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**New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Eastern Remedial Action**



MEMORANDUM

TO: Carl Hoffman
FROM: Joe Peck *Joe I Peck*
SUBJECT: Eugene's Dry Cleaners, Site No. 152157, O&M Plan
DATE: June 27, 2002

I am enclosing the subject O & M Plan for your review and comment. Please provide your comments within 2 to 3 weeks from the date of this memo. If you have any questions please call me at 2-9622.

enclosure

cc: w/o enc.

J. Ryder
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OPERATIONS MAINTENANCE AND MONITORING PLAN

**Eugene's Dry Cleaners Site
Babylon (V) Suffolk County
Site Number 1-52-157**

JUNE 2002

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1.0 INTRODUCTION

This Operations Maintenance and Monitoring Plan (OM&M) for the property located at 54 E. Main Street Babylon, New York has been prepared by Department of Environmental Remediation, Bureau of Eastern Remedial Action staff. This plan addresses the sampling and analysis program to be performed to monitor the groundwater quality during the post-source removal basement sump clean out and power washing.

1.1 Project Site

54 E. Main Street, Babylon, New York

1.2 Purpose of OM&M Plan

The purpose of this OM&M Plan is to provide general site history, discuss investigative site sampling, describe basement sump cleanout and power washing Interim Remedial Measures (IRM), and OM&M Plan for groundwater monitoring plan at the site after the above mentioned IRM.

2.0 SITE DESCRIPTION

2.1 Site History

The Eugene's Dry Cleaners Site was an active dry cleaning facility until 1999. This site is located at 54 East Main Street in the Village of Babylon, Suffolk County, New York. The site is currently owned by Ms. Maria O'Shea Manning who resides in Louisville, Tennessee. The business was formerly founded, owned and operated by Eugene McCusker who reputedly resides in Vero Beach, Florida. Donald Gottwald owned and operated the Eugene's Dry Cleaners business from 1989 to 1999.

Prior to 1989, Eugene's Dry Cleaners was founded and initially operated by Eugene McCusker. The most recent operator has stated that he operated his equipment properly and disposed of his perchloroethylene (PCE) waste according to the current standards of the trade. There have been three documented fuel oil spills at the property. The New York State Department of Environmental Conservation (NYSDEC) Bureau of Spills has records of fuel oil spills which occurred at Eugene's Dry Cleaners during the period from December 1993 and January 1996.

Periodic flooding of the basement has caused the residues from past spills of PCE and fuel oil to resuspend and mix in the water and cause contamination. When the level of flooding in the basement recedes, this contamination has drained into openings in the basement floor and the sump located in the basement. The PCE contamination has been documented by the Suffolk County Department of Health Services (SCDOH). The oil spills have documented by the NYSDEC.

The Eugene's Dry Cleaners Site and surrounding area are shown on Figure 1. The site is part of a property which contains three stores located on East Main St.. The site is bordered to the north by Main St., on the east by a paved alley which leads to parking lots in the rear, and on the west by antique shops. The surrounding area consists mainly of light commercial properties along East Main Street, with residential homes located one block to the south and north. The size of the Eugene's Dry Cleaners facility is estimated to be 0.1 acres (approximately 50 feet in street frontage and 100 feet in length).

Access to the site is from East Main Street. The area immediately adjacent to the building at the site is almost entirely covered with pavement/parking lots. The site is not fenced.

The Eugene's Dry Cleaners Site is comprised of a building and the small paved area around the building. The building on the site is approximately 50 feet in width by 100 feet in length. The owner of the site's property (Ms. Maria O'Shea Manning) also owns the property on

which several buildings to the west stand. There is a driveway on the east side of the property that is approximately 30 feet wide. On the other side of the driveway, there is a health club. On the south side of the property, there is a parking area. To the southwest, there is a larger parking lot owned by the Village of Babylon. Further south is a commercial equipment repair business. The Eugene's Dry Cleaners building consists of one story and a basement, and is constructed of concrete block. An antique store is adjacent to Eugene's Dry Cleaners directly on the west.

The SCDOH sampled the PCE waste in the basement of Eugene's Dry Cleaners in 1994. SCDOH found PCE in the following concentrations: soil from the sump - 12,000 parts per million (ppm) and groundwater 840 parts per billion (ppb). The New York State Department of Environmental Conservation (NYSDEC) cleanup guidelines for soil contaminated with PCE is 1.4 ppm. The NYSDEC groundwater standard for PCE is 5 ppb. Note that these levels of PCE contamination found in the basement sump at Eugene's Dry Cleaners were above acceptable levels for both soil and groundwater. The SCDHS performed this work in 1994.

