

**EnviroGroup Limited**  
**26 Century Hill Drive**  
**Latham, NY 12110**

**Passive Soil Gas Survey – Analytical Report**  
**Date: December 7, 2011**

**Attn: Mr. Eric Lovenduski**

**Beacon Project No. 2432**

<b>Project Reference:</b>	Ithaca Sites 35 and 43, Ithaca, NY
<b>Samplers Installed:</b>	November 1 and 2, 2011
<b>Samplers Retrieved:</b>	November 15, 2011
<b>Samples Received:</b>	November 17, 2011
<b>Analyses Completed:</b>	November 20, 2011
<b>Laboratory Data Issued:</b>	November 23, 2011

#### **EPA Method 8260C (Modified)**

All samples were successfully analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation to target a custom compound list following EPA Method 8260C. Laboratory results are reported in nanograms (ng) of specific compound per sample.

Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method 8260C. Analyses and reporting were in accordance with BEACON's Quality Assurance Project Plan.

#### **Reporting limits**

The reporting limit (RL) for each compound is equal to the limit of quantitation (LOQ), which is 10 nanograms (ng), and the limit of detection (LOD) is 5 ng. **Table 1** provides survey results in nanograms per sampler by sample-point number and compound name; measurements below the LOQ but above the LOD are flagged with a "J." The LOQs (<10 ng) represent a baseline above which results exceed laboratory-determined limits of precision and accuracy. Field sample measurements above the upper calibration standard are estimated; however, these values are reported without qualifiers because all reported measurements are relative to each other and are appropriate to meet the survey objectives of locating source areas and vapor intrusion pathways and defining the lateral extent of contamination.

#### **Calibration Verification**

The continuing calibration verification (CCV) values for the system check compounds were all within  $\pm 20\%$  of the true values as defined by the initial five-point calibration and met the requirements specified in Beacon Environmental's Quality Assurance Project Plan.

#### **Method Blanks/Trip Blanks**

Laboratory method blanks are run with each sample batch to identify contamination present in the laboratory. If contamination is detected on a method blank, measurements of identical compounds in that sample batch 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 sampler 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 analyses of the trip blanks (labeled Trip-1 and Trip-2 in **Table 1**) reported none of the targeted compounds.

### Passive Soil-Gas Survey Notes

When sample locations are covered with or near the edge of an artificial surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are often significantly higher than the concentrations would be if the surfacing were not present. Thus, a reading taken below or near an impermeable surface is much higher than it would be in the absence of such a cap. Therefore, the sample location conditions should be evaluated when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate survey and site information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times). BEACON recommends the guidelines stated in **Attachment 1** to establish a relationship between reported soil-gas measurements and actual subsurface contaminant concentrations, which will indicate those measurements representing significant subsurface contamination.

BEACON's passive soil-gas samplers are prepared with two sets of adsorbent cartridges for subsequent duplicate or confirmatory sample analysis. At ENVIROGROUP's request, duplicate analysis was performed for two (2) samples. The duplicate samples were designated with "DUP" following the sample number. When comparing quantitative results, a duplicate correspondence should be considered when the relative percent difference (RPD) between the two samples is less than or equal to 100%. For the purpose of calculating correspondences, all non-detections should be assigned, as a baseline value, the CRQL for the specific contaminant. Based on these assumptions, a 100% correlation was found between the duplicate samples and their base samples.

### Project Details

Samplers were deployed on November 1 and 2, 2011, and were retrieved on November 15, 2011. **Attachment 2** describes the field procedures used. Individual deployment and retrieval times will be found in the Field Deployment Report (**Attachment 3**).

Seventy-three (73) field samples, two (2) field sample duplicates, and two (2) trip blanks were received by BEACON on November 17, 2011. Adsorbent cartridges from the passive samplers were thermally desorbed, then analyzed using gas chromatography/mass spectrometry (GC/MS) equipment, in accordance with EPA Method 8260C (Modified), as described in **Attachment 4**. BEACON's laboratory analyzed each sample for the targeted compounds; analyses were completed on November 20, 2011. Following a laboratory review, results were provided to ENVIROGROUP on November 23, 2011. The Chain-of-Custody form, which was shipped with the samples for this survey, is supplied as **Attachment 5**.

All field sample locations are shown on **Figure 1**. In this investigation, samples were collected in two distinct areas of concern, identified as Site 35 and Site 43. Maps with the prefix "2-" show results for the samples collected at Site 35, while maps with the prefix "3-" show results for the samples collected at Site 43.

The following tables lists frequency of detections based on the number of field samples analyzed, the reporting limit, and the maximum value for each mapped compound. The table also includes the transformation and interpolation method for the compound distribution maps provided.

**Site 35**

<b>Figure No.</b>	<b>2-1</b>	<b>2-2</b>	<b>2-3</b>
Compound	cis-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene
Frequency	8	19	25
Reporting Limit (nanograms)	10	10	10
Max Value (nanograms)	22	197	661
Transformation Method	Log	Log	Log
Interpolation Method	Kriging	Kriging	Kriging

**Site 43**

<b>Figure No.</b>	<b>3-1</b>	<b>3-2</b>	<b>3-3</b>
Compound	cis-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene
Frequency	0	10	8
Reporting Limit (nanograms)	10	10	10
Max Value (nanograms)	<10	46	80
Transformation Method	NA	Log	Log
Interpolation Method	NA	Kriging	Kriging

**Attachments:**

- 1- Applying Results From Passive Soil-Gas Surveys
- 2- Field Procedures
- 3- Field Deployment Report
- 4- Laboratory Procedures
- 5- Chain-of-Custody Form

ALL DATA MEET REQUIREMENTS AS SPECIFIED IN THE BEACON ENVIRONMENTAL SERVICES, INC. QUALITY ASSURANCE PROJECT PLAN. RELEASE OF THE DATA CONTAINED IN THIS DATA PACKAGE HAS BEEN AUTHORIZED BY THE LABORATORY DIRECTOR OR HIS SIGNEE, AS VERIFIED BY THE FOLLOWING SIGNATURE:



Steven C. Thornley  
Laboratory Director

Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	mb111118a	Trip-1	Trip-2	PSV-35-A1	PSV-35-A2	PSV-35-A3
Project Number:		2432	2432	2432	2432	2432
Lab File ID:	A11111813	A11111815	A11111816	A11111817	A11111818	A11111819
Received Date:		11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/18/2011	11/18/2011	11/18/2011	11/18/2011	11/18/2011	11/18/2011
Analysis Time:	16:16	17:02	17:25	17:48	18:10	18:33
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Trichloroethene	<10	<10	<10	<10	<10	<10
Tetrachloroethene	<10	<10	<10	<b>15</b>	<b>8 J</b>	<b>5 J</b>

Table 1

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**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-35-A4	PSV-35-A5	PSV-35-A7	PSV-35-B1	PSV-35-B2	PSV-35-B3
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111820	A11111821	A11111822	A11111823	A11111824	A11111825
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/18/2011	11/18/2011	11/18/2011	11/18/2011	11/18/2011	11/18/2011
Analysis Time:	18:55	19:18	19:40	20:03	20:25	20:48
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Trichloroethene	<10	<10	<10	<10	<10	<b>5 J</b>
Tetrachloroethene	<10	<10	<10	<b>6 J</b>	<10	<b>15</b>

Table 1

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**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-35-B4	PSV-35-B5	PSV-35-B6	PSV-35-B7	PSV-35-C1	PSV-35-C2
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111826	A11111827	A11111828	A11111829	A11111830	A11111831
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/18/2011	11/18/2011	11/18/2011	11/18/2011	11/18/2011	11/18/2011
Analysis Time:	21:11	21:34	21:56	22:18	22:41	23:04
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<b>13</b>	<10	<10
Trichloroethene	<10	<10	<b>7 J</b>	<b>149</b>	<b>53</b>	<10
Tetrachloroethene	<b>8 J</b>	<10	<b>7 J</b>	<b>84</b>	<b>234</b>	<10

Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-35-C3	PSV-35-C4	PSV-35-C5	PSV-35-C5 DUP	PSV-35-C7	PSV-35-D1
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111832	A11111833	A11111834	A11111835	A11111836	A11111837
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/18/2011	11/18/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011
Analysis Time:	23:26	23:49	0:12	0:34	0:57	1:20
Units:	ng	ng	ng	ng	ng	ng

**COMPOUNDS**

Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<b>22</b>	<b>34</b>	<10	<10
Trichloroethene	<10	<b>6 J</b>	<b>167</b>	<b>309</b>	<b>26</b>	<b>13</b>
Tetrachloroethene	<10	<b>9 J</b>	<b>194</b>	<b>141</b>	<b>93</b>	<b>185</b>

Table 1

**Beacon Environmental Services, Inc.**  
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**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-35-D2	PSV-35-D3	PSV-35-D4	PSV-35-D5	PSV-35-D7	PSV-35-E1
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111838	A11111839	A11111840	A11111841	A11111842	A11111843
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011
Analysis Time:	1:42	2:05	2:27	2:50	3:13	3:35
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<b>15</b>	<10	<b>13</b>	<10	<b>6 J</b>
Trichloroethene	<b>100</b>	<b>197</b>	<b>18</b>	<b>149</b>	<b>43</b>	<b>62</b>
Tetrachloroethene	<b>481</b>	<b>644</b>	<b>149</b>	<b>423</b>	<b>95</b>	<b>210</b>



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**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-35-E2	PSV-35-E3	PSV-35-E4	PSV-35-E5	PSV-35-E7	PSV-35-F5
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111844	A11111845	A11111846	A11111847	A11111848	A11111849
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011
Analysis Time:	3:58	4:21	4:43	5:06	5:28	5:51
Units:	ng	ng	ng	ng	ng	ng

**COMPOUNDS**

Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<b>8 J</b>	<b>10</b>	<10	<b>9 J</b>
Trichloroethene	<b>51</b>	<b>59</b>	<b>166</b>	<b>128</b>	<10	<b>119</b>
Tetrachloroethene	<b>297</b>	<b>182</b>	<b>661</b>	<b>387</b>	<b>21</b>	<b>373</b>

Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	mb111118a1	PSV-43-A1	PSV-43-A1D	PSV-43-A2	PSV-43-A2D	PSV-43-A8
Project Number:		2432	2432	2432	2432	2432
Lab File ID:	A11111857	A11111859	A11111860	A11111861	A11111862	A11111863
Received Date:		11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011
Analysis Time:	8:54	9:40	10:02	10:25	10:47	11:10
Units:	ng	ng	ng	ng	ng	ng

**COMPOUNDS**

Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Trichloroethene	<10	<10	<10	<10	<10	<b>33</b>
Tetrachloroethene	<10	<10	<10	<10	<10	<b>80</b>

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**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-43-A9	PSV-43-B1	PSV-43-B3	PSV-43-B3 DUP	PSV-43-B4	PSV-43-B5
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111864	A11111865	A11111866	A11111867	A11111868	A11111869
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011
Analysis Time:	11:32	11:55	12:18	12:40	13:03	13:26
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Trichloroethene	<10	<10	<b>10 J</b>	<b>7 J</b>	<10	<b>9 J</b>
Tetrachloroethene	<b>11</b>	<b>12</b>	<b>8 J</b>	<b>10</b>	<10	<b>31</b>

Table 1

**Beacon Environmental Services, Inc.**  
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**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-43-B6	PSV-43-B8	PSV-43-B9	PSV-43-B10	PSV-43-B11	PSV-43-C1
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111870	A11111871	A11111872	A11111873	A11111874	A11111875
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011
Analysis Time:	13:48	14:11	14:34	14:56	15:19	15:42
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Trichloroethene	<10	<10	<10	<10	<10	<10
Tetrachloroethene	<10	<b>7 J</b>	<b>6 J</b>	<10	<10	<10

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**Beacon Environmental Services, Inc.**  
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**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-43-C2	PSV-43-C8	PSV-43-C8D	PSV-43-C10	PSV-43-C10D	PSV-43-C11
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111876	A11111877	A11111878	A11111879	A11111880	A11111881
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011
Analysis Time:	16:04	16:27	16:50	17:13	17:35	17:58
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Trichloroethene	<10	<10	<10	<10	<b>5 J</b>	<10
Tetrachloroethene	<b>5 J</b>	<10	<10	<10	<10	<10

Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-43-C12	PSV-43-C13	PSV-43-C14	PSV-43-C15	PSV-43-D1	PSV-43-D2
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111882	A11111883	A11111884	A11111885	A11111886	A11111887
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011
Analysis Time:	18:21	18:44	19:06	19:29	19:51	20:14
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Trichloroethene	<10	<b>8 J</b>	<10	<10	<10	<10
Tetrachloroethene	<10	<10	<10	<10	<10	<10

Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-43-D8	PSV-43-D9	PSV-43-D10	PSV-43-D11	PSV-43-E1	PSV-43-E2
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111888	A11111889	A11111890	A11111891	A11111892	A11111893
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011	11/19/2011
Analysis Time:	20:36	20:59	21:22	21:44	22:07	22:30
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Trichloroethene	<10	<b>46</b>	<10	<10	<10	<10
Tetrachloroethene	<10	<10	<10	<10	<10	<10

Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
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**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	PSV-43-E3	PSV-43-E4	PSV-43-E5	PSV-43-E6	PSV-43-E7	PSV-43-E8
Project Number:	2432	2432	2432	2432	2432	2432
Lab File ID:	A11111894	A11111895	A11111896	A11111897	A11111898	A11111899
Received Date:	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011	11/17/2011
Analysis Date:	11/19/2011	11/19/2011	11/19/2011	11/20/2011	11/20/2011	11/20/2011
Analysis Time:	22:52	23:15	23:38	0:00	0:23	0:46
Units:	ng	ng	ng	ng	ng	ng

**COMPOUNDS**

Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Trichloroethene	<10	<10	<10	<b>6 J</b>	<b>24</b>	<b>6 J</b>
Tetrachloroethene	<10	<10	<10	<10	<10	<10



**Table 1**

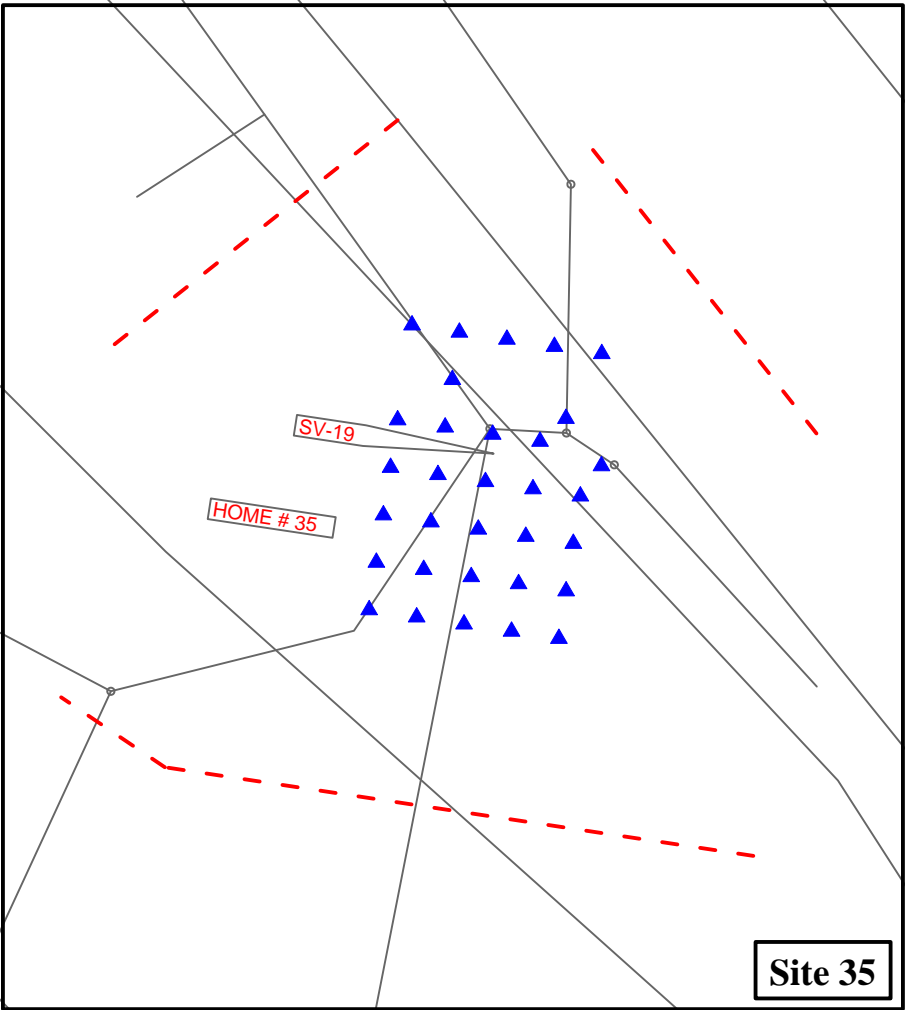
**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

