Department of Environmental Conservation

Division of Environmental Remediation

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

November 2000

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* JOHN P. CAHILL, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

Eugene's Dry Cleaners Inactive Hazardous Waste Site
Babylon (V), Suffolk County, New York

Site No. 152157

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Eugene's Dry Cleaners Class 2 inactive hazardous waste disposal site which was chosen in accordance with the New York State Environmental Conservation Law. The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Eugene's Dry Cleaners inactive hazardous waste site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site have been addressed by implementing the interim remedial actions identified in this ROD. The removal of contaminated soil and groundwater from the sump has significantly reduced the threat to public health and the environment. Therefore, a groundwater monitoring program will be implemented to monitor the effectiveness of previous remedial actions in preventing further contamination of the groundwater.

Description of Selected Remedy

Based on the results of the Focused Remedial Investigation (RI) for the EDC Site and the criteria identified for evaluation of alternatives, the NYSDEC has selected No Further Remedial Action with continued groundwater monitoring. The remedy consists of the following:

Sampling and analysis of groundwater quality and flow direction from three existing piezometers (microwells) and four new monitoring wells on a semi-annual basis for a minimum of five years to confirm long term trends.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

December 1, 2000
Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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RECORD OF DECISION

Eugene's Dry Cleaners Site
Babylon (V), Suffolk County
Site No. 152157
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SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health has selected this remedy for the Eugene's Dry Cleaners (EDC) Class 2 inactive hazardous waste disposal site. As more fully described in Sections 3 and 4 of this document, hazardous wastes, including tetrachloroethylene (PCE) were disposed of on site. Groundwater on and near the site became contaminated with PCE and other volatile organic compounds (VOCs).

These disposal activities resulted in the following significant threats to the public health and/or the environment:

a significant threat to human health associated with direct contact with contaminated soils in the basement sump.

a significant environmental threat associated with the impacts of contaminants to the groundwater resource.

During the course of the investigation, an Interim Remedial Measure (IRM) was undertaken at the EDC site in response to the threats identified above. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the Remedial Investigation (RI). The components of IRM undertaken at this site include:

Power washing the basement; vacuuming soil and groundwater from a drainage sump located in the basement of the EDC facility; backfilling the sump with clean (sand) material and securing the fuel storage tank located in the basement.

An additional benefit from this IRM was the cleanup of fuel oil residues in the basement of the EDC facility from previous spills.

Based upon the success of the above IRM and the findings of the RI at this site, the Department, in conjunction with the NYSDOH, has concluded that the site no longer poses a threat to human health or the environment, therefore No Further Remedial Action with continued groundwater monitoring is proposed as the remedy for this site.

In addition, the Department will reclassify the site from a Class 2 to a Class 4 site (which means the site has been remediated but requires ongoing monitoring) on the New York State Registry of Inactive Hazardous Waste Disposal Sites.

SECTION 2: SITE LOCATION AND DESCRIPTION

The EDC Site is located in the Village of Babylon, Suffolk County at 54 E. Main St. Babylon, NY. See Figure 1 for location of the site. The site is approximately 0.1 acres in size and is located in a mix of light commercial and residential properties. The site is located near the south shore of Long Island. Two public water supply wells are located approximately 0.5 miles north (upgradient) of the site. There are no down gradient public water supply wells.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

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. From 1989 to 1999, Mr. Donald Gottwald has most recently operated the dry cleaning facility. The dry cleaning facility is currently being remodeled to accommodate a new business. It is believed that at some time during the past, PCE was spilled or leaked into the basement sump during dry cleaning operations.

3.2: Remedial History

The Suffolk County Department of Health Services first discovered evidence of hazardous waste disposal in the form of PCE in 1994 when they performed an inspection of the facility and retrieved soil samples from the basement. The analysis of the soil samples indicated that PCE was present in the basement sump at a concentration of 12,000 ppm. The first of two fuel oil spills was reported in 1993 (there were three reported spills, but the 1996 spill was reported by two different individuals). Most of the fuel oil cleanup was performed at the time that the spills occurred. The remaining fuel oil residues were cleaned up as part of the Interim Remedial Measure described in Section 4.2.

SECTION 4: SITE CONTAMINATION

To evaluate the contamination present at the site and to evaluate alternatives to address the significant threat to human health and the environment posed be the presence of PCE, the NYSDEC conducted a Focused RI at the EDC Site.

4.1: Summary of the Remedial Investigation

The purpose of the Focused RI was to define the nature and extent of any contamination resulting from previous activities at the site.

The RI was conducted in one phase. This phase was conducted between July 1998 and May 2000. A report entitled "Eugene's Dry Cleaner's Focused Remedial Investigation" dated February, 2000 has been prepared which describes the field activities and findings of the RI in detail.

The RI included the following activities:

Survey of the site;

Soil boring in the basement of the building (see figure 5); and

Initial groundwater sampling was performed at nine locations (GW 1 through GW 9 shown on figure 2) using the Geoprobe method. Subsequent groundwater sampling was performed at three locations (P1, P6 and P8 are shown on figure 2). P1, P6, and P8 are permanently installed dual purpose wells which are used as both piezometers and monitoring wells. The P1, P6, and P8 microwells were installed using the Geoprobe method. The groundwater monitoring results from the P1, P6, and P8 microwells are shown on Table 2. Analysis of these groundwater samples was performed by mobile and contract laboratories.