The SCDOH placed two monitoring wells in the Village parking located southeast from the Dry Cleaners. Results of sampling were reported in New York State Department of Health (NYSDOH) Report dated February 17, 1997. The NYSDOH concurred with the NYSDEC recommendation to give this site a classification of 2 on May 26, 1995.

A Potential Responsible Party (PRP) search was performed by the Department of Environmental Conservation (DEC) Division of Environmental Conservation (DEE). No viable PRP's willing to do the work were found. In early 1998, the site was referred to the Division of Environmental Remediation (DER) to begin the Remedial Investigation/Feasibility Study (RI/FS) process. The funds for the RI at this site here allocated from the New York State Superfund Program.

2.2 Hydrogeology

The topography in the site area is relatively level with areas of local relief of less than 5 feet. Eugene's Dry Cleaners Site is located at an elevation of approximately 5 feet above Mean Sea Level (MSL).

According to the soil survey of Suffolk County, New York, prepared by the United States Soil Conservation Service, the soil in the site area is classified as either Urban Land or other. Urbanized areas are defined as areas covered with asphalt, concrete and other impervious building material. These areas are nearly level or gently sloping.

The property gradually slopes away from East Main Street. Site drainage infiltrates directly to the subsurface in areas that are not paved or via dry wells. Run off flows toward the rear of the property. The topography gently slopes towards the end of the driveway near the southeast corner of the building and continues on to the Village parking lot to the southeast of the property. The basement of Eugene's Dry Cleaners is flooded periodically during rain events and

high tides.

Long Island is composed of a thick succession of unconsolidated sediments overlying a southeasterly sloping bedrock. In the region of Suffolk County, in the approximate location of the site, the unconsolidated deposits are about 1400 to 1800 feet thick. The Upper Glacial aquifer is located between the ground surface and the first unconformity. The Magothy aquifer occupies the zone between the first and second unconformities. The Gardiners Clay acts as a confining layer between the Upper Glacial aquifer and the underlying Magothy aquifer.

The Upper Glacial aquifer is approximately 100-150 feet thick and consists mostly of glacial outwash which is generally fine to coarse sand and gravel with thin local lenses of clay.

The Magothy aquifer ranges from 800 to 1000 feet thick. The unit typically consists mostly of fine to medium sand to clayey sand interbedded with lenses and layers of coarse sand, and sandy to solid clay. Gravel is common in the basal zone and discontinuous layers of gray lignitic clay are common in the upper zones.

The groundwater at the Eugene's Dry Cleaners Site is located approximately 8 feet below grade and is influenced by rain events and tidal fluctuations. On October 21, 1998, a survey was done of geoprobe points and three piezometers installed on July 24, 1998. The groundwater evaluation indicated that the groundwater flows in a southeasterly direction.

The site area served by public water supplied by the Suffolk County Water Authority (SCWA) supplies water. SCWA uses water supply wells at various locations in Suffolk County to supply water to various municipalities in Suffolk County. The water supply wells are screened in the aquifers below the Upper Glacial aquifer. The water is treated, tested, and pumped into holding tanks, etc before it is either pumped under pressure or allowed to flow by gravity into service areas.

3.0 SITE REMEDIAL ACTION

3.1 Description of Remedial Action

Bureau of Eastern Remedial Action (BERA) staff developed the scope of site remediation which included soil and groundwater removal from the basement sump.

3.2 Goals of Remedial Action

3. Investigate soil and groundwater contamination on site and surrounding Eugene's Dry Cleaner located at 54 E. Main Street, Babylon, New York.
4. Secure fuel oil storage located in basement of facility.
5. Remove residual fuel oil contaminated with PCE.
6. Remove contaminated material (petroleum contamination and the high concentration of dry cleaning chemicals) located in the basement sump.
7. Power wash basement of facility.
8. Remove contaminated soil and properly dispose of it off site by a licensed waste removal company.
7. After the soil removal, collect and analyze soil and groundwater samples to determine if additional contamination was present in the basement of the dry cleaning facility and in other areas outside the facility.

Additional groundwater sampling was performed to determine if the basement sump clean out was effective (see Table 1). This additional information confirmed that the sump clean out IRM was effective.

