

# ENVIRON



RDMS DocID

106794

October 9, 1996

RCRA RECORDS CENTER  
FACILITY ENVIRITE  
I.D. NO. CTD 0936/6613  
FILE LOC. R-9  
OTHER \* 106794

Raphael J. Cody, Project Manager  
Corrective Action Section, Office of Site Remediation and Restoration  
United States Environmental Protection Agency, Region I  
John F. Kennedy Federal Building  
Boston, Massachusetts 02203-0001

Dear Mr. Cody:

ENVIRON Corporation (ENVIRON) has recently completed a limited soil gas sampling investigation on behalf of Envirite Corporation (Envirite) in accordance with the Workplan for Soil Gas Sampling at the Envirite Facility in Thomaston, Connecticut, dated July 23, 1996, which was approved by the United States Environmental Protection Agency (USEPA) on July 30, 1996. The soil gas sampling activities were conducted as Phase II activities as set forth in USEPA's final comments regarding Envirite's RCRA Facility Investigation (RFI) Phase I Interim Report and Phase II Proposal (dated April 25, 1996). The purpose of this limited investigation was to quantify the potential presence of vinyl chloride in the soil gas at the Envirite facility, if any. The results from this investigation will be used to determine whether further investigation for vinyl chloride in soil gas is warranted.

The soil gas sampling was conducted on August 21, 1996, by Target Environmental Services, Inc. (Target), under the direction of an on-site ENVIRON geologist. The soil gas sampling focused on locations where the highest concentrations of tetrachloroethylene (PCE) had been detected during a previous soil gas survey conducted by GZA GeoEnvironmental, Inc (GZA) in 1994. Since vinyl chloride can be formed as an intermediate product in the biodegradation of PCE, under certain environmental conditions, the highest concentrations of vinyl chloride in soil gas would be expected in these locations. These locations are as summarized below:

<u>Grid Location</u>	<u>Maximum PCE Concentration</u>		<u>Sampling Depth (in)</u>
	<u>(mg/m<sup>3</sup>)</u>	<u>(ppmv)</u>	
H7	50	7	42
J8	25	4	42
I7	24	3.5	10, 12, 42
G5	22	3	16, 42
E8	20	3	42
D5	18	2.5	16, 42

These sampling locations, which are shown in Figure 1, also correspond with the locations where the highest concentrations of total volatile organic compounds (VOCs) were reported.

The results of the soil gas sampling are summarized in Table 1. The final data tables prepared by Target are included in Attachment A. The only VOCs detected were PCE and trichloroethylene (TCE); no vinyl chloride was detected in any of the soil gas samples collected at a method detection limit of 0.4 ppm. Concentrations of PCE and TCE generally were detected at lower concentrations than during the previous soil gas survey.

Based on these results, we believe that no further investigation pertaining to vinyl chloride in soil gas is necessary. These results will be incorporated into the RFI Supplement and the final Public Health and Environmental Risk Evaluation (PHERE).

Sincerely,



Ranjit J. Machado, P.E.  
Manager

cc: W. McTigue  
J. Krupa

<b>TABLE 1</b>				
<b>Comparison of Soil Gas Survey Sampling Results<sup>a</sup></b>				
<b>Envirite Facility, Thomaston, Connecticut</b>				
<b>Sample Location - Depth</b>	<b>PCE - 1994 (mg/m<sup>3</sup>)<sup>b,d</sup></b>	<b>PCE - 1996 (mg/m<sup>3</sup>)<sup>c,d</sup></b>	<b>TCE - 1994 (mg/m<sup>3</sup>)<sup>b,d</sup></b>	<b>TCE - 1996 (mg/m<sup>3</sup>)<sup>c,d</sup></b>
D5 - 16 in	10	2.4	ND	ND
D5 - 42 in	18	4.2	0.8	ND
E8 - 42 in	20	1.4	7.2	ND
G5 - 16 in	0.15 / 0.076 <sup>e</sup>	ND	ND / ND <sup>e</sup>	ND
G5 - 42 in	22	ND	ND	ND
H7 - 42 in	50	5.0	ND	1.1
I7 - 10 in	0.4	2.4	ND	ND
I7 - 12 in	1.2	5.6	ND	ND
I7 - 42 in	24 / 20 <sup>e</sup>	9.5 / 9.8 <sup>e</sup>	1.4 / ND <sup>e</sup>	ND / ND <sup>e</sup>
J8 - 42 in	>20 / 25 <sup>e</sup>	41	ND / ND <sup>e</sup>	ND

Notes:

