REPORT

Site Assessment

Eagle Comtronics, Inc.
Clay, New York

June 1993

O'BRIEN & GERE
ENGINEERS, INC.

2665.003

REPORT

SITE ASSESSMENT

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O'BRIEN & GERE ENGINEERS, INC.
5000 BRITTONFIELD PARKWAY
SYRACUSE, NEW YORK 13221

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SECTION 1 - INTRODUCTION

1.01 Project Background

Eagle Comtronics is involved in light manufacturing of electronic components, primarily for the cable television market. The facility is located at 4562 Waterhouse Road in Clay, New York and includes management offices for the firm as well as a separate 12,000 square foot manufacturing building used for assembly of electrical products. The parcel is approximately 18 acres in size and is surrounded by agricultural properties and a few nearby residential homes. The Eagle Comtronics site and these residential homes are served by municipal water supply and sewer systems. Figures 1 and 2 depict the location and layout of the site.

During an environmental assessment conducted by a third party as a routine prerequisite to obtaining a new line of bank financing, detectable concentrations of volatile organic compounds (VOCs) were measured in ground water samples collected from monitoring wells installed near the manufacturing building.

In response to these findings, Eagle Comtronics retained O'Brien & Gere Engineers, Inc. (Engineers) of Syracuse, New York to conduct further investigations in order to define the extent of the potential soil and ground water contamination, and to develop a remedial action plan for the site.

1.02 Purpose and Scope of Project

The primary objective of this program is to define the physical and chemical nature of the potential soil and ground water contamination on the Eagle Comtronics site. To achieve this objective, Engineers initiated a field program which initially

included a limited topographic survey to establish ground water elevations and flow characteristics using existing shallow ground water monitoring wells. The field program also consisted of the installation of four additional shallow monitoring wells to augment the three existing shallow wells which were previously installed as part of the assessment. Upon completion of the well installation, the seven wells were developed and sampled for VOCs using standard analytical methods. Ground water elevations were also obtained from the wells.

The initial round of sampling was followed by the collection of three additional rounds of samples which were analyzed using similar analytical methods. The purpose of this sampling was to confirm the results obtained in the first round and to document trends in contaminant concentrations. In addition, samples were obtained from two select monitoring wells and analyzed for total priority pollutants to provide a broader indication of ground water chemistry, and to provide an indication of other possible constituents which may be present within the ground water.

Soil borings were advanced within the area suspected to be the source of the VOC contamination. These samples were analyzed for VOCs in order to evaluate the presence of residual contamination within the soil matrix.

In additional to the above, two deep monitoring wells were installed to evaluate ground water quality in deeper portions of the aquifer. Upon completion, these wells were developed and sampled for VOCs using standard analytical methods.

1.03 Report Format

Having introduced the background and intent of this program in this section, the remaining sections of this report provide additional detail regarding the project. Specifically, Section 2 summarizes the available historical information including a spill history and previous investigations done by others. Section 3 presents the field program as implemented by Engineers including the topographic survey, shallow and deep ground water monitoring well installation, ground water elevation measurements, ground water sampling and soil sampling. In Section 4, the results and interpretation of the field program are discussed. Finally, Section 5 provides a summary of the conclusions which have been developed in this report.

The report appendices include boring logs, laboratory reports, hydraulic conductivity test data, the proposed remedial Action Plan and design package for the site, and the proposed project schedule.

SECTION 2 - HISTORICAL INFORMATION

2.01 Spill History

Unbeknownst to Eagle Comtronics management, a spill occurred in 1981 in an area by the southwest corner of the existing assembly building. This area was formerly used for temporary storage of spent solvents used in the assembly of the electrical products. Apparently, several drums were located in this area during the winter months and these drums froze to the ground rendering them immobile. To free them, a forklift operated by John E. Fisher Construction Company was used and in doing so, several drums were punctured and waste solvents were spilled in this area. The John E. Fisher Construction Company was working under contract to Eagle Comtronics for the express purpose of loading those drums of waste solvent onto a truck for transport by others to an off-site, permitted disposal location.

Until recently, Eagle Comtronics management was unaware of this incident. However, during an environmental property assessment required for completion of a new lending agreement, this incident and some of the details surrounding it became known.

In part, because of employee turnover and the number of intervening years involved, some of the specific details regarding this spill remain unknown. What is known is that as many as six (6) drums may have been punctured and some material was released. The lost volume, however, is not known since reportedly the drums contained varying amounts and only a small loss from the punctured drums may have occurred.

The type of material that was spilled was likely a waste solvent containing 1,1,1-trichloroethane (1,1,1-TCA) which was formerly used in the manufacturing operation. This material was used to rinse spent soldering flux from printed circuit boards. In general, the plant used slightly less than 1 drum of solvent per month. The use of this material began in July, 1980 and was discontinued in June of 1982.

2.02 Previous Investigations

Environmental inquiries were conducted by a third party as part of the preparation for refinancing. These inquiries involved a two-staged environmental assessment. The initial assessment was conducted in June 1989, and consisted of a background and regulatory review of the site and a visual inspection of the site and the surrounding areas by Adirondack Environmental Services, Inc.

There were no blatant environmental issues identified in the first stage of the assessment; however, further investigation of a suspect area located at the southwest corner of the assembly building was recommended. This area was used to accumulate waste solvents during the period when 1,1,1 trichloroethane was used.

Upon receipt of this recommendation, Eagle Comtronics authorized Adirondack Environmental to perform a follow-up assessment which required installation and sampling of three shallow monitoring wells around the assembly building. The locations of these monitoring wells, MW-1, MW-2, and MW-3, are shown on Figure 2.

Sampling and analysis of ground water samples from these wells was conducted, and detectable concentrations of VOCs were found.

SECTION 3 - FIELD INVESTIGATIONS

3.01 Shallow Ground Water Monitoring Well Installation

In response to the findings by Adirondack Environmental, Eagle Comtronics then retained Engineers to conduct more intensive studies. Four additional shallow ground water monitoring wells were installed on-site to collect data pertaining to ground water flow direction, shallow subsurface geologic conditions, aquifer hydraulic conductivity, and shallow ground water quality. These newly installed wells, MW-4, MW-5, MW-6, and MW-7 (Figure 2) supplement three existing wells MW-1, MW-2, and MW-3 previously installed by Adirondack Environmental Inc.

Prior to installing the new wells, ground water elevations were collected in the three existing wells. These data were used to assess the shallow ground flow conditions and to optimize the positioning of the downgradient wells.

Monitoring wells MW-5 and MW-7 (Figure 2) were established as hydraulically downgradient ground water wells to evaluate ground water quality in the vicinity of the northern property boundary. Each of these wells was installed to a depth of approximately 15 feet. Monitoring well MW-6 was installed along the east side of the manufacturing building to assess the ground water in this region of the site. Monitoring well MW-4 was installed approximately 135 feet south of the assembly building (Figure 2) to a depth of approximately 14.5 feet, to assess the quality of the ground water flowing onto the Eagle Comtronics property.

The ground water monitoring wells (MW-4, MW-5, MW-6, MW-7) were installed using hollow-stem drilling methods. Split-spoon soil samples were collected

at 5 foot intervals in each boring. Each collected soil sample was visually described and logged by an Engineers hydrogeologist.

The new monitoring wells, MW-4, MW-5, MW-6 and MW-7, installed by Engineers, are constructed of two inch diameter PVC well casing and 10 foot sections of 0.020" PVC slotted well screen. A summary of well specifications for these wells is presented in Table 1. Soil boring logs and as-built well construction details are contained in Appendix A. The well screen depths were positioned so that a portion of each well screen extended above the water table such that if non-aqueous phase liquids were present (floating) at the surface of the ground water table, they could be detected.

Depth sounding measurements collected from monitoring wells MW-1, MW-2, and MW-3 indicate they were installed to approximate depths of 13.5 feet, 14.0 feet, and 14.5 feet, respectively. The construction details and specifications for MW-1, MW-2, and MW-3 are not known. However, these wells were likely installed in a similar manner.

Following installation, the new monitoring wells were developed by use of a bottom loading stainless steel bailer to remove sediment that had accumulated within the well screen during installation. Additionally, the existing monitoring wells were developed in a consistent manner.

Subsequent to completion of installation of the new monitoring wells, a field survey was undertaken to establish locations and elevations for each of these wells relative to the existing pre-surveyed monitoring wells MW-1, MW-2, and MW-3. These elevation data are also presented in Table 1.

3.02 Deep Ground Water Monitoring Well Installation

Two deep ground water monitoring wells, designated MW-3D and MW-5D, were installed to supplement the data from seven previously installed shallow monitoring wells. The deep well locations are illustrated in Figure 2. These wells were installed to evaluate ground water quality at the overburden/bedrock interface.

Monitoring well MW-3D was installed adjacent to MW-3 and screened from 46 feet to 41 feet. Monitoring well MW-5D was installed adjacent to MW-5, and screened from 42 feet to 37 feet. The wells were installed using hollow-stem auger drilling methods with standard sampling techniques per ASTM-D-1586-84. Split spoon samples were collected every 5 feet, visually described and logged by an on-site Engineers hydrogeologist. The wells are constructed with a five foot section of 2 inch diameter 0.010 inch slotted PVC well screen attached to a 2 inch diameter schedule 40 PVC riser. Soil boring logs and well construction details are presented in Appendix A. Following installation, the wells were developed with a bottom loading stainless steel bailer to remove sediment that had accumulated in the well screen during installation.

3.03 *In Situ* Hydraulic Conductivity Tests

In Situ hydraulic conductivity tests were performed on the newly installed and existing shallow ground water monitoring wells. The purpose of these tests were to determine the permeability of the shallow overburden materials in order to estimate on-site ground water flow velocities. *In Situ* hydraulic conductivity data and calculations are included in Appendix B. A summary of these data results is presented in Table 1.

In Situ hydraulic conductivity tests were conducted by evacuating a sufficient volume of water from a given well to generate a potential hydraulic difference between the well and the surrounding aquifer. Water levels were measured and recorded at specific time intervals until the water level returned to the initial static water level. The recorded measurements represents the recovery rate of the aquifer material which is the function of the hydraulic conductivity of that material. Values for the *In Situ* hydraulic conductivities were calculated using Hvorslev's formulae.

The resulting hydraulic conductivity data in conjunction with the static ground water elevation data were evaluated to estimate on-site ground water flow velocities described in Section 4.02.

3.04 Ground Water Quality Monitoring

Ground water samples were collected from the seven (7) shallow monitoring wells on August 18, 1989, September 1, 1989, April 12, 1990, and November 6, 1992. Samples from the two (2) deep monitoring wells were collected on April 12, 1990 and November 6, 1992. Prior to sampling, static ground water elevations were measured in each well. These data are presented in Table 1. Prior to sampling, a minimum of three well volumes of water was evacuated from each well. Well purging and ground water sample collection were accomplished using a bottom loading stainless steel bailer attached to an appropriate length of polypropylene rope. Subsequent to sampling, the bailer was decontaminated by washing with Alconox and water followed by a distilled water rinse. A new clean length of polypropylene rope was used for each well sampled.

Appropriate chain of custody procedures and methods of sample preservation were maintained from time of collection to time of delivery to the laboratory. The ground water samples were analyzed by OBG Laboratories in Syracuse, New York. Submitted samples were analyzed for volatile organic compounds by Environmental Protection Agency (EPA) Method 601 and 602. Additionally, monitoring wells MW1 and MW4 were sampled for full priority pollutant analysis during the 9/1/89 sampling event. Laboratory reports for the 8/18/89, 9/1/89, 4/12/90 and 11/6/92 sampling events including QA/QC trip blanks, equipment blanks, and chain of custody forms are presented in Appendix C.

3.05 Soil Boring Installation and Sampling

Ten soil test borings were installed adjacent to the southwest corner of the Assembly Building. The boring locations are shown in Figure 2. The borings were installed within the area suspected to be the spill location.

Soil samples were collected at two foot sample intervals to a depth of four feet using split spoon sampling techniques per ASTM-D-1586-84. Borings were completed to first encountered ground water, which was between 3 to 4 feet below grade. Upon retrieval, the samples were visually inspected, logged, then packed in precleaned sample jars and stored at 4 degrees C. Two samples were collected from each boring, one from 0-2 feet and one from 2-4 feet. Soil boring logs are presented in Appendix A. Subsequent to sample collection, borings were backfilled with a mixture of cement and bentonite pellets.

Collected soil samples were submitted to OBG Laboratories of Syracuse, New York and analyzed for VOCs in accordance with EPA Methods 8010/8020.

SECTION 4 - INVESTIGATIVE RESULTS

4.01 General Physiography and Site Geology

The project area lies within the Erie-Ontario Lowlands Physiographic Province of New York State. This area is characterized by relatively low relief topography and lies between Lake Ontario to the north and the Appalachian Uplands to the south of Syracuse.

The site is located on an upland area approximately 1500 feet west of the Clay Marsh (Figure 1) which acts as a local surface water drainage discharge point. Surface water drainage from the site is to the northeast toward Waterhouse Road.

Subsurface geologic conditions encountered at the site are described on the test boring logs presented in Appendix A. A review of these data indicate that the shallow on-site geology encountered within 15 feet of the ground surface is characterized by 5 to 10 feet of reddish brown fine to medium sand overlying a dense reddish-brown glacial till comprised of silt, clay, fine sand and imbedded gravel. At location MW6 (Figure 2) a grayish brown fine sand was encountered from approximately 2 to 6 feet. This unit most likely represents backfilled subgrade materials emplaced around the assembly building foundation during construction. At location MW-3D, a reddish silt was encountered from approximately 15-30 feet.

The underlying bedrock formation was encountered during the installation of monitoring well MW-5D at approximately 42 feet below grade.

4.02 Site Ground Water Hydrology

Ground water elevation data were recorded on 8/18/89, 9/1/89, 9/19/89, 4/24/90 and 11/5/92. These data are summarized in Table 1. Ground water elevation data from 8/18/89 and 4/26/92 were used to produce the ground water elevation contour maps shown as Figures 3 and 4. Ground water occurs in the overburden from between 3 feet and 10 feet below the ground surface at wells MW1 and MW7, respectively. In general, the direction of shallow ground water flow is to the northeast.

The calculated hydraulic gradient across the site was calculated to be 0.025 ft/ft on 8/18/89. Hydraulic conductivity values summarized on Table 1, ranged from 1.0 gpd/ft^2 at MW4 to 6.5 gpd/ft^2 at MW2.

The ground water flow velocity across site has been estimated using Darcy's Law.

$$V = \frac{KI}{7.48\ (N)}$$

where:

V = ground water velocity in ft/day

K = average hydraulic conductivity in gpd/ft^2

I = average hydraulic gradient in ft/ft (8/18/89)

N = percent porosity

Therefore, assuming an average site wide hydraulic conductivity of 3.4 gpd/ft^2 and average hydraulic gradient of 0.02 ft/ft, and an estimated porosity of 35%, ground water will flow to the northeast at a rate of approximately 0.03 ft/day (11 feet/year).

4.03 Site Ground Water Quality

Ground water samples were collected from the shallow wells on 8/18/89, 9/1/89, 4/12/90 and 11/6/92, and from the deep wells on 4/12/90 and 11/6/92. Collected samples were submitted for laboratory analyses of volatile organic compounds according to EPA Method 601 and 602. In addition, during the 9/1/89 sampling event monitoring wells MW1 and MW4 located in the suspected source area and upgradient locations respectively were sampled for total priority pollutant analyses. The purpose of these analyses was to establish if any additional compounds were present which might be related to suspected source materials, and to assess the quality of the ground water flowing on to the site from upgradient off-site areas. The following data assessment includes data results from the volatile organic analyses from the 8/18/89, 9/1/89, 4/12/90 and 11/6/92 sampling events for the seven shallow wells. Volatile organic analyses from the 4/12/90 and 11/6/92 sampling events for the two deep wells are also included. Priority pollutant data for monitoring wells MW1 and MW4 collected from the 9/1/89 sampling are also discussed.

A ground water quality summary table for VOCs is provided as Table 2. A review of these data indicate that ground water samples collected from the nine monitoring wells, with the exception of upgradient well MW4 and deep well MW-5D, contain concentrations of volatile organic compounds in excess of New York State Department of Environmental Conservation (NYSDEC) Class GA ground water standards. Constituent parameters exceeding this standard include: 1,1,1-trichloroethane, 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene, 1,2-dichloroethane, trans-1,2-dichloroethene, chloroethane, vinyl chloride, methylene chloride, and toluene.

The presence of the majority of these constituents can likely be attributed to the degradation over time of 1,1,1-trichloroethane.

The highest concentrations of these constituents detected during the initial 8/18/89 sampling event were measured in monitoring wells MW-1 and MW-6, which are located adjacent to the assembly building (Figure 2). Monitoring wells MW-1 and MW-6 exhibited respective concentrations of chloroethane at 2800 micrograms per liter (ug/L or ppb) and 590 ppb, 1,1-dichloroethene at 130 ppb and 270 ppb, 1,1-dichloroethane at 1000 ppb and 3300 ppb, trans-1,2-dichloroethene at 1300 ppb and 530 ppb, 1,2-dichloroethane at 59 ppb and 150 ppb, and 1,1,1-trichloroethane at 12 ppb and 66 ppb. MW-1 also contained 170 ppb of toluene. Additionally, MW-6 contained 18 ppb of vinyl chloride and 27 ppb of methylene chloride. Monitoring wells MW-2 and MW-3 located along the north side of the assembly building exhibited only concentrations of 1,1-dichloroethane, at levels of 9 ppb and 56 ppb respectively. Further downgradient, concentrations of 1,1-dichloroethane were measured in wells MW-5 and MW-7 at levels of 90 ppb and 23 ppb, respectively. In addition, 10 ppb of chloroethane was also detected at MW-5.

A review of the 9/1/89 volatile organic data also summarized on Table 2 indicates that in general the previously identified constituent parameters have decreased or remained unchanged. Monitoring well MW-5 did exhibit a slight increase in 1,1-dichloroethane, from 90 ppb to 93 ppb, between the 8/18/89 and 9/1/89 sampling events, respectively. Additionally, monitoring wells MW-3 and MW-6 also exhibited slight increases (1 ppb and 2 ppb, respectively) in concentrations of trans-1, 2-dichloroethane from 8/18/89 to 9/1/89.

A review of the 4/12/90 and 11/6/92 volatile organic data on Table 2 indicates that contaminant concentrations have decreased even further than from the 8/18/89 - 9/1/89 sampling events. This suggests contaminant reduction due to natural biodegradation. This is supported by an increase in chloroethane and a corresponding decrease in 1,1-dichloroethane monitoring wells MW-5 and MW-6. This is generally indicative of biotransformation of 1,1,1-trichloroethane (*Abiotic and Biotic Transformations of 1,1,1-trichloroethane under Methanogenic Conditions, Vogel, McCarty, 1987).*

Figures 5, 6 and 7 illustrate the total concentrations of volatile organic constituents measured during the 8/18/89, 9/1/89, and 4/26/90 sampling events, respectively, at each monitoring well location. The total organic concentrations presented in Table 2 for both sampling events represent the summation of constituents measured above the detection limit for each sample location. The areal distribution of these values indicates that the volatile organic plume migrated in the general direction of ground water flow. The primary axis of the volatile organic plume lies between wells MW-2 and MW-7, where total values decrease to below 50 ppb.

On September 1, 1989, samples for total priority pollutants were obtained from MW-1 and MW-4. Total priority pollutant samples were obtained from MW-1 since this well is located in the area in which spent solvents were allegedly spilled. The total priority pollutant samples in this area were intended to demonstrate that no other compounds were present in the ground water in the source area. Similarly, total priority pollutant samples were obtained from MW-4. This well was sampled for total priority pollutant samples in order to establish the ground water quality at

an upgradient location, and to assess the quality of ground water flowing from off-site areas. Sample analyses included priority pollutant metals, pesticides and PCB, base neutral/acid compounds and phenol. Sample results are summarized in Table 3.

Sample results for priority pollutant metals were below detection limits with the exception of zinc. Zinc was detected in MW-1 at 0.03 ppb, and in upgradient MW-4 at 0.01 mg/l. These results, including zinc, are below the NYSDEC Class GA ground water quality standards for metals. Results for the cyanide analyses indicate non-detectable levels of cyanide from both MW-1 and MW-4. Sample results for pesticides indicate non-detectable levels of pesticides from both MW-1 and MW-4. In addition, no detectable levels of pesticides were found in the equipment blank sample. Results for PCB analyses indicate non-detectable levels of PCBs from both MW-1 and MW-4. In addition, no detectable levels of PCBs were found in the equipment blank sample. Sample results for base neutral compounds, with one exception, indicate non-detectable levels of base neutral compounds from both MW-1 and MW-4. The exception is a detectable level (15 ug/l) of bis(2-ethylhexyl) phthalate in upgradient MW-4. The presence of this compound at 15 ug/l is generally not indicative of additional site related compounds in the ground water and is commonly associated with plastic sample equipment or containers. Sample results for acid extractable compounds indicate non-detectable levels of acid extractable compounds from both MW-1 and MW-4. Sample results for phenols indicate the presence of phenols in MW-1 at 0.005 mg/l and in upgradient MW-4 at 0.006 mg/l.

4.04 Soil Boring Analyses

Soil boring analytical data is summarized in Table 4 with laboratory reports provided as Appendix C. Soil boring locations are shown in Figure 2. A review of Table 3 indicates VOCs detected in the shallow soils include 1,1-dichloroethene, 1,1-dichloroethane, t-1,2-dichloroethene, 1,1,1-trichloroethane, trichloroethene, tetrachloroethene and toluene. Concentrations of 1,1-dichloroethene, 1,1,1-trichloroethane, and TCE were detected in excess of NYSDEC Recommended Soil Cleanup Objectives for the protection of ground water (NYSDEC TAGM HWR-92-4046, November 16, 1992). Concentrations of 1,1,1-trichloroethane are present within the soils at one to two orders of magnitude above the NYSDEC recommended cleanup objective of 800 ug/kg.

SECTION 5 - CONCLUSIONS

5.01 Conclusions

Based on the information reviewed and data collected as part of this investigation, the following can be concluded:

a. Geologic conditions at the site indicate that the shallow subsurface materials encountered within 15 feet of the ground surface consists of 5 to 10 feet of fine to medium sand which overlies a dense reddish brown glacial till. Bedrock was found at 42 feet.

b. On-site ground water occurs in the overburden materials at a depth between 2 and 10 feet below ground level.

c. Localized ground water flows across the site to the northeast, generally toward Mud Creek and the northern portion of the Clay Marsh at a velocity estimated to be 0.03 ft/day.

d. Ground water quality analyses have detected concentrations of VOCs in excess of NYSDEC Class GA ground water standards.

e. The ground water contamination has likely resulted from an undisclosed, isolated waste solvent spill (1,1,1-trichloroethane) which allegedly occurred in 1981 along the southwest corner of the Assembly Building.

f. The highest concentrations of VOCs were found in monitoring wells MW-1 and MW-6 which are located immediately adjacent to the assembly building.

g. Ground water samples collected on 9/1/89, 4/12/90, and 11/6/92 indicate that concentrations of VOCs have decreased subsequent to the initial round of samples taken on 8/18/89.

h. The primary axis of the VOCs plume trends to the northeast coincident with the general direction of ground water flow.

i. The detected volatile organic compounds within ground water likely represent degradation of the 1,1,1-trichloroethane, likely by biotransformation. The historical data suggest this process is ongoing.

j. Concentrations of VOCs in excess of NYSDEC Recommended Soil Cleanup Objectives have been detected within source area soils.

k. The detected VOCs within the source area soils are likely continuing to impact site ground water quality. This is likely the primary source of ground water contamination, as most of the soil contamination is in the form of 1,1,1-trichloroethane. 1,1,1-trichloroethane will likely continue to leach into ground water and biotransform into 1,1-dichloroethane and other site contaminants.

Tables

TABLE 1
EAGLE COMTRONICS, INC.
WATERHOUSE ROAD FACILITY
Well Specification/Conductivity/Water Elevation Data

Monitoring Well	Well Depth (FT)	Ground Elevation (FT)	Screened Interval (FT)	Hydraulic Conductivity (GPD/FT^2)	Ground Water Elevations (FT) 08/18/89	09/01/89	09/19/89	04/24/90	11/05/92
MW-1	13.33	100.00	13.33 - 3.33	2.19	97.81	96.26	97.78	98.55	99.60
MW-2	14.10	99.35	14.10 - 4.10	6.64	92.98	92.34	93.73	94.42	95.29
MW-3	14.46	99.03	14.46 - 4.46	2.18	93.24	92.16	93.61	94.82	96.51
MW-3D	45.90	98.76	45.90 - 40.90	--	--	--	--	92.11	92.65
MW-4	14.62	102.93	14.62 - 4.62	1.04	98.61	97.86	99.00	100.85	101.29
MW-5	14.99	95.67	14.99 - 4.99	2.04	89.65	88.70	90.06	92.18	91.96
MW-5D	41.78	95.41	41.78 - 36.78	--	--	--	--	58.98	92.34
MW-6	14.91	100.42	14.91 - 4.91	3.12	94.99	94.20	93.86	95.68	94.91
MW-7	14.98	98.61	14.98 - 4.98	6.55	89.51	88.70	89.65	92.35	91.02

Notes:
(1) Ground elevation of 100.00 feet assumed at MW-1

TABLE 2
EAGLE COMTRONICS, INC.
WATERHOUSE ROAD FACILITY
Ground Water Quality Data
(All values reported as ug/L)

Location	Sampling Date	Vinyl Chloride	Chloro-ethane	Methylene Chloride	1,1-DCE	1,1-DCA	t-1,2-DCE	1,2-DCA	1,1,1-TCA	TCE	Toluene	Total VOC's
MW-1:	07/18/89	<50	3940	---	149	971	---	86	<50	---	299	5445
	08/18/89	<10	2800	<10	130	1000	1300	59	12	<10	170	5471
	09/01/89	<10	2400	<10	130	850	1100	40	<10	<10	88	4608
	04/12/90	<10	500	<10	54	230	300	13	<10	<10	14	1111
	11/06/92	<10	610	<10	41	260	500	<10	<10	<10	<1	1411
MW-2:	07/18/89	<1	<1	---	<1	6.8	---	<1	1.8	---	<1	9
	08/18/89	<1	<1	<1	<1	9	5	<1	<1	1	<1	15
	09/01/89	<1	<1	<1	<1	9	5	<1	<1	1	<1	15
	04/12/90	<1	<1	<1	<1	3	<1	<1	<1	<1	<1	3
	11/06/92	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	2
MW-3:	07/18/89	12.1	137	---	19.1	833	---	36.2	<10	---	<10	1037
	08/18/89	<1	4	<1	<1	56	1	1	<1	<1	<1	62
	09/01/89	<1	4	<1	<1	52	2	<1	<1	<1	<1	58
	04/12/90	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	11/06/92	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-3D:	04/12/90	<1	1	<1	<1	12	<1	<1	<1	<1	<1	13
	11/06/92	<1	1	<1	<1	12	<1	<1	<1	<1	<1	13
MW-4:	08/18/89	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	09/01/89	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	2
	04/12/90	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	11/06/92	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-5:	08/18/89	<1	10	<1	2	90	3	2	<1	<1	<1	107
	09/01/89	<1	4	<1	1	93	5	2	<1	<1	<1	105
	04/12/90	<1	2	<1	<1	31	3	<1	<1	<1	<1	37
	11/06/92	<1	19	<1	1	47	14	4	<1	<1	<1	85
MW-5D:	04/12/90	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	2
	11/06/92	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-6:	08/18/89	18	590	27	270	3300	530	150	66	<10	<10	4951
	09/01/89	<10	450	14	210	2400	370	100	35	<10	<10	3579
	04/12/90	<1	32	<1	8	57	10	2	1	<1	<1	110
	11/06/92	<50	730	<50	140	2000	560	91	<50	<50	<50	3521

TABLE 2
EAGLE COMTRONICS, INC.
WATERHOUSE ROAD FACILITY
Ground Water Quality Data
(All values reported as ug/L)

Location	Sampling Date	Vinyl Chloride	Chloro-ethane	Methylene Chloride	1,1-DCE	1,1-DCA	t-1,2-DCE	1,2-DCA	1,1,1-TCA	TCE	Toluene	Total VOC's
MW-7:	08/18/89	<1	2	<1	<1	23	<1	<1	<1	<1	<1	25
	09/01/89	<1	<1	<1	<1	17	<1	<1	<1	<1	<1	17
	04/12/90	<1	2	<1	<1	40	<1	<1	<1	<1	<1	42
	11/06/92	<1	<1	<1	2	56	12	3	<1	<1	<1	70

Notes:

(1) Bromodichlormethane and Chloroform were detected in MW-5D on 4/12/90.

