Department of Environmental Conservation

Division of Environmental Remediation

RECORD OF DECISION

Eagle Comptronics Site

Clay (T), Onondaga County

Site Number 7-34-058

March 1998

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

DECLARATION STATEMENT - RECORD OF DECISION

Eagle Comtronics Inactive Hazardous Waste Site
Clay (T), Onondaga County, New York
Site No. 7-34-058

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedial action for the Eagle Comtronics inactive hazardous waste disposal site which was chosen in accordance with the New York State Environmental Conservation Law (ECL). 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 upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Eagle Comtronics Inactive Hazardous Waste Site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A bibliography 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implementing the interim response action identified in this ROD, therefore the site, with continued monitoring, should no longer represent a current or potential threat to public health and the environment.

Description of Selected Remedy

Based upon the results of the site assessments for the Eagle Comtronics site and results of the interim remedial measure the NYSDEC has selected no further action with groundwater monitoring. The components of the remedy are as follows:

- One sentinel well will be installed on Eagle Comtronics property.
- Four residential drinking water wells and the sentinel well will be monitored semi-annually for volatile organic compounds. If the contaminants of concern are detected in drinking water wells or sentinel wells, further action will be required.

- On site monitoring wells (identified as MW-2, MW-3, MW-3D, MW-5, MW-5D, MW-6, and MW-7 on Drawing 2 of the Record of Decision) will be monitored annually for volatile organic compounds.

- The site will be reclassified to Class 4 on the New York State List of Inactive Hazardous Waste Sites, indicating that the site is properly closed, but requires continued management.

- If concentrations in all on site monitoring wells drop to below drinking water standards for two consecutive sampling events, the monitoring program (on site and off site) will be discontinued and the site will be considered for removal from the New York State Registry of Inactive Hazardous Waste Sites.

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.

3/23/98
Date

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

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SECTION 1: SITE LOCATION AND DESCRIPTION

The Eagle Comtronics Site (Site No. 7-34-058) is located on Waterhouse Road in the Town of Clay, Onondaga County. Liverpool, which serves as a bedroom community for the City of Syracuse, is located approximately one mile to the southwest of the site. Onondaga Lake is located four miles southwest of the site, and the City of Syracuse is located 6 miles south of the site. The property is 18 acres in size, with half of the property being actively used by Eagle Comtronics. The site is located in a rural area used for both agricultural and residential purposes.

The site is located 1,200 feet up gradient of Clay Marsh, a New York State Wildlife Management Area and a Class I freshwater wetland. The topography of the site and surrounding area is very flat, sloping gradually to the northeast, and losing approximately 20 feet in elevation over the 1,200 feet to Clay Marsh. Figure 1 shows the site location.

The site consists of an office building, engineering facility, and parking facilities. The office building is 24,000 square feet and the engineering building is 12,000 square feet. Eagle Comtronics manufactures electronic components for the cable television industry.

SECTION 2: SITE HISTORY

2.1: Operational/Disposal History

The property now occupied by Eagle Comtronics was originally developed in 1978. The engineering facility was initially constructed for the purpose of servicing trucks owned by Niagara Mohawk. Prior to completion of the building, Niagara Mohawk decided to build its own facility at a different location. Eagle Comtronics purchased the property, including the unfinished engineering facility, in 1981. Eagle then built the office building and completed the engineering facility (which was initially used for light assembly by Eagle).

Eagle Comtronics operates this facility as a product development and management facility for the production of components for the cable television industry. Product assembly, which occurred in the engineering facility prior to 1997, now takes place at an Eagle facility located near the intersection of Henry Clay Boulevard and Buckley Road. Eagle used 1,1,1-trichloroethane (TCA) as a solvent in their light assembly process to rinse spent soldering flux from printed circuit boards. TCA was used at the facility from July 1980 until June 1982.

In the winter of 1981, a spill of TCA occurred near the southwest corner of the engineering building. Drums of spent solvents had been temporarily stored in this area prior to offsite disposal. The drums had frozen to the ground and were punctured by a fork lift when a contractor attempted to load them on a truck. The amount of spent solvent spilled is not known.

2.2: Remedial History

June 1989: Adirondack Environmental Services, Inc. performed a two-staged environmental assessment of the facility. During the second round of this assessment, monitoring wells were installed near the former waste solvent storage area. Groundwater samples collected from these wells identified concentrations of volatile organic compounds (VOCs) above drinking water standards.

