3-14-092

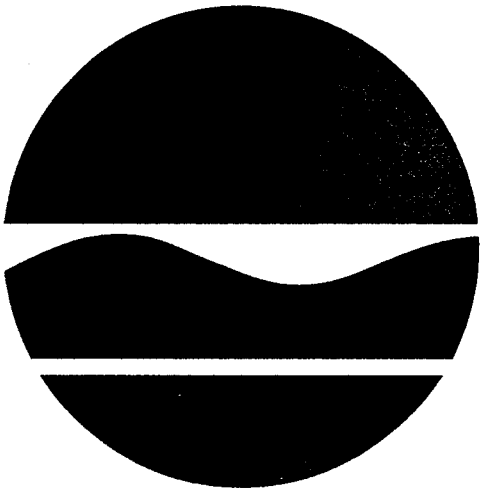
Former Cavalier Gage and Electronics

Salt Point, Dutchess County, New York

Site No: 3-14-092

PROPOSED REMEDIAL ACTION PLAN

March 1998



Prepared by:

Division of Environmental Remediation
New York State Department of Environmental Conservation

PROPOSED REMEDIAL ACTION PLAN

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Site No. 3-14-092
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SECTION 1: PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) is proposing no further action for the Cavalier Gage and Electronics Site. The findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment.

This Proposed Remedial Action Plan (PRAP) identifies the preferred remedy of no further action and discusses the rationale for this preference. The NYSDEC will select a final remedy for the site only after careful consideration of all comments submitted 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 summarizes the information that can be found in greater detail in the Remedial Investigation (RI) and Feasibility Study (FS) reports available at the document repositories.

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

To better understand the site, and the alternatives evaluated, the public is encouraged to review the project documents which are available at the following repositories:

Pleasant Valley Free Library
Main Street - Route 44
Pleasant Valley, NY 12569
Monday & Wednesday, 1:00 pm - 9:00 pm
Tuesday & Thursday, 10:00 am - 9:00 pm
Friday, 1:00 pm - 6:00 pm
Saturday, 10:00 am - 1:00 pm

NYSDEC Region 3
21 South Putt Corners Road
New Paltz, NY 12561
Monday - Friday, 9:00 am - 4:30 pm

Written comments on the PRAP can be submitted to Mr. Keith Browne at the above address.

DATES TO REMEMBER:
March 9, 1998 through April 7, 1998
Public comment period on RI/FS Report, PRAP, and preferred alternative.

On March 16, 1998, at 7:00 pm - 9:00 pm, the Public meeting at the Pleasant Valley Fire House Company No. 1, Main Street - Route 44.

SECTION 2: SITE LOCATION AND DESCRIPTION

This site is located in the Village of Salt Point, in the Town of Pleasant Valley, Dutchess County, and is 23 acres in size. (Site No. 3-14-092). The site is located along Hibernia Road. The site contains two one-story buildings which were constructed as a residence and an out building. The site is about 550 ft. northeast to the closest residence. The main building is now used as a children's daycare center called the Rainbow's End Daycare Center. A separate building to its east is proposed to be used as a nursery school. A topographic map and site map are attached (Figures 1 and 2)

SECTION 3: SITE HISTORY

3.1 Operational/Disposal History

- 1950's - 1967: Residence
- 1967 - 1985: Operated by Cavalier Gage and Electronics, small electronics parts assembled, chlorinated solvents used.
- Mid - 1970's: Operated by Micri Corporation similar operation of the prior company.
- 1978 - 1985: Operated again by Cavalier Gage and Electronics. No TCA purchased (TCA principal groundwater contaminant).
- 1985 - 1988: Site not occupied.
- 1988 - Present: Occupied by Rainbow's End Daycare Center.
- 1992: Dutchess County DOH detected VOCs water supply survey.
- 2/92: Drinking water treatment system installed.
- 7/92: New drinking well installed with a carbon filter.

During the period when the site was used for industrial manufacturing of electronic components, chlorinated solvents were used. The storage and disposal practices of the manufacturing operators are not clear, but chlorinated solvents used in the operation were detected in 1992, in the water supply well and the septic tanks existing in that year.

It is surmised that the former septic system contaminated the bedrock aquifer. The chlorinated solvents were disposed to that septic system and were released to the environment by the original leach field.

3.1.1 Septic Tanks Use History

A chronology of the use of septic tanks at the site as follow (Figure 4):

- The Old Septic Tank was the first tank in use. It was abandoned in 1994 during the septic system upgrade. It was sampled in 1992 and only chloroform at 2.7 ppb was detected.

