

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

GROUNDWATER SAMPLING PLAN

MARCH 1994



CHESTER
ENVIRONMENTAL

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

GROUNDWATER SAMPLING PLAN

PROJECT NO.: 320000-20

MARCH 1994



CHESTER
ENVIRONMENTAL

P.O. Box 15851 · Pittsburgh, PA 15244
412-269-5700 · Fax 412-269-5749

GROUNDWATER SAMPLING PLAN

PHILIPS DISPLAY COMPONENTS CO. SENECA FALLS, NEW YORK

TABLE OF CONTENTS

	Page No.
1.0 INTRODUCTION	1
1.1 Regulatory Framework.....	1
2.0 FIELD ACTIVITIES	1
2.1 Test Boring and Monitoring Well Installation	1
2.2 Hydraulic Conductivity Testing	2
2.3 Groundwater Sampling	2
3.0 RESULTS OF FIELD ACTIVITIES	3
3.1 Subsurface Conditions	3
3.2 Hydraulic Conductivity	3
3.3 Groundwater Quality	4
3.1.1 Metals	4
3.1.2 Volatile Organic Compounds	4
3.1.3 Semivolatile Compounds	4
4.0 GROUNDWATER SAMPLING PLAN	4
4.1 Schedule	5
4.2 Personnel	5
4.3 Responsibilities - Preparation for the Field Work	5
4.4 Groundwater Sampling	6
4.4.1 Locations	6
4.4.2 Analyses	6
4.4.3 Sample Containers and Preservation	6
4.4.4 Quality Assurance/Quality Control	6
4.4.5 Laboratory	7
4.5 Field Procedures	7
4.5.1 Opening the Monitoring Well	8
4.5.2 Water Level Measurement	8
4.5.3 Well Purging	8
4.5.4 Groundwater Sampling	8

GROUNDWATER SAMPLING PLAN

PHILIPS DISPLAY COMPONENTS CO. SENECA FALLS, NEW YORK

TABLE OF CONTENTS (CONT.)

	Page No.
4.5.5 Decontamination	10
4.5.6 Sample Documentation	10
4.6 Post-Sampling Activities	11

TABLES

2-1	Well Construction Summary
2-2	Monitoring Well Development Summary
3-1	Summary of Hydraulic Conductivity
3-2	Groundwater Analytical Results - Inorganics, Round 1
3-3	Groundwater Analytical Results - Inorganics, Round 2
3-4	Groundwater Analytical Results - Volatile Organics, Round 1
3-5	Groundwater Analytical Results - Volatiles Organics, Round 2
4-1	Pre-Field Checklist

FIGURES

2-1	Monitoring Well Location Map
3-1	Groundwater Elevation Contours
4-1	Field Data Sheet
4-2	Chain-of-Custody Form

APPENDICES

Appendix A	Test Boring Logs and Monitoring Well Construction Diagrams, MW-20 Through MW-29
------------	--

GROUNDWATER SAMPLING PLAN

**PHILIPS DISPLAY COMPONENTS CO.
SENECA FALLS, NEW YORK**

TABLE OF CONTENTS (CONT.)

Appendix B Slug Test Evaluations, MW-20 Through MW-29

Appendix C Analytical Results, Groundwater Sampling Rounds 1 and 2

1.0 INTRODUCTION

1.1 Regulatory Framework

The Philips Display Components Company (Philips) is conducting investigations as part of the RCRA corrective action program at their former facility in Seneca Falls, New York. Philips and the New York State Department of Environmental Conservation (NYSDEC) have agreed to designate the plant buildings at the Seneca Falls Facility an Inaccessible Solid Waste Management Unit (SWMU). As part of the agreement for the inaccessible SWMU designation, Philips agreed to initiate a groundwater monitoring program. The program was proposed in the RCRA Facility Assessment (RFA) Supplemental Sampling Visit Work Plan (SSVWP) and approved by the NYSDEC. The NYSDEC has required that the groundwater monitoring program continue during the period of time the buildings are classified as inaccessible SWMU's, unless Philips presents information to the NYSDEC showing that continued groundwater monitoring is unnecessary.

The SSVWP requires that a groundwater monitoring plan be submitted following monitoring well installation and collection of two rounds of groundwater sampling to assess the groundwater quality at the facility. Chester Environmental (Chester) installed a network of ten wells in accordance with the SSVWP to monitor groundwater quality around the plant buildings. Two rounds of groundwater samples were collected five weeks apart to provide a preliminary assessment of groundwater quality. The analytical results obtained from the two sampling rounds were used to select constituents of interest for this sampling plan.

This document is the groundwater sampling plan for the Seneca Falls facility and fulfills the requirement proposed in the SSVWP. Section 2.0 of this sampling plan discusses the field activities completed during installation of the monitoring system. Section 3.0 presents the results of the field activities and Section 4.0 presents the activities and procedures to be implemented during each groundwater sampling event.

2.0 FIELD ACTIVITIES

2.1 Test Boring and Monitoring Well Installation

The ten groundwater monitoring wells, MW-20 through MW-29 were installed as part of the SSVWP. Monitoring well locations are shown on Figure 2-1. Nine of the wells monitor the uppermost water-bearing till zone, the tenth monitors a deeper water-bearing till zone. The top of each of the shallow well screens was typically installed between five and ten feet below the ground surface. Monitoring well MW-

24 is the deeper well and was double cased and drilled deeper to avoid petroleum products encountered in the shallow fill material. Monitoring well MW-24 monitors groundwater between 15 and 25 feet below the ground surface.

*highest levels
are in the
only deep well
- exposed deep
well must*

Soil borings to accommodate monitoring well installation were completed using hollow stem augers. Continuous soil samples were collected using split spoons. Soils were described and classified by Chester's on-site hydrogeologist.

The monitoring wells were constructed with a ten-foot length of 4-inch inside diameter, 0.010-inch slot, PVC well screen and 4-inch inside diameter, flush joint, schedule 40, PVC riser pipe. The annular space between the well screen and bore hole wall was backfilled with a clean silica sand to a point two feet above the top of the screen. A two foot layer of bentonite pellets was placed on top of the sand pack and hydrated. Concrete was then placed on top of the bentonite seal. The wells were finished with a flush-mount protective cover or an above-ground protective steel casing. A reference point was marked on the top of the PVC riser and surveyed to provide a reference elevation for water level measurements. Boring logs and monitoring well construction diagrams are presented in Appendix A of this report. A summary of the construction details is provided in Table 2-1.

Drill cuttings and waters generated from the temporary decontamination pad were placed in labeled DOT-approved drums and stored on site. These materials have been tested for later disposal.

All monitoring wells were developed by agitating the water column in the well and removing the water with hand-held bailers. The wells were purged until three or more well volumes were removed or the wells were dry. Table 2-2 provides a summary of the monitoring well development.

*Shallow
water level*

2.2 Hydraulic Conductivity Testing

Slug tests were performed in ten of the monitoring wells to calculate the hydraulic conductivity of the shallow water bearing zone. Tests were performed by lowering or raising a stainless steel slug into or out of the water column and recording the response to the change in water level. Water level measurements over time were recorded with a pressure transducer and a data recorder. Nineteen tests were performed in the wells.

2.3 Groundwater Sampling

Groundwater samples were collected from the newly installed wells (MW-20 through 29) and MW-1 and MW-8 on June 14. Monitoring well MW-8 was deleted from the list during the second sampling round on July 20, 1993, because it monitors deep

bedrock water bearing zones below the till and would not provide the appropriate data to select constituents of interest for shallow groundwater monitoring.

Before sampling each well, the depth to the water level was measured from the reference point marked at the top of the PVC casing. The volume of water in the well was calculated and up to three well volumes were removed from the well or, water was removed until the well was dry. All purge water was placed in DOT approved drums, stored on site until receipt of analytical results, then disposed. During sample collection the pH, specific conductance and temperature were measured.

Groundwater samples collected during the first sampling round were analyzed for Volatile Organic Compounds, (VOCs) by Method 8240, total cadmium, chromium and zinc by Method 6010, total lead by Method 7421, and total fluoride by Method 340.2.

Groundwater analyses for the second sampling round included the VOCs and metals listed above. The NYSDEC requested that semivolatile analyses also be run on samples collected from two monitoring wells which were chosen based on first round sampling analytical results. Accordingly, monitoring wells MW-1 and MW-24 were analyzed for semi-volatile organic compounds by Method 8270 in accordance with the SSVWP.

3.0 RESULTS OF FIELD ACTIVITIES

3.1 Subsurface Conditions

The natural soils encountered during the investigation were principally stiff to hard glacial tills consisting of mixed clays, silts, sands and gravels. Thin lenses of fine sand were occasionally encountered. Six feet of fill, consisting mostly of sand and gravel, was encountered in MW-24. Six feet of clayey fill was encountered in MW-22. In the other borings the fill consisted mostly of one foot or less of asphalt or gravel.

Saturated soil was encountered at various depths. Wet zones were often encountered between moist or damp soil zones. Water levels in the wells are two to seven feet below the ground surface. Groundwater contours shown in Figure 3-1 indicate groundwater flow is to the south and southeast with an average gradient of 0.017 feet per foot.

3.2 Hydraulic Conductivity

The hydraulic conductivity was calculated using the Bouwer and Rice method. The water level measurements were entered into a curve-fitting program along with well

dimensions. The results of the slug tests are summarized in Table 3-1. Calculations indicate the average hydraulic conductivity ranges from a low conductivity of 1.6×10^{-5} feet/minute to a high conductivity of 3×10^{-4} feet/minute. Plots and curve fits of the water level data are presented in Appendix B of this report.

3.3 Groundwater Quality

3.3.1 Metals

A summary of metals concentrations are presented for informational purposes in Table 3-2 and 3-3. The first round concentrations are summarized in Table 3-2; Table 3-3 summarizes concentrations the second round sampling event. All analytical results for metals are presented in Appendix C.

3.3.2 Volatile Organic Compounds

A summary of volatile organic concentrations are presented in Table 3-4 for the first sampling round; Table 3-5 presents concentrations for the second sampling round. All analytical results for volatile organics are presented in Appendix C. The analytical results are presented in this plan for informational purposes.

Some concentrations in Tables 3-4, 3-5 and Appendix C are labelled with the "J" designation. These values are below the EPA mandated method detection limit, but above the detection limit of the instrument.

3.3.3 Semivolatile Compounds

Semivolatile compounds were analyzed only from second round groundwater samples and only from monitoring wells MW-1 and MW-24 based upon first round analytical results. No semivolatile compounds were detected in either MW-1 or MW-24. Analytical results are presented in Appendix C.

4.0 GROUNDWATER SAMPLING PLAN

This section presents the activities and procedures to be implemented during each sampling event at the Seneca Falls facility. The monitoring wells included in the sampling events and the constituents of interest are based on the two rounds of groundwater sampling previously completed. Groundwater sampling procedures are to be implemented in accordance with those described in the Quality Assurance Project Plan (QAPjP) prepared for the Philips Seneca Falls facility. Standard Operation Procedures (SOPs) for groundwater sampling are presented in the appendix of the QAPjP. Departure from the procedures should be documented and reported to the project manager as soon as possible.

where is this?

4.1 Schedule

Groundwater sampling will be conducted on a quarterly basis. The quarters will be January through March, April through June, July through September, and October through December. Efforts will be made to perform the sampling around the fifteenth of the first month of each quarter.

4.2 Personnel

The project manager will act as coordinator during the sampling event and will designate a field team leader. The field sampling team will consist of two people; the field team leader and a sampling technician.

4.3 Responsibilities - Preparation for the Field Work

Prior to the beginning of field work it is the responsibility of the coordinator to:

- Schedule the sampling event,
- Assure the field team leader and sampling technician are familiar with the scope of work and the procedures employed during the work,
- Assure the field sampling personnel have read and understand the Site Health and Safety Plan and the QAPjP,
- Assure that the field sampling personnel meet with all state and federal training and health monitoring requirements, and
- Notify the NYSDEC and facility personnel of the intended date of the sampling event.

Prior to the field work it is the responsibility of the sampling personnel to:

- Assemble laboratory equipment and sample containers,
- Check all equipment and assure that it is in working order, and
- Secure transportation of personnel, sampling equipment, sampling containers to the site.

Table 4-1 is a pre-field check list to be used as a guideline in assembling field equipment.

4.4 Groundwater Sampling

4.4.1 Locations

Twelve monitoring wells will be sampled. They are: MW-1, MW-8, and MW-20 through 29. Monitoring well MW-8 has been included in the monitoring well network in order to monitor bedrock groundwater quality. Monitoring well locations are shown on Figure 2-1.

4.4.2 Analyses

Field analyses at each well will consist of pH, specific conductance and temperature.

Each well will be sampled and samples analyzed for the following inorganics: total chromium, and total zinc by EPA Method 6010; total lead by EPA Method 7421 and total fluoride by EPA Method 340.2. Cadmium is not included as a constituent of interest for this monitoring program because it was not detected above the method detection level in any of the sampled wells.

Each well will be sampled and samples analyzed for Volatile Organic Compounds (VOCs) by EPA Method 8240.

Third party independent data validation will not be performed on the analytical results obtained from quarterly groundwater sampling. In accordance with the NYSDEC RCRA Quality Assurance Project Plan Guidance document, dated March 29, 1991, independent third party data validation applies only to one time sampling events.

4.4.3 Sample Containers and Preservation

Metals samples will be placed in 1000 milliliter (ml) plastic containers, preserved with nitric acid (HNO_3) to a pH of less than 2. The holding time for metals is six months.

VOC samples will be placed in two, 40 ml, glass vials with Teflon septums. The samples will be preserved with hydrochloric acid (HCl) to a pH less than 2. Holding time is 14 days if they are preserved.

All sample containers will be placed in an iced cooler immediately after collection.

4.4.4 Quality Assurance/Quality Control

One duplicate will be collected from one well during the sampling event. The duplicate sample will be analyzed for pH, specific conductance, temperature, metals and VOCs.

One rinsate blank will be collected each day groundwater samples are collected. The rinsate blank will be prepared by pouring laboratory-prepared, analyte-free water through a decontaminated bailer. The rinsate blank will be analyzed for pH, specific conductance, metals and VOCs. The sampling personnel will record the time the rinsate blank is collected and list the sample on the chain-of-custody form.

One or more trip blanks will be prepared in the laboratory and be kept in an iced cooler with the sample containers at all times. There will be one trip blank for each overnight shipment of samples, or one trip blank if all the samples are delivered to the laboratory in a single shipment. The trip blanks will be prepared using laboratory-prepared, analyte-free water placed in two, 40 ml vials with Teflon septums and preserved to a pH of less than 2 using HCl. The sample container will not be opened at any time during the field activities. The trip blank will be analyzed for VOCs. The trip blank(s) will be listed on the chain-of-custody.

4.4.5 Laboratory

The analytical laboratory will be notified one week prior to initiating field sampling activities in order to obtain the appropriate sample containers and preservatives. The analytical laboratory will assure the proper preservative will be placed in the sample containers for the constituent of interest. The analytical laboratory for groundwater analysis at the Seneca Falls Facility is:

Attention: _____

Groundwater samples will be sent to the laboratory designated above.

The analytical laboratory has not been selected at this time. The samples will be sent to an analytical laboratory certified in the State of New York. The address and point of contact will be placed in the blanks above upon selection.

4.5 Field Procedures

Upon arrival, the sampling personnel will notify facility security of their arrival and their estimated duration of work at the facility.

4.5.1 Opening the Monitoring Well

Sampling personnel will monitor the air immediately above the open riser and the air in the breathing space with a Flame Ionization Detector (FID). If levels immediately above the open riser are above background levels, the breathing space will be monitored at five minute intervals. If levels in the breathing space are above background, procedures detailed in the Site Health and Safety Plan will be followed. All readings and the times they were taken will be recorded in the field book.

4.5.2 Water Level Measurement

Water levels will be measured with an electric water level probe in all monitoring wells prior to purging and sample collection. Measurements will be made from the marked reference point at the top of the PVC well casing. Water levels will be recorded in the field log book and on field data sheets. The water level probe will be decontaminated between each well by rinsing the tape with distilled or deionized water.

The bottom of the well will be measured and recorded.

4.5.3 Well Purging

Sampling personnel will calculate the volume of water in the well based on the water level and bottom of the well measurements and record the results on the field data sheets. If the well does not bail dry, a minimum of three well volumes of groundwater will be removed from the well. If the well is bailed dry during purging, the well will be considered adequately purged.

The wells will be purged by bailing with a decontaminated bailer. Laboratory cleaned bailers will be used if possible. If not, bailers will be decontaminated according to procedures listed in Section 4.5.5 of this report.

All purge water will be placed in 55-gallon steel DOT drums, labelled accordingly and stored on-site. The number of drums used will be recorded in the field book.

4.5.4 Groundwater Sampling

If the well yields sufficient water, then groundwater samples will be collected within three hours of purging. If the well is purged dry, samples will be collected the following day.

The following steps will be performed during sample collection from monitoring wells:

1. Sampling personnel will put on new disposable gloves prior to handling sampling equipment.
2. Sample container sets will be labeled and preservatives added, if necessary, prior to sample collection.
3. Specific conductance and pH meters will be set up and calibrated.
4. Clean plastic sheeting will be placed around each well casing prior to sample collection to provide for a clean working surface.
5. Laboratory-cleaned, stainless steel, bottom-fill, bailers or disposable Teflon bailers will be used for each well. New nylon or polyethylene cord will be securely fastened to each bailer.
6. After removing the protective cover from the bailer, lower the bailer into the well until it touches the bottom of the well. Remove an additional length of cord from the spool, cut the cord and tie it securely to the well head to serve as a safety line for the bailer.
7. Raise and lower the bailer slowly. When raising the bailer, the cord is placed on the plastic sheeting. A plastic lined 5-gallon bucket may be used to collect the cord.
8. The water in the first bailer will be collected and analyzed for pH, specific conductance and temperature. The time the sample is collected will be recorded in the log book along with pH, specific conductance, temperature readings, and the appearance of the sample.
9. VOC samples will be collected in the second bailer. Sampling personnel will use proper care to assure no air bubbles are in the VOC vials.
10. The metals sample will be collected. Total metals will be determined, accordingly, no field filtering of the sample will be performed.
- 10a. If the duplicate sample is being collected, steps 7, 8 and 9 will be repeated. A unique sample number will be assigned to the duplicate sample.
11. The samples will be entered onto the chain-of-custody sheet and maintained in the project files.



12. Excess water, gloves, disposable bailers and sheeting will be placed in DOT drums and stored on site.

Sampling personnel will record in the field book the condition of the protective casing, lock, riser, and pad. If any damage is noted, or a condition exists which may compromise sample integrity, the sampling personnel will notify the coordinator as soon as possible.

4.5.5 Decontamination

Sampling equipment will be cleaned in the laboratory as described in the Standard Operating Procedures (SOPs) contained in Appendix E of the QAPjP. If laboratory-cleaned equipment is not available, decontaminate equipment using the following procedure:

1. Wash bailers with tap water and non-phosphate detergent,
2. Rinse with tap water,
3. Rinse with 10% nitric acid solution,
4. Rinse several times with tap water,
5. Rinse with pesticide grade methanol, acetone, and methanol again,
6. Rinse with distilled, analyte free water,
7. Air dry and
8. Wrap in aluminum foil.

All water and fluids used for decontamination will be collected and placed in DOT approved drums and stored on site for future disposal.

4.5.6 Sample Documentation

Field Log Book

A field log book will be used to record field data measurements and observations. Information recorded at each sampling location will contain the following details:

- Identification of sampling location
- PID readings
- Water levels
- Purge volumes
- Sample withdrawal procedure/equipment

- Date and time of sample collection
- Quality assurance/control samples
- Name of sample collector
- Types of sample containers used and preservatives
- Field observations during sampling event
- Climatic conditions
- Parameters requested for analysis

*Field Parameters
Parameters*

Other items that will be recorded in the field book include:

- The names, titles, and appropriate information of visitors
- Special instructions and departures from workplan protocol
- Equipment calibration

Field Data Sheets

Field data sheets will be completed by the field personnel after each round of groundwater sampling is performed. The field data sheets summarize groundwater levels, purge volumes, and other field parameters. Figure 4-1 is an example of a field data sheet.

Chain-of-Custody

All shipping containers (ice chests) delivered to the laboratory will contain a Chain-of-Custody (COC) form. This form lists the sample identification number, the day and time the sample was collected and the number and types of bottles in the sample set. A COC form will be included with each shipping container if the samples are shipped to the laboratory via overnight express. The COC forms will be signed and relinquished by the sampler. The original copy will be sealed in a plastic envelope and taped to the inside of the lid of the specific ice chest and will be sent to the laboratory. One copy will be retained by the field sampling team. Figure 4-2 is a copy of the COC form.

Each chain-of-custody will have the name and business address of the project manager with the notation that analytical results shall be forwarded to that person.

4.6 Post-Sampling Activities

When the field work is completed, the sampling personnel will issue a brief field trip memo with attached copies of the field log, field data sheets, and chain-of-custody forms. A copy will be sent to the sampling coordinator and the project manager.

The project manager will arrange for the disposal of any contaminated personal protective equipment, sampling equipment and purge water left at the facility.

A letter report will be issued to the NYSDEC approximately sixty days after receipt of the analytical results from each quarterly sampling event. The letter report will include a summary of field activities and a copy of the laboratory results. An annual report will also be submitted approximately 90 days after results of the fourth sampling event has been received. The annual report will include groundwater contours, flow directions, groundwater velocities and a summary of the groundwater analyses for four quarters.

The annual report will provide an evaluation of the constituents of interest for the previous year. Recommendations will be made to the NYSDEC for modifications to the monitoring program, if necessary, based upon the yearly evaluation. Modifications may address constituents of interests, monitoring frequency or deletion/addition of monitoring wells.



TABLE 2-1

WELL CONSTRUCTION SUMMARY

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NY

WELL	TOC ELEVATION (FEET)	GROUND SURFACE ELEVATION (FEET)	APPROX. WELL DEPTH (FEET)	WELL DIAMETER (INCHES)	SCREEN INTERVA (FEET)	TOP OF SCREEN ELEVATION (FEET)	BOTTOM OF SCREEN ELEVATION (FEET)
MW-1	463.03	460.88	30	4	20-30	440.88	430.88
MW-20	465.61	466.21	14	4	4-14	462.21	452.21
MW-21	469.58	470.03	21.6	4	11.6-21.6	458.43	448.43
MW-22	462.93	463.33	15	4	5-15	458.33	448.33
MW-23	463.04	463.44	19	4	9-19	454.44	444.44
MW-24*	464.78	465.23	24.5	4	12.5-24.5	452.73	440.73
MW-25	462.94	460.29	16	4	6-16	454.29	444.29
MW-26	461.09	461.69	15	4	5-15	456.69	446.69
MW-27	462.67	460.57	15	4	5-15	455.57	445.57
MW-28	463.48	461.13	15.5	4	5.5-15.5	455.63	445.63
MW-29	462.17	460.03	18	4	8-18	452.03	442.03
MW-8**	463.35	460.90	150	6	42.4-153.7	421.00	309.67

Notes: * WELL MW-24 CONSTRUCTED WITH 10" ID SURFACE CASING INSTALLED TO 8.4 FEET.

** WELL MW-8 IS OPEN HOLE BELOW 42.4 FEET.

*** APPROXIMATE TOP OF CASING ELEVATION.

TABLE 2-2

MONITORING WELL DEVELOPMENT

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

WELL	DATE DEVELOPED	DEPTH TO WATER (FEET)	DEPTH TO BOTTOM (FEET)	ONE WELL VOLUME (GAL)	VOLUME REMOVED (GAL)	pH S.U.	S.C. umhos/cm	TEMP (C)
MW-20	08-May-93	0.56	14	8.75	6	6.83	850	14
					10	6.88	850	14
					15	6.93	850	14.5
					20	7.04	900	14.5
					25	7	900	15
					30	7.1	850	14.5
					40	7.09	800	15
MW-21	08-May-93	3.22	21.6	11.97	6	8.37	570	-
					7	8.41	570	-
					10	8.38	570	11
					15	8.3	700	11
					20	8.24	700	11
					25	7.84	650	11
					30	7.79	675	11
MW-22	16-May-93	6.36	14.8	5.49	0	7.31	490	15
					5	7.25	470	12
					10	7.31	468	11.5
					dry at 15	7.43	455	11.5
MW-23	16-May-93	3.4	19	10.16	0	7.02	1190	15
					5	7.08	1170	12.5
					10	7.17	1180	12
					15	7.22	1120	12
					20	7.24	1110	11.5
					dry at 23	7.32	1080	11.5
MW-24	11-Jun-93	4.14	24.5	13.25	dry at 20	-	-	-

MW-25	15-May-93	5.43	17.74	8.01	0	6.86	580	14
					5	7.06	580	11
					15	7.07	550	10
					20	7.21	510	10
					dry at 25	7.19	510	11
MW-26	15-May-93	6.67	14.5	5.10	0	7.31	810	13
					5	7.23	800	11
					10	7.21	790	10.5
					dry at 13	7.29	800	10.5
MW-27	15-May-93	7.44	17.66	6.65	0	7.5	600	12
					5	7.37	590	12
					10	7.37	580	10.5
					15	7.41	560	10
					20	7.43	550	10
					dry at 23	7.57	520	10
MW-28	09-Jun-93	6.34	15.5	5.96	dry at 20	-	-	-
MW-29	09-Jun-93	6.32	18	7.60	dry at 30	-	-	-
MW-8**								

TABLE 3-1

SUMMARY OF HYDRAULIC CONDUCTIVITY
FROM SLUG TEST DATA

PHILIPS DISPLAY COMPONENTS CO.
SENECA FALLS, NY

AVERAGE HYDRAULIC CONDUCTIVITY

WELL	RIISING HEAD TEST	FALLING HEAD TEST				
	(FT/MIN)	(FT/MIN)	(FT/MIN)	(FT/DAY)	(CM/SEC)	(GPD/FT2)
MW-20	3.0E-04	NA	3.0E-04	4.3E-01	1.5E-04	3.25
MW-21	1.3E-05	8.7E-05	5.0E-05	7.2E-02	2.6E-05	0.54
MW-22	8.5E-05	1.2E-04	1.0E-04	1.5E-01	5.3E-05	1.12
MW-23	7.8E-05	7.2E-05	7.5E-05	1.1E-01	3.8E-05	0.81
MW-24	1.8E-05	1.9E-05	1.8E-05	2.6E-02	9.3E-06	0.20
MW-25	1.1E-05	1.1E-05	1.1E-05	1.6E-02	5.6E-06	0.12
MW-26	2.2E-05	3.1E-05	2.7E-05	3.8E-02	1.3E-05	0.29
MW-27	3.4E-05	7.4E-05	5.4E-05	7.8E-02	2.8E-05	0.58
MW-28	7.5E-05	8.5E-05	8.0E-05	1.2E-01	4.1E-05	0.86
MW-29	9.7E-06	2.2E-05	1.6E-05	2.3E-02	8.2E-06	0.17

TABLE 3-2
INORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND1) COLLECTED JUNE 14-16, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:			MW01-GW-01	MW08-GW-01	MW20-GW-01	MW21-GW-01	MW22-GW-01
LABORATORY SAMPLE ID:			0896-05	0902-09	0896-01	0896-03	0902-03
DATE SAMPLED:			6/15/93	6/16/93	6/14/93	6/15/93	6/16/93
DATE ANALYZED:			6/29/93	6/29/93	6/29/93	6/29/93	6/29/93
DILUTION FACTOR:			1X	1X/10X (Pb)	1X	1X	1X
UNITS	UNDILUTED DETECTION LIMIT	NYSDEC ACTION LEVEL	ug/L	ug/L	ug/L	ug/L	ug/L
PARAMETER							
CADMIUM	5	5	ND	ND	ND	ND	ND
CHROMIUM	10	50	ND	13	ND	ND	ND
LEAD	3	15	ND	ND	ND	ND	ND
ZINC	20	300	ND	34	ND	ND	ND
FLUORIDE	100	1500	220	1,120	390	300	660

NOTES

- Lead analyses were performed on 6/25 or 6/29/93. Fluoride analyses were performed on 6/22/93.
- Cadmium, chromium, and zinc were analyzed by Method 6010.
- Lead was analyzed by Method 7421 and fluoride was analyzed by Method 340.2.

