into air ducts

____

____

____

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other ________
c. Basement floor:	concrete	dirt	stone	other ________
d. Basement floor:	uncovered	covered	covered with ________________	
e. Concrete floor:	unsealed	sealed	sealed with ________________	
f. Foundation walls:	poured	block	stone	other ________
g. Foundation walls:	unsealed	sealed	sealed with ________________	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: ________(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

____

____

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other __________

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: ____________________________

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other__________
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? Y / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

____

____

____

____

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	______________________
1st Floor	______________________
2nd Floor	______________________
3rd Floor	______________________
4th Floor	______________________

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?		Y / N
b. Does the garage have a separate heating unit?		Y / N / NA
c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)		Y / N / NA Please specify__________
d. Has the building ever had a fire?		Y / N When?__________
e. Is a kerosene or unvented gas space heater present?		Y / N Where? __________
f. Is there a workshop or hobby/craft area?	Y / N	Where & Type? __________
g. Is there smoking in the building?	Y / N	How frequently? __________
h. Have cleaning products been used recently?	Y / N	When & Type? __________
i. Have cosmetic products been used recently?	Y / N	When & Type? __________

j. Has painting/staining been done in the last 6 months? Y / N Where & When? ______________

k. Is there new carpet, drapes or other textiles? Y / N Where & When? ______________

l. Have air fresheners been used recently? Y / N When & Type? ______________

m. Is there a kitchen exhaust fan? Y / N If yes, where vented?____________

n. Is there a bathroom exhaust fan? Y / N If yes, where vented?____________

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type?________________

Are there odors in the building? Y / N
If yes, please describe: ____

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ________________________________

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: ___________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply:	Public Water	Drilled Well	Driven Well	Dug Well	Other: _______
Sewage Disposal:	Public Sewer	Septic Tank	Leach Field	Dry Well	Other: _______

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: ______________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

First Floor:

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

ATTACHMENT 2 Soil Gas Survey

BEACON Report No. EM1789

PASSIVE SOIL-GAS SURVEY
LEICA SITE
CHEEKTOWAGA, NY

Prepared for

SCIENTECH, Inc.
143 West Street
New Milford, CT 06776

by

BEACON ENVIRONMENTAL SERVICES, INC.

Beacon Environmental Services, Inc.
323 Williams Street
Suite D
Bel Air, MD 21014

July 19, 2005

Applying Results from Soil-Gas Surveys

The utility of soil-gas surveys is directly proportional to their accuracy in reflecting and representing changes in the subsurface concentrations of source compounds. Passive soil-gas survey results are the mass collected from the vapor-phase emanating from the source. The vapor-phase is merely a fractional trace of the source, so, as a matter of convenience, the units used in reporting detection values from passive soil-gas surveys are smaller than those employed for source-compound concentrations.

The critical fact is that, whatever the relative concentrations of source and associated soil gas, best results are realized when the ratio of soil-gas measurements to actual subsurface concentrations remains as close to constant as the real world permits. It is the reliability and consistency of this ratio, not the particular units of mass (*e.g.*, nanograms) that determine usefulness. Thus, BEACON emphasizes the necessity of conducting — at minimum — follow-on intrusive sampling at one or two points that show relatively high soil-gas measurements to obtain corresponding concentrations of soil and groundwater contaminants. These correspondent values furnish the basis for approximating the required ratio. Once that ratio is established, it can be used in conjunction with the soil-gas measurements (regardless of the units adopted) to estimate subsurface contaminant concentrations across the survey field. It is important to keep in mind, however, that specific conditions at individual sample points, including soil porosity and permeability, depth to contamination, and perched ground water, can have significant impact on soil-gas measurements at those locations.

When passive soil-gas surveys are handled in this way, the data provide information that can yield substantial savings in drilling costs and in time. They furnish, among other things, a checklist of compounds expected at each survey location and help to determine how and where drilling budgets can most effectively be spent.

BEACON Report Number: EM1789

Passive Soil-Gas Survey
Leica Site
Cheektowaga, NY

This Passive Soil-Gas Survey Report has been prepared for SCIENTECH, Inc. (SCIENTECH) by Beacon Environmental Services, Inc. (BEACON) in accordance with the terms of the signed order confirmation form dated June 23, 2005. BEACON's principal technical contact at SCIENTECH for this project has been Mr. Robert McPeak. Passive soil-gas samples were collected following the protocols of the EMFLUX® Passive Soil-Gas Sampling System.

1. Objectives

Soil-gas samples were collected to determine the presence, identity, and relative strength of targeted contaminants in soil and/or ground water at the Leica Site. Survey results will be used to identify source areas and delineate the lateral extent of contamination.

