GROUNDWATER SCREENING SURVEY
PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS FACILITY
SENECA FALLS, NEW YORK

Prepared for:

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

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PROJECT NO. 288788

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CHESTER
ENVIRONMENTAL

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1.0 INTRODUCTION

A groundwater screening survey was proposed to the New York State Department of Environmental Conservation (NYSDEC) to assist in selecting monitoring well locations for the MW-1 RCRA Facility Investigation (RFI). In addition, the survey results could be used to assist in determining the existence of the groundwater plume, which is suggested by the presence of halogenated compounds in monitoring well MW-1. The purpose of this report is to document the field activities and present the results of the groundwater screening survey.

1.1 Background

The manufacturing facility, in the village of Seneca Falls, New York, was originally owned by Ramsey Pump, a manufacturer of well pumps, lawn mowers and other casted materials. Sylvania purchased the facility from Ramsey Pump in 1948 and operated the facility from 1948 to 1960. In 1960 Sylvania was acquired by GTE. Philips acquired the facility in 1981 from GTE, and operated it as a television picture tube manufacturing location. Philips ceased operations in 1986, removed the manufacturing equipment shortly thereafter, and sold the facility to the Seneca County Industrial Development Agency (IDA) in December of 1989.

The facility is bordered by Van Cleef Lake and the Seneca River/Barge Canal to the south, by undeveloped and agricultural areas to the north and east, and by a residential area to the west. The facility was used to manufacture black and white and color television picture tubes, and also served as headquarters for other Philips

operations. Hazardous waste was generated in television glass and metal tube component fabrication, cleaning, finishing, coating, and tube salvage operations.

A RCRA monitoring program was established in 1983 to monitor the former RCRA impoundments and the post closure activities at the facility. Measurable quantities of chlorinated hydrocarbons have been detected in monitoring well MW-1 during the groundwater monitoring program. The chlorinated hydrocarbons consistently detected were: 1,1-dichloroethene (1,1-DCE), 1,1-dichloroethane (1,1-DCA), and 1,1,1-trichloroethane (1,1,1-TCA). The concentrations of these constituents is presented in Table 1. The New York Department of Environmental Conservation (NYSDEC) has indicated that the presence of the halogenated compounds suggests a release to the environment has occurred and, as a result, has required that an RFI be performed east of Building 13A in the vicinity of monitoring well MW-1 (Figure 1).

1.2 Regional Geology

Regionally, the geology for the Seneca Falls area consists of a glacial till deposited as a result of Wisconsinian glaciation. The thickness of the glacial till varies between 21 and 37 feet, and consists primarily of clay and silt, with trace amounts of medium sand to boulder sized material.

Bedrock beneath the glacial till consists of, from the youngest to the oldest, the Bertie Limestone and the Camillus Shale of the (Silurian) Salina Formation. The Bertie Limestone directly underlies the till, is approximately 25 feet thick in the area and is a magnesian limestone with slaty shale interbeds ranging in thickness from

three to ten inches. The Camillus Shale is directly beneath the Bertie Limestone and is predominantly a shale unit with thin beds of evaporitic limestone, gypsum, and salt. The thickness of this unit is approximately 500 feet.

1.2.1 Site Geology

The facility is underlain by glacial till that is 35 feet thick, as indicated soil boring logs from monitoring wells MW-1 and MW-8. Soil boring logs for monitoring wells MW-1 and MW-8, are presented in Appendix A. The lithologic descriptions presented on the soil boring logs supports regional descriptions. Subsurface materials encountered in MW-1 range from very stiff to hard, which suggest the permeability of the till unit is low. Some fractures within the till unit have been documented during previous field activities, but the density and location (extent) of these fractures is unknown. Fractures would be the primary mechanism for the downward migration of groundwater in the subsurface.

1.3 Scope of Work

The purpose of performing the groundwater screening survey was to assess groundwater quality within the till unit. The information obtained from the survey would be used to locate the monitoring wells proposed in the MW-1 RFI work plan.

The groundwater screening survey would be accomplished by establishing a sampling grid system on fifty foot centers, collecting a groundwater sample from each node of the sampling grid and analyzing the groundwater for selected chlorinated hydrocarbons. The analytical results for each constituent of concern

would be evaluated to determine if groundwater was impacted and would be plotted on the grid and overlain on a map of the facility to assist in placing monitoring wells for the MW-1 RFI.

Ten sampling points were selected at the perimeter of the sampling grid prior to the initiation of the field activities to serve in a preliminary screening capacity to determine if areas outside the grid were impacted. Analytical results of the groundwater samples collected from these perimeter sampling points would be received within a 24 hour period. In this way, the sampling grid could be expanded, if necessary, while the sampling crew was still at the site.

A map of the Seneca Falls facility was recently discovered which shows the location of a shallow lacquer burn pit east of Building 13A. The location of the burn pit was inside the boundaries of the sampling grid and would be investigated as a potential source for groundwater impacts to MW-1. The approximate location of the lacquer burn pit is shown on Figure 2. A copy of the map is included as Appendix B.

2.0 FIELD ACTIVITIES

Field activities were initiated on Monday, September 28, 1992. Transects were cleared of underbrush using a bulldozer where necessary. Once transect lines were cleared, a sampling grid was established on 50 foot centers, east and north of Building 13A as shown on Figure 2. During the clearing activities a large soil pile was encountered. As a result, sample points 11, 12, 17, 18, 23, 24, 29 and 30 were relocated as indicated on Figure 2. A total of 34 sampling points were located and labeled using wooden stakes.

2.1 Groundwater Sampling

2.1.1 Sampling Procedure

Groundwater sample collection was initiated on Tuesday September 29, 1992 by Target Environmental, Inc. (Target) with oversight of the sampling activities by Chester personnel. Groundwater sampling was performed by pushing a sampling probe, using a truck mounted hydraulic press, into the ground one to three feet below the anticipated depth to groundwater. Groundwater was anticipated at seven to nine feet below ground surface, based upon historical data obtained from monitoring well MW-1. Groundwater levels did not correlate with the historical levels encountered in MW-1; at various depths and in some instances the sample location was dry. The sample depths attained at each sampling point are presented in Table 2.

The sample probe was constructed of a one and one eighth outside diameter steel pipe that was fitted at one end with a expendable penetration point. Once at depth, the steel pipe was raised approximately one foot, leaving the expendable point in place, thus allowing groundwater to enter the steel pipe. Once the steel pipe was raised, an electric tape was used to verify if groundwater had entered the steel pipe.

Groundwater samples were collected by lowering a small diameter, bottom fill, stainless steel bailer through the center of the steel pipe. Each groundwater sample was placed into an amber EPA cleaned 40 ml glass vial which was sealed with zero head space and immediately placed on ice. The sampling equipment was

decontaminated between sampling points by washing with a mixture of water and an inorganic laboratory grade cleaner (Contad), rinsing with distilled water and drying with nitrogen gas to ensure discrete sampling.

Groundwater samples were shipped to the ChesterLab Net in Monroeville, Pennsylvania and analyzed using EPA Method 8010 for the following parameters:

1,1-dichloroethene (1,1-DCE)
c-1,2-DCE
t-1,2-DCE
1,1-dichloroethane (1,1-DCA)
trichloroethene
1,1,1-trichloroethane (1,1,1-TCA)
1,1,2-TCA
methylene chloride
vinyl chloride

The above parameters were selected, based on analytical results of groundwater samples collected from monitoring well MW-1 during past sampling events and are considered constituents of concern in the RCRA Facility Investigation (RFI).

2.1.2 Perimeter Sampling

The ten perimeter sampling points selected to determine the viability of the technique were: 2, 4, 5, 9, 16, 17, 28, 29, 31, and 33. Groundwater samples were

collected at varying depths. Four of the ten sampling points contained sufficient groundwater for laboratory analysis.

Groundwater was encountered at perimeter sampling points 2 and 4, at depths between six to seven feet. Attempts to obtain groundwater samples at the six to seven foot depth proved unsuccessful at the eight remaining perimeter sampling points (5, 9, 16, 17, 28, 29, 31 and 33), thus the sampling probe was pushed to depths between nine to twelve feet. Because groundwater was not encountered at the nine to twelve foot depth, the probe was advanced to a depth between 15 to 21 feet. Groundwater was not immediately encountered at these depths, therefore, the steel pipe was removed and the probe holes were left open for four to six hours to allow groundwater to accumulate.

After four to six hours, sufficient volumes of groundwater for laboratory analysis were present only at sampling points 17 and 31. The remaining sampling points were dry. Groundwater from the four locations encountering water (sampling points 2, 4, 17, and 31) were submitted to the ChesterLab Net to be analyzed within a 24 hour period.