1,1-DCE - 1,1-Dichloroethene
1,1-DCA - 1,1-Dichloroethane
t-1,2-DCE - trans-1,2-Dichloroethene
1,2-DCA - 1,2-Dichloroethane
1,1,1-TCA - 1,1,1-Trichloroethane
TCE - Trichloroethene

TABLE 3
EAGLE COMTRONICS, INC.
WATERHOUSE ROAD FACILITY
Priority Pollutant Analyses
Monitoring Wells MW-1 and MW-4

Priority Pollutant Analysis:	MW-1	MW-4
Metals (mg/L):		
Silver	<0.01	<0.01
Arsenic	<0.005	<0.005
Beryllium	<0.05	<0.05
Cadmium	<0.01	<0.01
Chromium	<0.05	<0.05
Copper	<0.01	<0.01
Mercury	<0.0005	<0.0005
Nickel	<0.05	<0.05
Lead	<0.05	<0.05
Antimony	<0.1	<0.1
Selenium	<0.005	<0.005
Zinc	0.03	0.01
Thallium	<0.5	<0.5
Pesticides/PCBs (ug/L):		
alfa-BHC	<0.05	<0.05
gamma-BHC	<0.05	<0.05
beta-BHC	<0.05	<0.05
Heptachlor	<0.05	<0.05
delta-BHC	<0.05	<0.05
Aldrin	<0.05	<0.05
Heptachlor Epoxide	<0.05	<0.05
Endosulfan I	<0.05	<0.05
4,4'-DDE	<0.10	<0.10
Dieldrin	<0.10	<0.10
Endrin	<0.10	<0.10
4,4'-DDD	<0.10	<0.10
Endosulfan II	<0.10	<0.10
4,4'-DDT	<0.10	<0.10
Endosulfan Sulfate	<0.10	<0.10
Endrin Aldehyde	<0.10	<0.10
Methoxychlor	<0.50	<0.50
Endrin Ketone	<0.10	<0.10
Chlordane	<0.50	<0.50
Toxaphene	<1.0	<1.0
PCB-1221	<0.50	<0.50
PCB-1232	<0.50	<0.50
PCB-1016/1242	<0.50	<0.50
PCB-1248	<0.50	<0.50
PCB-1254	<1.0	<1.0
PCB-1260	<1.0	<1.0
Base/Neutrals (ug/L):		
1,3-Dichlorobenzene	<11	<10

TABLE 3
EAGLE COMTRONICS, INC.
WATERHOUSE ROAD FACILITY
Priority Pollutant Analyses
Monitoring Wells MW-1 and MW-4

Priority Pollutant Analysis:	MW-1	MW-4
1,4-Dichlorobenzene	<11	<10
1,2-Dichlorobenzene	<11	<10
Hexachloroethane	<11	<10
Bis(2-chloroethyl)ether	<11	<10
Bis(2-chloroisopropyl)ether	<11	<10
N-Nitrosodi-n-propylamine	<11	<10
Nitrobenzene	<11	<10
Hexachlorobutadiene	<11	<10
1,2,4-Trichlorobenzene	<11	<10
Isophorone	<11	<10
Napthalene	<11	<10
Bis(2-chloroethoxy)methane	<11	<10
Hexachlorocyclopentadiene	<11	<10
2-Chloronapthalene	<11	<10
Acenaphthylene	<11	<10
Acenaphthene	<11	<10
Dimethyl phthalate	<11	<10
2,6-Dinitrotoluene	<11	<10
Fluorene	<11	<10
4-Chlorophenyl phenyl ether	<11	<10
2,4-Dinitrotoluene	<11	<10
1,2-Diphenylhydrazine	<11	<10
Diethylphthalate	<11	<10
N-nitrolsodiphenylamine	<11	<10
Hexachlorobenzene	<11	<10
4-Bromophenyl phenyl ether	<11	<10
Phenanthrene	<11	<10
Anthracene	<11	<10
Di-n-butyl phthalate	<11	<10
Fluoranthene	<11	<10
Pyrene	<11	<10
Benzidine	<54	<53
Butyl benzyl phthalate	<11	<10
Bis(2-ethylhexyl)phthalate	<11	15
Chrysene	<11	<10
Benzo(a)anthracene	<11	<10
3,3-Dichlorobenzidine	<22	<21
Di-n-octylphthalate	<11	<10
Benzo(b)fluoranthene	<11	<10
Benzo(k)fluoranthene	<11	<10
Benzo(a)pyrene	<11	<10
Indeno(1,2,3-cd)pyrene	<11	<10
Dibenzo(a,h)anthracene	<11	<10
Benzo(ghi)perylene	<11	<10
N-Nitrosodimethyl Amine	<11	<10

TABLE 3
EAGLE COMTRONICS, INC.
WATERHOUSE ROAD FACILITY
Priority Pollutant Analyses
Monitoring Wells MW-1 and MW-4

Priority Pollutant Analysis:	MW-1	MW-4
Acids (ug/L):		
2-Chlorophenol	<11	<10
2-Nitrophenol	<11	<10
Phenol	<11	<10
2,4-Dimethylphenol	<11	<10
2,4-Dichlorophenol	<11	<10
2,4,6-Trichlorophenol	<11	<10
4-Chloro-3-methylphenol	<11	<10
2,4-Dinitrolphenol	<54	<53
2-Methyl-4,6-dinitrophenol	<54	<53
Pentachlorophenol	<54	<53
4-Nitrophenol	<54	<53
Benzyl Alcohol	<11	<10
2-Methylphenol	<11	<10
4-Methylphenol	<11	<10
Benzoic Acid	<54	<53
4-Chloroaniline	<11	<10
2-Methylnapthalene	<11	<10
2,4,5-Trichlorophenol	<54	<53
2-Nitroaniline	<54	<53
3-Nitroaniline	<54	<53
Dibenzofuran	<11	<10
4-Nitroaniline	<54	<53
Other Analyses (mg/L):		
Cyanide	<0.01	<0.01
Phenol	0.006	0.005

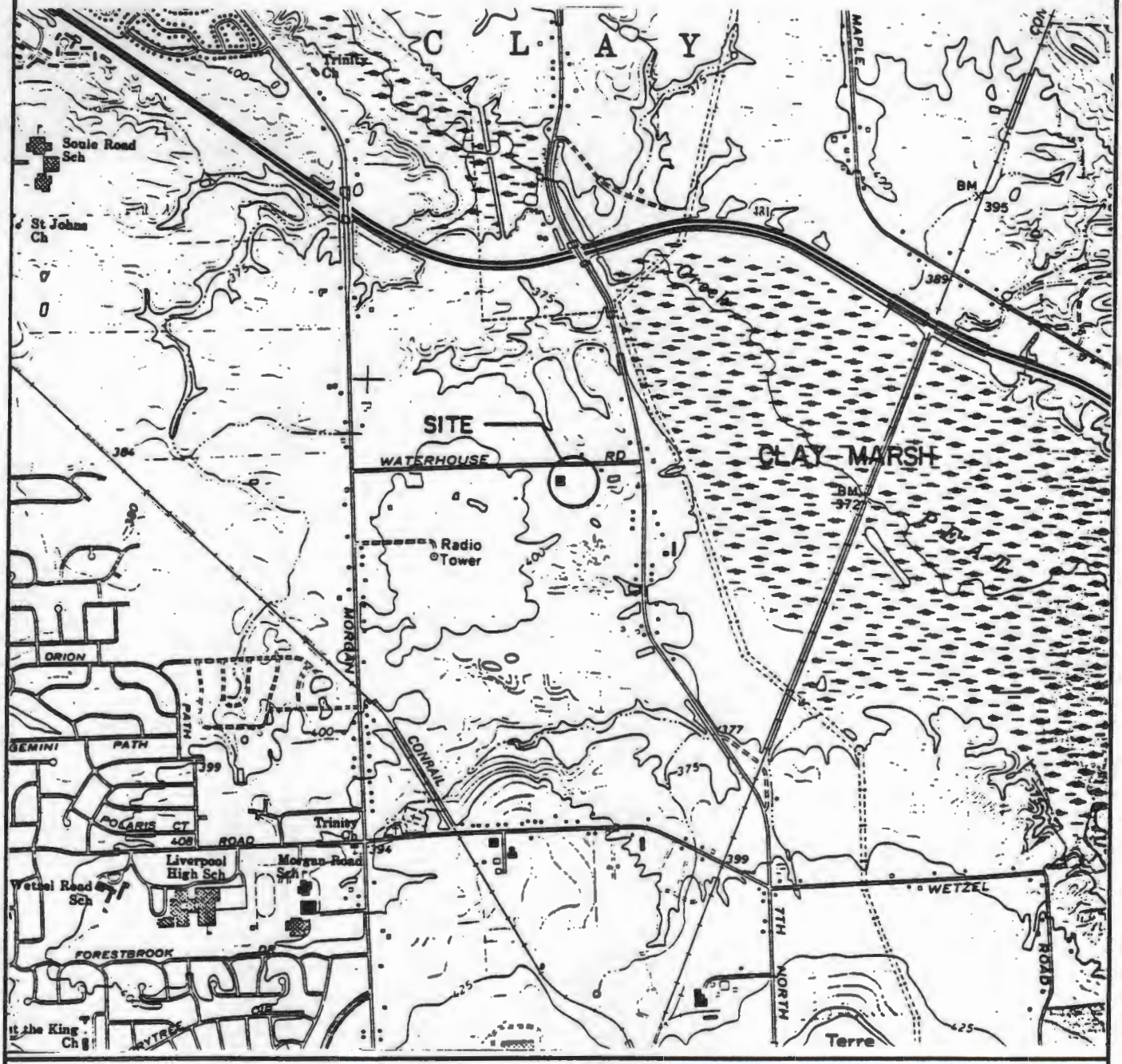
TABLE 4
EAGLE COMTRONICS, INC.
WATERHOUSE ROAD FACILITY
Soil Boring Analyses
(All values reported as ug/kg dry weight)

Boring No.	Depth (FT)	1,1-DCE	1,1-DCA	t-1,2-DCE	1,1,1-TCA	TCE	PERC	Toluene	Total VOC's
B-1	0-2	<11	<11	<11	720	12	84	340	1156
B-1	2-4	150	120	54	4600	220	130	13	5287
B-2	0-2	<12	<12	<12	31	<12	<12	<12	31
B-2	2-4	61	51	<11	2400	360	23	120	3015
B-3	0-2	13	<11	<11	930	35	<11	<11	978
B-3	2-4	<12	27	<12	810	34	<12	<12	871
B-4	0-2	1700	<110	<110	42000	5400	300	<110	49400
B-4	2-4	28	190	<12	1500	140	<12	<12	1858
B-5	0-2	<12	<12	<12	320	<12	<12	<12	320
B-5	2-4	<12	20	<12	110	<12	<12	<12	130
B-6	0-2	420	<110	<110	14000	170	<110	<110	14590
B-6	2-4	150	<120	<120	7900	230	<120	180	8460
B-7	0-2	<12	<12	<12	140	<12	<12	<12	140
B-7	2-4	13	59	<12	520	<12	<12	<12	592
B-8	0-2	13	<11	<11	830	<11	<11	<11	843
B-8	2-4	<11	17	<11	80	<11	<11	<11	97
B-9	0-2	<12	<12	<12	<12	<12	<12	<12	<12
B-9	2-4	<12	<12	<12	<12	<12	<12	<12	<12
B-10	0-2	<12	<12	<12	<12	<12	<12	<12	<12
B-10	2-4	<12	<12	<12	<12	<12	<12	<12	<12

Notes:
1,1-DCE - 1,1-Dichloroethene
1,1-DCA - 1,1-Dichloroethane
t-1,2-DCE - trans-1,2-Dichloroethene
1,2-DCA - 1,2-Dichloroethane
1,1,1-TCA - 1,1,1-Trichloroethane
TCE - Trichloroethene

Figures

FIGURE 1



EAGLE COMTRONICS INC.
CLAY, NEW YORK

QUADRANGLE LOCATION

SITE LOCATION MAP

0 2000 4000

SCALE IN FEET

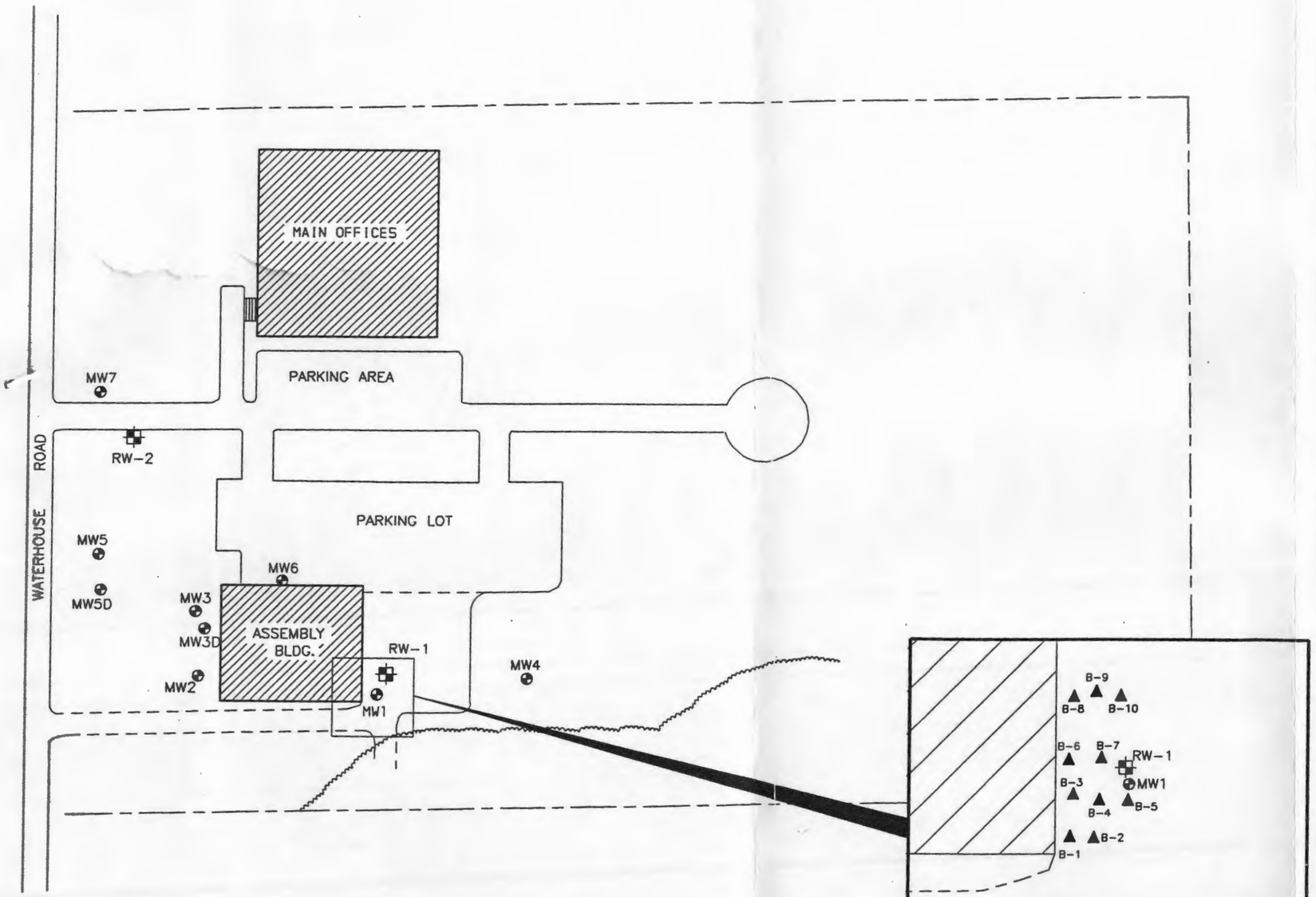
THIS MAP ADAPTED FROM THE BREWERTON, NEW YORK 7.5 MIN. U.S.G.S. QUADRANGLE MAP

O'BRIEN & GERE
ENGINEERS INC.
SYRACUSE, NEW YORK

FIGURE 2

EAGLE COMTRONICS INC.
CLAY, NEW YORK

SITE MAP



SOIL BORING LOCATIONS
SCALE 1" = 20'

LEGEND:

- PROPERTY LINE
- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- TREE LINE
- SOIL BORING

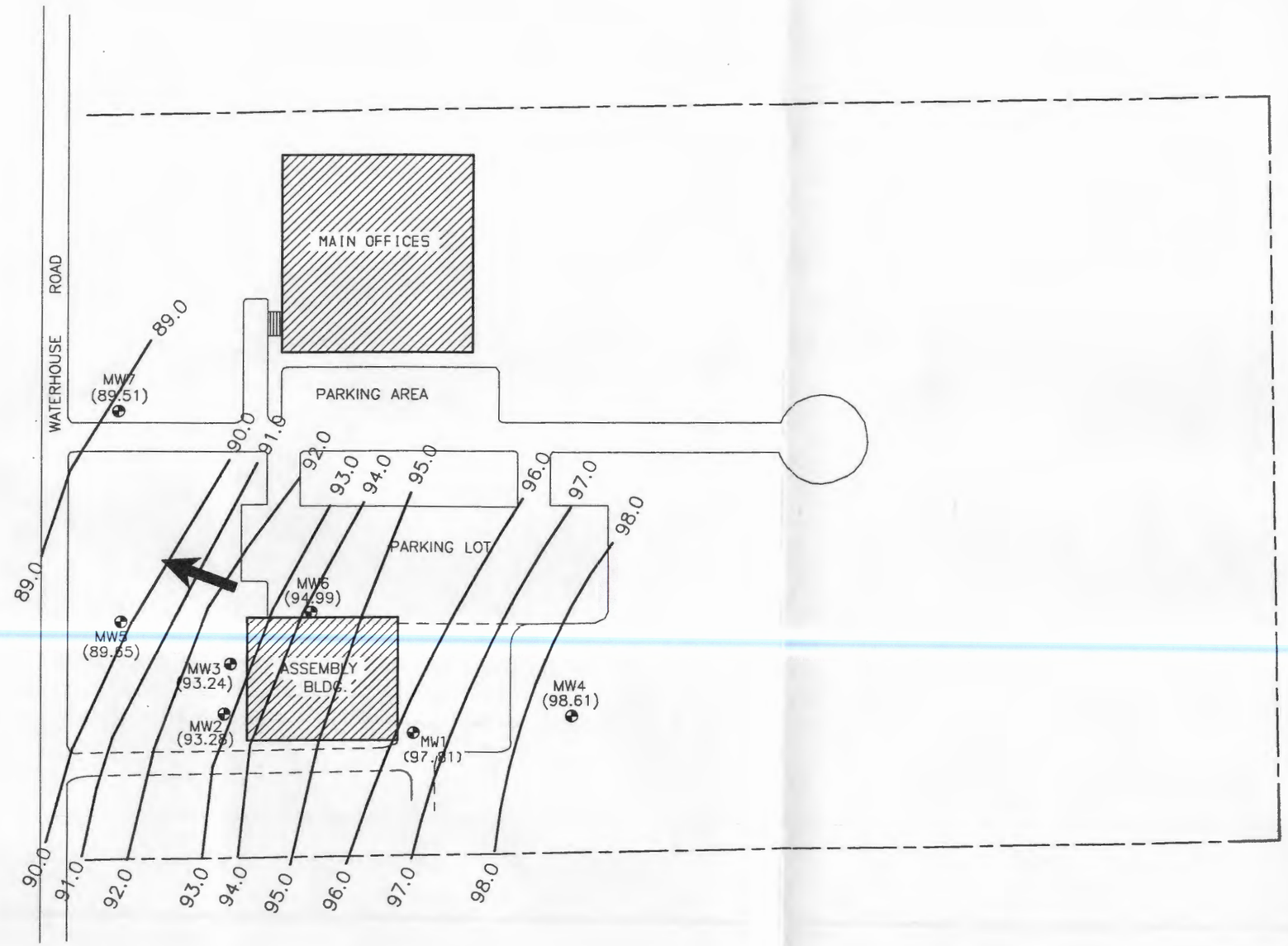
0 100 200
SCALE IN FEET

O'BRIEN & GERE

FIGURE 3

EAGLE COMTRONICS INC.
CLAY, NEW YORK

GROUND WATER FLOW MAP (8/18/89)



LEGEND:

- PROPERTY LINE
- MONITORING WELL LOCATION
- SHALLOW GROUND WATER CONTOUR (8/18/89)
- GROUND WATER FLOW DIRECTION

0 100 200

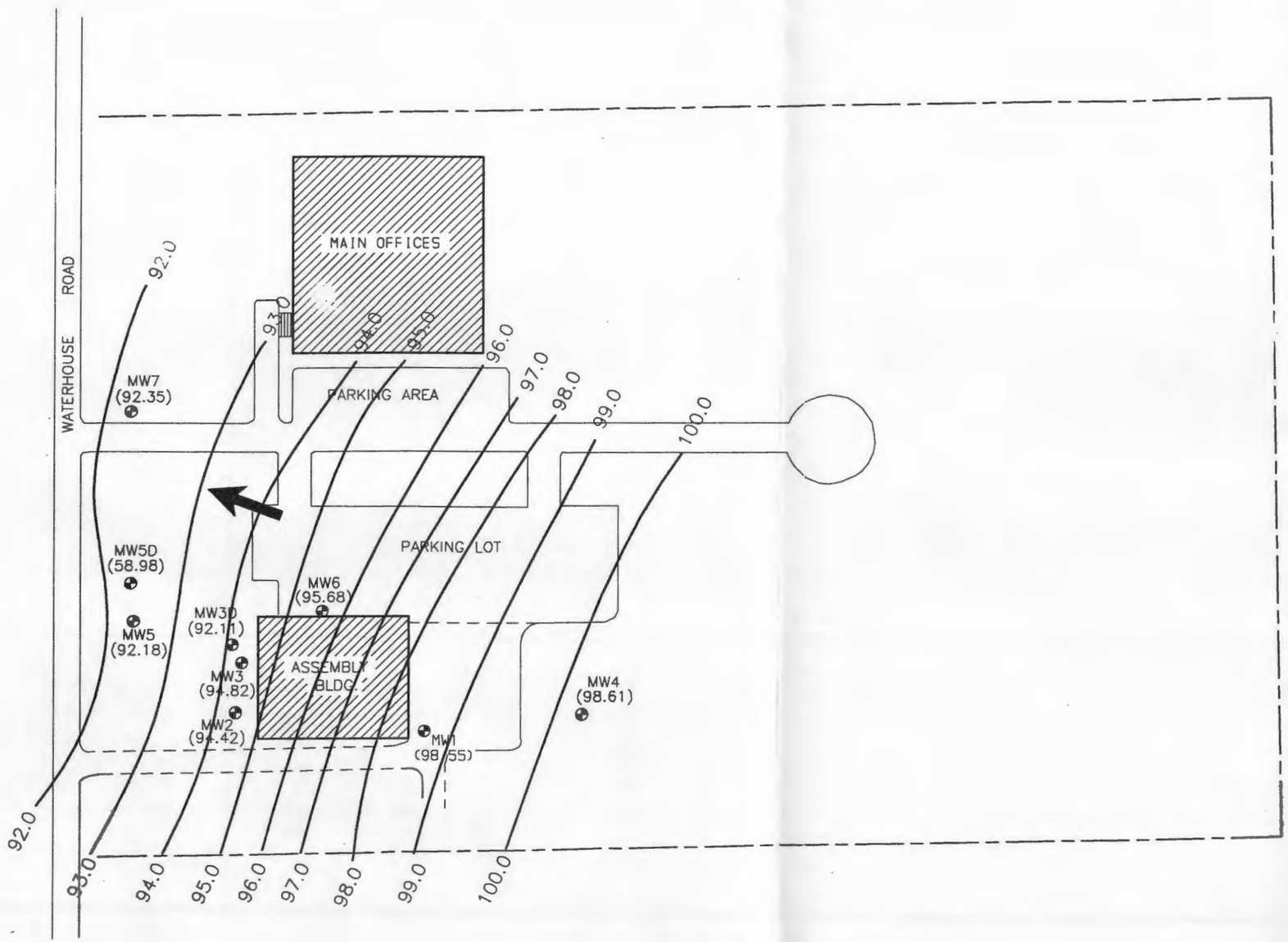
SCALE IN FEET

O'BRIEN & GERE ENGINEERS INC.

FIGURE 4

EAGLE COMTRONICS INC.
CLAY, NEW YORK

GROUND WATER FLOW MAP (4/26/90)



LEGEND:

- PROPERTY LINE
- MONITORING WELL LOCATION
- SHALLOW GROUND WATER CONTOUR (4/26/93)
- GROUND WATER FLOW DIRECTION

0 100 200

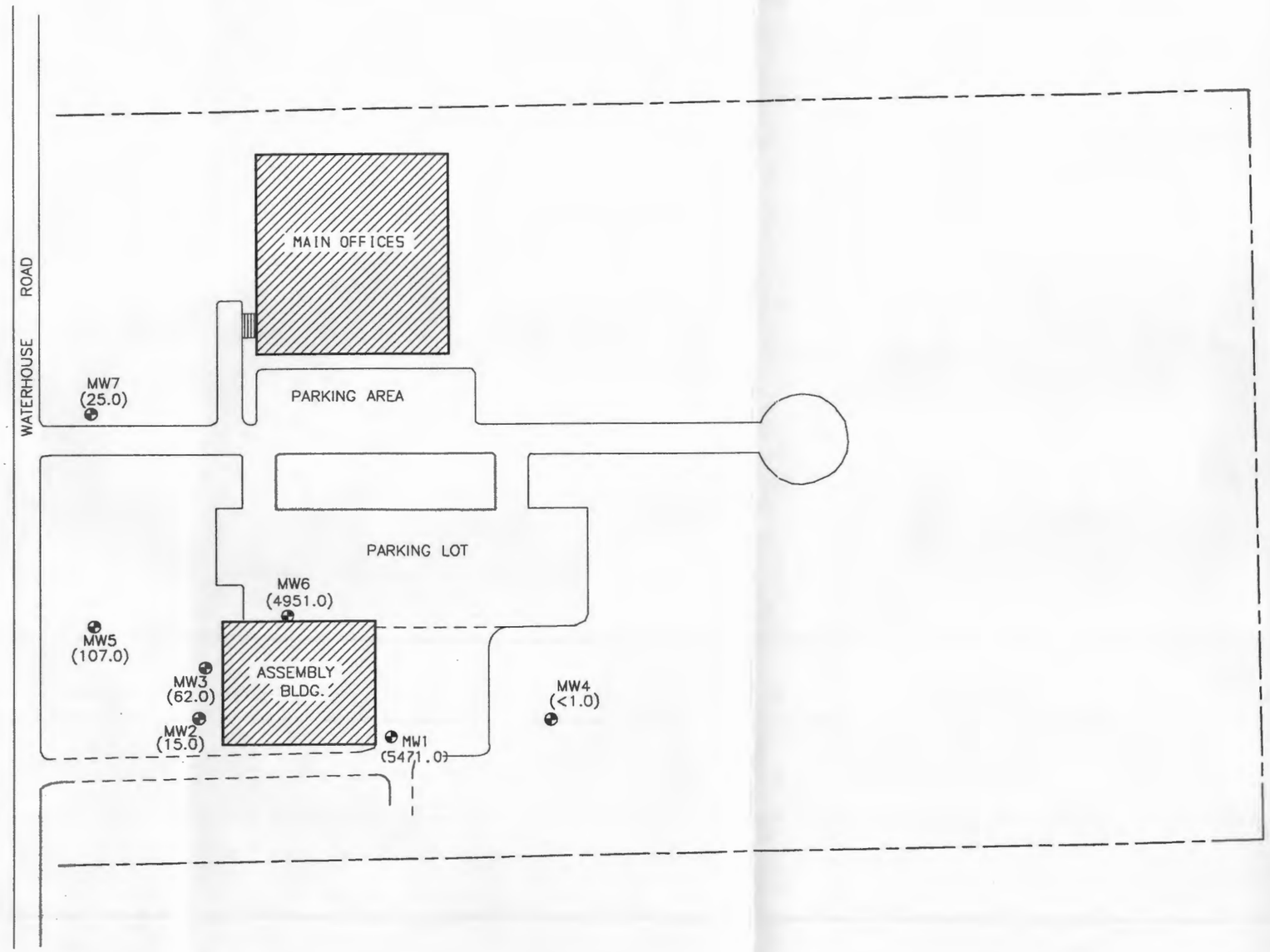
SCALE IN FEET

O'BRIEN & GERE ENGINEERS INC.

