VIEQUES
REPT-01

November 1994 89-119-18

SOIL GAS SURVEY REPORT

CARIBE GENERAL ELECTRIC
DISTRIBUTION TRANSFORMERS, INC.
VIEQUES, PUERTO RICO

Prepared for:

General Electric Company

Canonie Environmental Services Corp.
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November 30, 1994

89-119-18

Mr. Richard McDonald
Manager of Environmental Health and Safety
General Electric Company
Transformer Division
1223 Fairgrove Church Road
Hickory, NC 28601

Transmittal
Soil Gas Survey Report
Caribe Manufacturing Site
Vieques, Puerto Rico

Dear Richard:

Enclosed is a copy of the report on the results of the soil gas survey conducted at the Caribe General Electric Distribution Transformers, Inc. manufacturing plant site, Vieques, Puerto Rico. The soil gas survey was conducted in accordance with the Amendment to the Closure Plan.

Please call me at (303) 790-1747 if you have questions.

Very truly yours,

John W. Billiard, P.E.
Project Manager

JWB/ajw

Enclosure

cc: Mr. Santos Cabrera, Environmental Quality Board
Mr. Sam Ebdellatif, U.S. Environmental Protection Agency - Region II
Amir Lastra, Esq., GE - Caribe Distribution Transformers, Inc., Rio Piedras, PR
Mr. Doug Sargent, GE - Caribe Distribution Transformers, Inc.

RM\W:\89-119\SGSRPT.LTR [Nov. 30, 1994]

Larry Diamond, Esq., Hannoch Weisman
Max Pickle, _____ (not on file; jwb to provide info.)
John Rickner, _____ (same as Pickle)
Mr. Jeff Sommer, GE - Caribe Distribution and Control, Plainville, CT

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SOIL GAS SURVEY REPORT

CARIBE GENERAL ELECTRIC
DISTRIBUTION TRANSFORMERS, INC.
VIEQUES, PUERTO RICO

1.0 INTRODUCTION

This report presents the results of the PETREX soil gas survey conducted by Canonie Environmental Services Corp. (Canonie) at the Caribe General Electric Distribution Transformers, Inc. (Caribe) site and adjoining Puerto Rico Industrial Development Company (PRIDCO) property in Vieques, Puerto Rico. The soil gas survey was conducted in accordance with the Amendment to the Closure Plan (Amendment) (Canonie, 1994) approved by the U.S. Environmental Protection Agency (EPA) Region II and the Environmental Quality Board of Puerto Rico (EQB) (letter dated March 16, 1994).

Consistent with the Amendment, the soil gas survey was designed and conducted to identify a potential volatile organic compound (VOC) source or plume. Information derived from this work was then to be used to assist in locating the additional upgradient monitoring wells to further characterize ground water flow direction and quality.

The following sections of this report summarize the investigations, present the analytical results, and provide recommendations for placement of additional monitoring wells.

2.0 INVESTIGATION AND RESULTS

The soil gas survey was conducted using the PETREX soil gas survey method. The PETREX method uses samplers consisting of two or three activated carbon adsorption elements (collectors) attached to wires sealed in glass tubes. Soil gas sample collection was performed by unsealing the sampler and exposing the collector to the soil gas of the subsurface environment at the base of a shallow borehole. Collectors housed in the uncapped glass tube sorbed VOCs (if present) via free vapor diffusion of gas contained in the pores of the soil. Following a controlled period of time, the samplers were retrieved from the boreholes, resealed, and submitted to the laboratory for analyses.

Ten percent of the samplers used during the investigation were three-collector type samplers. One collector from each soil gas sampler was analyzed by thermal desorption/mass spectrometry (TD-MS). Selected second collectors were analyzed by thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) for compound confirmation. The third collector was used for setting instrument sensitivity prior to analysis. Compounds were identified by comparison to standard reference spectra run on the same instrument. The mass spectral ion count of the appropriate indicator peak(s) for each compound or group of compounds was then plotted as a relative response on a map and contoured using a variety of standard geostatistical analyses.

2.1 Field Activities

A total of 146 PETREX soil gas samplers and two sets of three time-test samplers were installed at the Caribe site and the adjoining PRIDCO property. Figure 1 illustrates the soil gas survey sampler locations. Samplers were placed on a regular grid at 25-foot intervals in shallow boreholes. Samplers were installed from July 20 through July 22, 1994, and retrieved from July 29 through July 31, 1994. Sampler installation was performed by creating a small borehole approximately 8 to 10 inches

deep using a core shovel and placing the uncapped, inverted sampler at the bottom of the borehole. The borehole was backfilled with the native soil material with the sampler in place. Each buried sampler was marked with a flag for easy retrieval.

Sampler exposure time was determined using time-test samplers. Two sets of three time-test samplers were installed concurrent with the other soil gas collectors. One set of time-test samplers (T-1, T-3, and T-5) was installed adjacent to Well C-4, in the area of known concentrations of VOCs in ground water where loading on the activated carbon would be expected. A second set of time-test samplers (T-2, T-4, and T-6) was installed adjacent to soil gas Sampler No. 99. This area was chosen to represent background conditions and loading on the activated carbon was not expected.

The time-test samplers were removed and sent for analysis following varying exposure times. The purpose of the time-test samplers was to assess the loading rate of VOCs onto the PETREX collectors. Based upon the analyses of time-test samples and on previous experience, nine days was determined to be a sufficient exposure period for the remaining soil gas samplers.