Because groundwater was not encountered in the remainder of the perimeter sample points, the probe holes were left open overnight and were checked for groundwater the following morning (Wednesday, September 30, 1992). Only sample point 9 contained sufficient volumes of groundwater the next morning for laboratory analysis. The remainder of the sampling points were either dry or the walls of the probe hole had collapsed, thus an alternative approach was implemented.

2.1.3 Alternative Sampling Approach

Due to the difficulty in obtaining the necessary groundwater volumes from the perimeter sampling points, an alternative approach was developed for the remainder (24) of the screening survey sampling points and five of the perimeter sampling points. The alternative approach was developed in an attempt to complete the screening investigation by obtaining sufficient volumes of groundwater at all sampling points that had not yielded groundwater for laboratory analysis.

The alternative approach was to advance the sampling probe to a depth of 15 feet and install a temporary PVC casing to prevent caving of the probe hole walls. A one-half inch, slotted PVC pipe, ten feet in length, would be inserted into the probe hole after the sampling probe was removed. Prior to installation, the PVC pipe would be decontaminated using the same procedures as the sampling equipment. Powdered bentonite would be placed at ground surface and in the annulus between the probe hole wall and the PVC pipe to prevent surface water runoff from entering the hole. The installation would be completed by placing a plastic bag over the top of the PVC pipe to prevent rainwater from entering. With this alternative approach, the probe hole could remain open for an extended period of time (perhaps overnight) in order to collect sufficient volumes of groundwater for laboratory analysis.

Representatives of NYSDEC were onsite during the initial collection of perimeter samples (September 29, 1992) to observe the groundwater screening procedures; the alternative approach was discussed with them at that time. The NYSDEC agreed

that the alternative approach should be implemented if sufficient quantities of groundwater could not be collected as described in the work plan. It was also agreed to that the remainder of the groundwater samples collected after Tuesday, September 29, 1992, would be analyzed on standard turn around time.

The alternative approach was implemented on Wednesday, September 30. Probe holes were advanced and PVC pipe installed at each sampling location that had not been sampled or that had not yielded groundwater. On Thursday, October 1, 1992, groundwater sample collection was attempted. Groundwater samples were collected from an additional 18 of 29 sampling points using the alternative approach. The groundwater samples were containerized and prepared for shipment to the designated laboratory.

At the completion of sampling activities, the PVC pipe was removed from each sampling point and the probe holes were filled with powdered bentonite to ground surface.

3.0 ANALYTICAL RESULTS

Twenty-two groundwater samples were collected and analyzed for the constituents of concern. Analytical results are summarized in Table 3 and are shown graphically on Figure 4 through Figure 8.

A review of the analytical results indicate that six compounds were detected during the screening survey. The six compounds were: Methylene Chloride, 1,1-dichloroethane (1,1-DCA), cis- 1,1-dichloroethene (c-1,1-DCE), 1,1,1-trichloroethane (1,1,1-TCA), trichloroethene (TCE), and Vinyl Chloride.

Two of the constituents, 1,1-DCA and 1,1,1-TCA, have been detected in MW-1 during routine groundwater monitoring. The constituent concentrations collected from the groundwater survey are compared with constituent concentrations from MW-1, in the following discussions.

Methylene Chloride

Methylene chloride was detected in all groundwater samples, the trip blank, and in the laboratory blanks. The concentration of methylene chloride in the laboratory blank was 3.30 ug/L. Methylene chloride has not been consistently detected in previous groundwater samples collected from monitoring well MW-1. Because this constituent has been detected in all water samples including the trip and laboratory blanks, Chester believes that the methylene chloride detected in the groundwater samples are a result of laboratory contamination.

1,1-Dichloroethane (1,1-DCA)

A graphical presentation of 1,1-DCA detections is presented in Figure 3. Groundwater samples collected at sampling points 9 and 18, contained concentrations of 0.244 ug/L and 1.16 ug/L, respectively. These values are well

below historical values found in MW-1 (Table 1), and below the NYSDEC groundwater quality standards (Table 3).

Cis- 1,2-Dichloroethene (c-1,2-DCE)

A graphical presentation of c-1,2-DCE detections is presented in Figure 4. Concentrations of c-1,2-DCE ranged from 0.078 ug/L at sample point 16 to 1.59 ug/L at sample point 25. These values are below the NYSDEC groundwater quality standards and the Federal MCLs (Table 3). This constituent was not previously detected in MW-1.

1,1,1-Trichloroethane (1,1,1-TCA)

A graphical presentation of 1,1,1-TCA detections is presented in Figure 5. Concentrations of 1,1,1-TCA ranged from 0.056 ug/L at sample point 16 to 0.112 ug/L at sample point 2. These values are well below historical values found in MW-1 (Table 1), and below the NYSDEC groundwater quality standards and the Federal MCLs (Table 3).

Trichloroethene (TCE)

A graphical presentation of 1,1-DCA detections is presented in Figure 6. Concentrations of TCE ranged from 0.063 ug/L at sample point 8 to 0.177 ug/L at sample point 19. These values are below the NYSDEC groundwater quality standards and the Federal MCLs (Table 3). This constituent was not previously detected in MW-1.

Vinyl Chloride

A graphical presentation of 1,1-DCA detections is presented in Figure 7. Concentrations of vinyl chloride ranged from 0.220 ug/L at sample point 16 to 1.33 ug/L at sample point 9. These values are well below the NYSDEC groundwater quality standards and the Federal MCLs (Table 3). This constituent was not previously detected in MW-1.

4.0 CONCLUSIONS

The conclusions presented below are drawn from the data presented in Section 3.0:

- The boring logs for monitoring wells MW-1 and MW-8 indicate that the soils are composed of clay and silt with densities varying from very stiff to hard, which suggests that the permeability of the soils is low. Low soil permeabilities are also suggested by the lack of sufficient volumes of groundwater for chemical analysis. Low permeability soils would inhibit the movement of groundwater in both the lateral and vertical direction.

- The till unit is heterogeneous and is probably the reason the groundwater was encountered at varying depths.

- The analytical results of all constituents detected from the groundwater screening survey indicate concentrations are below the NYSDEC groundwater quality standards and the Federal MCLs.

- The analytical results are inconclusive relative to the determination of a source area and the definition of a contaminant plume, due to the varying depths of groundwater encountered.

- Based on the results of the screening survey, the concentrations for the compounds 1,1-DCA and 1,1,1-TCA detected in the groundwater screening survey (Table 3), appear to be less than the historical concentrations found in monitoring well MW-1.

- The compounds C-1,2-DCE, TCE and vinyl chloride were detected in the groundwater screening survey but were not detected historically in MW-1.

- A map was discovered recently, which indicates that a shallow lacquer burn pit existed east of Building 13A at some time during the operation of the facility. The approximate location for the burn pit is indicated on Figure 2; a copy of the map is included as Appendix B. The analytical results obtained from the groundwater samples collected during the groundwater screening survey presented in Figures 3 through 7 do not conclusively indicate that the lacquer burn pit is the source of the constituents found in either the screening survey or MW-1.

- The analytical results from the groundwater screening survey indicate the concentration of the constituents of concern are below the NYSDEC groundwater quality standards and Federal MCL.

5.0 RECOMMENDATIONS

At the request of Philips, a draft copy of the analytical results from the groundwater screening survey were submitted to the NYSDEC for review. After reviewing the analytical results, the NYSDEC sent a letter to Philips, dated January 26, 1993 (Appendix C), stating that the four well clusters proposed under the MW-1 RFI would not accomplish the task of adequately defining the source area for the groundwater impacts detected in monitoring well MW-1.

Based upon the conclusions presented in Section 4.0 and the contents of a letter from the NYSDEC, Chester has developed recommendations for further assessment of the groundwater in the area of MW-1. The recommendations are as follows:

- Expansion of the groundwater screening survey grid to the northeast of sampling points 8 and 9 and the addition of sampling points to further evaluate the possibility of constituents of concern beyond the initial sampling constituent detects found at those sampling points. Figure 8 shows the proposed sampling locations on the expanded grid. Groundwater samples will be collected from these sampling points using the procedures as in the initial groundwater screening work plan. Groundwater and will be analyzed for the same parameters as previously.

- Two soil borings are proposed in the area of the suggested lacquer burn pit to investigate potential soil impacts. The proposed locations are shown on Figure 9. The soil borings will be completed to a depth of 35 feet or until auger refusal is encountered.

- Continuous split spoon soil samples will be collected for visual description and characterization. Soil samples will be scanned using an OVA, and a minimum of three soil samples exhibiting the highest OVA readings will be submitted to the laboratory for chemical analysis. If OVA readings from the soil samples are not above background readings, samples from the 0.5 foot 2.5 foot intervals, at a depth midway to bedrock, and from the till directly overlying the bedrock will be submitted to the laboratory for analysis.