Geoprobe is a direct push method of obtaining groundwater samples from varying depths at a given location, which may or may not result in the installation of a permanent monitoring well at that location.

To determine which media (soil, groundwater, etc.) contain contamination at levels of concern, the RI analytical data was compared to environmental Standards, Criteria, and Guidance values (SCGs). Groundwater, drinking water and surface water SCGs identified for the EDC Site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of the NYS Sanitary Code. For soils, NYSDEC TAGM 4046 provides soil cleanup guidelines for the protection of groundwater, background conditions, and health-based exposure scenarios. In addition, for soils, site specific background concentration levels can be considered for certain classes of contaminants. Guidance values for evaluating contamination in sediments are provided by the NYSDEC "Technical Guidance for Screening Contaminated Sediments".

Based on initial RI investigative results (see Figure 2), in comparison to SCGs and potential public health and environment exposure routes, certain areas and media at the site required

remediation. This remediation was an IRM which is summarized below in paragraph 4.2. More complete remediation information can be found in the RI Report.

Chemical concentrations are reported in parts per billion (ppb) for groundwater and parts per million (ppm) for soil. For comparison purposes, where applicable, SCGs are provided for each medium.

4.1.1 Site Geology and Hydrogeology

The Magothy formation is present from approximately 80 feet to 1000 feet below grade at the site. The Pleistocene Gardiners Clay overlies the Magothy Formation and is present at a depth of 50 to 60 feet at a location near the site where deeper borings were completed. The Gardiners Clay is reported to be approximately 10 feet thick or less in the general vicinity of the site. The Gardiners Clay is composed of a marine clay with interbedded sand layers and lenses.

The Pleistocene Glacial deposits overlie the Gardiners Clay and extend from at or near the ground surface to a depth of 50 to 60 feet below the site. The Glacial Deposits consist of a fine to coarse sand and gravel layer between the Upper Glacial and the underlying Magothy Aquifer. The Upper Glacial is a water table aquifer approximately eight feet below grade at the site. This aquifer is recharged by precipitation that infiltrates downward to the water table. Most of this recharge remains within the Upper Glacial Aquifer, moving laterally toward the discharge locations near the shore

Based on water table measurements of the Upper Glacial Aquifer, groundwater flow in the immediate vicinity of the site is to the south (see Figure 3). Horizontal hydraulic gradients for the site were calculated to be approximately 0.002 feet per foot, indicating a very flat water table gradient. Groundwater flow velocities are therefore suspected to be low.

4.1.2 Nature of Contamination:

As described in the RI Report, many soil and groundwater samples were collected at the site to characterize the nature and extent of contamination. Volatile organic compounds (VOCs) were detected in these samples at levels exceeding their SCGs. The primary VOC of concern is PCE.

4.1.3 Extent of Contamination

The highest level of PCE contamination was found in the soil in the basement sump (see Figure 5) of the EDC facility at a concentration of 19,200 ppm. The soil cleanup objective for PCE is 1.4 ppm. The highest level of PCE contamination in the groundwater was found at a depth of 15 feet beneath the ground surface at Geoprobe point GW6 at a concentration of 43 ppb. A breakdown product of PCE - 1,2 dichloroethylene (1,2 DCE) was also found at Geoprobe point GW1 at a concentration of 131 ppb. The groundwater standards for both of these constituents is 5 ppb. Table No. 1 summarizes the extent of contamination for the contaminates of concern in

the soil and groundwater. The highest concentration of total VOCs found in any well was 208 ppb found in GW 1 in July 1998. In July 1999, the total VOC concentration in GW 1 had dropped to 30 ppb.

4.2 Interim Remedial Measures:

Interim Remedial Measures (IRMs) are conducted at sites when a source of contamination or exposure pathway can be effectively addressed during the RI.

The NYSDEC concluded that since the main source of PCE contamination had been identified and the technology for removing this type of source was well established, it would be appropriate to clean the sump in the basement of the EDC facility through an IRM.

This was done in October 1998 by power washing the dry cleaner basement walls and floor and vacuuming the contaminated water and soil from the basement sump.

Approximately 3 cubic yards of soil and water were removed from the basement sump.

In order to determine the effectiveness of the sump cleanout, follow up groundwater testing was performed. In May, 1999, a second round of groundwater sampling indicated that only one sample very slightly exceeded groundwater standards. In July, 1999, a third round of groundwater samples was collected. Although some of the samples were slightly above the groundwater standards, the contaminant concentrations in the groundwater remained lower than those analyzed prior to the sump cleanout (see Table 2). Total VOCs in GW 1 (the monitoring well closest to the source area) dropped from 208 ppb before the IRM, to 30 ppb after the IRM.

The sump cleanout removed the source of groundwater contamination, and as a result the groundwater contaminant concentrations have dropped. NYSDEC expects this decline in groundwater concentrations to continue.

4.3 Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site.