FIGURE 5

EAGLE COMTRONICS INC.
CLAY, NEW YORK

TOTAL VOLATILE ORGANIC CONSTITUENTS IN GROUND WATER (8/18/89)



LEGEND:

- PROPERTY LINE
- MONITORING WELL LOCATION
- (<1.0) TOTAL VOLATILE ORGANIC CONSTITUENT VALUE (PPB)

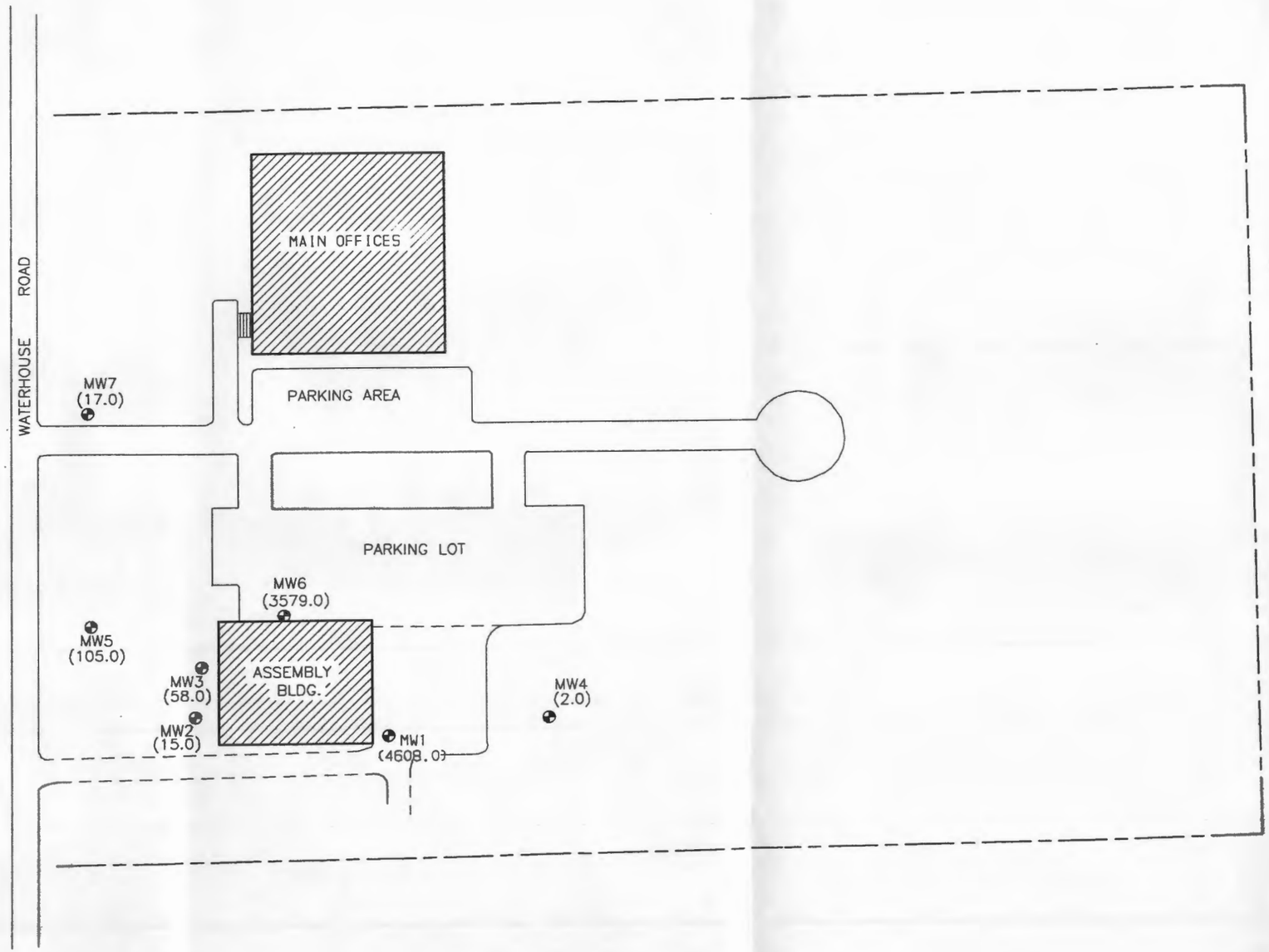
0 100 200
SCALE IN FEET

O'BRIEN & GERE
ENGINEERS INC.

FIGURE 6

EAGLE COMTRONICS INC.
CLAY, NEW YORK

TOTAL VOLITILE ORGANIC CONSTITUENTS IN GROUND WATER (9/1/89)



LEGEND:

- PROPERTY LINE
- MONITORING WELL LOCATION
- (<1.0) TOTAL VOLATILE ORGANIC CONSTITUENT VALUE (PPB)

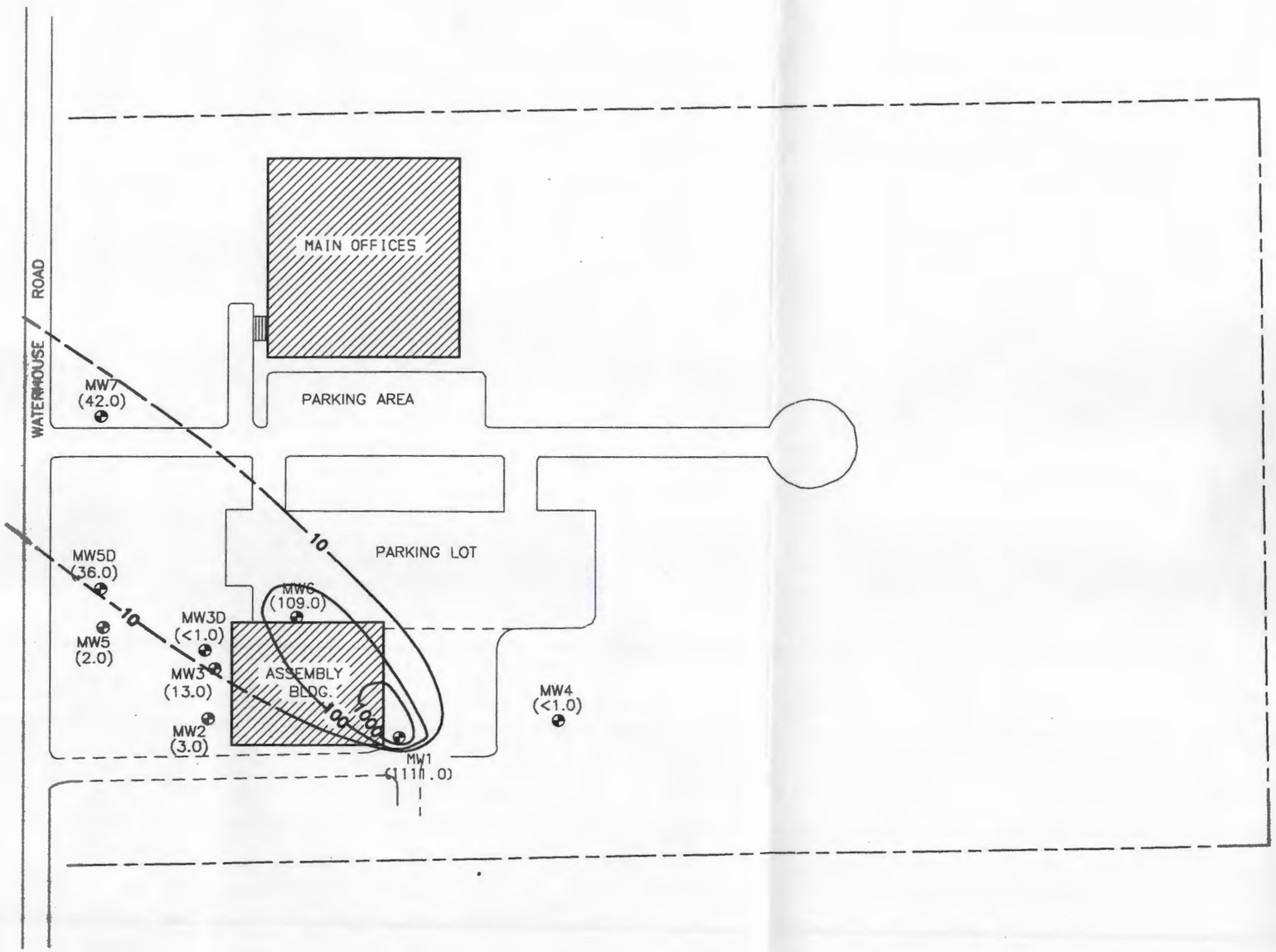
0 100 200
SCALE IN FEET

O'BRIEN & GERE
ENGINEERS INC.
Syracuse New York

FIGURE 7

EAGLE COMTRONICS INC.
CLAY, NEW YORK

TOTAL VOLATILE ORGANIC CONSTITUENTS IN GROUND WATER (4/26/90)



LEGEND:

- PROPERTY LINE
- MONITORING WELL LOCATION
- (<1.0) TOTAL VOLATILE ORGANIC CONSTITUENT VALUE(PPB)
- —10— TOTAL VOC ISOCONTOURS(PPB)

0 100 200

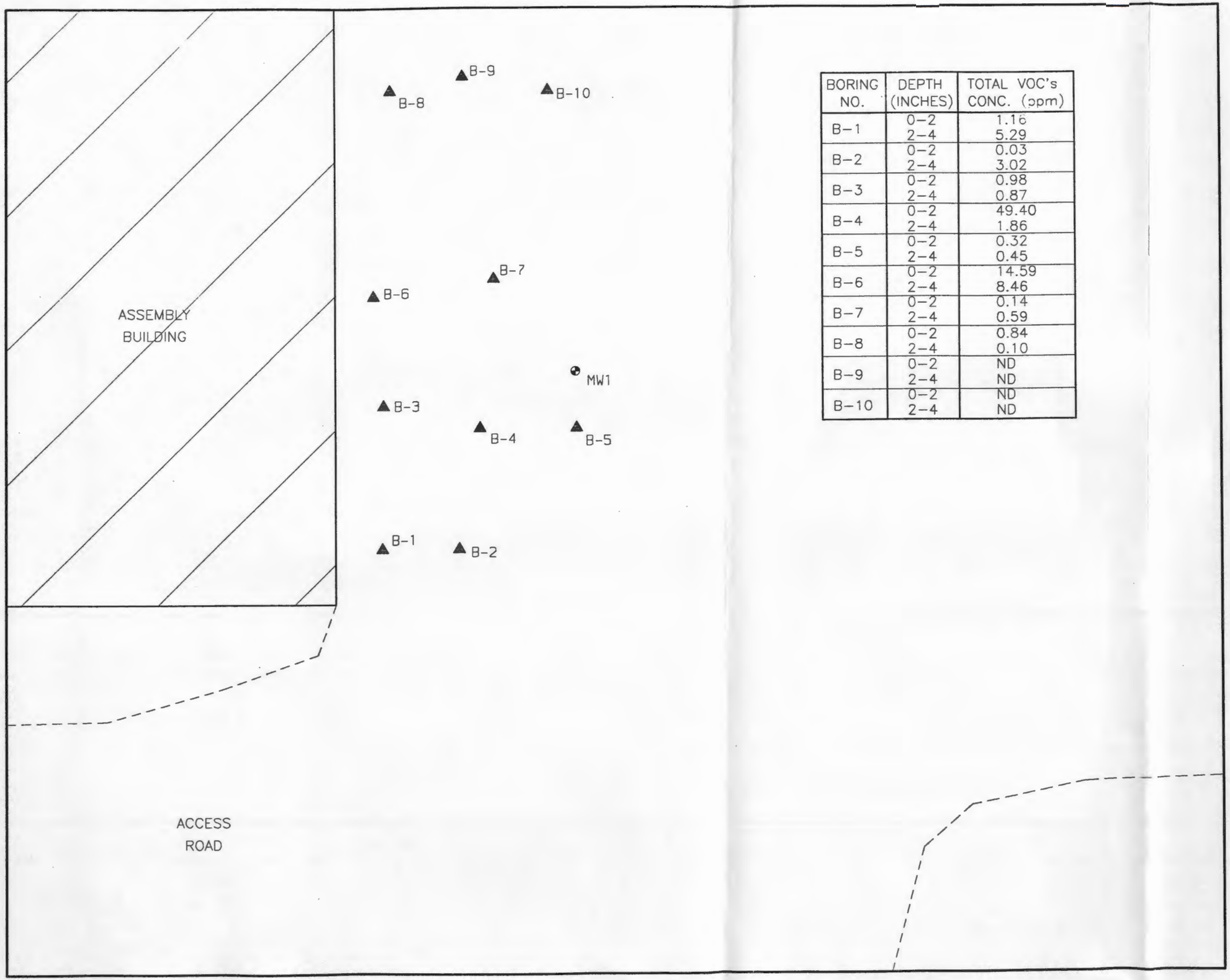
SCALE IN FEET

O'BRIEN & GERE ENGINEERS INC.
Syracuse New York

FIGURE 8

EAGLE COMTRONICS INC.
CLAY, NEW YORK

TOTAL VOLITILE ORGANIC CONSTITUENTS IN SOURCE AREA SOILS (4/90)



BORING NO.	DEPTH (INCHES)	TOTAL VOC's CONC. (ppm)
B-1	0-2	1.16
	2-4	5.29
B-2	0-2	0.03
	2-4	3.02
B-3	0-2	0.98
	2-4	0.87
B-4	0-2	49.40
	2-4	1.86
B-5	0-2	0.32
	2-4	0.45
B-6	0-2	14.59
	2-4	8.46
B-7	0-2	0.14
	2-4	0.59
B-8	0-2	0.84
	2-4	0.10
B-9	0-2	ND
	2-4	ND
B-10	0-2	ND
	2-4	ND

LEGEND:

- PROPERTY LINE
- MONITORING WELL LOCATION
- SOIL BORING

NOTES:

1. REFER TO TABLE 3 FOR A BREAKDOWN OF INDIVIDUAL VOC's.

0 100 200

SCALE IN FEET

O'BRIEN & GERE
ENGINEERS INC.
Syracuse New York

Appendices

APPENDIX A

BORING LOGS AND WELL SPECIFICATIONS

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-4 Sheet 1 of 1
Project Location: Clay, NY Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30 inches	Ground Water Depth Date Depth Date File No.: 2665.002.130

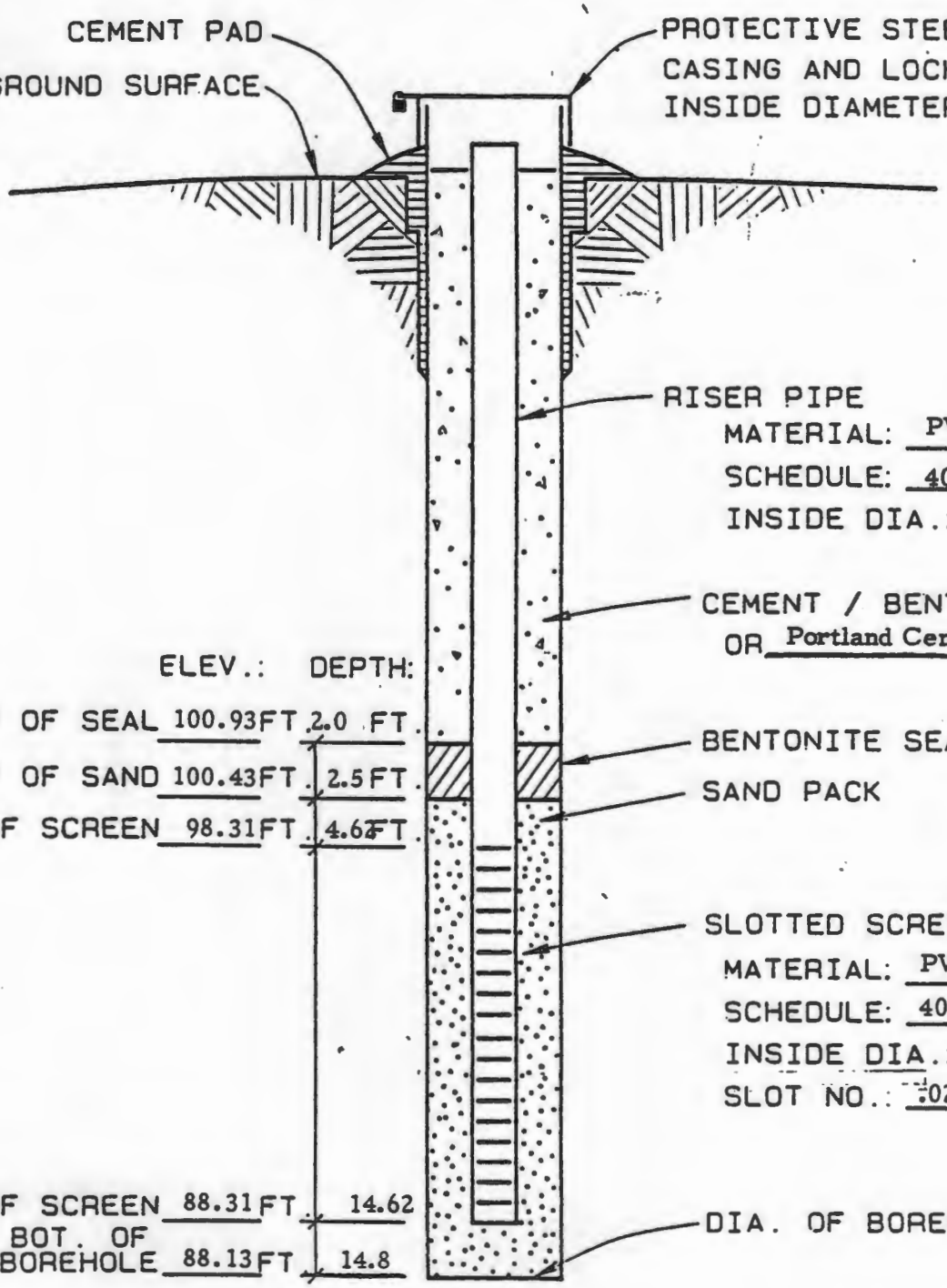
Boring Co.: Parratt-Wolff
Foreman: Barney Waters
OBG Geologist: Tim Eddy

Boring Location:
Ground Elevation: 102.93'
Dates: Started: 8/16/89 Ended: 8/16/89

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks
0				GRAB		Brown, damp, fine/medium SAND, some fine/ medium gravel, trace silt, apparent fill.						
5	1	5-7'	5-22- 23-27	2'/1.8'	45	Brown with reddish tinge, wet, fine SAND, some fine/medium gravel, little silt, very stiff, apparent fill.						
10	2	10-10.9	16-50/4'	.9'/.9'	—	Red, wet, hard, clayey SILT, some fine gravel, trace fine sand, poorly sorted, unstratified, apparent till.						
							14.8'					
15	3	15-15.9	21-60/4'	.9'/.9'	—	- Same as above. Bottom of boring at 14.8'.						

MW4.KJK
8/18/89

MW-4



TYPICAL OVERBURDEN MONITORING WELL

N.T.S.

O'BRIEN & GERE

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-5 Sheet 1 of 1
Project Location: Clay, NY Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30 inches	Ground Water Depth Date Depth Date File No.: 2665.002.130

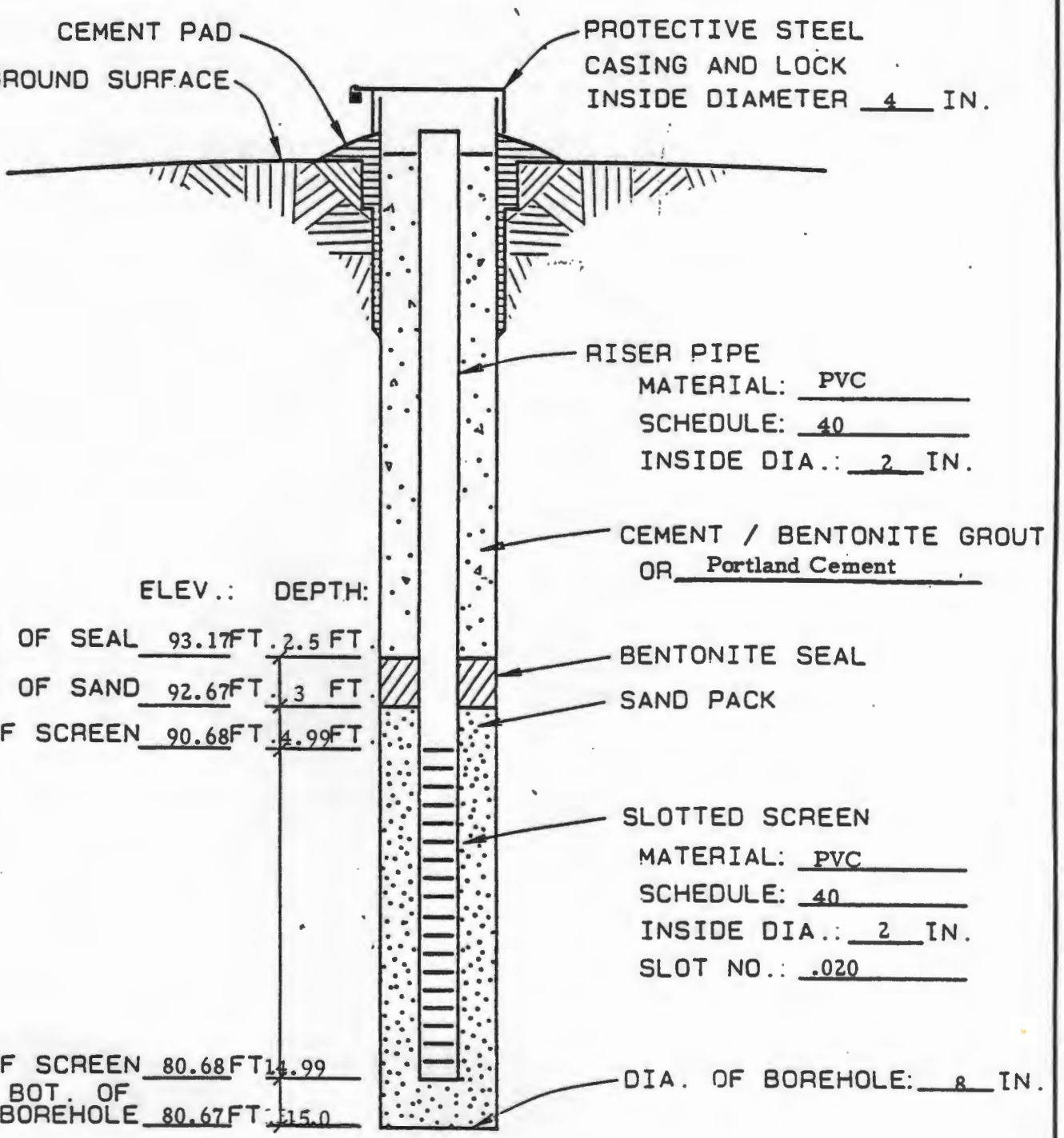
Boring Co.: Parratt-Wolff
Foreman: Barney Waters
OBG Geologist: Tim Eddy

Boring Location:
Ground Elevation: 95.67'
Dates: Started: 8/15/89 Ended: 8/15/89

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks
0				GRAB		0-2' Damp, reddish-brown, fine/medium SAND, little fine/medium gravel, little silt.						
5	1	5-7'	3-3-4-9	2/1.5'	7	Red, wet, clayey SILT, some fine/medium gravel, poorly sorted, unstratified, apparent till.						
10	2	10-12'	14-5- 24-50/.2	1.7/1.2'	—	Reddish-brown, saturated, stiff, clayey SILT, some fine/medium gravel, poorly sorted, unstratified, apparent till.						
							15.0'					
15	3	15-15.7	20-50/.2		—	Wet, red-gray, fine/medium angular GRAVEL, some silt, some clay, little fine sand, unstratified, poorly sorted, hard, apparent till.						
						Bottom of boring at 15 ft.						

MW5.KJK
8/18/89

MW-5



TYPICAL OVERBURDEN MONITORING WELL

N.T.S.

WELLCONS R42 L1

O'BRIEN & GERE

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-6 Sheet 1 of 1
Project Location: Clay, NY Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30 inches	Ground Water Depth Date Depth Date File No.: 2665.002.130

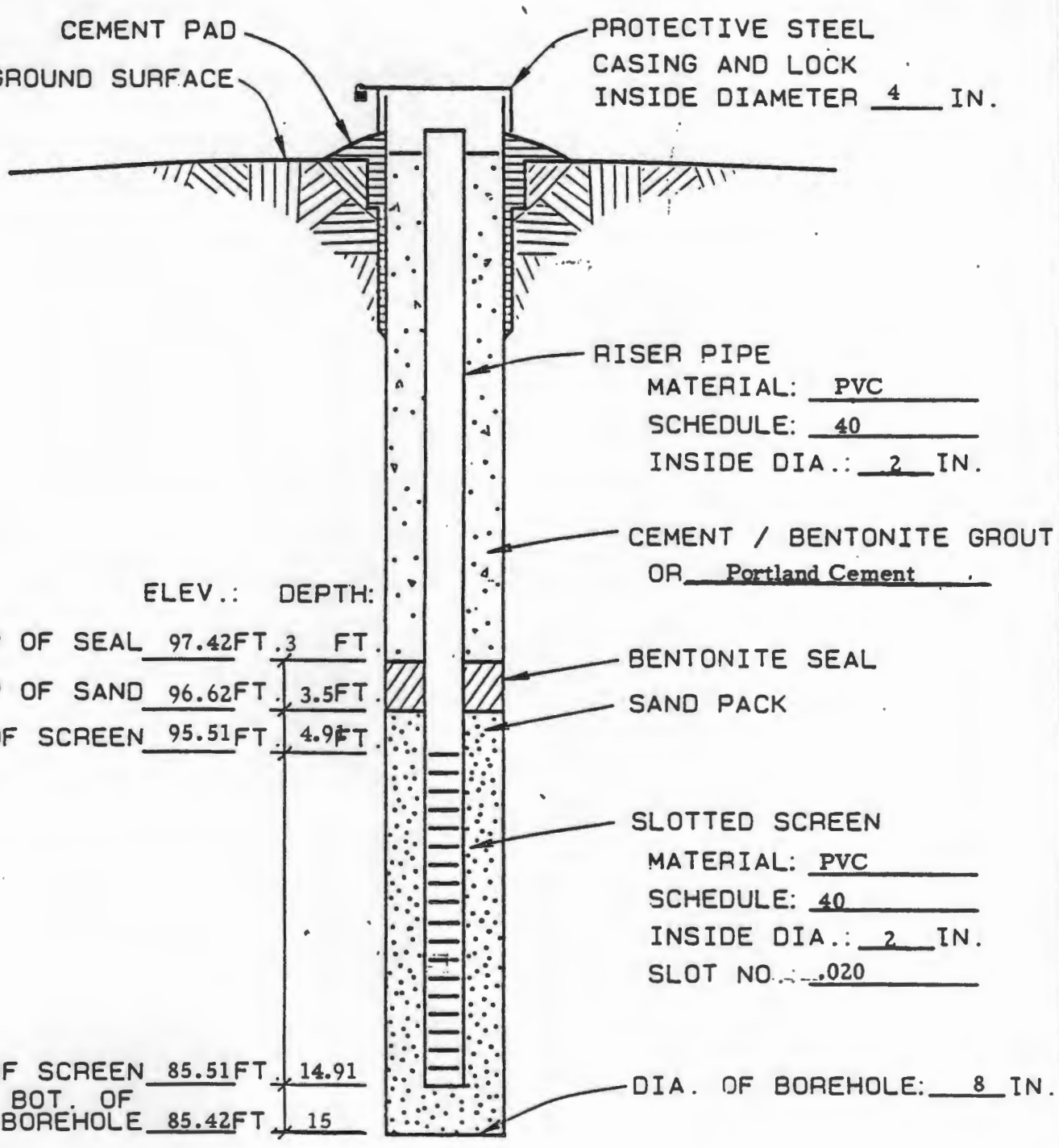
Boring Co.: Parratt-Wolff
Foreman: Barney Waters
OBG Geologist: Tim Eddy

Boring Location:
Ground Elevation: 100.42'
Dates: Started: 8/15/89 Ended: 8/15/89

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks
0				GRAB		Reddish-brown, fine/medium SAND, some fine/ medium gravel, trace silt, damp, apparent fill.						
							2.0'					
						Grayish brown, moist, fine SAND, little silt, apparent fill.						
5	1	5-7'	2-4-7-5	2'/1.8'	11	Soft, gray-brown, fine SAND, grading to clayey SILT with some fine/medium gravel poorly sorted, unstratified, apparent till.						
10	2	10-12'	12-8- 10-16	2'/1.8'	18	Reddish-brown, saturated wet, medium stiff clayey SILT, ends in yellowish, weathered rock.						
							15.0'					
15	3	15-15.8	45-50/.3	1.8/1.5'	—	Reddish-brown, clayey SILT, little fine/ medium gravel, saturated, grading to hard, reddish till, ending in reddish gray, fissle shale, apparent till.						
						Bottom of boring at 15.0 ft.						