2. Target Compounds

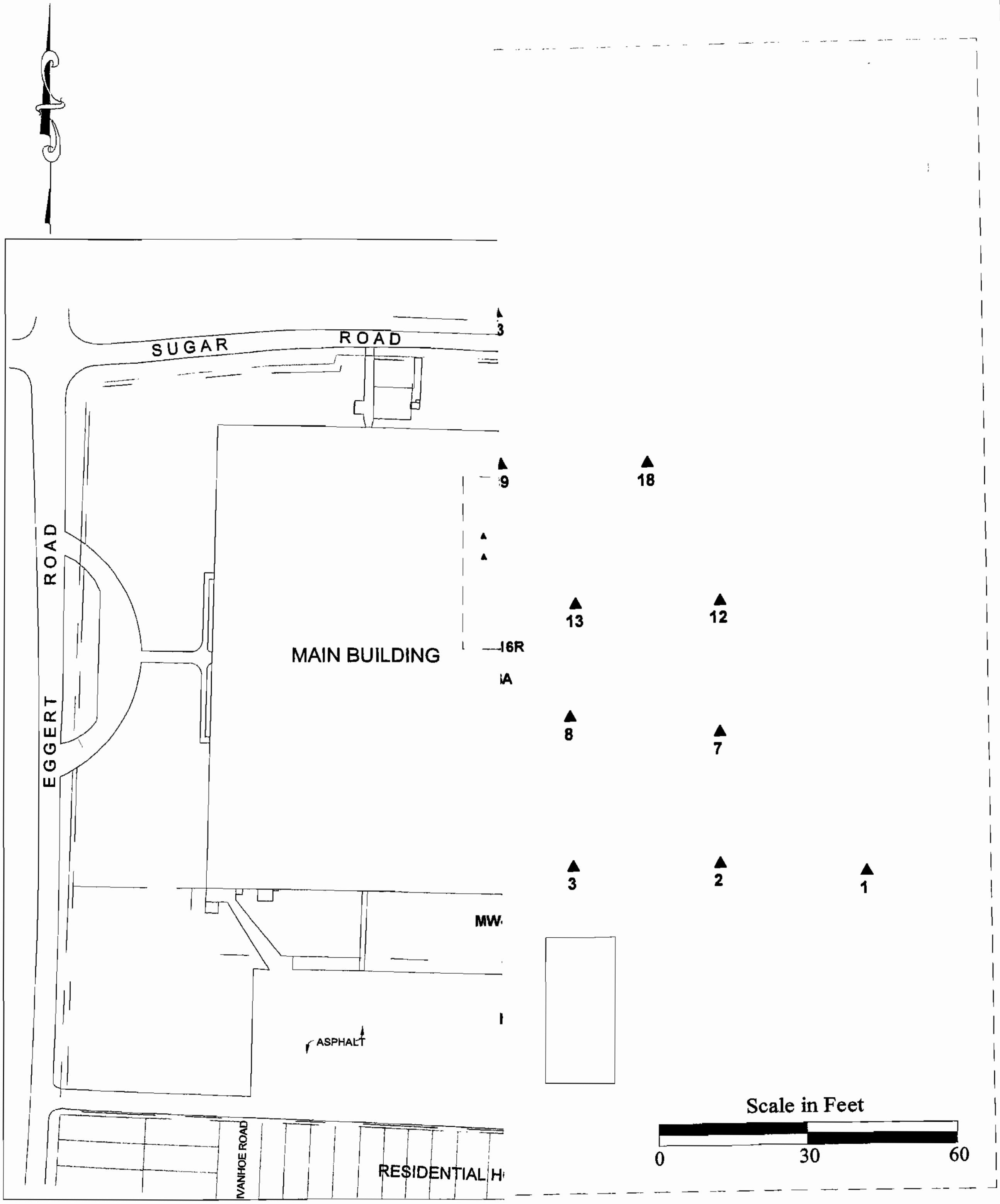
This survey targeted the 20 compounds listed in **Table 1**, which supplies the resulting laboratory data in nanograms (ng) of specific compound per cartridge.

3. Survey Description

- No. of Field Sample Points: 25
- No. of Trip Blanks: 1
- Total No. of Samples: 26
- Field sample locations are shown on **Figure 1**.

4. Field Work

SCIENTECH was provided a Field Kit with the equipment needed to conduct a 25-point passive soil-gas survey. Samplers were deployed on June 7, 2005, and were retrieved on June 20, 2005. **Attachment 1** describes the field procedures used. Individual deployment and retrieval times will be found in the Field Deployment Report (**Attachment 2**).



BEACON ENVIRONMENTAL SERVICES, INC.
323 Williams Street, Suite D, Bel Air, MD, 800-878-5510

Beacon Project No. EM1789, June 2005

Figure 1
Passive Soil-Gas Survey
Sample Locations

Leica Site
Cheektowaga, NY

5. Analysis and Reporting Dates

- BEACON's laboratory received 26 samples for analysis on June 21, 2005.
- Adsorbent cartridges from the passive samplers were thermally desorbed, then analyzed using gas chromatography/mass spectrometry (GC/MS) equipment, in accordance with EPA Method 8260B (Modified), as described in **Attachment 3**. BEACON's laboratory analyzed each cartridge for the targeted compounds.
- BEACON's laboratory completed the analysis on June 22, 2005. Following a laboratory review, results were provided to SCIENTECH on June 24, 2005.
- On July 18, 2004, SCIENTECH authorized BEACON to issue the final report.

6. Report Notes and Quality Assurance/Quality Control Factors

- **Table 1** provides survey results in nanograms per cartridge by sample-point number and compound name. The quantitation levels represent values above which quantitative laboratory results can be achieved within specified limits of precision and with a high degree of confidence. The quantitation level for each compound, therefore, provides a reliable basis for comparing the relative strength of any detection of that compound.

- **Data Compatibility**. It is important to note that when sample locations are covered with or near the edge of an artificial surface (*e.g.*, asphalt or concrete), sample measurements are often distorted (increased) significantly. Such distortion can be attributed to the fact that gas rising from sources beneath impermeable caps tends to reach equilibrium underneath the cap. Thus, a reading taken below or near an impermeable surface is much higher than it would be in the absence of such a cap.