- The 1987 Septic Tank is still in use and contained volatile organics when it was sampled in 1992.

- Both tanks were connected to a leach field located under the parking lot.

- The 1994 Septic Tank was built to upgrade the septic system. The effluent from the 1994 Septic Tank and 1987 Septic Tank are now discharged into a newly constructed leach field north of the Main Building. The original leach field under the parking lot has been disconnected from the new system.

3.2 Remedial History

In August 1992 the site was listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites as a class 2 site. In December 1994, the Cavalier Gage & Electronic Corp. signed an Order on Consent for an RI/FS. In March 1995, Cavalier Gage & Electronic Corp. stated that it was in financial trouble and was unable to conduct the RI/FS. The Cavalier Gage & Electronic Corp. requested a one year postponement to start the RI/FS. In 1996 Cavalier Gage & Electronic Corp. went out of business. In February 1997, the property owner signed a new RI/FS Order on Consent. The original RI/FS workplan drafted in 1995 was used.

Certain remedial measures were conducted to protect the public health, including the installation of a new water supply well and water treatment system. The supply well and its treatment system is being monitored by the Dutchess County Department of Health.

SECTION 4: CURRENT STATUS

In response to a determination that the presence of hazardous waste at the Site presents a significant threat to human health and the environment, the property owner, Dominic Cavalieri has recently completed a Remedial Investigation/Feasibility Study (RI/FS).

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 by completing a number of sequential tasks. A report entitled "Remedial Investigation and Feasibility Study" (January 1998) has been prepared describing field activities and findings of the RI in detail.

The RI included the following activities:

- Interviews with site employees and the owners of Cavalier to determine solvent use and disposal.
- Review of historical aerial photographs.
- Sampling on-site wells.
- Sampling off-site well.
- Sampling septic tanks.
- Sampling soil in areas used by children.
- Soil gas survey.
- Geoprobe borings to investigate depth to rock, depth to groundwater and to collect samples.
- Sampling air in buildings for VOCs.
- Risk Assessment

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 (SCGs). Groundwater, drinking water and surface water SCGs identified for the Former Cavalier site were based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of NYS Sanitary Code. NYSDEC TAGM 4046 soil cleanup guidelines for the protection of groundwater, background conditions, and risk-based remediation criteria were used as SCGs for soil. USEPA Guidance Document for Risk Assessment, EPA/50/189/002 dated Decemeber 1989, was used to perform a risk assessment using indoor air data.

Based upon the results of the remedial investigation in comparison to the SCGs and potential public health and environmental exposure routes, groundwater required remediation. These are summarized below.

More complete information can be found in the RI Report.

Chemical concentrations are reported in parts per billion (ppb), and parts per billion by volume (ppbv) for air samples. For comparison purposes, SCGs are given for each medium.

4.1.1 Nature of Contamination:

As described in the RI Report, many soil, groundwater, septic tank, soil vapor and indoor air samples were collected at the site to characterize the nature and extent of contamination. All of these samples were analyzed for volatile organic compounds (VOCs). The principal VOCs detected in site bedrock groundwater are 1,1,1-trichloroethane (TCA), 1,1-dichloroethane (1,1-DCA), and 1,1-dichloroethene (1,1-DCE). Other media are not significantly impacted.

4.1.2 Extent of Contamination

Table 1 summarizes the extent of contamination for the contaminants of concern in groundwater, surface soil, subsurface soil, septic tanks, soil gas and indoor air, and compares the data with the appropriate SCGs.

Groundwater

Three VOCs have been detected in site groundwater above SCGs: TCA, 1,1-DCE, 1,1-DCA. The NYS groundwater standard is 5 ppb for the three VOCs detected. There are three wells on site that are all bedrock wells. Well WSW-1 was the first water supply well for the site and was abandoned in 1992. There is no information on the construction or depth of this well. Well WSW-2 is an open borehole bedrock well with approximate depth of 500ft. Well WSW-3 is an open borehole bedrock well with approximate depth of 475 ft. The highest concentration detected on site was in WSW-2, former water supply well, at 130 ppb of TCA, 220 ppb of 1,1-DCA and 18 ppb of 1,1-DCE in 1992. These VOCs were generally detected at a concentration of 100 ppb or less in WSW-3, the current water supply well. The nearby residential well at 30 Hibernia Rd. has had no detects for VOCs since 1992. The one apparent exception took place when 0.5 ppb of TCA was detected during the sampling event in May 1997. The result, however, was due to laboratory error. Figure 2.