MW6.KJK
8/18/89

MW-6



TYPICAL OVERBURDEN MONITORING WELL

N.T.S.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-7 Sheet 1 of 1
Project Location: Clay, NY Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30 inches	Ground Water Depth Date Depth Date File No.: 2665.002.130

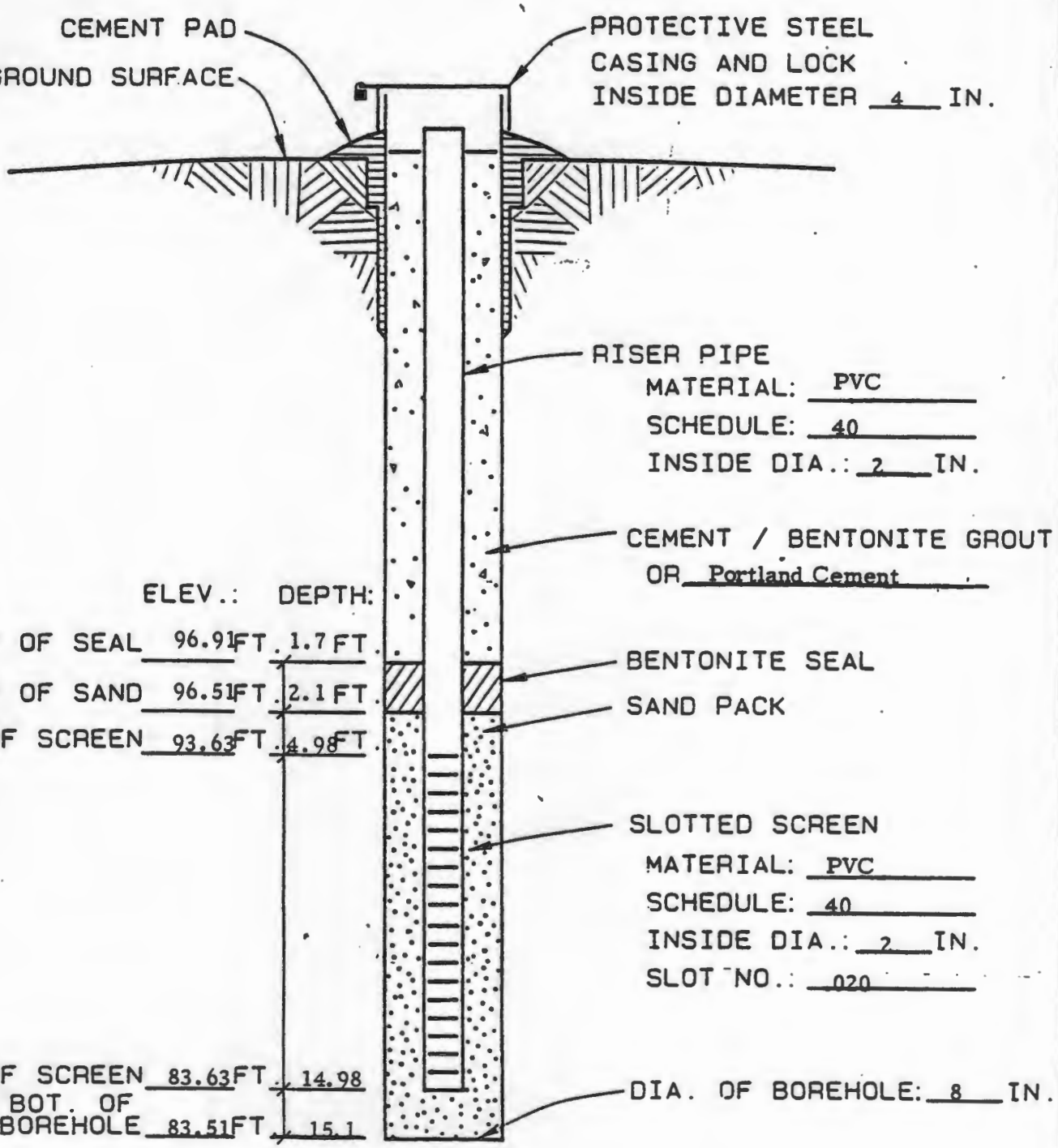
Boring Co.: Parratt-Wolff
Foreman: Barney Waters
OBG Geologist: Tim Eddy

Boring Location:
Ground Elevation: 98.61'
Dates: Started: 8/16/89 Ended: 8/16/89

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks#
0				GRAB		Reddish brown, fine SAND, damp, apparent fill.						
5	1	5-7'	4-3-4-5	2'/1.5'	7	Brown, damp, fine SAND, trace silt, apparent fill (soft).						
10	2	10-11.4	24-41- 50/.4'	2'/1.8'	—	Red, wet, hard, clayey SILT, some coarse sand, fine gravel, trace coarse gravel, poorly sorted, unstratified, apparent till.						
							15.1'					
15						Bottom of boring at 15.1 ft.						

MW7.KJK
8/18/89

MW-7



TYPICAL OVERBURDEN MONITORING WELL

N.T.S.

O'BRIEN & GERE

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-3D Sheet 1 of 2
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: T. Eddy

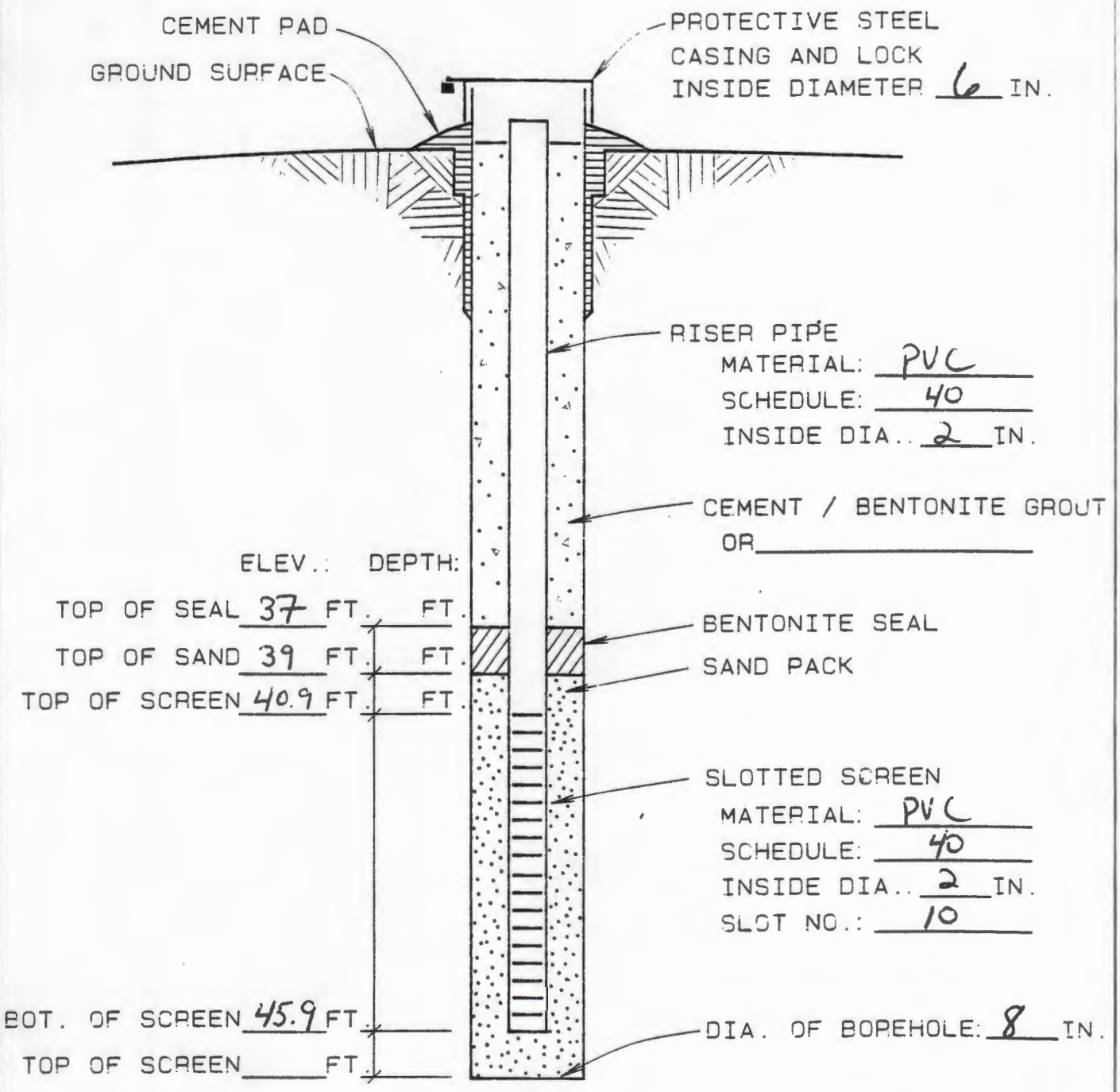
Boring Location:
Ground Elevation:
Dates: Started: 4/9/90 Ended: 4/10/90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Remarks
0												
5	1	5-7'	5-4-3-6	2.5'/1'	7	Brown, moist, loose, fine SAND, little silt grading to reddish brown, moist, clay, some silt, trace fine to coarse gravel.						
10	2	10-12'	6-13- 17-50/.4	1.9/1.5'	30	As above, grading to red, dry, very stiff SILT, trace clay and fine gravel at 11.5'.						
15	3	15-17'	20-50/.3	0.8/0.8'	—	Hard, moist, red, SILT, trace clay.						
20	4	20-22'	50/.4'	0.4/0.4'	—	As above.						
25	5	25-27'	50/.1'	0.1/0.5'	—	As above.						
30	6	30-32'	34-50/.2'	0.2/0.2'	—	Highly weathered, grayish red, thinly bedded SHALE.						

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-3D Sheet 2 of 2
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131
Boring Co.: Parratt Wolff, Inc. Foreman: Barney Waters OBG Geologist: T. Eddy	Boring Location: Ground Elevation: Dates: Started: 4/9/90	Ended: 4/10/90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks#
35	7	35-37'	50/.4'	0.4/0.4'	—	Red, dry, clayey SILT, little fine to angular shale gravel.						
40	8	40-42'	50/.1'	0.1/0.1'	—	Hard, reddish gray, dry, weathered, thinly bedded SHALE.						
45	9	45'	50/0'	0/0	—	No sample recovery.						
	10	45.9'	50/.1'	0.1/0.1'	—	Thinly bedded red and greenish competent SILTSTONE.	45.9'					
						Bottom of boring 45.9 ft.						

mw-3D



TYPICAL OVERBURDEN MONITORING WELL

N.T.S.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-5D Sheet 1 of 2
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4/11/90 Ended: 4/11/90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks*
0		0-5'				Cuttings from auger from hard grab sample; Dark brown, very fine SAND, trace silt, wet no odor.						
5	1	5-7'	5-4-4-12	2'/1'	8	Medium dense, fine SAND to 5.2', then red/ brown SILT, little yellow clay, moist.						
10	2	10-12'	22-21- 50/.4'	1.4/1.4'	—	At 10.5' encounter rock debris (prob from cobble), red/brown SILT, blue/green weathered material interspersed throughout sample.						
15	3	15-17'	50/.5'	0.5/0.5'	—	Red/gray SILT, apparent weathered rock. Hard, angular, blue/green fragments.	15.2'					
20	4	20-22'	50/.2'	0.2/0.2'	—	Reddish gray weathered SILTSTONE, some clay, wet, hard.						
25	5	25-27'	50/.1'	0.1/0.1'	—	As above.						
30	6	30-32'	50/.3'	0.3/0.3'	—	As above with trace silt, trace clay.						

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-5D Sheet 2 of 2
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

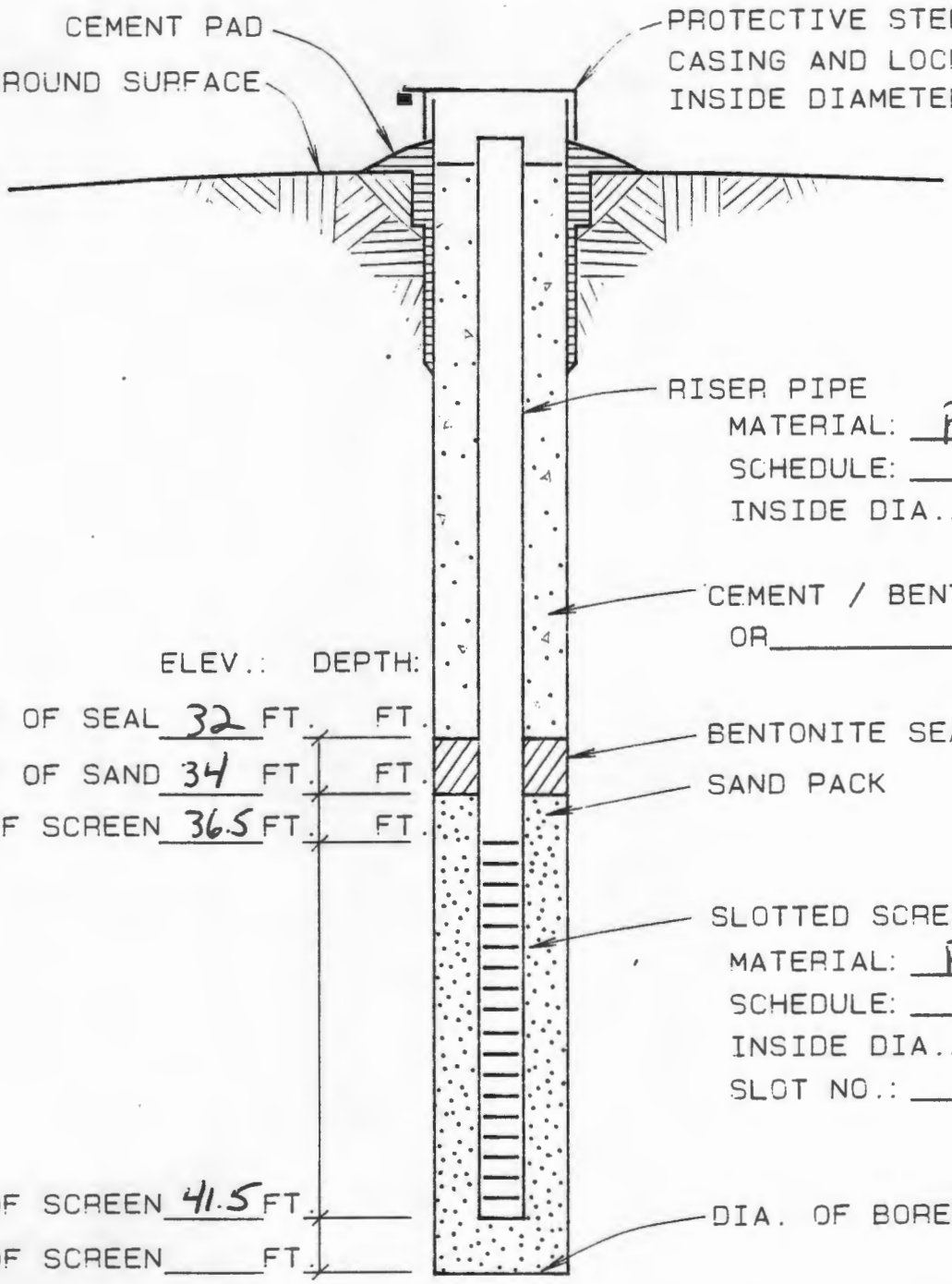
Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4/11/90 Ended: 4/11/90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks*
35	7	35-37'	50/.1'	0.1/0.1'	---	Reddish brown, weathered SILTSTONE, trace clay.						
40	8	40-42'	50/0'	0'/0'	---	No sample recovered.						
		41.5'				Blue/green bedrock encountered at 41.5 ft.						
						Bottom of Boring 42.0'						

2MW5D.KJF
4/30/90

MW-5D



TYPICAL OVERBURDEN MONITORING WELL

N.T.S.

WELLDIAG R42 L1

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. B-1 Sheet 1 of 1
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4-11-90 Ended: 4-11-90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks*
0	1	0-2'	14-8-8-8	2'/.5	16	Fill Gravel & medium dense coarse brown SAND, trace coarse gravel.						
	2	2-4'	8-6-6-5	2'/.8	12	Fine to medium SAND, some silt, trace fine gravel, wet, brown.						
5												

B1.bdm
5/8/90

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. B-2 Sheet 1 of 1
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4-11-90 Ended: 4-11-90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks
0	1	0-2'	11-20	2.0/1.0	33	Hard, moist, brown medium SAND, some coarse gravel, little silt.						
			13-18									
	2	2-4'	7-7-6-4	2.0/1.0	13	Medium dense, moist, medium & fine SAND, trace coarse gravel, little silt, brown.						
						Bottom of Boring at 4.0'						
5												

b2.bdm
5/8/90

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. B-3 Sheet 1 of 1
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4-11-90 Ended: 4-11-90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks
0	1	0-2'	7-7-7-5	2.0/1.0	14	Fine to coarse, medium dense SAND, little silt, trace gravel; moist, brown.						
	2	2-4'	5-5-3-2	2.10/1.0	8	Fine to medium SAND, little silt, wet, brown.						
						Bottom of Boring at 4.0'						
5												

B3.bdm
5/8/90

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. B-4 Sheet 1 of 1
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4-11-90 Ended: 4-11-90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks*
0	1	0-2'	10-6-8-4	2.0/1.2	14	Medium to coarse, medium dense SAND, some silt trace coarse gravel, wet, brown.						
	2	2-4'	9-8-5-3	2.0/.2	13	Fine to medium, stiff, SAND, some silt trace coarse gravel, wet, brown.						
						Bottom of Boring at 4.0'						
5												

b4.bdm
5/8/90

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. B-5 Sheet 1 of 1
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4-11-90 Ended: 4-11-90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks
0	1	0-2'	12-10	2.0/1.0	20	Medium dense, fine to coarse SAND, little coarse gravel, moist, brown.						
			10-10									
	2	2-4'	7-7-10-6	2.0/1.0	17	Fine to medium SAND, medium dense, trace coarse sand, trace silt, moist, brown.						
						Bottom of Boring at 4.0'						
5												

B5.bdm
5/9/90

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. B-6 Sheet 1 of 1
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4-11-90 Ended: 4-11-90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks*
0	1	0-2'	10-9-6-7	2.0/1/1	15	Fine to coarse, medium dense SAND, little silt, trace coarse gravel, moist, brown.						
	2	2-4'	6-5-5-5	2.0/1.0	10	Fine to medium SAND, little silt, trace coarse gravel, moist, brown.						
						Bottom of Boring at 4.0'						
5												

B6.bdm
5/9/90

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. B-7 Sheet 1 of 1
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4-11-90 Ended: 4-11-90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks
0	1	0-2'	5-5-5-10	2.0/1.5	10	Fine to coarse, medium dense SAND, little silt, trace coarse gravel, moist, brown.						
	2	2-4'	7-7-8-7	2.0/1.3	15	Fine to medium SAND, trace silt, trace coarse gravel, wet, brown.						
						Bottom of Boring at 4.0'						
5												

B7.bdm
5/9/90

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. B-8 Sheet 1 of 1
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4-11-90 Ended: 4-11-90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Sp Cond	HNU	Remarks
0	1	0-2'	11-8-5-7	2.0/1.2	13	Fine to coarse, medium dense SAND, trace silt, trace coarse gravel, moist, brown.						
	2	2-4'	6-7-6-6	2.0/1.0	13	Fine, medium dense SAND, trace silt, moist, brown.						
						Bottom of Boring at 4.0'						
5												

B8.bdm
5/9/90

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. B-9 Sheet 1 of 1
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4-11-90 Ended: 4-11-90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks#
0	1	0-2'	5-13	2.0/1.3	25	Medium dense, fine to medium SAND, trace silt, trace coarse gravel, moist, brown.						
			12-13									
	2	2-4'	9-11	2.0/1.1	23	Fine, medium dense SAND, trace silt, moist, brown.						
			12-13									
						Bottom of Boring at 4.0'						
5												

B9.bdm
5/9/90

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. B-10 Sheet 1 of 1
Project Location: Clay, New York Client: Eagle Comtronics	SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Water Depth Date Depth Date File No.: 2665.003.131

Boring Co.: Parratt Wolff, Inc.
Foreman: Barney Waters
OBG Geologist: M.J. Roma

Boring Location:
Ground Elevation:
Dates: Started: 4-11-90 Ended: 4-11-90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks
0	1	0-2'	7-5-6-4	2.0/.8	11	Fine to coarse, medium dense SAND, trace silt, trace coarse gravel, moist, brown.						
	2	2-4'	8-9-10-10	2.0/1.7	19	Fine to medium, medium dense SAND, little silt, trace coarse gravel, moist, brown.						
						Bottom of Boring at 4.0'						
5												

b10.bdm
5/9/90

APPENDIX B

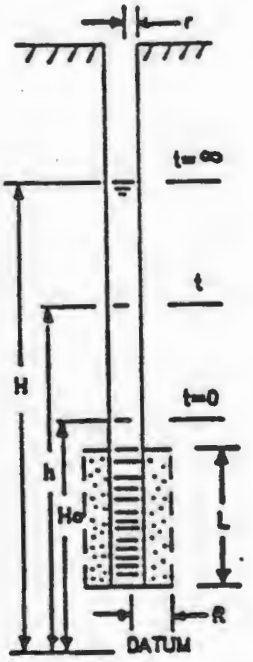
HYDRAULIC CONDUCTIVITY DATA

O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT EAGLE CONTRONICS
WELL NUMBER MW 1
DATE 8/29/89

LOCATION CLAY, NY
ELEVATION

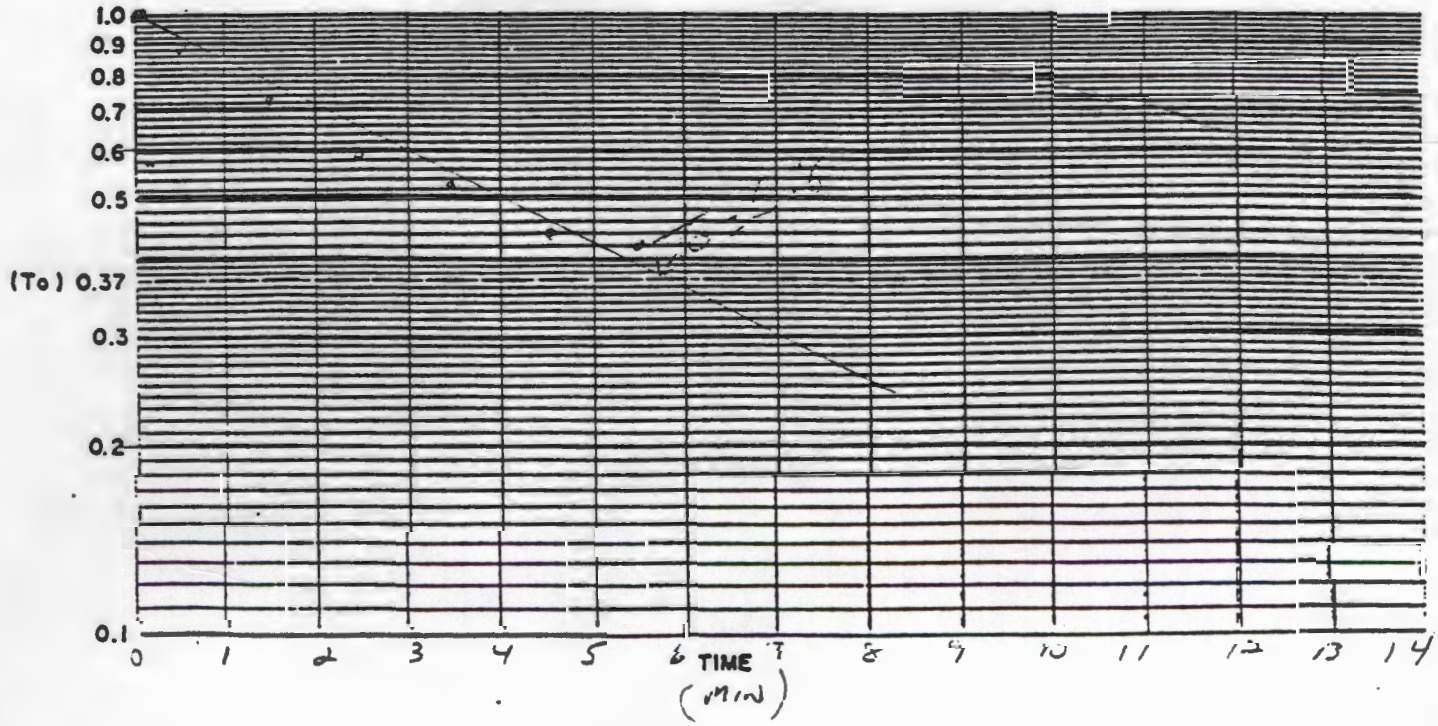


STATIC HEAD (H) 10.13
PIPE RADIUS (r) .083
SCREEN RADIUS (R) .33
SCREEN LENGTH (L) 10
INITIAL HEAD (Ho) 9.13
HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$K = \frac{2.03 \times 10^{-4} \text{ ft/min}}{1.03 \times 10^{-4} \text{ cm/sec}}$

TIME	RECOVERY h	RECOVERY (H-h)/(H-Ho)	SLUG h	SLUG (H-h)/(H-Ho)
0	9.13	1		
.5	9.25	.88		
1.5	9.4	.73		
2.5	9.54	.59		
3.5	9.6	.53		
4.5	9.69	.44		
5.5	9.71	.42		

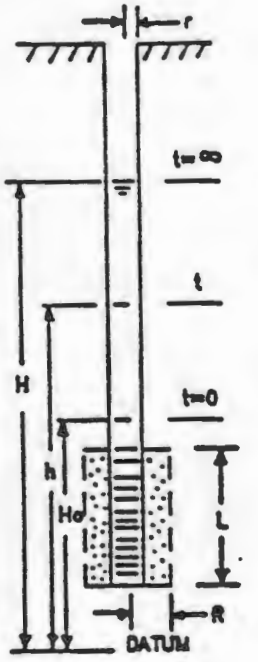


O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT EAGLE CONTRONICS
WELL NUMBER MW-2
DATE 8/29/62

LOCATION CLAY NY
ELEVATION

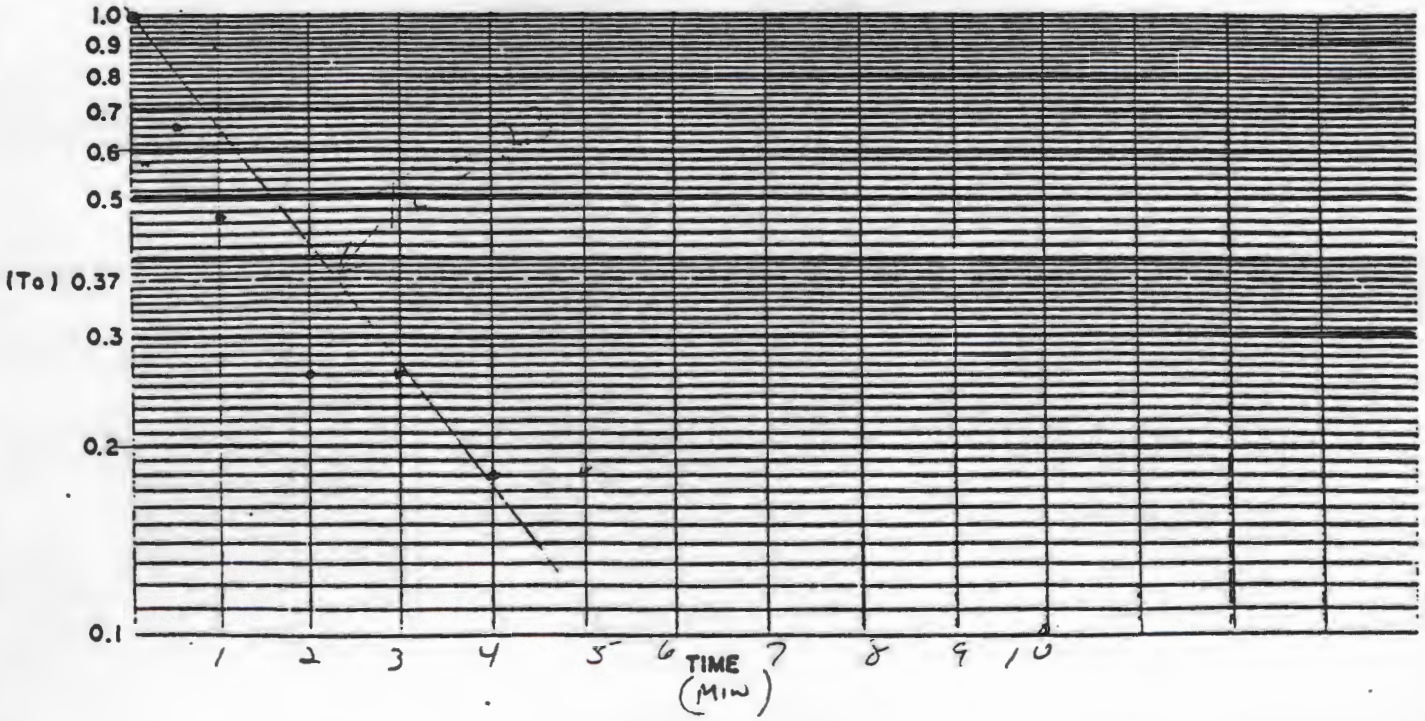


STATIC HEAD (H) 7.63
PIPE RADIUS (r) .083
SCREEN RADIUS (R) .33
SCREEN LENGTH (L) 7.63
INITIAL HEAD (Ho) 6.9
HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$K = \frac{6.17 \times 10^{-4} \text{ Ft/min}}{3.13 \times 10^{-4} \text{ cm/sec}}$

	RECOVERY		SLUG	
TIME	h	$\frac{H-h}{H-Ho}$	Δh	$\frac{H-h}{H-Ho}$
0	6.9	1		
.5	7.15	.166		
1	7.29	.47		
2	7.44	.26		
3	7.44	.26		
4	7.5	.18		
5	7.5	.18		
10	7.56	.1		

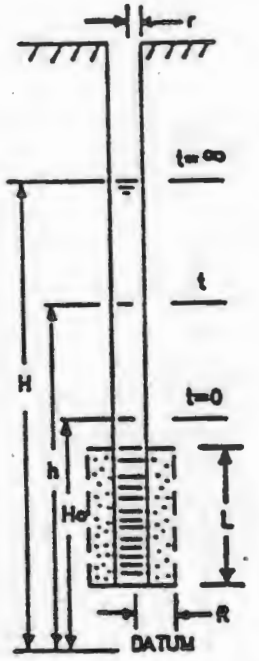


O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT EAGLE CONTROLS
WELL NUMBER MW-3
DATE 8/29/89