4.0 SAMPLING ANALYSIS

4.1 Elements of Monitoring Plan

Three existing micro wells (P-1, P-6, P-8) (see Figure 2) currently exist at the site. Four additional wells are proposed (PW-1, PW-2, PW-3 & PW-4) and sampled along with the three existing micro wells on a semi-annual basis. Elevations will also be measured prior to well purging and groundwater sampling.

5.0 FIELD SAMPLING PROCEDURES AND PROTOCOLS

Samples will be collected from the selected existing groundwater monitoring wells on a semi-annual basis. Locations for the seven monitoring wells are shown on Figure 2. Additional monitoring well survey data is also provided in Table 1.

5.1 Groundwater Sampling Protocols

During each round of sampling, groundwater samples will be collected from the seven monitoring wells using the well sampling techniques described herein. The wells to be sampled and the locations are shown on Figure 2.

Prior to a sampling round, water levels will be measured in all monitoring wells. These water level data will be collected on a single date, prior to the field sampling, and will be tabulated and used to compile groundwater contour maps.

Three to five well casing volumes will be purged using a submersible pump and disposable polyethylene tubing or by bailing. As needed field measurements of pH, specific conductance, and temperature will be collected and documented.

A stainless steel, Teflon, PVC, or polyethylene bailer or tygon tubing with a PVC check valve will be used to obtain the groundwater samples. Samples must be collected within three (3) hours of purging. All samples will be sent to the laboratory for analysis within 24 hours of sampling.

The following standard protocol for groundwater sampling has been established to conform to NYSDEC rules and regulations. The standard methods for preparation, collection and transfer of groundwater samples, as well as record keeping, are detailed below. These methods must be followed to provide representative samples of chemical analysis.

After collection of an acceptable sample in accordance with this protocol, the sample will be submitted to a NYSDOH ELAP certified laboratory. The preparation, collection, preservation,

transfer and record keeping of each sample will be coordinated with the analytical laboratory to ensure reliable test results.

5.2 Sampling Periods

The wells will be monitored every six months and groundwater samples will be analyzed for EPA Method 8260 constituents by a NYSDOH- certified laboratory and deliverables would conform to NYSDEC ASP Category B. As part of the reporting process, all data will be evaluated and recommendations-for modification's in the frequency of sampling and number of wells to be sampled will be presented.

5.3 Pre-Sampling Preparation Equipment

8. Health and Safety: The health and safety protocols for sample collection will conform to typical Level D industry standards.
- b. Authorized Personnel: All individuals involved in the sampling will have read this Plan, be technically qualified, and follow the protocol whenever groundwater samples are obtained.
- c. Staging: Prior to any sampling event, personnel will take the following steps responsible for sampling:
 1. Review the sampling procedures;
 2. Assemble and inspect field equipment necessary for sample collection, and verify that equipment is clean and in proper working order;
 3. Calibrate equipment to the manufacturer's specifications;
 4. Examine shuttles, bottles and preservatives. Contact the laboratory immediately if any problems are found or observed;
 5. Confirm sample delivery time and method of sample shipment with the laboratory;
 6. Establish a well purging and sampling schedule for the activities to be performed each day; and
 7. Establish a temporary staging area consisting of plastic sheeting.

5.4 Groundwater Level Measurement Procedures

- a. Clean all water-level measuring equipment (e.g., steel tape or water level indicator) using appropriate decontamination procedures.
- b. Remove locking well cap, note weather, time of day and date, etc. in field notebook, or on an appropriate form.
- c. Remove well casing cap.
- d. Measure the static water level in the well with a decontaminated steel tape or electronic water level indicator. The tape or water level indicator shall be rinsed

with deionized water in between individual wells to prevent cross-contamination. Synoptic rounds of water level measurements shall all be completed in the same day.

- e. Measure distance from water surface to reference measuring point on well casing, and record in field notebook. (Note that the measurement is being taken from the established survey reference mark (notch) located at the top of the PVC riser pipe in each well.
- f. Measure total depth of well and record in field notebook or on log form. All water level measurements are to be recorded to the nearest 0.01-foot.
- g. Remove all downhole equipment, replace and secure well casing cap and locking protective caps.
- h. Calculate elevation of water:

$$EW = E - D$$

Where:

EW = Elevation of water;

E = Elevation of point of measurement (i.e., survey reference point); and D = Depth to water

5.5 Procedures for Well Purging

Well purging is necessary to obtain a sample representative of the groundwater in the formation and not standing/stagnant water in the well.