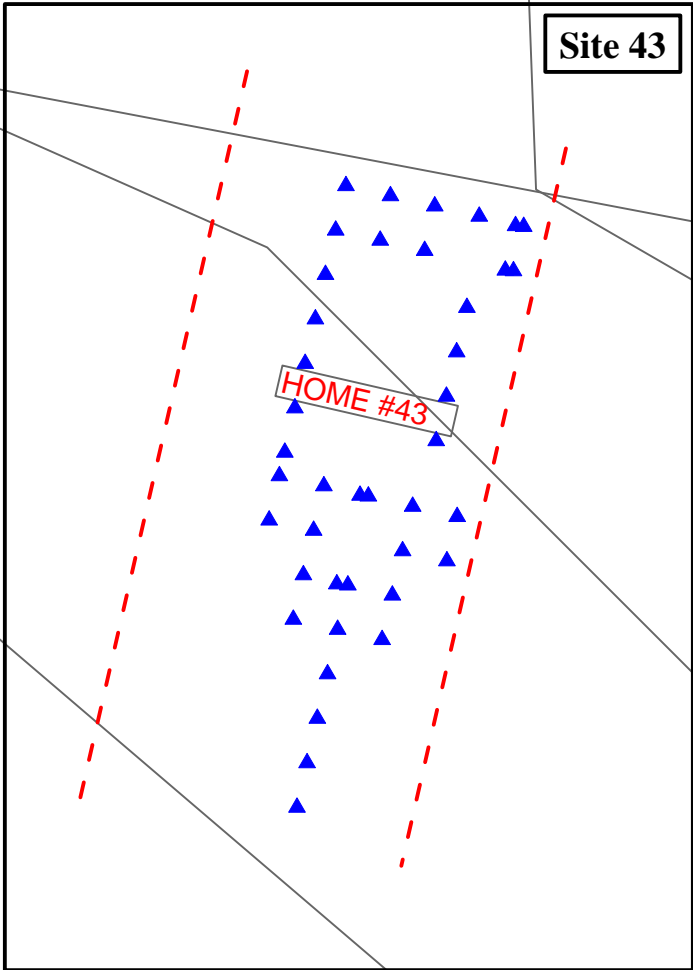
Client Sample ID: PSV-43-E9  
Project Number: 2432  
Lab File ID: A11111900  
Received Date: 11/17/2011  
Analysis Date: 11/20/2011  
Analysis Time: 1:09  
Units: ng

**COMPOUNDS**

Vinyl Chloride	<10
1,1-Dichloroethene	<10
trans-1,2-Dichloroethene	<10
cis-1,2-Dichloroethene	<10
Trichloroethene	<b>32</b>
Tetrachloroethene	<10

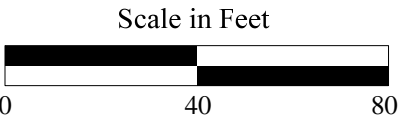


Areas of investigation that are shown in greater detail in subsequent maps.



**LEGEND**

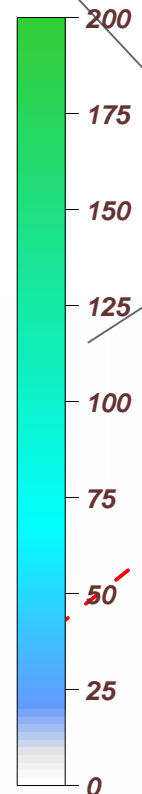
- ▲ PASSIVE SOIL-GAS SAMPLE LOCATION
- - - APPROXIMATE PROPERTY LINES