Surface Soil

Two common laboratory contaminants, methylene chloride and chloroform were found in one soil sample, each at concentrations well below SCGs.

Subsurface Soil

Subsurface soil samples were taken from ten locations within the boundaries of the parking lot, which was the location of the old septic tank and original leach field. Three VOCs (TCA, TCE, PCE) were detected in subsurface soil samples collected in the parking lot, Geoprobe concentrations were all at least 100 times lower than SCGs. A Geoprobe is a sampling tool used to collect soil and groundwater samples. The location of the Geoprobe samples are shown in Figure 3.

Indoor Air

Indoor air samples were taken from three locations in the main building: the infant room, the front room, and the basement. The basement (which is not occupied) air sample contained TCA at a concentration of 9.6 ppbv,

which was determined to pose no unacceptable risk.

Septic Tanks

In 1994, the site's septic system was upgraded and the old septic tank and original leach field were abandoned. The old septic tank was pumped out and disconnected from the septic system. The 1987 Septic Tank and Old Septic Tank historically contained low concentrations of VOCs principally 1,2,4-trimethylbenzene (1,2,4-TMB) and toluene. These chemicals are associated with septic tank cleaners. The last sampling, conducted in 1992, detected 1,2,4-TMB at 89 ppb and toluene at 49 ppb in the supernate of the 1987 Septic Tank. The system had been pumped on: Decemeber 1992, April 1994, and December 1997. VOCs have not been used on site for approximately 10 years. The 1994 Septic Tank has not been sampled because VOCs have not been used since its construction. Figure 4.

Soil Gas

The soil gas survey included the area of the original leach field under the parking lot. There were no soil gas detections. See Figure 5 for the soil gas survey map.

4.2 Summary of Human Exposure Pathway

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the health risks can be found in Section 4 of the RI Report.

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. These elements of an exposure pathway may be based on past, present, or future events.

As discussed above in section 4.1.1, the only significantly impacted media is bedrock groundwater. This groundwater lies at a depth of at least 10 feet beneath the developed portion of the site. Well WSW-3 is the water supply for the site. The site water supply system is equipped with a granulated activated carbon (GAC) treatment system which is operated under Dutchess County Department of Health approval. Well WSW-3 was sampled in February 1998 with total VOCs less than 5 ppb. It is sampled and maintained regularly. During indoor air sampling a detectable level of TCA was found in the basement of the building. The basement is not occupied, and therefore the occupants of the building are not exposed to the TCA.

The closest resident is 550 ft. from the site and the resident's water supply well has been monitored since 1992. No VOC contamination has been detected in this well above the NYS drinking water standard.

Therefore, there are no complete exposure pathways at this site.

4.3 Summary of Environmental Exposure Pathways:

This section summarizes the types of environmental exposures which may be presented by the site. Based on the very tight nature of the bedrock, the presence of transformation products indicating that natural attenuation is occurring, Wappinger Creek is

approximately 600 ft. from the site, and the size of Wappinger Creek, it is surmised that no impact is occurring to the environment from bedrock groundwater.

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 NYSDEC and Cavalier Gage & Electronic Corp. entered in Consent Order, Index # D3-0001-93-04 on December 1994. Cavalier Gage & Electronic Corp. expressed financial trouble in 1995 and went out of business in 1996.

The NYSDEC and Dominic Cavalieri entered in a Consent Order, Index # W3-0774-96-08 on February 7, 1997. The Order obligates the responsible parties to implement a RI/FS remedial program. Upon issuance of the Record of Decision, the NYSDEC will approach the PRPs to implement monitoring, and operation and maintenance program under an Order of Consent.

SECTION 6: SUMMARY OF THE 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 NYSDEC believes that the point of use treatment with granulated activated carbon, and on-site and off-site groundwater monitoring, would accomplish this objective provided that it continues to be operated and maintained in a manner consistent with the design.

Based upon the results of the RI, the NYSDEC is proposing no further action with continued groundwater monitoring, operation and maintenance as the preferred remedial alternative for the site. The PRP will submit an operation and maintenance plan for the supply water treatment system for approval by the NYSDEC and NYSDOH. The old supply well WSW-2 will be used as a monitoring well and will be sampled quarterly in compliance with year by year goals that will be established by the NYSDEC. If the concentration substantially exceeds the goals, the NYSDEC would determine the appropriate action at the site.