Upon retrieval of the soil gas samplers, the samplers were sealed, packed with ice in coolers and shipped via Federal Express to the Northeast Research Institute, LLC. (NERI) laboratory in Lakewood, Colorado, for analysis.

Prior to shipment of the samplers, quality assurance/quality control (QA/QC) collectors from each lot manufactured by NERI were analyzed by TD-MS to ensure that they were contaminant free. No compounds were detected above background on the QA/QC collectors. In addition, two PETREX samplers were provided as travel blanks. These travel blanks remained sealed and traveled with the survey samplers from the laboratory to the field and back to the laboratory to monitor for potential external contamination of the survey samplers. The travel blanks were analyzed under the same instrument conditions as the survey collectors. No compounds were detected above background on the QA/QC travel blanks.

2.2 Analytical Results

Trichloroethene (TCE), tetrachloroethene (PCE), 1,1-dichloroethene (1,1-DCE), 1,1,1-trichloroethane (1,1,1-TCA), chloroform, and the petroleum hydrocarbon compounds benzene, toluene, ethylbenzene and xylene(s) (BTEX) were detected in the soil gas. The response values are reported in ion counts. Relative ion count values are the unit of measure assigned by the mass spectrometer to the relative intensities associated with each of the reported compounds. These intensity levels or response levels do not represent actual concentrations of the reported compounds in the soil or ground water. However, the intensity levels are best utilized as a qualitative measurement. A difference in ion count values of an order of magnitude or more is considered significant when interpreting potential source areas and migration/dispersion pathways versus background areas. Table 1 lists the analytical results from the survey collectors and QA/QC travel blank samples.

3.0 DISTRIBUTION OF VOC DATA

Organic compounds TCE, PCE, 1,1-DCE, 1,1,1-TCA, chloroform, and the BTEX group of compounds were identified by the soil gas survey as present within the soil gas inside the investigation area. The distributions of 1,1-DCE, 1,1,1-TCA, and chloroform were more limited than TCE, PCE, and BTEX compounds and were also detected in locations consistent with TCE, PCE, and BTEX compounds. Hence, the distributions of 1,1-DCE, 1,1,1-TCA and chloroform compounds were not plotted. The distributions of TCE, PCE, and BTEX compounds have been plotted and are shown on Figures 2, 3, and 4.

3.1 Distribution of Trichloroethene

The distribution of TCE as detected in the soil gas is shown on Figure 2. Upgradient occurrences were identified at Sample Locations 82, 83, 90, 91, 93, 102, and 111 in the northwestern portion of the adjoining property located immediately south and upgradient of the Caribe site. This location is approximately 150 feet south of the southwestern corner of the Main Plant Building. Other occurrences of TCE in the soil gas were identified near the southern border of the Caribe site, immediately south of the Main Plant Building. Note that a single significant soil gas response level (i.e., a relative response value greater than 50,000) was detected along the northern edge of the southern access corridor at Sample Location 26, just north of PRIDCO's East Plant Building. This area may need further investigation at a later date to confirm the presence or absence of VOCs in the soil and/or ground water. The extent of TCE occurrences in the soil gas appears to be limited to the three areas described above.

The presence of TCE in the soil gas at Sample Location 92 cannot be confirmed due to the presence of particular hydrocarbon compounds (not including BTEX). Particular petroleum hydrocarbons have the same mass as TCE. Since these compounds were detected in Sample Location 92 concurrent with TCE, the identification of TCE cannot be confirmed by TD-MS analysis. The lack of a positive identification of TCE at Sample Location 92 does not mean TCE was not present; the presence of TCE was masked by a much more elevated presence of particular hydrocarbon compounds.

3.2 Distribution of PCE

The distribution of PCE as detected in the soil gas is shown on Figure 3. Upgradient occurrences were identified at Sample Locations 90, 91, 92, 93, and 102 in the northwestern portion of the adjoining property located immediately south and upgradient of Caribe site. This location is approximately 150 feet south of southwestern corner of the Main Plant Building. Other occurrences of PCE in the soil gas were identified near the southern border of the Caribe site, immediately south of the Main Plant Building. Similar to TCE, the extent of PCE occurrences in the soil gas appears to be limited to these two areas only.

3.3 Distribution of BTEX Compounds

The distribution of BTEX compounds is shown on Figure 4. As shown, the BTEX compounds were detected over a widespread area within the property located south and upgradient of the Caribe site. BTEX compounds were detected at only two soil gas sample locations (Nos. 127 and 130) near the southern border of the Caribe site, immediately south of the Main Plant building. The origin of the BTEX contamination in such a broad area upgradient of the Caribe site might be attributed to use of motorized vehicles at this property (parking, driving, refueling). Canonie has noted that the property is used occasionally by the Army for training purposes.

3.4 Distribution of Other VOCs

Three other VOCs were detected in limited locations within the study area. The 1,1-DCE compound was detected in the soil gas at the upgradient Sample Location 93 and near the southern border of the Caribe site, immediately south of the Main Plant building at Sample Locations 125, 134, and 136. The 1,1,1-TCA compound was detected in the soil gas near the southern border of the Caribe site, immediately south of the Main Plant building at Sample Locations 129, 132, 133, 134, and 136. Chloroform was only detected in the soil gas at the upgradient Sample Location 80. Table 1 summarizes the sample locations and relative response ion count values for each of these compounds.