**Figure 1**  
**Passive Soil-Gas Survey**  
**Sample Locations**

**Ithaca Sites 35 and 43**  
**Ithaca, NY**



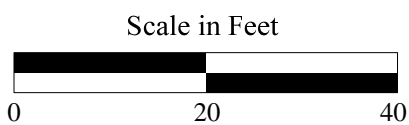


HOME # 35

SV-19

### LEGEND

- 6 J** NANOGRAMS/SAMPLER (J = Estimated Value)
- ▲** PASSIVE SOIL-GAS SAMPLE LOCATION
- APPROXIMATE PROPERTY LINES

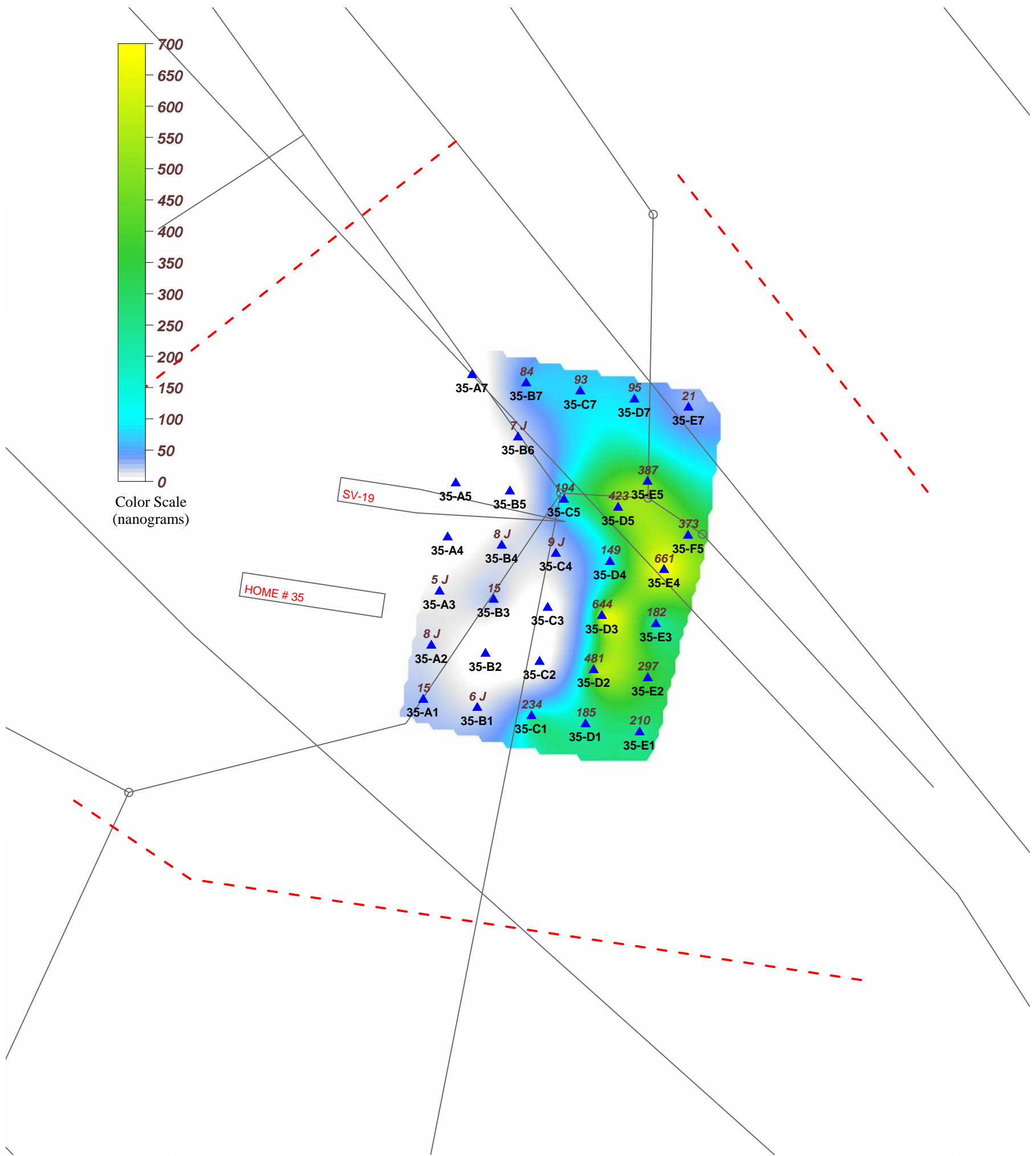


**BEACON ENVIRONMENTAL SERVICES, INC.**

323 Williams Street, Bel Air, MD, 800-878-5510  
Beacon Project No. 2432, December 2011

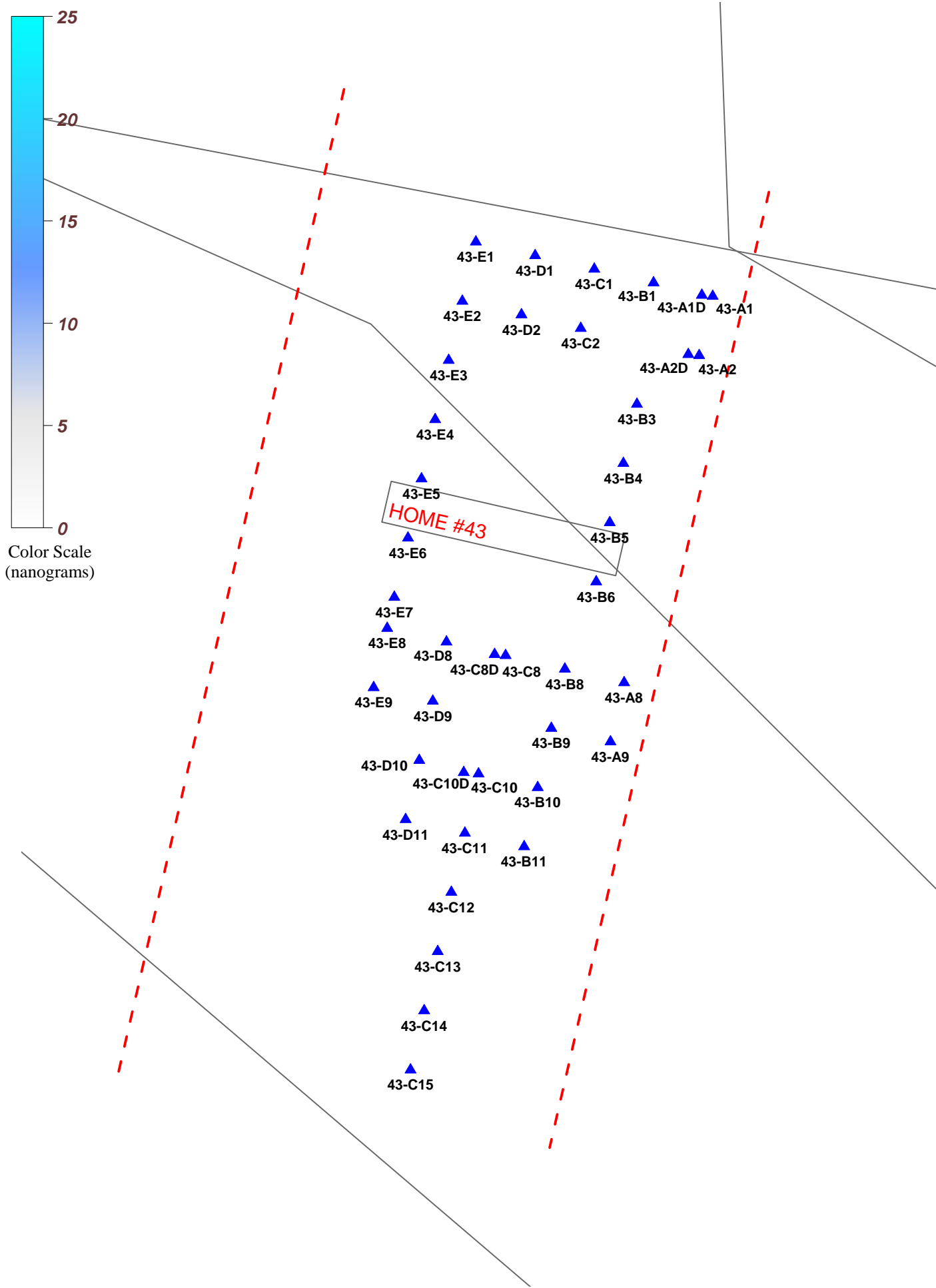
**Figure 2-2**  
**Passive Soil-Gas Survey**  
**Trichloroethene**