- a. Examination of the well
 - 1. Identify the well and record the well number of the field data sheet.
 - 2. Verify that the well is not damaged. Notify the NYSDEC if well damage is obvious or suspected, so that the well can be repaired or replaced.
 - 3. Put on new disposable gloves.
 - 4. Carefully remove well cover to avoid entry of foreign material into well.
 - 5. If needed, the exterior and interior of the exposed protective well box should be wiped with clean filter paper (or equivalent, wetted with distilled water).
- b. Purging the Well
 - 1. Three to five casing volumes of water will be removed from the well prior to sampling with either a submersible pump and dedicated polyethylene tubing, or with a dedicated bailer, or properly decontaminated bailer (stainless steel, Teflon or PVC.. The well volume is calculated using the

following formula:

$$V = R^2 (H)(0.49)$$

Where: V = standing water volume, in gallons, to be purged

R = inside radius of well in inches

H = linear feet of standing water in the casing (total depth to groundwater)

0.49- correction factor that includes conversion from inches to feet and assumes three well volumes will be purged

OR: purge until water temperature, conductivity and pH stabilize (i.e., remain constant within 10% of each reading). If a well purges dry or is slow to recharge, only one well volume of water needs to be purged.

2. Temperature, specific conductance, and pH will be measured during purging. At a minimum, measurements will be taken after each well volume purged.
3. All purging and sampling equipment must be stored and transported in a manner that minimizes the possibility of accidental contamination.

5.6 Procedures for Record Keeping

1. The sampling team will record the following information regarding the well purging procedure in the field notebook and/or on a Groundwater Sampling Record/Field Observation Log such as the form shown in Figure 3:
 - Day/date/time
 - Weather conditions
 - Air temperature
 - Condition of the well (rusty, bent casing, etc.)
 - Person(s) doing the purging
 - Groundwater level prior to purging
 - Depth to the bottom of the well
 - Minimum volume of groundwater to be purged (3 well volumes)
 - Chemical properties of evacuated water: temperature specific conductance, pH
 - Method of purge water disposal
 - Physical properties of evacuated water: Color, odor, turbidity, presence of sheen
 - Volume of groundwater purged from the well.

The following field measurement procedures that discuss specific steps in the calibration and use of field instruments should be interpreted to reflect the manufacturer's recommended procedures for the actual instruments being utilized.

5.7 Procedures for the Measurement of Groundwater pH and Temperature

5.7.1 Calibration

- a. Immerse the tip of the electrode in water overnight. If this is not possible due to field conditions, immerse the electrode tip in water for at least an hour before use.
 - b. Rinse the electrode with demineralized water.
 - c. Immerse the electrode in pH 7 buffer solution.
 - d. Adjust the temperature compensator to the proper temperature.
 - e. Adjust the pH meter to read 7.0.
 - f. Remove the electrode from the buffer and rinse with demineralized water.
- 5.7.2 Measurement

5.7.2 Measurement

- a. Collect a groundwater sample using either a stainless steel, Teflon or PVC bailer and pour a small amount of this sample into an extra sample jar that will not be used to store chemically analyzed samples.
- b. Immerse the electrode into the extra sample jar. Do not immerse the electrode into a sample that will be analyzed by the laboratory.
- c. Read and record the pH of the solution after adjusting-the temperature compensator to the sample temperature.
- d. Rinse the electrodes with demineralized water.
- e. Keep the electrode immersed in demineralized water when not in use.
- f. Record Results in the field notebook.

5.8 Procedure for the Measurement of Groundwater Specific Conductance

- a. Immerse the electrode in water overnight. If this is not possible due to field conditions, immerse the electrode for at least an hour before use.
- b. Rinse the cell with one or more portions of the sample to be tested.
- c. Immerse the electrode in the sample and measure the conductivity.
- d. Adjust the temperature setting to the sample temperature.
- e. Record the results in the field notebook.

5.9 Procedures for Groundwater Sampling

The following procedure shall be used for monitoring well groundwater sampling:

- a. Prepare for purging. Decontaminate bailer and discard rope. If a submersible pump is used, discard pump discharge line. If using a disposable bailer and dedicated rope, prepare new bailer and appropriate length of rope.
- b. After purging, allow static water level to recover for ten minutes.
- c. Obtain sample from well with either a stainless steel, Teflon, PVC or disposable bailer suspended on either a polypropylene monofilament or a stainless steel, coated-coated wire. The maximum time between purging and sampling will be three (3) hours.
- d. Lower the bailer slowly to avoid degassing.
- e. Collect samples by pouring bailers directly into sample bottles from bailers.
- f. Place samples in cooler and chill to 4°C. Samples will be delivered to the designated laboratory within 24 hours.
- g. Re-lock well cap.
- h. Fill out field notebook, well sample log sheet, labels, custody seals and chain-of custody forms.