The supply well WSW-3 would be sampled in accordance with Sub-Part 5 of NYS Sanitary Code.

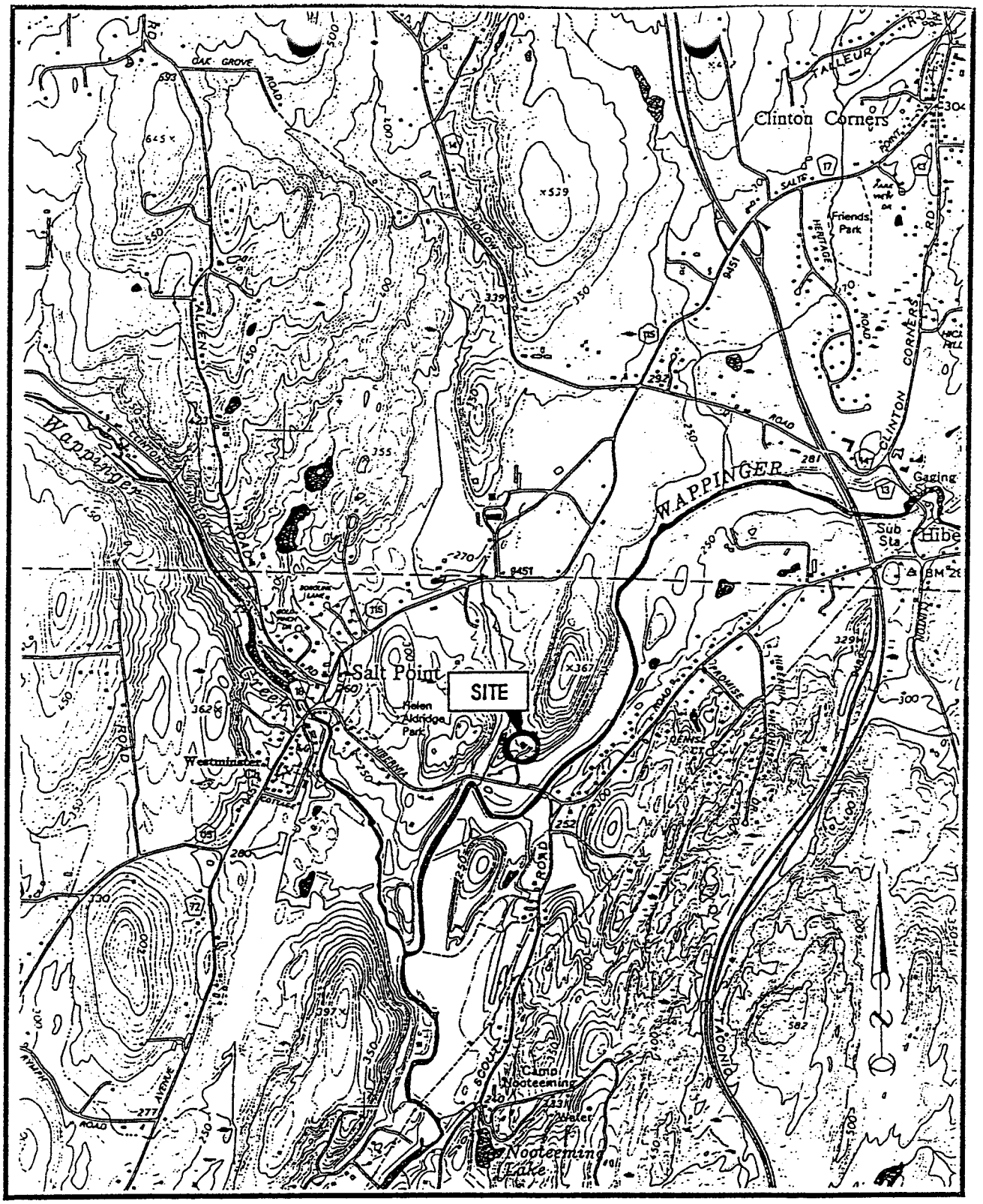
Upon implementation of the approved monitoring and operation and maintenance plans the NYSDEC will reclass the site from a class 2 to a class 4. Class 4 sites require continued management and monitoring until SCGs are met.