- The **Chain-of-Custody** form, which was shipped with the samples for this survey, is supplied as **Attachment 4**.

- **Laboratory QA/QC procedures** included standards, surrogates, and blanks appropriate to EPA Method 8260 (Modified). Field work, analyses, and reporting were done in accordance with BEACON's Quality Assurance Program Plan.

- **QA/QC Contaminant Corrections**. Following EPA guidelines, laboratory data is not corrected for method blank or trip blank sample contamination values; any contamination detected on QA/QC samples is reported in **Table 1**.

- **Laboratory method blanks** are run each day with project samples to identify contamination present in the laboratory. If contamination is detected on a method blank, measurements of identical compounds on samples analyzed the same day are considered to be suspect and are flagged in the laboratory report. The laboratory method blank analyzed in connection with the present samples revealed no contamination.

- The **trip blank** is a sampling cartridge prepared, transported, and analyzed with other samples but intentionally not exposed. Any target compounds identified on the trip blanks are reported in the laboratory data. The analysis of the trip blank (labeled Trip-1 in **Table 1**) reported none of the targeted compounds, indicating that the survey site itself is the source of detected contamination.

- **Survey findings** are relative exclusively to this project and should not routinely be compared with results of other BEACON Surveys. *To establish a relationship between reported soil-gas measurements and actual subsurface contaminant concentrations, which will indicate those detections representing significant subsurface contamination, BEACON recommends the guidelines on the inside front cover of this report.*

- At the request of SCIENTECH, the following compound distribution maps have been provided:

Figure 2 — Trichloroethene
Figure 3 — 1,1,1-Trichloroethane
Figure 4 — Vinyl Chloride

- The following **Attachments** are included:

-1- Field Procedures
-2- Field Deployment Report
-3- Laboratory Procedures
-4- Chain-of-Custody Form

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	Meth_Blk	Trip-1	1	2	3	4
Project Number:	EM1789	EM1789	EM1789	EM1789	EM1789	EM1789
Lab File ID:	05062103	05062104	05062105	05062106	05062107	05062108
Received Date:		6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
Analysis Date:	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
Analysis Time:	11:29	11:59	12:30	13:01	13:32	14:03
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
Vinyl Chloride	<25	<25	<25	<25	<25	**116**
1,1-Dichloroethene	<25	<25	<25	<25	<25	**8,090**
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	**368**
1,1-Dichloroethane	<25	<25	<25	<25	<25	**4,241**
cis-1,2-Dichloroethene	<25	<25	**34**	<25	<25	**8,909**
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	**27,579**
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	**254**	**51**	**27**
Trichloroethene	<25	<25	**135**	**238**	**40**	**26,490**
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	**185**	**44**	**33**
Tetrachloroethene	<25	<25	<25	<25	<25	**2,499**
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	**80**	**51**	**37**	**53**
p & m-Xylene	<25	<25	**122**	**103**	**66**	**95**
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	**233**	**228**	**88**	**126**

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	5	6	7	8	9	10
Project Number:	EM1789	EM1789	EM1789	EM1789	EM1789	EM1789
Lab File ID:	05062109	05062110	05062111	05062112	05062113	05062114
Received Date:	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
Analysis Date:	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
Analysis Time:	14:34	15:05	15:36	16:07	16:38	17:09
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
Vinyl Chloride	**62**	<25	**26**	**82**	**3,138**	**1,280**
1,1-Dichloroethene	**1,291**	<25	**62**	**514**	**2,713**	**26,982**
trans-1,2-Dichloroethene	**656**	<25	**123**	**766**	**301**	**23,079**
1,1-Dichloroethane	**8,837**	**33**	**742**	**7,142**	**33,926**	**32,542**
cis-1,2-Dichloroethene	**6,701**	<25	**417**	**3,451**	**4,556**	**77,999**
Chloroform	<25	**30**	**60**	<25	<25	**211**
1,2-Dichloroethane	<25	<25	<25	<25	<25	**28**
1,1,1-Trichloroethane	**15,744**	**119**	**160**	**13,635**	**9,367**	**42,735**
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	**42**	**31**	**110**	**48**	**33**	**210**
Trichloroethene	**4,135**	**68**	**7,290**	**12,396**	**15,207**	**115,861**
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	**42**	**74**	**64**	**32**	**58**	**58**
Tetrachloroethene	<25	<25	<25	**32**	**33**	**510**
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	**27**	<25	**30**	<25	**29**	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	**32**	**32**	**54**	<25	**38**	**26**

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	11	12	13	14	15	16
Project Number:	EM1789	EM1789	EM1789	EM1789	EM1789	EM1789
Lab File ID:	05062115	05062116	05062117	05062118	05062119	05062120
Received Date:	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
Analysis Date:	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
Analysis Time:	17:40	18:11	18:42	19:13	19:44	20:14
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
Vinyl Chloride	**320**	**79**	**34**	**1,144**	**181**	**68**
1,1-Dichloroethene	**223**	**90**	**239**	**2,307**	**7,746**	**978**
trans-1,2-Dichloroethene	**260**	<25	**146**	**65**	**21,764**	**5,623**
1,1-Dichloroethane	**1,399**	**230**	**2,161**	**16,397**	**20,366**	**2,446**
cis-1,2-Dichloroethene	**2,056**	**70**	**798**	**335**	**83,779**	**21,005**
Chloroform	<25	<25	<25	<25	**461**	**194**
1,2-Dichloroethane	<25	<25	<25	<25	**52**	<25
1,1,1-Trichloroethane	**1,501**	**218**	**1,061**	**8,212**	**42,091**	**13,185**
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	**60**	**49**	**100**	**45**	**469**	**196**
Trichloroethene	**1,770**	**377**	**6,634**	**5,645**	**175,612**	**117,835**
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	**53**	**58**	**95**	**40**	**67**	**90**
Tetrachloroethene	**219**	<25	<25	**70**	**6,161**	**1,971**
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	**60**	**93**	**66**	**43**	<25
p & m-Xylene	<25	**42**	**160**	**98**	**67**	**37**
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	**27**	**55**	**192**	**272**	**107**	**47**