- Monitoring wells MW-1 and MW-8 are proposed to be included in the groundwater monitoring program that has been proposed in the Supplemental Sampling Visit Work Plan (SSVWP). The groundwater would be analyzed for the same constituents of concern as stated in the SSVWP.

FIGURES

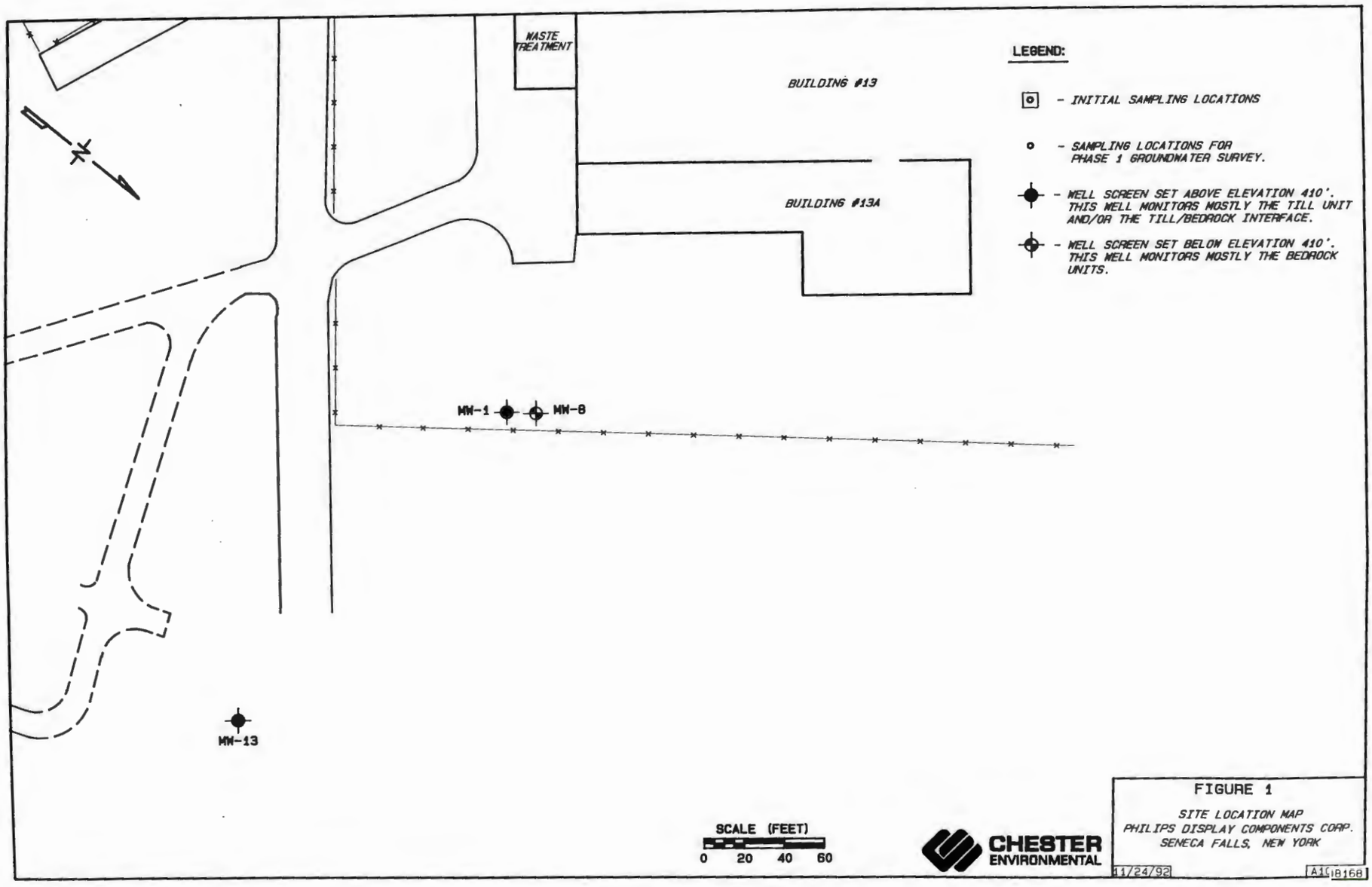


FIGURE 1

SITE LOCATION MAP
PHILIPS DISPLAY COMPONENTS CORP.
SENECA FALLS, NEW YORK

11/24/92 A1(B168

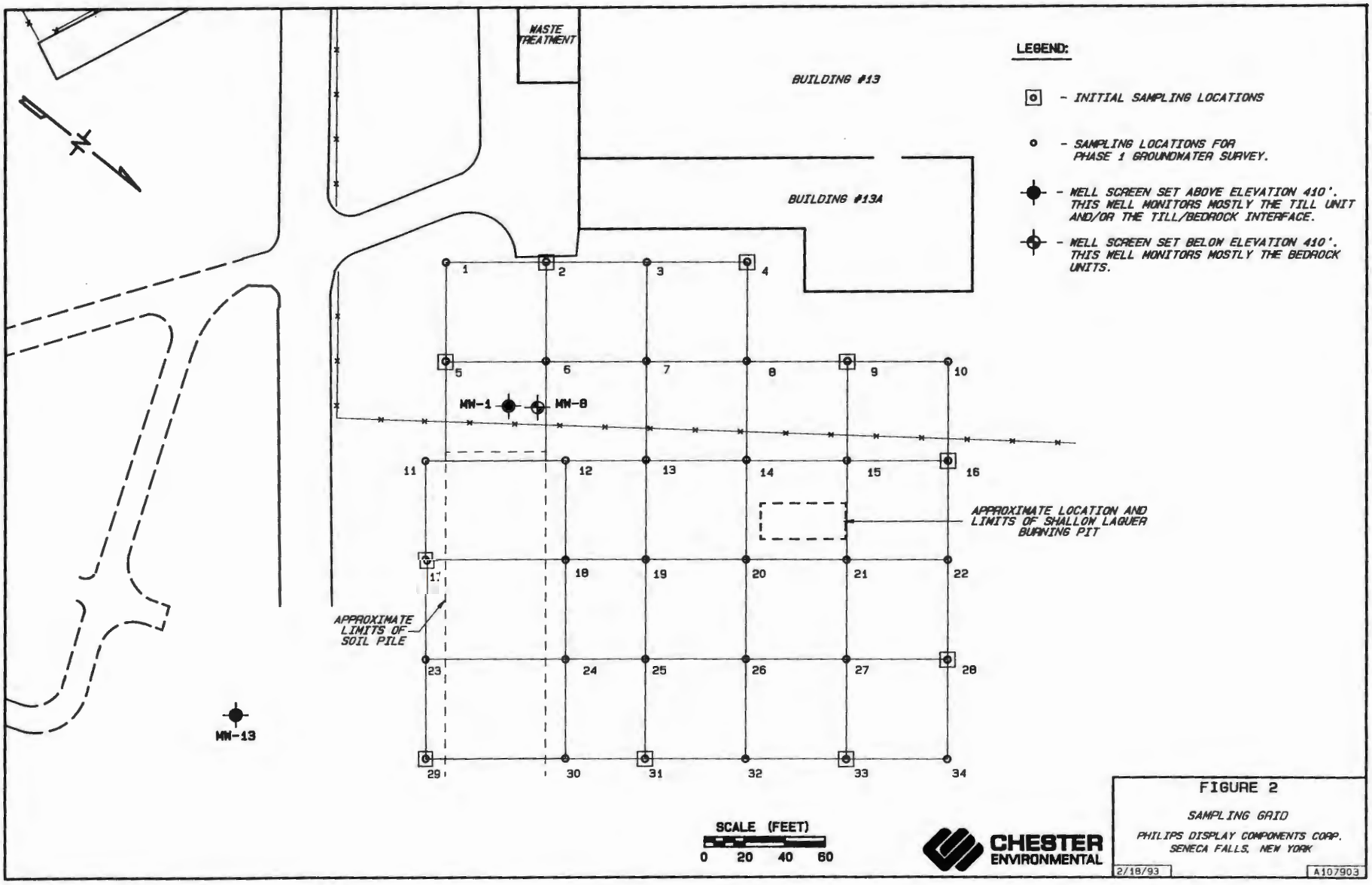