5.10 Field Procedures Documentation

Data reporting practices will be followed carefully and data entries will be validated regularly to ensure that raw data are accurate. All the field data generated during field measurements, observations and field instrument calibrations, will be entered directly into a bound field notebook.

One or more bound books will be maintained for the site, and each book will be consecutively numbered. The books will remain with the main project files.

All entries in the logbook will be made-in ink. When a mistake is made in the log, it will be crossed out with a single ink line and will be initialed and dated.

Special care will be taken in the description and documentation of sampling procedures. Sampling information to be documented in the field notebook and/or associated forms are as follows:

- Weather conditions;
- Sample number;
- Date and time of sample collection;
- Source of sample (well, trench, etc.);
- Purged well - type of equipment, purge volume, rate of purge, decontamination procedures and method of disposal;
- Location of sample - document with a site sketch and/or written description of the sampling location so that accurate re-sampling can be conducted if necessary;
- Sampling equipment (i.e. bailer);
- Analysis and QA/QC required;

- Filtering, if required;
- Field instrument calibration including date of calibration, standards used and their source, results of calibration and any corrective actions taken;
- Field data (pH, temperature, conductivity, etc.);
- Field observations - all significant observations will be documented;
- Sample condition (color, odor, turbidity, sheen, etc.);
- Site conditions;
- Sample shipping procedure, date, time, destination, and if legal seals were attached to transport container(s);

Comments - Any observation or event that occurred that would be relevant to the site; for example weather changes and effect in sampling.

5.11 QA/QC Sampling

Field Blanks will be collected to evaluate the cleanliness of groundwater sampling equipment, sample bottles, and the potential for cross-contamination of samples due to airborne contaminants present in the air at the site during handling of equipment and sample bottles. Field blank samples will be collected from the bailers used to collect the groundwater samples. The frequency of field blanks taken will be one per decontamination event for each type of sampling equipment, at a minimum of one per equipment type per day.

Where required, field blanks will be obtained prior to the occurrence of any analytical field sampling event by pouring deionized or potable water over a particular piece of sampling equipment and into a sample container. The analytical laboratory will provide field blank water and sample containers with preservatives for the collection of field blanks. The field blanks, as well as the trip blanks will accompany field personnel to the sampling location. The field blanks will be analyzed for the same parameters as the samples and shall be shipped with the samples taken subsequently that day.

Field Blanks shall be taken in accordance with the procedure described below:

- a. Decontaminate sampler/sampling equipment using the procedures specified in this plan.
- b. Pour distilled/deionized water over the sampling equipment and collect the rancid water in the appropriate sample bottles.
- c. The sample shall be immediately placed in a sample cooler and maintained at a temperature of 4° C (39.2° F) until received by the laboratory.
- d. Fill out sample log, labels and chain-of-custody forms, and record in field notebook.

If disposable bailers are utilized, the first step in the procedure will be deleted and replaced as follows:

- a. Remove wrappings from a brand new, unused disposable bailer.

A laboratory supplied trip blank consisting of an aliquot of distilled, deionized water which will be sealed in a sample bottle(s) prior to initiation of sampling. The trip blank will be used to determine if any cross contamination occurs between aqueous samples and/or the environment during shipping. Trip blanks will be analyzed for aqueous VOCs only. Glass vials (40 ml) with Teflon-lined lids will be prepared by the laboratory prior to sampling. The sealed trip blanks will be placed in a cooler with the empty sample bottles and brought to the site by laboratory personnel or via overnight courier. One trip blank per shipment will be analyzed.

Duplicate samples will be collected and analyzed to check laboratory reproducibility of analytical data. At least 5% (one per every 20 samples) of the total number of samples collected samples will be duplicated to evaluate the precision of the methods used. Duplicate samples will be collected using the same method as non-duplicate samples. Bottles for the sample and duplicate sample will be filled alternately until all sample and duplicate sample bottles have been filled.