An exposure pathway is how an individual may come in contact with a contaminant. The five element of an exposure are:

1) The source of contamination.

2) The environment media.

3) The point of exposure.

4) The route of exposure.

5) The receptor population.

A completed exposure pathway may be based on past, present, or future events.

The basement sump cleanout has been completed, therefore there are currently no completed exposure pathways associated with this site.

4.4 Summary of Environmental Exposure Pathways:

This section summarizes the types of environmental exposures and ecological risks which may be present at the site. The following pathway for environmental exposure and/or ecological risks has been identified:

Impact to the groundwater resource above standards.

Although the groundwater in the immediate vicinity of the site is impacted above standards, with the source area now remediated, NYSDEC expects groundwater standards will be achieved through natural attenuation. Continued monitoring of the groundwater is expected to confirm this.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those PRPs who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for this site, documented to date, include:

Ms. Maria O'Shea Manning
Mr. Eugene McCusker
Mr. Donald Gottwald

The PRPs declined to implement an RI/FS at the site when requested by the NYSDEC. After the remedy is selected, the PRPs will again be contacted to assume responsibility for the remedial program (both past costs, new well installation, and future monitoring costs). If an agreement cannot be reached with the PRPs, the NYSDEC may evaluate the site for further action under the State Superfund. The PRPs are subject to legal actions by the State for recovery of all response costs the State has incurred.

SECTION 6: SUMMARY OF REMEDIAL GOALS AND SELECTED ACTION

The selected remedy for any site should, at a minimum, eliminate or mitigate all significant threats to the public health or the environment presented by the hazardous waste present at the site. The State believes that the IRM completed at the site accomplished this objective, provided that groundwater monitoring continues to show decreasing contaminant concentrations in groundwater.

Based upon the results of the investigations, which have shown a significant decrease in total VOCs concentration in groundwater, and the IRM that has been performed at the site, the NYSDEC has selected No Further Remedial Action with continued groundwater monitoring as the remedial alternative for the site.

The remaining low VOC concentrations in the groundwater in the immediate vicinity of the site do not pose a threat to public health or the environment. There are no drinking water supply wells in this area due to the proximity of saline waters and the VOC concentrations in groundwater are low enough to preclude adverse impacts to indoor air quality in nearby buildings. Groundwater impacts from this site have not reached any surface water body, and even if these low VOC concentrations were to eventually reach the nearest surface water body, they would not cause an adverse environmental impact.

The Department will also reclassify the site from a Class 2 to a Class 4 (which means the site has been remediated but requires ongoing monitoring) on the New York State Registry of Inactive Hazardous Waste Disposal Sites. Four new monitoring wells, in additional to the 3 microwells (P-1, P-6, and P-8) installed during the Remedial Investigation, will be part of the long term monitoring of this site, as shown on figure 4. The cost to install these addition wells is approximately $5,000 and the annual cost to monitor all the wells on a semi-annual basis is approximately $1000. The new and existing wells will be monitored for a minimum of 5 years to confirm long term trends of the clean up of groundwater contamination near the site.