FIGURE 2

SAMPLING GRID

PHILIPS DISPLAY COMPONENTS CORP.
SENECA FALLS, NEW YORK

2/18/93

A107903

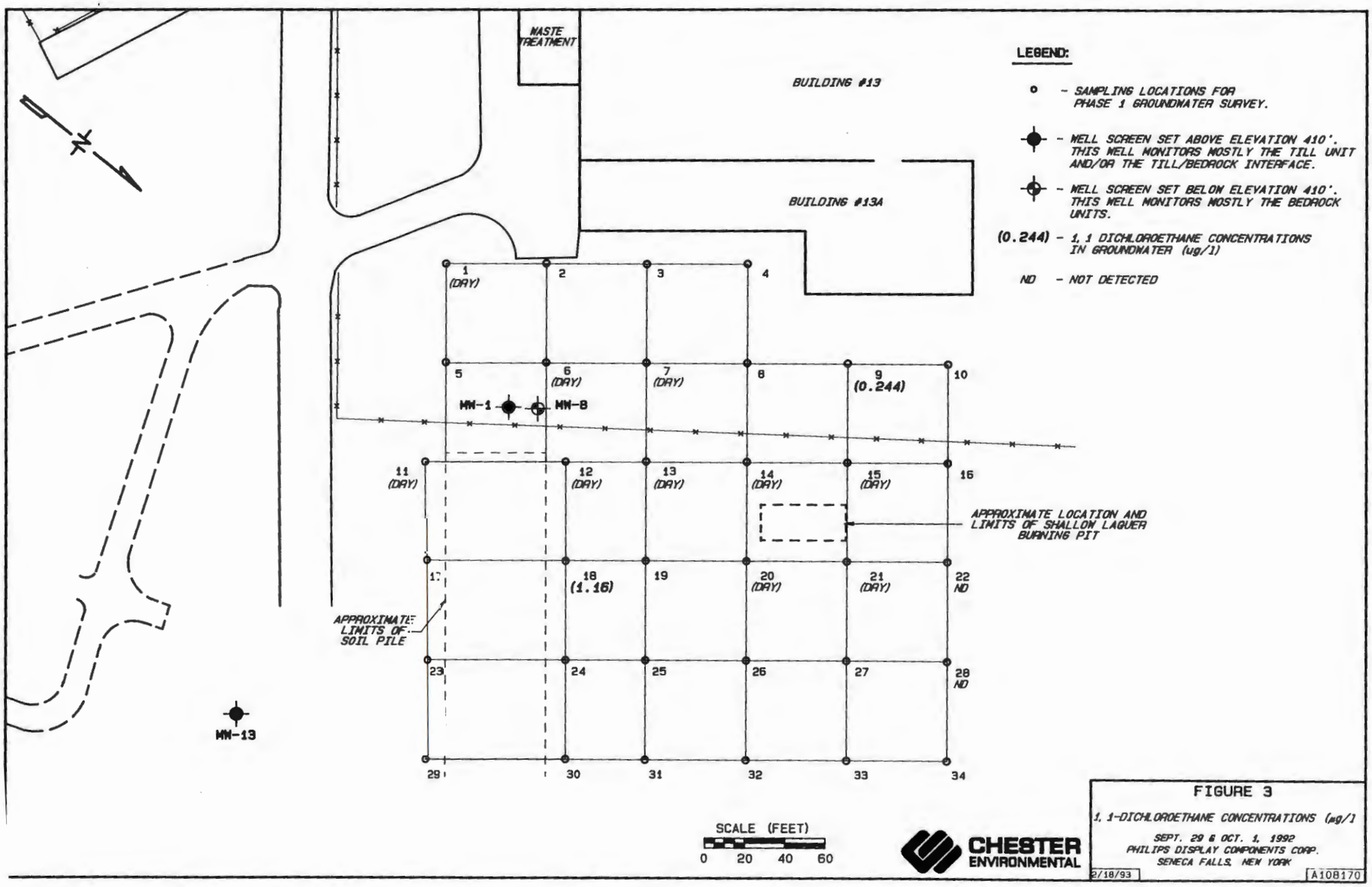


FIGURE 3

1, 1-DICHLOROETHANE CONCENTRATIONS (µg/l)

SEPT. 29 & OCT. 1, 1992
PHILIPS DISPLAY COMPONENTS CORP.
SENECA FALLS, NEW YORK

2/18/93

A108170

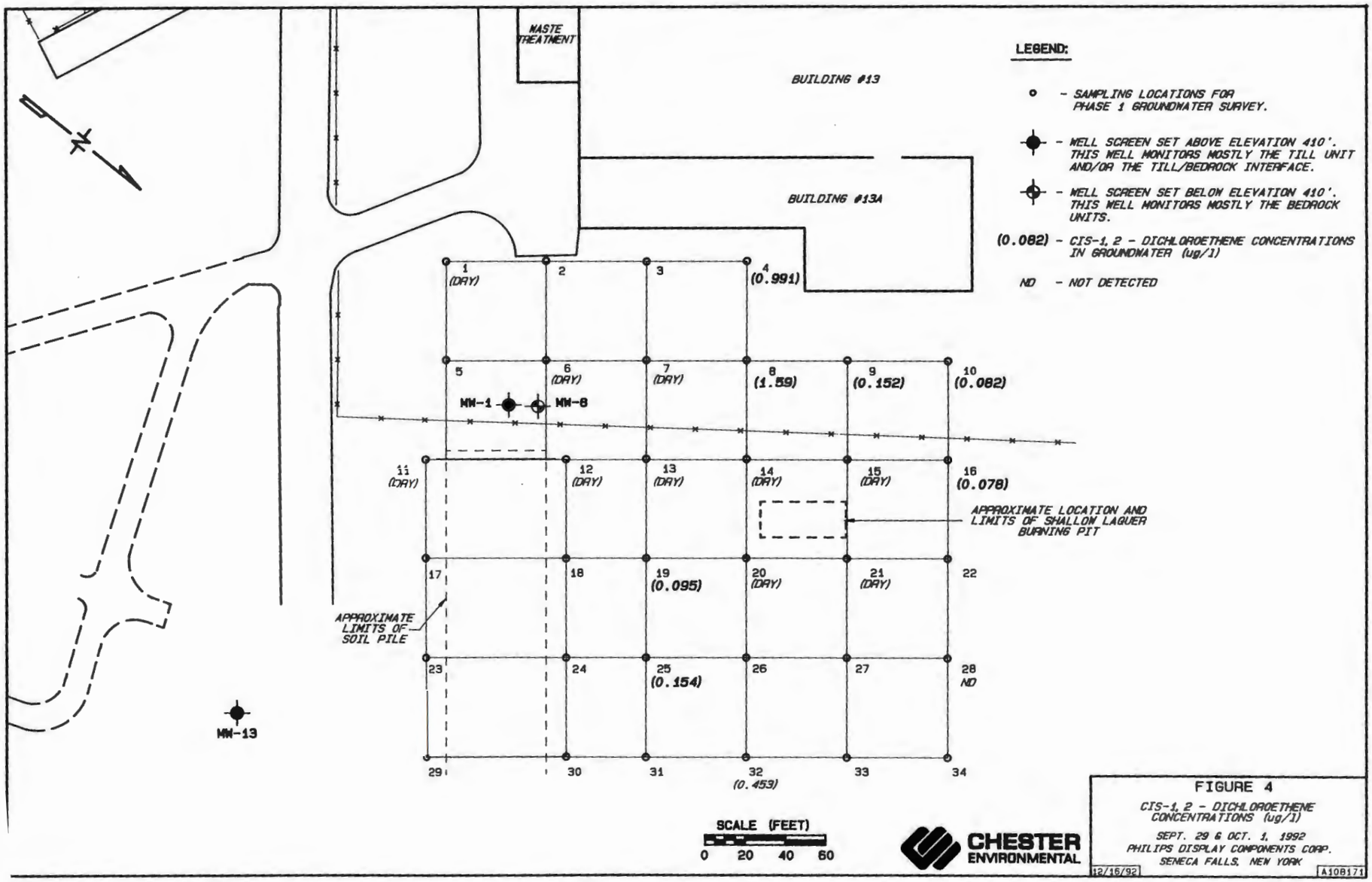


FIGURE 4

CIS-1, 2 - DICHLOROETHENE CONCENTRATIONS (ug/l)

SEPT. 29 & OCT. 1, 1992

PHILIPS DISPLAY COMPONENTS CORP.