Matrix spike (MS) and matrix spike duplicates (MSD) for organic analysis are preformed at a rate of at least 5% (one per every 20 samples) of the total number of samples collected. Further, reanalyses are required at times, due to determination of anomalous results during analysis. To ensure that the laboratory has sufficient volume for the MS/MSD analysis, triple sample volume must be submitted for aqueous organic extractable and volatile samples once per every 20 samples in a sample delivery group (SDG).

5.12 Corrective Action

If, during the course of sampling, it is determined that field procedures are not yielding representative groundwater samples, this Plan will be modified as required and reported to the NYSDEC. Any alteration to field procedures will be included as an amendment to the Plan.

6.0 REPORTING

An annual report will be prepared and submitted to the NYSDEC to document the, monitoring results. The report will present appropriate groundwater analytical sampling results in table format. The report will include both semi-annual groundwater elevation and contaminant concentration contour maps. In addition, routine monitoring sheets containing system monitoring records, semi-annual groundwater sampling data forms for individual monitoring wells, and any corrective action conducted to optimize the effectiveness of the treatment system will be described. Appropriate conclusions with regard to system performance and remedial progress of the site will be made.

7.0 POST-REMEDATION GROUNDWATER QUALITY MONITORING AND REPORTING PROGRAM

The Post-Remedial Monitoring and Maintenance Plan groundwater monitoring to be conducted under this Plan will follow the requirements for analysis under the New York State Superfund Program. Analytical results for each round will be tabulated, validated and reported to the DEC as soon as the data is available. An annual Monitoring Report summarizing the results of the two rounds of groundwater samples will be prepared each year.

7.1 Reporting of Data from Each Sampling Round

Analytical results will be tabulated and reported to the DEC after each sampling round has been analyzed. The summary analytical table will contain the sample collection date, the analytical results, designation of each sampling point, QA/QC qualification, and method detection limits (MDLs).

A summary of field data will be included with the results from each sampling round. Sampling conditions and field parameters tested will be recorded on a field data sheet (see Figure 3). The field data summary sheet will include the following information:

- Data, time and place of sampling or measurements;
- Name of individuals who performed sampling;
- Initial depth to water in well, depth of well, well casing radius, and volume of water purged;
- Groundwater elevation;
- Purge method (e.g., submersible pump or bailer);
- Field parameters (pH, temperature, conductivity);
- Results of organic vapor screening readings; and
- Condition of well and weather conditions.

7.2 Report on Results of Annual Post Closure Monitoring and Maintenance Program

This report will summarize the activities, results, findings, and conclusions of the quarterly sampling conducted each year. This annual groundwater monitoring report will supplement the reporting requirements for the Post-Closure Monitoring and Maintenance Plan. The outline for the annual groundwater report will be as follows:

- 1.0 Introduction
- 2.0 Sample Location and Analysis
- 3.0 Sampling Procedures
- 4.0 Analytical Results (comparison of sample results to groundwater standards/guidelines)
- 5.0 Groundwater Flow

6.0 Conclusions
7.0 Recommendations

Figures will include the following:

1. Site Location
2. Well Location
3. Potentiometric and Water Table Contour Maps

The report will include a table or graph comparing current analytical results with water quality standards. In addition, a discussion comparing new analytical results with previous water quality data from the site will be presented.

In addition, each annual report will include recommendations for future monitoring of the wells including the sample analysis to be performed and frequency of sampling during the Post-Remediation Monitoring Plan groundwater-monitoring program.