October 1989: O'Brien & Gere Engineers (OBG) completed a *Preliminary Hydrogeologic Site Assessment* for the Eagle property. The purpose of this report was to determine the extent of groundwater contamination on the Eagle property. The report included a topographic survey, the installation of four monitoring wells, and two rounds of sampling for all seven existing monitoring wells. Groundwater samples confirmed the presence of VOCs; which included vinyl chloride, chloroethane, methylene chloride, dichloroethene (DCE), dichloroethane (DCA), trichloroethane (TCA) and toluene. Total VOCs ranged from non-detect to 5,471 parts per million (ppm).

Late 1989: Eagle Comtronics notified the NYSDEC of the presence of VOCs in groundwater on the Eagle property.

June 1993: OBG submitted a report entitled *Site Assessment* for the Eagle Comtronics site. This investigation expanded the groundwater investigation and included a soil boring program. It identified an area of contaminated soil believed to be the source of groundwater contamination.

October 1993: The NYSDEC listed the site as a Class 2 site (site represents a significant threat to public health or the environment- action required) on the New York State List of Inactive Hazardous Waste Disposal Sites. This listing was based on the potential threat to Clay Marsh, a regulated wetland, from chlorinated solvent contaminated groundwater.

OBG submitted an IRM Work Plan entitled, *Interim Remedial Measure, Eagle Comtronics*. This report outlined a proposed IRM to address subsurface soil contamination. This IRM is detailed in Section 4.2.

December 1993: Eagle Comtronics signed an Order on Consent (Index #A7-0306-93-10) agreeing to perform an Interim Remedial Measure (IRM) to excavate and treat solvent contaminated soil. Work to implement the IRM was initiated.

March 1994: After learning of the presence of four nearby residential wells, Eagle collected and analyzed water samples from those drinking water wells. No contaminants were detected in any of the wells. Prior to this time it had been believed that all residential properties near the site were served by public water.

February 1995: Eagle submitted the report entitled, *Interim Remedial Measure Program 1993 and 1994 Activities*. This report detailed the implementation of the IRM soil cleanup near the engineering building.

May 1996: Eagle completed the treatment of soil excavated during the IRM soil cleanup, which began in October 1993. The treatment system was dismantled and the clean soil was used for fill on the Eagle property.

January 1997: Eagle collected two samples from borings beneath the engineering building and two borings along the foundation of the engineering building. These samples were collected to verify the effectiveness of the IRM soil cleanup, and determine if any additional soil contamination existed along the building foundation. Sampling demonstrated that VOC contaminated soil near the engineering building was removed during the IRM. The results of the work were summarized in a March 1997 letter from Mr. Marc J. Dent (OBG) to Mr. Jeffrey A. Edwards (NYSDEC).

February 1997: Eagle Comtronics signed Order on Consent (Index #D7-0001-97-02) agreeing to perform supplementary investigations. The purpose of this work, which was completed in January 1997, was to verify the effectiveness of work completed during the IRM. The Order on Consent included soil and groundwater sampling, as well as a contingency for a remedial investigation if deemed necessary.

June 1997: Groundwater samples were collected and analyzed from one residential well. The sample results showed that the residential well water was not contaminated.

January 1998: Groundwater samples were collected from on site monitoring wells. The sample results show a decreasing trend in VOC concentrations in groundwater. TCA was not detected in groundwater samples. Since only TCA degradation products (DCE, DCA, vinyl chloride) were detected in groundwater, it is evident that the spilled solvent is degrading naturally.

SECTION 3: CURRENT STATUS

In response to a determination that the presence of hazardous waste at the site presented a potential threat to human health and the environment, Eagle Comtronics has completed an investigation entitled, *Site Assessment*.

3.1: Summary of the Site Investigation

Included in the investigation were the following activities:

- Limited topographic survey to establish groundwater elevations. The groundwater elevations were used to determine flow characteristics using the shallow groundwater monitoring wells.

- Installation of four shallow and two deep groundwater monitoring wells to augment the existing three shallow wells.

- The collection and laboratory analyzing of four rounds of groundwater samples to characterize the physical and chemical characteristics of the groundwater.