KEY

ND = Not Detected
ug/L = Microgram per Liter (part per billion aqueous)

TABLE 3-2
INORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND1) COLLECTED JUNE 14-16, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:	MW23-GW-01	MW23-GW-01D	MW24-GW-01	MW25-GW-01	MW26-GW-01
LABORATORY SAMPLE ID:	0902-01	0902-02	0902-08	0902-04	0896-04
DATE SAMPLED:	6/16/93	6/16/93	6/16/93	6/16/93	6/15/93
DATE ANALYZED:	6/29/93	6/29/93	6/29/93	6/29/93	6/29/93
DILUTION FACTOR:	1X	1X	1X	1X	1X

UNITS	UNDILUTED DETECTION LIMIT	NYSDEC ACTION LEVEL	ug/L	ug/L	ug/L	ug/L	ug/L
<u>PARAMETER</u>							
CADMIUM	5	5	ND	ND	ND	ND	ND
CHROMIUM	10	50	ND	ND	ND	16	ND
LEAD	3	15	ND	ND	ND	ND	ND
ZINC	20	300	ND	ND	ND	ND	ND
FLUORIDE	100	1500	320	310	740	590	160

NOTES

- Lead analyses were performed on 6/25 or 6/29/93. Fluoride analyses were performed on 6/22/93.
- Cadmium, chromium, and zinc were analyzed by Method 6010.
- Lead was analyzed by Method 7421 and fluoride was analyzed by Method 340.2.
- Sample MW23-GW-01D is a field duplicate of MW23-GW-01.

KEY

ND = Not Detected
ug/L = Microgram per Liter (part per billion aqueous)

TABLE 3-2
INORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND1) COLLECTED JUNE 14-16, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:			MW27-GW-01	MW28-GW-01	MW29-GW-01	RB-27	RB-28
LABORATORY SAMPLE ID:			0902-05	0902-07	0902-06	0896-02	0896-06
DATE SAMPLED:			6/16/93	6/16/93	6/16/93	6/14/93	6/15/93
DATE ANALYZED:			6/29/93	6/29/93	6/29/93	6/29/93	6/29/93
DILUTION FACTOR:			1X	1X	1X	1X	1X
UNITS	UNDILUTED DETECTION LIMIT	NYSDEC ACTION LEVEL	ug/L	ug/L	ug/L	ug/L	ug/L
PARAMETER							
CADMIUM	5	5	ND	ND	ND	ND	ND
CHROMIUM	10	50	ND	ND	ND	ND	ND
LEAD	3	15	6	ND	ND	ND	ND
ZINC	20	300	ND	ND	ND	ND	ND
FLUORIDE	100	1500	450	220	480	ND	ND

NOTES

- Lead analyses were performed on 6/25 or 6/29/93. Fluoride analyses were performed on 6/22/93.
- Cadmium, chromium, and zinc were analyzed by Method 6010.
- Lead was analyzed by Method 7421 and fluoride was analyzed by Method 340.2.
- Samples RB-27 and RB-28 are equipment rinsate blanks.

KEY

ND = Not Detected
ug/L = Microgram per Liter (part per billion aqueous)

TABLE 3-2
INORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND1) COLLECTED JUNE 14-16, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID: RB-29
LABORATORY SAMPLE ID: 0902-10
DATE SAMPLED: 6/16/93
DATE ANALYZED: 6/29/93
DILUTION FACTOR: 1X

UNITS	UNDILUTED DETECTION LIMIT	NYSDEC ACTION LEVEL	ug/L
<u>PARAMETER</u>			
CADMIUM	5	5	ND
CHROMIUM	10	50	ND
LEAD	3	15	ND
ZINC	20	300	ND
FLUORIDE	100	1500	ND

NOTES

- Lead analyses were performed on 6/25 or 6/29/93. Fluoride analyses were performed on 6/22/93.
- Cadmium, chromium, and zinc were analyzed by Method 6010.
- Lead was analyzed by Method 7421 and fluoride was analyzed by Method 340.2.
- Sample RB-29 is an equipment rinsate blank.

KEY

ND = Not Detected
ug/L = Microgram per Liter (part per billion aqueous)

TABLE 3-3
INORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND 2) COLLECTED JULY 21, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:	MW1-GW-02	MW20-GW-02	MW21-GW-02	MW22-GW-02	MW22-GW-02D
LABORATORY SAMPLE ID:	1057-12	1057-02	1057-01	1057-06	1057-07
DATE SAMPLED:	7/21/93	7/21/93	7/21/93	7/21/93	7/21/93
DATE ANALYZED:	08/05/93	08/05/93	08/05/93	08/05/93	08/05/93
DILUTION FACTOR:	1X/2X (Pb)	1X	1X	1X	1X/2X (Pb)

UNITS	UNDILUTED DETECTION LIMIT	NYSDEC ACTION LEVEL	ug/L	ug/L	ug/L	ug/L	ug/L
PARAMETER							
CADMIUM	5	5	ND	ND	ND	ND	ND
CHROMIUM	10	50	ND	ND	ND	ND	ND
LEAD	3	15	6.8	4.0	ND	7.6	13.6
ZINC	20	300	24.1	ND	ND	ND	23.6
FLUORIDE	100	1500	240.0	386.0	280.0	660.0	670.0

NOTES

- All lead analyses were performed on 8/02-03/93 and all fluoride analyses were performed on 7/27/93.
- Cadmium, chromium, and zinc were analyzed by Method 6010.
- Lead was analyzed by Method 7421 and fluoride was analyzed by Method 340.2.
- Sample MW22-GW-02D is a field duplicate of MW22-GW-02.

KEY

ND = Not Detected
ug/L = Microgram per Liter

TABLE 3-3
INORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND 2) COLLECTED JULY 21, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:			MW23-GW-02	MW24-GW-02	MW25-GW-02	MW26-GW-02	MW27-GW-02
LABORATORY SAMPLE ID:			1057-05	1057-13	1057-08	1057-04	1057-09
DATE SAMPLED:			7/21/93	7/21/93	7/21/93	7/21/93	7/21/93
DATE ANALYZED:			08/05/93	08/05/93	08/05/93	08/05/93	08/05/93
DILUTION FACTOR:			1X	1X/2X(Pb)	1X	1X	1X
UNITS	UNDILUTED DETECTION LIMIT	NYSDEC ACTION LEVEL	ug/L	ug/L	ug/L	ug/L	ug/L
PARAMETER							
CADMIUM	5	5	ND	ND	ND	ND	ND
CHROMIUM	10	50	ND	ND	ND	ND	ND
LEAD	3	15	ND	ND	5.7	4.5	ND
ZINC	20	300	ND	ND	24.1	ND	ND
FLUORIDE	100	1500	310.0	710.0	580.0	150.0	480.0

NOTES

- All lead analyses were performed on 8/02-03/93 and all fluoride analyses were performed on 7/27/93.
- Cadmium, chromium, and zinc were analyzed by Method 6010.
- Lead was analyzed by Method 7421 and fluoride was analyzed by Method 340.2.

KEY

ND = Not Detected
ug/L = Microgram per Liter

TABLE 3-3
INORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND 2) COLLECTED JULY 21, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:			MW28-GW-02	MW29-GW-02	RB-30
LABORATORY SAMPLE ID:			1057-10	1057-11	1057-03
DATE SAMPLED:			7/21/93	7/21/93	7/21/93
DATE ANALYZED:			08/05/93	08/05/93	08/05/93
DILUTION FACTOR:			1X	1X/2X (Pb)	1X
UNITS	UNDILUTED DETECTION LIMIT	NYSDEC ACTION LEVEL	ug/L	ug/L	ug/L
<u>PARAMETER</u>					
CADMIUM	5	5	ND	ND	ND
CHROMIUM	10	50	ND	ND	ND
LEAD	3	15	ND	8.6	3.6
ZINC	20	300	ND	25.7	ND
FLUORIDE	100	1500	210.0	444.0	ND

NOTES

- All lead analyses were performed on 8/02-03/93 and all fluoride analyses were performed on 7/27/93.
- Cadmium, chromium, and zinc were analyzed by Method 6010.
- Lead was analyzed by Method 7421 and fluoride was analyzed by Method 340.2.
- Sample RB-30 is an equipment rinsate blank.

KEY

ND = Not Detected
ug/L = Microgram per Liter

TABLE 3-4
VOLATILE ORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND 1) COLLECTED JUNE 14-16, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

What is Upgradient?

FIELD SAMPLE ID:			MW01-GW-01	MW08-GW-01	MW20-GW-01	MW21-GW-01	MW22-GW-01	MW23-GW-01
LABORATORY SAMPLE ID:			93089605	93090209	93089601	93089603	93090203	93090201
DATE SAMPLED:			6-15-93	6-16-93	6-14-93	6-15-93	6-16-93	6-16-93
DATE ANALYZED:			6-17-93	6-18-93	6-17-93	6-17-93	6-17-93	6-17-93
DILUTION FACTOR(S):			1	1	1	1	1	1
UNITS			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
8010 PARAMETER	DETECTION LIMIT	NYSDEC ACTION LEVEL						
→ VINYL CHLORIDE	10	2	ND	ND	120	ND	ND	ND
CHLOROETHANE	10	5	ND	ND	ND	ND	ND	ND
ACETONE	10	50	ND	ND	ND	ND	ND	ND
→ 1,1-DICHLOROETHENE	10	5	4 J	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	10	5	7 J	ND	ND	ND	ND	ND
→ 1,2-DICHLOROETHENE (cis)	10	5	ND	ND	27	ND	17	31
→ 1,2-DICHLOROETHENE (trans)	10	5	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE (total)	10	5	ND	ND	27	ND	17	31
CHLOROFORM	10	7	ND	ND	ND	ND	ND	4 J
1,2-DICHLOROETHANE	10	5	ND	ND	ND	ND	ND	57
1,1,1-TRICHLOROETHANE	10	5	57	22	ND	ND	ND	ND
1,2-DICHLOROPROPANE	10	5	ND	ND	ND	ND	ND	ND
→ TRICHLOROETHENE	10	5	ND	ND	ND	ND	43	16,000
BENZENE	10	0.7	ND	ND	ND	ND	ND	ND
4-METHYL-2-PENTANONE	10	50	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	10	5	ND	4 J	ND	ND	ND	ND
TOLUENE	10	5	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	10	5	ND	ND	ND	ND	ND	ND
XYLENE (total)	10	5	ND	ND	ND	ND	ND	ND
			68	24	174	ND	77	16123

NOTES

-Analyses were performed by Methods 8010/8020. No positive results were detected for Method 8020 analyses.
-These groundwater samples represent the first sampling round.

KEY

ND = Not Detected at the limit reported
ug/L = Microgram per Liter

J = Value is estimated since reported below the CRQL

TABLE 3-4
VOLATILE ORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND 1) COLLECTED JUNE 14-16, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:
LABORATORY SAMPLE ID:
DATE SAMPLED:
DATE ANALYZED:
DILUTION FACTOR(S):
UNITS

MW23-GW-01D	MW24-GW-01	MW25-GW-01	MW26-GW-01	MW27-GW-01	MW28-GW-01
93090202	93090208	93090204	93089604	93090205	93090207
6-16-93	6-16-93	6-16-93	6-15-93	6-16-93	6-16-93
6-17-93	6-17-93	6-17-93	6-17-93	6-17-93	6-17-93
1	1	1	1	1	1
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

8010 PARAMETER	DETECTION LIMIT	NYSDEC ACTION LEVEL	MW23-GW-01D	MW24-GW-01	MW25-GW-01	MW26-GW-01	MW27-GW-01	MW28-GW-01
→ VINYL CHLORIDE	10	2	ND	8,800	590	19	ND	ND
CHLOROETHANE	10	5	ND	ND	ND	ND	ND	ND
ACETONE	10	50	ND	ND	ND	ND	ND	ND
→ 1,1-DICHLOROETHENE	10	5	ND	100	17	ND	ND	ND
1,1-DICHLOROETHANE	10	5	ND	ND	44	4 J	ND	ND
→ 1,2-DICHLOROETHENE (cis)	10	5	35	38,000	2,000	180	ND	ND
→ 1,2-DICHLOROETHENE (trans)	10	5	ND	150	6 J	ND	ND	ND
1,2-DICHLOROETHENE (total)	10	5	35	39,000	2,000	180	ND	ND
CHLOROFORM	10	7	5 J	6 J	ND	ND	ND	ND
1,2-DICHLOROETHANE	10	5	64	1,300 J	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	10	5	ND	ND	34	ND	ND	ND
1,2-DICHLOROPROPANE	10	5	ND	10	ND	3 J	ND	3 J
→ TRICHLOROETHENE	10	5	17,000	11,000	120	310	ND	ND
BENZENE	10	0.7	ND	26	3 J	ND	ND	11
4-METHYL-2-PENTANONE	10	50	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	10	5	ND	ND	4 J	ND	ND	ND
TOLUENE	10	5	ND	140	6 J	ND	ND	ND
THYL BENZENE	10	5	ND	59	ND	ND	ND	ND
YLENE (total)	10	5	ND	110	ND	ND	ND	ND

NOTES

-Analyses were performed by Methods 8010/8020. No positive results were detected for Method 8020 analyses.
-These groundwater samples represent the first sampling round.
-Sample MW-GW23-01D is a field duplicate of MW-GW23-01.

KEY

ND = Not Detected at the limit reported
ug/L = Microgram per Liter

J = Value is estimated since reported below the CRQL

TABLE 3-4
VOLATILE ORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND 1) COLLECTED JUNE 14-16, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:
LABORATORY SAMPLE ID:
DATE SAMPLED:
DATE ANALYZED:
DILUTION FACTOR(S):

UNITS			MW29-GW-01 93090206 6-16-93 6-17-93 1	TB-19 93089607 6-15-93 6-17-93 1	TB-20 93090211 6-16-93 6-18-93 1	RB-27 93089602 6-14-93 6-17-93 1	RB-28 93089606 6-15-93 6-17-93 1	RB-29 93090210 6-16-93 6-18-93 1
8010 PARAMETER	DETECTION LIMIT	NYSDEC ACTION LEVEL	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
VINYL CHLORIDE	10	2	51	ND	ND	ND	ND	ND
CHLOROETHANE	10	5	4 J	ND	ND	ND	ND	ND
ACETONE	10	50	38	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	10	5	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	10	5	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE (cis)	10	5	84	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE (trans)	10	5	ND	ND	ND	ND	ND	3 J
1,2-DICHLOROETHENE (total)	10	5	84	ND	ND	ND	ND	ND
CHLOROFORM	10	7	ND	ND	ND	ND	ND	3 J
1,2-DICHLOROETHANE	10	5	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	10	5	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	10	5	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	10	5	ND	ND	ND	ND	ND	ND
BENZENE	10	0.7	6 J	ND	2 J	ND	ND	3 J
4-METHYL-2-PENTANONE	10	50	24	ND	ND	ND	ND	ND
TETRACHLOROETHENE	10	5	ND	ND	ND	ND	ND	ND
TOLUENE	10	5	250	ND	ND	ND	ND	ND
THYL BENZENE	10	5	ND	ND	ND	ND	ND	ND
YLENE (total)	10	5	4 J	ND	ND	ND	ND	ND
			545	ND	2	ND	ND	9

NOTES

- Analyses were performed by Methods 8010/8020. No positive results were detected for Method 8020 analyses.
- These groundwater samples represent the first sampling round.
- Samples beginning with "TB" are trip blanks and samples beginning with "RB" are equipment rinsate blanks.

KEY

ND = Not Detected at the limit reported
ug/L = Microgram per Liter

J = Value is estimated since reported below the CRQL

TABLE 3-5
VOLATILE ORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND 2) COLLECTED JULY 21, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:
LABORATORY SAMPLE ID:
DATE SAMPLED:
DATE ANALYZED:
DILUTION FACTOR(S):
UNITS

PARAMETER	DETECTION LIMIT	NYSDEC ACTION LEVEL	MW1-GW-02 93105712 7-21-93 7-26-93 1 ug/L	MW20-GW-02 93105702 7-21-93 7-26-93 1 ug/L	MW21-GW-02 93105701 7-21-93 7-26-93 1 ug/L	MW22-GW-02 93105706 7-21-93 7-26-93 1 ug/L	MW22-GW-02D 93105707 7-21-93 7-27-93 1 ug/L
VINYL CHLORIDE	10	2	ND	43	ND	ND	ND
1,1-DICHLOROETHENE	10	5	5 J	ND	ND	ND	ND
1,1-DICHLOROETHANE	10	5	10 J	23	ND	ND	ND
1,2-DICHLOROETHENE (cis)	10	5	ND	23	ND	16	15
1,2-DICHLOROETHENE (total)	10	5	ND	ND	ND	16	15
1,2-DICHLOROETHANE	10	5	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	10	5	80	ND	ND	43	38
TRICHLOROETHENE	10	5	ND	ND	ND	75	68

NOTES

- Analyses were performed by Methods 8010/8020. No positive results were detected for Method 8020 analyses.
- These groundwater samples represent the second sampling round.
- Sample MW-GW22-02D is a field duplicate of MW-GW22-02.

KEY

ND = Not Detected at the limit reported
ug/L = Microgram per Liter

J = Value is estimated since result is below the CRQL

TABLE 3-5
VOLATILE ORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND 2) COLLECTED JULY 21, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:
LABORATORY SAMPLE ID:
DATE SAMPLED:
DATE ANALYZED:
DILUTION FACTOR(S):
UNITS

MW23-GW-02 93105705 7-21-93 7-26-93 100 ug/L	MW24-GW-02 93105713 7-21-93 7-26-93 200 ug/L	MW25-GW-02 93105708 7-21-93 7-26-93 10 ug/L	MW26-GW-02 93105704 7-21-93 7-26-93 1 ug/L	MW27-GW-02 93105709 7-21-93 7-26-93 1 ug/L
---	---	--	---	---

PARAMETER	DETECTION LIMIT	NYSDEC ACTION LEVEL	MW23-GW-02	MW24-GW-02	MW25-GW-02	MW26-GW-02	MW27-GW-02
VINYL CHLORIDE	10	2	ND	5,000	300	12	ND
1,1-DICHLOROETHENE	10	5	ND	ND	ND	3 J	ND
1,1-DICHLOROETHANE	10	5	ND	ND	49 J	3 J	ND
1,2-DICHLOROETHENE (cis)	10	5	ND	38,000	2,100	180	ND
1,2-DICHLOROETHENE (total)	10	5	ND	38,000	2,100	180	ND
1,2-DICHLOROETHANE	10	5	ND	1,200 J	ND	ND	ND
1,1,1-TRICHLOROETHANE	10	5	ND	ND	45 J	4 J	ND
TRICHLOROETHENE	10	5	23,000	13,000	170	450	ND

NOTES

-Analyses were performed by Methods 8010/8020. No positive results were detected for Method 8020 analyses.
-These groundwater samples represent the second sampling round.

KEY

ND = Not Detected at the limit reported
ug/L = Microgram per Liter

J = Value is estimated since result is below the CRQL

TABLE 3-5
VOLATILE ORGANIC
CONCENTRATIONS DETECTED IN GROUNDWATER
(ROUND 2) COLLECTED JULY 21, 1993

PHILIPS DISPLAY COMPONENTS COMPANY
SENECA FALLS, NEW YORK

FIELD SAMPLE ID:
LABORATORY SAMPLE ID:
DATE SAMPLED:
DATE ANALYZED:
DILUTION FACTOR(S):
UNITS

PARAMETER	DETECTION LIMIT	NYSDEC ACTION LEVEL	MW28-GW-02 93105710 7-21-93 7-27-93 1 ug/L	MW29-GW-02 93105711 7-21-93 7-26-93 1 ug/L	TB-21 93105714 7-21-93 7-26-93 1 ug/L	RB-30 93105703 7-21-93 7-26-93 1 ug/L
VINYL CHLORIDE	10	2	ND	31	ND	ND
1,1-DICHLOROETHENE	10	5	ND	ND	ND	ND
1,1-DICHLOROETHANE	10	5	ND	ND	ND	ND
1,2-DICHLOROETHENE (cis)	10	5	ND	69	ND	ND
1,2-DICHLOROETHENE (total)	10	5	ND	69	ND	ND
1,2-DICHLOROETHANE	10	5	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	10	5	3 J	ND	ND	ND
TRICHLOROETHENE	10	5	11	ND	ND	ND

NOTES

- Analyses were performed by Methods 8010/8020. No positive results were detected for Method 8020 analyses.
- These groundwater samples represent the second sampling round.
- Sample RB-30 is a rinsate blank and TB-21 is a trip blank.

KEY

ND = Not Detected at the limit reported
ug/L = Microgram per Liter

J = Value is estimated since result is below the CRQL

TABLE 4-1
PRE-FIELD CHECKLIST

PROJECT: _____

SAMPLING DATES: _____

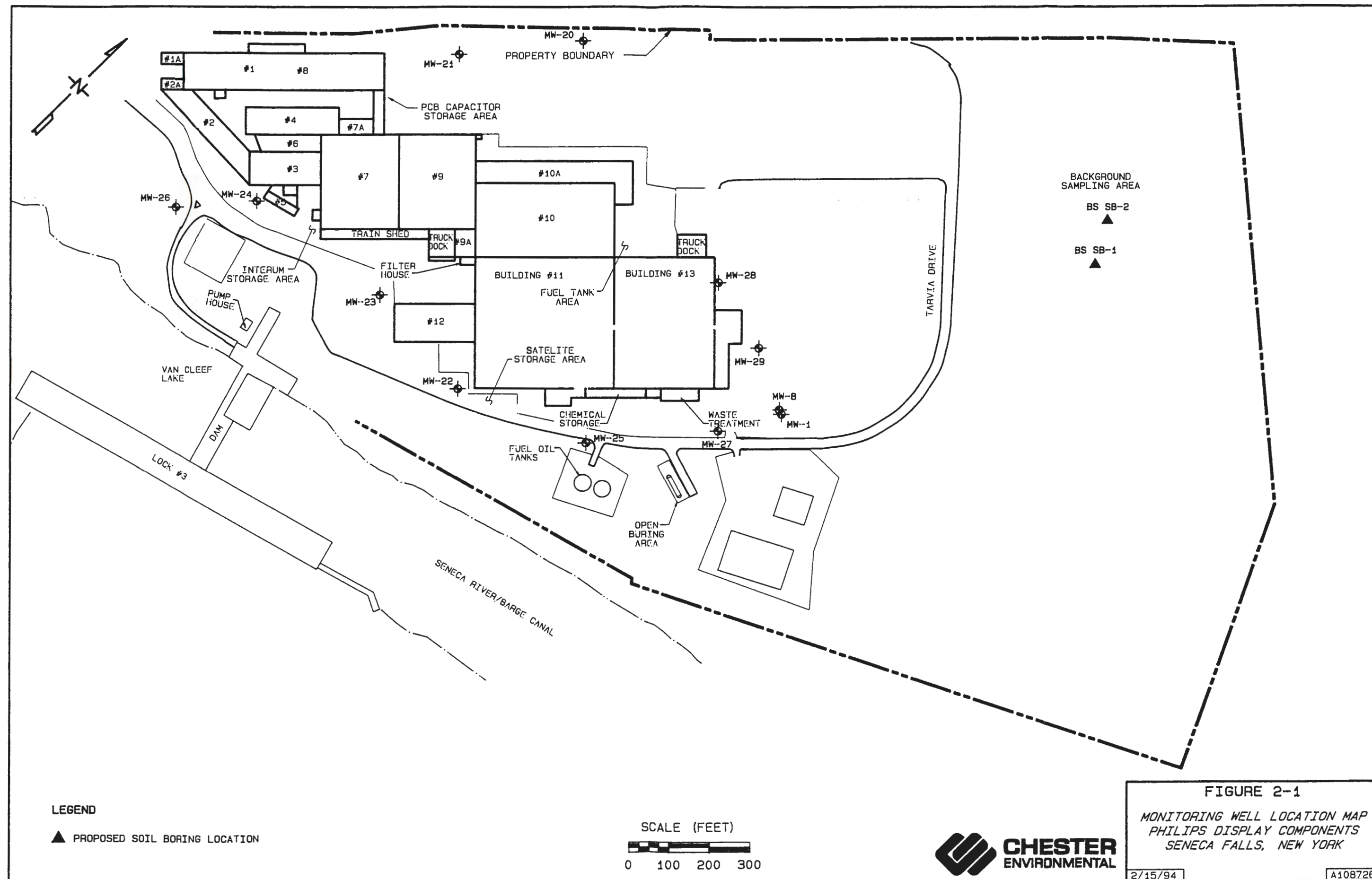
<u>PRE-TRIP TASKS</u>		<u>INITIALS</u>	<u>DATE</u>
1.	Review Site Specific Field Sampling Manual	_____	_____
2.	Review Site Specific Health & Safety Plan or Other Approved Document.....	_____	_____
3.	Notify Analytical Laboratory.....	_____	_____
4.	Notify Designated Plant Personnel of Sampling Event.....	_____	_____
5.	Prepare Sample Bottles and Shipping Containers (See Project Information Sheet)	_____	_____
6.	Identify Quality Assurance Samples and Locations.....	_____	_____
7.	Assemble Sampling Equipment and Completed Equipment Checklist (See Equipment Checklist).....	_____	_____
8.	Perform Laboratory Calibrations and Precision of Field Meters	_____	_____
	a. pH Meter	_____	_____
	b. Conductivity Meter	_____	_____
	c. Field Calibration Solutions.....	_____	_____
9.	Assemble Necessary Forms	_____	_____
	a. Field Log Book.....	_____	_____
	b. Field Data Sheet	_____	_____
	c. Chain of Custody	_____	_____
	d. Copy of Analytical Request Sheet (Approved)	_____	_____
	e. Project Information Sheet (Approved).....	_____	_____
10.	Review Sampling Procedures with Project Team.	_____	_____