4.0 RECOMMENDATIONS FOR PLACEMENT OF ADDITIONAL MONITORING WELLS

The next phase of the investigation identified in the Amendment (Canonie, 1994) includes the installation of one or more ground water monitoring wells. Chemical data from these wells would be used to confirm the presence or absence of VOCs in the soil and ground water. Water level data from these wells would be used to confirm the upgradient status of Well C-4 and to further define the gradient and direction of ground water flow on the west side of the Caribe site.

Consistent with the Amendment and based upon the findings of the PETREX soil gas survey, Canonie suggests the following locations for the proposed monitoring wells:

1. Monitoring Well C-5 will be located in the vicinity of Sample Location 116, at the site proposed in the Amendment (Canonie, 1994). Data from this well will confirm the upgradient status of Well C-4, provide ground water quality data upgradient of the Caribe site, and further characterize the ground water flow direction at the east side of the Caribe site. The proposed location is shown on Figure 1.

2. Monitoring Well C-6 will be located in the vicinity of soil gas survey Sample Location 90. Data from this well will be used to characterize the ground water on the west side of the Caribe site. The proposed location for this well is also shown on Figure 1.

Note that the exact locations of these two wells would be contingent upon the granting of access to these locations by the owner of the property.

TABLE

TABLE 1

PETREX RELATIVE SOIL GAS RESPONSE VALUES
(IN ION COUNTS)
CARIBE GE DISTRIBUTION TRANSFORMERS, INC.
VIEQUES, PUERTO RICO

Sample	TCE	PCE	BTEX	1,1-DCE	1,1,1-TCA	Chloroform
1	1,780	20,235	7,520	ND	ND	ND
2	ND	8,552	2,959	ND	ND	ND
3	ND	12,120	2,213	ND	ND	ND
4	ND	1,057	ND	ND	ND	ND
5	ND	4,093	18,698	ND	ND	ND
6	ND	ND	873	ND	ND	ND
7	ND	ND	30,960	ND	ND	ND
8	ND	ND	9,144	ND	ND	ND
9	ND	ND	26,029	ND	ND	ND
10	ND	ND	4,903	ND	ND	ND
11	ND	ND	32,361	ND	ND	ND
12	ND	ND	16,031	ND	ND	ND
13	ND	ND	25,839	ND	ND	ND
14	ND	ND	12,112	ND	ND	ND
15	ND	ND	21,729	ND	ND	ND
16	ND	ND	3,465	ND	ND	ND
17	ND	ND	5,816	ND	ND	ND
18	ND	ND	907	ND	ND	ND
19	ND	ND	5,400	ND	ND	ND
20	ND	ND	12,615	ND	ND	ND
21	ND	ND	5,726	ND	ND	ND
22	ND	ND	5,028	ND	ND	ND
23	ND	ND	18,152	ND	ND	ND
24	ND	ND	75,191	ND	ND	ND
25	ND	ND	9,522	ND	ND	ND
26	62,496	ND	22,454	ND	ND	ND
27	ND	ND	27,215	ND	ND	ND
28	ND	ND	62,930	ND	ND	ND
29	ND	ND	176,895	ND	ND	ND
30	ND	ND	83,216	ND	ND	ND
31	2,117	ND	71,674	ND	ND	ND
32	ND	ND	63,478	ND	ND	ND
33	ND	ND	313,555	ND	ND	ND
34	ND	ND	86,074	ND	ND	ND
35	ND	ND	171,965	ND	ND	ND
36	1,293	ND	16,762	ND	ND	ND
37	ND	ND	187,805	ND	ND	ND
38	ND	ND	6,599	ND	ND	ND
39	19,138	ND	82,941	ND	ND	ND
40	ND	ND	202,993	ND	ND	ND

TABLE 1

PETREX RELATIVE SOIL GAS RESPONSE VALUES
(IN ION COUNTS)
CARIBE GE DISTRIBUTION TRANSFORMERS, INC.
VIEQUES, PUERTO RICO

Sample	TCE	PCE	BTEX	1,1-DCE	1,1,1-TCA	Chloroform
41	ND	ND	36,942	ND	ND	ND
42	ND	ND	194,020	ND	ND	ND
43	ND	ND	14,401	ND	ND	ND
44	ND	3,536	928,266	ND	ND	ND
45	ND	ND	28,713	ND	ND	ND
46	ND	6,487	1,209,841	ND	ND	ND
47	ND	ND	31,474	ND	ND	ND
48	ND	1,524	117,484	ND	ND	ND
49	ND	1,660	238,759	ND	ND	ND
50	ND	1,228	848,782	ND	ND	ND
51	ND	ND	6,477	ND	ND	ND
52	ND	ND	426,840	ND	ND	ND
53	ND	3,862	965,027	ND	ND	ND
54	ND	ND	3,845	ND	ND	ND
55	ND	ND	84,208	ND	ND	ND
56	ND	1,785	669,879	ND	ND	ND
57	ND	ND	82,131	ND	ND	ND
58	ND	ND	297,866	ND	ND	ND
59	ND	ND	ND	ND	ND	ND
60	ND	ND	290,155	ND	ND	ND
61	ND	12,496	94,994	ND	ND	ND
62	ND	ND	353,483	ND	ND	ND
63	ND	ND	16,315	ND	ND	ND
64	ND	ND	435,290	ND	ND	ND
65	ND	ND	1,410,768	ND	ND	ND
66	ND	ND	55,779	ND	ND	ND
67	ND	ND	208,746	ND	ND	ND
68	ND	ND	249,499	ND	ND	ND
69	ND	ND	154,080	ND	ND	ND
70	ND	ND	15,188	ND	ND	ND
71	ND	ND	277,586	ND	ND	ND
72	1,093	ND	22,795	ND	ND	ND
73	9,720	14,270	884,609	ND	ND	ND
74	ND	ND	57,207	ND	ND	ND
75	ND	ND	63,360	ND	ND	ND
76	ND	47,113	4,513	ND	ND	ND
77	ND	7,036	798,770	ND	ND	ND
78	ND	1,262	5,885	ND	ND	ND
79	ND	ND	398,600	ND	ND	ND
80	3,649	ND	1,084	ND	ND	125,314