LOCATION CLAY, NY
ELEVATION

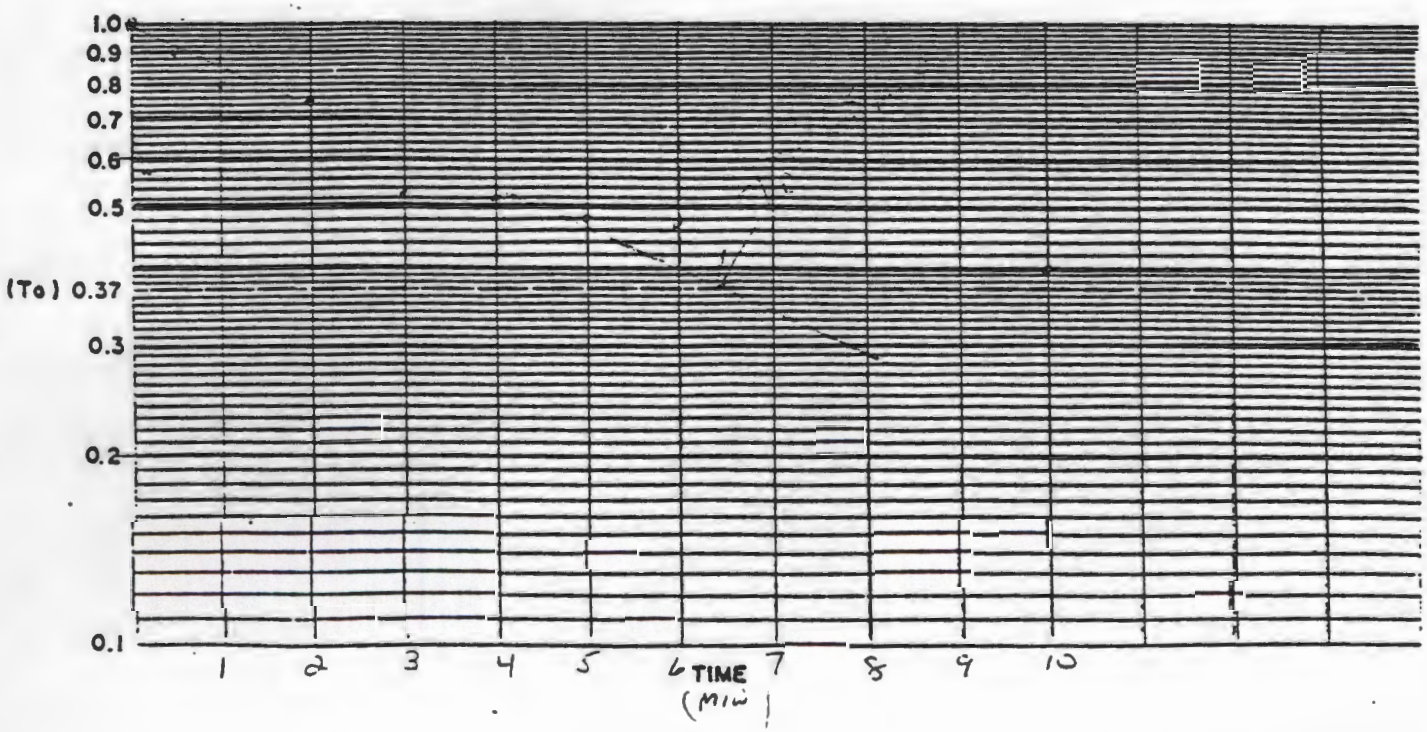


STATIC HEAD (H) 8.55
PIPE RADIUS (r) .083
SCREEN RADIUS (R) .33
SCREEN LENGTH (L) 8.55
INITIAL HEAD (Ho) 5.92
HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$$K = \frac{2.02 \times 10^{-4} \text{ Ft/MIN}}{1.03 \times 10^{-4} \text{ cm/sec}}$$

TIME (MIN)	RECOVERY h	RECOVERY (H-h)/(H-Ho)	SLUG h	SLUG (H-h)/(H-Ho)
0	5.92	1		
.5	6.17	.90		
1	6.44	.80		
2	6.59	.75		
3	7.15	.53		
4	7.14	.52		
5	7.28	.48		
6	7.32	.47		
10	7.51	.40		

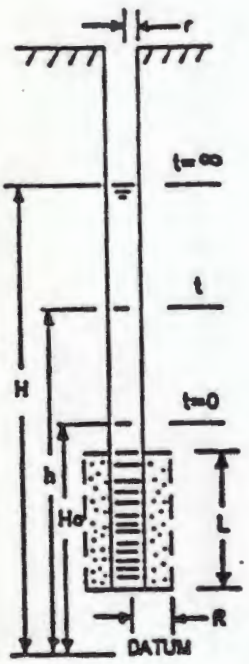


O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT EAGLE CONTRONICS
WELL NUMBER MW-4
DATE 8/29/62

LOCATION CLAY, NY
ELEVATION



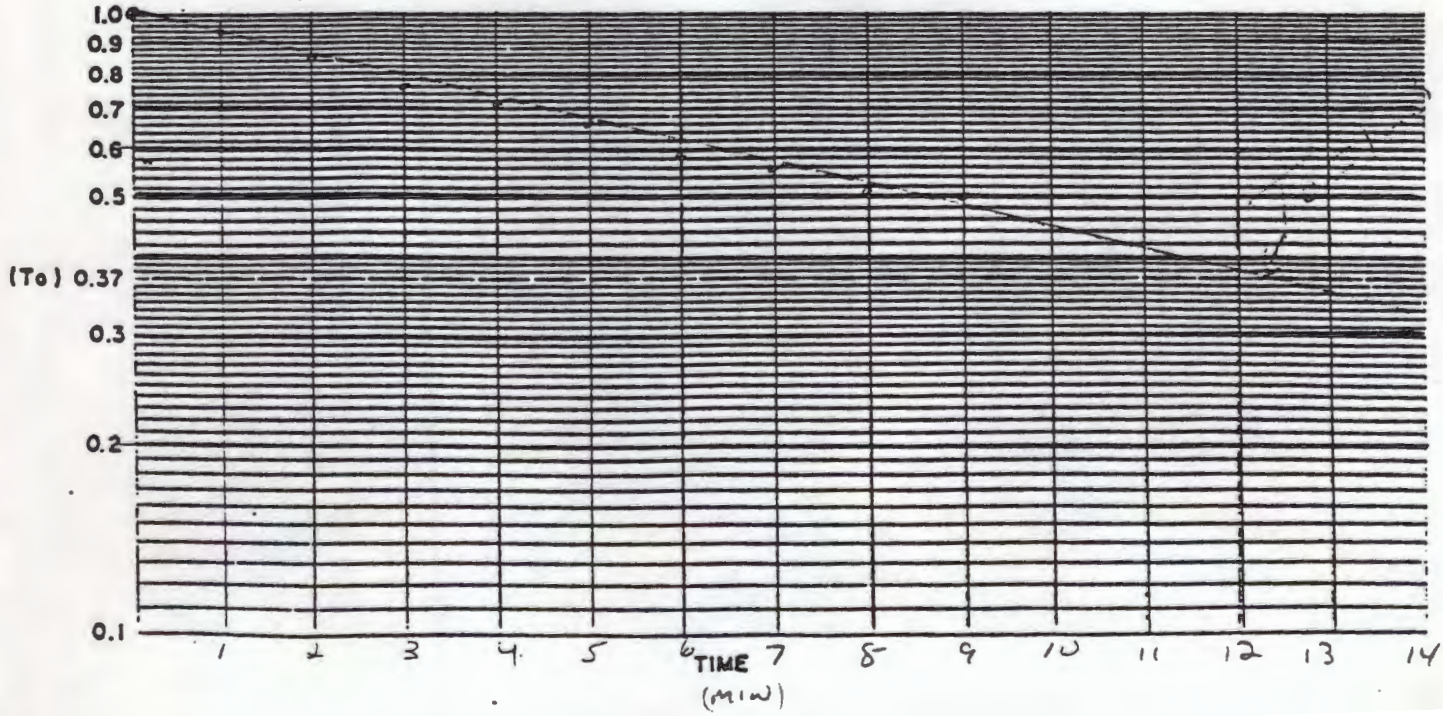
STATIC HEAD (H) 9.43
PIPE RADIUS (r) .083
SCREEN RADIUS (R) .33
SCREEN LENGTH (L) 993
INITIAL HEAD (Ho) 8.56

HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$$K = \frac{9.6 \times 10^{-5} \text{ Ft/min}}{4.88 \times 10^{-5} \text{ cm/sec}}$$

	RECOVERY		SLUG	
TIME	h	$\frac{H-h}{H-Ho}$	Δh	$\frac{H-h}{H-Ho}$
0	8.56	1		
1	8.64	.94		
2	8.77	.85		
3	8.89	.76		
4	8.96	.71		
5	9.02	.66		
6	9.12	.54		
7	9.16	.56		
8	9.23	.51		
9	9.25	.50		

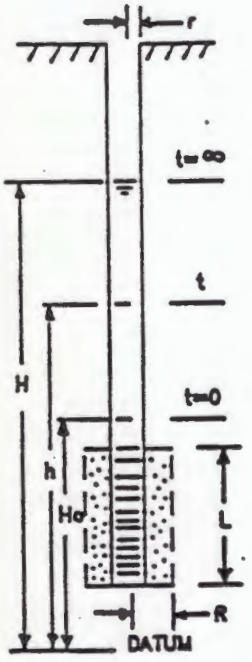


O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT EAGLE CONTRONICS
WELL NUMBER MW-5
DATE 9/1/89

LOCATION CLAY, NY
ELEVATION

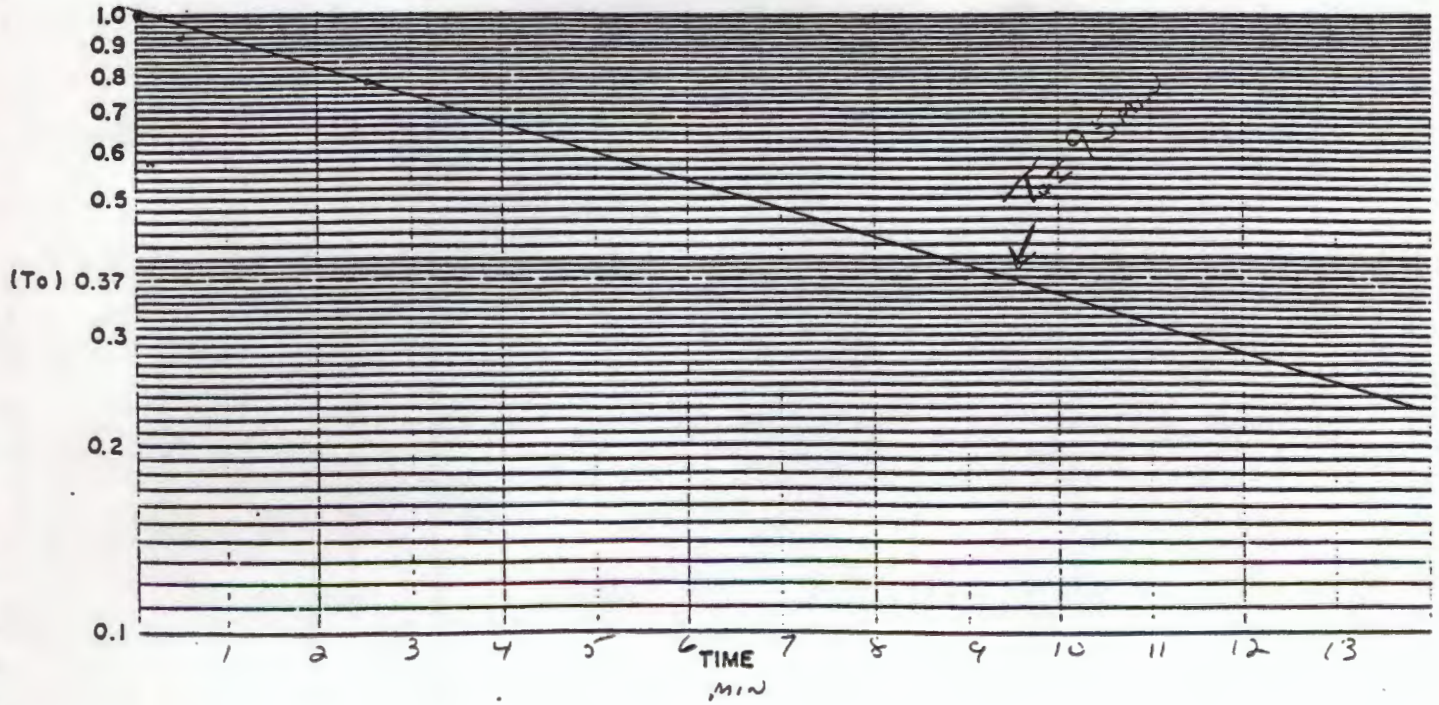


STATIC HEAD (H) 8.36
PIPE RADIUS (r) .083
SCREEN RADIUS (R) .33
SCREEN LENGTH (L) 10
INITIAL HEAD (Ho) 786
HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$$K = \frac{1.24 \times 10^{-4} \text{ ft/min}}{6.28 \times 10^{-5} \text{ cm/sec}}$$

	RECOVERY		SLUG	
MIN TIME	h	$\frac{H-h}{H-Ho}$	h	$\frac{H-h}{H-Ho}$
0	.786	1		
.5	79	.92		
2	7.95	.82		
2.5	7.97	.78		

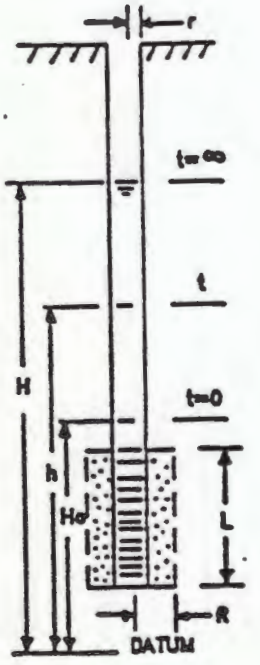


O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT EAGLE CONTRACTS
WELL NUMBER MW-6
DATE 8/29/62

LOCATION CLAY, NY
ELEVATION



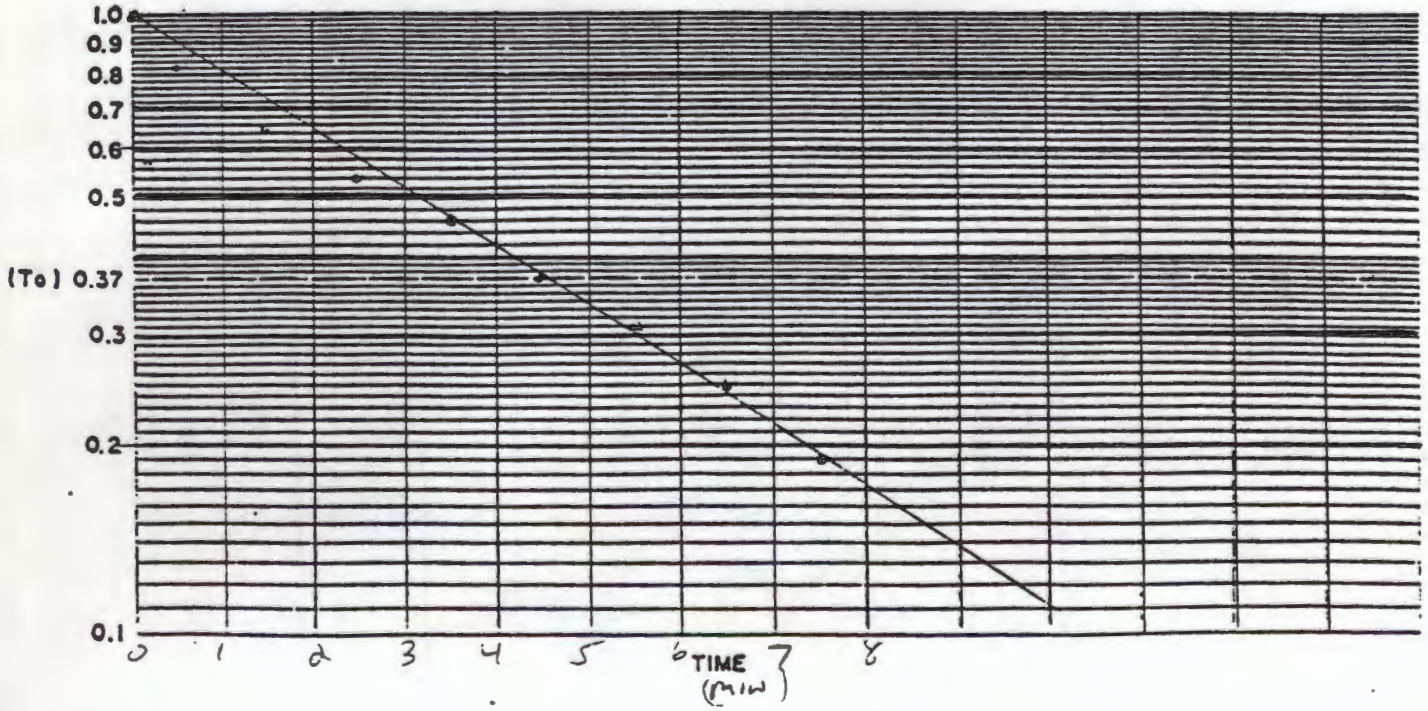
STATIC HEAD (H) 8.61
PIPE RADIUS (r) .083
SCREEN RADIUS (R) .33
SCREEN LENGTH (L) 8.61
INITIAL HEAD (Ho) 7.11

HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$K = \frac{2.9 \times 10^{-4} \text{ Ft/min}}{1.47 \times 10^{-4} \text{ cm/sec}}$

	RECOVERY		SLUG	
TIME	h	$\frac{H-h}{H-Ho}$	h	$\frac{H-h}{H-Ho}$
0	7.11	1		
.5	7.38	.82		
1.5	7.63	.65		
2.5	7.8	.54		
3.5	7.92	.46		
4.5	8.05	.37		
5.5	8.15	.31		
6.5	8.23	.25		
7.5	8.32	.19		

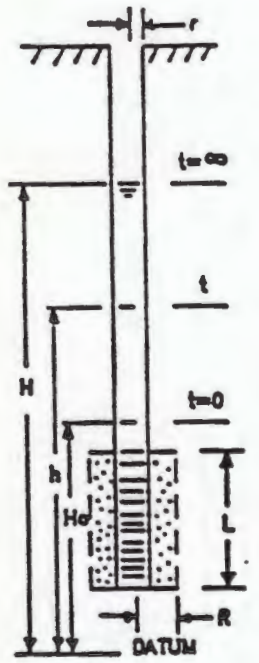


O'BRIEN & GERE

IN-SITU PERMEABILITY TEST
FIELD LOG

PROJECT EAGLE COMTRONICS
WELL NUMBER MW-7
DATE 8/29/89

LOCATION CLAY, NY
ELEVATION _____



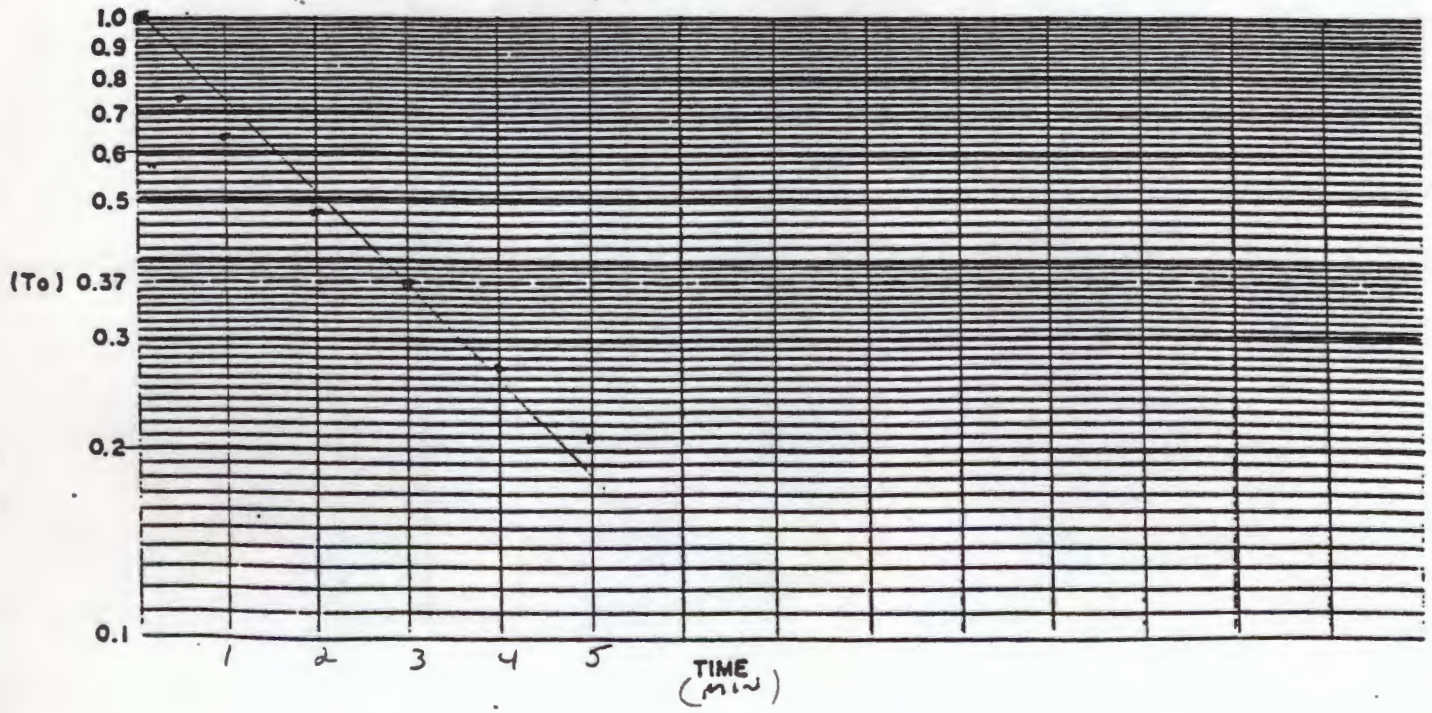
STATIC HEAD (H) 5.21
PIPE RADIUS (r) .083
SCREEN RADIUS (R) .33
SCREEN LENGTH (L) 5.21
INITIAL HEAD (Ho) 3.7

HYDRAULIC CONDUCTIVITY :

$$K = \frac{r^2 \ln(L/R)}{2LTo}$$

$$K = \frac{1.08 \times 10^{-4} \text{ Ft/min}}{3.09 \times 10^{-4} \text{ cm/sec}}$$

TIME	RECOVERY h	RECOVERY (H-h)/(H-Ho)	SLUG h	SLUG (H-h)/(H-Ho)
0	3.7	1		
.5	4.09	.74		
1	4.25	.64		
2	4.48	.48		
3	4.65	.37		
4	4.8	.27		
5	4.9	.21		



APPENDIX C

LABORATORY REPORTS

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Eagle Comtronics, Inc. Waterhouse Road - Water

DATE COLLECTED 8-18-89 DATE REC'D. 8-21-89 DATE ANALYZED 8-21-89

DESCRIPTION:	MW1(E)	MW2(E)	MW3(E)	MW 4	MW 5	MW 6
SAMPLE NO.:	I9401	I9402	I9403	I9404	I9405	I9406
Chloromethane	<10.	<1.	<1.	<1.	<1.	<10.
Bromomethane	↓	↓	↓	↓	↓	↓
Vinyl chloride	↓	↓	↓	↓	↓	18.
Chloroethane	2800.	↓	4.	↓	10.	590.
Methylene chloride	<10.	↓	<1.	↓	<1.	27.
1,1-Dichloroethene	130.	↓	↓	↓	2.	270.
1,1-Dichloroethane	1000.	9.	56.	↓	90.	3300.
t-1,2-Dichloroethene	1300.	5.	1.	↓	3.	530.
Chloroform	<100.	<1.	<1.	↓	<1.	<10.
1,2-Dichloroethane	59.	↓	1.	↓	2.	150.
1,1,1-Trichloroethane	12.	↓	<1.	↓	<1.	66.
Carbon tetrachloride	<10.	↓	↓	↓	↓	<10.
Bromodichloromethane	↓	↓	↓	↓	↓	↓
1,2-Dichloropropane	↓	↓	↓	↓	↓	↓
t-1,3-Dichloropropene	↓	↓	↓	↓	↓	↓
Trichloroethene	↓	1.	↓	↓	↓	↓
Benzene	↓	<1.	↓	↓	↓	↓
Dibromochloromethane	↓	↓	↓	↓	↓	↓
1,1,2-Trichloroethane	↓	↓	↓	↓	↓	↓
c-1,3-Dichloropropene	↓	↓	↓	↓	↓	↓
2-Chloroethylvinyl ether	<100.	<10.	<10.	<10.	<10.	<100.
Bromoform	<100.	<10.	<10.	<10.	<10.	<100.
1,1,2,2-Tetrachloroethane	<10.	<1.	<1.	<1.	<1.	<10.
Tetrachloroethene	↓	↓	↓	↓	↓	↓
Toluene	170.	↓	↓	↓	↓	↓
Chlorobenzene	<10.	↓	↓	↓	↓	↓
Ethylbenzene	↓	↓	↓	↓	↓	↓
Xylenes	↓	↓	↓	↓	↓	↓

Units: µg/l

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: Thomas A. Alexander

Date: September 1, 1989

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Eagle Comtronics, Inc. Waterhouse Road - Water

DATE COLLECTED 8-18-89 DATE REC'D. 8-21-89 DATE ANALYZED 8-21/22-89

DESCRIPTION:	MW 7	Equipment Blank	QC Trip Blank
SAMPLE NO.:	I9407	I9408	I9409
Chloromethane	<1.	<1.	<1.
Bromomethane			
Vinyl chloride			
Chloroethane	2.		
Methylene chloride	<1.		
1,1-Dichloroethene			
1,1-Dichloroethane	23.		
t-1,2-Dichloroethene	<1.		
Chloroform		1.	
1,2-Dichloroethane		<1.	
1,1,1-Trichloroethane			
Carbon tetrachloride			
Bromodichloromethane			
1,2-Dichloropropane			
t-1,3-Dichloropropene			
Trichloroethene			
Benzene			
Dibromochloromethane			
1,1,2-Trichloroethane			
c-1,3-Dichloropropene			
2-Chloroethylvinyl ether	<10.	<10.	<10.
Bromoform	<10.	<10.	<10.
1,1,2,2-Tetrachloroethane	<1.	<1.	<1.
Tetrachloroethene			
Toluene			
Chlorobenzene			
Ethylbenzene			
Xylenes			

UNITS: µg/l

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: Thomas G. Alexander

Date: September 1, 1989

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

SURVEY: EAGLE COMTRONICS INC.

SAMPLERS: (Signature)

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water Comp.	SAMPLE TYPE: Water Grab	SAMPLE TYPE: Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
MW-7	WATERHOUSE RD	9/18/89	8:30 Am		✓		1	2	1
MW-5	"	"	8:45 Am		✓		2	2	1
MW-3E	"	"	9:15 Am		✓		3	2	601, 602
EQUIPMENT BLANK	"	"	9:30 Am		✓		4	2	1
MW-2E	"	"	[illegible]		✓		5	2	1
MW-1E	"	"	2:30 PM		✓		6	2	
MW-4	"	"	2:40 PM		✓		7	2	
MW-6	"	"	2:50 PM		✓		8	2	1

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) Date/Time	Received for Laboratory by:	Date/Time 9-21-89 0750
Method of Shipment:		

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Road / Syracuse, New York 13221 / (315) 457-1494
Oakdale Medical Building / 700 Harry L. Drive / Johnson City, New York 13790

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY - Waters

DATE COLLECTED 9-1-89 DATE REC'D. 9-1-89 DATE ANALYZED 9-8-89

DESCRIPTION:	MW-2	MW-7	MW-3	MW-5	MW-6	MW-4
SAMPLE NO.:	J0092	J0093	J0094	J0095	J0096	J0097
Chloromethane	<1.	<1.	<1.	<1.	<10.	<1.
Bromomethane						
Vinyl chloride						
Chloroethane			4.	4.	450.	
Methylene chloride			<1.	<1.	14.	
1,1-Dichloroethene				1.	210.	
1,1-Dichloroethane	9.	17.	52.	93.	2400.	
t-1,2-Dichloroethene	5.	<1.	2.	5.	370.	
Chloroform	<1.		<1.	<1.	<10.	
1,2-Dichloroethane				2.	100.	
1,1,1-Trichloroethane				<1.	35.	
Carbon tetrachloride					<10.	
Bromodichloromethane						
1,2-Dichloropropane						
t-1,3-Dichloropropene						
Trichloroethene	1.					2.
Benzene	<1.					<1.
Dibromochloromethane						
1,1,2-Trichloroethane						
c-1,3-Dichloropropene						
2-Chloroethylvinyl ether	<10.	<10.	<10.	<10.	<100.	<10.
Bromoform	<10.	<10.	<10.	<10.	<100.	<10.
1,1,2,2-Tetrachloroethane	<1.	<1.	<1.	<1.	<10.	<1.
Tetrachloroethene						
Toluene						
Chlorobenzene						
Ethylbenzene						
Xylenes						

UNITS: µg/l

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: Thomas A. Clarke

Date: October 5, 1989

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY - Waters

DATE COLLECTED 9-1-89 DATE REC'D. 9-1-89 DATE ANALYZED 9-8-89

DESCRIPTION:	MW-1	Bailer Blank	QC Trip Blank
SAMPLE NO.:	J0098	J0099	J0100
Chloromethane	<10.	<1.	<1.
Bromomethane	↓	↓	↓
Vinyl chloride	↓	↓	↓
Chloroethane	2400.		
Methylene chloride	<10.		
1,1-Dichloroethene	130.		
1,1-Dichloroethane	850.		
t-1,2-Dichloroethene	1100.		
Chloroform	<100.		
1,2-Dichloroethane	40.		
1,1,1-Trichloroethane	<10.		
Carbon tetrachloride	↓	↓	↓
Bromodichloromethane	↓	↓	↓
1,2-Dichloropropane	↓	↓	↓
t-1,3-Dichloropropene	↓	↓	↓
Trichloroethene	↓	4.	↓
Benzene	↓	<1.	↓
Dibromochloromethane	↓	↓	↓
1,1,2-Trichloroethane	↓	↓	↓
c-1,3-Dichloropropene	↓	↓	↓
2-Chloroethylvinyl ether	<100.	<10.	<10.
Bromoform	<100.	<10.	<10.
1,1,2,2-Tetrachloroethane	<10.	<1.	<1.
Tetrachloroethene	↓	↓	↓
Toluene	88.		
Chlorobenzene	<10.		
Ethylbenzene	↓	↓	↓
Xylenes	↓	↓	↓

UNITS: µg/l

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: Thomas C. Alexander

Date: October 5, 1989

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG LABORATORIES, INC.