FIGURES

FIGURE 1

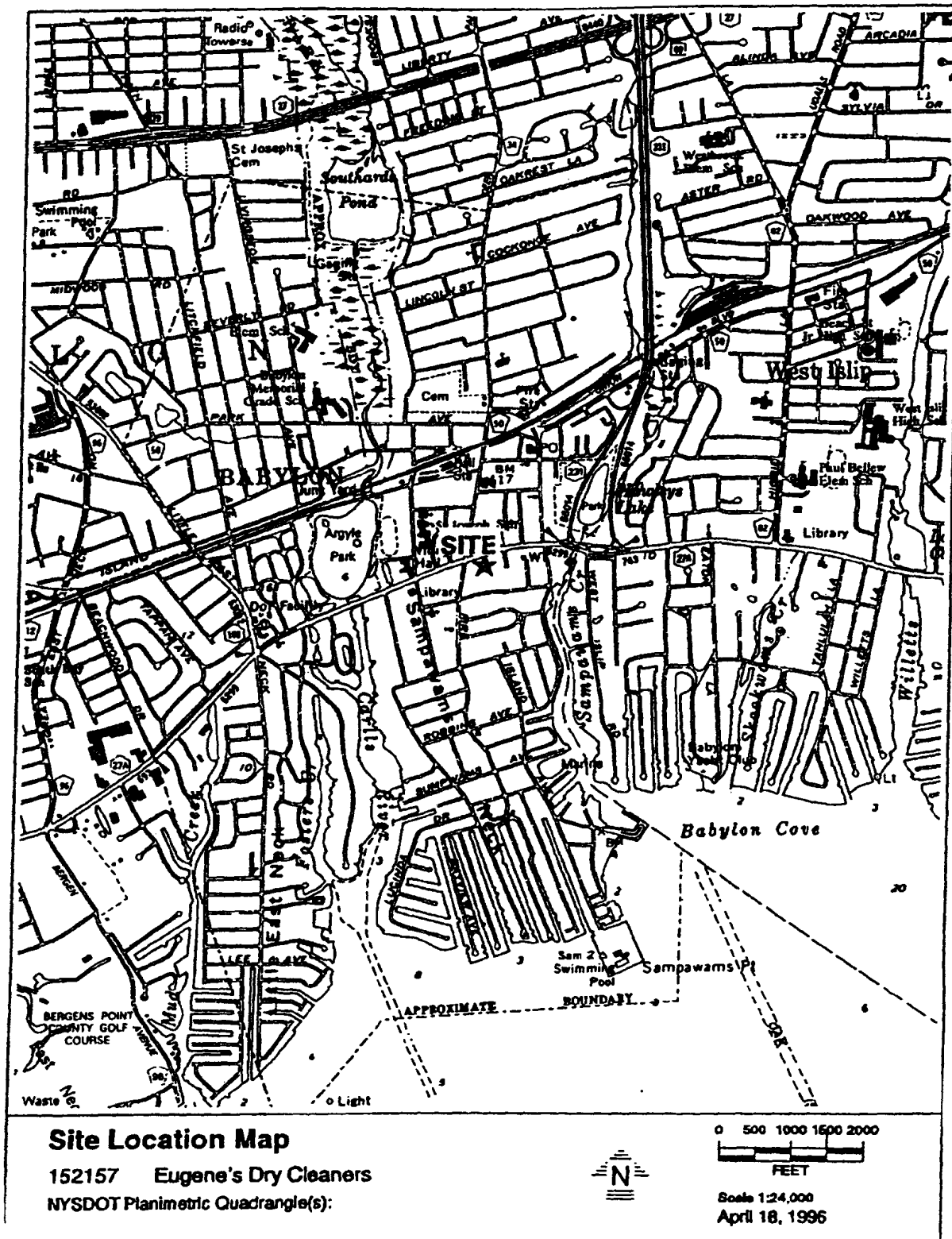


FIGURE 2

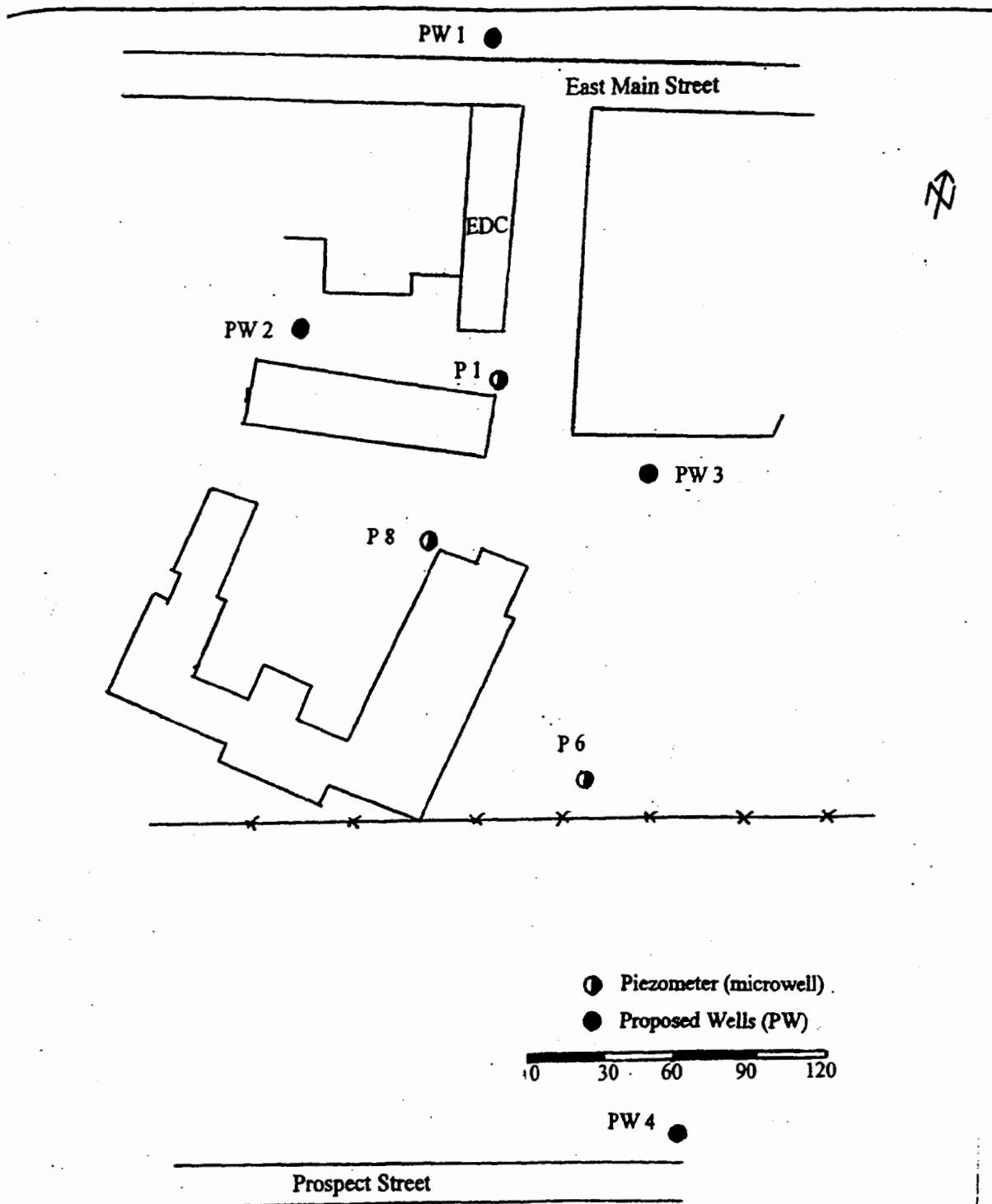


FIGURE 3

WELL SAMPLING LOG

CLIENT/PROJECT: _____

WELL No./OWNER _____

SAMPLING POINT _____

SAMPLE I.D. No. _____ SAMPLED BY _____

DATE SAMPLED _____ TIME _____

WELL USE _____

STATIC WATER ELEV. _____ FT. BELOW MEASURING POINT _____

WELL DIAMETER _____ INCHES

TOTAL WELL DEPTH _____ FT. BELOW MEASURING POINT _____

SAMPLING INFORMATION

PURGING METHOD _____

PURGING RATE _____ GAL/MIN. PURGING TIME _____ MIN.

No. CASING VOLUMES REMOVED: _____ GALLONS: _____

WELL DRAWDOWN/RECOVERY _____

SAMPLE APPEARANCE _____

ODORS OBSERVED _____

CONDUCTIVITY _____ ms pH _____

TEMPERATURE _____ °C _____

SAMPLES ANALYZED FOR _____

LABORATORY/DATE SHIPPED _____

COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

1 Vol. (1)

2 Vol. (2)

3 Vol. (3)

pH
Cond.
T°C

TABLE

TABLE 1

**Eugene Dry Cleaners
Site No. 152 157**

Summary of Groundwater Monitoring Results (ug/l)

Sampling Pt	July 23, 1998 -16' Depth	May 27, 1999 -15' Depth	July 27, 1999 -15' Depth	May 4, 2000 - 15" Depth	Standard
GW1/PZ1					
1,2 DCE	131	5	21	18	5
PCE	34.59★	U	U	U	5
TCE	34.17	U	U	U	5
VC	8.34	2	9	U	2
GW6/PZ6					
1,2 DCE	1.1	6	37	U	5
PCE	43.53★	U	U	U	5
TCE	2.29	U	U	U	5
VC	U	U	6	U	2
GW8/PZ8					
1,2 DCE	7.58	5	4	13	5
PCE	2.49★	U	2	U	5
TCE	U	U	U	U	5
VC	U	U	U	U	2

Note: A cleanout IRM of the basement sump was performed on October 22, 1998

U Undetectable

★ PCE breaks down into 1,2, DCE