SECTION 7: HIGHLIGHTS OF COMMUNITY PARTICIPATION

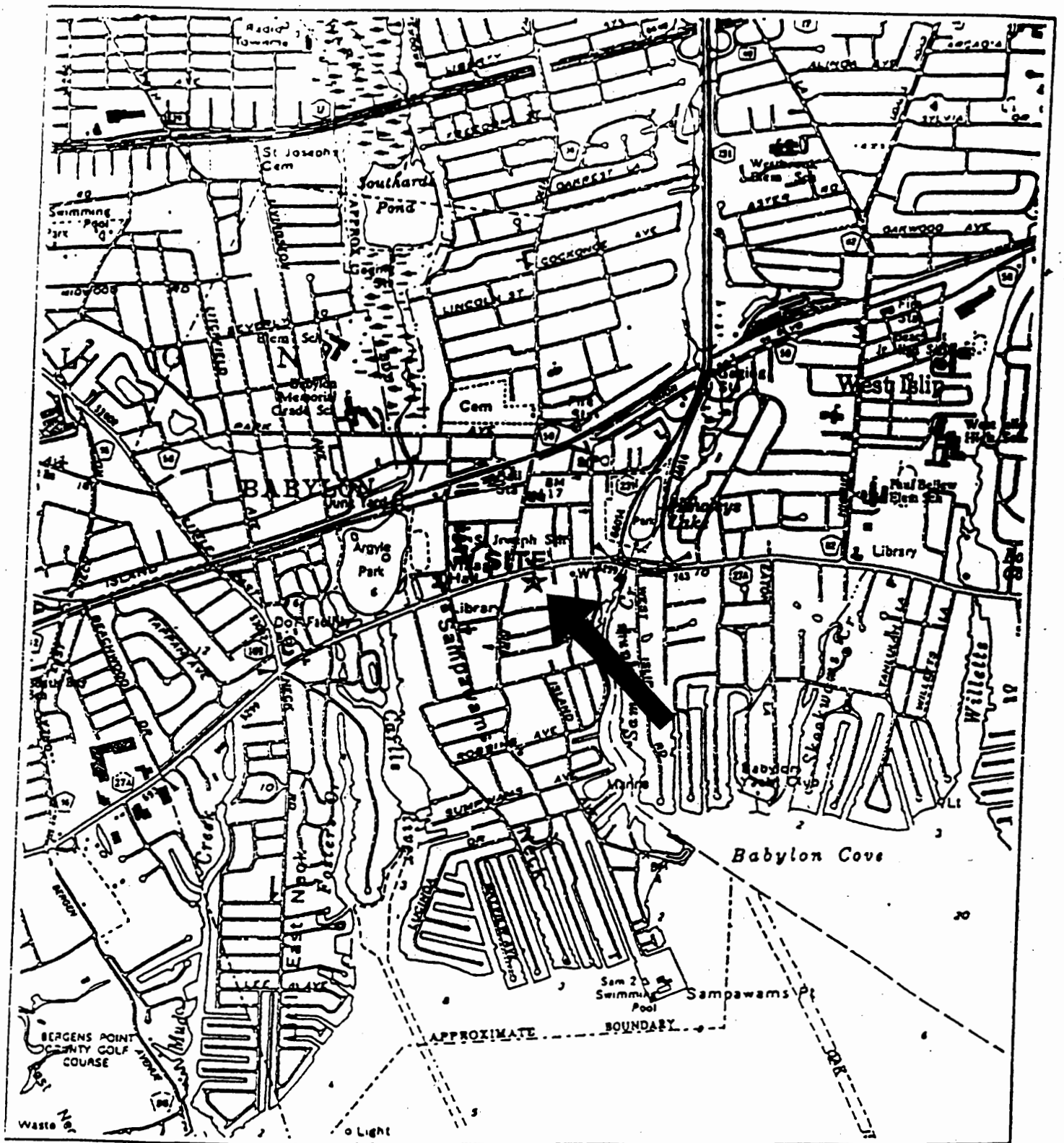
As part of the remedial investigation process, a number of Citizen Participation activities were undertaken in an effort to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- A repository for documents pertaining to the site was established.
- A site mailing list was established which included nearby property owners, local political officials, local media and other interested parties.
- A fact sheet summarizing the RI results and describing the Proposed Remedial Action Plan was mailed to those on the mailing list in June 2000.

- A public meeting was held on July 20, 2000 to present the RI results, describe the proposed remedy and solicit public comment on that remedy.

- In November 2000, a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.

FIGURE 1



Site Location Map

152157 Eugene's Dry Cleaners

NYSDOT Planimetric Quadrangle(s):