- Soil borings were advanced in the suspected source area of contamination to delineate soil contamination with VOCs.

The investigation was a compilation of data collected over four years (August 1989 until June 1993). The report entitled *Site Assessment, June 1993* has been prepared describing the field activities and findings in detail.

To determine which media (soil, groundwater, etc.) contain contamination at levels of concern, the investigation analytical data was compared to environmental Standards, Criteria, and Guidance (SCGs). Groundwater, drinking water and surface water SCGs identified for the Eagle Comtronics 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; and the NYSDEC Guidance for Screening Contaminated Sediments was used for surface water sediments.

Based upon the results of the investigation in comparison to the SCGs and potential public health and environmental exposure routes, certain areas and media of the site required remediation (summarized below). More complete information can be found in the Site Assessment Report.

Chemical concentrations are reported in parts per billion (ppb) or parts per million (ppm). For comparison purposes, SCGs are given for each medium.

3.1.1 Nature of Contamination:

As described in the Site Assessment Report, many soil and groundwater samples were collected at the site to characterize the nature and extent of contamination. The main contaminants of concern are 1,1,1-trichloroethane (TCA) and its breakdown products, which belong to a class of compounds called volatile organic compounds (VOCs). TCA is a colorless man-made chemical which does not occur naturally. In the environment, it can be found as a liquid, as a vapor, or

dissolved in water and other chemicals. When found as a liquid in an open container, it evaporates quickly and becomes vapor in the air. TCA has a sweet, yet sharp odor.

TCA has many industrial and household uses It is often used as a solvent to dissolve other substances (ex: glue or paint). In industry, it is widely used to remove oil or grease from manufactured metal parts. In the home, it may be used in products such as spot cleaners, glues, and aerosol sprays.

In surface waters such as lakes and rivers, where TCA will partially mix with water, it will probably evaporate quickly into the air. It does not readily stick to soil and can be carried by water through soil and into groundwater. Once there, it may be slowly broken down by naturally occurring organisms. TCA and its breakdown products were detected at levels above SCGs in subsurface soils and groundwater.

3.1.2 Extent of Contamination

Table 1 summarizes the extent of contamination for the contaminants of concern in soil and groundwater and compares the data with the proposed remedial action levels (SCGs) for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Soil

A soil boring program was conducted based on historical information concerning the solvent spill. Ten borings were advanced near the southwest corner of the engineering building to determine whether a source area of contaminated subsurface soil existed. The borings were successful at delineating the nature and extent of subsurface contamination. Analytical data from the soil boring program identified 1,1-dichloroethene; 1,1,1-trichloroethane; and trichloroethene in concentrations exceeding SCGs. The boring program determined that there was an isolated area of subsurface soil contamination that was acting as a source area for groundwater contamination.

Groundwater

Monitoring well logs indicate that the site is located on five to ten feet of reddish brown, sandy fill. Beneath the fill is a glacial till; comprised of red, wet, hard clayey silt. Hydraulic conductivity measurements collected across the site ranged from 1.0 gpd/ft^2 to 6.5 gpd/ft^2. Based on these measurements and the average hydraulic gradient across the site, the groundwater flow velocity was calculated to be 0.03 feet per day or 11 feet per year. These calculations are consistent with the flat nature of the site and the tight nature of the native soil (the glacial till). Groundwater flow direction is consistent with the local topography, flowing northeast towards

Clay Marsh. Clay Marsh is the local low point in topography, approximately 1,200 feet away from the site. Based on the site characteristics and the calculated gradients and groundwater flow velocity, groundwater is flowing very slowly to the northeast, towards Clay Marsh.