SENECA FALLS, NEW YORK

12/16/92

A108171

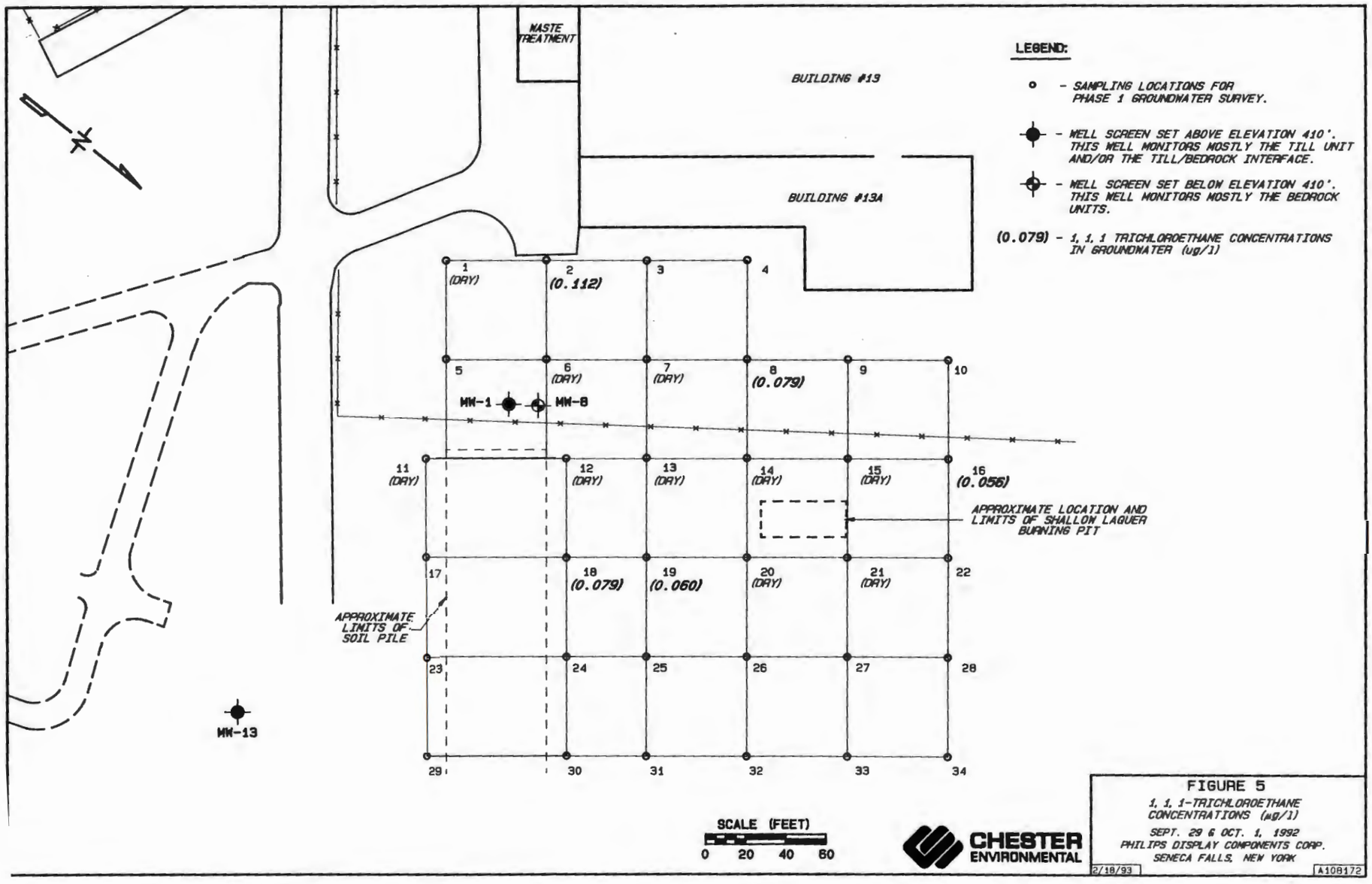


FIGURE 5

1, 1, 1-TRICHLOROETHANE CONCENTRATIONS (µg/l)

SEPT. 29 & OCT. 1, 1992

PHILIPS DISPLAY COMPONENTS CORP.

SENECA FALLS, NEW YORK

2/18/93

A108172

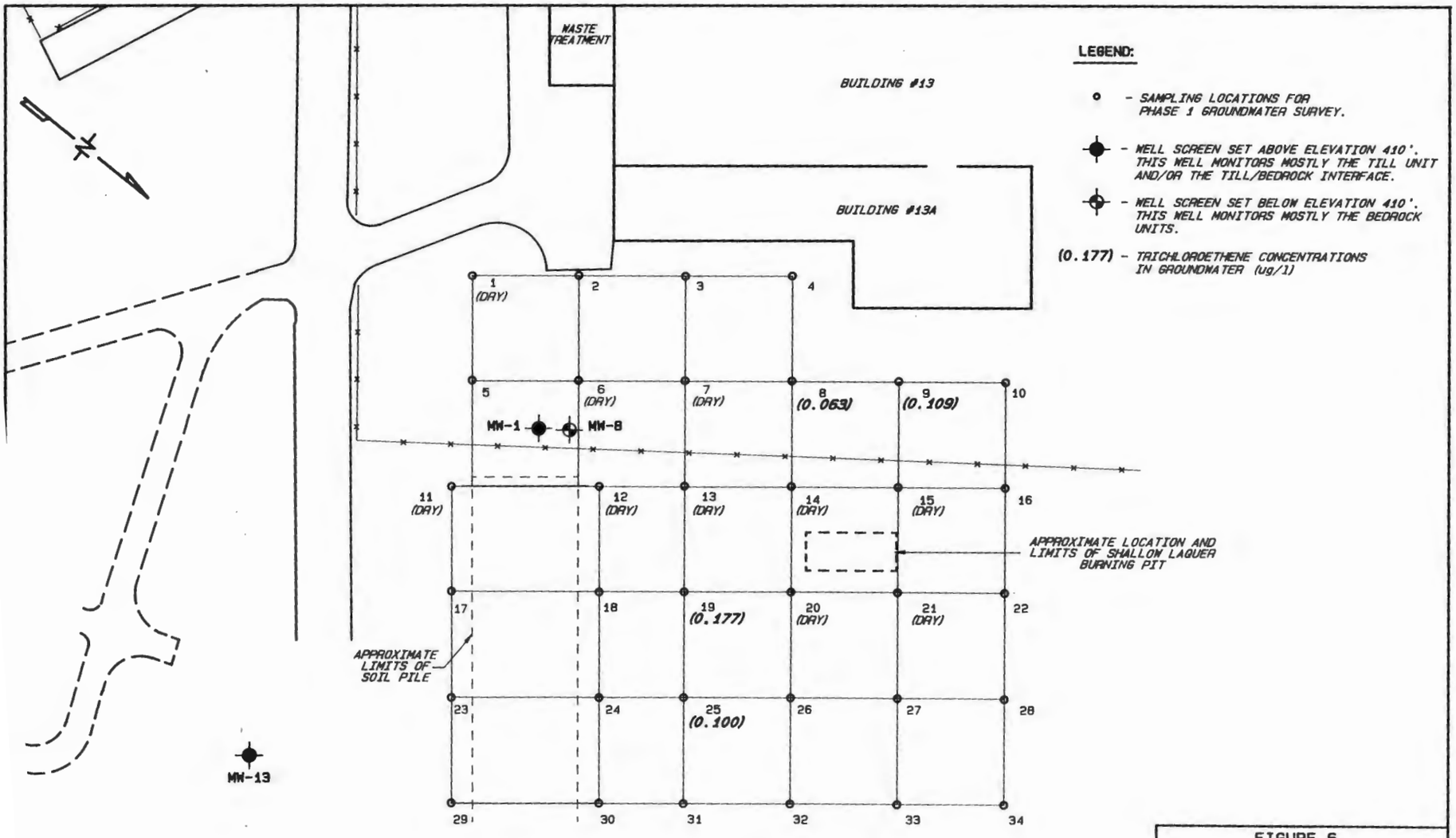


FIGURE 6

TRICHLOROETHENE CONCENTRATIONS (µg/l)