**Site 35**  
**Ithaca, NY**



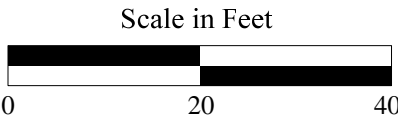
**LEGEND**

- 6 J NANOGRAMS/SAMPLER (J = Estimated Value)
- 35-A1 PASSIVE SOIL-GAS SAMPLE LOCATION
- - - APPROXIMATE PROPERTY LINES



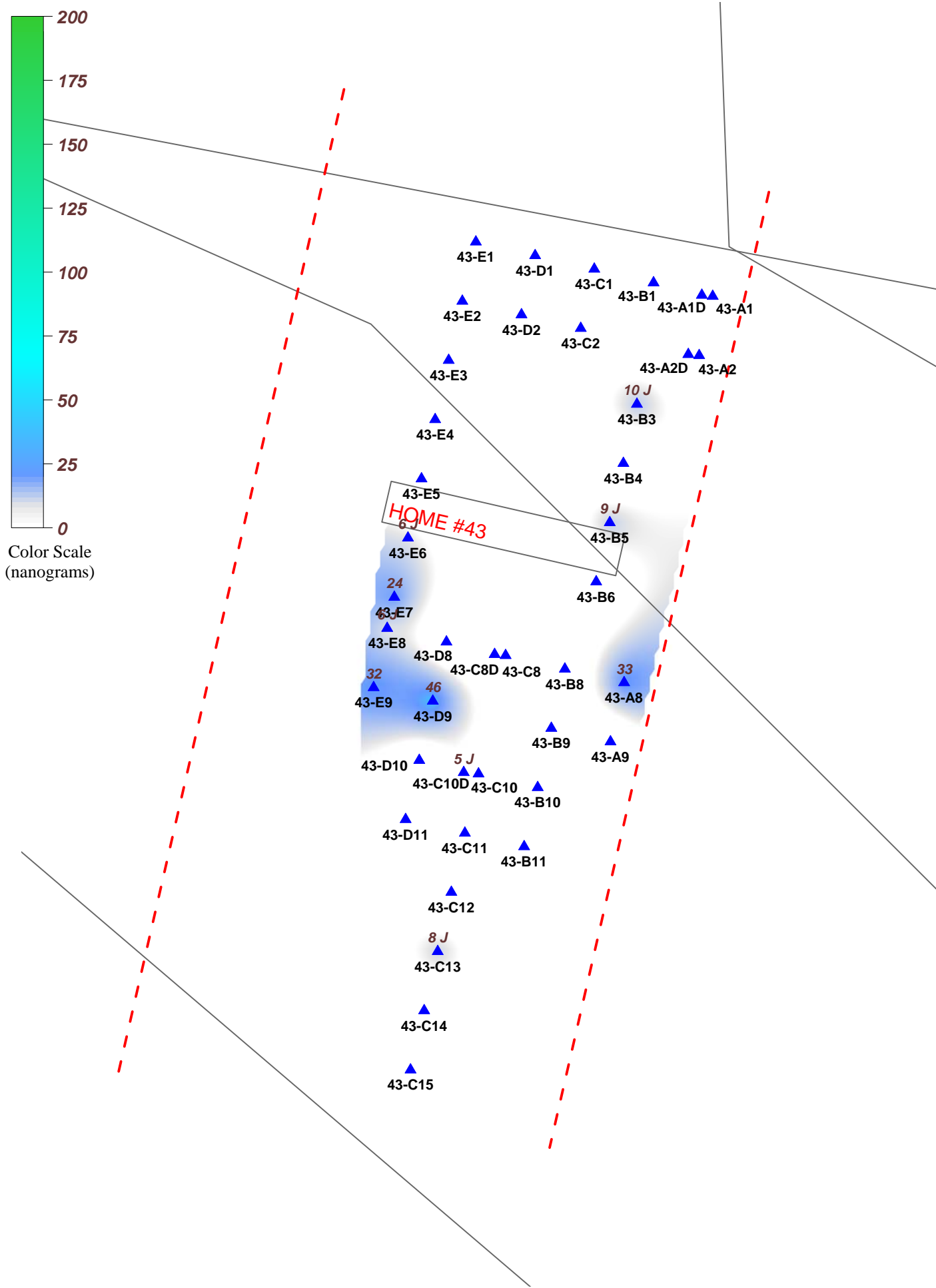
**LEGEND**

- 6 J** NANOGRAMS/SAMPLER (J = Estimated Value)
- 43-A1** PASSIVE SOIL-GAS SAMPLE LOCATION
- - -** APPROXIMATE PROPERTY LINES



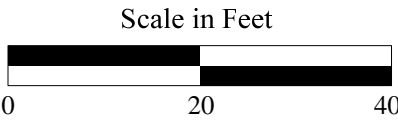
**Figure 3-1**  
**Passive Soil-Gas Survey**  
**cis-1,2-Dichloroethene**

**Site 43**  
**Ithaca, NY**



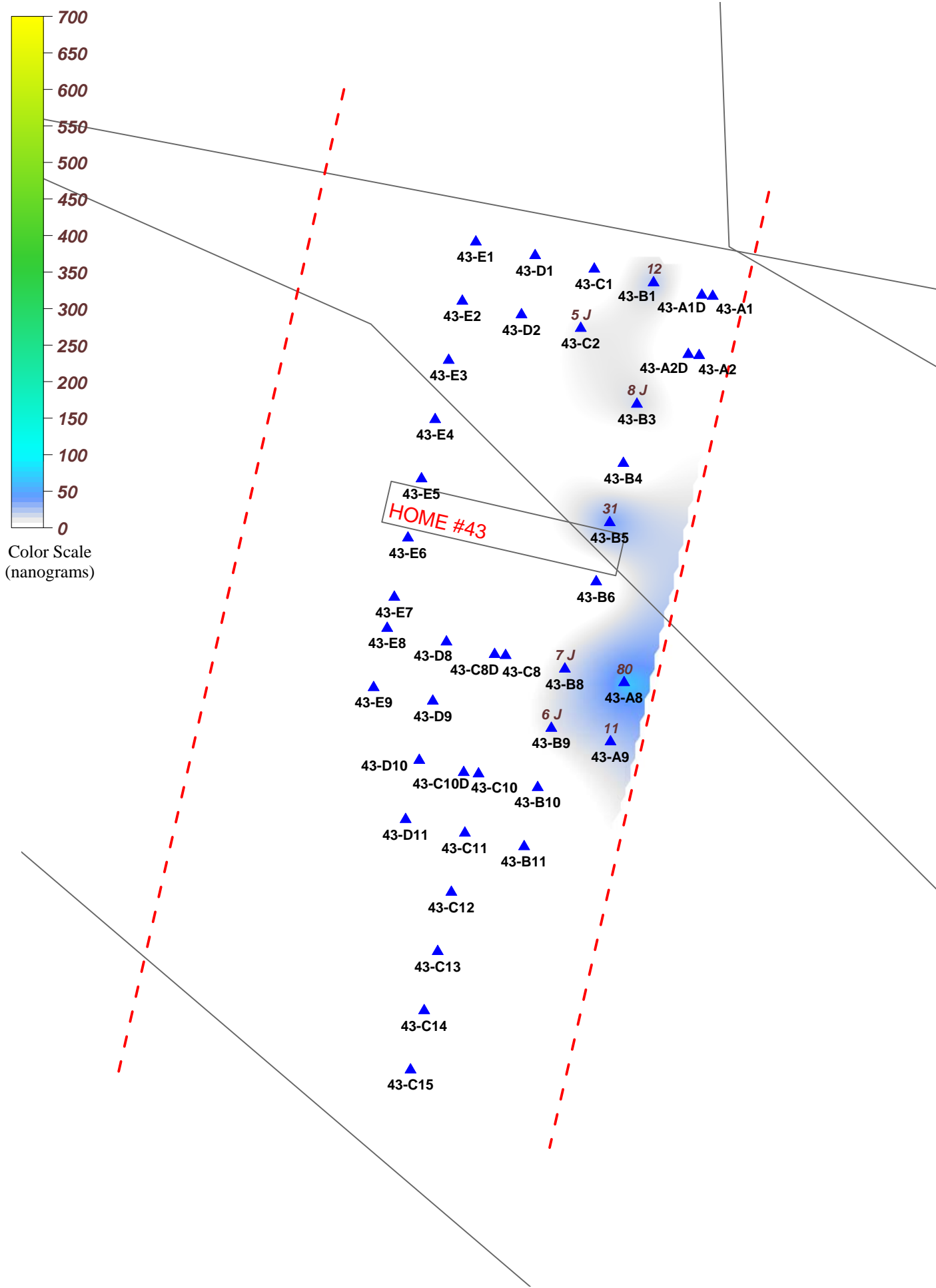
**LEGEND**

- 6 J** NANOGRAMS/SAMPLER (J = Estimated Value)
- 43-A1** PASSIVE SOIL-GAS SAMPLE LOCATION
- - -** APPROXIMATE PROPERTY LINES



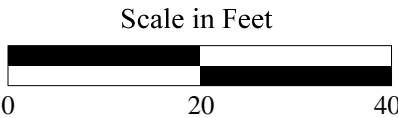
**Figure 3-2**  
**Passive Soil-Gas Survey**  
**Trichloroethene**

**Site 43**  
**Ithaca, NY**



**LEGEND**

- 6 J** NANOGRAMS/SAMPLER (J = Estimated Value)
- 43-A1** PASSIVE SOIL-GAS SAMPLE LOCATION
- - -** APPROXIMATE PROPERTY LINES



**Figure 3-3**  
**Passive Soil-Gas Survey**  
**Tetrachloroethene**

**Site 43**  
**Ithaca, NY**



## **Attachments**

## Attachment 1

### APPLYING RESULTS FROM PASSIVE 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(s). The vapor-phase is merely a fractional trace of the source(s) and, 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.

