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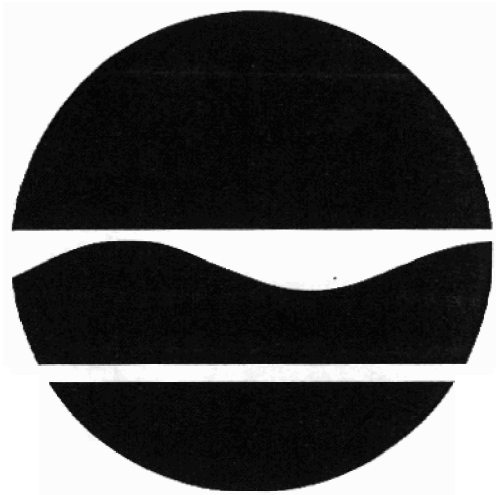
EUGENES DRY CLEANERS

Babylon (V),Suffolk County, New York
Site No. 1-52-157

Final

PROPOSED REMEDIAL ACTION PLAN

June 2000



Prepared by:

Division of Environmental Remediation
New York State Department of Environmental Conservation

PROPOSED REMEDIAL ACTION PLAN

EUGENES DRY CLEANERS
Babylon (V), Suffolk County, New York
Site No. 152157
June 2000

SECTION 1: SUMMARY OF REMEDIAL ACTIVITIES

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) is proposing a remedy for the Eugenes Dry Cleaners (EDC) Site, a Class 2 inactive hazardous waste disposal site (which means the site presents a significant threat to public health or the environment and action is required). As more fully described in Sections 3 and 4 of this document, the operation of the EDC facility resulted in the disposal of a number of hazardous wastes, including tetrachloroethylene (also known as perchloroethylene or PCE) at the site.

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

- A significant threat to public 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 RI. The IRM undertaken at this site was:

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, the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment, therefore 'No Further Action' is proposed as the remedy for this site.

In addition, the Department proposes to 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.

This Proposed Remedial Action Plan (PRAP) identifies the preferred remedy and discusses the reasons for this preference. The NYSDEC will select a final remedy for the site only after careful consideration of all comments received during the public comment period.

The NYSDEC has issued this PRAP as a component of the citizen participation plan developed pursuant to the New York State Environmental Conservation Law (ECL) and 6 NYCRR Part 375. This document is a summary of the information that can be found in greater detail in the Focused Remedial Investigation (RI) available at the document repositories.

To better understand the site and the investigations conducted, the public is encouraged to review the project documents at the following repositories:

NYSDEC Region 1 Office
SUNY Campus, Loop Road - Building 40
Stony Brook, NY 117900-2356

Babylon Public Library
24 South Carll Avenue
Babylon, NY 11702

NYSDEC Central Office
50 Wolf Road
Albany, NY 12233-7010
Attn: Joseph I. Peck

THE NYSDEC seeks input from the community on all PRAPs. A public comment period has been set from **June 27 to July 27, 2000** to provide an opportunity for public participation in the remedy selection process for this site. A public meeting is scheduled for **July 20, 2000** at the **Babylon Public Library** beginning at **7:00 PM.**

At the meeting, the results of the investigation and IRM at the site will be presented along with a discussion of the proposed long term monitoring of the site. After the presentation, a question and answer period will be held, during which you can submit verbal or written comments on the PRAP.

The NYSDEC may modify the preferred alternative or select another based on new information or public comments. Therefore, the public is encouraged to review and comment on all of the alternatives identified here.

Comments will be summarized and responses provided in the Responsiveness Summary section of the Record of Decision (ROD). The ROD is the NYSDEC's final selection of the remedy for this site. Written comments may be sent to **Joseph I. Peck, Project Manager** at the above address through July 27, 2000.

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). 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 this dry cleaning business. The dry cleaner is currently not in operation. It is believed that at some time during the past dry cleaning operations, PCE was spilled or leaked into the basement sump.

3.2: Remedial History

The Suffolk County Depatment 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. Their analytical results indicated that PCE was present in the basement sump at a concentration of 12,000 ppm. The first of three fuel oil spills was reported in 1993. Fuel oil cleanup was performed at the time that the spills occurred.

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 by the presence of PCE, the NYSDEC has recently conducted a RI at the EDC Site.