SEPT. 29 & OCT. 1, 1992
PHILIPS DISPLAY COMPONENTS CORP.
SENECA FALLS, NEW YORK

2/18/93

A108173

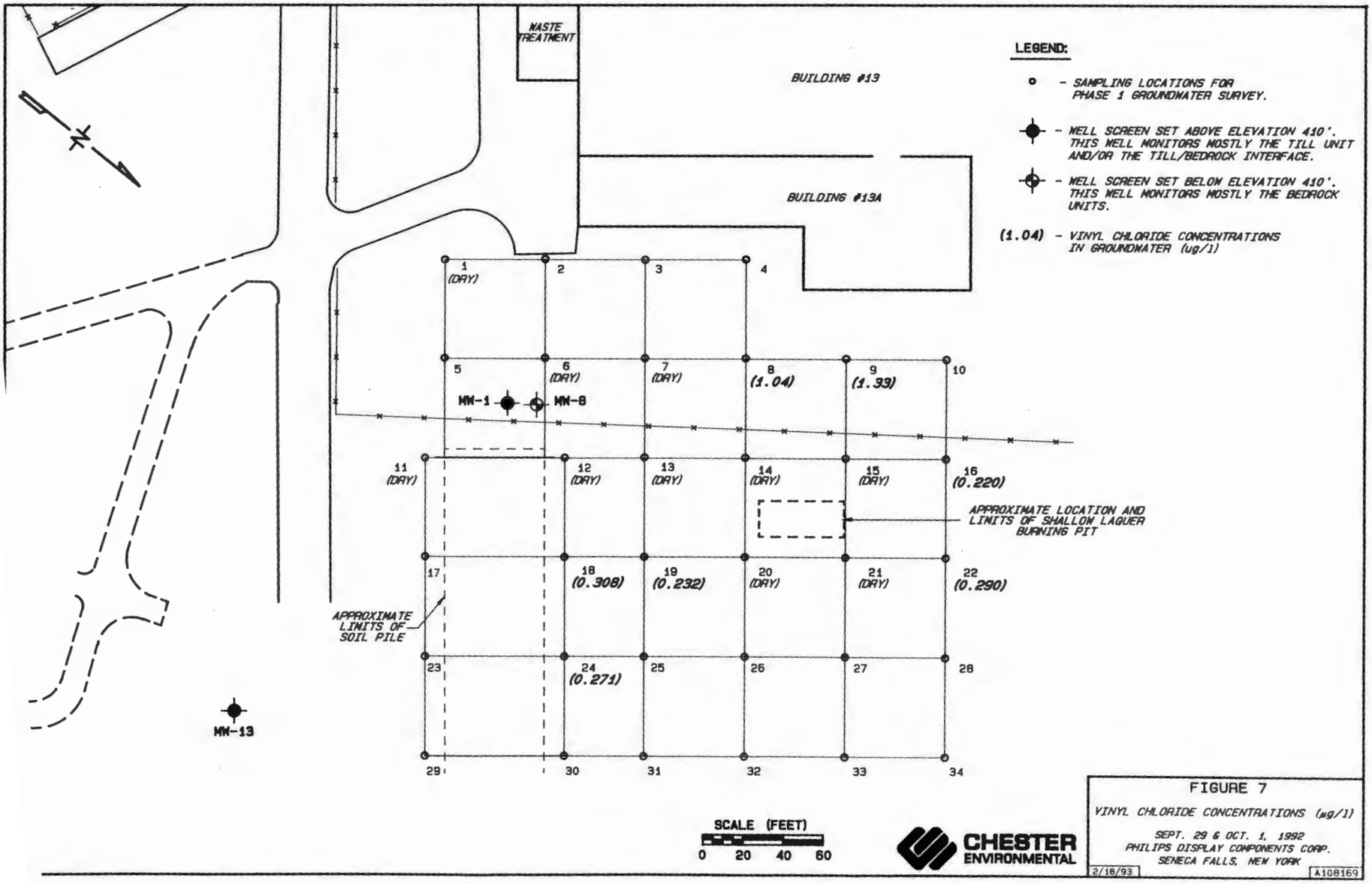


FIGURE 7

VINYL CHLORIDE CONCENTRATIONS (µg/l)