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	17	18	19	20	21	22
Project Number:	EM1789	EM1789	EM1789	EM1789	EM1789	EM1789
Lab File ID:	05062121	05062122	05062123	05062124	05062125	05062126
Received Date:	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
Analysis Date:	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005
Analysis Time:	20:45	21:16	21:47	22:18	22:49	23:20
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
Vinyl Chloride	<25	**50**	**382**	**191**	**39**	**112**
1,1-Dichloroethene	**52**	**34**	**653**	**384**	**1,083**	**38**
trans-1,2-Dichloroethene	**127**	<25	**1,469**	**520**	**42**	<25
1,1-Dichloroethane	<25	**312**	**5,015**	**7,245**	**870**	<25
cis-1,2-Dichloroethene	**268**	**112**	**2,717**	**1,442**	**35**	<25
Chloroform	<25	<25	**41**	**28**	**54**	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	**84**	<25	**6,648**	**3,831**	**8,465**	**55**
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	**36**	**159**	**129**	**60**	**26**	**62**
Trichloroethene	**4,558**	**1,219**	**23,796**	**38,343**	**7,821**	**118**
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	**90**	**86**	**127**	**89**	**47**	**89**
Tetrachloroethene	**34**	**51**	**168**	**17,906**	**95**	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	**35**	**52**	**29**	<25	<25
p & m-Xylene	<25	**58**	**96**	**46**	<25	**27**
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	**26**	**74**	**144**	**64**	<25	**27**

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

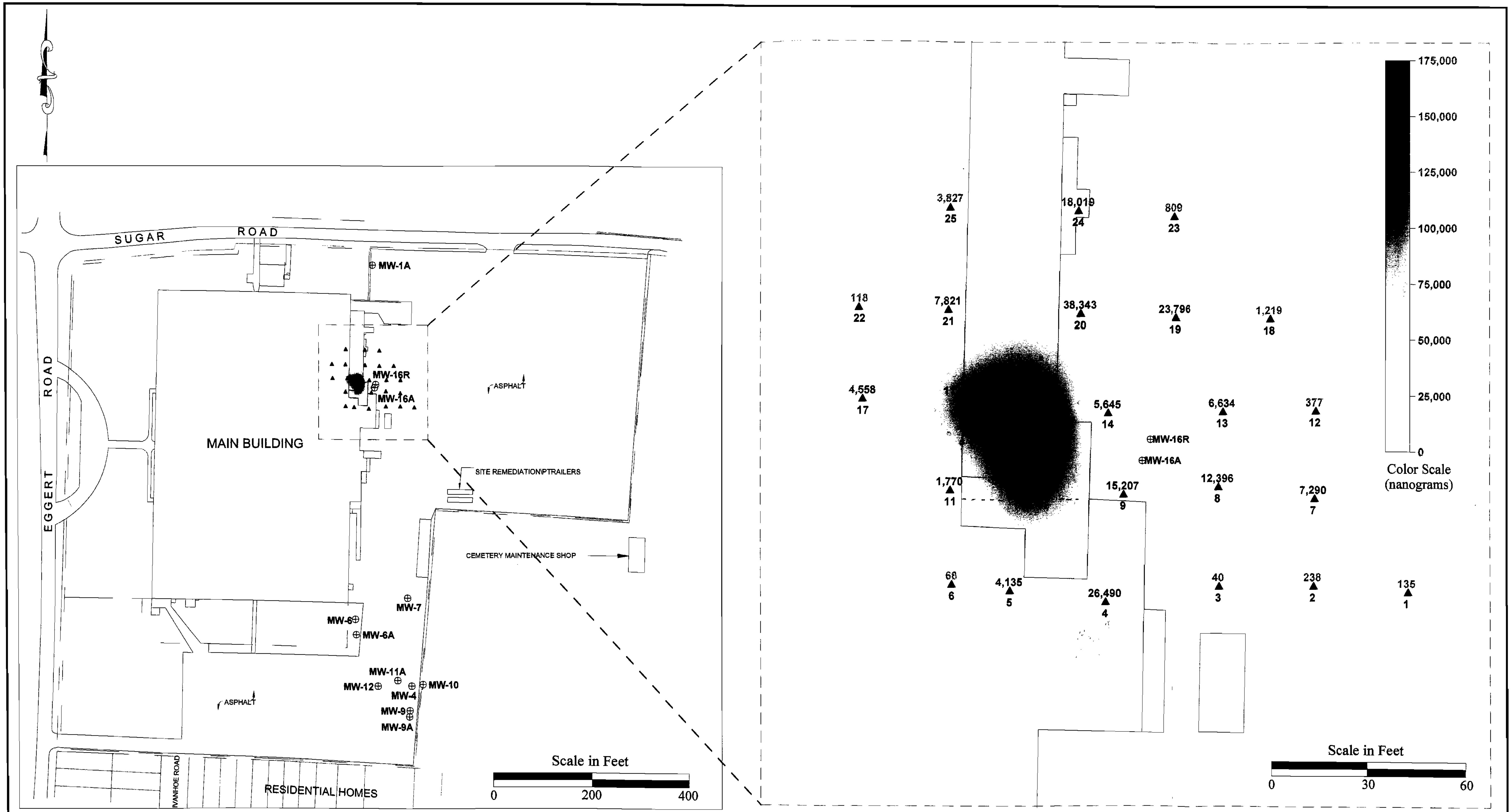
Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	23	24	25
Project Number:	EM1789	EM1789	EM1789
Lab File ID:	05062127	05062128	05062129
Received Date:	6/21/2005	6/21/2005	6/21/2005
Analysis Date:	6/21/2005	6/22/2005	6/22/2005
Analysis Time:	23:51	0:22	0:53
Units:	ng/trap	ng/trap	ng/trap
COMPOUNDS			
Vinyl Chloride	<25	**37**	<25
1,1-Dichloroethene	<25	**177**	**66**
trans-1,2-Dichloroethene	<25	**120**	<25
1,1-Dichloroethane	**38**	**1,161**	**109**
cis-1,2-Dichloroethene	**29**	**636**	**35**
Chloroform	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25
1,1,1-Trichloroethane	**81**	**1,580**	**904**
Carbon Tetrachloride	<25	<25	<25
Benzene	**63**	**45**	**54**
Trichloroethene	**809**	**18,019**	**3,827**
1,1,2-Trichloroethane	<25	<25	<25
Toluene	**94**	**43**	**90**
Tetrachloroethene	<25	**1,101**	**113**
1,1,1,2-Tetrachloroethane	<25	<25	<25
Chlorobenzene	<25	<25	<25
Ethylbenzene	**684**	<25	<25
p & m-Xylene	**1,278**	<25	**30**
1,1,2,2-Tetrachloroethane	<25	<25	<25
o-Xylene	**1,742**	<25	**35**