Table 1
Nature and Extent of Contamination

MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppb)	FREQUENCY of DETECTION	SCG (ppb)
Groundwater	Volatile Organic Compounds (VOCs)	1,1,1-TCA/200	ND-130	40 of 65	5
		1,1-DCA/200	ND-220	26 of 65	5
		1,1-DCE/400	ND-18	19 of 65	5
		1,2-DCA/200	ND-0.76	2 of 65	5
		Vinyl Chloride/100	ND-0.90	1 of 65	2
Septic Tank Supernate {1}	Volatile Organic Compounds (VOCs)	1,1,1-TCA	ND-5	1 of 3	
		1,1-DCA	ND-24	1 of 3	
		Toluene	ND-340	2 of 3	
		1,2,4-TMB*	ND-54	2 of 3	
		1,3,5-TMB*	ND-4	1 of 3	
		Chloroform	ND-2.7	1 of 3	
Surface Soil	Volatile Organic Compounds (VOCs)	Methylene Chloride	ND-2.1	1 of 6	100
		Chloroform	ND 8.8	1 of 6	300
Soil Gas	Volatile Organic Compounds (VOCs)	All	All-ND	None of 24	
Subsurface Soil	Volatile Organic Compounds (VOCs)	1,1,1-TCA	0.5 - 1.0	10 of 10	800
		TCE	ND-0.6	3 of 10	700
		PCE	ND-0.6	1 of 10	1,400
Indoor Air	Volatile Organic Compounds (VOCs)	1,1,1-TCA	ND-9.6**	1 of 3	100