SEPT. 29 & OCT. 1, 1992
PHILIPS DISPLAY COMPONENTS CORP.
SENECA FALLS, NEW YORK

2/18/93 A108169

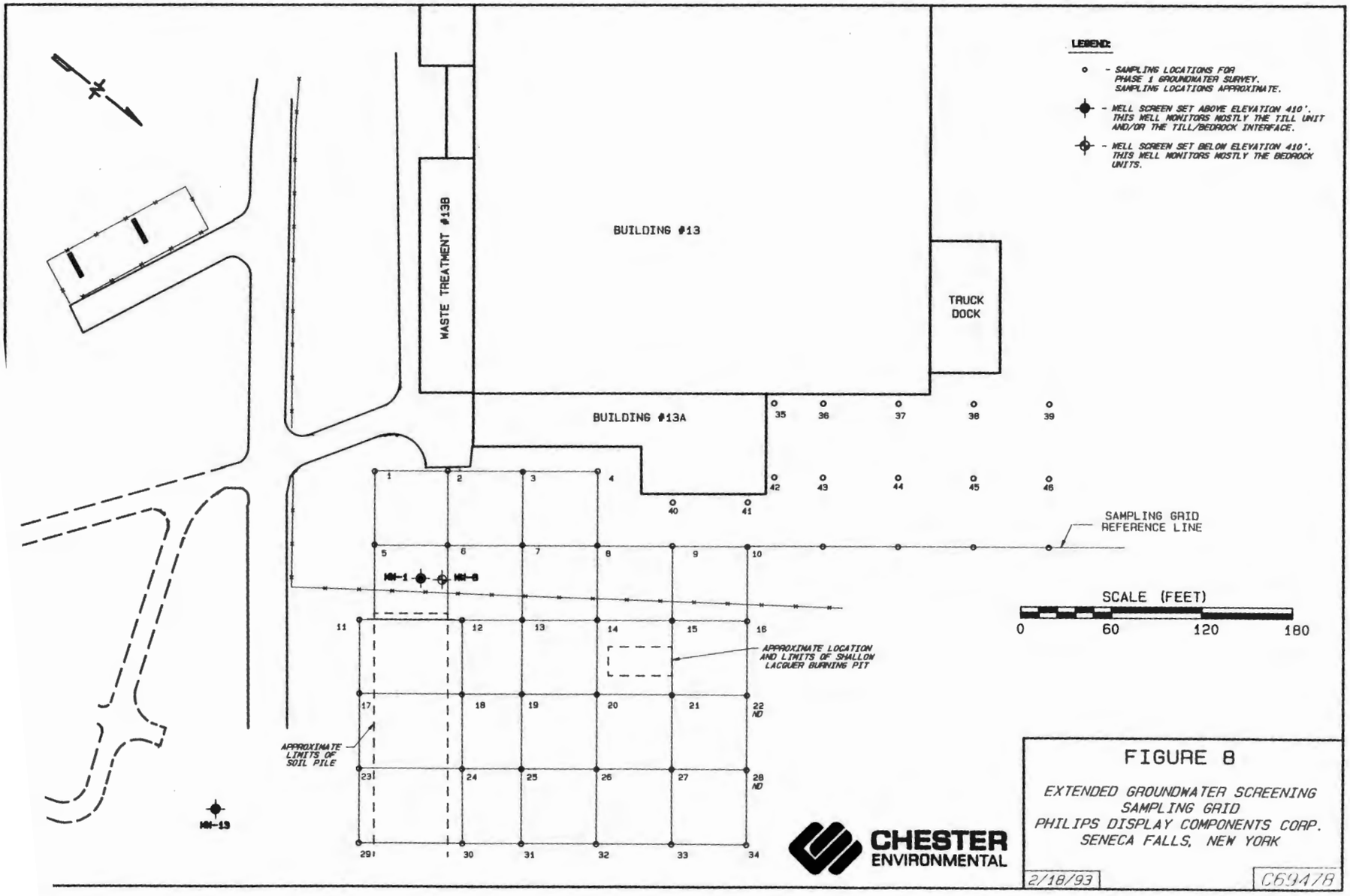


FIGURE 8

EXTENDED GROUNDWATER SCREENING
SAMPLING GRID
PHILIPS DISPLAY COMPONENTS CORP.
SENECA FALLS, NEW YORK

2/18/93

C69478

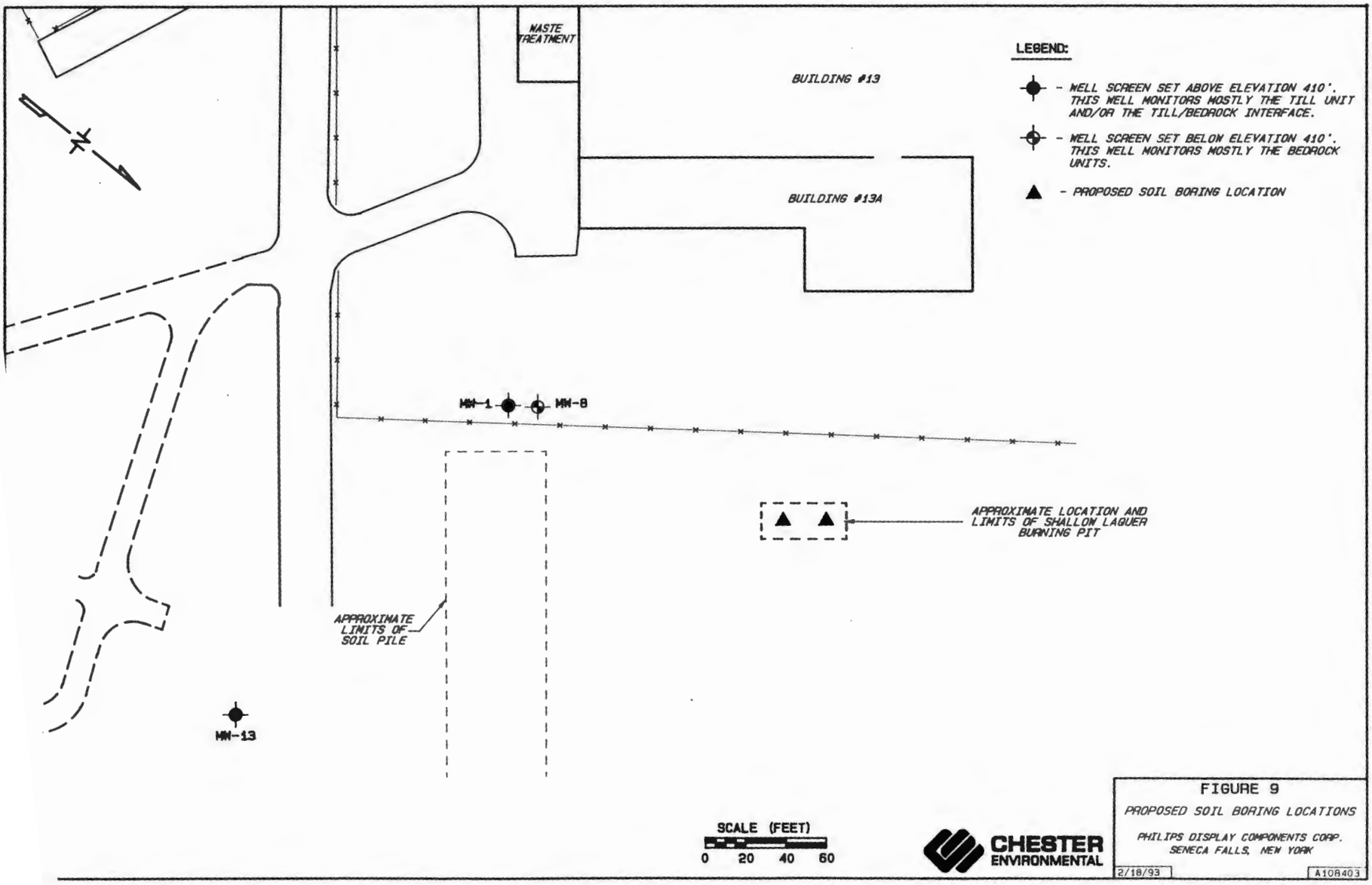


FIGURE 9

PROPOSED SOIL BORING LOCATIONS

PHILIPS DISPLAY COMPONENTS CORP.
SENECA FALLS, NEW YORK

2/18/93 A10R403

TABLES

TABLE 1
ANALYTICAL RESULTS*
HISTORICAL MONITORING WELL MW-1

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS FACILITY
SENECA FALLS, N.Y.

PARAMETER	UNIT	MW-1 3/3/87	MW-1 6/3/87	MW-1 9/10/87	MW-1 10/29/87	MW-1 2/17/88	MW-1 5/17/88	MW-1 8/9/88	MW-1 11/02/88	MW-1 2/1/89	MW-1 4/28/89	MW-1 8/11/89	MW-1 10/5/89
1,1-DICHLOROETHANE	MG/L	0.016	0.0089	0.02	0.02	0.011	0.024	0.018	0.02	0.015	0.017	N/A	N/A
1,1-DICHLOROETHENE	MG/L	0.01	<0.005	0.0075	<0.005	<0.005	0.0096	0.0098	0.014	0.01	<0.005	N/A	N/A
1,1,1-TRICHLOROETHANE	MG/L	0.253	0.066	0.235	0.217	0.144	0.235	0.18	0.22	0.136	0.158	N/A	N/A
ACETONE	MG/L	<0.005	N/A	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	N/A	N/A
METHYLENE CHLORIDE	MG/L	<0.005	N/A	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	N/A	N/A

* Laboratory Analyses by Chester LabNet.
** Laboratory Contaminant.
NA – Not Analyzed.

CHESTER

W-3730 3/93

TABLE 1 (Cont'd.)
ANALYTICAL RESULTS*
HISTORICAL MONITORING WELL MW-1

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS FACILITY
SENECA FALLS, N.Y.

PARAMETER	UNIT	MW-1 1/18/90	MW-1 4/19/90	MW-1 8/22/90	MW-1 11/29/90	MW-1 1/16/91	MW-1 4/9/91	MW-1 8/1/91	MW-1 10/30/91	MW-1 2/5/92	MW-1 5/12/92	MW-1 8/6/92	MW-1 11/6/92
1,1-DICHLOROETHANE	MG/L	0.0198	<0.005	0.0066	0.0064	0.0116	0.0105	0.0121	0.016	0.0083	0.0143	<0.050	<0.005
1,1-DICHLOROETHENE	MG/L	<0.01	0.0078	<0.005	0.0168	0.0062	0.0124	0.0164	0.0128	0.006	0.012	<0.050	0.0105
1,1,1-TRICHLOROETHANE	MG/L	0.127	0.1054	0.0339	0.129	0.0693	0.0982	0.0794	0.142	0.0806	0.0827	0.0502	0.0689
ACETONE	MG/L	<0.020	0.0198**	<0.010	<0.005	<0.010	<0.010	<0.010	0.0178**	<0.005	<0.005	0.270**	<0.010
METHYLENE CHLORIDE	MG/L	<0.020	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	0.0082**	<0.010	<0.010	<0.005	0.0061**

* Laboratory Analyses by Chester LabNet.
** Laboratory Contaminant.
NA – Not Analyzed.

TABLE 2
SAMPLING POINT HYDRAULIC PROBE DEPTH

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS FACILITY
SENECA FALLS, NEW YORK

SAMPLE POINT #	DEPTH (Feet)	
1	15	*
2	6 – 7	+
3	15	
4	6 – 7	+
5	21	+
6	15	*
7	15	*
8	15	
9	21	+
10	15	
11	15	*
12	15	*
13	15	*
14	15	*
15	15	*
16	21	+
17	21	+
18	15	
19	15	
20	15	*
21	15	*
22	15	
23	15	
24	15	
25	15	
26	15	
27	15	
28	21	+
29	21	+
30	15	
31	21	+
32	15	
33	21	+
34	15	

* Dry probe holes.
+ Preliminary Sampling Points.

TABLE 3

GROUNDWATER SCREENING SURVEY

ANALYTICAL RESULTS (ug/L)*

PHILIPS DISPLAY COMPONENTS COMPANY

SENECA FALLS FACILITY

SENECA FALLS, NEW YORK

SEPTEMBER 29 & OCTOBER 1, 1992

	DETECTION LIMIT (ug/L)	9/29 #2	10/1 #3	9/29 #4	10/1 #5	10/1 #8	10/1 #9	10/1 #10	10/1 #16	9/29 #17	10/1 #18	10/1 #19	FEDERAL MCL (ug/L)	NYSDEC GROUNDWATER QUALITY STANDARDS (ug/L)
Methylene Chloride	<0.100	1.54	3.20	0.140	2.24	4.06	4.41	0.261	6.26	0.214	8.55	5.76		
1,1-Dichloroethane	<0.050	ND	ND	ND	ND	ND	0.244	ND	ND	ND	1.16	ND		5
cis-1,2-Dichloroethene	<0.050	ND	ND	0.991	ND	1.59	0.152	0.082	0.078	ND	ND	0.095	700	5
1,1,1-Trichloroethane	<0.050	0.112	ND	ND	ND	0.079	ND	ND	0.056	ND	0.079	0.060	200	5
Trichloroethene	<0.050	ND	ND	ND	ND	0.063	0.109	ND	ND	ND	ND	0.177	5	5
Vinyl Chloride	<0.200	ND	ND	ND	ND	1.04	1.33	ND	0.220	ND	0.308	0.232	2	2

	DETECTION LIMIT (ug/L)	10/1 #22	10/1 #23	10/1 #24	10/1 #25	10/1 #27	10/1 #28	10/1 #29	10/1 #30	10/1 #31	10/1 #32	10/1 #33	FEDERAL MCL (ug/L)	NYSDEC GROUNDWATER QUALITY STANDARDS (ug/L)
Methylene Chloride	<0.100	2.75	2.64	2.62	2.28	2.89	2.38	0.858	1.92	0.250	0.350	2.46		
1,1-Dichloroethane	<0.050	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		5
cis-1,2-Dichloroethene	<0.050	ND	ND	ND	0.154	ND	ND	ND	ND	ND	0.453	ND	700	5
1,1,1-Trichloroethane	<0.050	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	5
Trichloroethene	<0.050	ND	ND	ND	0.100	ND	ND	ND	ND	ND	ND	ND	5	5
Vinyl Chloride	<0.200	0.290	ND	0.271	ND	ND	ND	ND	ND	ND	ND	ND	2	2

ND - Not detected.