TABLE 1

PETREX RELATIVE SOIL GAS RESPONSE VALUES
(IN ION COUNTS)
CARIBE GE DISTRIBUTION TRANSFORMERS, INC.
VIEQUES, PUERTO RICO

Sample	TCE	PCE	BTEX	1,1-DCE	1,1,1-TCA	Chloroform
81	16,313	12,421	1,821,939	ND	ND	ND
82	149,516	25,387	46,245	ND	ND	ND
83	528,645	43,895	98,211	ND	ND	ND
84	20,611	42,203	625,864	ND	ND	ND
85	ND	4,618	227,048	ND	ND	ND
86	ND	ND	41,896	ND	ND	ND
87	ND	ND	602,021	ND	ND	ND
88	ND	ND	39,631	ND	ND	ND
89	27,084	22,844	483,924	ND	ND	ND
90	1,090,120	158,611	160,630	ND	ND	ND
91	927,037	187,947	56,521	ND	ND	ND
92	52,656 #	92,384	901,889	ND	ND	ND
93	637,659	131,222	92,399	126,911	ND	ND
94	14,901	26,241	210,170	ND	ND	ND
95	ND	14,656	122,790	ND	ND	ND
96	ND	9,168	595,001	ND	ND	ND
97	ND	ND	248,496	ND	ND	ND
98	ND	ND	250,269	ND	ND	ND
99	ND	ND	4,383	ND	ND	ND
100	ND	ND	27,623	ND	ND	ND
101	46,224	10,753	5,750	ND	ND	ND
102	241,398	54,565	99,392	ND	ND	ND
103	1,331	6,144	5,893	ND	ND	ND
104	ND	13,742	4,619	ND	ND	ND
105	ND	7,927	21,657	ND	ND	ND
106	ND	ND	1,857	ND	ND	ND
107	ND	ND	190,847	ND	ND	ND
108	ND	ND	2,265	ND	ND	ND
109	ND	989	5,996	ND	ND	ND
110	6,776	26,337	55,994	ND	ND	ND
111	57,237	16,849	3,263	ND	ND	ND
112	37,448	3,100	6,652	ND	ND	ND
113	ND	ND	30,627	ND	ND	ND
114	ND	ND	ND	ND	ND	ND
115	ND	18,172	61,618	ND	ND	ND
116	ND	ND	13,359	ND	ND	ND
117	ND	6,349	4,960	ND	ND	ND
118	ND	1,096	47,972	ND	ND	ND
119	ND	ND	36,540	ND	ND	ND
120	ND	ND	7,617	ND	ND	ND

TABLE 1

PETREX RELATIVE SOIL GAS RESPONSE VALUES
(IN ION COUNTS)
CARIBE GE DISTRIBUTION TRANSFORMERS, INC.
VIEQUES, PUERTO RICO

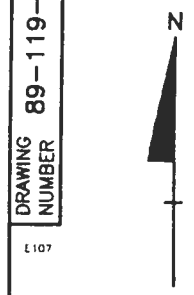
Sample	TCE	PCE	BTEX	1,1-DCE	1,1,1-TCA	Chloroform
121	ND	6,785	53,838	ND	ND	ND
122	ND	ND	17,380	ND	ND	ND
123	ND	ND	3,497	ND	ND	ND
124	ND	4,271	42,992	ND	ND	ND
125	73,309	73,702	27,473	27,815	ND	ND
126	ND	ND	9,152	ND	ND	ND
127	2,834	1,043	471,470	ND	ND	ND
128	ND	ND	16,885	ND	ND	ND
129	1,108,530	56,641	51,337	ND	23,635	ND
130	2,586,620	825,960	1,779,596	ND	ND	ND
131	1,552,600	1,380,540	95,017	ND	ND	ND
132	777,546	1,247,950	64,805	ND	38,056	ND
133	119,428	1,691,420	122,762	ND	32,496	ND
134	1,608,130	474,499	39,884	128,716	15,818	ND
135	424,912	386,463	23,429	ND	ND	ND
136	407,518	318,992	51,747	84,713	25,655	ND
137	614,554	1,161	25,756	ND	ND	ND
138	2,292,330	46,231	23,093	ND	ND	ND
139	ND	ND	23,514	ND	ND	ND
140	665,487	4,129	45,087	ND	ND	ND
141	ND	ND	11,303	ND	ND	ND
142	43,338	ND	25,522	ND	ND	ND
143	80,548	ND	ND	ND	ND	ND
144	52,793	867,115	38,335	ND	ND	ND
145	ND	ND	4,908	ND	ND	ND
146	ND	ND	2,319	ND	ND	ND
147*	ND	ND	ND	ND	ND	ND
148*	ND	ND	ND	ND	ND	ND