Passive soil gas data are reported in mass of compounds identified per sample location (e.g., nanograms (ng) or micrograms (µg) per sampler). Results from a passive soil gas survey typically are then used to guide where follow-on intrusive samples should be collected to obtain corresponding concentrations of the contaminants in soil, soil gas, and/or groundwater, as well as eliminate those areas where intrusive samples are not required. It is not practical to report passive soil gas data as concentration because the sampler's uptake rates of the compounds are often greater than the replenishment rates of the compounds around the sampler, which results in low bias measurements, and the replenishment rates will be dependent on several factors that include, at a minimum, soil gas concentrations, soil porosity and permeability, and soil moisture level.

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 in areas that show relatively high soil-gas measurements to obtain corresponding concentrations of soil and groundwater contaminants. These correspondent values furnish the basis for approximating a relationship. For extrapolating passive soil gas results to vapor intrusion evaluations, we recommend a minimum of three passive soil gas locations be converted to a shallow vapor well then sampled using an active soil gas method. Once a relationship is established, it can be used in conjunction with the remaining soil-gas measurements to estimate subsurface contaminant concentrations across the survey field. (See [www.beacon-usa.com/passivesoilgas.html](http://www.beacon-usa.com/passivesoilgas.html), Publication 1: *Mass to Concentration Tie-In for PSG Surveys* and Publication 4: *Groundwater and PSG Correlation*.) 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 an impact on soil-gas measurements at those locations.

When passive soil-gas surveys are utilized as described above, 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. Passive soil-gas surveys can also be used as a remediation or general site monitoring tool that can be implemented on a quarterly, semi-annual or annual basis.

## Attachment 2

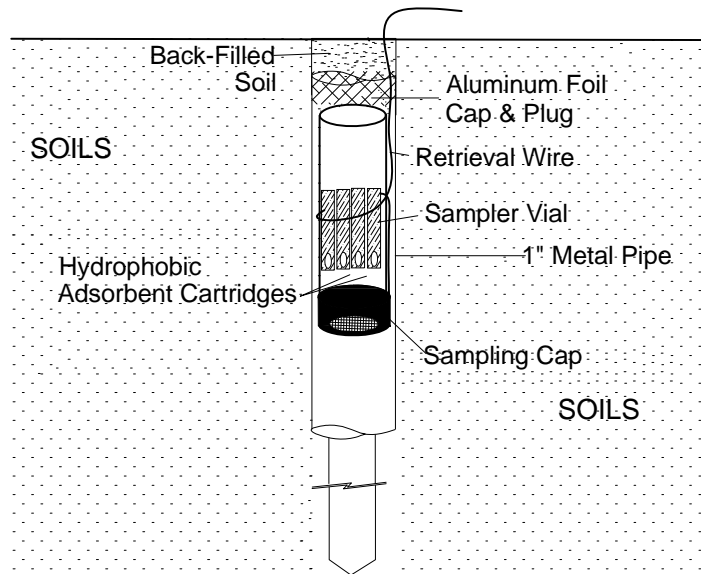
### FIELD PROCEDURES FOR PASSIVE SOIL-GAS SURVEYS

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.

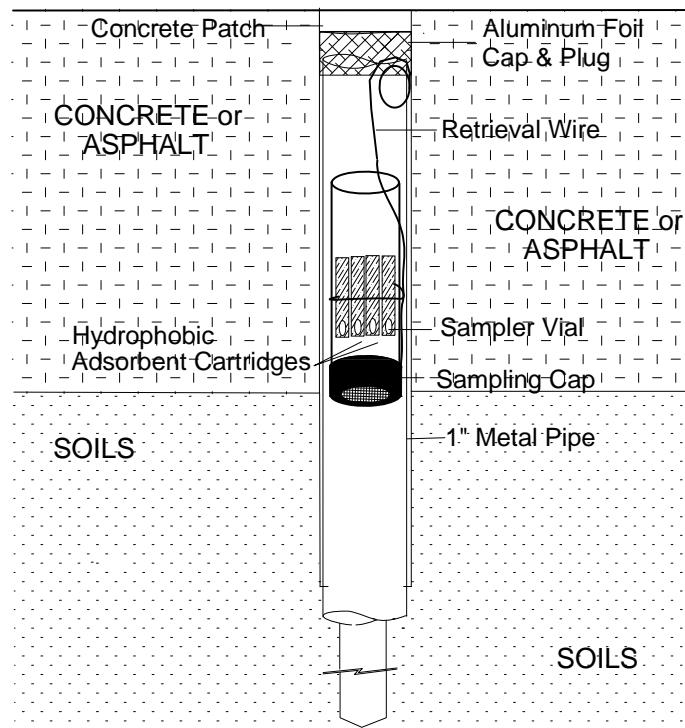
- A. Field personnel carry a BESURE Sample Collection Kit™ and support equipment to the site and deploy the passive samplers in a prearranged survey pattern. A passive sampler consists of a borosilicate glass vial containing hydrophobic adsorbent cartridges with a length of wire attached to the vial 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 hammer drill with a 1"- to 1½"-diameter bit, creates a hole 12 to 14 inches deep. [Note: For locations covered with asphalt, concrete, or gravel surfacing, the field technician drills a 1"- to 1½"-diameter hole through the surfacing to the soils beneath]. The technician then, using a hammer drill with a ½" diameter bit, creates a hole three-feet deep. The hole is then sleeved with a 1"-diameter 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 an aluminum foil plug and soils for uncapped locations or, for capped locations, an aluminum foil plug 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 transport the passive samplers to BEACON's laboratory.

# BEACON'S PASSIVE SOIL-GAS SAMPLER

## DEPLOYMENT THROUGH SOILS



## DEPLOYMENT THROUGH AN ASPHALT/CONCRETE CAP



**Attachment 3**

**Field Deployment Report**

# PASSIVE SOIL-GAS SURVEY FIELD DEPLOYMENT REPORT

Project Information	
Beacon Project No.:	2432
Site Name:	Ithaca Site
Site Location:	Ithaca, NY



Client Information	
Company Name:	EnviroGroup Limited
Office Location:	Latham, NY
Samples Collected By:	E Lovenduski

FIELD SAMPLE ID	Date Emplaced	Date Retrieved	Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)
	Time Emplaced	Time Retrieved		
TRIP BLANK	1259	1020	—	
PSV-35-A1	1301	1025	36"	Grass 0.9
PSV-35-A2	1305	1029	36"	Grass 0.8
PSV-35-A3	1306	1033	36"	Grass 0.9
PSV-35-A4	1308	1035	36"	Grass 0.9
PSV-35-A5	1310	1038	36"	Grass 0.9
PSV-35-A7	1315	1040	36"	Soil 0.5
PSV-35-B1	1320	1043	36"	Grass 1.2
PSV-35-B2	1322	1045	36"	Grass 0.3
PSV-35-B3	1325	1047	36"	Grass 1.3
PSV-35-B4	1327	1049	36"	Grass 1.5
PSV-35-B5	1329	1052	36"	Soil 2.3
PSV-35-B6	1331	1054	36"	Soil 0.3
PSV-35-B7	1337	1056	36"	Soil 2.4
PSV-35-C1	1343	1100	36"	Grass 2.7

\* Background on PID reads 0-9 ppm



# PASSIVE SOIL-GAS SURVEY FIELD DEPLOYMENT REPORT

Project Information	
Beacon Project No.:	2432
Site Name:	Ithaca Site
Site Location:	Ithaca, NY



Client Information	
Company Name:	EnviroGroup Limited
Office Location:	Latham, NY
Samples Collected By:	ELownduski

FIELD SAMPLE ID	Date Emplaced	Date Retrieved	Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)
	Time Emplaced	Time Retrieved		
	11/1/11	11/15/11		Surface PID
PSV-35-C2	1345	1102	36"	Gross 2.2
PSV-35-C3	1347	1104		Gross 1.8
PSV-35-C4	1349	1106		Gross 0.3
PSV-35-C5	1351	1108		Soil DVP HERE 1.5
PSV-35-C6	1353	1111		Soil 1.8
PSV-35-D1	1411	1114		Gross 0.7
PSV-35-D2	1416	1117		Gross 0.7
PSV-35-D3	1418	1119		Soil 2.0
PSV-35-D4	1420	1122		Soil 1.7
PSV-35-D5	1422	1124		Soil 0.9
PSV-35-D7	1425	1126		Soil 1.2
PSV-35-E1	1430	1128		Gross 1.0
PSV-35-E2	1435	1130		Gross 0.7
PSV-35-E3	1438	1132		Soil 0.7
PSV-35-E4	1441	1134	✓	Soil 1.1