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.



238 TRICHLOROETHENE (nanograms)

▲ 17 PASSIVE SOIL-GAS SAMPLE LOCATION

⊕ MW-16R MONITORING WELL LOCATION

Figure 2
Passive Soil-Gas Survey
Trichloroethene

Leica Site
Cheektowaga, NY

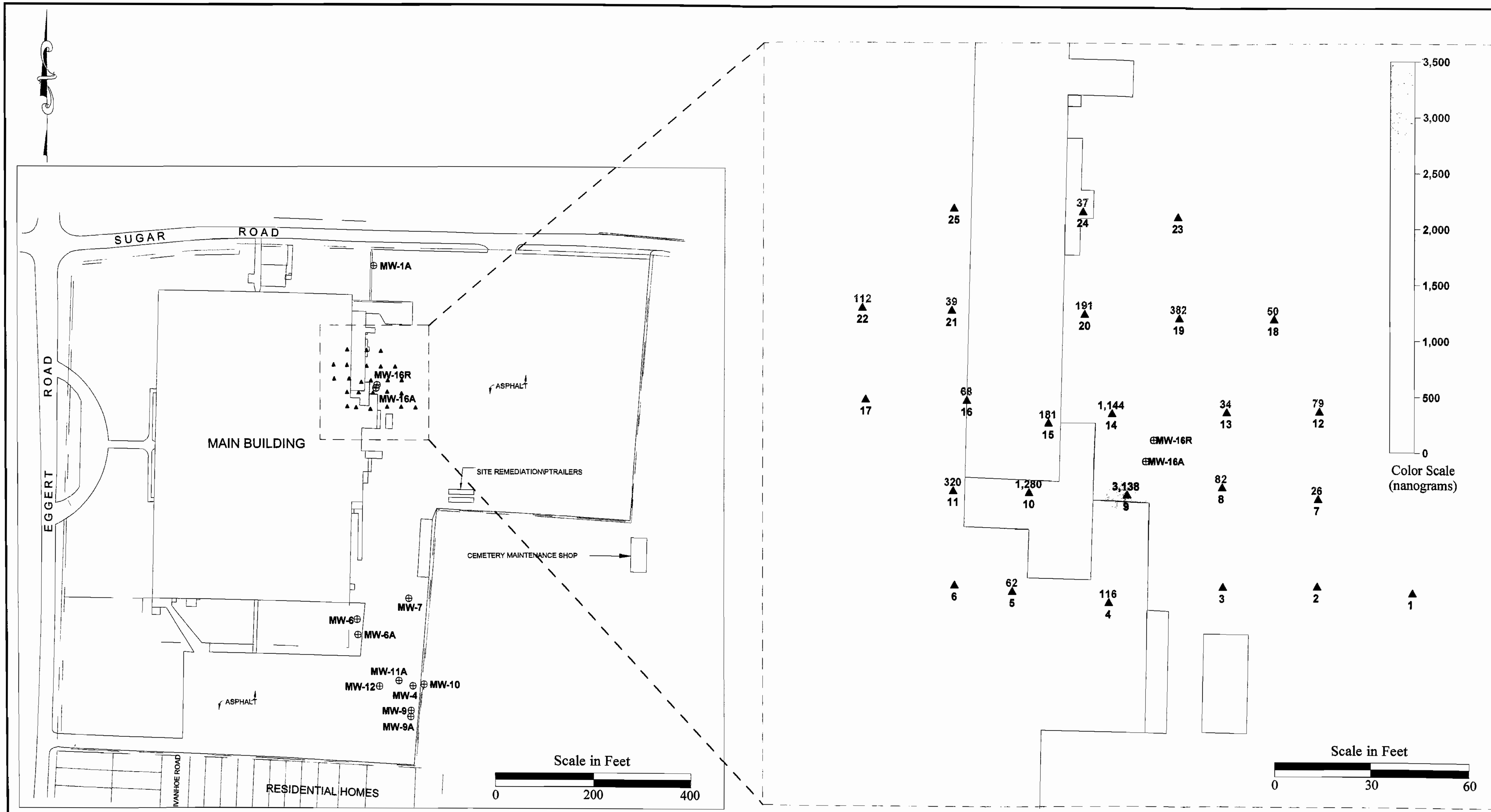
BEACON ENVIRONMENTAL SERVICES, INC.
323 Williams Street, Suite D, Bel Air, MD, 800-878-5510
Beacon Project No. EM1789, June 2005