4.1: Summary of the Remedial Investigation

The purpose of the 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 "Eugenes 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 borings in the basement of the building
- Sampling of groundwater from monitoring wells installed using a Geoprobe method and directly, using a Geoprobe method, with subsequent analysis in a contracted laboratory

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 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 the SCGs and potential public health and environmental exposure routes, certain areas and media of 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 Pleistoncene 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 very 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 precipation 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, 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 minute, 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. The main categories of contaminants which exceed their SCGs are volatile organic compounds (VOCs). The VOC contaminant 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 GW1 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 through an IRM in the basement of the EDC facility.

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 were 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 Figure 4). 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.

Since the sump cleanout was completed, the source of groundwater contamination has been removed and 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 into contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. A completed exposure pathway

may be based on past, present, or future events.

There are no completed exposure pathways which are known to exist at the site with the completion of the IRM.

4.4 Summary of Environmental Exposure Pathways:

This section summarizes the types of environmental exposures and ecological risks which may be presented by 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 who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The Potential Responsible Parties (PRP) for the site, documented to date, include:

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

The PRPs declined to implement the 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. If an agreement cannot be reached with the PRPs, the NYSDEC will 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 THE REMEDIAL GOALS AND PROPOSED 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 Interim Remedial measure completed at the site which is described in Section 4.2 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 volatile organic compounds (VOCs) concentration in groundwater, and the IRM that has been performed at the site, the NYSDEC is proposing no further action with monitoring as the preferred remedial alternative for the site.

The remaining low VOC concentrations in the groundwater in the immediate vicinity of the site does not pose a threat to public health or the environment. There are no known drinking water supply wells in this area due to the proximity of saline waters and the VOC

concentrations in groundwater are low enought 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 would 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. The additional monitoring wells being considered as part of the long term monitoring of this site are 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.

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

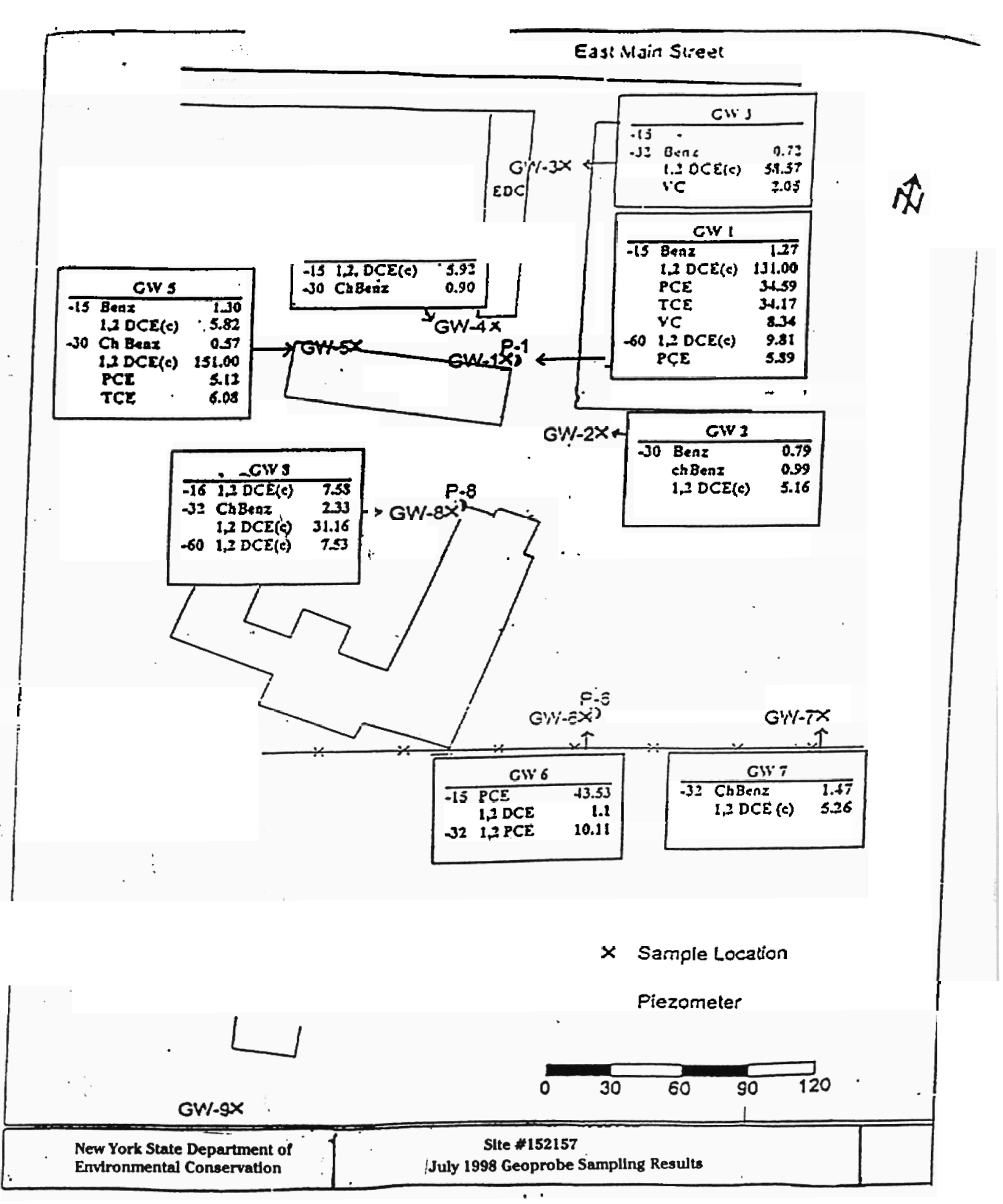
MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppb)	FREQUENCY of EXCEEDING SCGs	SCG (ppb)
Groundwater	Volatile Organic Compounds (VOCs)	Perchloroethylene	ND to 43	4 of 23	5
		1,2 Dichloroethene	ND to 151	13 of 23	5
		Trichloroethylene	ND to 34	2 of 23	5
		Vinyl Chloride	ND to 8	2 of 23	2
		Benzene	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