# PASSIVE SOIL-GAS SURVEY FIELD DEPLOYMENT REPORT

Project Information	
Beacon Project No.:	2432
Site Name:	Ithaca Site
Site Location:	Ithaca, NY



Client Information	
Company Name:	EnviroGroup Limited
Office Location:	Latham, NY
Samples Collected By:	E. L. and usk:

FIELD SAMPLE ID	Date Emplaced	Date Retrieved	Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)
	Time Emplaced	Time Retrieved		
PSV-35-ES	1444	1136	36"	50' / 1.5
PSV-35-FS	1448	1140	↓	50' / 1.0
PSV-35-E7	1630	1138	↓	50' / 1.4



# PASSIVE SOIL-GAS SURVEY FIELD DEPLOYMENT REPORT

Project Information	
Beacon Project No.:	2432
Site Name:	Ithaca Site
Site Location:	Ithaca, NY

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

Client Information	
Company Name:	EnviroGroup Limited
Office Location:	Latham, NY
Samples Collected By:	E. Lowndeski

FIELD SAMPLE ID	Date Emplaced	Date Retrieved	Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)
	Time Emplaced	Time Retrieved		
TRIP BLANK	—	1320	—	Mulch = F.I.C. 0.0
PSV-43-A1	1220	1324	36"	Mulch 0.0
PSV-43-A1D	1221	1326	60"	Mulch 0.0
PSV-43-B1	1223	1329	36"	Gross 0.0
PSV-43-C1	1225	1331		Gross 0.7
PSV-43-D1	1227	1332		Gross 0.2
PSV-43-E1	1230	1334		Gross 0.0
PSV-43-A2	1233	1336	↓	Mulch 1.1
PSV-43-A2D	1234	1337	60"	Mulch but taken on 11/15 0.9
PSV-43-B2	<del>1237</del>	<del>1338</del>	36"	Gross - no sample - sample cap never put on. 0.0
PSV-43-C2	1240	1340		Gross 0.0
PSV-43-D2	1243	1341		Gross 0.0
PSV-43-E2	1245	1343		Gross 0.0
PSV-43-E3	1249	1345		Mulch 0.0
PSV-43-E4	1251	1347	↓	Mulch 0.6

# PASSIVE SOIL-GAS SURVEY FIELD DEPLOYMENT REPORT

Project Information	
Beacon Project No.:	2432
Site Name:	Ithaca Site
Site Location:	Ithaca, NY



Client Information	
Company Name:	EnviroGroup Limited
Office Location:	Latham, NY
Samples Collected By:	E. Lovend-3/11

FIELD SAMPLE ID	Date Emplaced	Date Retrieved	Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)
	Time Emplaced	Time Retrieved		
PSV-43-E5	1256	1349	36"	Grass 0.0
PSV-43-E6	1258	1350		Grass 0.0
PSV-43-E7	1305	1351		Grass 0.0
PSV-43-E8	1309	1352		Grass 0.0
PSV-43-E9	1349	1354		Tube wet & pick-up 0.4
PSV-43-D8	1430	1359		Mulch - flower box 0.0
PSV-43-C8	1432	1401		Gravel 0.0
PSV-43-C8D	1433	1402	60"	Gravel 0.0
PSV-43-B8	1435	1403	36"	Gravel 0.0
PSV-43-A8	1437	1405		Mulch 0.0
PSV-43-A9	1439	1407		Mulch 0.0
PSV-43-B9	1441	1408		Brick 0.0
PSV-43-D9	1442	1410		Mulch 0.0
PSV-43-B10	1444	1414		Mulch - wet tube on 11/15 0.0
PSV-43-C10	1446	1416		Mulch 0.0



# PASSIVE SOIL-GAS SURVEY FIELD DEPLOYMENT REPORT

Project Information	
Beacon Project No.:	2432
Site Name:	Ithaca Site
Site Location:	Ithaca, NY



Client Information	
Company Name:	EnviroGroup Limited
Office Location:	Latham, NY
Samples Collected By:	ELOVENDSKI

FIELD SAMPLE ID	Date Emplaced	Date Retrieved	Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)	
	Time Emplaced	Time Retrieved			
PSV-43-C10D	1447	1417	60-54"	Mulch - Tube wet on 11/15	PICKUP PID (ppm) 0.0
PSV-43-D10	1449	1418	36"	Mulch	0.0
PSV-43-C11	1451	1423		Grass - wet tube on 11/15	0.0
PSV-43-C12	1453	1426		Grass wet tube on 11/15	0.0
PSV-43-C13	1456	1428		Grass - wet tube on 11/15	0.0
PSV-43-C14	1458	1430		Grass - wet tube on 11/15	0.0
PSV-43-C15	1500	1431		Grass	0.0
PSV-43-D11	1503	1425		Grass wet tube on 11/15	0.0
PSV-43-B11	1508	1420		Grass wet tube on 11/15	0.0
<del>PSV-43-B8</del>	<del>1510</del>			Already installed PS 2 S/S	
PSV-43-B7	1513			Vial broke when removed, solvents lost in hole no sample	
PSV-43-B6	1515	1435		Gravel moist in tube on 11/15	0.0
PSV-43-B5	1517	1437		Gravel wet in tube on 11/15	0.0
PSV-43-B4	1519	1439		Gravel Moist in tube on 11/15	0.0
PSV-43-B3	1521	1442	✓	Gravel moist in tube on 11/15	DUPHERE 0.0

## **Attachment 4**

### **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 8260C 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 and to meet the objectives of reporting semi-quantitative data. 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 Rxi-624Sil MS 20m, 0.18 mm ID, 1.00 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 SW846-8260C. 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 6890-5973a Gas Chromatograph/Mass Spectrometer;
  - Markes Unity thermal desorber;
  - Markes Ultra autosampler; and
  - Markes Mass Flow Controller Modules

**Attachment 5**

**Chain-of-Custody Form**



# CHAIN-OF-CUSTODY PASSIVE SOIL-GAS SAMPLES

HOUSE#35-1

Project Information	
Beacon Project No.:	2432
Site Name:	Ithaca Site
Site Location:	Ithaca, NY
Analytical Method:	EPA Method 8260C
Target Compounds:	Beacon Project Number 2432 Target Compound List



Client Information	
Company Name:	EnviroGroup Limited
Office Location:	Latham, NY
Samples Submitted By:	E. Lovenduski
Contact Phone No.:	518-258-3859

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 BLANK 01	2432 Trip-1		11/15/11	1020	ES
PSV-35-A1	2432 PSV-35-A1		11/15/11	1025	ES
PSV-35-A2	2432 PSV-35-A2			1029	ES
PSV-35-A3	2432 PSV-35-A3			1033	ES
PSV-35-A4	2432 PSV-35-A4			1035	ES
PSV-35-A5	2432 PSV-35-A5			1038	ES
PSV-35-A7	2432 PSV-35-A7			1040	ES
PSV-35-B1	2432 PSV-35-B1			1043	ES
PSV-35-B2	2432 PSV-35-B2			1045	ES
PSV-35-B3	2432 PSV-35-B3			1047	ES
PSV-35-B4	2432 PSV-35-B4			1049	ES
PSV-35-B5	2432 PSV-35-B5			1052	ES
PSV-35-B6	2432 PSV-35-B6			1054	ES
PSV-35-B7	2432 PSV-35-B7			1056	ES
PSV-35-C1	2432 PSV-35-C1			1100	ES
PSV-35-C2	2432 PSV-35-C2			1102	ES
PSV-35-C3	2432 PSV-35-C3			1104	ES
PSV-35-C4	2432 PSV-35-C4			1106	ES
PSV-35-C5	2432 PSV-35-C5			1108	ES
PSV-35-C5 DUP	2432 PSV-35-C5 DUP			1108	ES