Laboratory Report

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY - Waters

DATE COLLECTED 9-1-89 DATE REC'D. 9-1-89 DATE ANALYZED

Description	MW-4	MW-1			
Sample #	J0097	J0098			
Total Metals					
SILVER	<0.01	<0.01			
ARSENIC	<0.005	<0.005			
BERYLLIUM	<0.05	<0.05			
CADMIUM	<0.01	<0.01			
CHROMIUM	<0.05	<0.05			
COPPER	<0.01	<0.01			
MERCURY	<0.0005	<0.0005			
NICKEL	<0.05	<0.05			
LEAD	<0.05	<0.05			
ANTIMONY	<0.1	<0.1			
SELENIUM	<0.005	<0.005			
ZINC	0.01	0.03			
THALLIUM	<0.5	<0.5			
Other Analysis					
CYANIDE	<0.01	<0.01			
			UNITS	mg/L	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Units: mg/l (ppm) unless otherwise noted

Comments:

Authorized: Thomas A. Alexander

Date: October 18, 1989

OBG Laboratories, Inc., an O'Brien & Gere Limited Company
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

Pesticide/PCB Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY
MW-1 - Water

SAMPLE NO. J0098 DATE COLLECTED 9-1-89 DATE REC'D. 9-1-89 DATE ANALYZED 9-6-89

	ppb		ppb
α-BHC	<0.05	4,4'-DDT	<0.10
γ-BHC		Endosulfan Sulfate	
β-BHC		Endrin Aldehyde	
Heptachlor		Methoxychlor	<0.50
δ-BHC		Endrin Ketone	<0.10
Aldrin		Chlordane	<0.50
Heptachlor Epoxide		Toxaphene	<1.0
Endosulfan I		PCB-1221	<0.50
4,4'-DDE	<0.10	PCB-1232	
Dieldrin		PCB-1016/1242	
Endrin		PCB-1248	
4,4'-DDD		PCB-1254	<1.0
Endosulfan II		PCB-1260	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

Authorized: Thomas A. Alexander

Date: October 17, 1989

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Pesticide/PCB Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY
MW-4 - Water

SAMPLE NO. J0097 DATE COLLECTED 9-1-89 DATE REC'D. 9-1-89 DATE ANALYZED 9-6-89

	ppb		ppb
α-BHC	<0.05	4,4'-DDT	<0.10
γ-BHC		Endosulfan Sulfate	
β-BHC		Endrin Aldehyde	
Heptachlor		Methoxychlor	<0.50
δ-BHC		Endrin Ketone	<0.10
Aldrin		Chlordane	<0.50
Heptachlor Epoxide		Toxaphene	<1.0
Endosulfan I		PCB-1221	<0.50
4,4'-DDE	<0.10	PCB-1232	
Dieldrin		PCB-1016/1242	
Endrin		PCB-1248	
4,4'-DDD		PCB-1254	<1.0
Endosulfan II		PCB-1260	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

Authorized: Thomas A. Alexander

Date: October 17, 1989

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Pesticide/PCB Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY

Bailer Blank - Water

SAMPLE NO. J0099 DATE COLLECTED 9-1-89 DATE REC'D. 9-1-89 DATE ANALYZED 9-6-89

	ppb		ppb
α-BHC	<0.05	4,4'-DDT	<0.10
γ-BHC		Endosulfan Sulfate	
β-BHC		Endrin Aldehyde	
Heptachlor		Methoxychlor	<0.50
δ-BHC		Endrin Ketone	<0.10
Aldrin		Chlordane	<0.50
Heptachlor Epoxide		Toxaphene	<1.0
Endosulfan I		PCB-1221	<0.50
4,4'-DDE	<0.10	PCB-1232	
Dieldrin		PCB-1016/1242	
Endrin		PCB-1248	
4,4'-DDD		PCB-1254	<1.0
Endosulfan II		PCB-1260	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

Authorized: Thomas R. Alexander

Date: October 17, 1989

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Base/Neutral Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY
MW-1 - Water

SAMPLE NO. J0098 DATE COLLECTED 9-1-89 DATE REC'D. 9-1-89 DATE ANALYZED 9-7-89

	ppb		ppb
1,3-Dichlorobenzene	<11.	Diethylphthalate	<11.
1,4-Dichlorobenzene		N-nitrosodiphenylamine	
1,2-Dichlorobenzene		Hexachlorobenzene	
Hexachloroethane		4-Bromophenyl phenyl ether	
Bis (2-chloroethyl) ether		Phenanthrene	
Bis (2-chloroisopropyl) ether		Anthracene	
N-Nitrosodi-n-propylamine		Di-n-butyl phthalate	
Nitrobenzene		Fluoranthene	
Hexachlorobutadiene		Pyrene	
1,2,4-Trichlorobenzene		Benzidine	<54.
Isophorone		Butyl benzyl phthalate	<11.
Naphthalene		Bis(2-ethylhexyl)phthalate	
Bis (2-chloroethoxy) methane		Chrysene	
Hexachlorocyclopentadiene		Benzo(a)anthracene	
2-Chloronaphthalene		3,3-Dichlorobenzidine	<22.
Acenaphthylene		Di-n-octylphthalate	<11.
Acenaphthene		Benzo(b)fluoranthene	
Dimethyl phthalate		Benzo(k)fluoranthene	
2,6-Dinitrotoluene		Benzo(a)pyrene	
Fluorene		Indeno(1,2,3-cd)pyrene	
4-Chlorophenyl phenyl ether		Dibenzo(a,h)anthracene	
2,4-Dinitrotoluene		Benzo(g,h,i)perylene	
1,2-Diphenylhydrazine		N-Nitrosodimethyl Amine	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Comments:

Authorized: Thomas A. Alexander

Date: October 17, 1989

OBG Laboratories, Inc., an O'Brien & Gere Limited Company
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

Base/Neutral Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY
MW-4 - Water

SAMPLE NO. J0097 DATE COLLECTED 9-1-89 DATE REC'D. 9-1-89 DATE ANALYZED 9-7-89

	ppb		ppb
1,3-Dichlorobenzene	<10.	Diethylphthalate	<10.
1,4-Dichlorobenzene		N-nitrosodiphenylamine	
1,2-Dichlorobenzene		Hexachlorobenzene	
Hexachloroethane		4-Bromophenyl phenyl ether	
Bis (2-chloroethyl) ether		Phenanthrene	
Bis (2-chloroisopropyl) ether		Anthracene	
N-Nitrosodi-n-propylamine		Di-n-butyl phthalate	
Nitrobenzene		Fluoranthene	
Hexachlorobutadiene		Pyrene	
1,2,4-Trichlorobenzene		Benzidine	<53.
Isophorone		Butyl benzyl phthalate	<10.
Naphthalene		Bis(2-ethylhexyl)phthalate	15.
Bis (2-chloroethoxy) methane		Chrysene	<10.
Hexachlorocyclopentadiene		Benzo(a)anthracene	<10.
2-Chloronaphthalene		3,3-Dichlorobenzidine	<21.
Acenaphthylene		Di-n-octylphthalate	<10.
Acenaphthene		Benzo(b)fluoranthene	
Dimethyl phthalate		Benzo(k)fluoranthene	
2,6-Dinitrotoluene		Benzo(a)pyrene	
Fluorene		Indeno(1,2,3-cd)pyrene	
4-Chlorophenyl phenyl ether		Dibenzo(a,h)anthracene	
2,4-Dinitrotoluene		Benzo(g,h,i)perylene	
1,2-Diphenylhydrazine		N-Nitrosodimethyl Amine	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Comments:

Authorized: Thomas A. Alexander

Date: October 17, 1989

OBG Laboratories, Inc., an O'Brien & Gere Limited Company
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

Acid Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY
MW-1 - Water

SAMPLE NO. J0098 DATE COLLECTED 9-1-89 DATE REC'D. 9-1-89 DATE ANALYZED 9-7-89

	ppb		ppb
2-Chlorophenol	<11.	2,4,6-Trichlorophenol	<11.
2-Nitrophenol		4-Chloro-3-methylphenol	<11.
Phenol		2,4-Dinitrophenol	<54.
2,4-Dimethylphenol		2-Methyl-4,6-dinitrophenol	
2,4-Dichlorophenol		Pentachlorophenol	
		4-Nitrophenol	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Comments:

Benzyl Alcohol	<11.
2-Methylphenol	
4-Methylphenol	
Benzoic Acid	<54.
4-Chloroaniline	<11.
2-Methylnaphthalene	
2,4,5-Trichlorophenol	<54.
2-Nitroaniline	
3-Nitroaniline	
Dibenzofuran	<11.
4-Nitroaniline	<54.

Authorized: Thomas A. Alexander

Date: October 17, 1989

OBG Laboratories, Inc., an O'Brien & Gere Limited Company
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

Acid Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY

MW-4 - Water

SAMPLE NO. J0097 DATE COLLECTED 9-1-89 DATE REC'D. 9-1-89 DATE ANALYZED 9-7-89

	ppb		ppb
2-Chlorophenol	<10.	2,4,6-Trichlorophenol	<10.
2-Nitrophenol		4-Chloro-3-methylphenol	<10.
Phenol		2,4-Dinitrophenol	<53.
2,4-Dimethylphenol		2-Methyl-4,6-dinitrophenol	
2,4-Dichlorophenol		Pentachlorophenol	
		4-Nitrophenol	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Comments:

Benzyl Alcohol	<10.
2-Methylphenol	
4-Methylphenol	
Benzoic Acid	<53.
4-Chloroaniline	<10.
2-Methylnaphthalene	
2,4,5-Trichlorophenol	<53.
2-Nitroaniline	
3-Nitroaniline	
Dibenzofuran	<10.
4-Nitroaniline	<53.

Authorized: Thomas L. Alexander

Date: October 17, 1989

OBG Laboratories, Inc., an O'Brien & Gere Limited Company
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

Laboratory Report

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Inc. Clay, NY - Water

DATE COLLECTED 9-19-89 DATE REC'D. 9-20-89 DATE ANALYZED

Description	Sample #	PHENOL
MW-4 South Side	J0786	0.006
MW-1 South Side	J0787	0.005
	UNITS:	mg/l

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Units: mg/ℓ (ppm) unless otherwise noted

Comments:

Authorized: Thomas A. Alexander

Date: October 6, 1989

OBG Laboratories, Inc., an O'Brien & Gere Limited Company
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

SURVEY: CLAY, NY
EAGLE CONTROLICS

SAMPLERS: [Signature]

STATION NUMBER	STATION LOCATION	DATE	TIME	CONTAINER TYPE: WATER	CONTAINER TYPE: SOIL	CONTAINER TYPE: AIR	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
	MW-2	9/1/89	0845		✓			2	EPA 601/602
	MW-7	9/1/89	0920		✓			2	EPA 601/602
	MW-3	9/1/89	0953		✓			2	EPA 601/602
	MW-5	9/1/89	1035		✓			2	EPA 601/602
	MW-6	9/1/89	1115		✓			2	EPA 601/602
	BAILER FIELD BLANK	9/1/89	1127		✓			6 ea	PRIORITY POLLUTANTS
	BAILER FIELD BLANK	9/1/89	1127		✓			1	EPA 601/602
	MW-4	9/1/89	1150		✓			5	PRIORITY POLLUTANTS
	MW-1	9/1/89	1236		✓			6	PRIORITY POLLUTANTS
	TRIP BLANK	8/4/89	—					2	

Relinquished by: [Signature] 9/1/89 1328 | Received by: | Date/Time

Relinquished by: | Received by: | Date/Time

Relinquished by: | Received by: | Date/Time

Relinquished by: | Received by Mobile Laboratory for field analysis: | Date/Time

Dispatched by: | Date/Time | Received for Laboratory by: Lisa Barnes | Date/Time 9-1-89 1328

Remarks: Shipment:

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Road / Syracuse, New York 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

SURVEY: EAGLE COMTRONICS INC.

SAMPLERS: (Signature) [signature]

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water Comp.	SAMPLE TYPE: Water Grab	SAMPLE TYPE: Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
MW-2E	NORTH OF BUILDING	9/19/89	1:45 PM		✓		1	1	PHENOLS
MW-3E	"	9/19/89	2:10 PM		✓		2	1	PHENOLS
MW-5	"	"	2:25 PM		✓		3	1	PHENOLS
MW-7	NORTH EAST CORNER	"	2:40 PM		✓		4	1	PHENOLS
MW-6	EAST SIDE	"	2:55 PM		✓		5	1	PHENOLS
MW-4	SOUTH SIDE	"	3:15 PM		✓		6	1	PHENOLS
MW-1	"	"	3:40 PM		✓		7	1	PHENOLS

Relinquished by: (Signature) [signature]	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) — Date/Time: 9/19/89 4:00 PM	Received for Laboratory by: Wendy Smith	Date/Time: 9/20/89 07:3[illegible]
Method of Shipment:		

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Road / Syracuse, New York 13221 / (315) 457-1494
Oakdale Medical Building / 700 Harry L. Drive / Johnson City, New York 13790

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY - Soils

DATE COLLECTED 4-11-90 DATE REC'D. 4-12-90 DATE ANALYZED 4-13,14/17-90

DESCRIPTION:	B-1 0'-2'	B-1 2'-4'	B-2 0'-2'	B-2 2'-4'	B-3 0'-2'	B-3 2'-4'
SAMPLE NO.:	K0121	K0122	K0123	K0124	K0125	K0126
Chloromethane	<11.	<12.	<12.	<11.	<11.	<12.
Bromomethane	↓	↓	↓	↓	↓	↓
Vinyl chloride						
Chloroethane						
Methylene chloride		↓		↓	↓	
1,1-Dichloroethene		150.		61.	13.	
1,1-Dichloroethane		120.		51.	<11.	27.
t-1,2-Dichloroethene		54.		<11.	↓	<12.
Chloroform		<12.		↓		↓
1,2-Dichloroethane	↓	<12.	↓	↓	↓	
1,1,1-Trichloroethane	720.	4600.	31.	2400.	930.	810.
Carbon tetrachloride	<11.	<120.	<12.	<110.	<11.	<12.
Bromodichloromethane	↓	<120.	↓	<110.	↓	↓
1,2-Dichloropropane		<12.		<11.		
t-1,3-Dichloropropene	↓	↓		<11.	↓	↓
Trichloroethene	12.	220.		360.	35.	34.
Benzene	<11.	<12.		<11.	<11.	<12.
Dibromochloromethane	↓	↓		↓	↓	↓
1,1,2-Trichloroethane						
c-1,3-Dichloropropene	↓	↓	↓	↓	↓	↓
2-Chloroethylvinyl ether	<110.	<120.	<120.	<110.	<110.	<120.
Bromoform	<110.	<120.	<120.	<110.	<110.	<120.
1,1,2,2-Tetrachloroethane	<11.	<12.	<12.	<11.	<11.	<12.
Tetrachloroethene	84.	130.	↓	23.	↓	↓
Toluene	340.	13.		120.		
Chlorobenzene	<11.	<12.		<11.		
Ethylbenzene	↓	↓		↓		
Xylenes	↓	↓	↓	↓	↓	↓
Other Analyses:						
Percent Total Solids	89.	82.	86.	87.	92.	86.

UNITS: µg/kg dry weight

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: Thomas L. Alexander

Date: May 8, 1990

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY - Soils

DATE COLLECTED 4-11-90 DATE REC'D. 4-12-90 DATE ANALYZED 4-13,14-90

DESCRIPTION:	B-4 0'-2'	B-4 2'-4'	B-5 0'-2'	B-5 2'-4'	B-6 0'-2'	B-6 2'-4'
SAMPLE NO.:	K0127	K0128	K0129	K0130	K0131	K0132
Chloromethane	<110.	<12.	<12.	<12.	<110.	<120.
Bromomethane						
Vinyl chloride						
Chloroethane						
Methylene chloride						
1,1-Dichloroethene	1700.	28.			420.	150.
1,1-Dichloroethane	<110.	190.		20.	<110.	<120.
t-1,2-Dichloroethene		<12.		<12.		
Chloroform						
1,2-Dichloroethane						
1,1,1-Trichloroethane	42,000.	1500.	320.	110.	14,000.	7900.
Carbon tetrachloride	<1100.	<120.	<12.	<12.	<1100.	<120.
Bromodichloromethane	<1100.	<120.			<1100.	
1,2-Dichloropropane	<110.	<12.			<110.	
t-1,3-Dichloropropene						
Trichloroethene	5400.	140.			170.	230.
Benzene	<110.	<12.			<110.	<120.
Dibromochloromethane						
1,1,2-Trichloroethane						
c-1,3-Dichloropropene						
2-Chloroethylvinyl ether	<1100.	<120.	<120.	<120.	<1100.	<1200.
Bromoform	<1100.	<120.	<120.	<120.	<1100.	<1200.
1,1,2,2-Tetrachloroethane	<110.	<12.	<12.	<12.	<110.	<120.
Tetrachloroethene	300.					
Toluene	<110.					180.
Chlorobenzene						<120.
Ethylbenzene						
Xylenes						
Other Analyses:						
Percent Total Solids	89.	85.	85.	86.	90.	82.

UNITS: µg/kg dry weight

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: Thomas A. Alexander

Date: May 8, 1990

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY - Soils

DATE COLLECTED 4-11-90 DATE REC'D. 4-12-90 DATE ANALYZED 4-13-90

DESCRIPTION:	B-7 0'-2'	B-7 2'-4'	B-8 0'-2'	B-8 2'-4'	B-9 0'-2'	B-9 2'-4'
SAMPLE NO.:	K0133	K0134	K0135	K0136	K0137	K0138
Chloromethane	<12.	<12.	<11.	<11.	<12.	<12.
Bromomethane						
Vinyl chloride						
Chloroethane						
Methylene chloride						
1,1-Dichloroethene		13.	13.			
1,1-Dichloroethane		59.	<11.	17.		
t-1,2-Dichloroethene		<12.		<11.		
Chloroform						
1,2-Dichloroethane						
1,1,1-Trichloroethane	140.	520.	830.	80.		
Carbon tetrachloride	<12.	<12.	<11.	<11.		
Bromodichloromethane						
1,2-Dichloropropane						
t-1,3-Dichloropropene						
Trichloroethene						
Benzene						
Dibromochloromethane						
1,1,2-Trichloroethane						
c-1,3-Dichloropropene						
2-Chloroethylvinyl ether	<120.	<120.	<110.	<110.	<120.	<120.
Bromoform	<120.	<120.	<110.	<110.	<120.	<120.
1,1,2,2-Tetrachloroethane	<12.	<12.	<11.	<11.	<12.	<12.
Tetrachloroethene						
Toluene						
Chlorobenzene						
Ethylbenzene						
Xylenes						
Other Analyses:						
Percent Total Solids	85.	85.	89.	88.	ND 82.	ND 86.
Tot. VOCs	140	592	843	97		

UNITS: µg/kg dry weight

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: Thomas G. Alexander

Date: May 8, 1990

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Clay, NY - Soils and Water

DATE COLLECTED 4-9,11-90 DATE REC'D. 4-12-90 DATE ANALYZED 4-13-90

DESCRIPTION:	B-10 0'-2'	B-10 2'-4'	QC Trip Blank
SAMPLE NO.:	K0139*	K0140*	K0141**
Chloromethane	<12.	<12.	<1.
Bromomethane			
Vinyl chloride			
Chloroethane			
Methylene chloride			
1,1-Dichloroethene			
1,1-Dichloroethane			
t-1,2-Dichloroethene			
Chloroform			
1,2-Dichloroethane			
1,1,1-Trichloroethane			
Carbon tetrachloride			
Bromodichloromethane			
1,2-Dichloropropane			
t-1,3-Dichloropropene			
Trichloroethene			
Benzene			
Dibromochloromethane			
1,1,2-Trichloroethane			
c-1,3-Dichloropropene			
2-Chloroethylvinyl ether	<120.	<120.	<10.
Bromoform	<120.	<120.	<10.
1,1,2,2-Tetrachloroethane	<12.	<12.	<1.
Tetrachloroethene			
Toluene			
Chlorobenzene			
Ethylbenzene			
Xylenes			
Other Analyses:			
Percent Total Solids	85.	86.	-
Tot. VOCs	ND	ND	

UNITS: * µg/kg dry weight
** µg/l

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: _____

Date: May 8, 1990

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Inc., Clay, NY - Waters

DATE COLLECTED 4-12-90 DATE REC'D. 4-13-90 DATE ANALYZED 4-17,18-90

DESCRIPTION:	MW-1	MW-2	MW-3D	MW-3	TP-3	MW-4
SAMPLE NO.:	K0357	K0358	K0359	K0360	K0361	K0362
Chloromethane	<10.	<1.	<1.	<1.	<1.	<1.
Bromomethane	↓	↓	↓	↓	↓	↓
Vinyl chloride	↓	↓	↓	↓	↓	↓
Chloroethane	500.	↓	1.	↓	1.	↓
Methylene chloride	<10.	↓	<1.	↓	<1.	↓
1,1-Dichloroethene	54.	↓	<1.	↓	<1.	↓
1,1-Dichloroethane	230.	3.	12.	↓	22.	↓
t-1,2-Dichloroethene	300.	<1.	<1.	↓	<1.	↓
Chloroform	<10.	↓	↓	↓	↓	↓
1,2-Dichloroethane	13.	↓	↓	↓	↓	↓
1,1,1-Trichloroethane	<10.	↓	↓	↓	↓	↓
Carbon tetrachloride	↓	↓	↓	↓	↓	↓
Bromodichloromethane	↓	↓	↓	↓	↓	↓
1,2-Dichloropropane	↓	↓	↓	↓	↓	↓
t-1,3-Dichloropropene	↓	↓	↓	↓	↓	↓
Trichloroethene	↓	↓	↓	↓	↓	↓
Benzene	↓	↓	↓	↓	↓	↓
Dibromochloromethane	↓	↓	↓	↓	↓	↓
1,1,2-Trichloroethane	↓	↓	↓	↓	↓	↓
c-1,3-Dichloropropene	↓	↓	↓	↓	↓	↓
2-Chloroethylvinyl ether	<100.	<10.	<10.	<10.	<10.	<10.
Bromoform	<100.	<10.	<10.	<10.	<10.	<10.
1,1,2,2-Tetrachloroethane	<10.	<1.	<1.	<1.	<1.	<1.
Tetrachloroethene	<10.	↓	↓	↓	<1.	↓
Toluene	14.	↓	↓	↓	1.	↓
Chlorobenzene	<10.	↓	↓	↓	<1.	↓
Ethylbenzene	↓	↓	↓	↓	↓	↓
Xylenes	↓	↓	↓	↓	↓	↓
UNITS:	µg/l					

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: Thomas G. Alexander

Date: May 2, 1990

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Inc., Clay, NY - Waters

DATE COLLECTED 4-12-90 DATE REC'D. 4-13-90 DATE ANALYZED 4-17 thru 19-90

DESCRIPTION:	MW-5D	MW-5	MW-6	MW-7	Duplicate	Field Blank
SAMPLE NO.:	K0363	K0364	K0365	K0366	K0367	K0368
Chloromethane	<1.	<1.	<1.	<1.	<10.	<1.
Bromomethane						
Vinyl chloride						
Chloroethane		2.	32.	2.	540.	
Methylene chloride		<1.	<1.	<1.	<10.	
1,1-Dichloroethene		<1.	8.	<1.	60.	
1,1-Dichloroethane	4.	31.	57.	40.	270.	
t-1,2-Dichloroethene	<1.	3.	10.	<1.	320.	
Chloroform	8.	1.	<1.		<10.	
1,2-Dichloroethane	<1.	<1.	2.		12.	
1,1,1-Trichloroethane			1.		<10.	
Carbon tetrachloride			<1.			
Bromodichloromethane	2.					
1,2-Dichloropropane	<1.					
t-1,3-Dichloropropene						
Trichloroethene						
Benzene						
Dibromochloromethane						
1,1,2-Trichloroethane						
c-1,3-Dichloropropene						
2-Chloroethylvinyl ether	<10.	<10.	<10.	<10.	<100.	<10.
Bromoform	<10.	<10.	<10.	<10.	<100.	<10.
1,1,2,2-Tetrachloroethane	<1.	<1.	<1.	<1.	<10.	<1.
Tetrachloroethene					<10.	
Toluene					17.	
Chlorobenzene					<10.	
Ethylbenzene						
Xylenes						

UNITS: µg/l

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: Thomas A. Alexander

Date: May 2, 1990

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG
LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.760

DESCRIPTION Eagle Comtronics, Inc., Clay, NY - Waters

DATE COLLECTED 4-12-90 DATE REC'D. 4-13-90 DATE ANALYZED 4-18-90

DESCRIPTION:	QC Trip Blank
SAMPLE NO.:	K0369
Chloromethane	<1.
Bromomethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
1,1-Dichloroethene	
1,1-Dichloroethane	
t-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	
t-1,3-Dichloropropene	
Trichloroethene	
Benzene	
Dibromochloromethane	
1,1,2-Trichloroethane	
c-1,3-Dichloropropene	
2-Chloroethylvinyl ether	<10.
Bromoform	<10.
1,1,2,2-Tetrachloroethane	<1.
Tetrachloroethene	
Toluene	
Chlorobenzene	
Ethylbenzene	
Xylenes	
UNITS:	µg/l

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: µg/l (ppb) unless otherwise noted

Comments:

Authorized: Thomas A. Alexander

Date: May 2, 1990

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY 13221 / (315) 457-1494

OBG LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

SURVEY: EAGLE COMTRONICS CLAY, N.Y.

SAMPLERS: Signature: Mark J Vomal / Jim Fahey

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water	SAMPLE TYPE: Soil	SEC. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
	MW-5	4/12/90	1:20	✓			2	EPA 601/602
	MW-3D	4/12/90	1320	✓			2	
	MW-5D	4/13/90	1336	✓			2	
	MW-3	4/12/90	2:05	✓			2	
	MW-2	4/12/90	2:40	✓			2	
	TP-2	4/12/90	1451	✓			2	
	MW-7	4/12/90	3:35	✓			2	
	MW-4	4/12/90	1553	✓			2	
	MW-1	4/12/90	1634	✓			2	
	Field Blank	4/12/90	4.45	✓			2	
	Duplicate	4/12/90		✓			2	
	MW-6	4/13/90	0916	✓			2	

Relinquished by: Signature	Date/Time	Received by: Signature	Date/Time
Mark J Vomal / Jim Fahey	4/13/90 1015		
Relinquished by: Signature		Received by: Signature	Date/Time
Relinquished by: Signature		Received by: Signature	Date/Time
Relinquished by: Signature		Received by Mobile Laboratory for field analysis: Signature	Date/Time
Relinquished by: Signature	Date/Time	Received for Laboratory by: Glenn Barnes	Date/Time 4/13/90 10:15

Comments or Statement:

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Road / Syracuse, New York 13221 / (315) 457-1494

OBG LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

SURVEY: EAGLE CONTRONICS
CLAY, NY

SAMPLERS: Signature
Mark S Rowe / Terry Hefele

STATION NUMBER	STATION LOCATION	DATE	TIME	COMPOSITE (Comp / Grab)		SEC. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
	TRIP Blank	4/11/90	—		-		1	EPA 601/602

Relinquished by: Signature Mark S Rowe Terry Hefele 1015	Received by: Signature	Date/Time
Relinquished by: Signature	Received by: Signature	Date/Time
Relinquished by: Signature	Received by: Signature	Date/Time
Relinquished by: Signature	Received by Mobile Laboratory for field analysis: Signature	Date/Time
Dispatched by: Signature	Date/Time Received for Laboratory by: Chris Barnes	Date/Time 4/13/90 10:15

Courier's Statement:

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Road / Syracuse, New York 13221 / (315) 457-1494

File 2665.003 #3

OBG
LABORATORIES, INC.