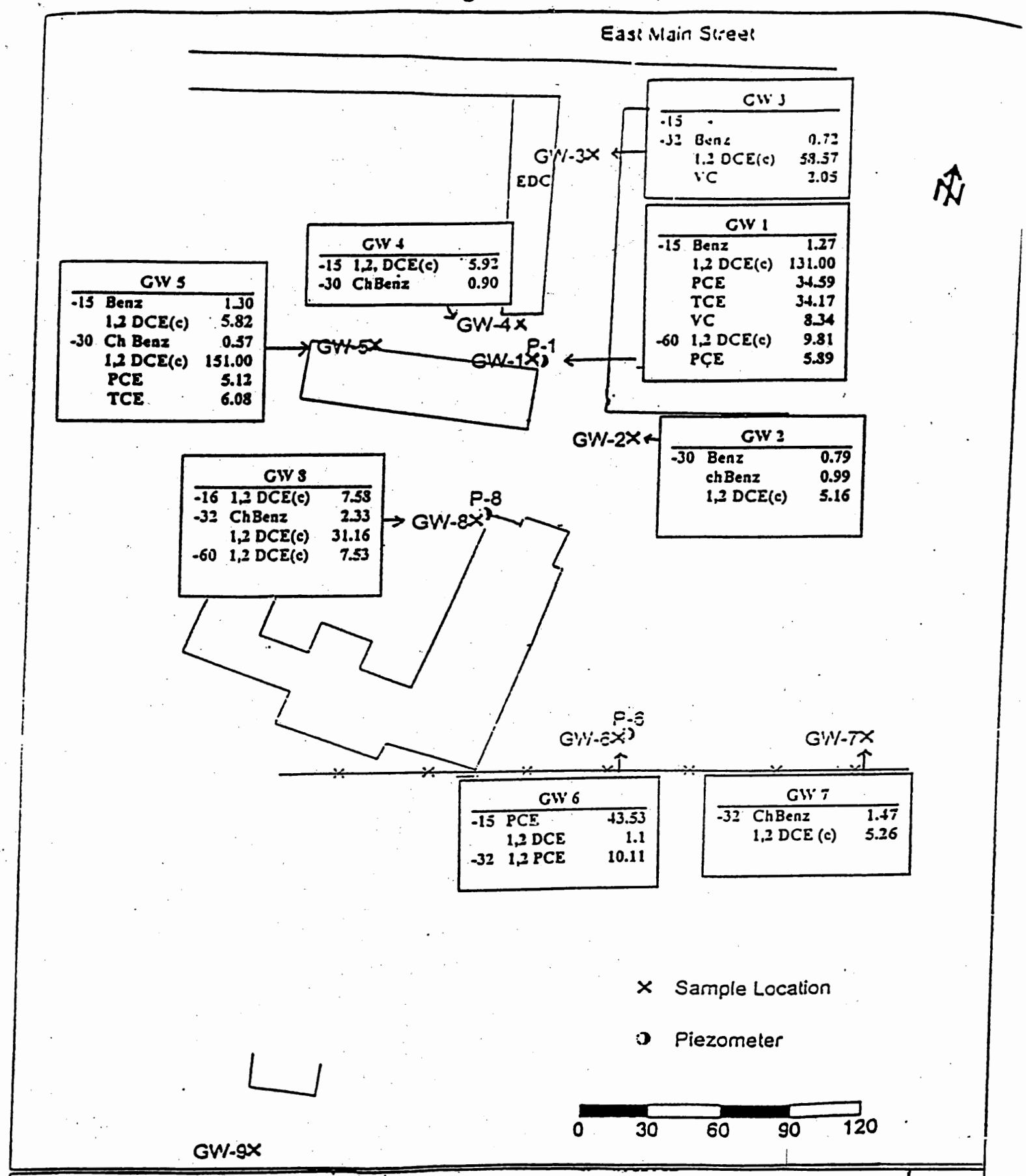
N

0 500 1000 1500 2000

FEET

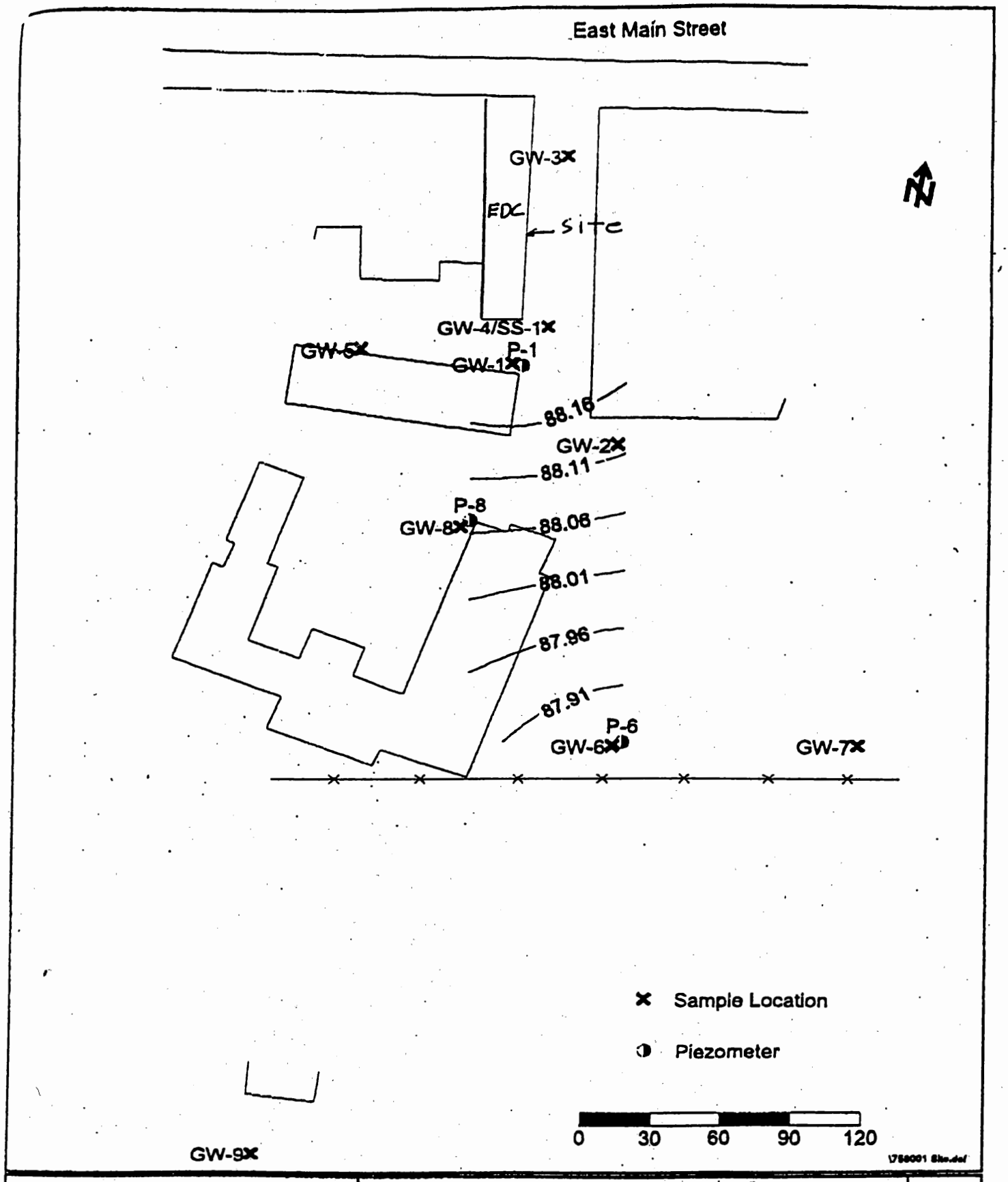
Scale 1:24,000

Figure 2