FIGURE 1

Site Location Map

152157 Eugene's Dry Cleaners

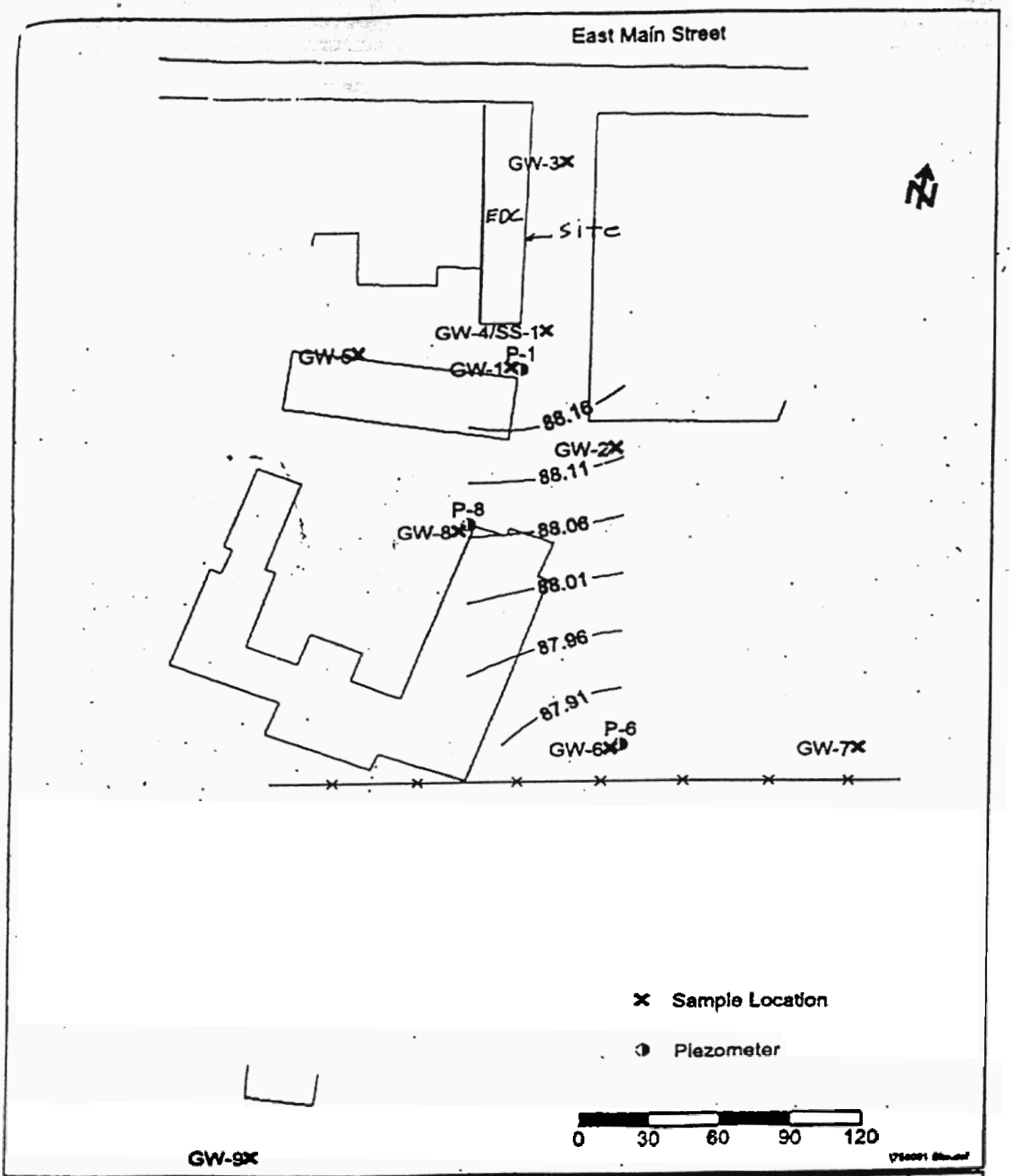
NYSDOT Planimetric Quadrangle(s):