* - Laborotory Analysis by The ChesterLab Net

#2 - Groundwater Screening Survey Sampling Point

CHESTER

A

APPENDIX A

MW-1 AND MW-8 SOIL BORING LOGS

APPENDIX A

BORING NO. MW-1

THE CHESTER ENGINEERS
CORAOPOLIS, PENNSYLVANIA
TEST BORING RECORD

SHEET 1 of 1

PROJECT Philips ECG LOCATION Senaca Falls, New York GROUND ELEVATION 459.33
FEATURE Upgradient Well Top of Casing 462.13
DATE STARTED 3/11/83 TYPE OF SAMPLER Split Spoon DIAMETER OF AUGER 9 inch GROUND WATER 0 HRS 17.0' 24 HRS 6.3'
DATE COMPLETED 3/12/83 SAMP. SIZE 2 inch O.D. WEIGHT OF HAMMER 140 lb. FALL 36 inch
WEATHER Cloudy, Cold CASING SIZE 4 inch I.D. WEIGHT OF HAMMER FALL

DEPTH OF STRATUM	DESCRIPTION OF STRATUM	COLOR	MOISTURE CONDITION	DENSITY CONSISTENCY, HDNESS	BLOW CNT OR RECVY*	% REC.	SMPL. OR RUN NO.	SMPL. OR RUN INTVL	RQD LENGTH	% RQD	CAS. BLOWS
0.0-14.0 145	Silt and clay, some sand, trace gravel (till)	reddish brown	damp	very stiff to hard	9-12-12 19-24-26		S-1 S-2	5.0-6.5 10.0-11.5			
14.0-20.0 139	Silt, some clay, some sand, little gravel (till)	brown	damp	very stiff	9-8-9		S-3	15.0-16.5			
20.0-30.0 429	Silt and clay, some sand, little gravel (till)	grayish brown	moist	hard to stiff	9-12-17 16-16-25 5-5-4-6		S-4 S-5 S-6	20.0-21.5 25.0-26.5 30.0-32.0			
	Bottom of Hole 30.0' Well Completion Data Cement 2.0 - Surface Bentonite 5.0-2.0' Sand Pack 30.0-5.0' Screen 30.0-20.0'										

*NOTE: Blow Count indicates number of blows required to drive sampler 6 inches using 140 pound hammer falling 30 inches.

DRILLING COMPANY Carob Environmental Co. DRILLER Arthur Utter LOGGED Frank Jones

APPENDIX A
(Cont'd)

BORING NO. MW-8

THE CHESTER ENGINEERS
CORAOPOLIS, PENNSYLVANIA
TEST BORING RECORD

SHEET 1 of 1

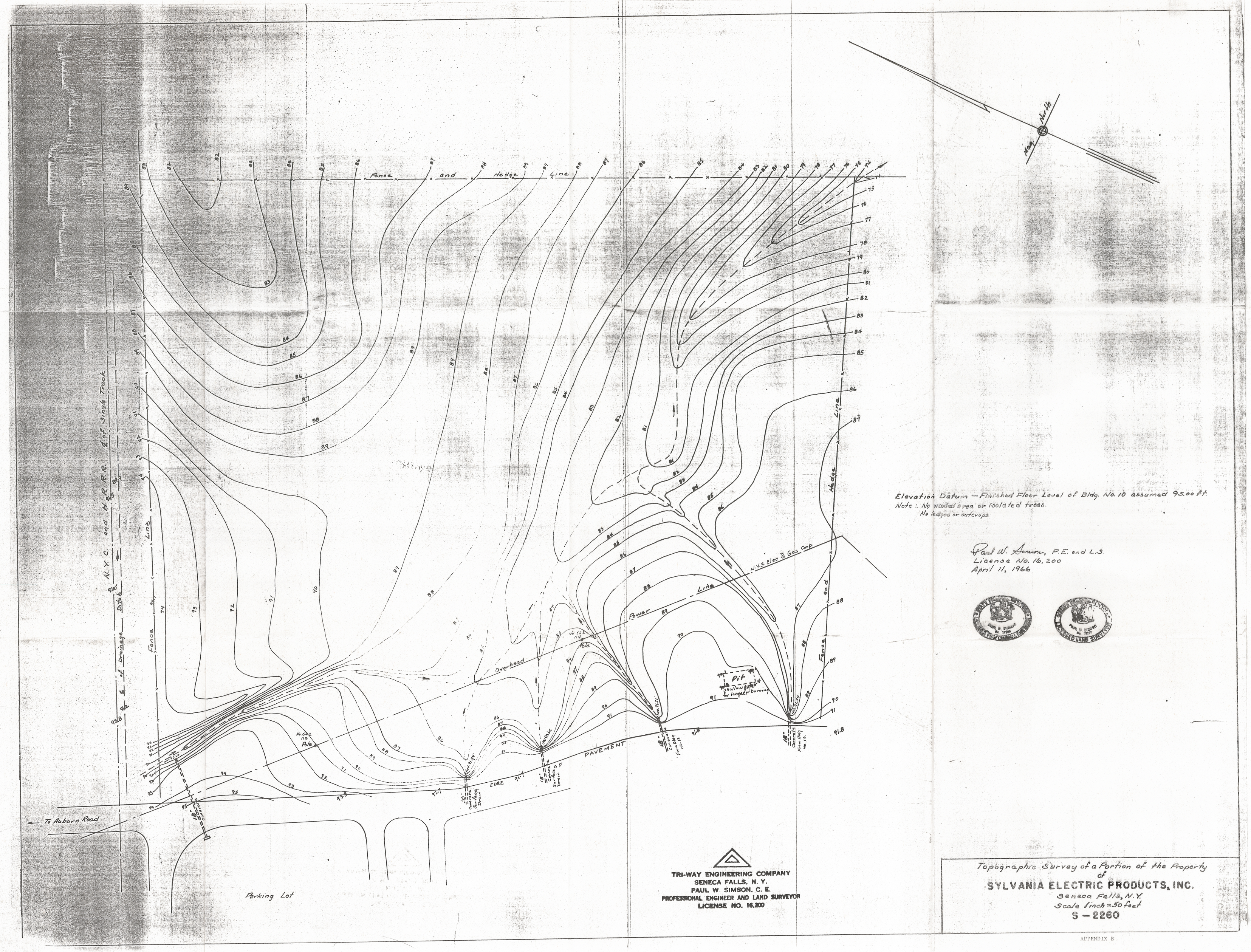
PROJECT PHILLIPS ECG LOCATION Senaca Falls, New York GROUND ELEVATION 459.67
FEATURE Near MW-1 Upgradient Well Top of Casing 461.91
DATE STARTED 2/27/84 TYPE OF SAMPLER None DIAMETER OF AUGER Air Hammer GROUND WATER 0 HRS Dry 24 HRS Dry
DATE COMPLETED 2/29/84 SAMP. SIZE N/A WEIGHT OF HAMMER N/A FALL
WEATHER Snow, cold CASING SIZE 8 inch WEIGHT OF HAMMER FALL

DEPTH OF STRATUM	DESCRIPTION OF STRATUM	COLOR	MOISTURE CONDITION	DENSITY CONSISTENCY, HONESS	BLOW CNT OR RECVY*	% REC.	SMPL. OR RUN NO.	SMPL. OR RUN INTVL	ROD LENGTH	% ROD	CAS. BLOWS
0.0-7.0	Silt, some clay, some sand, little gravel	Brown	Moist	Hard							
7.0-35.0	Clay, some silt, little sand, little gravel	Gray	Wet	Hard							
35.0-150.0	Limestone with gypsum seams	Gray	Dry	Medium Hard							
	Bottom of hole 150.0'										

* [illegible] required to drive sampler 6 inches using 140 pound hammer falling 30 inches.

APPENDIX B

LACQUER BURN PIT MAP



Elevation Datum — Finished Floor Level of Bldg. No. 10 assumed 95.00 ft.
Note: No wooded area or isolated trees.
No ledges or outcrops

Paul W. Simson, P.E. and L.S.
License No. 16,200
April 11, 1966

TRI-WAY ENGINEERING COMPANY
SENECA FALLS, N. Y.
PAUL W. SIMSON, C. E.
PROFESSIONAL ENGINEER AND LAND SURVEYOR
LICENSE NO. 16,200

Topographic Survey of a Portion of the Property of
SYLVANIA ELECTRIC PRODUCTS, INC.
Seneca Falls, N.Y.
Scale 1 inch = 50 feet
S – 2260