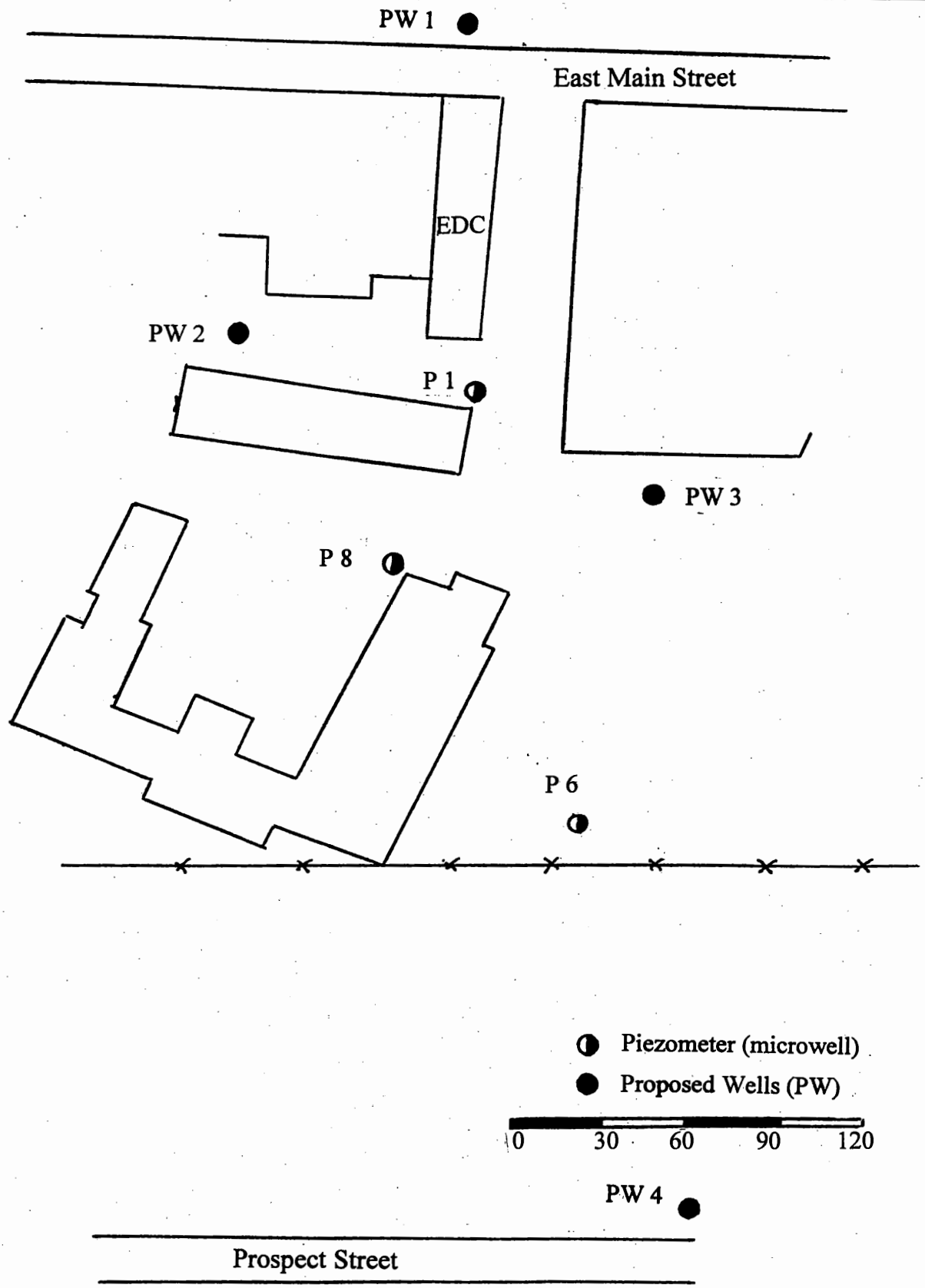
New York State Department of Environmental Conservation	Site #152157 July 1998 Geoprobe Sampling Results