New York State Department of Environmental Conservation

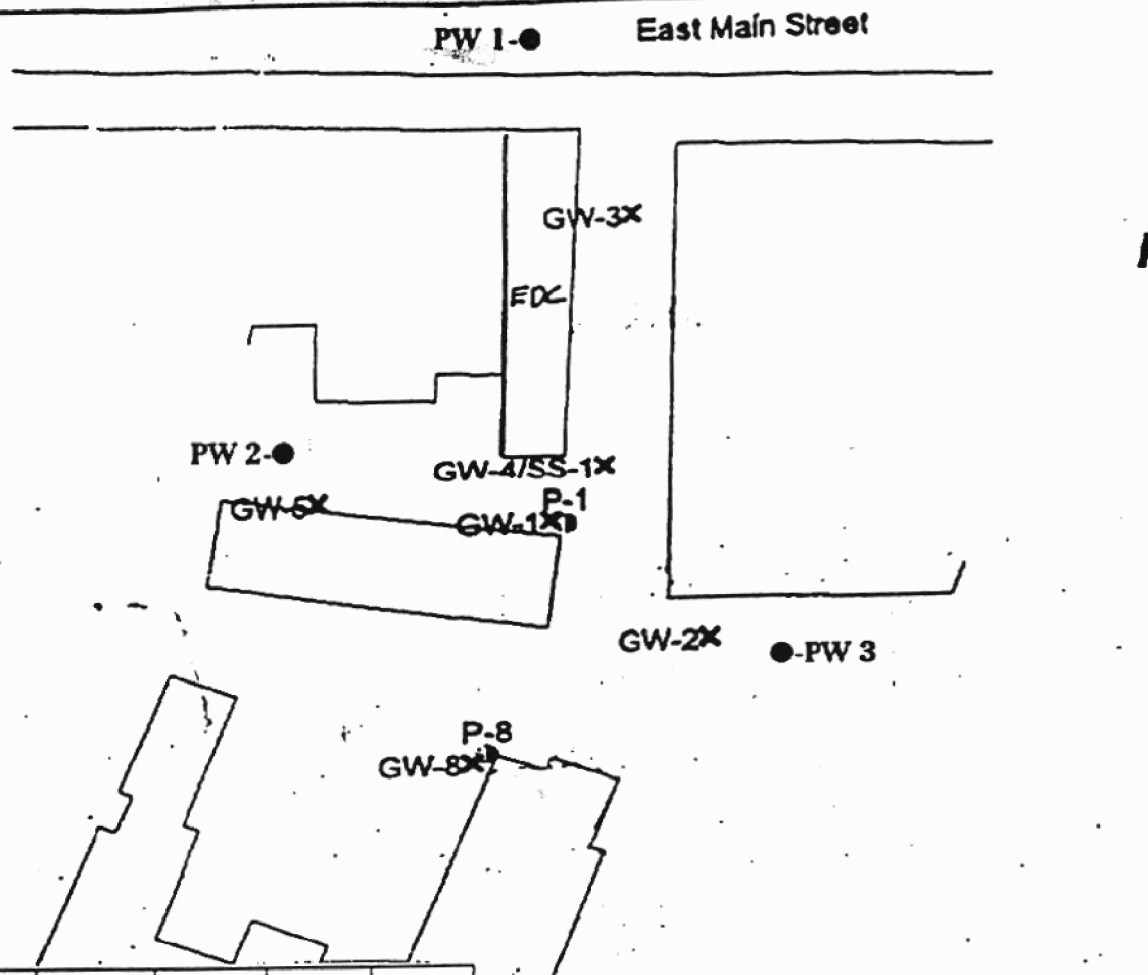
Site #152157
July 1998 Geoprobe Sampling Results