119	1,1,1-TRICHLOROETHANE (nanograms)
▲ 17	PASSIVE SOIL-GAS SAMPLE LOCATION
⊕ MW-16R	MONITORING WELL LOCATION

BEACON ENVIRONMENTAL SERVICES, INC.
323 Williams Street, Suite D, Bel Air, MD, 800-878-5510
Beacon Project No. EM1789, June 2005

Figure 3
Passive Soil-Gas Survey
1,1,1-Trichloroethane

Leica Site
Cheektowaga, NY



BEACON ENVIRONMENTAL SERVICES, INC.

323 Williams Street, Suite D, Bel Air, MD, 800-878-5510

Beacon Project No. EM1789, June 2005

116	VINYL CHLORIDE (nanograms)
▲ 17	PASSIVE SOIL-GAS SAMPLE LOCATION
⊕ MW-16R	MONITORING WELL LOCATION

Figure 4
Passive Soil-Gas Survey
Vinyl Chloride

Leica Site
Cheektowaga, NY

Attachments

Attachment 1

FIELD PROCEDURES FOR PASSIVE SOIL-GAS SURVEYS

The following field procedures are routinely used during a BEACON Passive Soil-Gas Survey. Modifications can be and are incorporated from time to time in response to individual project requirements. In all instances, BEACON adheres to EPA-approved Quality Assurance and Quality Control practices.

A. Field personnel carry system components and support equipment to the site and deploy the passive samplers in a prearranged survey pattern. A passive sampler consists of a glass vial containing hydrophobic adsorbent cartridges with a length of wire attached to the vial for retrieval. Although samplers require only one person for emplacement and retrieval, the specific number of field personnel required depends upon the scope and schedule of the project. Each Sampler emplacement generally takes less than two minutes.

B. At each survey point a field technician clears vegetation as needed and, using a slide hammer with a ½″ diameter probe or a hammer drill with a ½″ diameter bit, creates a hole three-feet deep. The technician then uses a hammer and a ¾″ diameter pointed metal stake to widen the top four inches of the hole. [Note: For locations covered with asphalt, concrete, or gravel surfacing, the field technician first drills a 1″- to 1½″-diameter hole through the surfacing to the soils beneath and the hole is sleeved with a ¾″ i.d. metal sleeve.]

C. The technician then removes the solid plastic cap from a sampler and replaces it with a Sampling Cap (a plastic cap with a hole covered by screen meshing). The technician inserts the sampler, with the Sampling Cap end facing down, into the hole (**see attached figure**). The sampler is then covered with either local soils for uncapped locations or, for capped locations, aluminum foil and a concrete patch. The sampler's location, time and date of emplacement, and other relevant information are recorded on the Field Deployment Form.

D. One or more trip blanks are included as part of the quality-control procedures.

E. Once all the samplers have been deployed, field personnel schedule sampler recovery and depart, taking all other equipment and materials with them.

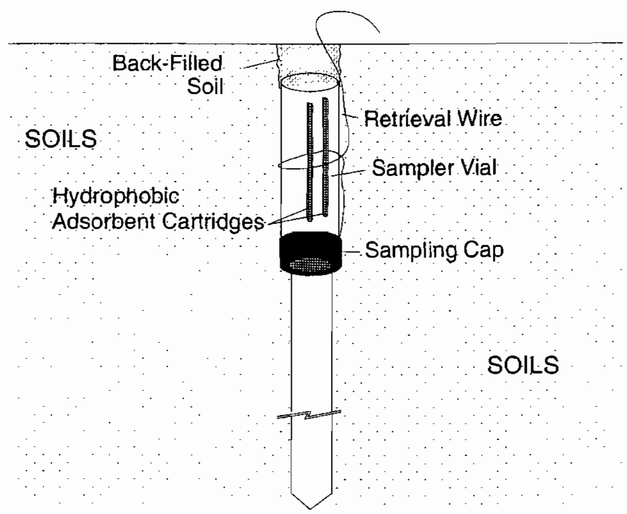
F. Field personnel retrieve the samplers at the end of the exposure period. At each location, a field technician withdraws the sampler from its hole, removes the retrieval wire, and wipes the outside of the vial clean using gauze cloth; following removal of the Sampling Cap, the threads of the vial are also cleaned. A solid plastic cap is screwed onto the vial and the sample location number is written on the label. The technician then records sample-point location, date, time, etc. on the Field Deployment Form.