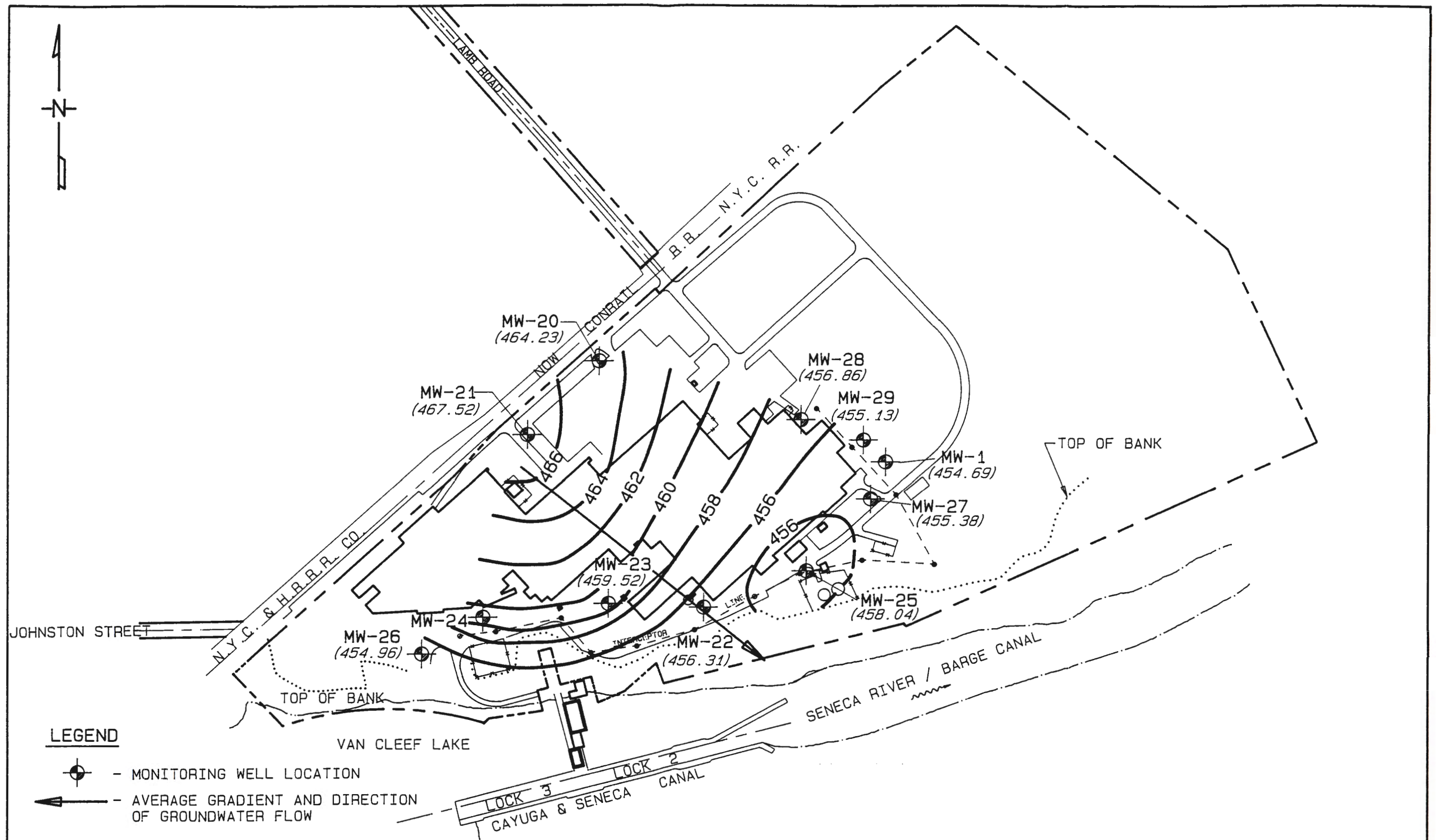
Approved By _____ Date _____

<u>POST-TRIP TASKS</u>		<u>INITIALS</u>	<u>DATE</u>
Complete Field Notes.....		_____	_____
Complete Trip Report.....		_____	_____
Deliver Trip Report and Field Notes to Project Mgr.		_____	_____

Approved By _____ Date _____

Figures





DWN BY: AMA	CHK'D BY:	APPR BY:	SCALE (FEET)	CHESTER ENVIRONMENTAL	FIGURE 3-1 GROUNDWATER ELEVATION CONTOURS JUNE 14, 1993 PHILIPS DISPLAY COMPONENTS CO. SENECA FALLS, NY	DWG NO. C69758
FILE NAME	SCALE	DATE 1/14/94				

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1

[illegible][illegible]



PAGE _____ OF _____

APPENDIX A

**TEST BORING LOGS AND
MONITORING WELL CONSTRUCTION
DIAGRAMS**

MW-20 -- MW-29

PROJECT: SUPPLEMENTAL SAMPLING VISIT
 LOCATION: SENECA FALLS, NEW YORK
 CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-20

GROUND ELEVATION: 466.21

WELL ELEVATION: 465.81

WELL DEPTH: 14

DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

ELEV. DATUM: FEET MSL

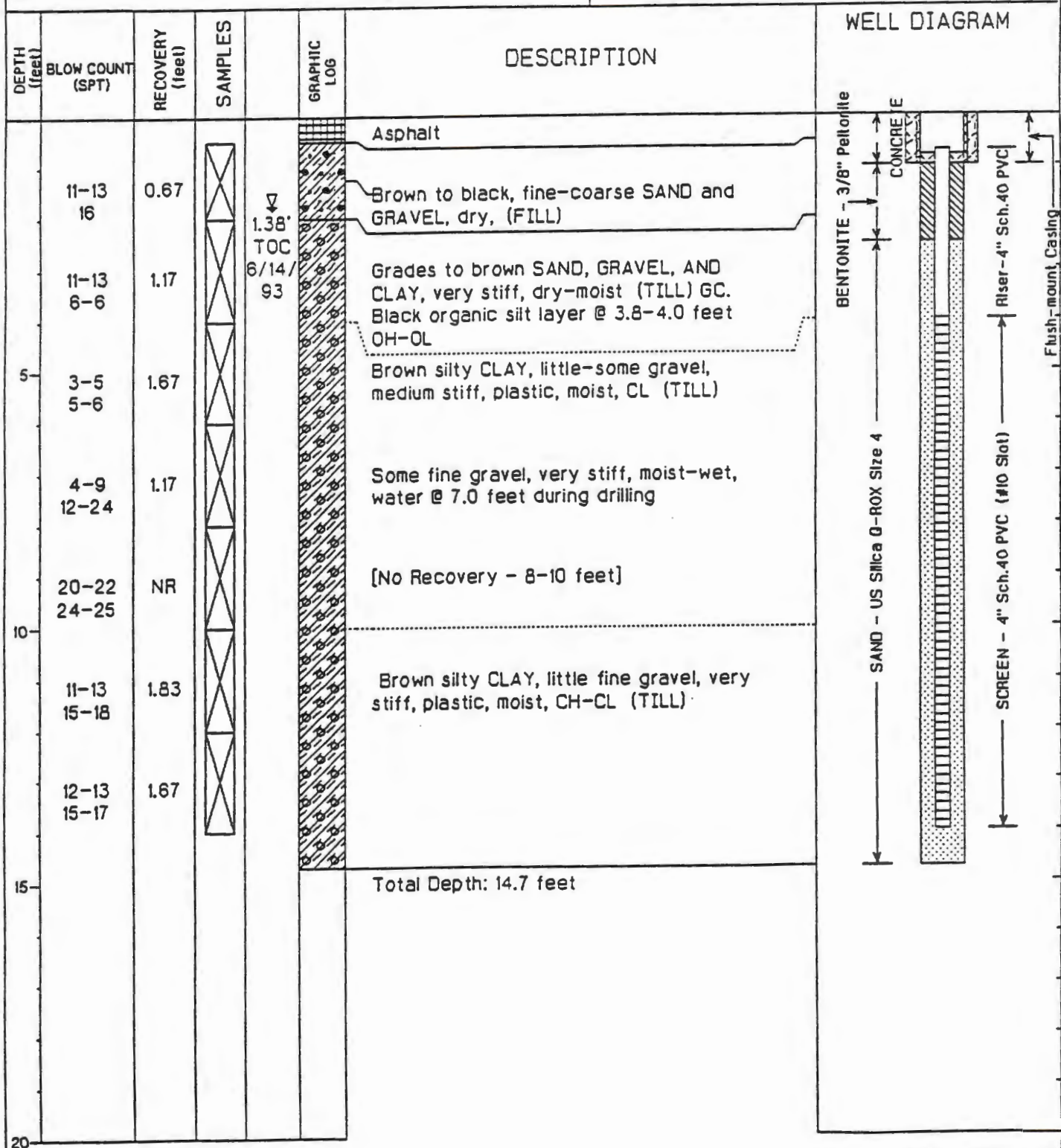
DATUM: FEET BGS

DRILLING METHOD: 6.25-INCH I.D. HOLLOW STEM AUGER

DRILLER: EMPIRE SOILS INVESTIGATION

DATE DRILLED: 4 MAY, 1993

GEOLOGIST: MIKE MEYER



PROJECT: SUPPLEMENTAL SAMPLING VISIT

LOCATION: SENECA FALLS, NEW YORK

CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-21

GROUND ELEVATION: 470.03

WELL ELEVATION: 469.58

ELEV. DATUM: FEET MSL

WELL DEPTH: 21.6

DATUM: FEET BGS

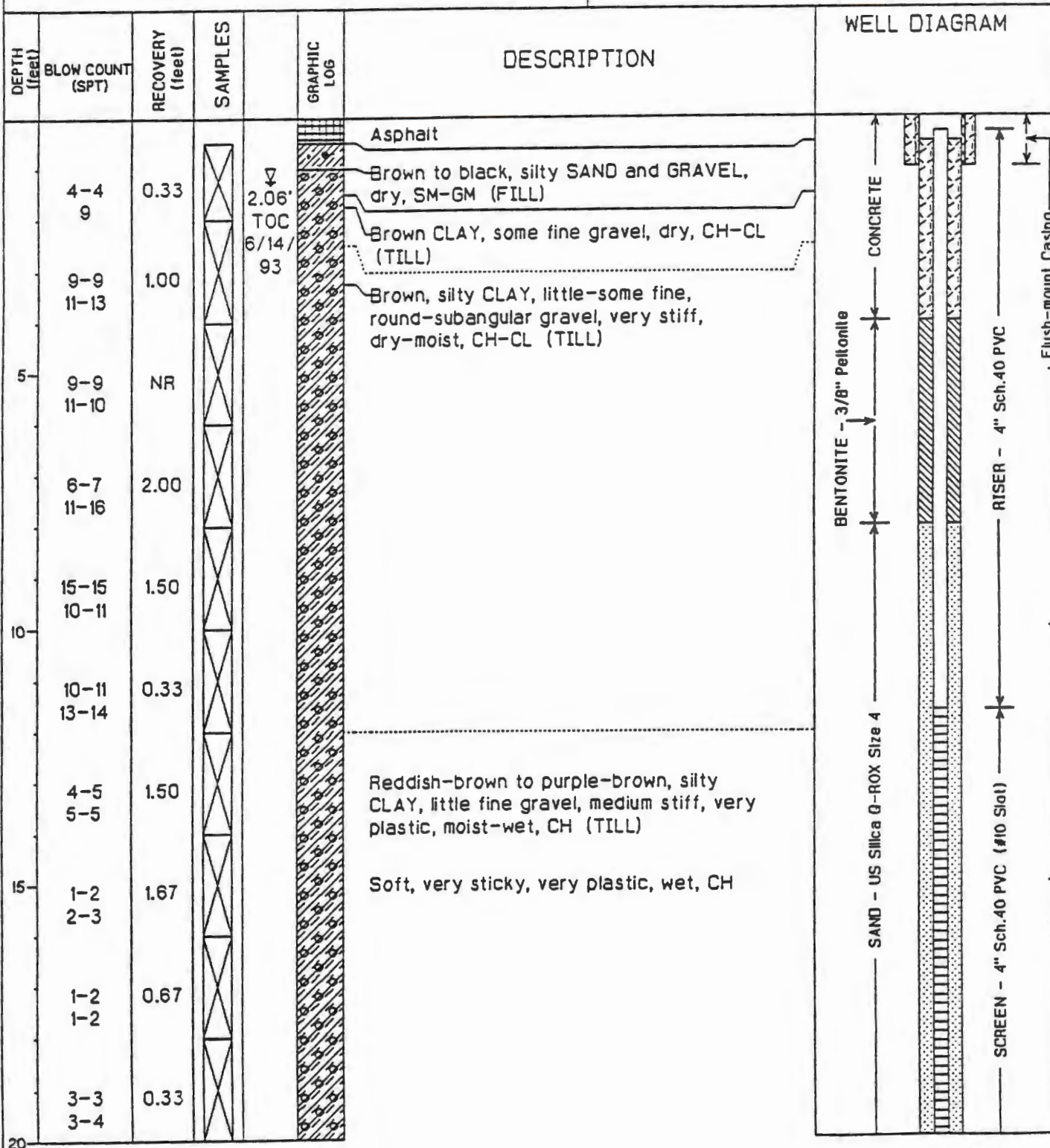
DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

DRILLING METHOD: 6.25-INCH I.D. HOLLOW STEM AUGER

DRILLER: EMPIRE SOILS INVESTIGATION

DATE DRILLED: 4-5 MAY, 1993

GEOLOGIST: MIKE MEYER



PROJECT: SUPPLEMENTAL SAMPLING VISIT		WELL LOG: MW-21	
LOCATION: SENECA FALLS, NEW YORK		DRILLING METHOD: 6.25-INCH I.D. HOLLOW STEM AUGER	
CLIENT: PHILIPS DISPLAY COMPONENTS		DRILLER: EMPIRE SOILS INVESTIGATION	
GROUND ELEVATION: 470.03		DATE DRILLED: 4-5 MAY, 1993	
WELL ELEVATION: 469.58	ELEV. DATUM: FEET MSL	GEOLOGIST: MIKE MEYER	
WELL DEPTH: 21.6	DATUM: FEET BGS		
DEVELOPMENT METHOD: SURGE AND PURGE - BAILER			

DEPTH (feet)	BLOW COUNT (SPT)	RECOVERY (feet)	SAMPLES	GRAPHIC LOG	DESCRIPTION	WELL DIAGRAM
	2-2 4-5	1.67	X X X	X X X	Trace-little, fine gravel, CL-CH (TILL)	
	3-5 6-7	2.00	X X X	X X X	WELL SET IN DRY HOLE	
					Total Depth: 24 feet	
25						
30						
35						
40						

PROJECT: SUPPLEMENTAL SAMPLING VISIT
 LOCATION: SENECA FALLS, NEW YORK
 CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-22

GROUND ELEVATION: 463.33

WELL ELEVATION: 462.93

WELL DEPTH: 15

DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

ELEV. DATUM: FEET MSL

DATUM: FEET BGS

DRILLING METHOD: 6.25-INCH I.D. HOLLOW STEM AUGER

DRILLER: EMPIRE SOILS INVESTIGATION

DATE DRILLED: 5 MAY, 1993

GEOLOGIST: MIKE MEYER

DEPTH (feet)	BLOW COUNT (SPT)	RECOVERY (feet)	SAMPLES	GRAPHIC LOG	DESCRIPTION	WELL DIAGRAM
					Asphalt	
6-6 4		1.00			Gray, silty CLAY, some fine gravel and coarse sand, medium stiff, dry, CL (FILL)	
10-4 4-4		0.33			Brown, clayey SILT, some fine-coarse sand, medium stiff, dry, ML (FILL)	
4-10 10-15		0.83			Brown-gray, silty CLAY, trace-little coarse sand and fine gravel, very stiff, dry (almost fissile), CL (FILL)	
7-10 11-12		1.17		6.62' TOC 6/14 93	Brown, silty CLAY, little fine subrounded gravel, very stiff, moist, organic odor, CH-CL (TILL)	
10-10 10-17		1.33			[Subangular-subrounded gravel]	
3-6 7-10		1.33			[Stiff, drilled on cobble or boulder @ 11.0 feet, water @ 12 feet during drilling]	
8-12 14-17		1.67			[Very Stiff, moist-wet]	
4-7 11-13		1.50				
4-5 9-13		NR			Total Depth: 16 feet	

PROJECT: SUPPLEMENTAL SAMPLING VISIT
 LOCATION: SENECA FALLS, NEW YORK
 CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-23

GROUND ELEVATION: 463.44

WELL ELEVATION: 463.04

ELEV. DATUM: FEET MSL

WELL DEPTH: 19

DATUM: FEET BGS

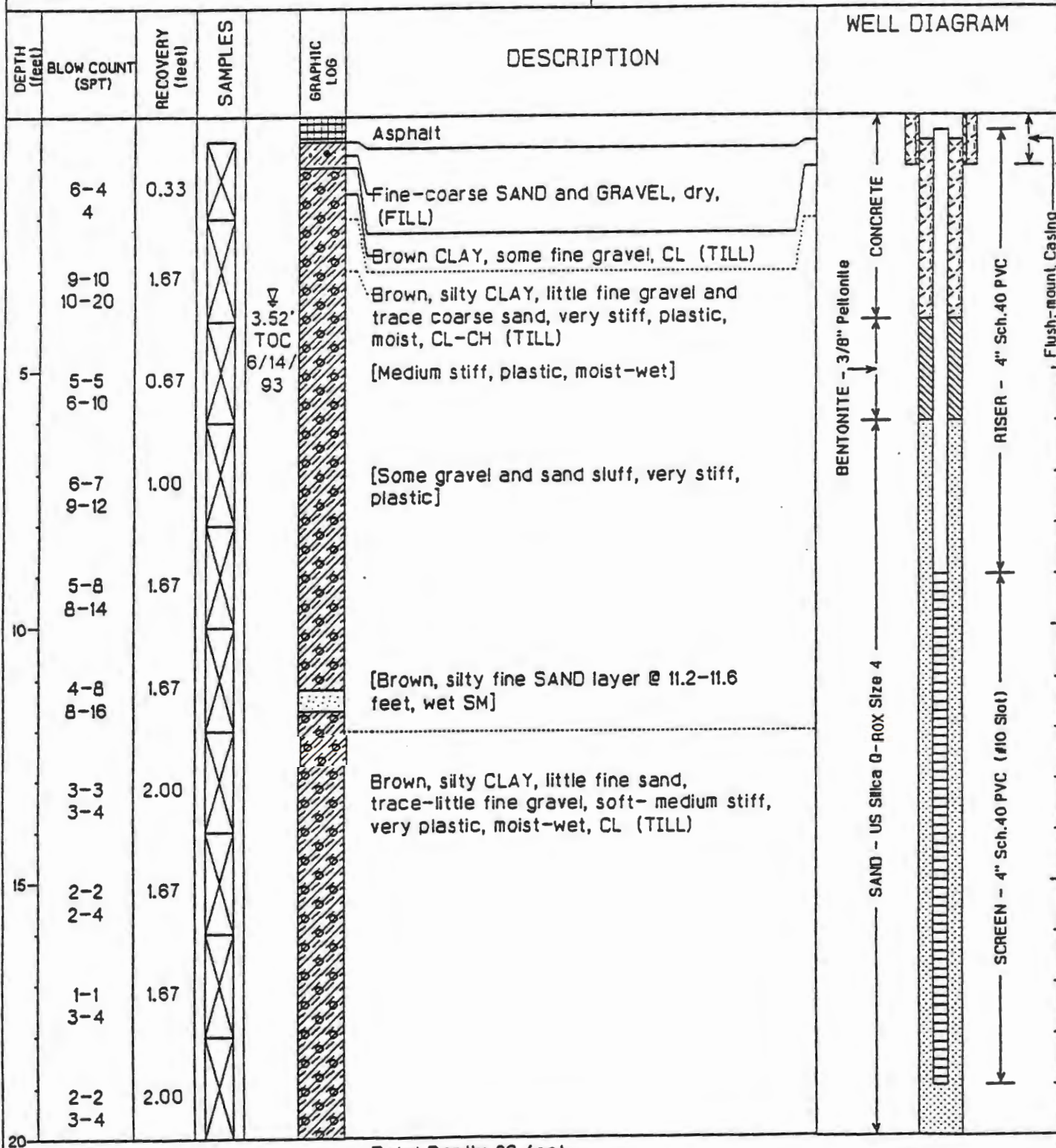
DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

DRILLING METHOD: 6.25-INCH I.D. HOLLOW STEM AUGER

DRILLER: EMPIRE SOILS INVESTIGATION

DATE DRILLED: 6-7 MAY, 1993

GEOLOGIST: MIKE MEYER



PROJECT: SUPPLEMENTAL SAMPLING VISIT
 LOCATION: SENECA FALLS, NEW YORK
 CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-24

GROUND ELEVATION: 465.23

WELL ELEVATION: 464.78

ELEV. DATUM: FEET MSL

WELL DEPTH: 24.5

DATUM: FEET BGS

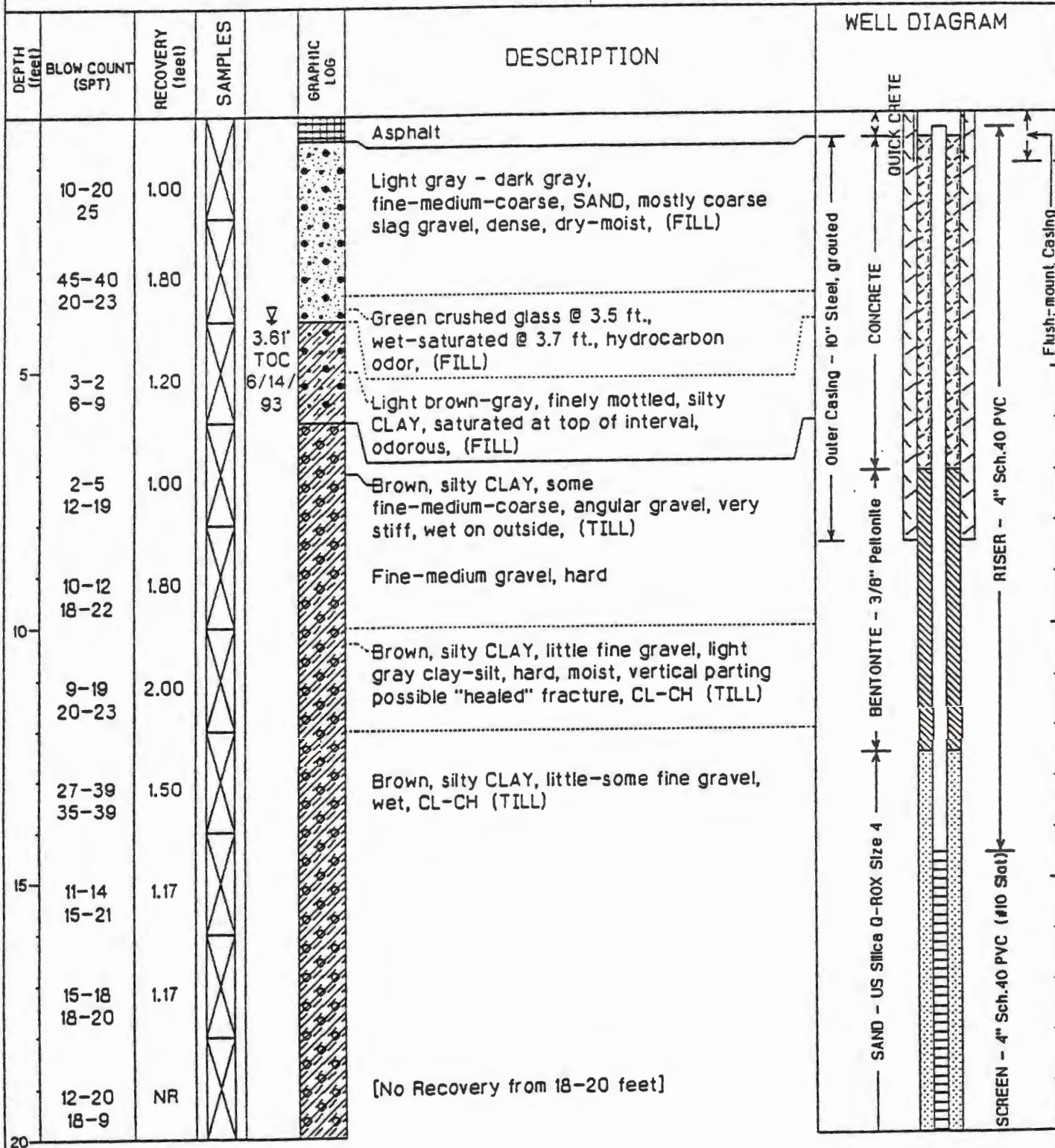
DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

DRILLING METHOD: 4.25-INCH I.D. HOLLOW STEM AUGER

DRILLER: EMPIRE SOILS INVESTIGATION

DATE DRILLED: 10 JUNE, 1993

GEOLOGIST: MIKE MEYER



PROJECT: SUPPLEMENTAL SAMPLING VISIT
 LOCATION: SENECA FALLS, NEW YORK
 CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-24

GROUND ELEVATION: 465.23

WELL ELEVATION: 464.78

ELEV. DATUM: FEET MSL

WELL DEPTH: 24.5

DATUM: FEET BGS

DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

DRILLING METHOD: 4.25-INCH I.D. HOLLOW STEM AUGER

DRILLER: EMPIRE SOILS INVESTIGATION

DATE DRILLED: 10 JUNE, 1993

GEOLOGIST: MIKE MEYER

DEPTH (feet)	BLOW COUNT (SPT)	RECOVERY (feet)	SAMPLES	GRAPHIC LOG	DESCRIPTION	WELL DIAGRAM
	5-6 8-10	1.17			[Stiff, saturated, slight hydrocarbon odor]	
	7-8 10-15	NR			[No recovery from 22-24 feet]	
25	3-4 5-6	1.67			Brown, silty CLAY, trace-little fine gravel, medium stiff, very plastic, saturated, CH (TILL)	
					Total Depth: 26 feet	
30						
35						
40						

← SAND - US Silica Q-ROX Size 4



PROJECT: SUPPLEMENTAL SAMPLING VISIT
 LOCATION: SENECA FALLS, NEW YORK
 CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-25

GROUND ELEVATION: 460.29

WELL ELEVATION: 462.94

ELEV. DATUM: FEET MSL

WELL DEPTH: 16

DATUM: FEET BGS

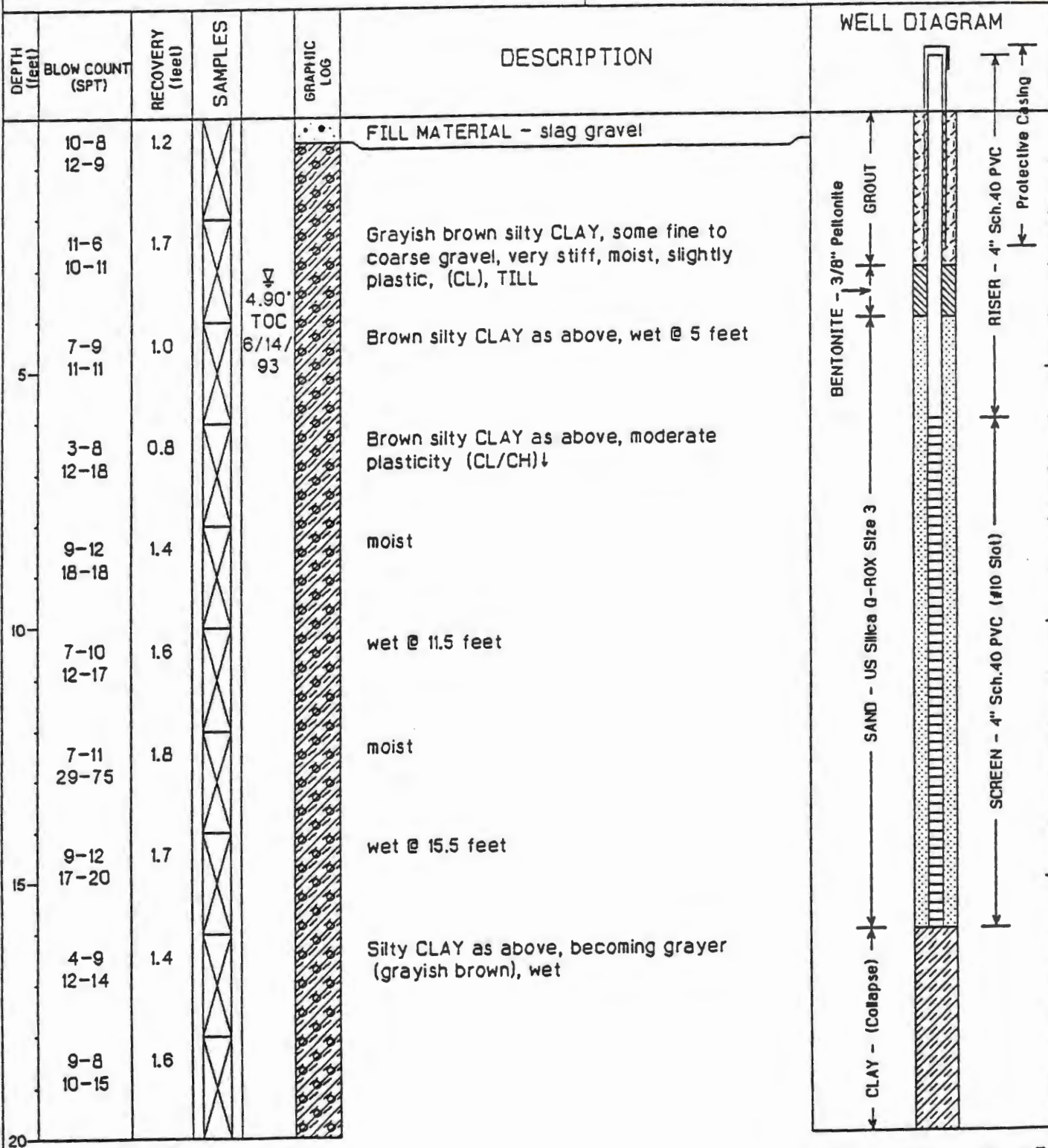
DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