* Trimethylbenzene ** ppbv

{1} Sampled twice in 1992



Scale: 1 inch = 2,000 feet

Figure 1

Site Location Map
A Portion of the U.S.G.S.
7 1/2 Minute Salt Point Quadrangle

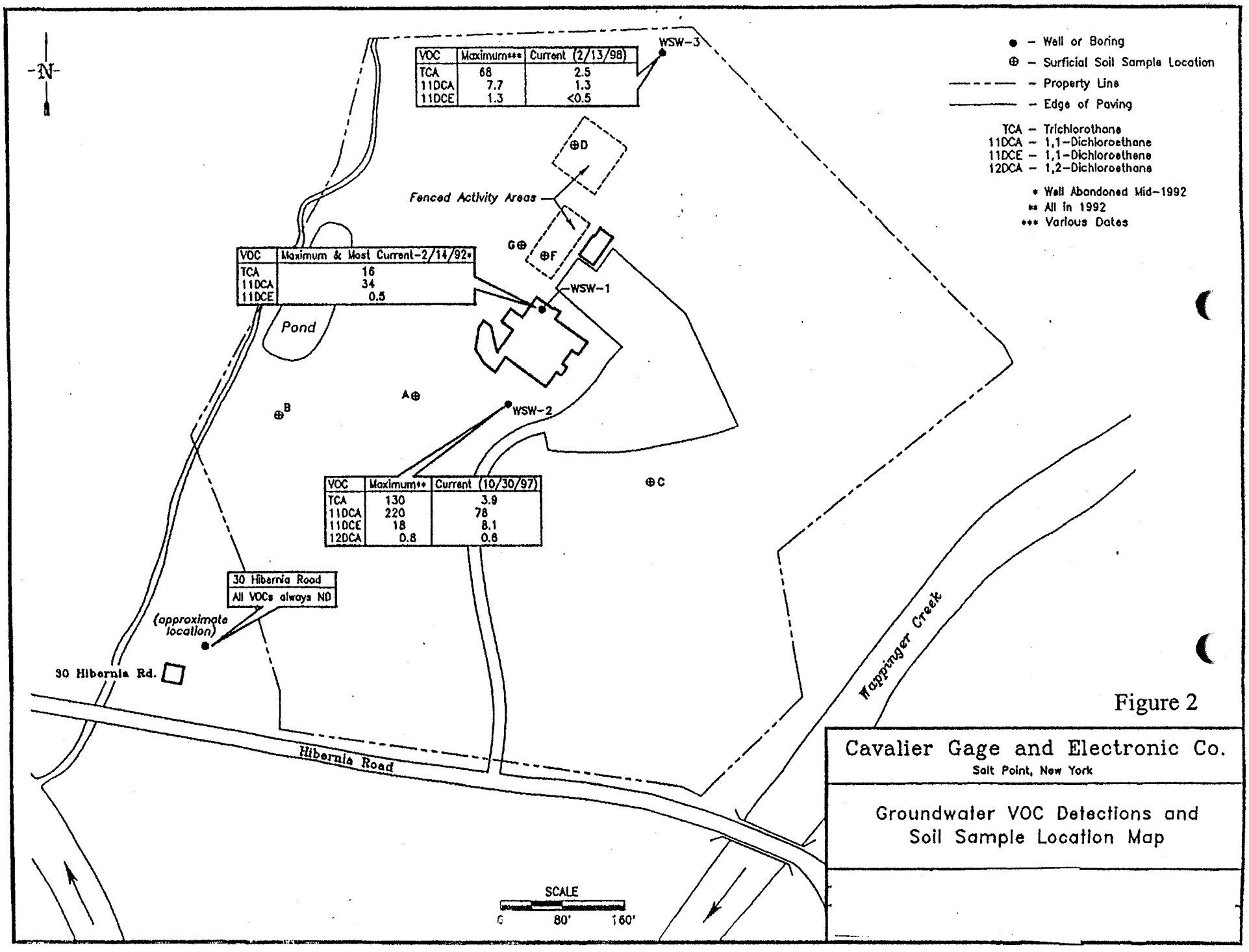


Figure 2

Cavalier Gage and Electronic Co.
Salt Point, New York