G. Sampling holes are refilled with soil, sand, or other suitable material. If samplers have been installed through asphalt or concrete, the hole is filled to grade with a plug of cold patch or cement.

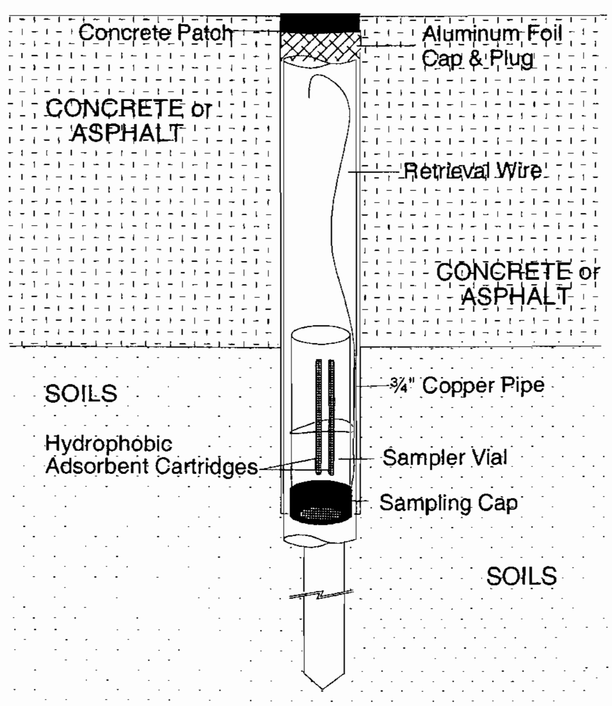
H. Following retrieval, field personnel ship or carry the passive samplers to BEACON's laboratory.

BEACON PASSIVE SAMPLER

DEPLOYMENT IN SOILS



DEPLOYMENT THROUGH CONCRETE OR ASPHALT



Attachment 2

Field Deployment Report

PASSIVE SOIL-GAS SURVEY
FIELD DEPLOYMENT REPORT

Project Information	
Beacon Project No.:	EM1789
Site Name:	Leica Site
Site Location:	Cheektowaga, NY

BEACON ENVIRONMENTAL SERVICES, INC.
323 Williams Street, Suite D, Bel Air, MD 21014, 800-878-5510

Client Information	
Company Name:	SCIENTECH, Inc.
Office Location:	New Milford, CT
Samples Collected By:	Wayne DeGroker

FIELD SAMPLE ID	Date Emplaced 6/7/2005 Time Emplaced	Date Retrieved Time Retrieved	FIELD NOTES (*e.g.*, asphalt/concrete covering, description of sample location, sampling hole depth, cartridge/vial condition)
1	15:00	08:45	SAMPLE DEPLOYED IN ASPHALT
2	15:10	08:50	" "
3	15:20	08:54	SAMPLE DEPLOYED IN SOIL
4	15:30	09:46	SAMPLE DEPLOYED IN BOILER ROOM - CONCRETE
5	15:40	09:52	SAMPLE DEPLOYED IN BOILER ROOM - CONCRETE
6	15:50	09:57	SAMPLE DEPLOYED IN FORMER OFFICE - CONCRETE
7	16:00	08:59	SAMPLE DEPLOYED IN ASPHALT
8	16:10	09:05	" "
9	16:20	09:10	" "
10	16:30	09:36	SAMPLE DEPLOYED IN BREAK ROOM - CONCRETE
11	16:40	09:41	SAMPLE DEPLOYED IN STORAGE AREA - CONCRETE
12	16:50	10:48	SAMPLE DEPLOYED IN ASPHALT
13	17:00	10:45	" "
14	17:05	10:38	" "
15	17:10	10:11	SAMPLE DEPLOYED IN BREAK ROOM - CONCRETE

PASSIVE SOIL-GAS SURVEY
FIELD DEPLOYMENT REPORT

FIELD SAMPLE ID	Date Emplaced: 6/7/05 Time Emplaced	Date Retrieved: Time Retrieved	FIELD NOTES (*e.g.*, asphalt/concrete covering, description of sample location, cartridge/vial condition)
16	17:15	10:05	SAMPLE DEPLOYED IN UNLOADING/LOADING AREA - CONCRETE
17	17:20	10:00	" "
18	17:30	11:00	SAMPLE DEPLOYED IN ASPHALT
19	17:35	10:55	" "
20	17:40	10:50	" "
21	17:45	10:18	SAMPLE DEPLOYED IN UNLOADING/LOADING AREA - CONCRETE
22	17:50	10:14	" "
23	17:55	11:10	SAMPLE DEPLOYED IN ASPHALT
24	18:00	11:05	" "
25	18:10	10:25	SAMPLE DEPLOYED IN UNLOADING/LOADING AREA - CONCRETE

Attachment 3

LABORATORY PROCEDURES
FOR PASSIVE SOIL-GAS SAMPLES

Following are laboratory procedures used with BEACON Passive Soil-Gas Surveys, a screening technology for expedited site investigation. After exposure, adsorbent cartridges from the passive samplers are analyzed using U.S. EPA Method 8260B as described in the Solid Waste Manual (SW-846), a capillary gas chromatographic/mass spectrometric method, modified to accommodate high temperature thermal desorption of the adsorbent cartridges. This procedure is summarized as follows:

A. The adsorbent cartridges are loaded with internal standards and surrogates prior to loading the autosampler with the cartridges. The loaded cartridges are purged in a helium flow. Then the cartridges are thermally desorbed in a helium flow onto a focusing trap. Any analytes in the helium stream are adsorbed onto a focusing trap.