DRILLING METHOD: 6.25-INCH I.D. HOLLOW STEM AUGER

DRILLER: EMPIRE SOILS INVESTIGATION

DATE DRILLED: 11 MAY, 1993

GEOLOGIST: MARK SHAHEEN



PROJECT: SUPPLEMENTAL SAMPLING VISIT
 LOCATION: SENECA FALLS, NEW YORK
 CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-26

GROUND ELEVATION: 461.69

WELL ELEVATION: 461.09

ELEV. DATUM: FEET MSL

WELL DEPTH: 15

DATUM: FEET BGS

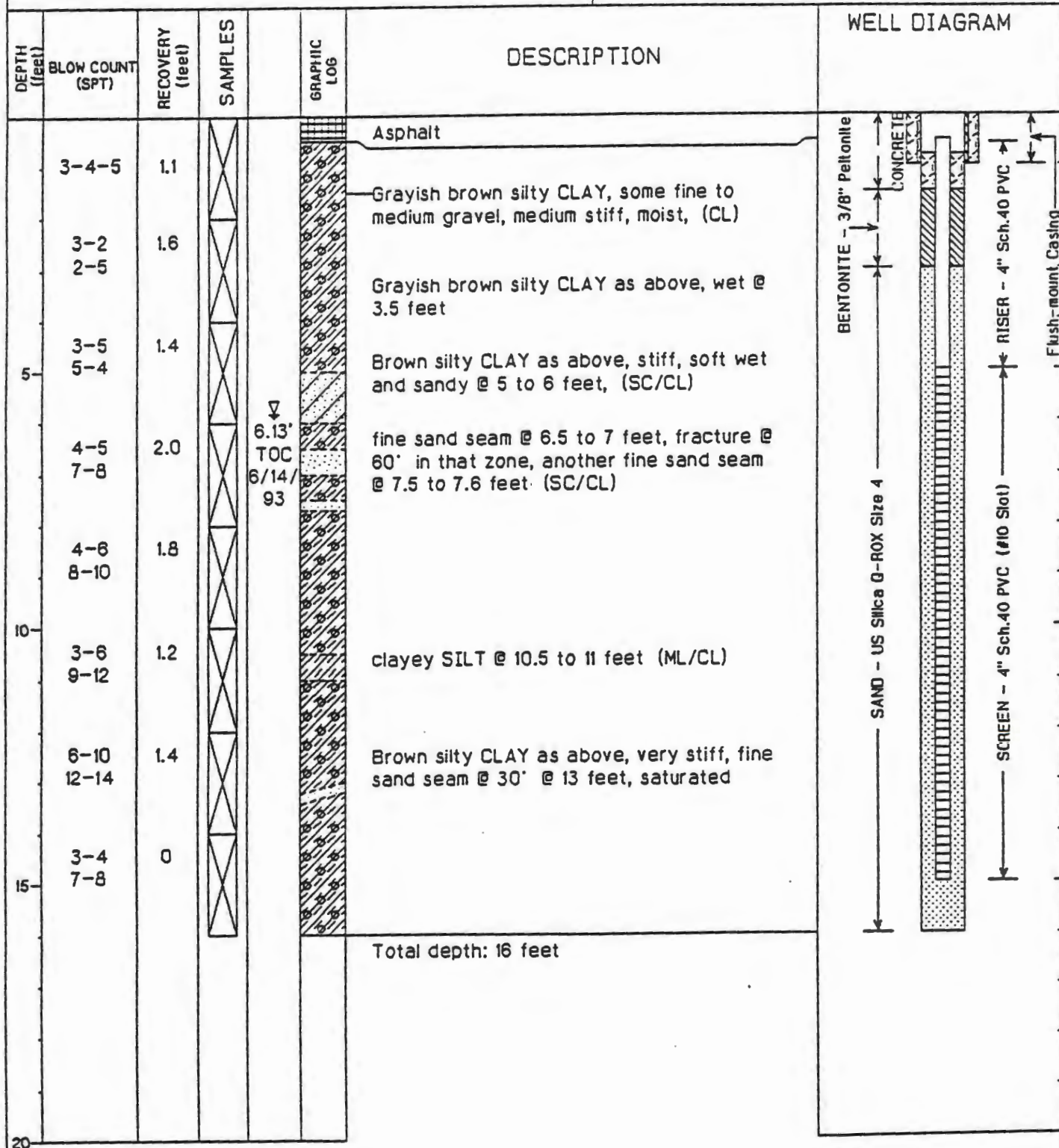
DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

DRILLING METHOD: 6.25-INCH I.D. HOLLOW STEM AUGER

DRILLER: EMPIRE SOILS INVESTIGATION

DATE DRILLED: 12 MAY, 1993

GEOLOGIST: MARK SHAHEEN



PROJECT: SUPPLEMENTAL SAMPLING VISIT
 LOCATION: SENECA FALLS, NEW YORK
 CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-27

GROUND ELEVATION: 460.57
 WELL ELEVATION: 462.67 ELEV. DATUM: FEET MSL
 WELL DEPTH: 15 DATUM: FEET BGS
 DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

DRILLING METHOD: 6.25-INCH I.D. HOLLOW STEM AUGER
 DRILLER: EMPIRE SOILS INVESTIGATION
 DATE DRILLED: 12 MAY, 1993
 GEOLOGIST: MARK SHAHEEN

DEPTH (feet)	BLOW COUNT (SPT)	RECOVERY (feet)	SAMPLES	GRAPHIC LOG	DESCRIPTION	WELL DIAGRAM
10-11 9-6		1.6				BENTONITE - 3/8" Peltonite GROUT RISER - 4" Sch. 40 PVC Protective Casing SAND - US Silica Q-ROX Size 4 SCREEN - 4" Sch. 40 PVC (#10 Slot) CLAY - (Collapse)
9-8 10-14		1.7			Brown silty CLAY, little fine to coarse gravel, very stiff, moist, (CL), TILL	
3-8 10-11		1.5			Brown silty CLAY as above, wet in small blotches	
8-10 14-16		1.5		7.29' TOC 6/14/ 93	two gray thin 1/8-inch horizontal silt seams @ 7 feet (wet) and one brown 1/4-inch silt seam angled at ca. 60° @ 7.5 feet	
9-18 23-26		1.6			some thin 1/8-inch silt/clay seams @ 8 to 10 feet, hard, moist/wet	
4-10 16-18		1.8			some fine to coarse gravel, moist/wet	
8-13 19-22		1.3			hard	
4-8 10-12		1.8				
Total depth: 16 feet						

PROJECT: SUPPLEMENTAL SAMPLING VISIT
 LOCATION: SENECA FALLS, NEW YORK
 CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-28

GROUND ELEVATION: 461.13

WELL ELEVATION: 463.48

ELEV. DATUM: FEET MSL

WELL DEPTH: 15.5

DATUM: FEET BGS

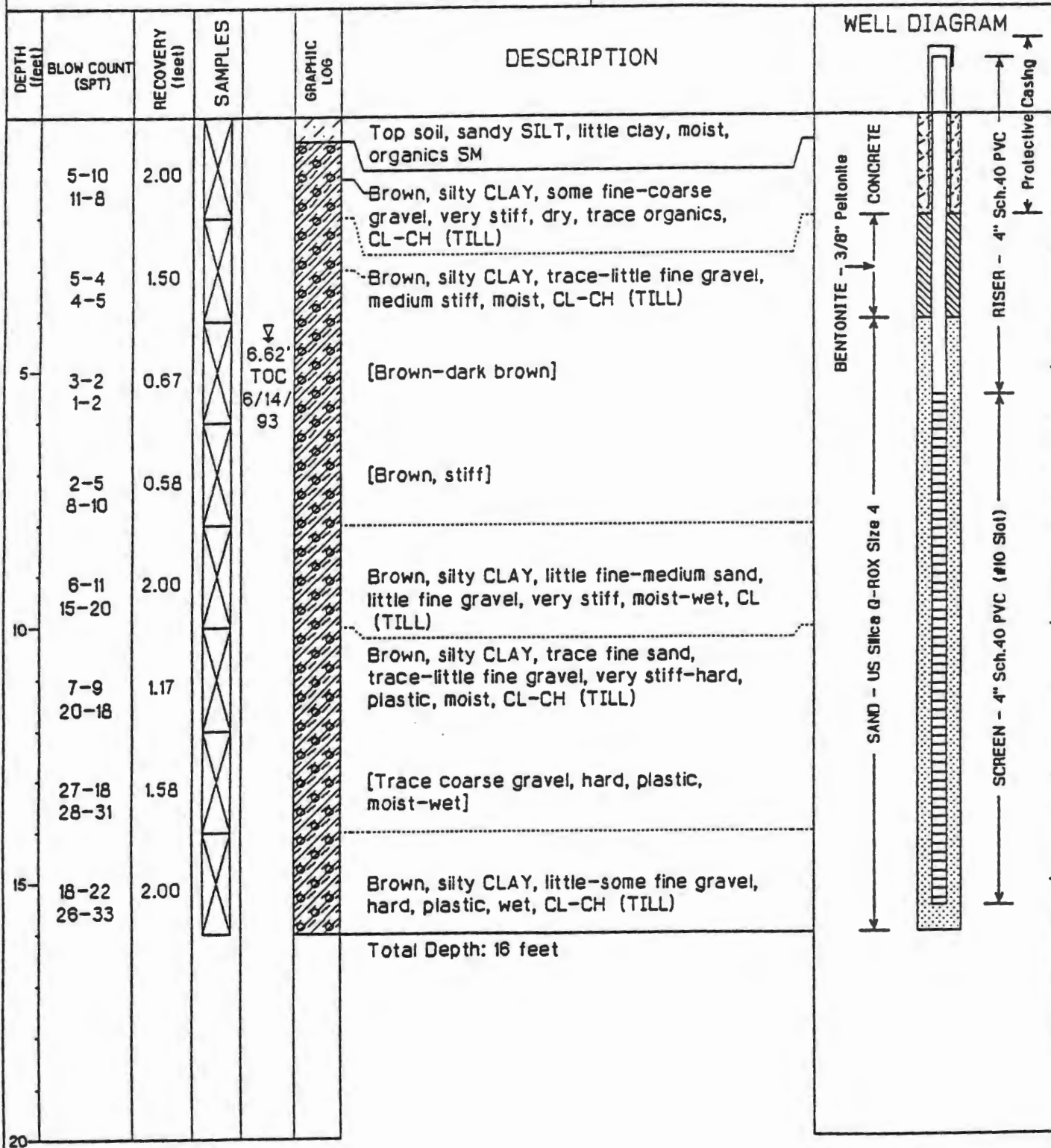
DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

DRILLING METHOD: 6.25-INCH I.D. HOLLOW STEM AUGER

DRILLER: EMPIRE SOILS INVESTIGATION

DATE DRILLED: 3-4 JUNE, 1993

GEOLOGIST: MIKE MEYER



PROJECT: SUPPLEMENTAL SAMPLING VISIT
 LOCATION: SENECA FALLS, NEW YORK
 CLIENT: PHILIPS DISPLAY COMPONENTS

WELL LOG: MW-29

GROUND ELEVATION: 460.03

WELL ELEVATION: 462.17

ELEV. DATUM: FEET MSL

WELL DEPTH: 18

DATUM: FEET BGS

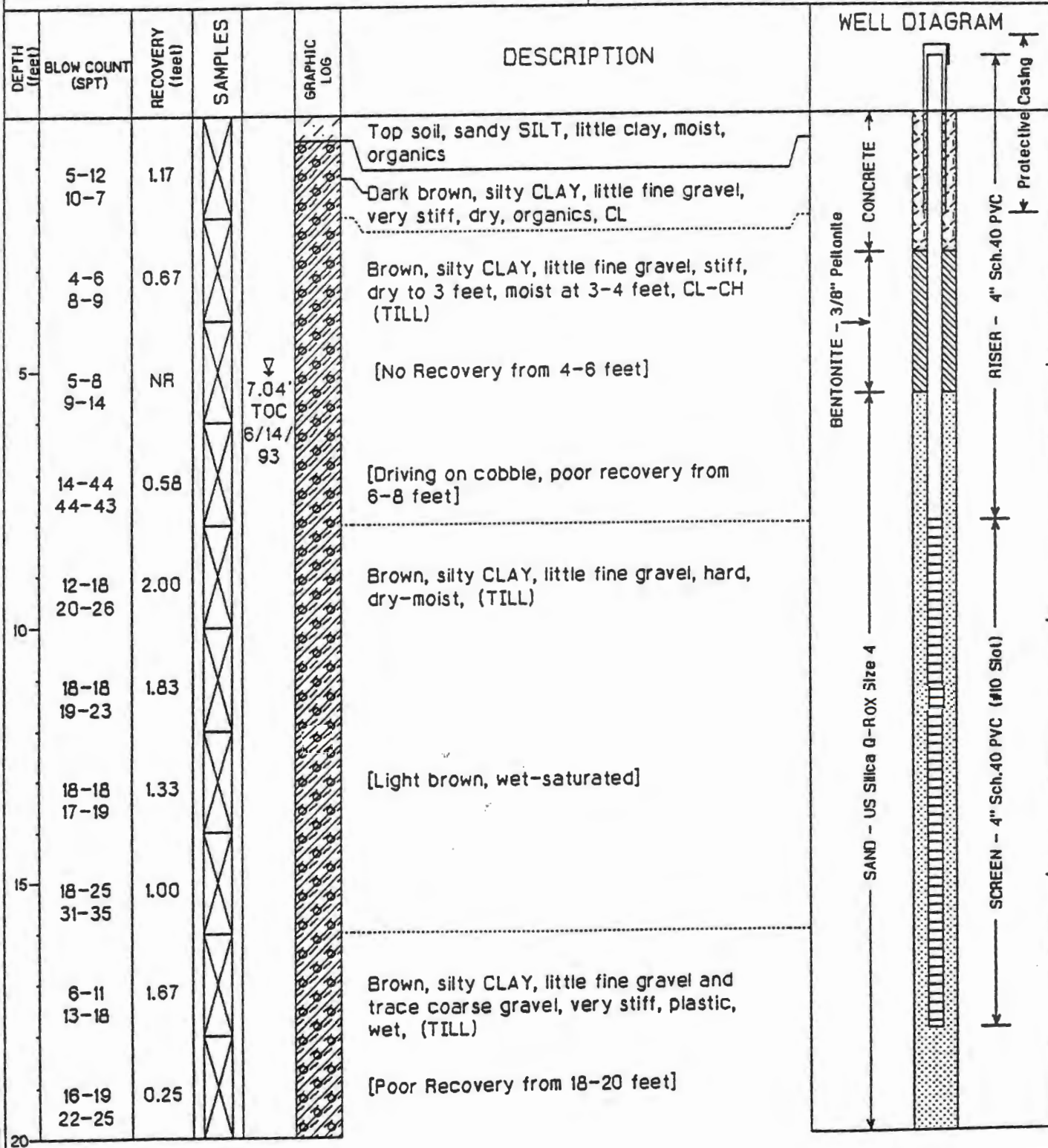
DEVELOPMENT METHOD: SURGE AND PURGE - BAILER