TABLE 1
Nature and Extent of Contamination at the Eagle Comtronics Site

Media	Class	Contaminant of Concern	Concentration Range in PPB	SCG	Frequency Exceeded
Subsurface Soil	VOCs	1,1-dichloroethene	ND to 1,700	400	2 of 20
		1,1,1-trichloroethane	ND to 42,000	800	9 of 20
		trichloroethene	ND to 5,400	700	1 of 20
Ground water (08/18/89)	VOCs	vinyl chloride	ND to 18	2	1 of 7
		chloroethane	ND to 2,800	5	3 of 7
		methylene chloride	ND to 27	5	1 of 7
		1,1-dichloroethene	ND to 270	5	2 of 7
		1,1-dichloroethane	ND to 3,300	5	6 of 7
		trans 1,2-dichloroethene	ND to 1,300	5	3 of 7
		1,2-dichloroethane	ND to 150	5	2 of 7
		1,1,1-trichloroethane	ND to 66	5	2 of 7
		toluene	ND to 170	5	1 of 7
	SVOCs	None > SCGs			
	PCBs/Pesticides	None > SCGs			
	Metals	None > SCGs			
Ground water (1/98)	VOCs	vinyl chloride	ND to 13	2	1 of 7
		1,1-dichloroethene	ND to 64	5	1 of 7
		1,1-dichloroethane	ND to 490	5	4 of 7
		cis 1,2-dichloroethene	ND to 280	5	3 of 7
		1,2-dichloroethane	ND to 23	5	1 of 7

Groundwater water samples were collected from shallow wells on four occasions and from deep wells on two occasions. All wells were analyzed for VOCs. In addition, two of the wells were analyzed for semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenols (PCBs), and inorganics on one occasion. Only VOCs were detected above SCGs in groundwater. The VOCs detected in groundwater were solvents (primarily TCA and its breakdown products), supporting historical information concerning the nature of the spill. The highest concentrations were detected near the engineering building. Concentrations tended to decrease with distance from the engineering building. Contamination appears to be migrating slowly in the direction of groundwater flow; northeast towards Clay Marsh.

According to historical information, the material spilled was TCA. At the time of the site investigation, TCA concentrations in groundwater were relatively low compared to concentrations of dichloroethene (DCE) and dichloroethane (DCA). The most recent groundwater data shows TCA has completely broken down into DCA, DCE, and vinyl chloride. The DCA, DCE, and vinyl chloride should continue to break down over time.

3.2 Interim Remedial Measure:

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

Based on results from the site investigation, the PRPs proposed an IRM soil removal to address contaminated subsurface soils. These subsurface soils were delineated with soil borings during the site investigation.

The IRM consisted of excavating a 30' long by 15' wide by 5' deep area of soil and treating it on site using ex-situ soil venting. For the treatment, a soil cell was constructed on the Eagle property consisting of soil berms constructed with on site, clean fill; and six inch thick layer of sand was placed over the berms and cell bottom. A 30 mil very low density polyethylene (VLDPE) bottom liner was installed over the cell berms and bottom. Another six inches of sand was placed over the liner. Approximately 86 cubic yards of solvent contaminated soil was excavated and placed in the cell. Prior to placement in the cell, contaminated soil was mixed with wood chips, which served as bulking agents to improve air flow through the soil. PVC well screen laterals were placed in the contaminated soil from which air could be drawn. A 30 mil VLDPE cover was placed over the soil mass and secured using tires. The lateral penetrations through the top of the liner were secured by welding pipe boots over the laterals. A drainage ditch was installed around the cell to divert surface runoff away from the system.

Laterals were attached to a header pipe, and eventually to a blower. The blower drew air through the soil pile, removing VOCs from the soil. VOCs readily volatilize when exposed to air. Air emissions from the system were sampled and analyzed. Based on these analysis, the NYSDEC issued an air permit for the operation of the treatment system.

The system operated between December 1993 and May 1996. After confirmatory samples determined the soil was treated to below NYSDEC TAGM 4046 soil cleanup guidelines for the protection of groundwater, the soil pile was taken apart and the soil was used as fill in the area. A detailed description of the IRM can be found in the report entitled, Interim Remedial Measure, 1993 and 1994 Activities and a May 17, 1997 letter from OBG to NYSDEC; both of which are in the document repository.

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

Completed pathways which are known to or may exist at the site include:

- There is a potential future exposure pathway for the ingestion of VOC contaminated groundwater.

3.4 Summary of Environmental Exposure Pathways:

This section summarizes the types of environmental exposures which may be presented by the site. The following pathways for environmental exposure have been identified:

- There is a potential future exposure pathway to Clay Marsh from VOC contaminated groundwater. Clay Marsh is a New York State Wildlife Management Area and a Class I freshwater wetland.