Figure 3



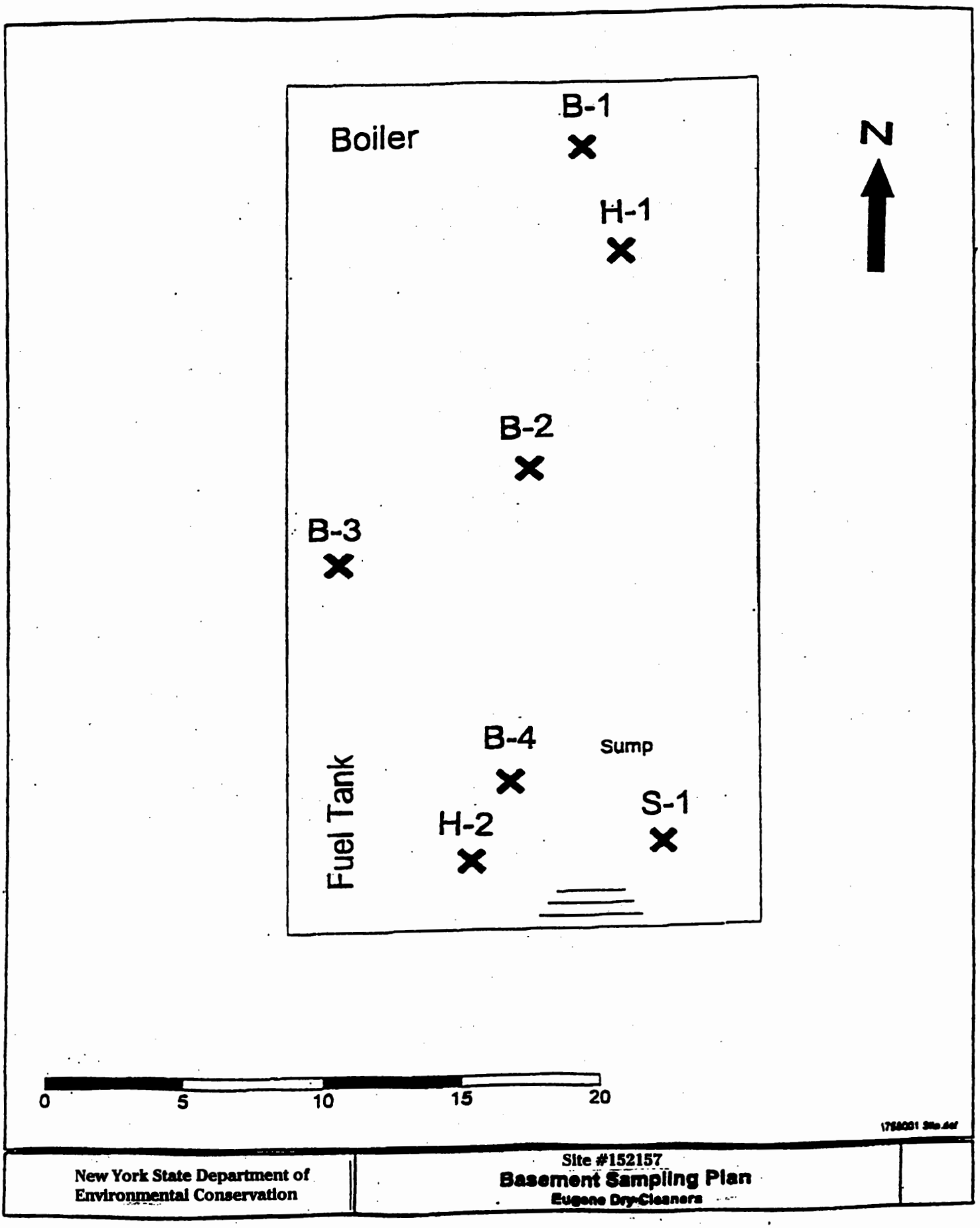
New York State Department of Environmental Conservation	Site #152157 Groundwater contour Map Eugene Dry Cleaners	

Figure 4



New York State Department of Environmental Conservation	Site # 152157 Groundwater Monitoring Well Locations Eugene Dry Cleaners	

Figure 5



New York State Department of Environmental Conservation	Site #152157 **Basement Sampling Plan** Eugene Dry Cleaners	

Table 1
Nature and Extent of Contamination
(Samples retrieved July 1998)

MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppb)	FREQUENCY of EXCEEDING SCGs	SCG (ppb)
Groundwater	Volatile Organic Compounds (VOCs)	Perchloroethylene	ND to 43	4 of 23	5
		1,2 Dichloroethene	ND to 151	13 of 23	5
		Trichloroethylene	ND to 34	2 of 23	5
		Vinyl Chloride	ND to 8	2 of 23	2
		Benzene	ND to 1	1 of 23	1
Soils	Volatile Organic Compounds (VOCs)	Perchloroethylene	ND to 19,200,000	3 of 18	1400
		Ethylbenzene	ND to 5144	3 of 18	550
		Xylene	ND to 26151	4 of 18	1200
		Acetone	ND to 2204	3 of 18	200
		2 Butanone	ND to 5762	3 of 18	300
		Methylene Chloride	ND to 116	1 of 18	100
		1,2 Dichloroethene	ND to 7570	1 of 18	800

TABLE 2

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

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Eugene's Dry Cleaners
Proposed Remedial Action Plan
Babylon (V), Suffolk County
Site No.152157

The Proposed Remedial Action Plan (PRAP) for the Eugene's Dry Cleaners, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on June 14, 2000. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated soil and sediment at the Eugene's Dry Cleaners. The preferred remedy was: no further remedial action with continued groundwater monitoring.

The release of the PRAP was announced via a notice to the mailing list, informing the public of the PRAP's availability.

A public meeting was held on July 20, 2000 which included a presentation of the Focused Remedial Investigation (RI) as well as a explanation of the remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site.
The public comment period for the PRAP ended on July 27, 2000.

This Responsiveness Summary responds to all questions and comments raised at the July 20, 2000 public meeting.