DRILLING METHOD: 6.25-INCH I.D. HOLLOW STEM AUGER

DRILLER: EMPIRE SOILS INVESTIGATION

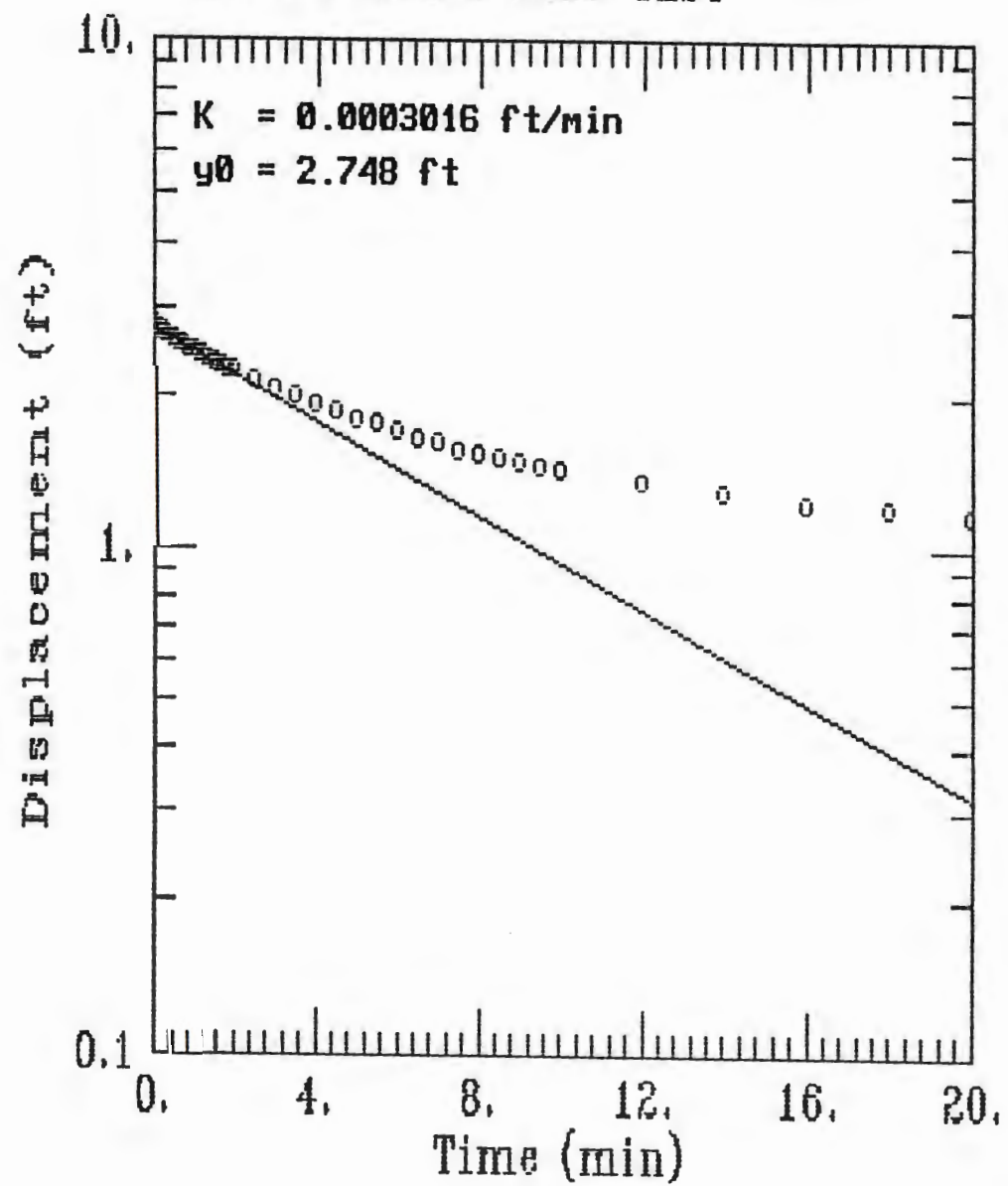
DATE DRILLED: 3-4 JUNE, 1993

GEOLOGIST: MIKE MEYER



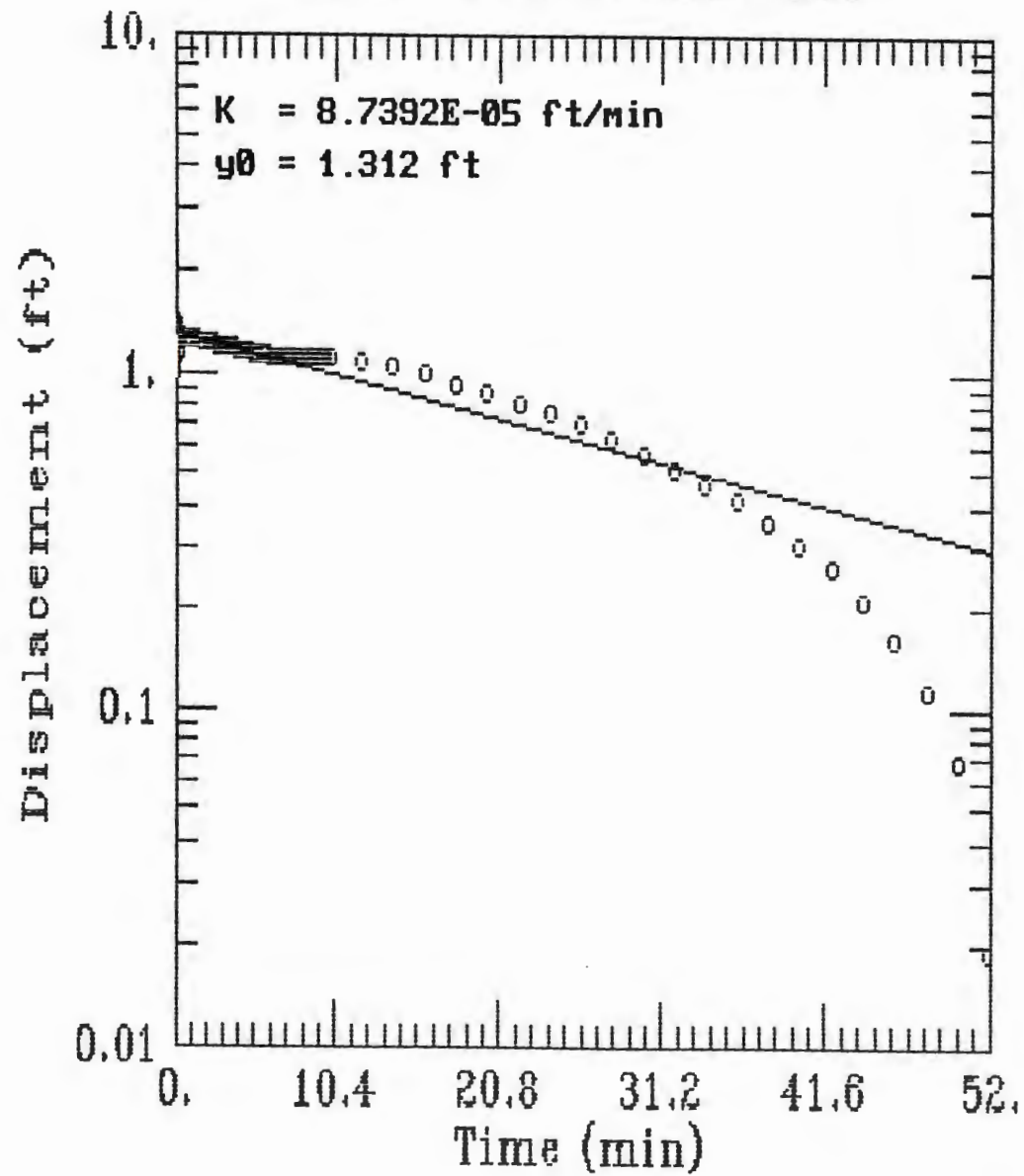
APPENDIX B
SLUG TESTS
MW-20 -- MW-29

MW-20 RISING HEAD TEST



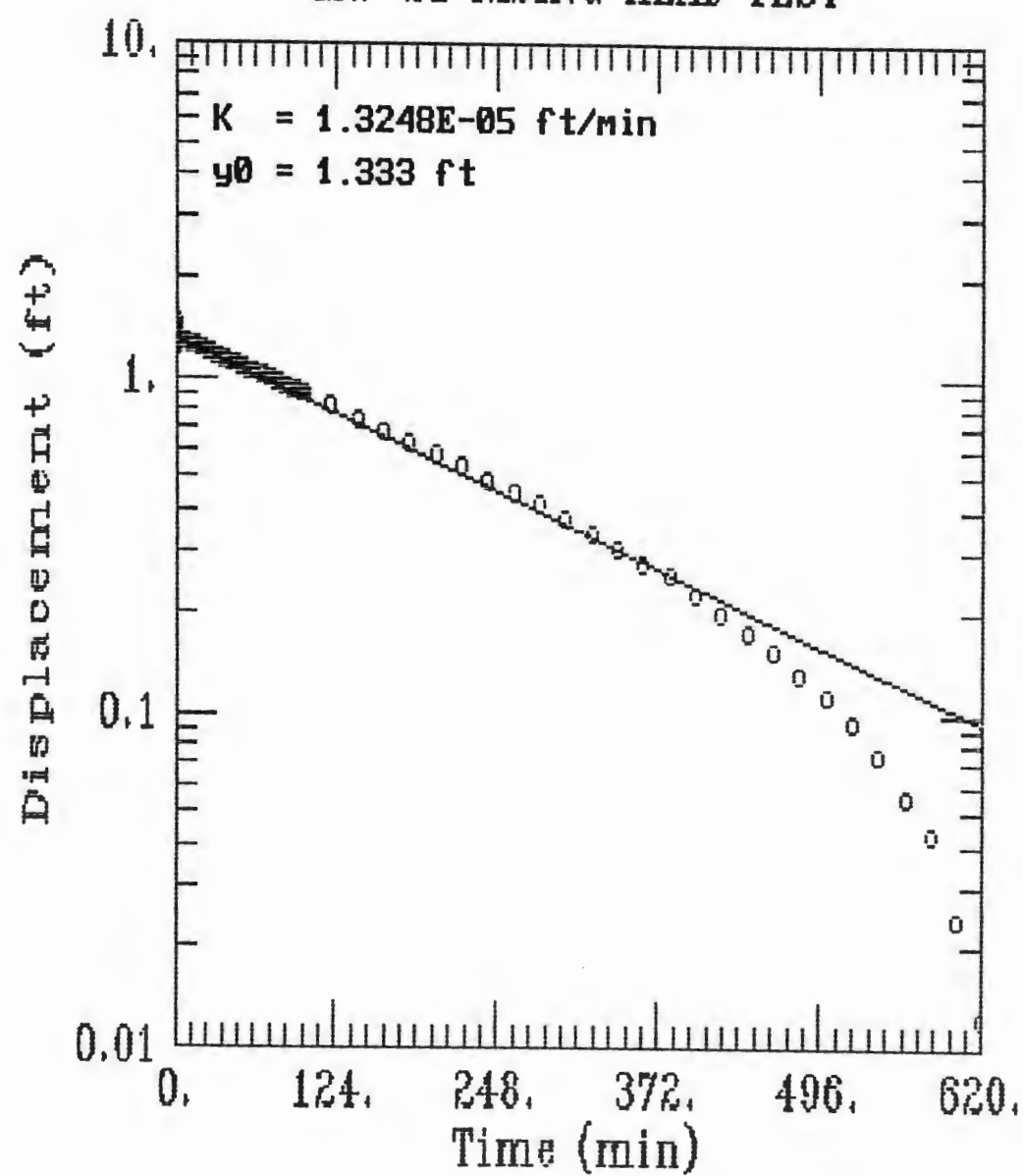
AQTESOLV

MW-21 FALLING HEAD TEST



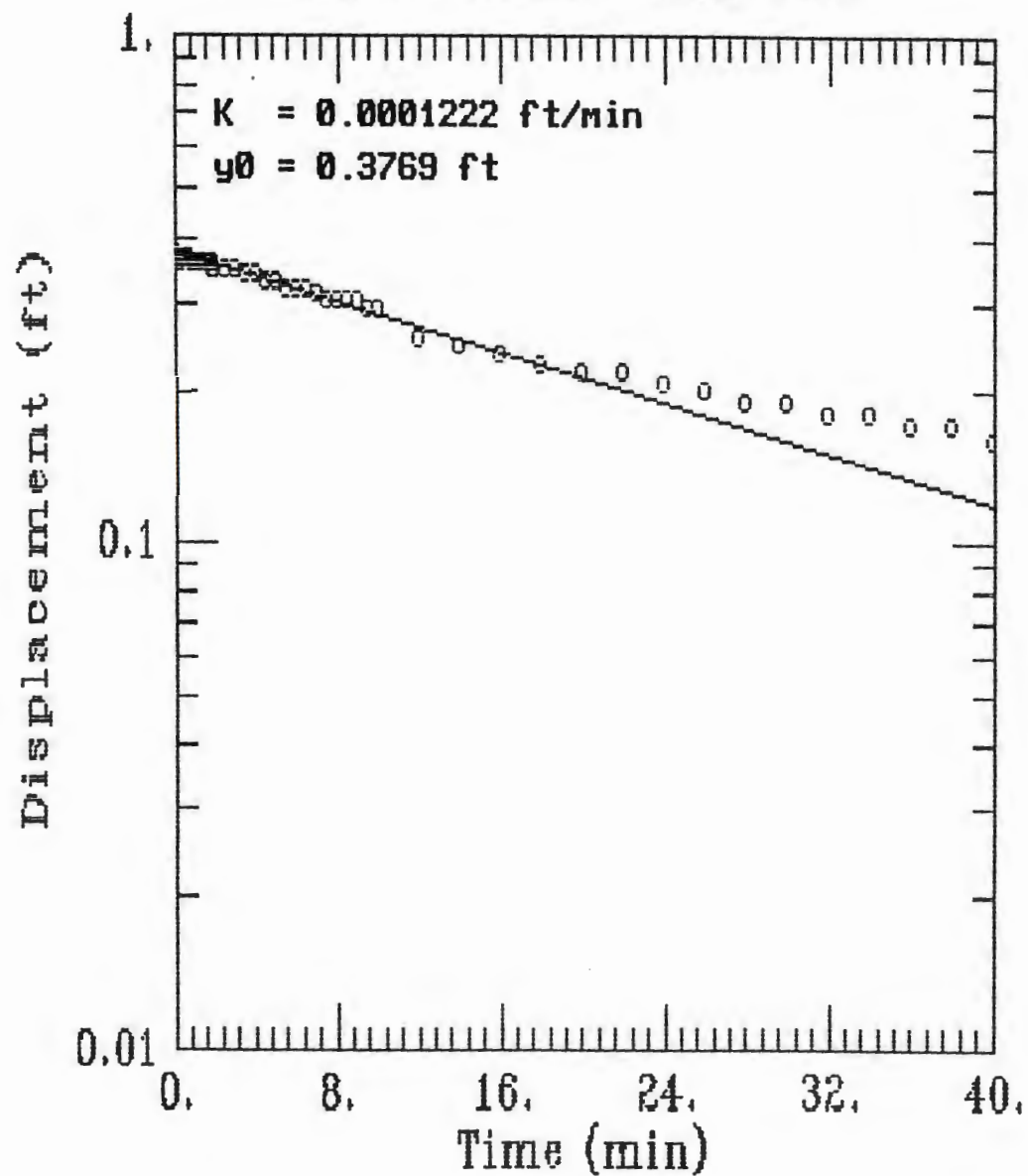
AQTESOLV

MW-21 RISING HEAD TEST



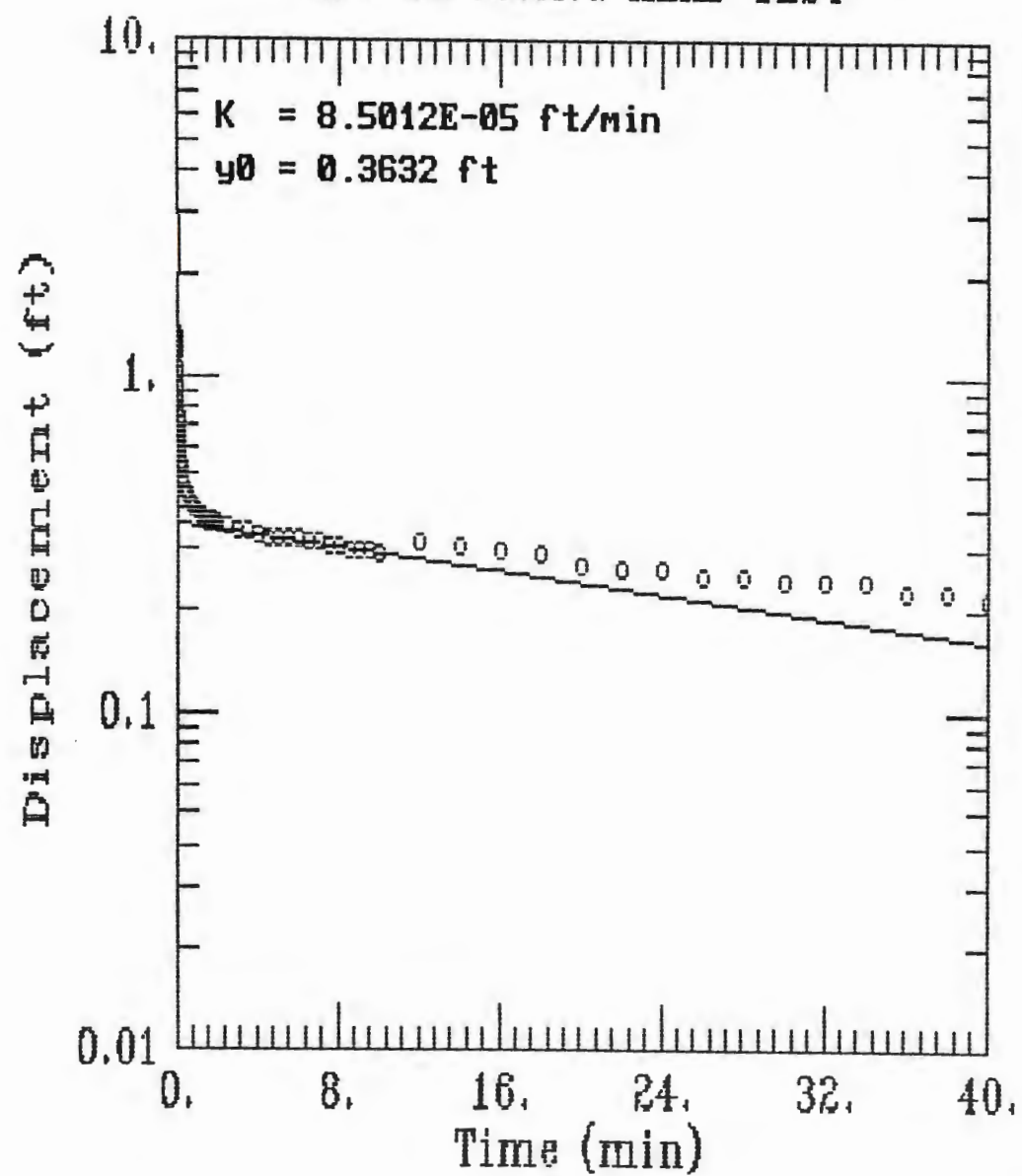
AQTESOLV

MW-22 FALLING HEAD TEST



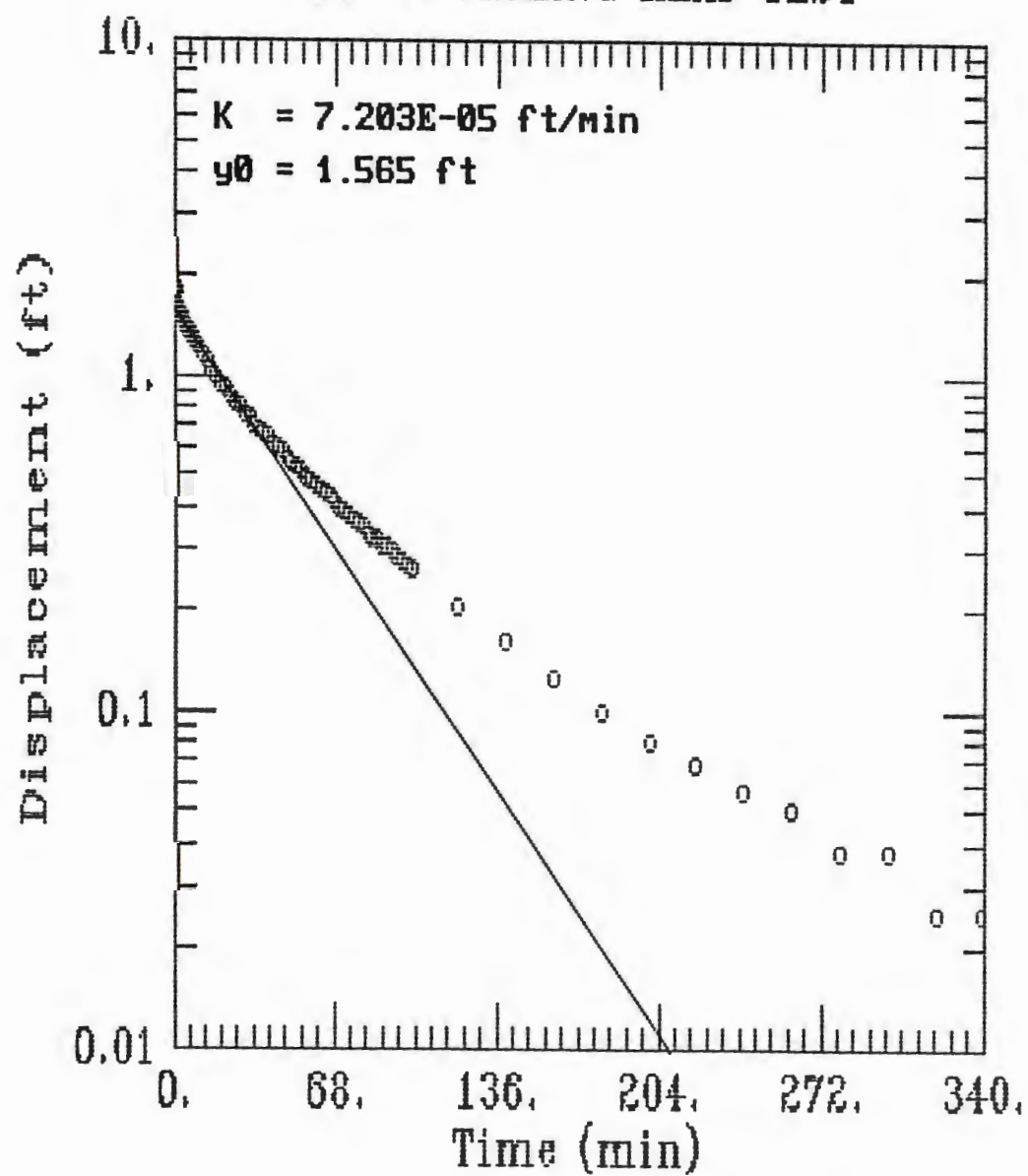
AQTESOLV

MW-22 RISING HEAD TEST



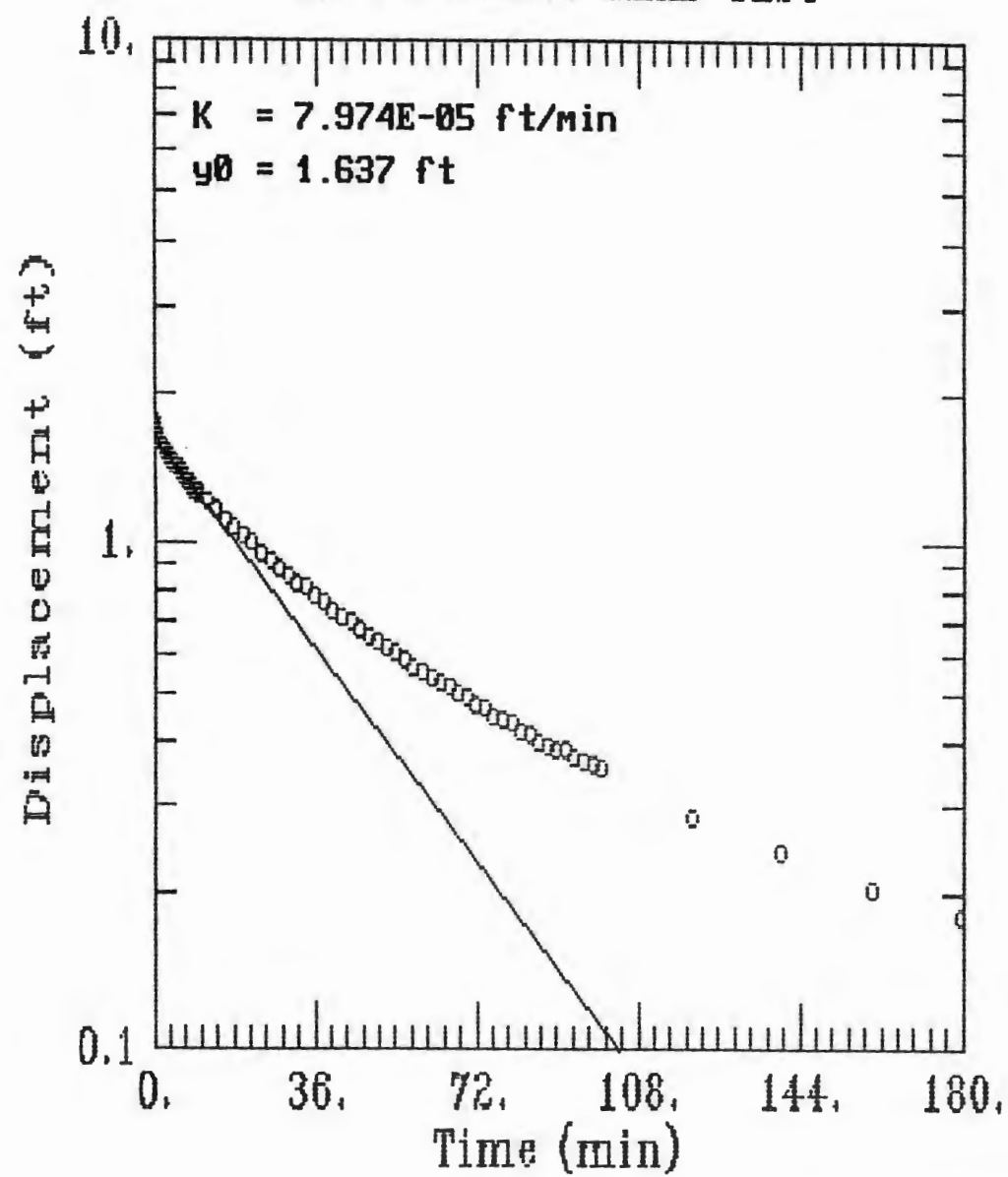
AQTESOLV

MW-23 FALLING HEAD TEST



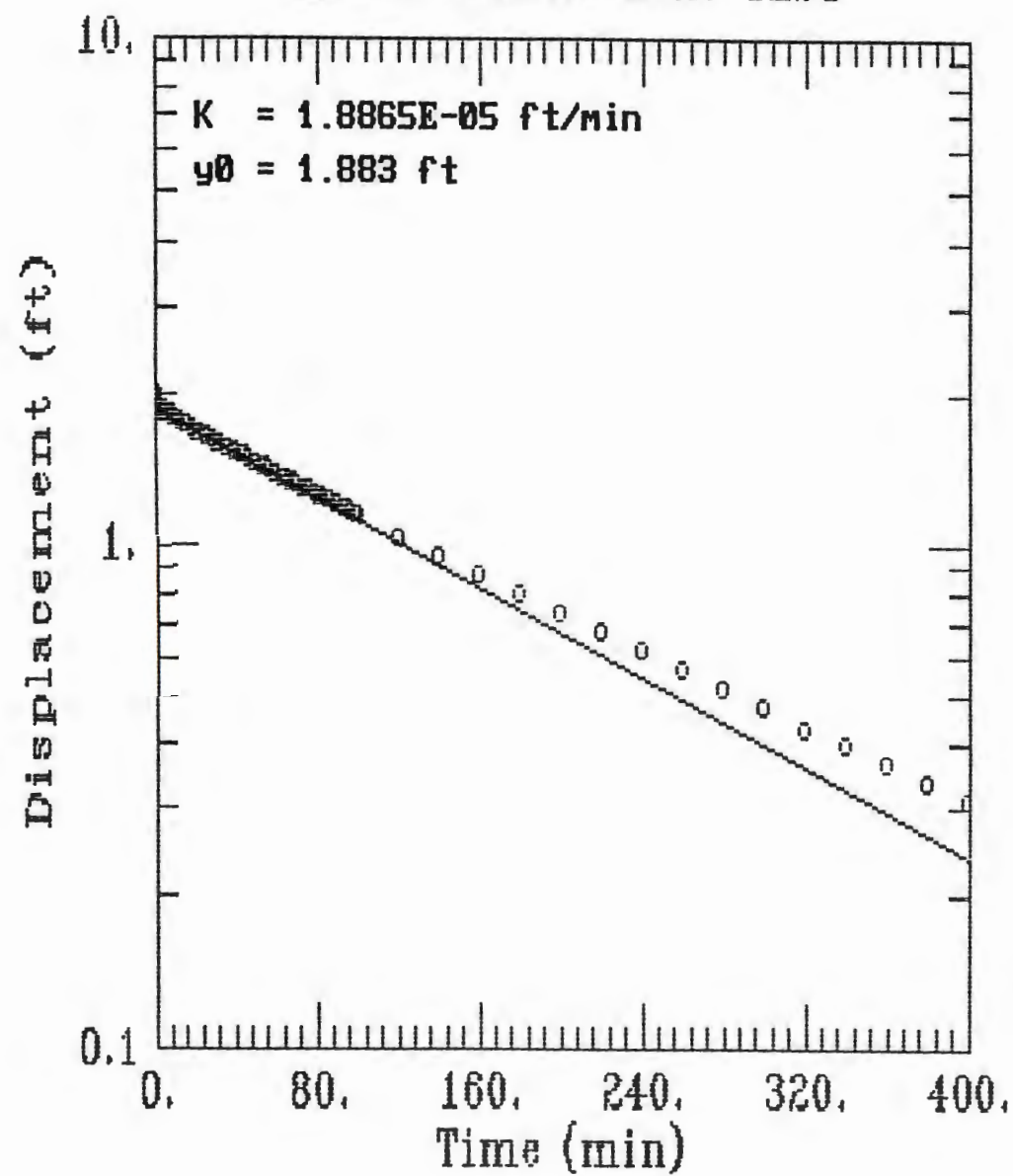
AQTESOLV

MW-23 RISING HEAD TEST



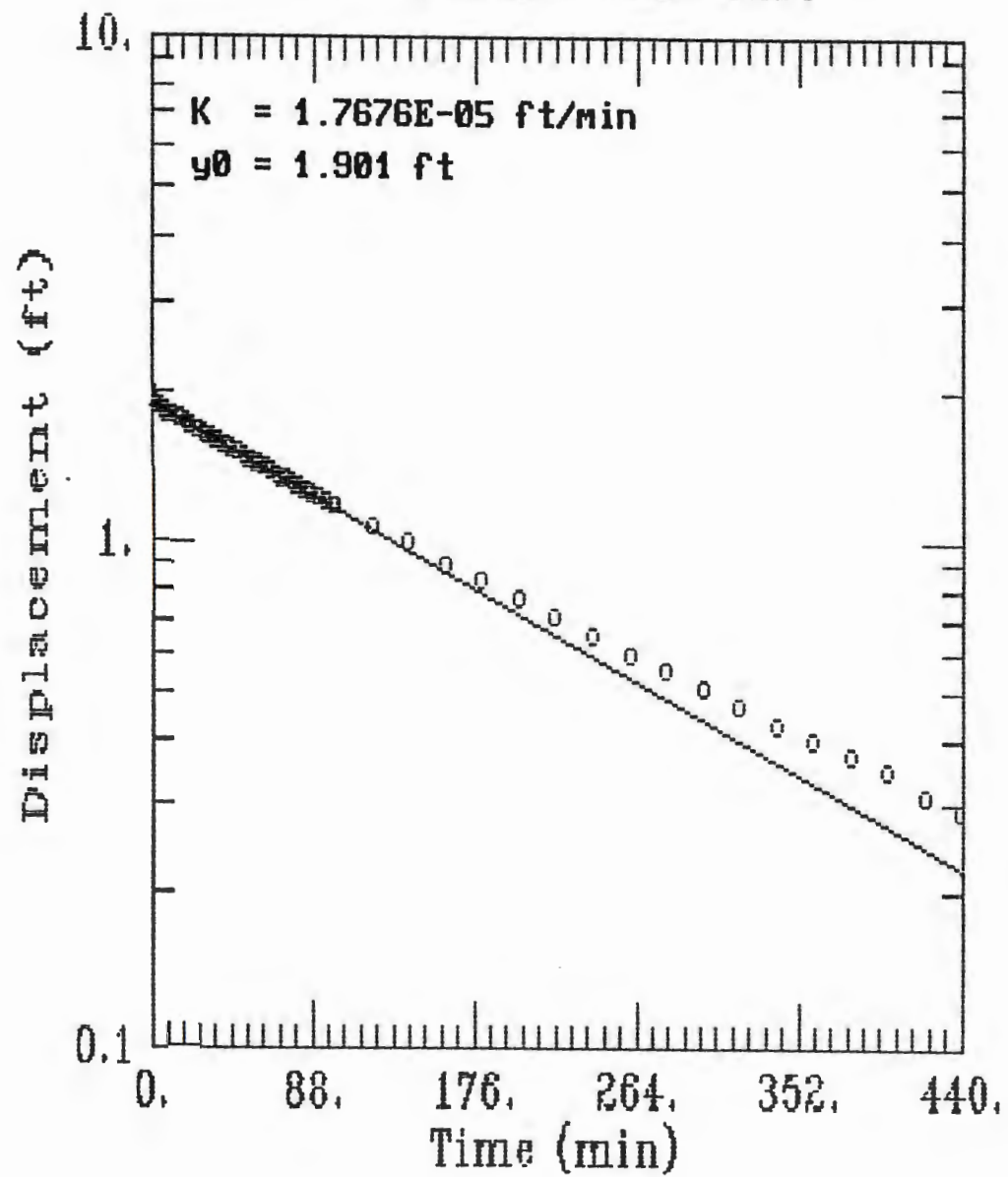
AQTESOLV

MW-24 FALLING HEAD TEST



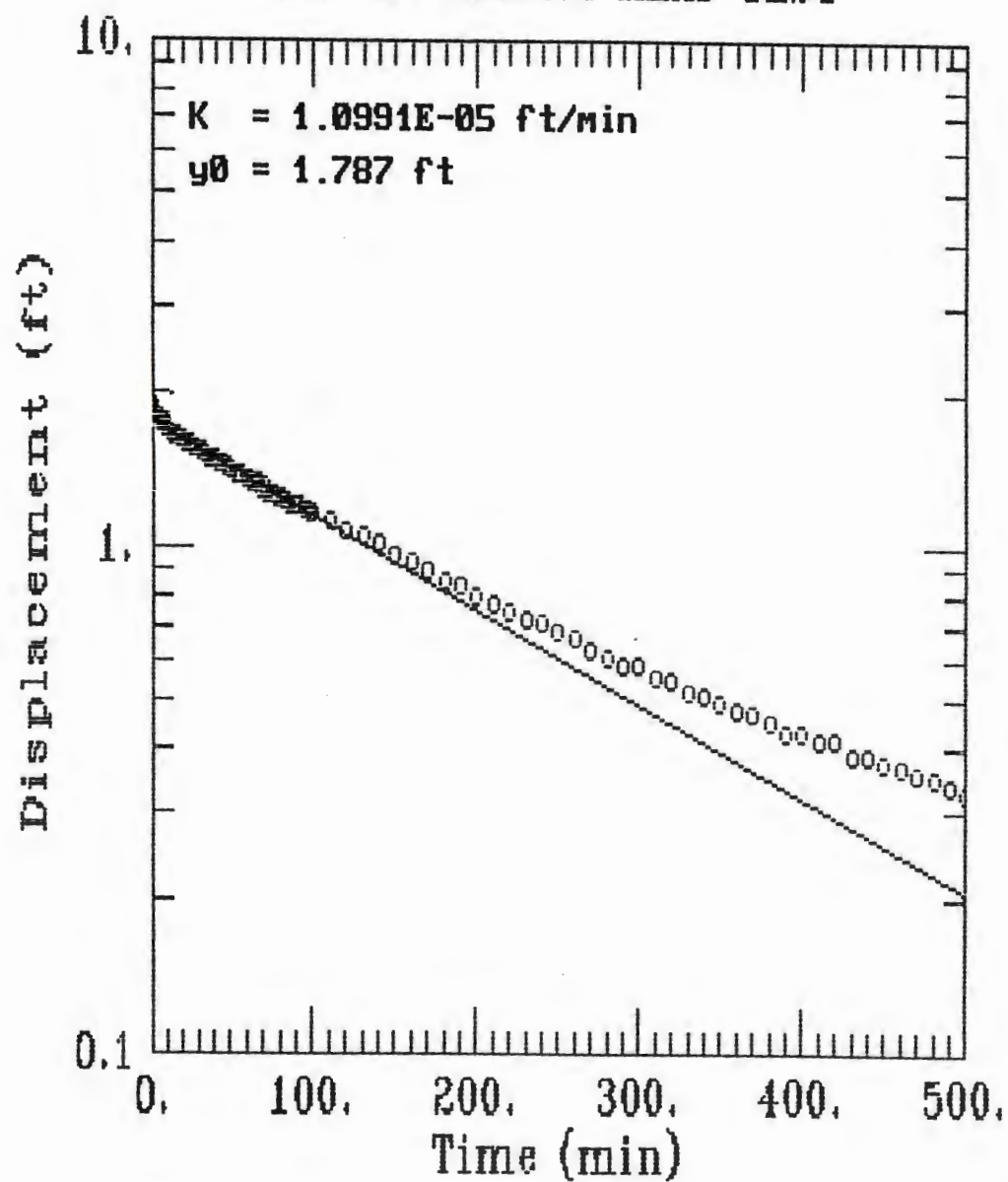
AQTESOLV

MW-24 RISING HEAD TEST



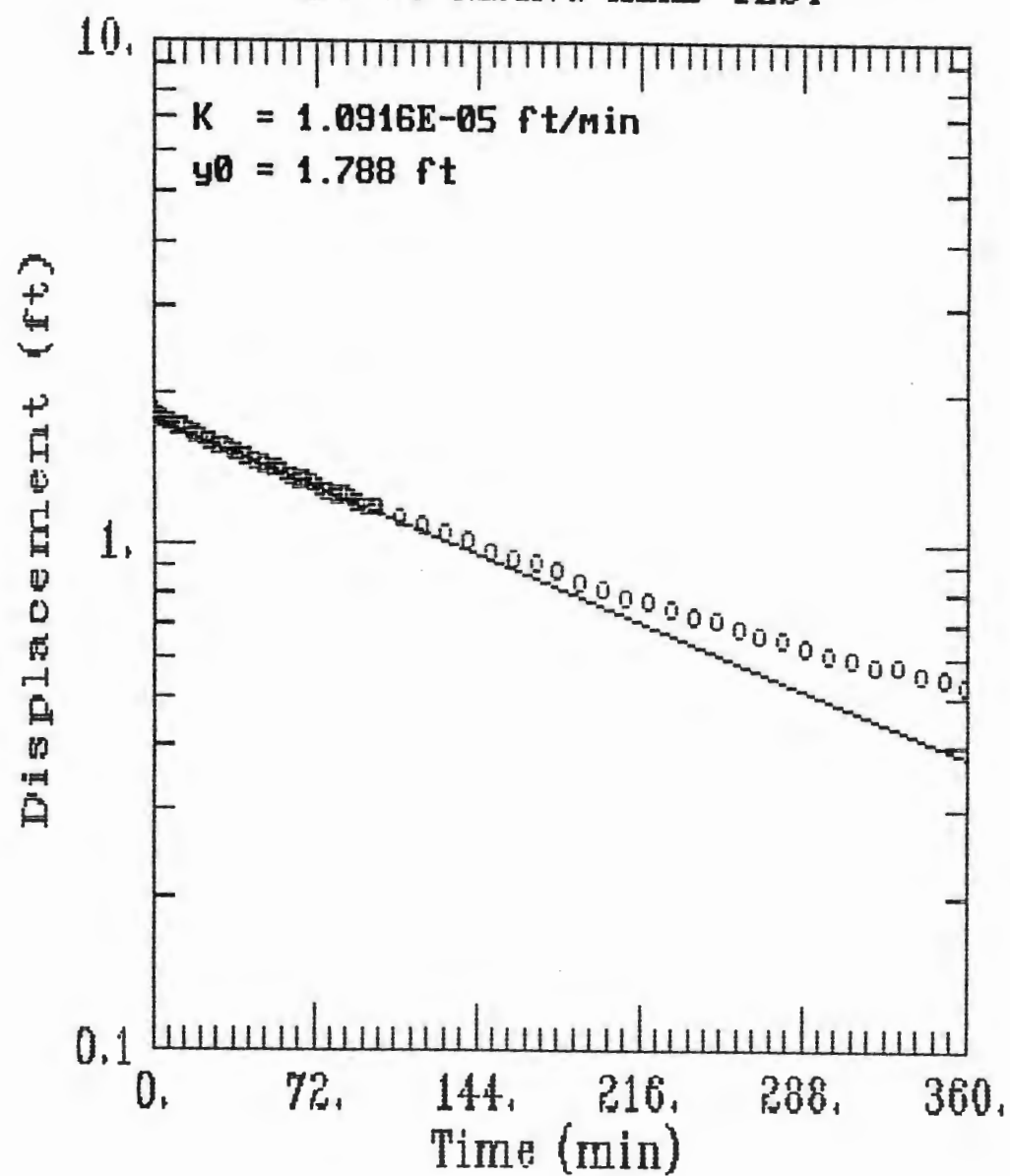
AQTESOLV

MW-25 FALLING HEAD TEST



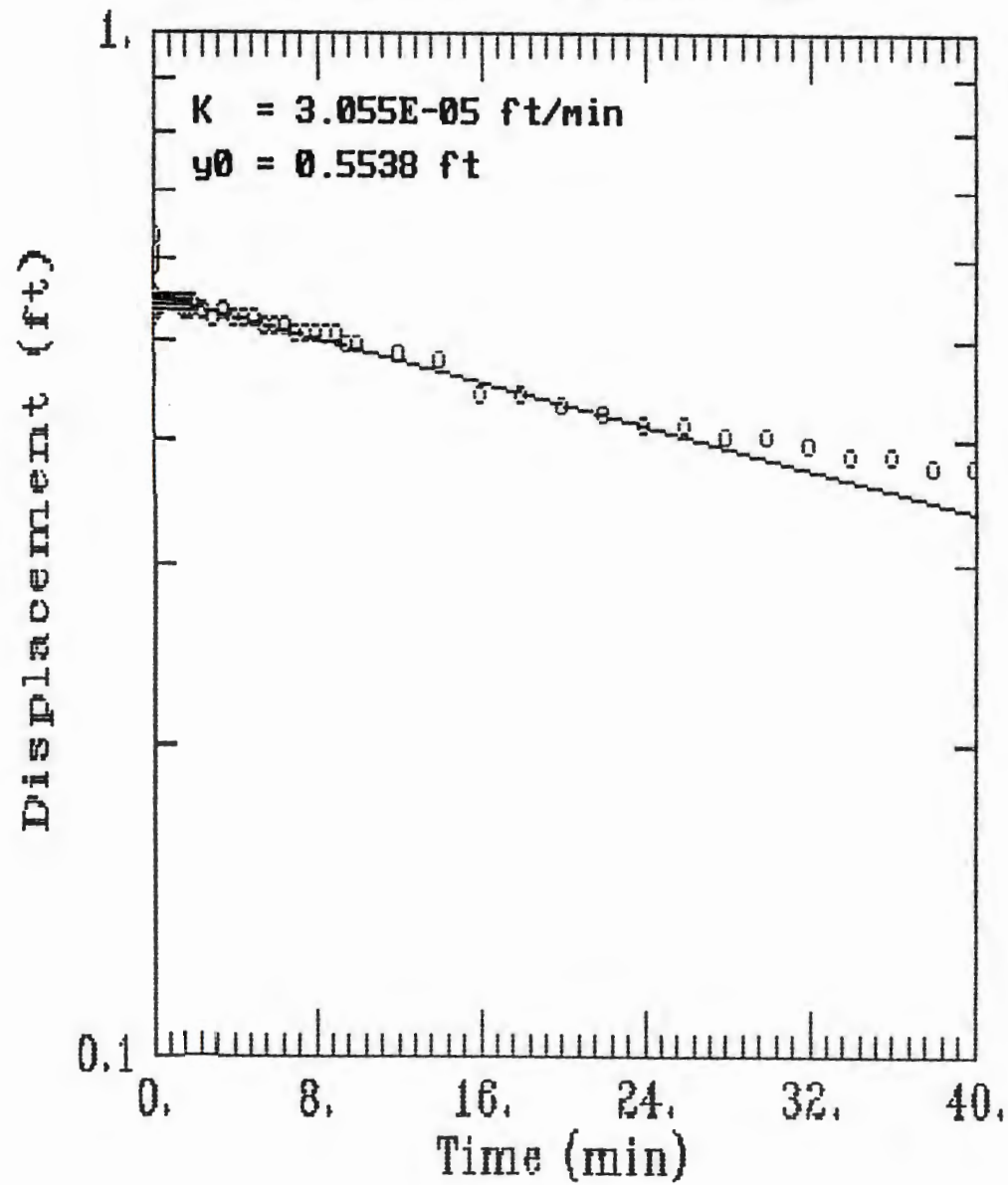
AQTESOLV

MW-25 RISING HEAD TEST



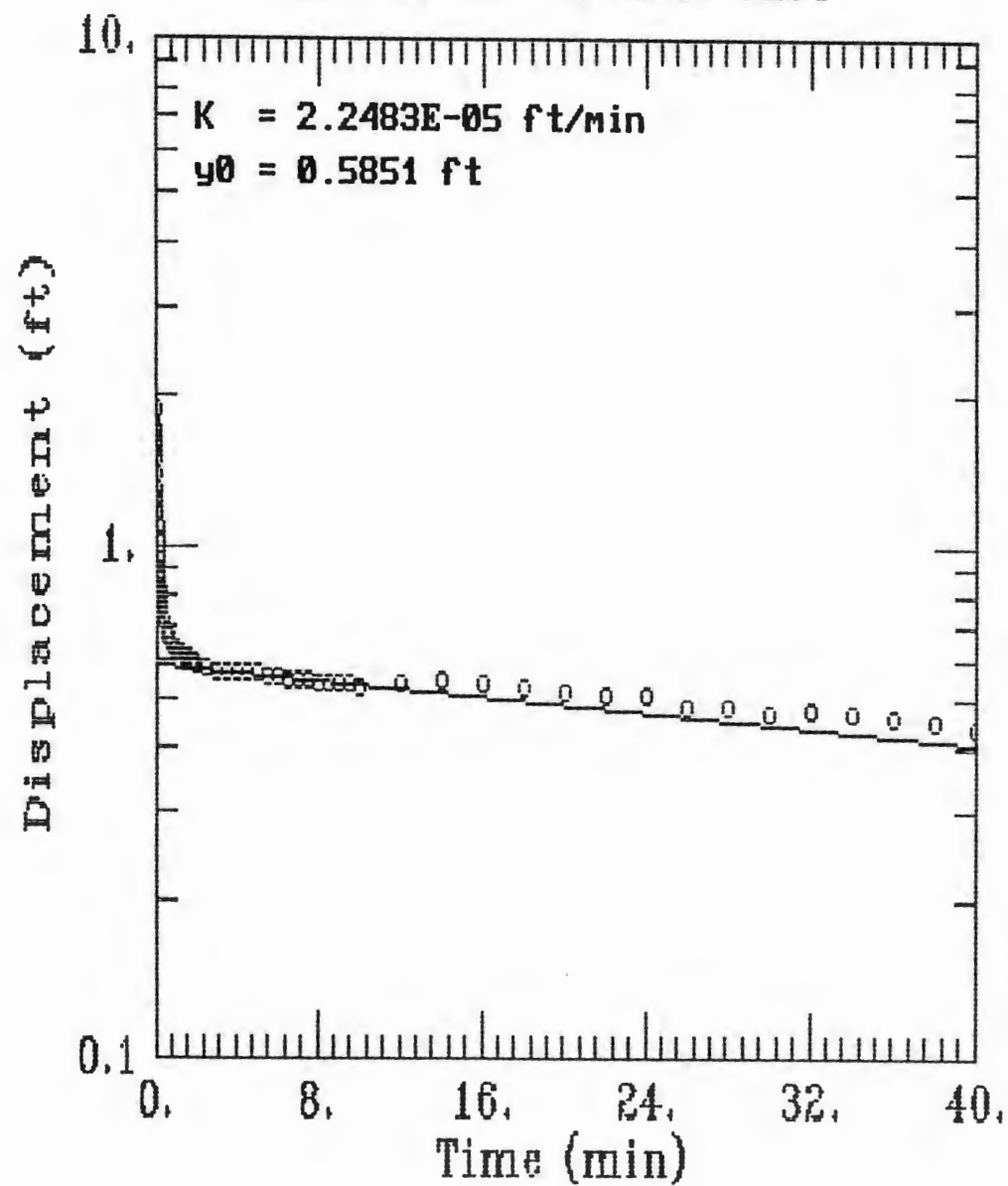
AQTESOLV

MW-26 FALLING HEAD TEST



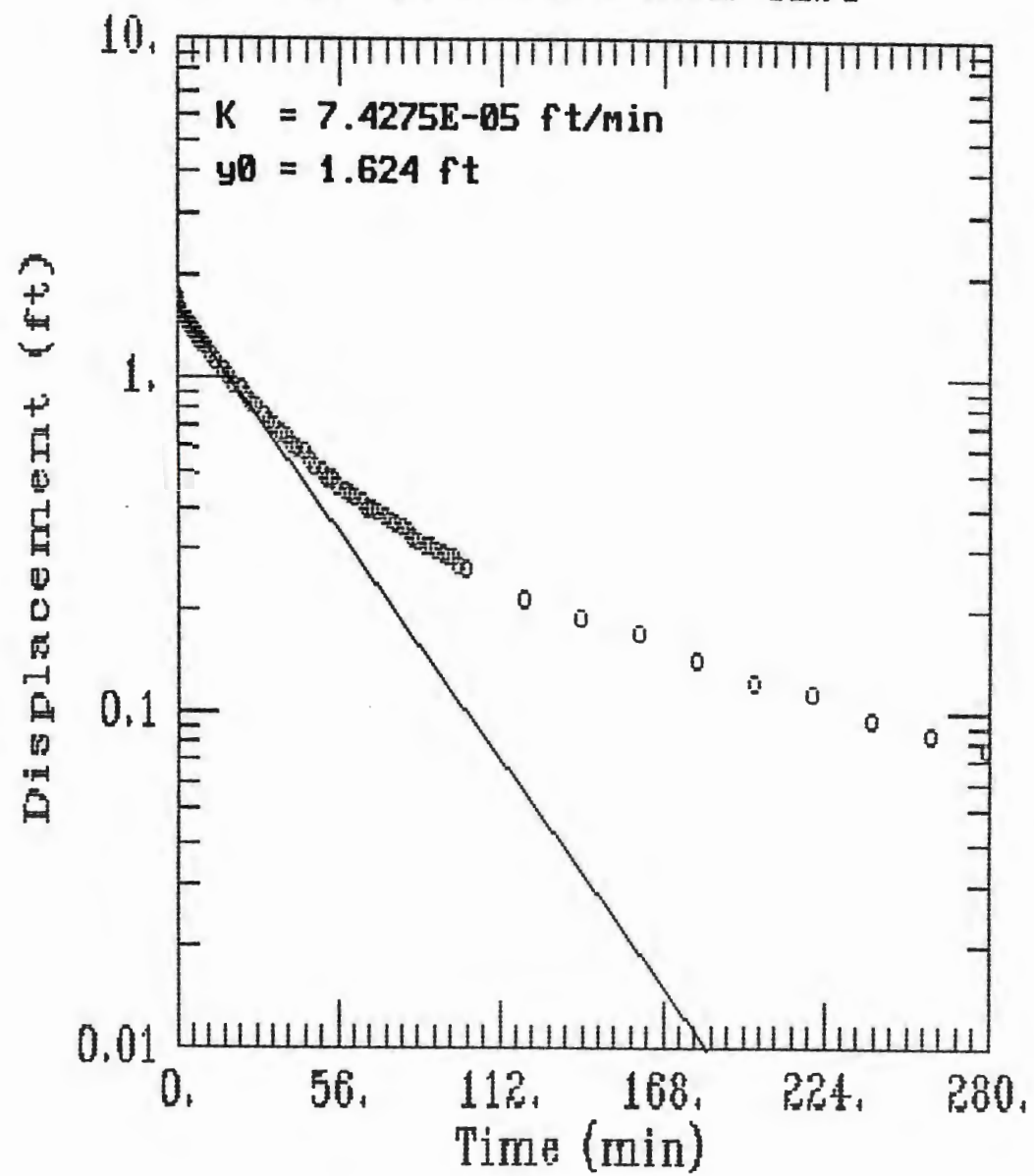
AQTESOLV

MW-26 RISING HEAD TEST



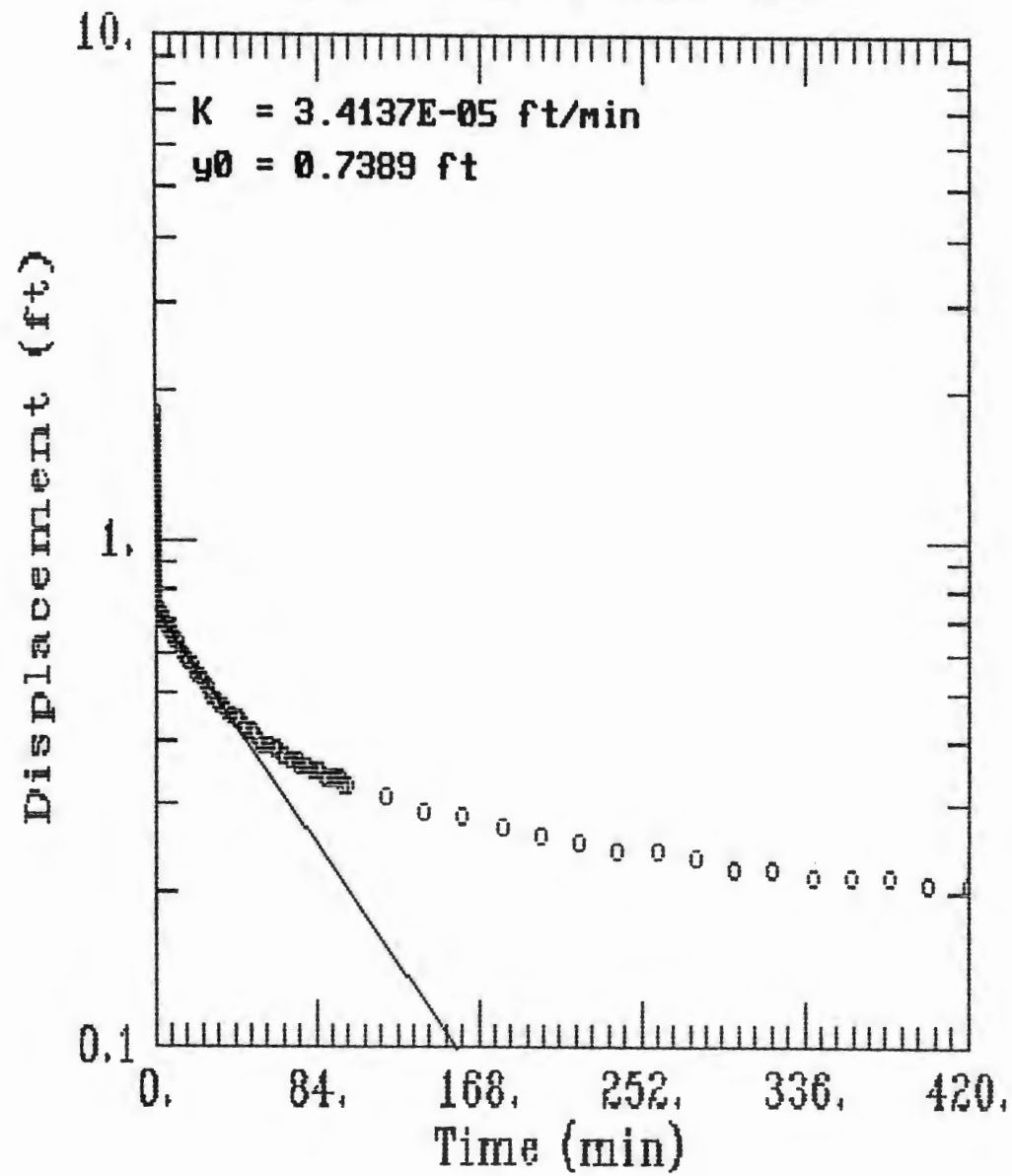
AQTESOLV

MW-27 FALLING HEAD TEST



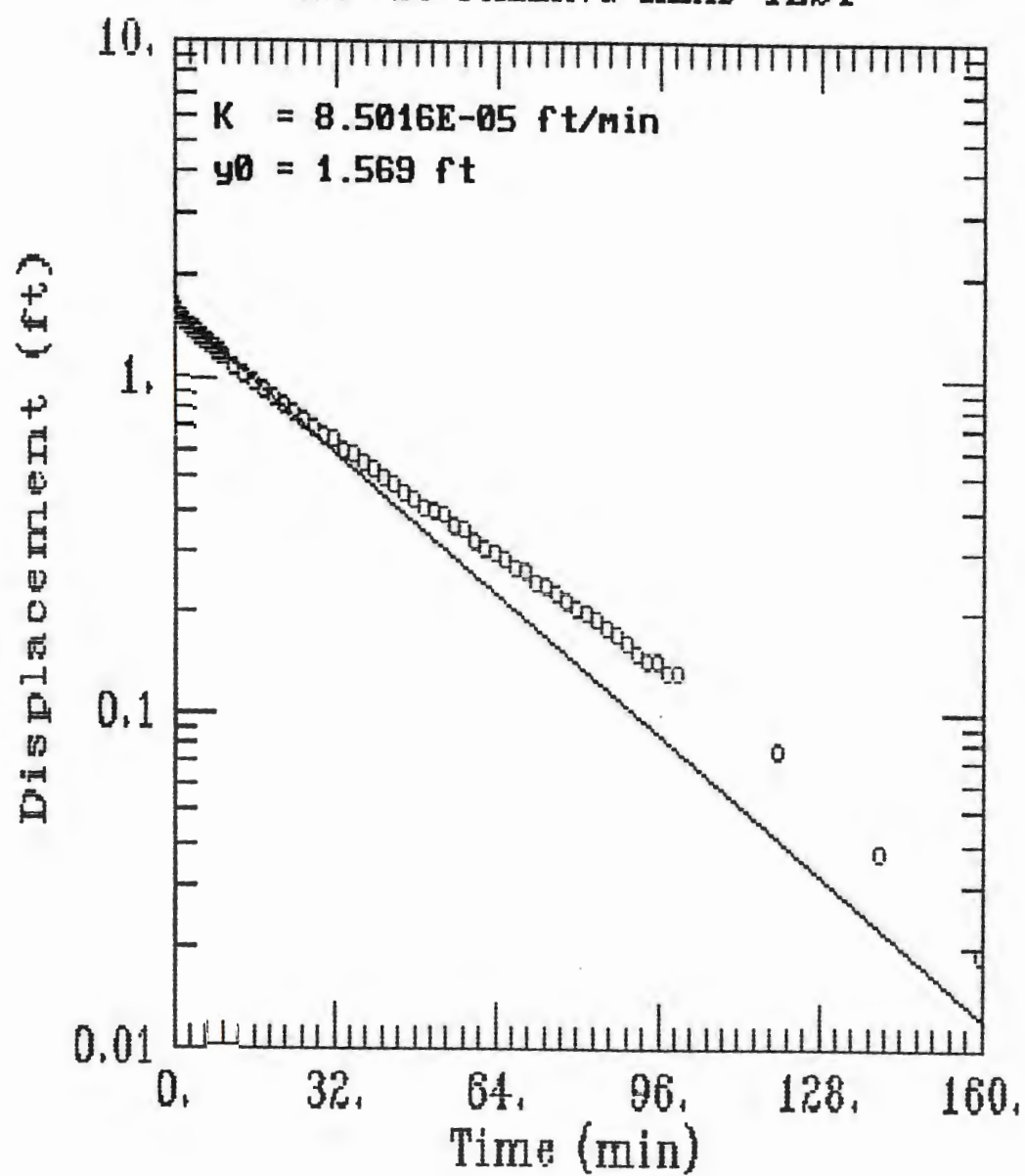
AQTESOLV

MW-27 RISING HEAD TEST



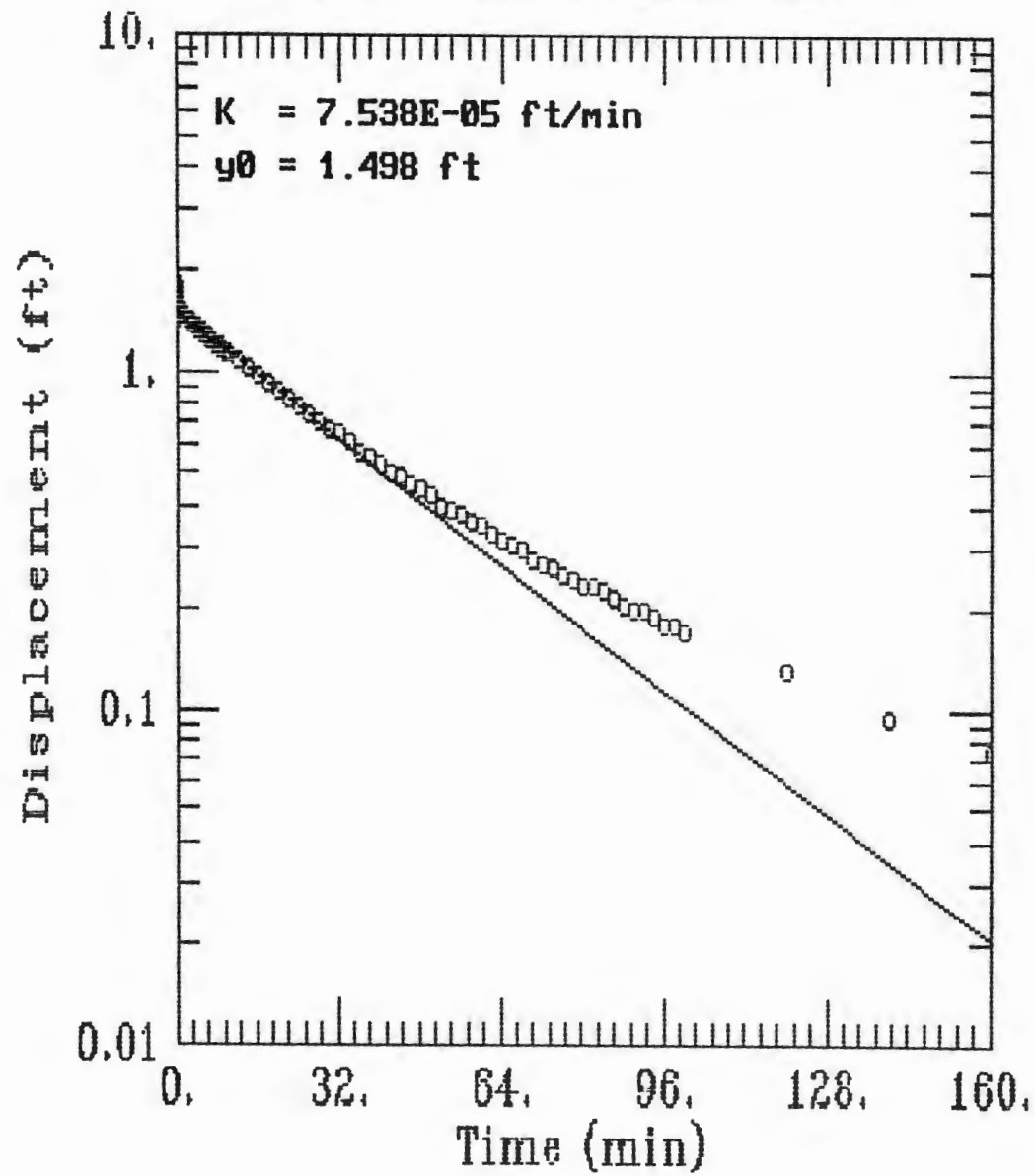
AQTESOLV

MW-28 FALLING HEAD TEST



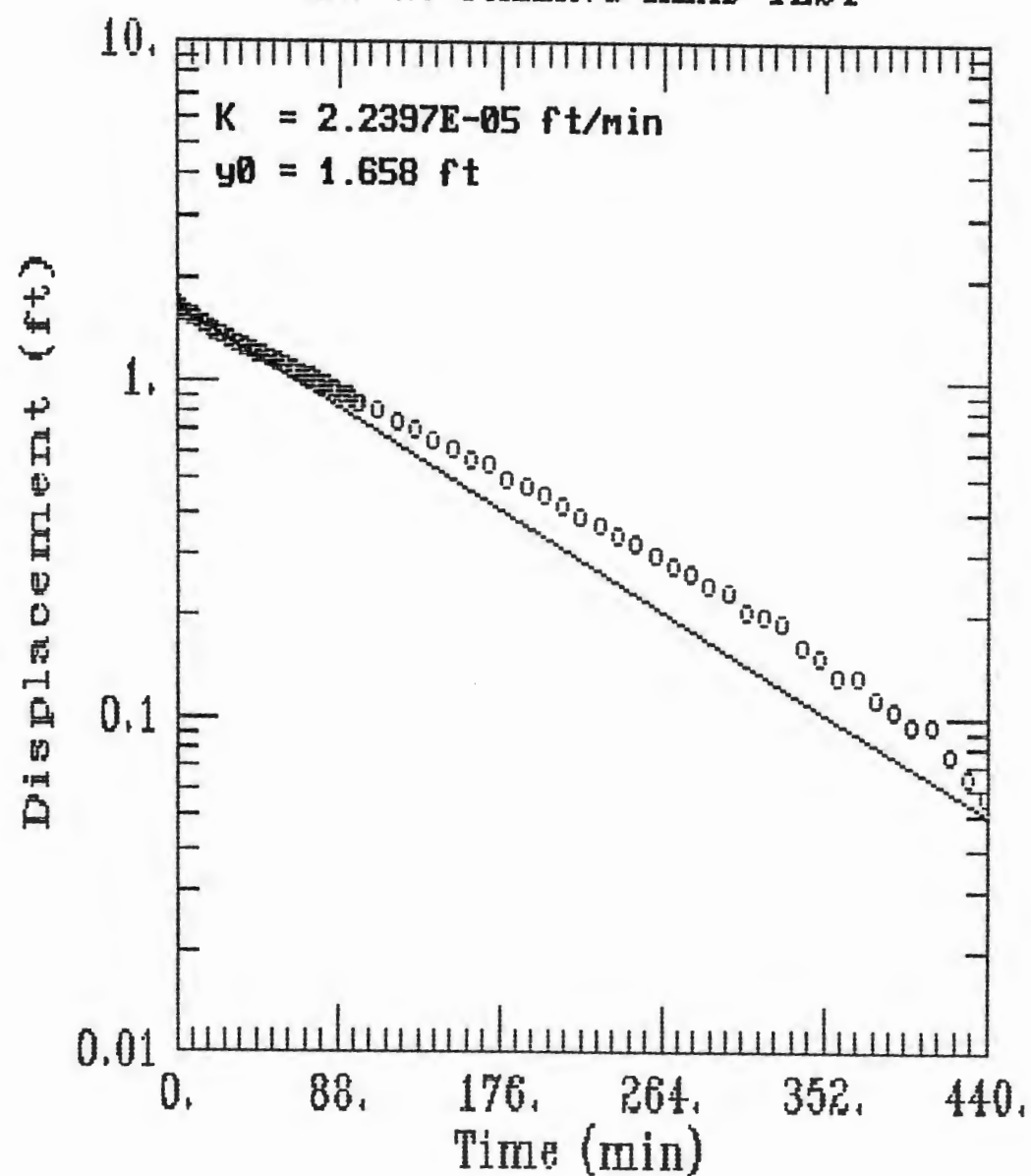
AQTESOLV

MW-28 RISING HEAD TEST



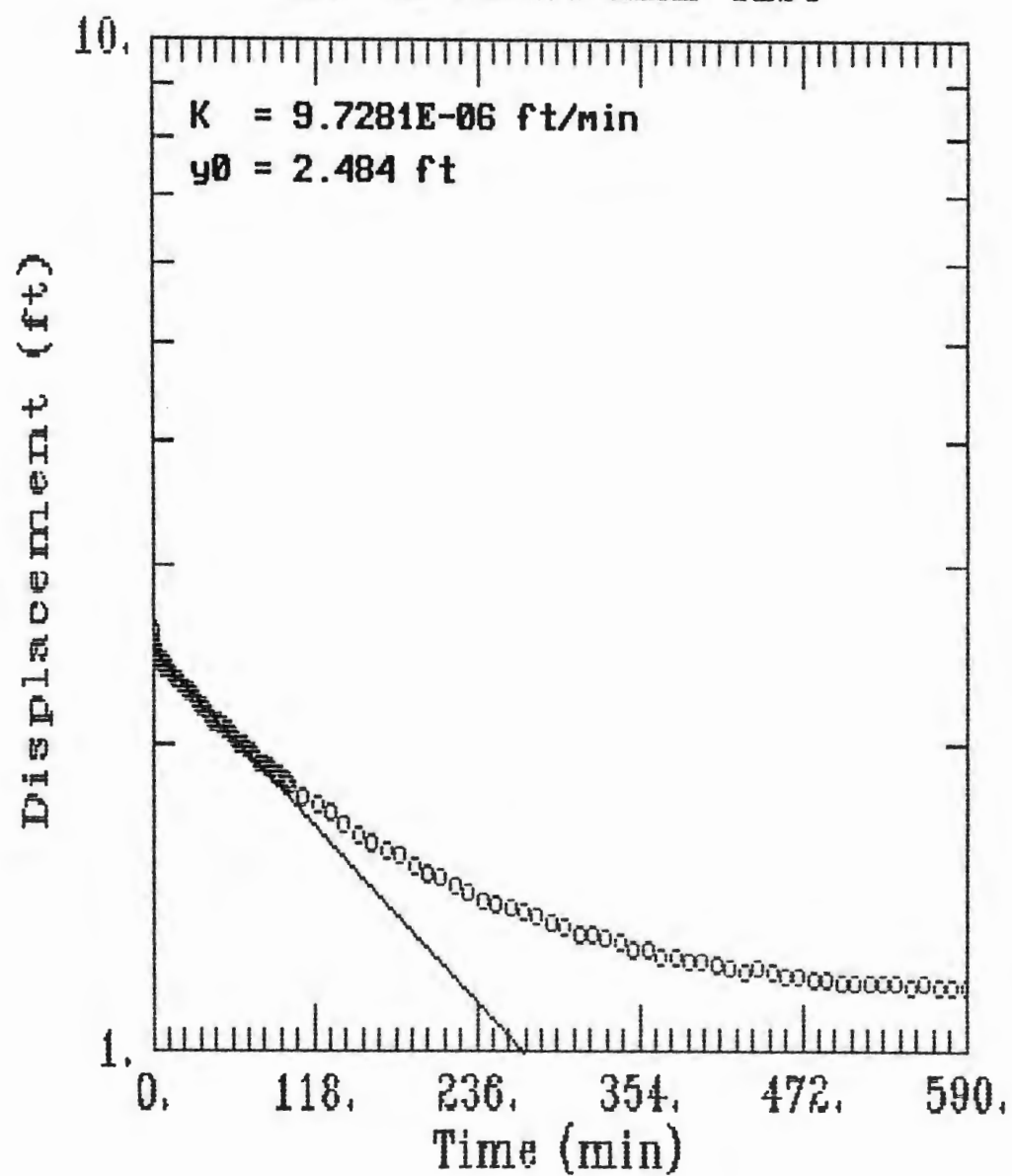
AQTESOLV

MW-29 FALLING HEAD TEST



AQTESOLV

MW-29 RISING HEAD TEST



AQTESOLV

APPENDIX C

**ANALYTICAL RESULTS
TWO ROUNDS OF
GROUNDWATER SAMPLING**

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 20

Page 1 of 2

EPA METHOD 8240
VOLATILE ORGANICS

FIELD SAMPLE ID:	MW20-GW-01	RB-27	MW21-GW-01	MW26-GW-01
LABORATORY SAMPLE ID:	93089601	93089602	93089603	93089604
DATE SAMPLED:	6-14-93	6-14-93	6-15-93	6-15-93
DATE ANALYZED:	6-17-93	6-17-93	6-17-93	6-17-93
DILUTION FACTOR(S):	1	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		DL ug/L
CHLOROMETHANE	10	U	10	U	10	U	10	U	10
BROMOMETHANE	10	U	10	U	10	U	10	U	10
VINYL CHLORIDE	120		10	U	10	U	19		10
CHLOROETHANE	10	U	10	U	10	U	10	U	10
METHYLENE CHLORIDE	10	U	10	U	10	U	10	U	10
ACETONE	10	U	10	U	10	U	10	U	10
CARBON DISULFIDE	10	U	10	U	10	U	10	U	10
1,1-DICHLOROETHENE	10	U	10	U	10	U	4	J	10
1,1-DICHLOROETHANE	10	U	10	U	10	U	10	U	10
1,2-DICHLOROETHENE (cis)	27		10	U	10	U	180		10
1,2-DICHLOROETHENE (trans)	10	U	10	U	10	U	10	U	10
1,2-DICHLOROETHENE (TOTAL)	27		10	U	10	U	180		10
CHLOROFORM	10	U	10	U	10	U	10	U	10
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10
2-BUTANONE	10	U	10	U	10	U	10	U	10
1,1,1-TRICHLOROETHANE	10	U	10	U	10	U	3	J	10
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10
VINYL ACETATE	10	U	10	U	10	U	10	U	10
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10
1,2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10
cis-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10
TRICHLOROETHENE	10	U	10	U	10	U	310		10
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10
BENZENE	10	U	10	U	10	U	10	U	10
trans-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10
2-CHLOROETHYL VINYL ETHER	10	U	10	U	10	U	10	U	10
BROMOFORM	10	U	10	U	10	U	10	U	10
4-METHYL-2-PENTANONE	10	U	10	U	10	U	10	U	10
2-HEXANONE	10	U	10	U	10	U	10	U	10
TETRACHLOROETHENE	10	U	10	U	10	U	10	U	10
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10
TOLUENE	10	U	10	U	10	U	10	U	10
CHLOROBENZENE	10	U	10	U	10	U	10	U	10
ETHYL BENZENE	10	U	10	U	10	U	10	U	10
STYRENE	10	U	10	U	10	U	10	U	10
XYLENE (TOTAL)	10	U	10	U	10	U	10	U	10

SURROGATE % RECOVERY	% REC	% REC	% REC	% REC	CONTROL LIMITS
1,2-DICHLOROETHANE d4	98	113	96	99	87 — 114
TOLUENE D8	98	98	96	99	82 — 113
BROMOFLUOROBENZENE	96	95	95	96	83 — 111

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 20

Page 2 of 2

EPA METHOD 8240
VOLATILE ORGANICS

FIELD SAMPLE ID:	MW01-GW-01	RB-28	TB-19	---
LABORATORY SAMPLE ID:	93089605	93089606	93089607	METHOD BLANK
DATE SAMPLED:	6-15-93	6-15-93	6-15-93	---
DATE ANALYZED:	6-17-93	6-17-93	6-17-93	6-17-93
DILUTION FACTOR(S):	1	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		DL ug/L
CHLOROMETHANE	10	U	10	U	10	U	10	U	10
BROMOMETHANE	10	U	10	U	10	U	10	U	10
VINYL CHLORIDE	10	U	10	U	10	U	10	U	10
CHLOROETHANE	10	U	10	U	10	U	10	U	10
METHYLENE CHLORIDE	10	U	10	U	10	U	10	U	10
ACETONE	10	U	10	U	10	U	10	U	10
CARBON DISULFIDE	10	U	10	U	10	U	10	U	10
1,1-DICHLOROETHENE	4	J	10	U	10	U	10	U	10
1,1-DICHLOROETHANE	7	J	10	U	10	U	10	U	10
1,2-DICHLOROETHENE (cis)	10	U	10	U	10	U	10	U	10
1,2-DICHLOROETHENE (trans)	10	U	10	U	10	U	10	U	10
1,2-DICHLOROETHENE (TOTAL)	10	U	10	U	10	U	10	U	10
CHLOROFORM	10	U	10	U	10	U	10	U	10
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10
2-BUTANONE	10	U	10	U	10	U	10	U	10
1,1,1-TRICHLOROETHANE	57		10	U	10	U	10	U	10
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10
VINYL ACETATE	10	U	10	U	10	U	10	U	10
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10
1,2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10
cis-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10
TRICHLOROETHENE	10	U	10	U	10	U	10	U	10
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10
BENZENE	10	U	10	U	10	U	10	U	10
trans-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10
2-CHLOROETHYL VINYL ETHER	10	U	10	U	10	U	10	U	10
BROMOFORM	10	U	10	U	10	U	10	U	10
4-METHYL-2-PENTANONE	10	U	10	U	10	U	10	U	10