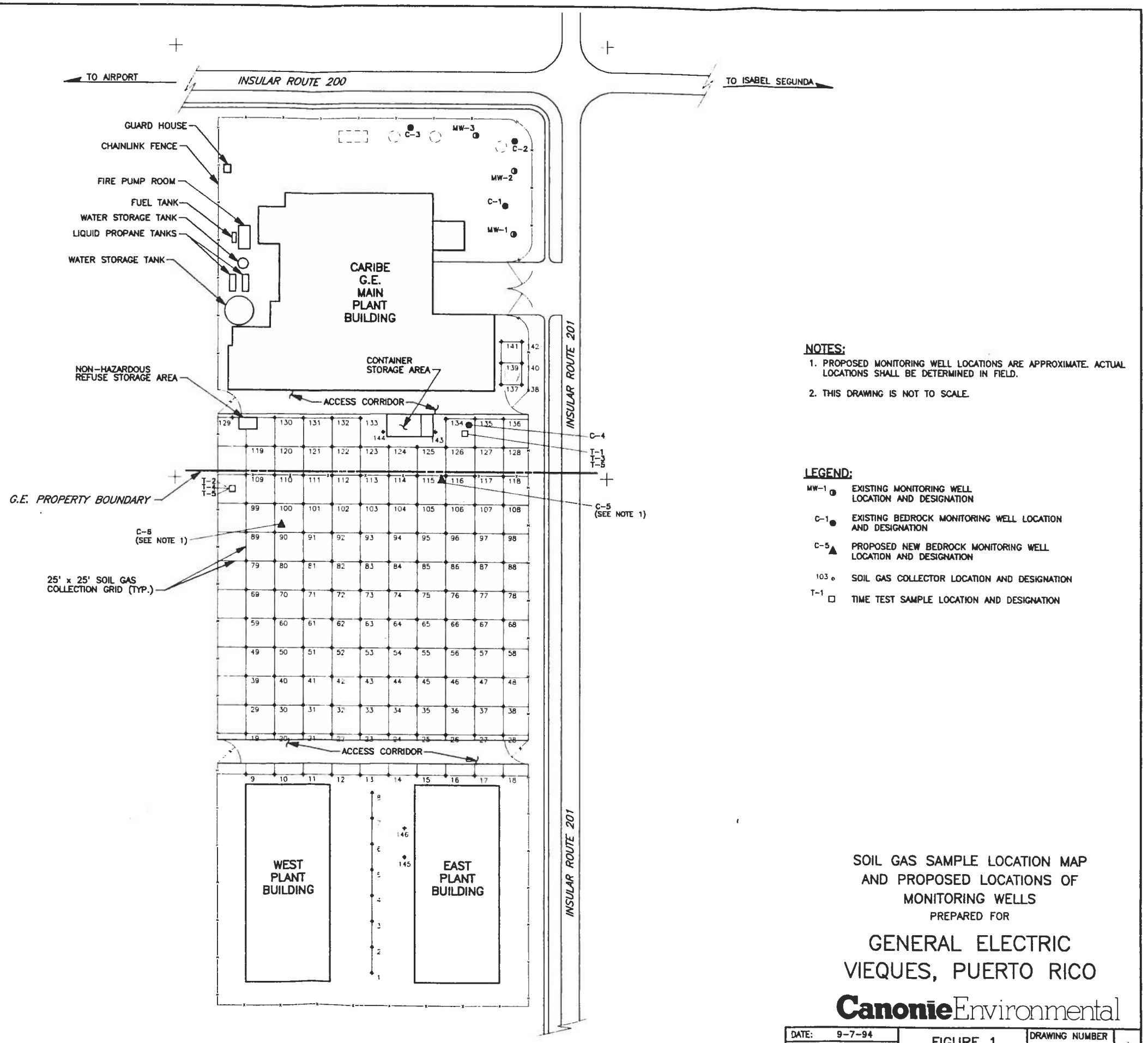
Notes:
TCE = Trichloroethylene, Indicator Mass Peak(s) 130
PCE = Tetrachloroethylene, Indicator Mass Peak(s) 164
BTEX = Benzene, Toluene, Ethylbenzene and Xylene(s), Indicator Mass Peak(s) 78, 92, 106
1,1-DCE = 1,1-Dichloroethylene, Indicator Mass Peak(s) 61
1,1,1-TCA = 1,1,1-Trichloroethane, Indicator Mass Peak(s) 117
Chloroform, Indicator Mass Peak(s) 83
*QA/QC Trip Blank Sample - No compounds detected above the PETREX normal reporting limits.
Value could not be confirmed due to interference with particular hydrocarbons, not including BTEX

FIGURES

DRAWING NUMBER 89-119-E109

E107





NOTES:

1. PROPOSED MONITORING WELL LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS SHALL BE DETERMINED IN FIELD.
2. THIS DRAWING IS NOT TO SCALE.