Shipment of Field Kit to Site — Custody Seal # 17350381

Relinquished by:	Date/Time	Courier	Intact? <input checked="" type="radio"/> Y <input type="radio"/> N	Received by:	Date/Time
Ryan Schick	10-27-2011 / 1700 Hours	UPS		ES	10/28/11 1100

Shipment of Field Kit to Laboratory — Custody Seal # 17350382

Relinquished by:	Date/Time	Courier	Intact? <input checked="" type="radio"/> Y <input type="radio"/> N	Received by:	Date/Time
ES	11/16/11 1500	FEDEX		Steven Thornberry	11.17.11 / 1000 hrs



# CHAIN-OF-CUSTODY PASSIVE SOIL-GAS SAMPLES

House #35-2

Project Information	
Beacon Project No.:	2432
Site Name:	Ithaca Site
Site Location:	Ithaca, NY
Analytical Method:	EPA Method 8260C
Target Compounds:	Beacon Project Number 2432 Target Compound List



Client Information	
Company Name:	EnviroGroup Limited
Office Location:	Latham, NY
Samples Submitted By:	E. Lovenduski
Contact Phone No.:	518-258-3859

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
PSV-35-C7	2432 PSV-35-C7		11/15/11	1111	ES
PSV-35-D1	2432 PSV-35-D1			1114	ES
PSV-35-D2	2432 PSV-35-D2			1117	ES
PSV-35-D3	2432 PSV-35-D3			1119	ES
PSV-35-D4	2432 PSV-35-D4			1122	ES
PSV-35-D5	2432 PSV-35-D5			1124	ES
PSV-35-D7	2432 PSV-35-D7			1126	ES
PSV-35-E1	2432 PSV-35-E1			1128	ES
PSV-35-E2	2432 PSV-35-E2			1130	ES
PSV-35-E3	2432 PSV-35-E3			1132	ES
PSV-35-E4	2432 PSV-35-E4			1134	ES
PSV-35-E5	2432 PSV-35-E5			1136	ES
PSV-35-E7	2432 PSV-35-E7			1138	ES
PSV-35-F5	2432 PSV-35-F5			1140	ES
/		S. [Signature]			

Shipment of Field Kit to Site — Custody Seal # 17350381

Intact? ☒ Y ☐ N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
Ryan School	10-27-2011 / 1700 Hours	UPS	ES	10/28/11 1100

Shipment of Field Kit to Laboratory — Custody Seal # 17350382

Intact? ☒ Y ☐ N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
[Signature]	11/16/11 1500	FED EX	Steven Thornley	11.17.11 / 1000 hrs



# CHAIN-OF-CUSTODY PASSIVE SOIL-GAS SAMPLES

House #43\_1

Project Information	
Beacon Project No.:	2432
Site Name:	Ithaca Site
Site Location:	Ithaca, NY
Analytical Method:	EPA Method 8260C
Target Compounds:	Beacon Project Number 2432 Target Compound List



Client Information	
Company Name:	EnviroGroup Limited
Office Location:	Latham, NY
Samples Submitted By:	E Lovenduski
Contact Phone No.:	518-258-3859

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 BLANK 02	2432 Trip 2		11/15/11	1320	SJK
PSV-43-A1	2432 PSV-43-A1			1324	SJK
PSV-43-A1D	2432 PSV-43-A1D			1326	SJK
PSV-43-B1	2432 PSV-43-B1			1329	SJK
PSV-43-C1	2432 PSV-43-C1			1331	SJK
PSV-43-D1	2432 PSV-43-D1			1332	SJK
PSV-43-E1	2432 PSV-43-E1			1334	SJK
PSV-43-A2	2432 PSV-43-A2			1336	SJK
PSV-43-A2D	2432 PSV-43-A2D			1337	SJK
PSV-43-C2	2432 PSV-43-C2			1340	SJK
PSV-43-D2	2432 PSV-43-D2			1341	SJK
PSV-43-E2	2432 PSV-43-E2			1343	SJK
PSV-43-E3	2432 PSV-43-E3			1345	SJK
PSV-43-E4	2432 PSV-43-E4			1347	SJK
PSV-43-E5	2432 PSV-43-E5			1349	SJK
PSV-43-E6	2432 PSV-43-E6			1350	SJK
PSV-43-E7	2432 PSV-43-E7			1351	SJK
PSV-43-E8	2432 PSV-43-E8			1352	SJK
PSV-43-E9	2432 PSV-43-E9			1354	SJK
PSV-43-D8	2432 PSV-43-D8			1359	SJK

Shipment of Field Kit to Site — Custody Seal # 17350381

Intact? ☒ Y ☐ N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
Ryan Schick	10-27-2011 / 1700 Hours	UPS	[Signature]	10/28/11 1100

Shipment of Field Kit to Laboratory — Custody Seal # 17350382

Intact? ☒ Y ☐ N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
[Signature]	11/16/11 1500	FedEx	Kenny Ipiach	11-17-2011 / 1000 hrs



# CHAIN-OF-CUSTODY PASSIVE SOIL-GAS SAMPLES

HOUSE #43-2

Project Information	
Beacon Project No.:	2432
Site Name:	Ithaca Site
Site Location:	Ithaca, NY
Analytical Method:	EPA Method 8260C
Target Compounds:	Beacon Project Number 2432 Target Compound List



Client Information	
Company Name:	EnviroGroup Limited
Office Location:	Latham, NY
Samples Submitted By:	E. Lovenduski
Contact Phone No.:	518-258-3859

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
PSV-43-C8	2432 PSV-43-C8		11/15/11	1401	SL
PSV-43-C8D	2432 PSV-43-C8D			1402	SL
PSV-43-B8	2432 PSV-43-B8			1403	SL
PSV-43-A8	2432 PSV-43-A8			1405	SL
PSV-43-A9	2432 PSV-43-A9			1407	SL
PSV-43-B9	2432 PSV-43-B9			1408	SL
PSV-43-D9	2432 PSV-43-D9			1410	SL
PSV-43-B10	2432 PSV-43-B10			1414	SL
PSV-43-C10	2432 PSV-43-C10			1416	SL
PSV-43-C10D	2432 PSV-43-C10D			1417	SL
PSV-43-D10	2432 PSV-43-D10			1418	SL
PSV-43-C11	2432 PSV-43-C11			1423	SL
PSV-43-C12	2432 PSV-43-C12			1426	SL
PSV-43-C13	2432 PSV-43-C13			1428	SL
PSV-43-C14	2432 PSV-43-C14			1430	SL
PSV-43-C15	2432 PSV-43-C15			1431	SL
PSV-43-D11	2432 PSV-43-D11			1425	SL
PSV-43-B11	2432 PSV-43-B11			1420	SL
PSV-43-B6	2432 PSV-43-B6			1435	SL
PSV-43-B5	2432 PSV-43-B5			1437	SL

Shipment of Field Kit to Site — Custody Seal # 17350381

Intact? ☒ Y ☐ N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
Ryan Scheel	10-27-2011 / 1700 Hours	UPS	SL	10/28/11 1100

Shipment of Field Kit to Laboratory — Custody Seal # 17350382

Intact? ☒ Y ☐ N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
SL	11/16/11 1500	FEDX	Kenny Ipechew	11-17-11 / 1000 hrs



House #43-3

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

A handwritten signature in blue ink on lined paper. The signature consists of a large capital 'L' followed by a capital 'G' and a capital 'L'. The 'L' and 'G' are connected, and the final 'L' is also connected to the 'G'. The signature is written in a cursive, flowing style.

Intact? ☒ Y ☐ N

Rennquistsch  
Ryan Schöl

Intact? ☒ Y ☐ N

Relinquished