2-HEXANONE	10	U	10	U	10	U	10	U	10
TETRACHLOROETHENE	10	U	10	U	10	U	10	U	10
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10
TOLUENE	10	U	10	U	10	U	10	U	10
CHLOROBENZENE	10	U	10	U	10	U	10	U	10
ETHYL BENZENE	10	U	10	U	10	U	10	U	10
STYRENE	10	U	10	U	10	U	10	U	10
XYLENE (TOTAL)	10	U	10	U	10	U	10	U	10

SURROGATE % RECOVERY	% REC	% REC	% REC	% REC	CONTROL LIMITS
1,2-DICHLOROETHANE d4	99	99	101	95	87 --- 114
TOLUENE D8	98	98	96	99	82 --- 113
BROMOFLUOROBENZENE	95	95	96	96	83 --- 111

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 20

Page 1 of 4

EPA METHOD 8240

VOLATILE ORGANICS

FIELD SAMPLE ID:	MW23-GW-01	MW23-GW-01D	MW22-GW-01	MW25-GW-01
LABORATORY SAMPLE ID:	93090201	93090202	93090203	93090204
DATE SAMPLED:	6-16-93	6-16-93	6-16-93	6-16-93
DATE ANALYZED:	6-17-93	6-17-93	6-17-93	6-17-93
DILUTION FACTOR(S):	1	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		DL ug/L	
CHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
BROMOMETHANE	10	U	10	U	10	U	10	U	10	U
VINYL CHLORIDE	10	U	10	U	10	U	590		10	U
CHLOROETHANE	10	U	10	U	10	U	10	U	10	U
METHYLENE CHLORIDE	10	U	10	U	10	U	10	U	10	U
ACETONE	10	U	10	U	10	U	10	U	10	U
CARBON DISULFIDE	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROETHENE	10	U	10	U	10	U	17		10	U
1,1-DICHLOROETHANE	10	U	10	U	10	U	44		10	U
1,2-DICHLOROETHENE (cis)	31		35		17		2,000		10	U
1,2-DICHLOROETHENE (trans)	10	U	10	U	10	U	6	J	10	U
1,2-DICHLOROETHENE (TOTAL)	31		35		17		2,000		10	U
CHLOROFORM	4	J	5	J	10	U	10	U	10	U
1,2-DICHLOROETHANE	57		64		10	U	10	U	10	U
BUTANONE	10	U	10	U	10	U	10	U	10	U
1,1,1-TRICHLOROETHANE	10	U	10	U	10	U	34		10	U
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10	U
VINYL ACETATE	10	U	10	U	10	U	10	U	10	U
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10	U
1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
TRICHLOROETHENE	16,000		17,000		43		120		10	U
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
BENZENE	10	U	10	U	10	U	3	J	10	U
trans-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
2-CHLOROETHYL VINYL ETHER	10	U	10	U	10	U	10	U	10	U
BROMOFORM	10	U	10	U	10	U	10	U	10	U
METHYL-2-PENTANONE	10	U	10	U	10	U	10	U	10	U
2-HEXANONE	10	U	10	U	10	U	10	U	10	U
TETRACHLOROETHENE	10	U	10	U	10	U	4	J	10	U
1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TOLUENE	10	U	10	U	10	U	6	J	10	U
CHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
ETHYL BENZENE	10	U	10	U	10	U	10	U	10	U
STYRENE	10	U	10	U	10	U	10	U	10	U
XYLENE (TOTAL)	10	U	10	U	10	U	10	U	10	U

PROBATE % RECOVERY	% REC	% REC	% REC	% REC	CONTROL LIMITS
1,2-DICHLOROETHANE d4	111	97	102	101	87 — 114
TOLUENE D8	100	99	87	84	82 — 113
BROMOFLUOROBENZENE	94	94	95	94	83 — 111

HUNTINGDON ANALYTICAL SERVICES

Page 2 of 4

Sample Delivery Group No.: 20

EPA METHOD 8240

VOLATILE ORGANICS

FIELD SAMPLE ID:	MW27-GW-01	MW29-GW-01	MW28-GW-01	MW24-GW-01
LABORATORY SAMPLE ID:	93090205	93090206	93090207	93090208
DATE SAMPLED:	6-16-93	6-16-93	6-16-93	6-16-93
DATE ANALYZED:	6-17-93	6-17-93	6-17-93	6-17-93
DILUTION FACTOR(S):	1	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		DL ug/L	
CHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
BROMOMETHANE	10	U	10	U	10	U	10	U	10	U
VINYL CHLORIDE	10	U	51		10	U	8,800		10	U
1,1-DICHLOROETHANE	10	U	4	J	10	U	10	U	10	U
METHYLENE CHLORIDE	10	U	10	U	10	U	10	U	10	U
ACETONE	10	U	38		10	U	10	U	10	U
CARBON DISULFIDE	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROETHENE	10	U	10	U	10	U	100		10	U
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROETHENE (cis)	10	U	84		10	U	38,000		10	U
1,2-DICHLOROETHENE (trans)	10	U	10	U	10	U	150		10	U
1,2-DICHLOROETHENE (TOTAL)	10	U	84		10	U	39,000		10	U
CHLOROFORM	10	U	10	U	10	U	6	J	10	U
1,2-DICHLOROETHANE	10	U	10	U	10	U	1,300	J	10	U
2-BUTANONE	10	U	10	U	10	U	10	U	10	U
1,1,1-TRICHLOROETHANE	10	U	10	U	3	J	10	U	10	U
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10	U
VINYL ACETATE	10	U	10	U	10	U	10	U	10	U
PERMETHYLFLUOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROPROPANE	10	U	10	U	10	U	10		10	U
1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
TRICHLOROETHENE	10	U	10	U	11		11,000		10	U
1,1-DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
BENZENE	10	U	6	J	10	U	26		10	U
trans-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
2-CHLOROETHYL VINYL ETHER	10	U	10	U	10	U	10	U	10	U
PERMETHYLFLUOROMETHANE	10	U	10	U	10	U	10	U	10	U
4-METHYL-2-PENTANONE	10	U	24		10	U	10	U	10	U
2-HEXANONE	10	U	10	U	10	U	10	U	10	U
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TOLUENE	10	U	250		10	U	140		10	U
CHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
ETHYL BENZENE	10	U	10	U	10	U	59		10	U
STYRENE	10	U	10	U	10	U	10	U	10	U
XYLENE (TOTAL)	10	U	4	J	10	U	110		10	U

SPURIOUS % RECOVERY	% REC	% REC	% REC	% REC	CONTROL LIMITS
1,2-DICHLOROETHANE d4	101	103	102	102	87 -- 114
TOLUENE D8	97	99	96	99	82 -- 113
BROMOFLUOROBENZENE	95	100	96	95	83 -- 111

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 20

Page 3 of 4

EPA METHOD 8240

VOLATILE ORGANICS

FIELD SAMPLE ID:	MW08-GW-01	RB-29	TB-20	---
LABORATORY SAMPLE ID:	93090209	93090210	93090211	METHOD BLANK
DATE SAMPLED:	6-16-93	6-16-93	6-16-93	---
DATE ANALYZED:	6-18-93	6-18-93	6-18-93	6-17-93
DILUTION FACTOR(S):	1	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		DL ug/L	
CHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
BROMOMETHANE	10	U	10	U	10	U	10	U	10	U
VINYL CHLORIDE	10	U	10	U	10	U	10	U	10	U
CHLOROETHANE	10	U	10	U	10	U	10	U	10	U
METHYLENE CHLORIDE	10	U	10	U	10	U	10	U	10	U
ACETONE	10	U	10	U	10	U	10	U	10	U