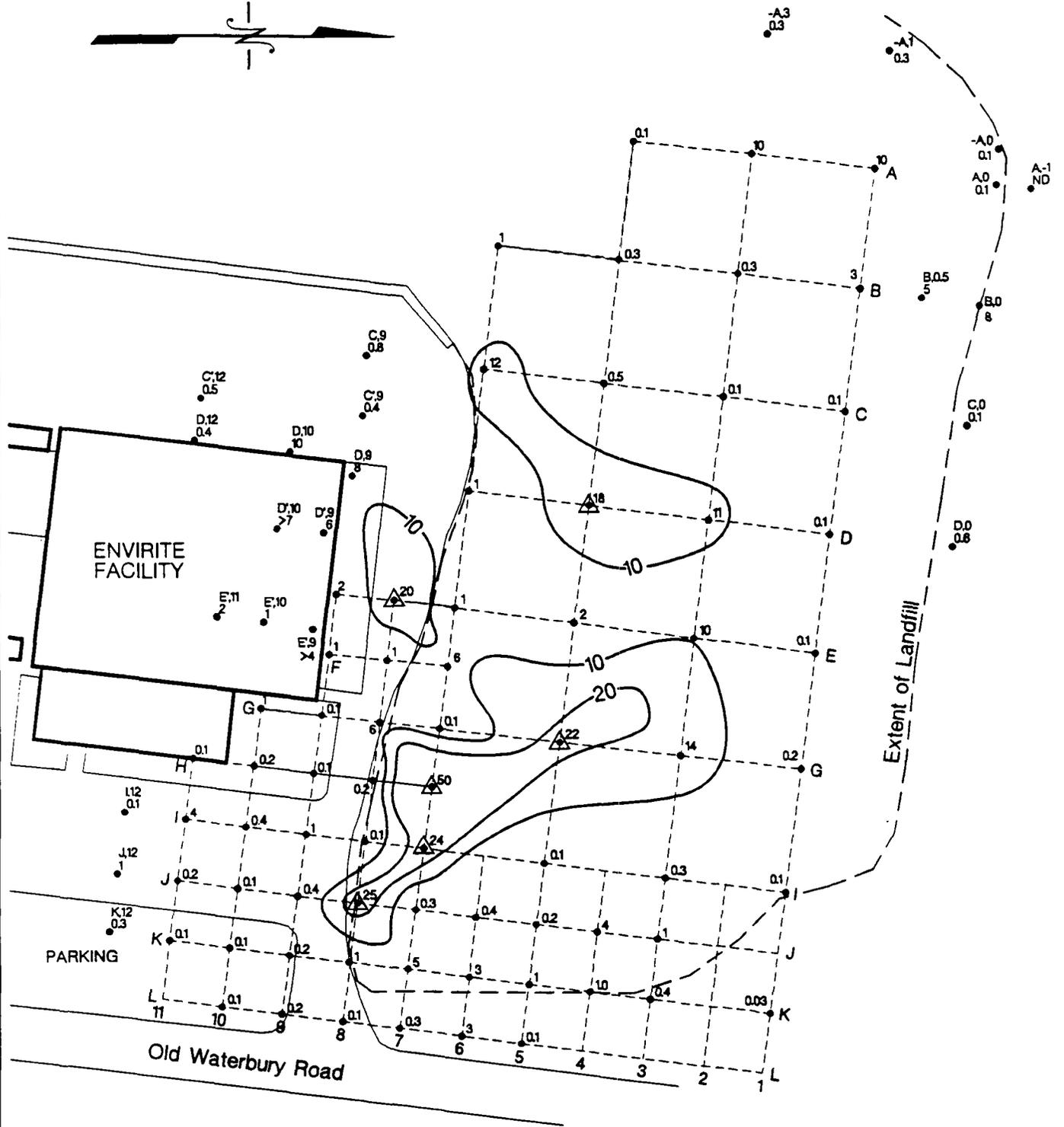
a 1994 survey conducted between April 20 and May 13; 1996 survey conducted August 21.

b ND = not detected at method detection limit (MDL);  
MDL for 1996 survey = 0.231 mg/m<sup>3</sup> for PCE and 0.135 mg/m<sup>3</sup> for TCE.

c MDL for 1994 survey not specified in 1995 RFI report.

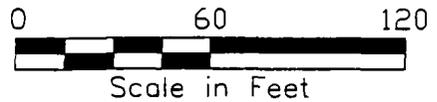
d 1 mg/m<sup>3</sup> PCE = 0.147 ppm; 1 mg/m<sup>3</sup> TCE = 0.186 ppm.

e Duplicate samples collected from this location; results presented for both samples.