Figure 3



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

Figure 4



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

× Sample Location

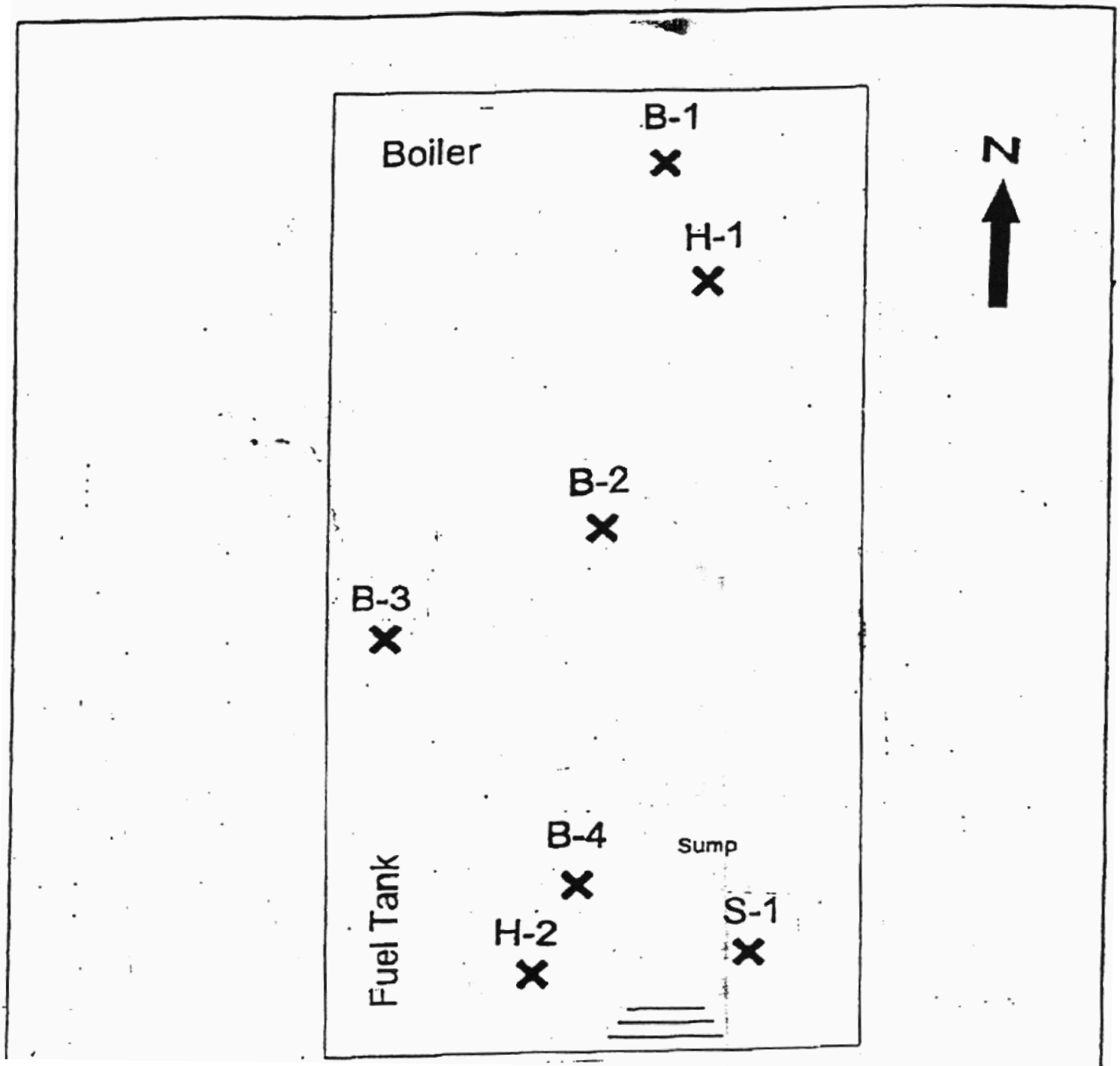
◑ Piezometer

● Proposed Wells

0 30 60 90 120

New York State Department of Environmental Conservation	Site #152157 Groundwater Monitoring Well Results 7/98-5/00 Eugene Dry Cleaners	

Figure 5



New York State Department of Environmental Conservation

Site #152157
Basement Sampling Plan
Eugene Dry Cleaners