CARBON DISULFIDE	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROETHENE (cis)	10	U	3	J	10	U	10	U	10	U
1,2-DICHLOROETHENE (trans)	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROETHENE (TOTAL)	10	U	3	J	10	U	10	U	10	U
CHLOROFORM	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
2-BUTANONE	10	U	10	U	10	U	10	U	10	U
1,1-TRICHLOROETHANE	22		10	U	10	U	10	U	10	U
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10	U
VINYL ACETATE	10	U	10	U	10	U	10	U	10	U
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10	U
1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
TRICHLOROETHENE	10	U	3	J	2	J	10	U	10	U
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
BENZENE	10	U	10	U	10	U	10	U	10	U
trans-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
2-CHLOROETHYL VINYL ETHER	10	U	10	U	10	U	10	U	10	U
BROMOFORM	10	U	10	U	10	U	10	U	10	U
METHYL-2-PENTANONE	10	U	10	U	10	U	10	U	10	U
2-HEXANONE	10	U	10	U	10	U	10	U	10	U
TETRACHLOROETHENE	4	J	10	U	10	U	10	U	10	U
1,2,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TOLUENE	10	U	10	U	10	U	10	U	10	U
CHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
ETHYL BENZENE	10	U	10	U	10	U	10	U	10	U
XYLENE	10	U	10	U	10	U	10	U	10	U
XYLENE (TOTAL)	10	U	10	U	10	U	10	U	10	U

PROBATE % RECOVERY	% REC	% REC	% REC	% REC	CONTROL LIMITS
1,2-DICHLOROETHANE d4	96	97	100	95	87 — 114
TOLUENE D8	99	84	100	99	82 — 113
BROMOFLUOROBENZENE	96	95	94	96	83 — 111

HUNTINGDON ANALYTICAL SERVICES

Page 4 of 4

Sample Delivery Group No.: 20

EPA METHOD 8240

VOLATILE ORGANICS

FIELD SAMPLE ID: ---
 LABORATORY SAMPLE ID: METHOD BLANK
 DATE SAMPLED: ---
 DATE ANALYZED: 6-18-93
 DILUTION FACTOR(S): 1

PARAMETER	RESULT ug/L	DL ug/L
CHLOROMETHANE	10 U	10 U
BROMOMETHANE	10 U	10 U
VINYL CHLORIDE	10 U	10 U
CHLOROETHANE	10 U	10 U
METHYLENE CHLORIDE	10 U	10 U
ACETONE	10 U	10 U
CARBON DISULFIDE	10 U	10 U
1,1-DICHLOROETHENE	10 U	10 U
1,2-DICHLOROETHANE	10 U	10 U
1,2-DICHLOROETHENE (cis)	10 U	10 U
1,2-DICHLOROETHENE (trans)	10 U	10 U
1,2-DICHLOROETHENE (TOTAL)	10 U	10 U
CHLOROFORM	10 U	10 U
1,1,1-TRICHLOROETHANE	10 U	10 U
2-BUTANONE	10 U	10 U
1,1,1-TRICHLOROETHANE	10 U	10 U
CARBON TETRACHLORIDE	10 U	10 U
VINYL ACETATE	10 U	10 U
BROMODICHLOROMETHANE	10 U	10 U
1,1-DICHLOROPROPANE	10 U	10 U
1,1,3-DICHLOROPROPENE	10 U	10 U
TRICHLOROETHENE	10 U	10 U
DIBROMOCHLOROMETHANE	10 U	10 U
1,1,2-TRICHLOROETHANE	10 U	10 U
BENZENE	10 U	10 U
trans-1,3-DICHLOROPROPENE	10 U	10 U
2-CHLOROETHYL VINYL ETHER	10 U	10 U
BROMOFORM	10 U	10 U
4-METHYL-2-PENTANONE	10 U	10 U
2-HEXANONE	10 U	10 U
TETRACHLOROETHENE	10 U	10 U
1,1,2,2-TETRACHLOROETHANE	10 U	10 U
TOLUENE	10 U	10 U
CHLOROBENZENE	10 U	10 U
ETHYL BENZENE	10 U	10 U
STYRENE	10 U	10 U
XYLENE (TOTAL)	10 U	10 U

SPURIOUS % RECOVERY	% REC	CONTROL LIMITS
1,2-DICHLOROETHANE d4	94	87 - 114
TOLUENE D8	100	82 - 113
BROMOFLUOROBENZENE	95	83 - 111

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 14

ANALYSIS PERFORMED ON TOTALS

FIELD SAMPLE ID:		METHOD BLANK		MW20-GW-01		RB-27		MW21-GW-01		MW26-GW-01	
LABORATORY ID:		0896-MB		0896-01		0896-02		0896-03		0896-04	
DATE SAMPLED:		6/29/93		6/14/93		6/14/93		6/15/93		6/15/93	
DATE ANALYZED:		6/29/93		6/29/93		6/29/93		6/29/93		6/29/93	
% SOLID:		LIQUID BLANK		LIQUID		LIQUID		LIQUID		LIQUID	
DILUTION FACTOR:		1		1		1		1		1	
PARAMETER		RESULT		RESULT		RESULT		RESULT		RESULT	
		ug/L.		ug/L		ug/L		ug/L		ug/L	
CADMIUM METHOD 6010		5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
CHROMIUM METHOD 6010		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
ZINC METHOD 6010		20.0	U	20.0	U	20.0	U	20.0	U	20.0	U
DATE ANALYZED:		6/29/93		6/29/93		6/29/93		6/29/93		6/29/93	
DILUTION FACTOR:		1		1		1		1		1	
		RESULT		RESULT		RESULT		RESULT		RESULT	
		ug/L.		ug/L		ug/L		ug/L		ug/L	
LEAD METHOD 7421		3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
DATE ANALYZED:		6/22/93		6/22/93		6/22/93		6/22/93		6/22/93	
DILUTION FACTOR:		1		1		1		1		1	
FLUORIDE METHOD 340.2		100.0	U	390.0		100.0	U	300.0		160.0	

000005

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 14

ANALYSIS PERFORMED ON TOTALS

FIELD SAMPLE ID:	MW01-GW-01	RB-28
LABORATORY ID:	0896-05	0896-06
DATE SAMPLED:	6/15/93	6/15/93
DATE ANALYZED:	6/29/93	6/29/93
% SOLID:	LIQUID	LIQUID
DILUTION FACTOR:	1	1

PARAMETER	RESULT		RESULT
	ug/L		ug/L
CADMIUM METHOD 6010	5.00	U	5.00
CHROMIUM METHOD 6010	10.0	U	10.0
ZINC METHOD 6010	20.0	U	20.0

DATE ANALYZED:	6/29/93	6/29/93
DILUTION FACTOR:	1	1

	RESULT		RESULT
	ug/L		ug/L
LEAD METHOD 7421	3.0	U	3.0

DATE ANALYZED:	6/22/93	6/22/93
DILUTION FACTOR:	1	1

FLUORIDE METHOD 340.2	220.0	100.0	U
-----------------------	-------	-------	---

00000

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 12

ANALYSIS PERFORMED ON TOTALS

FIELD SAMPLE ID:		METHOD BLANK	MW23-GW-01	MW23-GW-01D	MW22-GW-01	MW25-GW-01
LABORATORY ID:		0902-MB	0902-01	0902-02	0902-03	0902-04
DATE SAMPLED:			6/16/93	6/16/93	6/16/93	6/16/93
DATE ANALYZED:		6/29/93	6/29/93	6/29/93	6/29/93	6/29/93
% SOLID:		LIQUID BLANK	LIQUID	LIQUID	LIQUID	LIQUID
DILUTION FACTOR:		1	1	1	1	1
PARAMETER	RESULT		RESULT		RESULT	
	ug/L		ug/L		ug/L	
CADMIUM METHOD 6010	5.00	U	5.00	U	5.00	U
CHROMIUM METHOD 6010	10.0	U	10.0	U	10.0	U
ZINC METHOD 6010	20.0	U	20.0	U	20.0	U
DATE ANALYZED:		6/25/93	6/25/93	6/25/93	6/25/93	6/25/93
DILUTION FACTOR:		1	1	1	1	1
	RESULT		RESULT		RESULT	
	ug/L		ug/L		ug/L	
LEAD METHOD 7421	3.0	U	3.0	U	3.0	U
DATE ANALYZED:		6/22/93	6/22/93	6/22/93	6/22/93	6/22/93
DILUTION FACTOR:		1	1	1	1	1
FLUORIDE METHOD 340.2	100	U	320	310	660	590