LEGEND:

- MW-1 ● EXISTING MONITORING WELL LOCATION AND DESIGNATION
- C-1 ● EXISTING BEDROCK MONITORING WELL LOCATION AND DESIGNATION
- C-5 ▲ PROPOSED NEW BEDROCK MONITORING WELL LOCATION AND DESIGNATION
- 103 ∘ SOIL GAS COLLECTOR LOCATION AND DESIGNATION
- T-1 □ TIME TEST SAMPLE LOCATION AND DESIGNATION

SOIL GAS SAMPLE LOCATION MAP
AND PROPOSED LOCATIONS OF
MONITORING WELLS
PREPARED FOR

GENERAL ELECTRIC
VIEQUES, PUERTO RICO

Canonie Environmental

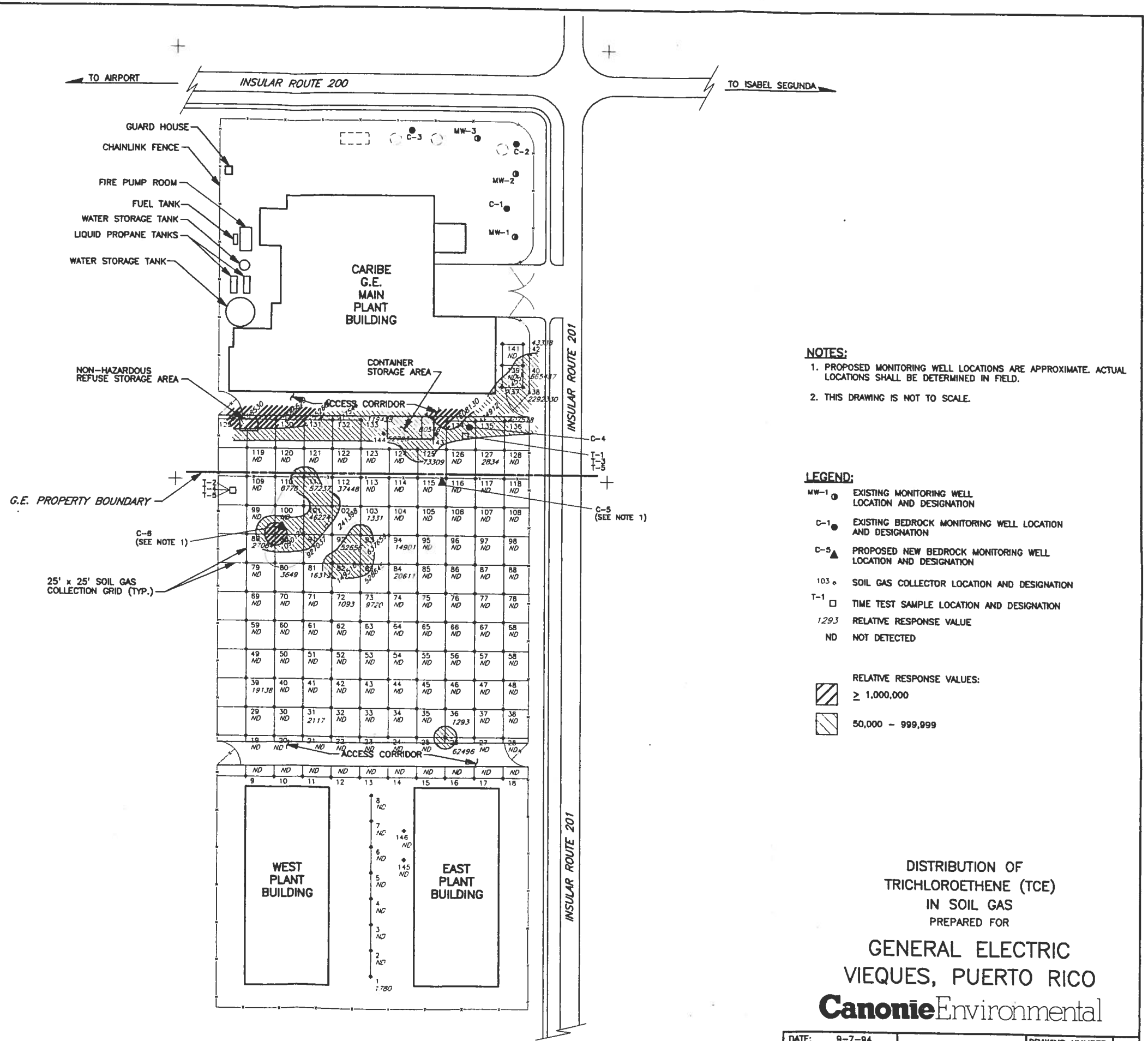
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	11/30/94	ISSUED FOR SOIL GAS SURVEY REPORT	MTH	CAH	AWB

DATE:	9-7-94	FIGURE 1	DRAWING NUMBER 89-119-E109
SCALE:	N.T.S.		1

89-119-E107

DRAWING NUMBER 89-119-E108

E107



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LEGEND:

- MW-1 ◑ EXISTING MONITORING WELL LOCATION AND DESIGNATION
- C-1 ● EXISTING BEDROCK MONITORING WELL LOCATION AND DESIGNATION
- C-5 ▲ PROPOSED NEW BEDROCK MONITORING WELL LOCATION AND DESIGNATION
- 103 ⊕ SOIL GAS COLLECTOR LOCATION AND DESIGNATION
- T-1 □ TIME TEST SAMPLE LOCATION AND DESIGNATION
- *1293* RELATIVE RESPONSE VALUE
- ND NOT DETECTED

RELATIVE RESPONSE VALUES:

- ▨ ≥ 1,000,000
- ▨ 50,000 – 999,999

DISTRIBUTION OF TRICHLOROETHENE (TCE) IN SOIL GAS

PREPARED FOR

GENERAL ELECTRIC
VIEQUES, PUERTO RICO

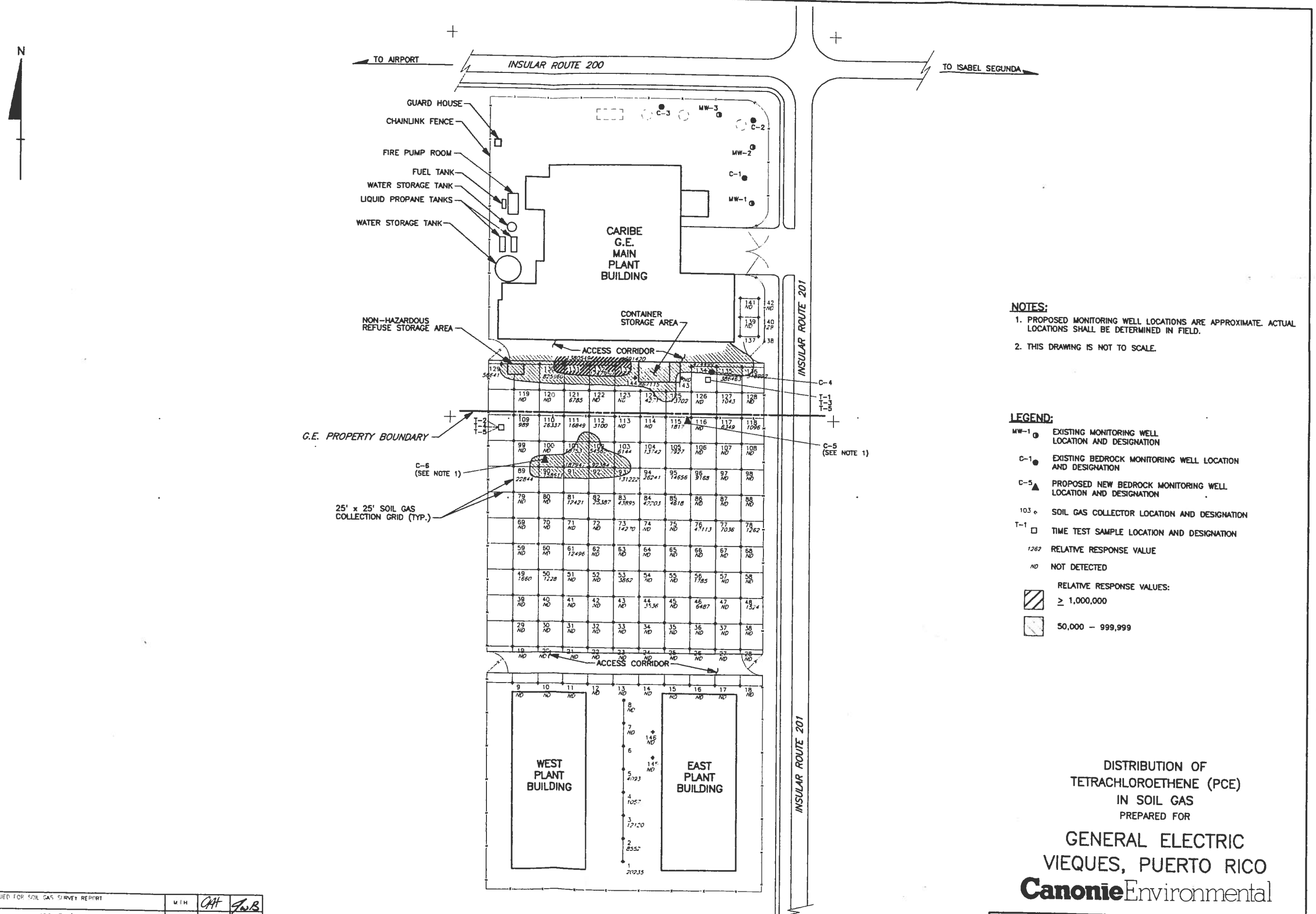
CanonieEnvironmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	11/30/94	ISSUED FOR SOIL GAS SURVEY REPORT	W.D.C.	CAT	GWB

89-119-E107

DATE:	9-7-94	FIGURE 2	DRAWING NUMBER 89-119-E108
SCALE:	N.T.S.		

DRAWING NUMBER 89-119-E110



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LEGEND:

- MW-1 ● EXISTING MONITORING WELL LOCATION AND DESIGNATION
- C-1 ● EXISTING BEDROCK MONITORING WELL LOCATION AND DESIGNATION
- C-5 ▲ PROPOSED NEW BEDROCK MONITORING WELL LOCATION AND DESIGNATION
- 103 ◆ SOIL GAS COLLECTOR LOCATION AND DESIGNATION
- T-1 □ TIME TEST SAMPLE LOCATION AND DESIGNATION
- 1262 RELATIVE RESPONSE VALUE
- ND NOT DETECTED

RELATIVE RESPONSE VALUES:

- ≥ 1,000,000
- 50,000 – 999,999

DISTRIBUTION OF TETRACHLOROETHENE (PCE) IN SOIL GAS

PREPARED FOR

GENERAL ELECTRIC
VIEQUES, PUERTO RICO

CanonieEnvironmental

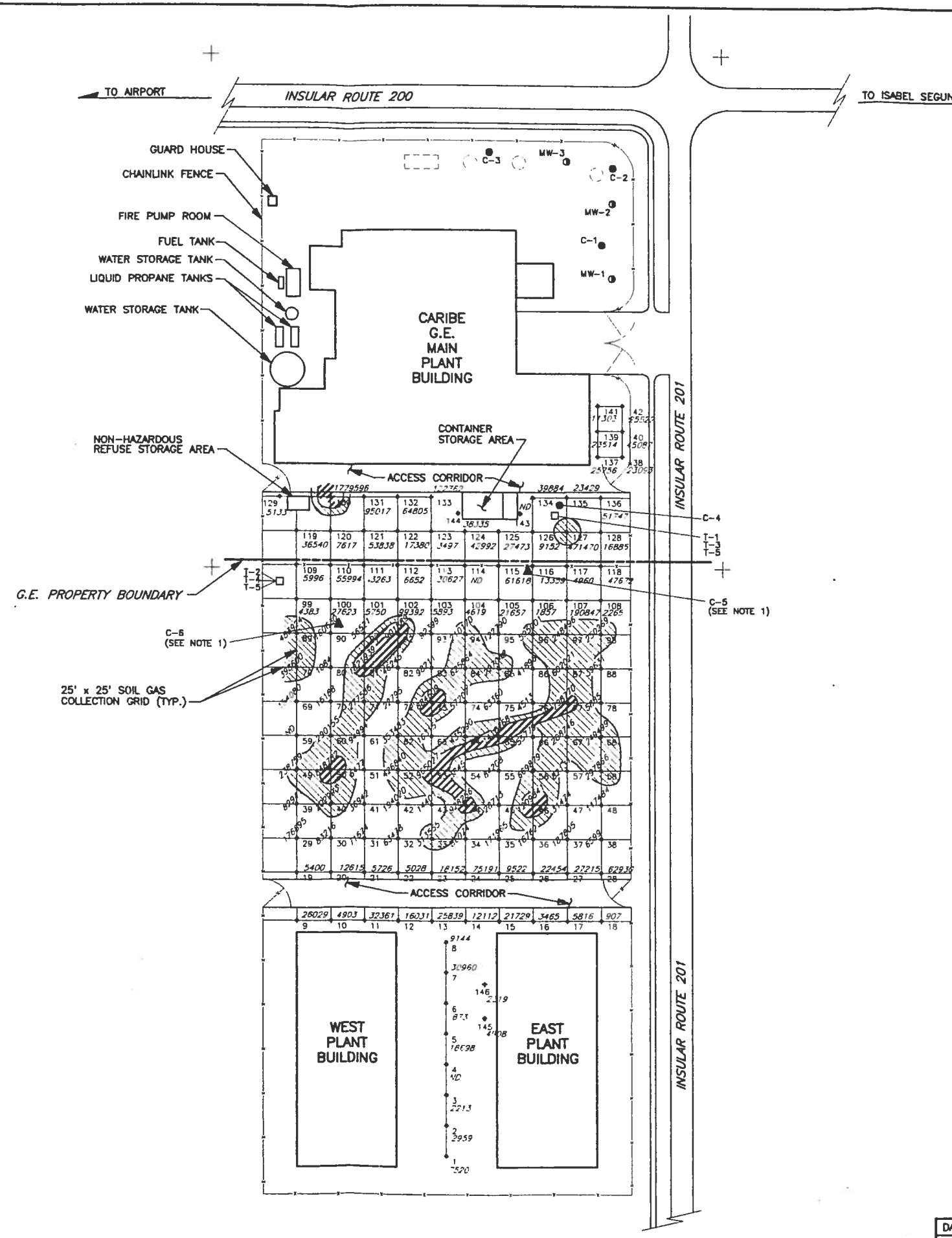
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
2	11/30/94	ISSUED FOR SOIL GAS SURVEY REPORT	MTH	CAH	GWB

89-119-E107

DATE: 9-7-94	FIGURE 3	DRAWING NUMBER 89-119-E110	2
SCALE: N.T.S.			

DRAWING NUMBER 89-119-E111

E107



NOTES:

1. PROPOSED MONITORING WELL LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS SHALL BE DETERMINED IN FIELD.
2. THIS DRAWING IS NOT TO SCALE.

LEGEND:

- MW-1 ◍ EXISTING MONITORING WELL LOCATION AND DESIGNATION
- C-1 ● EXISTING BEDROCK MONITORING WELL LOCATION AND DESIGNATION
- C-5 ▲ PROPOSED NEW BEDROCK MONITORING WELL LOCATION AND DESIGNATION
- 103 ◦ SOIL GAS COLLECTOR LOCATION AND DESIGNATION
- T-1 □ TIME TEST SAMPLE LOCATION AND DESIGNATION
- 5893 RELATIVE RESPONSE VALUE
- ND NOT DETECTED

RELATIVE RESPONSE VALUES:

- ▨ ≥ 1,000,000
- ▧ 50,000 - 999,999

DISTRIBUTION OF
BENZENE, TOLUENE, ETHYLBENZENE
XYLENES (BTEX) IN SOIL GAS
PREPARED FOR

GENERAL ELECTRIC
VIEQUES, PUERTO RICO

CanonieEnvironmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	11/23/94	ISSUED FOR SOIL GAS SURVEY REPORT	WDC		

89-119-E107

DATE:	9-7-94	FIGURE 4	DRAWING NUMBER
SCALE:	N.T.S.		89-119-E111