B. Following trap focusing, the trap is thermally desorbed onto a DB-VRX 60m, 0.25 mm ID, 1.40 micron filament thickness capillary column.

C. The GC/MS is scanned between 35 and 270 Atomic Mass Units (AMU) at 3.12 scans per second.

D. BFB tuning criteria and the initial five-point calibration procedures are those stated in method SW846-8260B. System performance and calibration check criteria are met prior to analysis of samples. A laboratory method blank is analyzed after the daily standard to determine that the system is contaminant-free.

E. The instrumentation used for these analyses includes:

- Agilent 6890-5973 Gas Chromatograph/Mass Spectrometer;
- Markes Unity thermal desorber;
- Markes UltrA autosampler; and
- Markes Mass Flow Controller Module.

Attachment 4

Chain-of-Custody Form

CHAIN-OF-CUSTODY
PASSIVE SOIL-GAS SAMPLES

Project Information	
Beacon Project No.:	EM1789
Site Name:	Leica Site
Site Location:	Cheektowaga, NY
Analytical Method:	EPA Method 8260B
Target Compounds:	Beacon Project Number EM1789 Target Compound List

BEACON ENVIRONMENTAL SERVICES, INC.
323 Williams Street, Suite D, Bel Air, MD 21014, 800-878-5510

Client Information	
Company Name:	SCIENTECH, Inc.
Office Location:	New Milford, CT
Samples Submitted By:	Wayne DeGolier
Contact Phone No.:	716-316-7993

Field Sample ID	Lab Sample ID (for lab use only)	Comments (only necessary if problem or discrepancy) Condition of sample or vial	Date	Time	Initial
Trip-1	1789 Trip-1				WD
1	1789 1	Good	6/20/05	08:45	WD
2	1789 2	Good Some Moisture in hole	6/20/05	08:50	WD
3	1789 3	Good Some Moisture in hole	6/20/05	08:54	WD
4	1789 4	Good	6/20/05	09:46	WD
5	1789 5	Good Some Moisture in hole	6/20/05	09:52	WD
6	1789 6	Good	6/20/05	09:57	WD
7	1789 7	Good	6/20/05	08:59	WD
8	1789 8	Good Moisture in Vial	6/20/05	09:05	WD
9	1789 9	Good Some Moisture in hole	6/20/05	09:10	WD
10	1789 10	Good	6/20/05	09:36	WD
11	1789 11	Good	6/20/05	09:41	WD
12	1789 12	Good Moisture in hole	6/20/05	10:48	WD
13	1789 13	Good Moisture in Vial	6/20/05	10:45	WD
14	1789 14	Good Moisture in Vial	6/20/05	10:38	WD
15	1789 15	Good	6/20/05	10:11	WD
16	1789 16	Good Moisture in hole	6/20/05	10:05	WD
17	1789 17	Good	6/20/05	10:00	WD
18	1789 18	Good	6/20/05	11:00	WD
19	1789 19	Good	6/20/05	10:55	WD

Shipment of Field Kit to Site — Custody Seal # 00424535 **Intact?** (Y) N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
Ryan Scheid	6-6-2005 / 1700	FedEx	[signature]	6/7/05 10:00

Shipment of Field Kit to Laboratory — Custody Seal # 00424538 **Intact?** (Y) N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
Wayne DeGolier [illegible]	6/20/05 13:00	Fedex	Ryan Scheid	6-21-2005 / 0930

CHAIN-OF-CUSTODY
PASSIVE SOIL-GAS SAMPLES

BEACON ENVIRONMENTAL SERVICES, INC.
323 Williams Street, Suite D, Bel Air, MD 21014, 800-878-5510

Project Information	
Beacon Project No.:	EM1789
Site Name:	Leica Site
Site Location:	Cheektowaga, NY
Analytical Method:	EPA Method 8260B
Target Compounds:	Beacon Project Number EM1789 Target Compound List

Client Information	
Company Name:	SCIENTECH, Inc.
Office Location:	New Milford, CT
Samples Submitted By:	Wayne DeGolier
Contact Phone No.:	716-316-4993

Field Sample ID	Lab Sample ID (for lab use only)	Comments (only necessary if problem or discrepancy): Condition of sample or vial	Date	Time	Initial
20	1789 20	Good	6/20/05	10:50	WD
21	1789 21	Good	6/20/05	10:18	WD
22	1789 22	Good	6/20/05	10:14	WD
23	1789 23	Good Moisture in hole	6/20/05	11:10	WD
24	1789 24	Good	6/20/05	11:05	WD
25	1789 25	Good	6/20/05	10:25	WD

Shipment of Field Kit to Site — Custody Seal # 00424535 Intact? (Y) N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
Ryan Scheid	6-6-2005 / 1700	FEDEX	[signature]	6/7/05 10:00

Shipment of Field Kit to Laboratory — Custody Seal # 00424538 Intact? (Y) N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
Wayne DeGolier	6/20/05 13:00	Fedex	Ryan Scheid	6-21-2005 / 0930