Purgeable Organics
Method 601/602

CLIENT EAGLE COMTRONICS JOB NO. 2665.003.517

DESCRIPTION Liverpool, NY

MATRIX: Water

DATE COLLECTED 11-6-92 DATE RECEIVED 11-6-92 DATE ANALYZED 11-19,20-92

DESCRIPTION:	MW-3S	MW-3D	MW-2	MW-5D	MW-5S	Equipment Blank
SAMPLE NO.:	Q9028	Q9029	Q9030	Q9031	Q9032	Q9033
Chloromethane	<10.	<10.	<10.	<10.	<10.	<10.
Bromomethane	↓	↓	↓	↓	↓	↓
Dichlorodifluoromethane	↓	↓	↓	↓	↓	↓
Vinyl chloride	<1.	<1.	<1.	<1.	<1.	<1.
Chloroethane	↓	1.	2.	↓	19.	↓
Methylene chloride	↓	<1.	<1.	↓	<1.	↓
Trichlorofluoromethane	↓	↓	↓	↓	<1.	↓
1,1-Dichloroethene	↓	↓	↓	↓	1.	↓
1,1-Dichloroethane	↓	12.	↓	↓	47.	↓
1,2-Dichloroethene (total)	↓	<1.	↓	↓	14.	↓
Chloroform	↓	↓	↓	↓	<1.	↓
1,2-Dichloroethane	↓	↓	↓	↓	4.	4.
1,1,1-Trichloroethane	↓	↓	↓	↓	<1.	<1.
Carbon tetrachloride	↓	↓	↓	↓	↓	↓
Bromodichloromethane	↓	↓	↓	↓	↓	↓
1,2-Dichloropropane	↓	↓	↓	↓	↓	↓
cis-1,3-Dichloropropene	↓	↓	↓	↓	↓	↓
Trichloroethene	↓	↓	↓	↓	↓	↓
Benzene	↓	↓	↓	↓	↓	↓
Dibromochloromethane	↓	↓	↓	↓	↓	↓
1,1,2-Trichloroethane	↓	↓	↓	↓	↓	↓
trans-1,3-Dichloropropene	↓	↓	↓	↓	↓	↓
2-Chloroethylvinyl ether	<10.	<10.	<10.	<10.	<10.	<10.

Authorized: Thomas Gilbert

Date: December 7, 1992

OBG Laboratories, Inc., *an O'Brien & Gere Limited Company*
5060 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

OBG LABORATORIES, INC.

Purgeable Organics
Method 601/602

CLIENT EAGLE COMTRONICS JOB NO. 2665.003.517

DESCRIPTION Liverpool, NY

MATRIX: Water

DATE COLLECTED 11-6-92 DATE RECEIVED 11-6-92 DATE ANALYZED 11-19,20-92

DESCRIPTION:	MW-3S	MW-3D	MW-2	MW-5D	MW-5S	Equipment Blank
SAMPLE NO.:	Q9028	Q9029	Q9030	Q9031	Q9032	Q9033
Bromoform	<10.	<10.	<10.	<10.	<10.	<10.
1,1,2,2-Tetrachloroethane	<1.	<1.	<1.	<1.	<1.	<1.
Tetrachloroethene	↓	↓	↓	↓	↓	↓
Toluene						
Chlorobenzene						
Ethylbenzene						
Xylene (total)	<3.	<3.	<3.	<3.	<3.	<3.
1,2-Dichlorobenzene	<5.	<5.	<5.	<5.	<5.	<5.
1,3-Dichlorobenzene	↓	↓	↓	↓	↓	↓
1,4-Dichlorobenzene						

Comments:

Methodology: Federal Register — 40 CFR, Part 136, October 26, 198

Certification No.: 10155

Units: µg/l

Authorized:

Date: December 7, 1992

OBG Laboratories, Inc., *an O'Brien & Gere Limited Company*
5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

OBG
LABORATORIES, INC.

Purgeable Organics
Method 601/602

CLIENT EAGLE COMTRONICS JOB NO. 2665.003.517

DESCRIPTION Liverpool, NY

MATRIX: Water

DATE COLLECTED 11-6-92 DATE RECEIVED 11-6-92 DATE ANALYZED 11-20,23-92

DESCRIPTION:	MW-7	MW-4	MW-1	MW-6	QC Trip Blank
SAMPLE NO.:	Q9034	Q9035	Q9036	Q9037	Q9038
Chloromethane	<10.	<10.	<100.	<500.	<10.
Bromomethane	↓	↓	↓	↓	↓
Dichlorodifluoromethane	↓	↓	↓	↓	↓
Vinyl chloride	<1.	<1.	<10.	<50.	<1.
Chloroethane	↓	↓	610.	730.	<1.
Methylene chloride	↓	↓	<10.	<50.	1.
Trichlorofluoromethane	↓	↓	<10.	<50.	<1.
1,1-Dichloroethene	2.	↓	41.	140.	↓
1,1-Dichloroethane	56.	↓	260.	2000.	↓
1,2-Dichloroethene (total)	12.	↓	500.	560.	↓
Chloroform	<1.	↓	<10.	<50.	↓
1,2-Dichloroethane	3.	↓	↓	91.	↓
1,1,1-Trichloroethane	<1.	↓	↓	<50.	↓
Carbon tetrachloride	↓	↓	↓	↓	↓
Bromodichloromethane	↓	↓	↓	↓	↓
1,2-Dichloropropane	↓	↓	↓	↓	↓
cis-1,3-Dichloropropene	↓	↓	↓	↓	↓
Trichloroethene	↓	↓	↓	↓	↓
Benzene	↓	↓	↓	↓	↓
Dibromochloromethane	↓	↓	↓	↓	↓
1,1,2-Trichloroethane	↓	↓	↓	↓	↓
trans-1,3-Dichloropropene	↓	↓	↓	↓	↓
2-Chloroethylvinyl ether	<10.	<10.	<10.	<500.	<10.

Authorized: [signature]

Date: December 7, 1992

OBG Laboratories, Inc., *an O'Brien & Gere Limited Company*
5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

OBG LABORATORIES, INC.

Purgeable Organics
Method 601/602

CLIENT EAGLE COMTRONICS JOB NO. 2665.003.517

DESCRIPTION Liverpool, NY

MATRIX: Water

DATE COLLECTED 11-6-92 DATE RECEIVED 11-6-92 DATE ANALYZED 11-20,23-92

DESCRIPTION:	MW-7	MW-4	MW-1	MW-6	QC Trip Blank
SAMPLE NO.:	Q9034	Q9035	Q9036	Q9037	Q9038
Bromoform	<10.	<10.	<100.	<500.	<10.
1,1,2,2-Tetrachloroethane	<1.	<1.	<10.	<50.	<1.
Tetrachloroethene	↓	↓	↓	↓	↓
Toluene	↓	↓	↓	↓	↓
Chlorobenzene	↓	↓	↓	↓	↓
Ethylbenzene	↓	↓	↓	↓	↓
Xylene (total)	<3.	<3.	<30.	<150.	<3.
1,2-Dichlorobenzene	<5.	<5.	<50.	<250.	<5.
1,3-Dichlorobenzene	↓	↓	↓	↓	↓
1,4-Dichlorobenzene	↓	↓	↓	↓	↓

Comments:

Methodology: Federal Register — 40 CFR, Part 136, October 26, 198

Certification No.: 10155

Units: µg/l

Authorized:

Date: December 7, 1992

OBG Laboratories, Inc., *an O'Brien & Gere Limited Company*
5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

O'BRIEN & GERE
ENGINEERS, INC.

Job No. 2665.003.230
Sheet 1 of 1

Office: Syracuse
Address: 5000 Brittonfield Pkwy
Phone: 437-6100

CHAIN OF CUSTODY

CLIENT: Eagle Controics
LOCATION: Liverpool, NY.

COLLECTED BY: J. Moore, D. Skapich
(Signature) Doon L Skapich

SAMPLE DESCRIPTION	Date	Time	Sample Matrix[1]	Sample Type[2]	No. of Containers	ANALYSIS REQUESTED
mw-3S	11/6/92	10:20	water	grab	2	601/602
mw-3D	"	10:50	"	"	"	
mw-2	"	11:10	"	"	"	
mw-5D	"	11:40	"	"	"	
mw 5-S	"	11:55	"	"	"	
eqpt. blank	"	12:00	"	"	"	
mw-7	"	12:10	"	"	"	
mw-4	"	13:30	"	"	"	
mw-1	"	13:55	"	"	"	
mw-6	"	14:10	"	"	"	

[1] Matrix = water, wastewater, air, sludge, sediment, etc.
[2] Type = grab, composite

Relinquished by:	Date	Time	Received by:	Date	Time
D. Skapich	11/6/92	15:10	Wendy Smith	11-6-92	1510
of: O'Brien & Gere Eng.			of: OBG Laboratories, Inc		
Relinquished by:	Date	Time	Received by:	Date	Time
of:			of:		
Relinquished by:	Date	Time	Received by:	Date	Time
of:			of:		
Use this space if shipped via courier (e.g., Fed Ex) Relinquished by:	Date	Time	Courier Name: *Attach delivery/courier receipt to Chain of Custody	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
			of:		

djb/wpC

September 17, 1990

CASE FILE

Survey: Eagle Comtronics Date Collected: 11-6-92

Sampler: J. Moore/D. Skapiak Date Received: 11-6-92

Client Name and Ref. #: DB+G Engineers

OBG Laboratory Client #: 2665.003.517

CONDITION OF SHIPMENT: Satisfactory

RADIOACTIVITY SCREENING*:

___ The sample cooler(s) were screened for radioactivity and found safe for handling.

✓ The samples come from a safe source and do not need to be screened.

Signed: Wendy Smith
Sample Coordinator

****

DISPOSAL PROCEDURE**: Return

Signed: DDD

Date: 12-11-92

*The radioactivity screen is performed to alert our employees of unexpected radioactivity at hazardous waste sites.

**Samples are disposed of four (4) weeks after a typed report is signed and mailed to the client. The routine method of disposal is: water samples are filtered through carbon to a sanitary sewer, solid samples are sent to a sanitary landfill.

APPENDIX D

ACTION PLAN - SOIL REMEDIATION

2665.003

ACTION PLAN

SOIL REMEDIATION

EAGLE COMTRONICS, INC.
CLAY, NEW YORK

JUNE 1993

O'BRIEN & GERE ENGINEERS, INC.
5000 BRITTONFIELD PARKWAY
SYRACUSE, NEW YORK 13221

TABLE OF CONTENTS

SECTION 1 - INTRODUCTION

1.01 Background

The Eagle Comtronics site is an approximate eighteen (18) acre site located on Waterhouse Road in Clay, New York. The facility is engaged in the manufacture of electronic components for the cable television industry and includes offices and a separate 12,000 square foot assembly building. The facility is surrounded by agricultural properties and some residential homes. The residential homes and the Eagle Comtronics facility are all served by municipal water and sewer service. A site location map is provided as Figure 1.

Previous investigations, initially conducted by a third party as a routine environmental assessment, have identified volatile organic compound (VOC) contamination on the property. The contamination is suspected to result from a one time, unknown spill of waste solvents formerly used in the manufacturing process. In response to these findings, Eagle Comtronics retained O'Brien & Gere Engineers, Inc. to conduct further investigations to define the potential extent of contamination. These investigations initially consisted of the installation and sampling of ground water monitoring wells which focused on the alleged spill area and areas down-gradient. In addition, a soil boring program was completed in the spill area. These site investigations confirmed that a localized area of concern exists for shallow soil and ground water contamination with VOCs. The results of these investigations are presented in detail in the O'Brien & Gere Report entitled Preliminary Hydrogeologic Site Assessment - Eagle Comtronics, Inc. - October 1989, which was submitted to the New York State Department of Environmental Conservation (NYSDEC).

These investigations have generated sufficient information to allow implementation of a remedial program to immediately address source contamination issues, allowing for rapid and focused remediation at the source area.

1.02 Objective

The objective of this Action Plan is to provide a basis for implementing a voluntary remedial program for the impacted source area soils. The remedial program consists of a source control system for the area. Given that the previous hydrogeologic and soil investigations have defined the nature, source, and extent of contamination, it is a logical approach to allow rapid site remediation to take place to minimize impacts to the environment.

1.03 Action Plan Format

This Action Plan outlines work tasks, health and safety and sampling activities associated with the remedial work tasks. Section 2 presents a summary of the site specific information which forms the basis for the remedial program described in Section 3. Figures are presented following the text.

SECTION 2 - SUMMARY OF AVAILABLE INFORMATION

2.01 Site Description

The Eagle Comtronics facility is located in an upland area approximately 1500 feet west of the Clay Marsh. The site has two structures; an administration building and a separate 12,000 square foot assembly building. The structures are separated by a paved parking area. A site map is presented as Figure 2. The alleged source area is located at the southwestern corner of the assembly building, on the southern side of the building. The soil boring program has defined the area of impacted soils horizontally to be approximately 15 feet by 30 feet and vertically to a depth of about 4 feet.

2.02 Site Characteristics

The shallow on-site geology within 15 feet of the ground surface is comprised of 5-10 feet of reddish brown fine to medium sand overlying a dense reddish brown glacial till comprised of silt, clay, fine sand, and embedded gravel.

In June 1989, the site was initially investigated through a third party environmental assessment. During this assessment, shallow monitoring wells MW-1, MW-2, and MW-3 were installed and sampled. This sampling revealed detectable concentrations of VOCs in ground water. In July 1989, O'Brien & Gere installed and sampled four additional shallow ground water monitoring wells; MW-4, MW-5, MW-6, and MW-7. This sampling also revealed detectable concentrations of VOCs in ground water. In April 1990, two deep ground water monitoring wells were installed to the top of the bedrock. Sampling of these wells also revealed detectable

concentrations of VOCs in ground water. In addition, a grid based soil boring program was completed in the alleged source area near the assembly building. Sampling revealed VOCs to be present within soils near the assembly building. The results of these efforts can be summarized as follows:

- Contaminants detected in the source area soils include; 1,1,1-trichloroethane, trichloroethylene, tetrachloroethylene, and toluene.
- The extent of the impacted soils in the source area has been defined horizontally as an approximate 15 foot by 30 foot area, and vertically to approximately 4 feet.

SECTION 3 - ACTION PLAN

3.01 Remedial Objective

This Action Plan presents a plan to address the defined VOC contamination within source area soils shown on Figure 2. The objective of the remedial measure proposed in this document is to mitigate the impact to the environment from identified soil contaminants. A program to monitor the effectiveness of these efforts is also proposed.

To accomplish the stated objective, the program will use the technology of *ex situ* soil venting. This technology has been proven effective in removing VOCs from unsaturated soils (EPA, 1991). The proposed remedial program controls on-site contamination while minimizing the generation of hazardous waste residuals, consistent with the preference for permanent remedies under SARA. The proposed remedial program in all likelihood will remediate the source of contamination, thereby preventing further impacts to ground water. To address concerns regarding ground water and to document the effectiveness of these efforts, a program to monitor ground water quality will be undertaken. This monitoring will document the expected reduction of contaminant concentrations in ground water due to the removal of VOCs from contaminated soil which continues to serve as a source. It should be noted that the historical sampling data from the site monitoring wells indicates that concentrations of VOCs in ground water are decreasing with time. Further, ground water is not used at the site and there are no known users of ground water in the area. These factors suggest that remediation of the source area soils will

effectively reduce the potential for exposure to contaminants at the site, both through contaminated soil and through contaminated ground water.

3.02 Action Plan Execution

This section outlines the series of tasks and activities that will be performed during the remediation. A general overview of the technology is presented first, followed by a description of the proposed system, discussions of system operating and monitoring activities, air discharge issues, and reporting issues. A plan of the system is provided as Figure 3.

3.02.01 Technology Description

Ex situ soil venting, or soil vapor extraction technology, has been demonstrated to be effective in the remediation of VOCs from unsaturated soil (EPA, 1991). Soil venting is a promising new technology for site remediation that has gained acceptance throughout New York State. *Ex situ* soil venting includes the excavation and stockpiling of contaminated soils and installation of vapor removal systems within the soils. The vapor removal systems are ducted to a header which is in turn connected to a vacuum blower. The blower is operated at such a rate whereby a negative pressure gradient is induced through the soil pile, thus extracting VOCs from the soil matrix.

3.02.02 System Description

The proposed system, shown in Figure 3, will consist of the required components to extract vapor phase VOCs from the excavated soil. As previously mentioned, an approximate 15 foot by 30 foot by 4 foot volume of soil has been identified for remediation from the subject area. Assuming soil bulking upon excavation and the potential for encountering additional contaminated soil, a conservative estimate is that approximately 100 cubic yards of soil will be treated. Due to the restrictive nature of the sub-surface soils it may be necessary to add a bulking agent to the soil to facilitate acceptable vapor flow rates. These measures will be implemented as required based on conditions observed in the field. Prior to excavation, a soil storage area will be constructed. The area will measure approximately 12 feet by 45 feet. This area will provide separation of contaminated soil from uncontaminated soil during treatment. The area will be constructed by clearing the selected location as required. Native soil in the area will be graded and compacted as required. Next, a 2 to 3 foot earthen perimeter berm will be constructed from uncontaminated soil. After grading and compaction, a 6 inch layer of sand will be placed within the bermed area, followed by a chemical resistant bottom liner placed over the sand and earthen berm. The deployment of the liner will include the use of solvent welding techniques along the edges of the sheeting. The objective will be to form one single liner. Once the bottom is complete, contaminated soil will be excavated into the area.

During excavation of soil into the storage area, extraction pipes will be placed horizontally into the soil pile. The extraction pipes will consist of 4 inch diameter 0.010 slotted Schedule 40 PVC pipe, each with a filter fabric wrap. The purpose of the filter fabric wrap will be to minimize fines entering the system. It is anticipated that three 45 foot extraction pipes will be required for the system. The pipes shall be placed into the pile as shown on Figure 3. Following soil excavation the top and sides of the pile will be covered with a chemical resistant liner.

The slotted pipes will connect to a solid pipe header which will in turn connect to a skid or trailer mounted vapor extraction system. A dual header system will be installed such that the flow of air through the pile can be periodically reversed to maximize removal efficiencies. The vapor extraction system will include a cyclone type separator, a mist eliminator pad, a disposable filter unit, and a blower.

A constant drive blower will apply a vacuum to the system. Valves will be used to vary overall system vacuum. The exhausted vapors will be discharged to the atmosphere through a 4 inch diameter, 20 foot high exhaust stack.

The system will include instrumentation for system vacuum, pressure drop of moisture, fines removal equipment, discharge pressure, system inlet and exhaust temperature, and exhaust sampling port.

3.02.03 Post Excavation Sampling and Excavation Backfill

To confirm that all contaminated soil has been excavated and placed into the storage area, a post excavation soil sampling program will be performed. A grid based pattern will be used to collect samples from the excavation bottom and sidewalls. Samples will be analyzed for VOCs using EPA method 8010/8020. Sample results will be compared to applicable cleanup criteria to confirm that impacted soils are excavated for treatment.

After all contaminated soil has been excavated, the excavation will be filled with clean backfill.

3.02.04 System Operation and Monitoring

The system is expected to operate for an approximate one to two year period. The actual time the system will operate will be based on the specific removal rates and efficiencies obtainable from the system. At system start-up, the exhausted vapors will be monitored for the first 12 hours of operation for the following parameters: volatile organics using a photoionizing detector (PID), temperature, exhaust velocity, percent oxygen, explosive level, system vacuum, discharge pressure, condensate volume collected, and induced vacuum within the subject area. In addition, samples of the exhausted vapors will be collected at run times 1-2 hours, 7-8 hours, and 23-24 hours. The samples will be collected using appropriate NIOSH methods and analyzed for VOCs.

Initially, the system will be operated continuously to provide maximum withdrawal of soil gas from the soil pile. During this operation, the exhaust

gas will be monitored as discussed above. If the concentrations are found to be decreasing to levels within one order-of-magnitude of the method detection limit, the system operation may be altered to 8 hours on, 16 hours off per day. This operating method will allow the soil gas to equilibrate with the soil prior to withdrawal, providing equal mass removal at lower operating costs. The system will operate until a point where it is considered that the cost for the system's operations is not justified by the comparative effectiveness of the system. The system's effectiveness will be determined by the mass of compounds removed over a measured period of time. If the operating cost to remove the mass of compounds is deemed economically unjustified, the system operation will cease.

After the initial 12 hours of operation, the system will be monitored monthly for the above operating parameters without stack sampling until the remediation is complete. The stack sampling results obtained during start up will be correlated to volatile organics as measured by the PID. Moisture, or condensate, will be collected and managed appropriately.

Periodically during system operation, a core sample of the soil pile will be collected and analyzed for VOCs using EPA method 8010/8020. This information, in addition to the stack sampling results, will monitor the overall effectiveness of the system.

At the conclusion of the remediation, confirmatory soil samples will be collected to confirm that the remedial program is complete. Treated soil will be disposed of on-site.

3.02.05 Air Discharges

The proposed system will discharge directly to the atmosphere. This exhaust stream, anticipated to be approximately 200 cubic feet per minute, will contain VOCs removed from the excavated soils. The anticipated air discharges will be evaluated using the appropriate limits as contained in Part 212 of the New York State Air Pollution Control Requirements. Air cleaning is not expected to be required since New York State Air Regulations do not stipulate a degree of air cleaning for less than 1 to 10 pounds per hour emission rate potentials of class B rated compounds.

Expected air toxic emissions will be examined using the most recent draft version of the New York State Air Guide-1, Guidelines for the Control of Toxic Ambient Air Contaminants, 1991 Draft edition. The maximum acceptable ambient levels for the VOCs of concern will be used as criteria for determining the need for air cleaning equipment on the blower discharge. Air dispersion modeling will be performed to assess the potential levels of VOCs in the ambient air. Screening air dispersion models will be used for this evaluation.

This information will be used in order to obtain a certificate to operate from NYSDEC Division of Air Resources.

3.02.06 Reporting

Upon the completion of the remedial program, results will be compiled into a report which will address the following issues:

- System operation and performance

- Analytical results
- Removal efficiency
- Contaminant transport through soils
- Monitoring program results

3.03 Work Area Details and Health and Safety

The purpose of this section is to discuss those site control and health and safety issues which must be implemented during the execution of the proposed remedial program.

3.03.01 Site Control

A temporary chain link fence will be placed around the treatment area. This procedure should minimize the potential for direct contact exposure of uninvolved parties.

Significant runon/runoff is not expected during the project. Runon/ runoff control measures, such as gutters or trenching, will be implemented as required based on field conditions.

An area inside the fence will serve as the final personnel decontamination zone. The area will have separate zones for final personnel decontamination. The primary personnel contamination reduction zone will be within the decontamination pad where boots, coveralls, gloves and other personal protective equipment will be removed and decontaminated or disposed as appropriate.

3.03.02 Site Operations Facilities Design

Facilities constructed on-site will be designed and maintained during their use to minimize any potential release of contaminants to the environment. Additional measures will be implemented as necessary based on field conditions.

3.03.03 Site Security

Site security will be maintained at all times. Site security will be maintained through the use of temporary chain link fence. The fence line will be posted, "Warning Hazardous Work Area Do Not Enter Unless Authorized". A log to identify personnel site entry and exit, site visitors and security incidents will be maintained. Select portions of the fence may be covered with a visual barrier. Access to the work area will be provided through a secure gate.

3.03.04 Worker Health and Safety

A site specific Health and Safety Plan (HASP) for the remedial program will be developed prior to construction by OBG Technical Services. The Health and Safety Plan shall present the minimum health and safety requirements for personnel engaged in site activities. Subcontractors involved in the site activities will also be required to develop their own Health and Safety Plans which will at least meet the minimum Health and Safety requirements presented in the OBG Technical Services HASP. The Health and Safety Plan will be developed in accordance with 29 CFR 1910.120.

Included in the Health and Safety Plan will be worker health and safety guidelines, air monitoring procedures, decontamination procedures for personnel and equipment, and equipment to be used at site for decontamination purposes.

3.03.05 Ambient Air Quality Monitoring

Field activities associated with the IRM may release airborne vapors from the site. Monitoring will be performed to document releases and to ensure personnel involved in the project are equipped with and are wearing the proper personal protective equipment.

To quantitatively document air emissions leaving the site, ambient air sampling both upwind and downwind of the work area will be completed using a portable photoionization detector. The ambient air monitoring program will include monitoring with a combustible gas indicator and oxygen meter. Specifications for the monitoring equipment and activities will be detailed in the site specific Health and Safety Plan.

3.04 Monitoring Program

A remedial monitoring program has been developed to:

1. monitor ground water quality and the effectiveness of the remedial program in preventing further impacts to ground water from the suspected source area;
2. monitor the effectiveness of the soil remediation program; and
3. monitor downgradient ground water quality.

To accomplish the first goal of the monitoring program, the monitoring program will use the existing monitoring well at the source area of the site. Monitoring well MW-1 will be sampled on an annual basis to document a decrease in source area VOCs. Monitoring well sampling will consist of VOC sampling using EPA method 8010/8020. In order to provide a consistent basis by which to evaluate ground water chemistry, the data will be subject to statistical analyses. The statistical method chosen will be selected using the criteria incorporated into both state and federal TSDF compliance monitoring programs [40 CFR 264.99(c) and 6 NYCRR 373.2.6(8)(ii)].

To accomplish the second goal of the monitoring program, post remediation soil sampling will be conducted. A soil sampling program will be conducted to determine if the source area soils have been remediated to applicable levels. This will prevent further impacts to ground water.

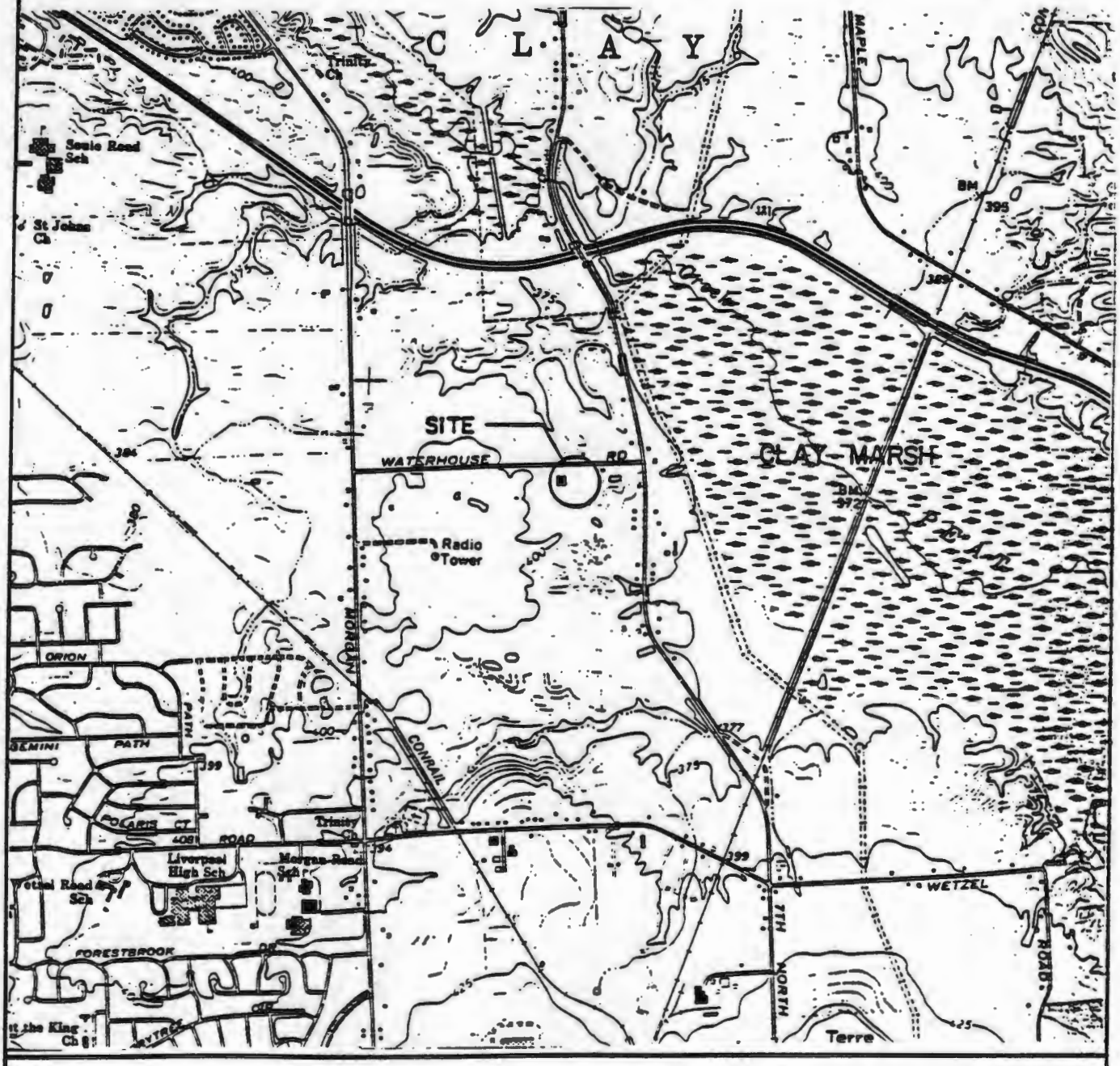
The third goal of the monitoring program will be to monitor downgradient ground water quality. To accomplish this task, the site wells MW-2, MW-3, and MW-6 will be sampled annually for VOCs. The upgradient well MW-4 will also be sampled to provide information on the upgradient water quality. These data will be compiled in a log for reporting purposes.