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 12

ANALYSIS PERFORMED ON TOTALS

FIELD SAMPLE ID:	MW27-GW-01	MW29-GW-01	MW28-GW-01	MW24-GW-01	MW08GW-01
LABORATORY ID:	0902-05	0902-06	0902-07	0902-08	0902-09
DATE SAMPLED:	6/16/93	6/16/93	6/16/93	6/16/93	6/16/93
DATE ANALYZED:	6/29/93	6/29/93	6/29/93	6/29/93	6/29/93
% SOLID:	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID
DILUTION FACTOR:	1	1	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L	
CADMIUM METHOD 6010	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
CHROMIUM METHOD 6010	10.0	U	10.0	U	10.0	U	10.0	U	13.1	
ZINC METHOD 6010	20.0	U	20.0	U	20.0	U	20.0	U	34.4	

DATE ANALYZED:	6/25/93	6/25/93	6/25/93	6/25/93	6/25/93
DILUTION FACTOR:	1	1	1	1	10

	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L	
LEAD METHOD 7421	5.5		3.0	U	3.0	U	3.0	U	30.0	U

DATE ANALYZED:	6/22/93	6/22/93	6/22/93	6/22/93	6/22/93
DILUTION FACTOR:	1	1	1	1	1

FLUORIDE METHOD 340.2	450	480	220	740	1120
-----------------------	-----	-----	-----	-----	------

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 12

ANALYSIS PERFORMED ON TOTALS

FIELD SAMPLE ID: RB-29
LABORATORY ID: 0902-10
DATE SAMPLED: 6/16/93
DATE ANALYZED: 6/29/93
% SOLID: LIQUID
DILUTION FACTOR: 1

PARAMETER	RESULT	
	ug/L	
CADMIUM METHOD 6010	5.00	U
CHROMIUM METHOD 6010	10.0	U
ZINC METHOD 6010	20.0	U

DATE ANALYZED: 6/25/93
DILUTION FACTOR: 1

	RESULT	
	ug/L	
LEAD METHOD 7421	3.0	U

DATE ANALYZED: 6/22/93
DILUTION FACTOR: 1

FLUORIDE METHOD 340.2	100.0	U
-----------------------	-------	---

HUNTINGDON ANALYTICAL SERVICES

EPA METHOD 8240
VOLATILE ORGANICS

FIELD SAMPLE ID:	MW21-GW-02	MW20-GW-02	RB-30	MW26-GW-02
LABORATORY SAMPLE ID:	93105701	93105702	93105703	93105704
DATE SAMPLED:	7-21-93	7-21-93	7-21-93	7-21-93
DATE ANALYZED:	7-26-93	7-26-93	7-26-93	7-26-93
DILUTION FACTOR(S):	1	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		DL ug/L
CHLOROMETHANE	10	U	10	U	10	U	10	U	10
BROMOMETHANE	10	U	10	U	10	U	10	U	10
VINYL CHLORIDE	10	U	43	U	10	U	12	U	10
CHLOROETHANE	10	U	10	U	10	U	10	U	10
METHYLENE CHLORIDE	10	U	10	U	10	U	10	U	10
ACETONE	10	U	10	U	10	U	10	U	10
CARBON DISULFIDE	10	U	10	U	10	U	10	U	10
1,1-DICHLOROETHENE	10	U	10	U	10	U	3	J	10
1,1-DICHLOROETHANE	10	U	10	U	10	U	3	J	10
1,2-DICHLOROETHENE (cis)	10	U	23	U	10	U	180	U	10
1,2-DICHLOROETHENE (trans)	10	U	10	U	10	U	10	U	10
1,2-DICHLOROETHENE (TOTAL)	10	U	23	U	10	U	180	U	10
CHLOROFORM	10	U	10	U	10	U	10	U	10
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10
2-BUTANONE	10	U	10	U	10	U	10	U	10
1,1,1-TRICHLOROETHANE	10	U	10	U	10	U	4	J	10
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10
VINYL ACETATE	10	U	10	U	10	U	10	U	10
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10
1,2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10
cis-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10
TRICHLOROETHENE	10	U	10	U	10	U	450	U	10
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10
BENZENE	10	U	10	U	10	U	10	U	10
trans-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10
2-CHLOROETHYL VINYL ETHER	10	U	10	U	10	U	10	U	10
BROMOFORM	10	U	10	U	10	U	10	U	10
4-METHYL-2-PENTANONE	10	U	10	U	10	U	10	U	10
2-HEXANONE	10	U	10	U	10	U	10	U	10
TETRACHLOROETHENE	10	U	10	U	10	U	10	U	10
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10
TOLUENE	10	U	10	U	10	U	10	U	10
CHLOROBENZENE	10	U	10	U	10	U	10	U	10
ETHYL BENZENE	10	U	10	U	10	U	10	U	10
STYRENE	10	U	10	U	10	U	10	U	10
XYLENE (TOTAL)	10	U	10	U	10	U	10	U	10
SURROGATE % RECOVERY	% REC		% REC		% REC		% REC		CONTROL LIMITS
1,2-DICHLOROETHANE d4	100		101		105		106		114 - 87
TOLUENE d8	80		102		114		110		113 - 82
BROMOFLUOROBENZENE	95		96		98		96		111 - 83

HUNTINGDON ANALYTICAL SERVICES

EPA METHOD 8240
VOLATILE ORGANICS

FIELD SAMPLE ID:	MW23-GW-02	MW22-GW-02	MW22-GW-02D	MW25-GW-02
LABORATORY SAMPLE ID:	93105705	93105706	93105707	93105708
DATE SAMPLED:	7-21-93	7-21-93	7-21-93	7-21-93
DATE ANALYZED:	7-26-93	7-26-93	7-27-93	7-26-93
DILUTION FACTOR(S):	100	1	1	10

PARAMETER	RESULT ug/L	RESULT ug/L	RESULT ug/L	RESULT ug/L	DL ug/L
CHLOROMETHANE	1,000 U	10 U	10 U	100 U	10
BROMOMETHANE	1,000 U	10 U	10 U	100 U	10
VINYL CHLORIDE	1,000 U	10 U	10 U	300 U	10
CHLOROETHANE	1,000 U	10 U	10 U	100 U	10
METHYLENE CHLORIDE	1,000 U	10 U	10 U	100 U	10
ACETONE	1,000 U	10 U	10 U	100 U	10
CARBON DISULFIDE	1,000 U	10 U	10 U	100 U	10
1,1-DICHLOROETHENE	1,000 U	10 U	10 U	100 U	10
1,1-DICHLOROETHANE	1,000 U	10 U	10 U	49 J	10
1,2-DICHLOROETHENE (cis)	1,000 U	16	15	2,100	10
1,2-DICHLOROETHENE (trans)	1,000 U	10 U	10 U	100 U	10
1,2-DICHLOROETHENE (TOTAL)	1,000 U	16	15	2,100	10
CHLOROFORM	1,000 U	10 U	10 U	100 U	10
1,2-DICHLOROETHANE	1,000 U	10 U	10 U	100 U	10
2-BUTANONE	1,000 U	10 U	10 U	100 U	10
1,1,1-TRICHLOROETHANE	1,000 U	10 U	10 U	45 J	10
CARBON TETRACHLORIDE	1,000 U	10 U	10 U	100 U	10
VINYL ACETATE	1,000 U	10 U	10 U	100 U	10
BROMODICHLOROMETHANE	1,000 U	10 U	10 U	100 U	10
1,2-DICHLOROPROPANE	1,000 U	10 U	10 U	100 U	10
cis-1,3-DICHLOROPROPENE	1,000 U	10 U	10 U	100 U	10
TRICHLOROETHENE	23,000	43	38	170	10
DIBROMOCHLOROMETHANE	1,000 U	10 U	10 U	100 U	10
1,1,2-TRICHLOROETHANE	1,000 U	10 U	10 U	100 U	10
BENZENE	1,000 U	10 U	10 U	100 U	10
trans-1,3-DICHLOROPROPENE	1,000 U	10 U	10 U	100 U	10
2-CHLOROETHYL VINYL ETHER	1,000 U	10 U	10 U	100 U	10
BROMOFORM	1,000 U	10 U	10 U	100 U	10
4-METHYL-2-PENTANONE	1,000 U	10 U	10 U	100 U	10
2-HEXANONE	1,000 U	10 U	10 U	100 U	10
TETRACHLOROETHENE	1,000 U	10 U	10 U	100 U	10
1,1,2,2-TETRACHLOROETHANE	1,000 U	10 U	10 U	100 U	10
TOLUENE	1,000 U	10 U	10 U	100 U	10
CHLOROBENZENE	1,000 U	10 U	10 U	100 U	10
ETHYL BENZENE	1,000 U	10 U	10 U	100 U	10
STYRENE	1,000 U	10 U	10 U	100 U	10
XYLENE (TOTAL)	1,000 U	10 U	10 U	100 U	10

SURROGATE % RECOVERY	% REC	% REC	% REC	% REC	CONTROL LIMITS
1,2-DICHLOROETHANE d4	98	91	100	95	114 - 87
TOLUENE d8	96	114	92	81	113 - 82
BROMOFLUOROBENZENE	99	99	95	99	111 - 83

000000

HUNTINGDON ANALYTICAL SERVICES

EPA METHOD 8240
VOLATILE ORGANICS

FIELD SAMPLE ID:	MW27-GW-02	MW28-GW-02	MW29-GW-02	MW1-GW-02
LABORATORY SAMPLE ID:	93105709	93105710	93105711	93105712
DATE SAMPLED:	7-21-93	7-21-93	7-21-93	7-21-93
DATE ANALYZED:	7-26-93	7-27-93	7-26-93	7-26-93
DILUTION FACTOR(S):	1	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		DL ug/L
CHLOROMETHANE	10	U	10	U	10	U	10	U	10
BROMOMETHANE	10	U	10	U	10	U	10	U	10
VINYL CHLORIDE	10	U	10	U	31	U	10	U	10
CHLOROETHANE	10	U	10	U	10	U	10	U	10
METHYLENE CHLORIDE	10	U	10	U	10	U	10	U	10
ACETONE	10	U	10	U	10	U	10	U	10
CARBON DISULFIDE	10	U	10	U	10	U	10	U	10
1,1-DICHLOROETHENE	10	U	10	U	10	U	5	J	10
1,1-DICHLOROETHANE	10	U	10	U	10	U	10	J	10
1,2-DICHLOROETHENE (cis)	10	U	10	U	69	U	10	U	10
1,2-DICHLOROETHENE (trans)	10	U	10	U	10	U	10	U	10
1,2-DICHLOROETHENE (TOTAL)	10	U	10	U	69	U	10	U	10
CHLOROFORM	10	U	10	U	10	U	10	U	10
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10
2-BUTANONE	10	U	10	U	10	U	10	U	10
1,1,1-TRICHLOROETHANE	10	U	3	J	10	U	80	U	10
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10
VINYL ACETATE	10	U	10	U	10	U	10	U	10
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10
1,2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10
cis-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10
TRICHLOROETHENE	10	U	11	U	10	U	10	U	10
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10
BENZENE	10	U	10	U	10	U	10	U	10
trans-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10
2-CHLOROETHYL VINYL ETHER	10	U	10	U	10	U	10	U	10
BROMOFORM	10	U	10	U	10	U	10	U	10
4-METHYL-2-PENTANONE	10	U	10	U	10	U	10	U	10
2-HEXANONE	10	U	10	U	10	U	10	U	10
TETRACHLOROETHENE	10	U	10	U	10	U	10	U	10
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10
TOLUENE	10	U	10	U	10	U	10	U	10
CHLOROBENZENE	10	U	10	U	10	U	10	U	10
ETHYL BENZENE	10	U	10	U	10	U	10	U	10
STYRENE	10	U	10	U	10	U	10	U	10
XYLENE (TOTAL)	10	U	10	U	10	U	10	U	10

SURROGATE % RECOVERY	% REC	% REC	% REC	% REC	CONTROL LIMITS
1,2-DICHLOROETHANE d4	89	100	93	106	114 - 87
TOLUENE d8	79	98	89	116	113 - 82
BROMOFLUOROBENZENE	98	93	104	97	111 - 83

HUNTINGDON ANALYTICAL SERVICES

EPA METHOD 8240
VOLATILE ORGANICS

FIELD SAMPLE ID:	MW24-GW-02	TB-21	---	---
LABORATORY SAMPLE ID:	93105713	93105714	M. BLANK	M. BLANK
DATE SAMPLED:	7-21-93	7-21-93	---	---
DATE ANALYZED:	7-26-93	7-26-93	7-26-93	7-27-93
DILUTION FACTOR(S):	200	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		DL ug/L
CHLOROMETHANE	2,000	U	10	U	10	U	10	U	10
BROMOMETHANE	2,000	U	10	U	10	U	10	U	10
VINYL CHLORIDE	5,000		10	U	10	U	10	U	10
CHLOROETHANE	2,000	U	10	U	10	U	10	U	10
METHYLENE CHLORIDE	2,000	U	10	U	10	U	10	U	10
ACETONE	2,000	U	10	U	10	U	10	U	10
CARBON DISULFIDE	2,000	U	10	U	10	U	10	U	10
1,1-DICHLOROETHENE	2,000	U	10	U	10	U	10	U	10
1,1-DICHLOROETHANE	2,000	U	10	U	10	U	10	U	10
1,2-DICHLOROETHENE (cis)	38,000		10	U	10	U	10	U	10
1,2-DICHLOROETHENE (trans)	2,000	U	10	U	10	U	10	U	10
1,2-DICHLOROETHENE (TOTAL)	38,000		10	U	10	U	10	U	10
CHLOROFORM	2,000	U	10	U	10	U	10	U	10
1,2-DICHLOROETHANE	1,200	J	10	U	10	U	10	U	10
2-BUTANONE	2,000	U	10	U	10	U	10	U	10
1,1,1-TRICHLOROETHANE	2,000	U	10	U	10	U	10	U	10
CARBON TETRACHLORIDE	2,000	U	10	U	10	U	10	U	10
VINYL ACETATE	2,000	U	10	U	10	U	10	U	10
BROMODICHLOROMETHANE	2,000	U	10	U	10	U	10	U	10
1,2-DICHLOROPROPANE	2,000	U	10	U	10	U	10	U	10
cis-1,3-DICHLOROPROPENE	2,000	U	10	U	10	U	10	U	10
TRICHLOROETHENE	13,000		10	U	10	U	10	U	10
DIBROMOCHLOROMETHANE	2,000	U	10	U	10	U	10	U	10
1,1,2-TRICHLOROETHANE	2,000	U	10	U	10	U	10	U	10
BENZENE	2,000	U	10	U	10	U	10	U	10
trans-1,3-DICHLOROPROPENE	2,000	U	10	U	10	U	10	U	10
2-CHLOROETHYL VINYL ETHER	2,000	U	10	U	10	U	10	U	10
BROMOFORM	2,000	U	10	U	10	U	10	U	10
4-METHYL-2-PENTANONE	2,000	U	10	U	10	U	10	U	10
2-HEXANONE	2,000	U	10	U	10	U	10	U	10
TETRACHLOROETHENE	2,000	U	10	U	10	U	10	U	10
1,1,2,2-TETRACHLOROETHANE	2,000	U	10	U	10	U	10	U	10
TOLUENE	2,000	U	10	U	10	U	10	U	10
CHLOROBENZENE	2,000	U	10	U	10	U	10	U	10
ETHYL BENZENE	2,000	U	10	U	10	U	10	U	10
STYRENE	2,000	U	10	U	10	U	10	U	10
XYLENE (TOTAL)	2,000	U	10	U	10	U	10	U	10
SURROGATE % RECOVERY	% REC		% REC		% REC		% REC		CONTROL LIMITS
1,2-DICHLOROETHANE d4	105		107		97		96		114 - 87
TOLUENE d8	103		118		114		98		113 - 82
BROMOFLUOROBENZENE	97		97		96		94		111 - 83

000000

HUNTINGDON ANALYTICAL SERVICES

PAGE 1 OF 2

Sample Delivery Group No.: 15

METHOD 8270

SEMIVOLATILE ORGANICS

FIELD SAMPLE ID:	MW21-GW-02	MW24-GW-02	---	---
LABORATORY SAMPLE ID:	93105701	93105713	SBLKW1	SBLKW2
DATE SAMPLED:	7-21-93	7-21-93	---	---
DATE EXTRACTED:	7-26-93	7-29-93	7-26-93	7-29-93
DILUTION FACTOR(S):	1	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		MDL ug/L	
ACENAPHTHENE	10	U	10	U	10	U	10	U	10	U
ACENAPHTHYLENE	10	U	10	U	10	U	10	U	10	U
ANTHRACENE	10	U	10	U	10	U	10	U	10	U
BENZO(a)ANTHRACENE	10	U	10	U	10	U	10	U	10	U
BENZO(b)FLUORANTHENE	10	U	10	U	10	U	10	U	10	U
BENZO(k)FLUORANTHENE	10	U	10	U	10	U	10	U	10	U
BENZO(a)PYRENE	10	U	10	U	10	U	10	U	10	U
BENZO(g,h,i)PERYLENE	10	U	10	U	10	U	10	U	10	U
BENZOIC ACID	50	U	50	U	50	U	50	U	50	U
BENZYL ALCOHOL	10	U	10	U	10	U	10	U	10	U
BIS(2-CHLOROETHOXY)METHANE	10	U	10	U	10	U	10	U	10	U
BIS(2-CHLOROETHYL)ETHER	10	U	10	U	10	U	10	U	10	U
BIS(2-CHLOROISOPROPYL)ETHER	10	U	10	U	10	U	10	U	10	U
BIS(2-ETHYLHEXYL)PHTHALATE	10	U	10	U	10	U	10	U	10	U
BUTYLBENZYL PHTHALATE	10	U	10	U	10	U	10	U	10	U
4-BROMOPHENYL-PHENYL ETHER	10	U	10	U	10	U	10	U	10	U
4-CHLOROANILINE	10	U	10	U	10	U	10	U	10	U
2-CHLORONAPHTHALENE	10	U	10	U	10	U	10	U	10	U
4-CHLOROPHENYL-PHENYL ETHER	10	U	10	U	10	U	10	U	10	U
CHRYSENE	10	U	10	U	10	U	10	U	10	U
DIBENZ(a,h)ANTHRACENE	10	U	10	U	10	U	10	U	10	U
DIBENZOFURAN	10	U	10	U	10	U	10	U	10	U
DI-N-BUTYL PHTHALATE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,3-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,4-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
3,3-DICHLOROBENZIDINE	20	U	20	U	20	U	20	U	20	U
DIETHYL PHTHALATE	10	U	10	U	10	U	10	U	10	U
DIMETHYL PHTHALATE	10	U	10	U	10	U	10	U	10	U
2,4-DINITROTOLUENE	10	U	10	U	10	U	10	U	10	U
2,6-DINITROTOLUENE	10	U	10	U	10	U	10	U	10	U
DI-N-OCTYL PHTHALATE	10	U	10	U	10	U	10	U	10	U
FLUORANTHENE	10	U	10	U	10	U	10	U	10	U
FLUORENE	10	U	10	U	10	U	10	U	10	U
HEXACHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
HEXACHLOROBUTADIENE	10	U	10	U	10	U	10	U	10	U
HEXACHLOROCYCLOPENTADIENE	10	U	10	U	10	U	10	U	10	U
HEXACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
INDENO(1,2,3-cd)PYRENE	10	U	10	U	10	U	10	U	10	U

000000

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 15

PAGE 2 OF 2

METHOD 8270

SEMI-VOLATILE ORGANICS

FIELD SAMPLE ID:	MW21-GW-02	MW24-GW-02	---	---
LABORATORY SAMPLE ID:	93105701	93105713	SBLKW1	SBLKW2
DATE SAMPLED:	7-21-93	7-21-93	---	---
DATE EXTRACTED:	7-26-93	7-29-93	7-26-93	7-29-93
DILUTION FACTOR(S):	1	1	1	1

PARAMETER	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		MDL ug/L
ISOPHORONE	10	U	10	U	10	U	10	U	10
2-METHYL NAPHTHALENE	10	U	10	U	10	U	10	U	10
NAPHTHALENE	10	U	10	U	10	U	10	U	10
2-NITROANILINE	50	U	50	U	50	U	50	U	50
3-NITROANILINE	50	U	50	U	50	U	50	U	50
4-NITROANILINE	50	U	50	U	50	U	50	U	50
NITROBENZENE	10	U	10	U	10	U	10	U	10
N-NITROSODIPHENYLAMINE	10	U	10	U	10	U	10	U	10
N-NITROS-DI-N-PROPYLAMINE	10	U	10	U	10	U	10	U	10
PHENANTHRENE	10	U	10	U	10	U	10	U	10
PYRENE	10	U	10	U	10	U	10	U	10
1,2,4-TRICHLOROBENZENE	10	U	10	U	10	U	10	U	10
CARBAZOLE	10	U	10	U	10	U	10	U	10

ACID COMPOUNDS	RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L		RESULT ug/L
4-CHLORO-3-METHYLPHENOL	10	U	10	U	10	U	10	U	10
2-CHLOROPHENOL	10	U	10	U	10	U	10	U	10
2,4-DICHLOROPHENOL	10	U	10	U	10	U	10	U	10
2,4-DIMETHYL PHENOL	10	U	10	U	10	U	10	U	10
2,4-DINITROPHENOL	50	U	50	U	50	U	50	U	50
4,6-DINITRO-2-METHYLPHENOL	50	U	50	U	50	U	50	U	50
2-METHYL PHENOL	10	U	10	U	10	U	10	U	50
4-METHYL PHENOL	10	U	10	U	10	U	10	U	10
2-NITROPHENOL	10	U	10	U	10	U	10	U	10
4-NITROPHENOL	50	U	50	U	50	U	50	U	50
PENTACHLOROPHENOL	50	U	50	U	50	U	50	U	50
PHENOL	10	U	10	U	10	U	10	U	10
2,4,5-TRICHLOROPHENOL	50	U	50	U	50	U	50	U	50
2,4,6-TRICHLOROPHENOL	10	U	10	U	10	U	10	U	10

SURROGATE % RECOVERY	% REC	% REC	% REC	% REC	CONTROL LIMITS
NITROBENZENE (d5)	86	85	89	91	16 - 146
2-FLUOROBIPHENYL	78	74	80	74	21 - 113
TERPHENYL (d14)	89	78	85	84	12 - 146
PHENOL (d5)	38	26	38	39	11 - 104
2-FLUOROPHENOL	56	36	55	54	17 - 117
2,4,6-TRIBROMOPHENOL	59	60	67	78	22 - 144
2-CHLOROPHENOL (d4)	69	54	75	71	20 - 130
1,2-DICHLOROBENZENE (d4)	80	76	79	76	20 - 130

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 15

ANALYSIS PERFORMED ON TOTALS

FIELD SAMPLE ID:		METHOD BLANK		MW21-GW-02		MW20-GW-02		RB-30		MW26-GW-02	
LABORATORY ID:		1057-MB		1057-01		1057-02		1057-03		1057-04	
DATE SAMPLED:				7/21/93		7/21/93		7/21/93		7/21/93	
DATE ANALYZED:											
% SOLID:		LIQUID BLANK		LIQUID		LIQUID		LIQUID		LIQUID	
DILUTION FACTOR:		1		1		1		1		1	
PARAMETER		RESULT		RESULT		RESULT		RESULT		RESULT	
		ug/L		ug/L		ug/L		ug/L		ug/L	
CADMIUM METHOD 6010		5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
CHROMIUM METHOD 6010		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
ZINC METHOD 6010		20.0	U	20.0	U	20.0	U	20.0	U	20.0	U
DATE ANALYZED:		8/02/93		8/02/93		8/02/93		8/02/93		8/02/93	
DILUTION FACTOR:		1		1		1		1		1	
		RESULT		RESULT		RESULT		RESULT		RESULT	
		ug/L		ug/L		ug/L		ug/L		ug/L	
LEAD METHOD 7421		3.0	U	3.0	U	4.0		3.6		4.5	
DATE ANALYZED:		7/27/93		7/27/93		7/27/93		7/27/93		7/27/93	
DILUTION FACTOR:		1		1		1		1		1	
FLUORIDE METHOD 340.2		100.0	U	280.0		386.0		100.0	U	150.0	

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 15

ANALYSIS PERFORMED ON TOTALS

FIELD SAMPLE ID:	MW23-GW-02	MW22-GW-02	MW22-GW-02D	MW25-GW-02	MW27-GW-02
LABORATORY ID:	1057-05	1057-06	1057-07	1057-08	1057-09
DATE SAMPLED:	7/21/93	7/21/93	7/21/93	7/21/93	7/21/93
DATE ANALYZED:					
% SOLID:	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID
DILUTION FACTOR:	1	1			

PARAMETER	RESULT ug/L	U	RESULT ug/L	U	RESULT ug/L	U	RESULT ug/L	U	RESULT ug/L	U
CADMIUM METHOD 6010	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
CHROMIUM METHOD 6010	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
ZINC METHOD 6010	20.0	U	20.0	U	23.6		24.1		20.0	U

DATE ANALYZED:
DILUTION FACTOR:

8/02/93
1

8/02/93
1

8/03/93
2

8/02/93
1

8/02/93
1

LEAD METHOD 7421

RESULT
ug/L
3.0 U

RESULT
ug/L
7.6

RESULT
ug/L
13.6

RESULT
ug/L
5.7

RESULT
ug/L
3.0 U

DATE ANALYZED:
DILUTION FACTOR:

7/27/93
1

7/27/93
1

7/27/93
1

7/27/93
1

7/27/93
1

FLUORIDE METHOD 340.2

310.0

660.0

670.0

580.0

480.0

HUNTINGDON ANALYTICAL SERVICES

Sample Delivery Group No.: 15

ANALYSIS PERFORMED ON TOTALS

FIELD SAMPLE ID: MW28-GW-02	MW29-GW-02	MW1-GW-02	MW24-GW-02
LABORATORY ID: 1057-10	1057-11	1057-12	1057-13
DATE SAMPLED: 7/21/93	7/21/93	7/21/93	7/21/93
DATE ANALYZED:			
% SOLID: LIQUID	LIQUID	LIQUID	LIQUID
DILUTION FACTOR:			

PARAMETER	RESULT ug/L	U	RESULT ug/L	U	RESULT ug/L	U	RESULT ug/L	U
CADMIUM METHOD 6010	5.00	U	5.00	U	5.00	U	5.00	U
CHROMIUM METHOD 6010	10.0	U	10.0	U	10.0	U	10.0	U
ZINC METHOD 6010	20.0	U	25.7		24.1		20.0	U

DATE ANALYZED: 8/02/93	8/03/93	8/03/93	8/03/93
DILUTION FACTOR: 1	2	2	2

RESULT ug/L	U	RESULT ug/L	U	RESULT ug/L	U
3.0	U	8.6		6.8	
				6.0	U

LEAD METHOD 7421	DATE ANALYZED: 7/27/93	7/27/93	7/27/93	7/27/93
	DILUTION FACTOR: 1	1	1	1
		210.0	444.0	240.0
				710.0