Groundwater VOC Detections and Soil Sample Location Map

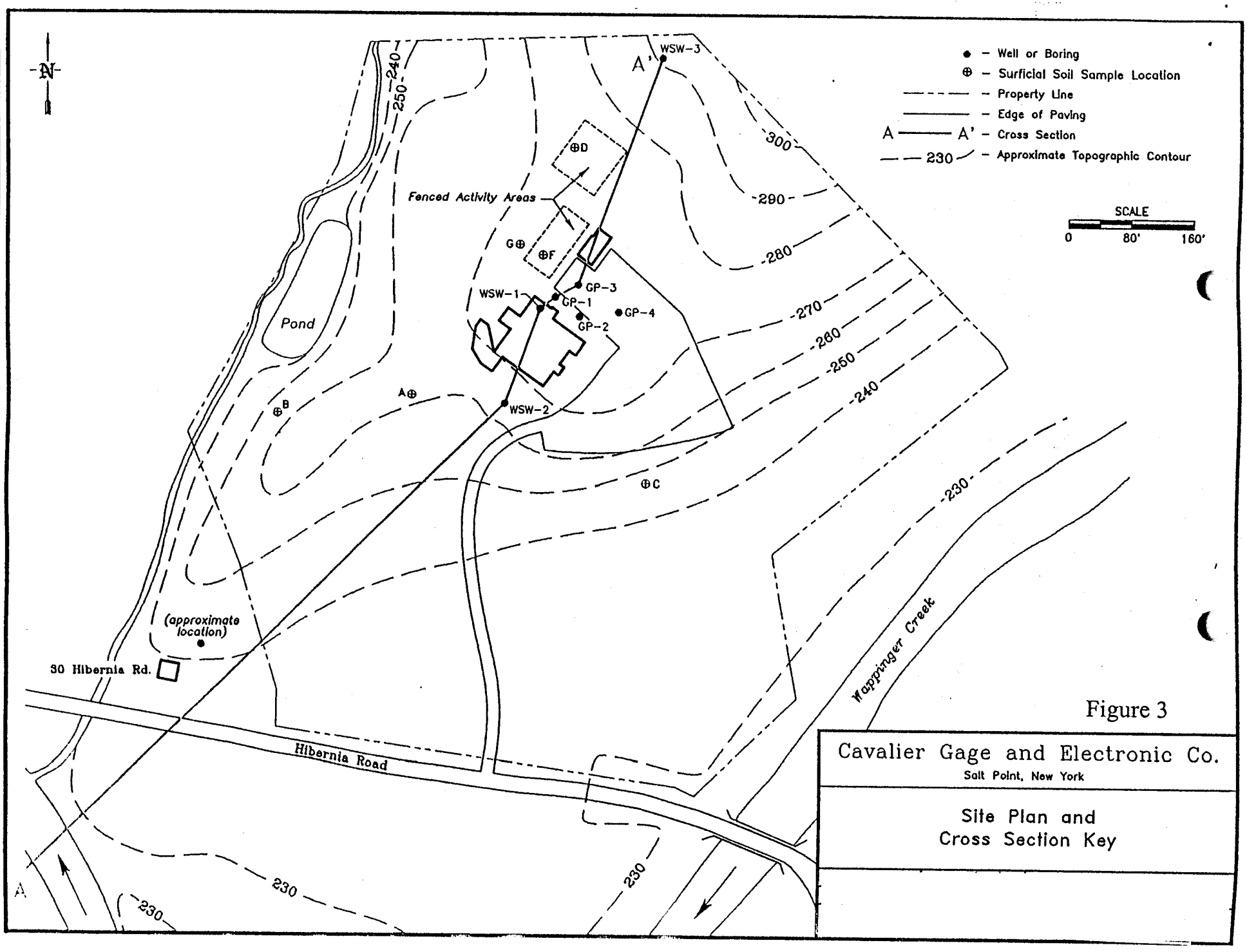


Figure 3

Cavalier Gage and Electronic Co.
Salt Point, New York

Site Plan and
Cross Section Key

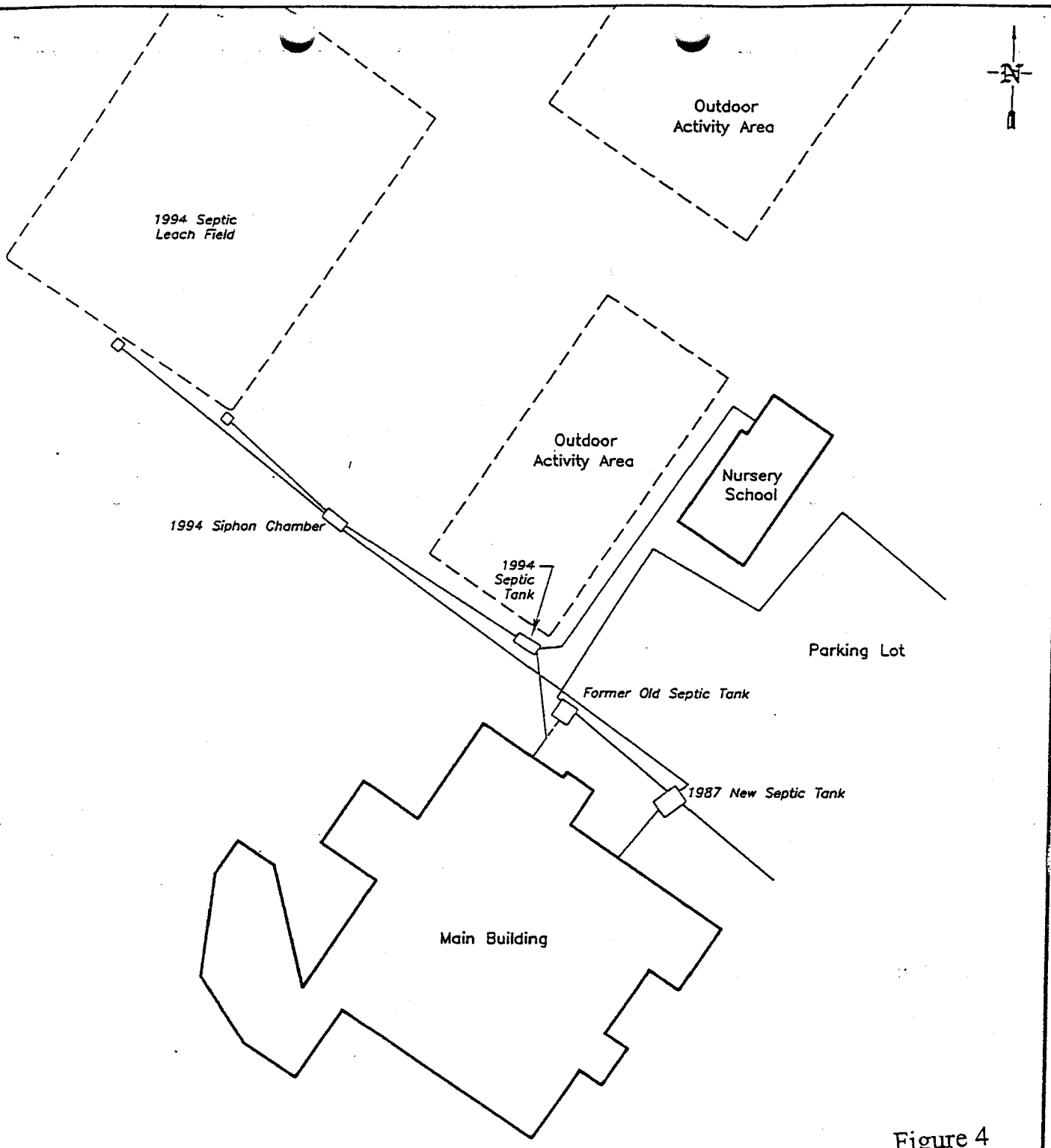


Figure 4

Cavalier Gage and Electronic Co.
Salt Point, New York

Site Plan Detail