REFERENCES

United States Environmental Protection Agency, Soil Vapor Extraction Technology Reference Handbook EPA 540/2-91/003, February 1991

Figures

FIGURE 1



EAGLE COMTRONICS INC.
CLAY, NEW YORK

QUADRANGLE LOCATION

SITE LOCATION MAP

0 2000 4000

SCALE IN FEET

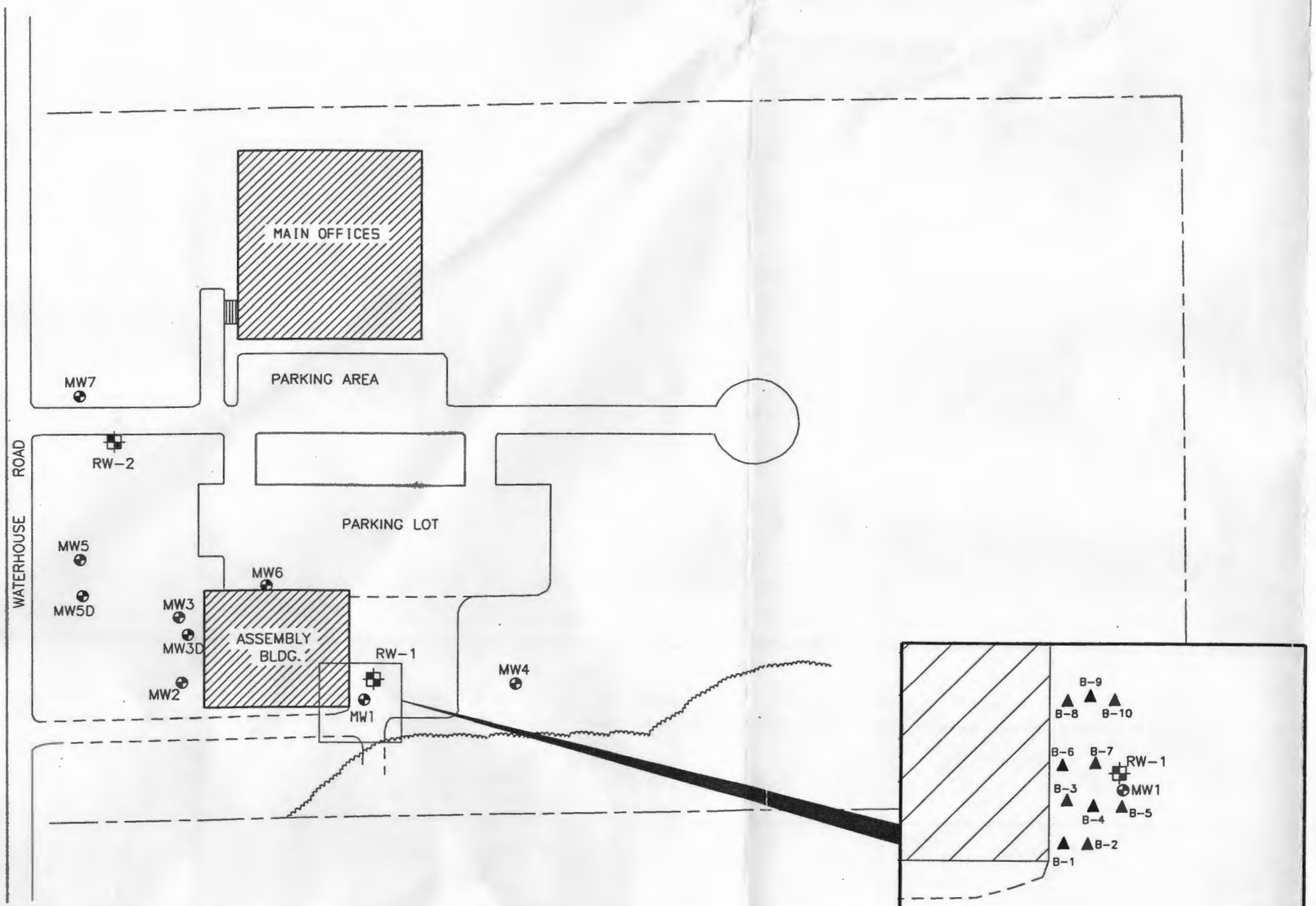
THIS MAP ADAPTED FROM THE BREWERTON, NEW YORK 7.5 MIN. U.S.G.S. QUADRANGLE MAP

O'BRIEN & GERE
ENGINEERS INC.
SYRACUSE, NEW YORK

FIGURE 2

EAGLE COMTRONICS INC.
CLAY, NEW YORK

SITE MAP



SOIL BORING LOCATIONS
SCALE 1" = 20'

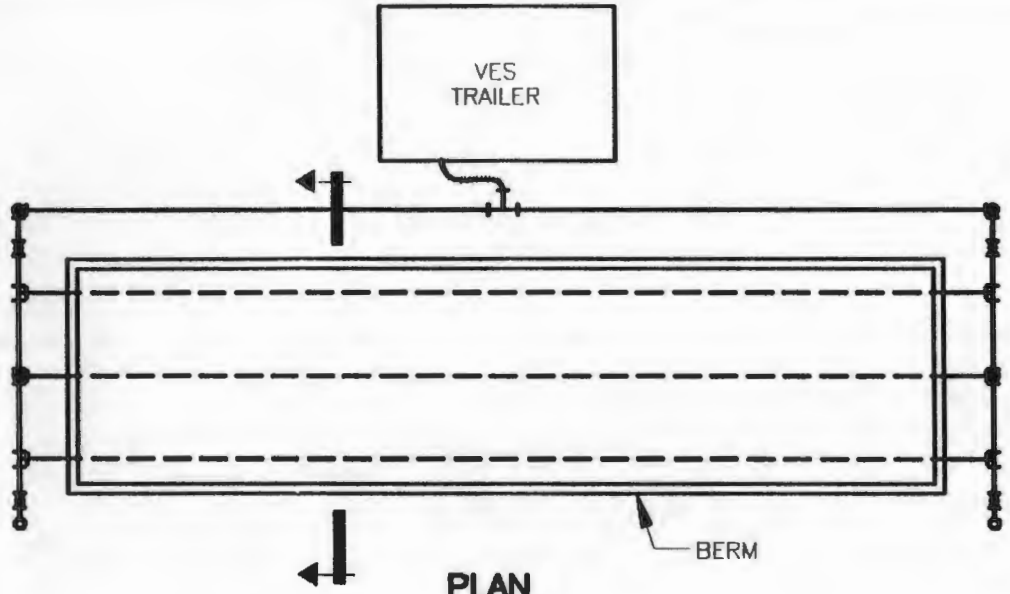
LEGEND:

- PROPERTY LINE
- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- TREE LINE
- SOIL BORING

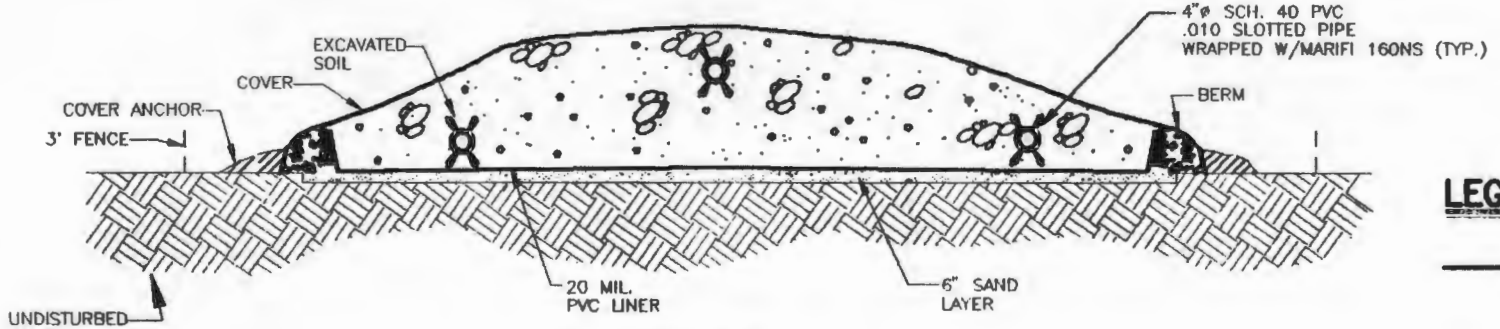
0 100 200
SCALE IN FEET

O'BRIEN & GERE
ENGINEERS INC.
Syracuse , New York

FIGURE 3



PLAN
NOT TO SCALE



SECTION
NOT TO SCALE

LEGEND:

- 4"SCH 40 PVC (SOLID)
- 4"SCH 40 PVC (.010 SLOTTED W/ MARIFI WRAP)
- BALL VALVE
- OPEN TO ATMOSPHERE

EX SITU SOIL VENTING SYSTEM

(CONCEPTUAL)

O'BRIEN & GERE ENGINEERS INC.

APPENDIX E

DESIGN PACKAGE - SOIL REMEDIATION SYSTEM

EAGLE COMTRONICS, INC.

MATERIALS AND PERFORMANCE SPECIFICATION

PREFABRICATED TRAILER MOUNTED SOIL VAPOR EXTRACTION SYSTEM

I. GENERAL

A) Work Specified

1. This section shall include the work required to construct, deliver, start-up and field test a complete, operating, prefabricated, trailer mounted soil vapor extraction system in accordance with the requirements of this section.

B) Design Basis

1. The soil vapor extraction system shall use the principles of vapor transport through soils to remove volatile organic compounds (VOCs) from unsaturated soils under the design conditions.

2. Design Characteristics:

   Regenerative blower capable of providing the following:

   a) Flow Range - 100 - 200 cubic feet per minute (CFM)
   b) Vacuum - 5 - 10 inches of Mercury (in Hg)

3. All components shall be designed to operate in an outdoor environment.

C) Related Work Not Included

1. 208 V, 3 phase power distribution from an existing motor control center to system control panel.

II. SUBMITTALS

A) Shop Drawings

The manufacturer shall submit shop drawings for the complete system and components. Four copies shall be submitted to the Owner's representative for

review. No equipment shall be manufactured until complete shop drawings are returned to the manufacturer by the Owner's representative stamped "Reviewed" or "Reviewed and Noted". Shop drawings shall include, but not be limited to, the following items:

1. Scale drawings showing equipment layouts, elevations, dimensions, pipe and duct connection sizes, blower configuration and control panel configuration.

2. Wiring and elementary control diagrams for the system control panel. Diagram shall include field connection point for power wiring.

3. Six (6) bound copies of system operation and maintenance manuals.

4. List of spare parts.

III. PRODUCT

A) General

The system shall be trailer mounted and include a blower, cyclone separator, in-line filter with replaceable cartridge element, inlet and outlet silencers, direct reading pressure, vacuum and temperature gauges, sampling taps, dilution air inlet valve and associated process piping.

B) Trailer

The trailer shall be a tandem axle, spring and equalized suspension type. Deck floor shall be constructed of pressure treated oak and deck height shall not exceed 34 inches. Trailer capacity shall be adequate to support equipment specified herein. Electric brakes, tail and backup lights and a ball hitch will also be provided. A centermount jack as well as 2000 pound side mount jacks shall be provided. A combination platform and steel tool box base, constructed of steel plate is to be welded onto the trailer tongue.

C) Accessories to be Provided

1. A 60" L x 30" W x 36" H security tool box is to be bolted onto the tool box base. The toolbox is to be 16-gauge steel construction with recessed closed padlocks, full cover, dual point locking system and built in storage tray. Two hardened steel padlocks are to be provided, each keyed to the same key, with four keys to be provided.

2. Two sets of two chocks shall be provided for securing the trailer when

parked. Each set of chocks shall be linked by rope or chain.

D) Blower Assembly

1. Blower shall be a single stage helical flow type exhauster with a cast aluminum housing and impeller as manufactured by Lamson Corporation or approved equal. Blower construction shall be suitable for operation in an outdoor environment.

2. Motor to be severe duty TEFC construction suitable for operation in an outdoor environment.

3. Motor will drive a variable speed V-belt pulley system capable of operating blower at any speed over the range of given flows.

4. Blower and motor shall be factory-mounted on a common steel baseplate with suitable resilient foundation isolation pads provided for mounting on trailer deck. Occupational Safety and Health Administration (OSHA) approved belt guard shall be provided.

E) Silencers

1. Inlet and outlet silencers of the straight through absorptive type shall be provided and mounted as close as possible to the inlet/outlet connections.

F) Vacuum relief valve

1. An adjustable vacuum relief valve shall be suitable for air, natural gas or propane service and be filed adjustable from 2 to 10 inches Hg suction.

G) Gauges

1. Direct reading pressure gauges shall be installed within the discharge piping and be capable of reading 0-6 PSIG.

2. Vacuum gauges shall be installed within the inlet piping before and after the cyclone separator and in-line filter. The vacuum gauges shall be capable of reading 0-12 inches Hg.

H) Inlet Filter

1. Inlet filter shall be large capacity vacuum type.

2. Vessel construction shall be carbon steel.

3. Nominal filter retention shall be 10 microns.

4. Corporation cocks shall be provided on the drain and vent openings.

5. One spare filter element shall be provided.

I) Ball Valves

1. Ball valves shall be Style A Double-Seal Screwed End ball valves.

2. Valve body and trim shall be carbon steel.

3. Valve seat, body seal and stem shall be TFE.

4. Handles shall be provided.

J) Process Air Piping

1. All process air piping shall be aluminum with threaded or flanged connections as required to complete the intent of the design.

K) Dilution Air Inlet Valve

1. A dilution air inlet valve shall be provided prior to the cyclone separator.

2. Valve shall be in accordance with Section III(I) above.

L) Temperature Switch

1. Temperature switch shall be NEMA 4 field adjustable increasing from 105 - 240 Fahrenheit and decreasing from 87 - 234 Fahrenheit.

M) Vacuum Switches

1. Vacuum switches shall be field adjustable with operating range from 0-30" Hg vacuum.

N) Pressure Switches

1. Pressure switches shall be field adjustable with operating range from 1/8-15 PSIG.

O) Cyclone Separator

1. An aluminum cyclone separator sized according to the range of expected flows shall be provided.

2. The cyclone separator shall include a day tank with freeze protection and a sight glass.

IV. ACCESSORIES TO BE PROVIDED

A) Suction Hose

1. Fifteen (15) linear feet of static protected stainless steel suction hose shall be provided in a diameter suitable for the flows expected. Hose shall have a 150# plate flange by floating flanged ends.

V. TESTING

A) Shop Performance Tests

1. Blower shall be shop tested and certified on the recommended manufacturer's RPM performance curve.

B) Field Running Tests

1. After installation, a qualified representative of the blower manufacturer shall conduct a field running test which demonstrates, as conditions permit, the following:

   a. That the unit has been properly installed and has no mechanical defects.

   b. That the unit is in proper alignment and has been properly connected.

   c. That the unit is free from undue vibration over the full range of operating conditions.

   d. That the unit is free from overloading or overheating of any parts.

2. A certified report attesting to the field running test shall be submitted to the Owner's representative.

3. The blower manufacturer's representative shall demonstrate in the presence of the Owner's representative how to adjust up and down the blower RPM within the given operating range.

New York State Department of Environmental Conservation
615 Erie Blvd. W., Syracuse, NY 13204-2400
Division of Regulatory Affairs, Region 7
(315) 426-7438

Thomas C. Jorling
Commissioner

January 26, 1993

Joseph Cardarelli
Safety Coordinator
Eagle Comtronics, Inc.
4562 Waterhouse Road
Clay, NY 13041

RE: Permit to Construct an Air Contamination Source for
Eagle Comtronics, Inc., (3124002079), Emission Point #00001,
Application ID #7-3124-00194/1-0

Dear Mr. Cardarelli:

Enclosed please find the above-referenced Permit to construct for the Eagle Comtronics, Inc. facility. This permit must be kept on file at the affected facility. It will expire on January 21, 1994.

Upon completion of construction, please have a representative of the firm sign and date Box 155. When returning this form to my attention, please refer to the Application ID number given above.

Also enclosed is the UPA receipt for your records.

If there are any questions, please contact this office.

Sincerely,

Joanne L. March
Sr. Environmental Analyst

Enclosures

cc: Div. of Air, Region 7 C. Branagh, Region 7
J. Rinko, O'Brien and Gere
JLM:jci

Application ID #7-3124-00194/1-0

Program ID #312400 2079

AIR PERMIT SPECIAL CONDITIONS

EAGLE COMTRONICS INC.
4562 WATERHOUSE RD.
CLAY, NY
EMISSION POINT NO: 00001

1. Quarterly soil or air emission analysis required to be reported to NYSDEC Division of Air. NYSDEC may change analysis requirements as necessary.

2. Vapor extraction rate limited to 200 CFM.

3. Operation shall not cause any nuisance odors.

4. Should significant new scientific evidence from a recognized institution result in a decision by DEC that lower ambient guideline concentrations must be established, it may be necessary to reduce emissions from this source prior to the expiration of this PC/CO.

1/19/93

Attachment 1

LOCATION FACILITY EMISSION POINT

3 1 2 4 0 0 2 0 7 9 0 0 0 0 1 1

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CC
WHITE - ORIGINAL
GREEN - DIVISION OF AIR
WHITE - REGIONAL OFFICE
PINK - FIELD REP
YELLOW - APPLICANT

A ADD
C CHANGE
D DELETE

READ INSTRUCTIONS CONTAINED IN FORM 76-11-12 BEFORE ANSWERING ANY QUESTION

PROCESS, EXHAUST OR VENTILATION SYSTEM

APPLICATION FOR PERMIT TO CONSTRUCT OR CERTIFICATE TO OPERATE

1. NAME OF OWNER/FIRM: EAGLE CONTRONICS, INC.			9. NAME OF AUTHORIZED AGENT: O'BRIEN & GERE ENGINEERS, INC.			10. TELEPHONE: (315) 437-6100	19. FACILITY NAME (IF DIFFERENT FROM OWNER/FIRM):
2. NUMBER AND STREET ADDRESS: 4562 WATERHOUSE ROAD			11. NUMBER AND STREET ADDRESS: 5000 BRITTONFIELD PARKWAY				20. FACILITY LOCATION (NUMBER AND STREET ADDRESS):
3. CITY - TOWN - VILLAGE: CLAY	4. STATE: NY	5. ZIP: 13041	12. CITY - TOWN - VILLAGE: SYRACUSE	13. STATE: NY	14. ZIP: 13221		21. CITY - TOWN - VILLAGE	22. ZIP
6. OWNER CLASSIFICATION: A. ☐ COMMERCIAL C. ☐ UTILITY F. ☐ MUNICIPAL I. ☐ RESIDENTIAL; B. ☒ INDUSTRIAL D. ☐ FEDERAL G. ☐ EDUC. INST. J. ☐ OTHER; E. ☐ STATE H. ☐ HOSPITAL			15. NAME OF P.E. OR ARCHITECT PREPARING APPLICATION: STEVEN R. GARVER, P.E.	16. N.Y.S. P.E. OR ARCHITECT LICENSE NO.: 052526	17. TELEPHONE: (315) 437-6100		23. BUILDING NAME OR NUMBER	24. FLOOR NAME OR NUMBER
7. NAME & TITLE OF OWNERS REPRESENTATIVE: JOSEPH CARDARELLI, SAFETY COORDINATOR		8. TELEPHONE: (315) 622-3402	18. SIGNATURE OF OWNERS REPRESENTATIVE OR AGENT WHEN APPLYING FOR A PERMIT TO CONSTRUCT: Brian R. O'Brien				25. START UP DATE: 11 / 92 (MO / YR)	26. DRAWING NUMBERS OF PLANS SUBMITTED: FIGURE 2
							27. PERMIT TO CONSTRUCT: A. ☒ NEW SOURCE B. ☐ MODIFICATION	28. CERTIFICATE TO OPERATE: A. ☐ NEW SOURCE B. ☐ MODIFICATION C. ☐ EXISTING SOURCE

29. EMISSION POINT ID.	30. GROUND ELEVATION (FT.)	31 HEIGHT ABOVE STRUCTURES (FT.)	32 STACK HEIGHT (FT.)	33. INSIDE DIMENSIONS (IN.)	34 EXIT TEMP. (°F)	35 EXIT VELOCITY (FT/SEC)	36. EXIT FLOW RATE (ACFM)	37. SOURCE CODE	38 HRS/DAY	39 DAYS/YR	40 % OPERATION BY SEASON Winter	Spring	Summer	Fall
0 0 0 0 1	393	15	15	4	100	38.2	200	2219	24	365	25	25	25	25

41. DESCRIBE PROCESS OR UNIT

1. SOIL VAPOR EXTRACTION SYSTEM
2.
3.
4.
5.
6.
7.
8.

EMISSION CONTROL EQUIPMENT I. D.	CONTROL TYPE	MANUFACTURER'S NAME AND MODEL NUMBER	DISPOSAL METHOD	DATE INSTALLED MONTH / YEAR	USEFUL LIFE
42	43 99	44 NONE	45	46 /	47
48	49	50	51	52 /	53

CALCULATIONS

SEE ATTACHED CALCULATIONS.

CONTAMINANT NAME	CAS NUMBER	INPUT OR PRODUCTION	UNIT	ENV. RATING	EMISSIONS ACTUAL	UNIT	HOW DET	EMISSIONS PERMISSIBLE	% CONTROL EFFIC'CY	HOURLY EMISSIONS (LBS/HR) ERP	HOURLY EMISSIONS (LBS/HR) ACTUAL	ANNUAL EMISSIONS (LBS/YR) ACTUAL	ANNUAL EMISSIONS (LBS/YR) PERMISSIBLE
54. 1,1,1-TRICHLOROETHANE	55. 00071-55-6	56	57	58. C	59 3.68 ~~0.00368~~	60 2	61 9	62 3.68	63 0	64 ~~0.00368~~ 0.004	65 ~~0.00368~~ 0.004	66 32.2	67 32.2
69. TRICHLOROETHYLENE	70. 00079-01-6	71.	72.	73. B	74. 0.37	75 ~~94~~ 2	76 9	77 0.37	78 0	79 TRACE 0.001	80 TRACE 0.001	81 3.24	82 3.24
84. TETRACHLOROETHYLENE	85. 00127-18-4	86.	87.	88. B	89. 0.01	90 ~~94~~ 2	91. 9	92. 0.01	93. 0	94 TRACE 0.001	95 TRACE 0.001	96 0.088	97 0.088
99. TOLUENE	100. 00108-88-3	101.	102.	103. C	104. 0.01	105 ~~94~~ 2	106 9	107. 0.01	108. 0	109 TRACE 0.001	110 TRACE 0.001	111 0.088	112 0.088
114.	115. - -	116.	117.	118.	119.	120.	121.	122.	123.	124.	125.	126.	127.
129.	130. - -	131.	132.	133.	134.	135.	136.	137.	138.	139.	140.	141.	142.

SOLID FUEL TYPE	SOLID FUEL TONS/YR	SOLID FUEL % S	OIL TYPE	OIL THOUSANDS OF GALLONS/YR	OIL % S	GAS TYPE	GAS THOUSANDS OF CF/YR	GAS BTU/CF	APPLICABLE RULE	APPLICABLE RULE
144	145	146	147	148	149	150	151.	152	153 212	154

Upon completion of construction sign the statement listed below and forward to the appropriate field representative

THE PROCESS, EXHAUST OR VENTILATION SYSTEM HAS BEEN CONSTRUCTED AND WILL BE OPERATED IN ACCORDANCE WITH STATED SPECIFICATIONS AND IN CONFORMANCE WITH ALL PROVISIONS OF EXISTING REGULATIONS.

155 SIGNATURE OF AUTHORIZED REPRESENTATIVE OR AGENT

DATE

156 LOCATION CODE	157 FACILITY ID. NO.	158 U T M (E)	159 U T M (N)	160 SIC NUMBER	161. DATE APPL RECEIVED	162 DATE APPL REVIEWED	163 REVIEWED BY
3 1 2 4 0 0	2 0 7 9	4 0 2 4	7 7 9 4	3 6 7 4	- / -	1 / 19 / 93	D. WEAVER

AGENCY USE ONLY

PERMIT TO CONSTRUCT ~~CW~~ AK

164 DATE ISSUED	165 EXPIRATION DATE	166 SIGNATURE OF APPROVAL	167 FEE
1/21/93	1/21/14		~~50~~

168
1. DEVIATION FROM APPROVED APPLICATION SHALL VOID THIS PERMIT
2. THIS IS NOT A CERTIFICATE TO OPERATE
3. TESTS AND/OR ADDITIONAL EMISSION CONTROL EQUIPMENT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A CERTIFICATE TO OPERATE

RECOMMENDED ACTION RE: C.O.

169 DATE ISSUED	170 EXPIRATION DATE	171 SIGNATURE OF APPROVAL	172 FEE
/ /	/ /		

173
1. ☐ INSPECTED BY _____ DATE _____
2. ☐ INSPECTION DISCLOSED DIFFERENCES AS BUILT VS PERMIT, CHANGES INDICATED ON FORM
3. ☐ ISSUE CERTIFICATE TO OPERATE FOR SOURCE AS BUILT
4. ☐ APPLICATION FOR C.O DENIED _____ DATE _____ INITIALED

174. SPECIAL CONDITIONS:

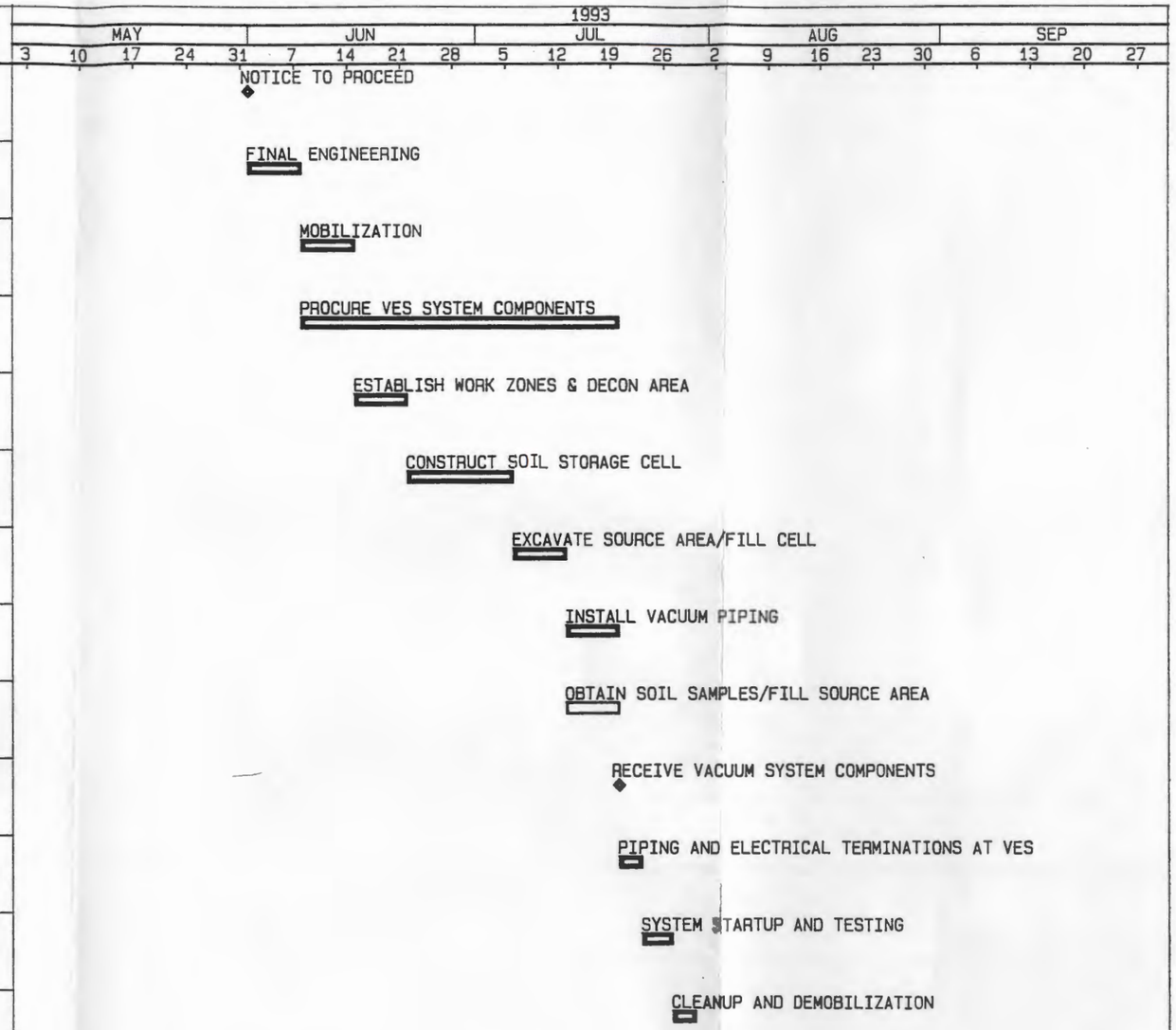
1. SEE ATTACHMENT 1
2.
3.
4.
5.
6.
7.
8.

19-3 (10-79)

APPENDIX F

IRM SCHEDULE

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	REM DUR	PCT
NOTICE TO PROCEED	1JUN93		0	0
FINAL ENGINEERING	1JUN93	7JUN93	5	0
MOBILIZATION	8JUN93	14JUN93	5	0
PROCURE VES SYSTEM COMPONENTS	8JUN93	19JUL93	30	0
ESTABLISH WORK ZONES & DECON AREA	15JUN93	21JUN93	5	0
CONSTRUCT SOIL STORAGE CELL	22JUN93	5JUL93	10	0
EXCAVATE SOURCE AREA/FILL CELL	6JUL93	12JUL93	5	0
INSTALL VACUUM PIPING	13JUL93	19JUL93	5	0
OBTAIN SOIL SAMPLES/FILL SOURCE AREA	13JUL93	19JUL93	5	0
RECEIVE VACUUM SYSTEM COMPONENTS	20JUL93	19JUL93	0	0
PIPING AND ELECTRICAL TERMINATIONS AT VES	20JUL93	22JUL93	3	0
SYSTEM STARTUP AND TESTING	23JUL93	26JUL93	2	0
CLEANUP AND DEMOBILIZATION	27JUL93	29JUL93	3	0



Plot Date 13APR93
Data Date 13APR93
Project Start 9APR93
Project Finish 29JUL93

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

EAGLE COMTRONICS, INC.
EX-SITU VACUUM EXTRACTION SYSTEM
OBG TECHNICAL SERVICES, INC.

REV 1

Date	Revision	Checked	Approved