EXPLANATION

- △ Proposed sampling location
- Soil gas units in  $\text{mg}/\text{m}^3$



**ENVIRON**

A Division of APBI  
Environmental Sciences Group, Inc.

GZA SOIL GAS SURVEY RESULTS  
PERCHLOROETHYLENE - ENVIRITE CORPORATION  
THOMASTON, CONNECTICUT

Figure  
1

C:\nocad\01443\ANDE\FIG1

# **ATTACHMENT A**

## **Data Summary Report**

**Fixed Laboratory Services**

**Target Environmental Services, Inc.**

**Mobile Laboratory Services**

Samples Collected: 8/21/96  
 Samples Received: 8/22/96  
 Samples Analyzed: 8/22/96  
 Samples Reported: 8/26/96  
 Project Identification: WASTE FACILITY  
 Target Job Code: ENW001  
 Purchase Order: N/A

Collected by: Charlie Kirk  
 Received by: Mike Marrale  
 Analyzed by: Mike Marrale  
 Reported by: Mike Marrale  
 Report Revision: 0.0  
 Method Deviations: None  
 Sampling Method: 4 Foot Slidehammer

Client: Environ Corp.  
 Client Address: 4350 North Fairfax Dr.  
 Arlington, VA 22203  
 Client Contact: Alan Kao  
 Client Phone: (703)516-2388  
 Client Fax: (703)516-2344

**USEPA Method 8260 Air Sample Analysis Results in ug/L**

Compound	MW <sup>1</sup> (g/mole)	MDL <sup>2</sup> (ug/L)	PQL <sup>3</sup> (ug/L)	EQB1 (ug/L)	D5-16 (ug/L)	D5-42 (ug/L)	G5-16 (ug/L)	G5-42 (ug/L)	H7-42 (ug/L)	I7-10 (ug/L)	I7-12 (ug/L)
Dichlorodifluoromethane	120.91	0.688	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	50.49	0.559	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	62.50	1.011	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	94.94	0.444	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	64.51	0.341	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	138.38	0.334	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	96.94	0.298	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	84.93	0.448	5.00	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	96.94	0.419	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	98.96	0.488	5.00	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	96.94	0.455	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	119.38	0.472	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	133.40	0.465	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	153.82	0.421	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	78.11	0.496	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	98.96	0.639	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	131.39	0.135	5.00	ND	ND	ND	ND	ND	1.05	ND	ND
1,2-Dichloropropane	112.99	0.121	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	163.83	0.161	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	173.83	0.525	5.00	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	110.97	0.306	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	92.14	0.156	5.00	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	110.97	0.412	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	133.40	0.551	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene or PCE	165.83	0.231	5.00	ND	2.36	4.20	ND	ND	4.99	2.40	5.61
Dibromochloromethane	208.28	0.264	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	187.86	0.562	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	112.56	0.171	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	167.85	0.117	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	106.17	0.308	5.00	ND	ND	ND	ND	ND	ND	ND	ND
m&p-Xylene	106.17	0.473	10.0	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	106.17	0.227	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	104.15	0.181	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	120.19	0.339	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	252.73	0.338	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	167.85	0.649	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	147.43	0.451	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	157.01	0.127	5.00	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	134.22	0.296	5.00	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	134.22	0.301	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	147.00	0.084	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	147.00	0.047	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	147.00	0.164	5.00	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	134.22	0.276	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	181.45	0.406	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	260.76	0.461	5.00	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	128.17	0.715	5.00	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	181.45	0.573	5.00	ND	ND	ND	ND	ND	ND	ND	ND

Sample Condition (S,U)/Dilution (PQL) 1 S S S S S S S S S

S Satisfactory, U: Unsatisfactory

U: see sample narrative

Dilution: numerical dilution factor used to quantitate analyte concentrations within the range of the initial calibration curve

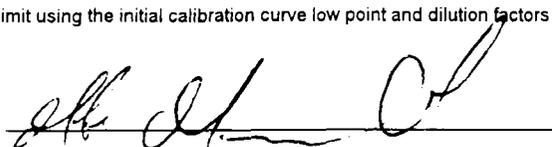
<sup>1</sup> MW: Molecular Weight

<sup>2</sup> MDL: Method detection limit according to EPA 40CFR Part 136 Appendix B

<sup>3</sup> PQL: Practical quantitation limit using the initial calibration curve low point and dilution factors where applicable

SAMPLE NARRATIVE:

Quality Control Analyst:



**This report will not be reproduced without the expressed written permission of the client**