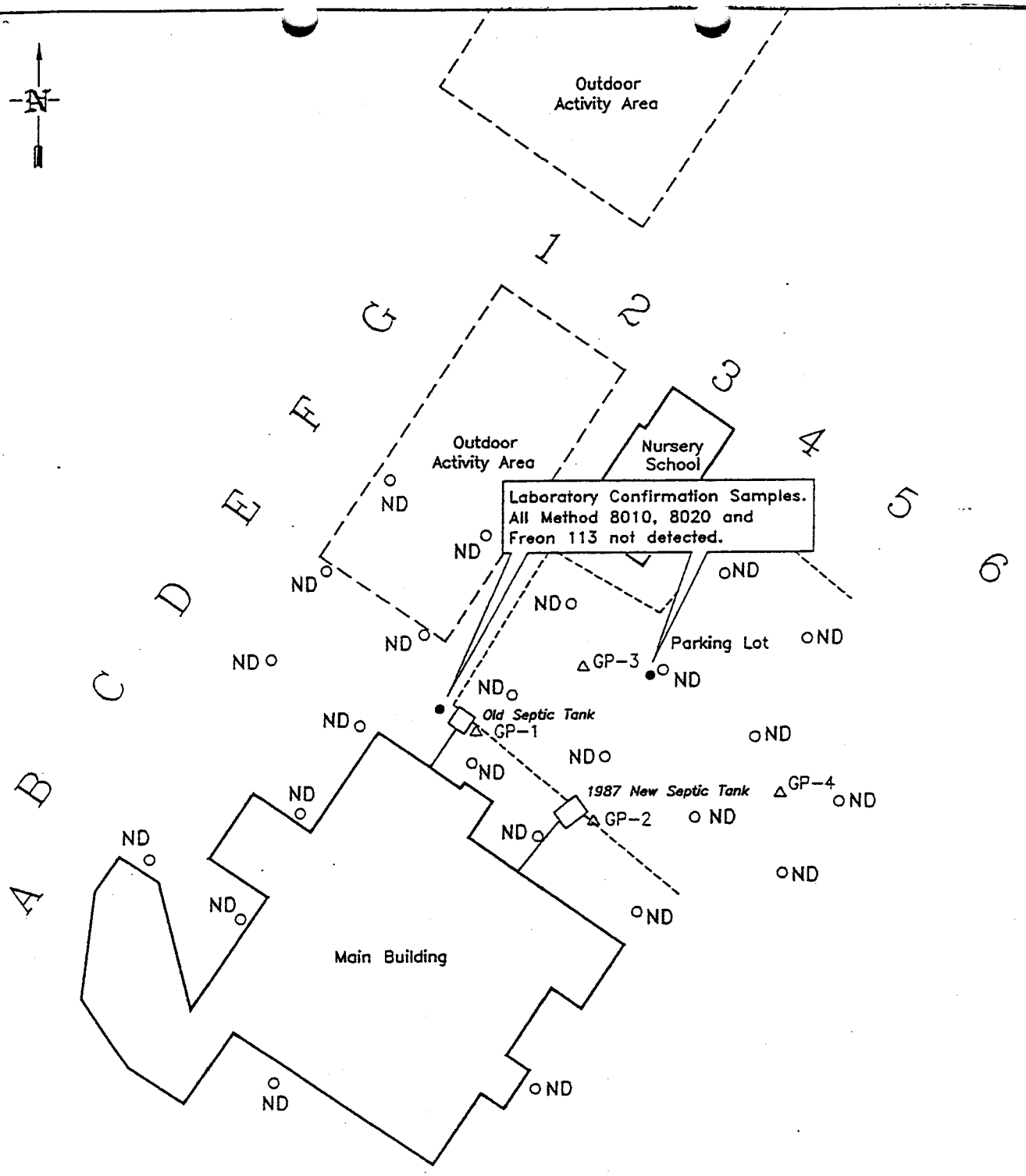


Figure 5

Cavalier Gage and Electronic Co. Salt Point, New York	
Soil Gas Survey Results	

○ – Field PID Soil Gas Sampling Location

△ – Geoprobe Location

ND – Not Detected in PID Survey

● – Laboratory Soil Gas Sample Location

Approximate Scale
0 20' 40'