The following are the comments received at the public meeting, with the NYSDEC's responses:

Comment 1: Will smelling PCE fumes over a long period of time affect ones health?

Response 1: An association exists between people exposed to high levels of PCE in workplace air and certain forms of cancer, although the association does not prove that the cancers were caused by PCE. PCE causes cancer in laboratory animals exposed to high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in people who are exposed to lower levels over long periods of time. People exposed to high levels of PCE in air show nervous system effects and slight changes to their liver and kidneys. Exposure to high levels of PCE has caused liver and kidney damage in laboratory animals and has changed their behavior.

If you would like to discuss the possible health effects of exposure to PCE further, call the NYSDOH at 1-800-458-1158.

Comment 2: Are there standards now for dry cleaners who use PCE?

Response 2: Yes, there are now more stringent air emission standards for dry cleaners. The New York State Department of Conservation enacted new dry cleaner regulations in April 1997 under Part 232 titled Perchloroethylene Dry Cleaning Facilities. The provisions in Part 232 include requirements for both co-located (mixed-use and residential) and stand-alone facilities in terms of equipment use and process controls to reduce fugitive emissions.

In conjunction with these efforts, NYSDOH uses its guideline value of 100 ug/m3 when evaluating concentrations of PCE in indoor air. The guideline is not a line between air levels that cause health effects and those that do not. The health effects of PCE depend on the level and duration of exposure. NYSDOH is particularly concerned about residential exposure where individuals may be exposed for many hours per day on a prolonged basis. For residential scenarios, NYSDOH also compares air testing results to levels typically found in indoor air to evaluate whether the levels are above background ranges.

Comment 3: Are there any soil samples from the adjacent store?

Response 3: No, based upon sampling results from beneath the floor at EDC there was only one point (the EDC basement sump) which indicated high levels of PCE contamination. Soils several feet away from the sump (in the direction of the adjacent store) were well below NYSDEC's soil cleanup objective for PCE. The contractor who implemented the IRM at EDC effectively removed all the highly concentrated PCE contamination from the EDC basement sump. The walls and floor of the basement were power washed. Contaminated water and soil were washed into the sump along with contaminated water and soil already in the sump. All of this material was subsequently vacuumed out.

Subsequent groundwater sampling indicated that the sump clean out was successful in removing PCE contamination to groundwater standards, although 1,2 DCE, a breakdown product of PCE, is still slightly above groundwater standards.

Comment 4: How far did the PCE contamination travel in the groundwater?

Response 4: Geoprobe groundwater monitoring results in the area south of the site indicated that PCE contaminated groundwater did not extend beyond the south end of the Village of Babylon parking lot (approximately 200 feet from the dry cleaner source area).

Comment 5: Have there been any studies of persons working in dry cleaning establishments?

Response 5: Yes. Various organizations have studied the health effects of PCE on people working in dry cleaning establishments. Please call the NYSDOH at 1-800-458-1158 for the reference information of papers discussing these studies.

The NYSDOH is not conducting any studies on the health of dry cleaning workers. However, the NYSDOH has begun a study to determine if people living in apartments above dry cleaning shops are exposed to high levels of PCE, and if so, whether they are showing any neurological effects from any exposure.

Comment 6: Has PCE contamination been cleaned up?

Response 6: The sump cleanout IRM removed most of the contaminated water and soil that was technically feasible. In the future, NYSDEC plans to monitor the groundwater in the vicinity of the site to ensure that natural attenuation is taking place and that groundwater standards are achieved.

Comment 7: What is the status of current dry cleaning operations?

Response 7: A new dry cleaner (Great Impressions) was refurbishing the EDC site to begin another dry cleaning operation when they changed their mind. A finger nail salon now has plans to open in this store.

Comment 8: How is spent PCE (used) transported? Are there placards (signs) which indicate this chemical is being transferred. What would be the response if this chemical was spilled during transport?

Response 8: A spent PCE recycling firm now picks up spent PCE from most modern dry cleaning operations. USDOT placards are required to be placed on the outside of the truck which is transporting spent PCE, as well as on the containers of PCE. USDOT 372.3(d) standards would be applicable to transporting spent PCE.

If spent PCE was spilled during transport, the transporter would have to report that spill using the NYSDEC Spill Hotline and would have to hire a cleanup firm which is qualified to do the cleanup of the spill. NYSDEC Spill staff would oversee the cleanup of such a spill.

APPENDIX B

Administrative Record

Administrative Record

1. Fact Sheet for Eugene's Dry Cleaners Site, dated June 2000.

2. Addendum No. 1 to the Focused Remedial Investigation (FRI) for the Eugene's Dry Cleaners Site, dated May 2000.

3. Eugene's Dry Cleaners Proposed Remedial Action Plan (PRAP) dated June 2000.

4. Focused Remedial Investigation for Eugene's Dry Cleaners Site, dated February 2000.

5. Health and Safety Plan for Eugene's Dry Cleaners Site, dated June 1998.

6. Citizen Participation Plan for Eugene's Dry Cleaners Site, dated December 1999.

7. RI/FS Work Plan for Eugene's Dry Cleaners Site, dated June 1998.