SECTION 4: 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 Eagle Comtronics, Inc. entered into a Consent Order on December 2, 1993. The Order obligated the PRP to implement a Interim Remedial Measure (IRM) to remove a source area of VOC contamination (completed). Upon issuance of the Record of Decision the NYSDEC will approach the PRP to implement the selected remedy under an Order on Consent.

The following is the chronological enforcement history of this site.

Date	Index No.	Subject of Order
12/2/93	A7-0306-93-10	IRM
2/28/97	D7-0001-97-02	Amendment for supplemental sampling.

SECTION 5: SUMMARY OF THE SELECTED REMEDY

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 remediation, which is described in section 3.2, has accomplished this objective.

Based upon the results of the site investigation, previous and subsequent investigations, and the IRM that has been performed at the site; the NYSDEC is selecting no further action, with monitoring, as the preferred remedial alternative for the site. The Department will also reclassify the site from a Class 2 to a Class 4 (which means the site is properly closed and requires continued management) on the New York State Registry of Inactive Hazardous Waste Disposal Sites.

Post-IRM sampling has shown that the source of the groundwater contamination has been successfully remediated. Therefore, the only remaining medium of concern at the Eagle Comtronics site is groundwater. The solvent spill that caused contamination of groundwater at the Eagle Comtronics facility occurred in 1981; approximately 17 years ago. Data collected during the site investigation has shown that groundwater flows slowly to the northeast. Analytical data has shown that groundwater VOC concentrations are greatest near the former source area, and decrease down gradient of the source area. This pattern has not changed over the nine years that groundwater has been monitored. Groundwater flow rate calculations and the pattern of groundwater contamination indicate that the VOC plume has not migrated significantly now that the source has been removed. In addition, the most recent round of groundwater samples only detected degradation products of TCA (DCE, DCA, vinyl chloride). Since only TCA degradation products remain and VOC concentrations have been slowly decreasing, it appears that contaminants are attenuating naturally.

There are six residential properties in the vicinity of the Eagle Comtronics facility that still use groundwater from private wells as their source of potable water. Four of these wells are downgradient. In addition, Clay Marsh is located further down gradient from the site, and is a New York State Wildlife Management Area and a Class I freshwater wetland. Any remedy for the Eagle Comtronics site must be protective of both the residents and Clay Marsh.

Based on the apparent lack of migration of the VOC plume and the slow attenuation of VOCs in groundwater, the NYSDEC believes that neither the residential wells or Clay Marsh should be impacted by contaminated groundwater from the Eagle Comtronics site. To confirm that there is no impact, the NYSDEC recommended that monitoring wells (called sentinel wells) be installed between the limits of groundwater contamination and the groundwater receptors. These wells would be sampled semi-annually and analyzed for VOCs. If analytical data reveals that contaminants have migrated to the sentinel wells, further action would be required to address groundwater contamination and protect down gradient receptors.

Two of the four residential properties, both located north of Waterhouse Road, are owned by a single property owner. The only sentinel well location available for these properties is on that owner's property. This owner, however, has been unwilling to allow the State or PRP to install wells on this property despite repeated attempts. The owner has agreed, however, to allow sampling of the potable water supply wells semi-annually. Using a residential well as a sentinel well is not the conservative alternative typically favored by the NYSDEC or NYSDOH. However, since the only properties potentially impacted by not placing an intermediate sentinel well are the properties of the owner in question and, since it is unlikely that contamination will reach these wells, the State will respect the wishes of the property owner. Two additional upgradient private wells were added to the monitoring program to alleviate their concerns with the chosen remedy. The selected remedial plan will sample the residential wells located at 8143, 8169, 8093, and 8089 Henry Clay Boulevard semi-annually, as well as the sentinel well shown on Drawing 3.

As long as groundwater concentrations exceed drinking water standards, future property owners will be given the option of having a sentinel well installed and sampled on the above referenced property rather than using their drinking water wells as a sentinel.

In addition to sampling the sentinel wells semi-annually, on site monitoring wells will be sampled annually. The purpose of this monitoring will be to determine when groundwater contamination has attenuated. Should groundwater contamination attenuate to below drinking water standards, the monitoring program could be discontinued and the site will be eligible for removal from the New York State Registry of Inactive Hazardous Waste Disposal Sites. Drawing 3 shows the sentinel well location and the locations of the residential wells.

SECTION 6: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation (CP) 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:

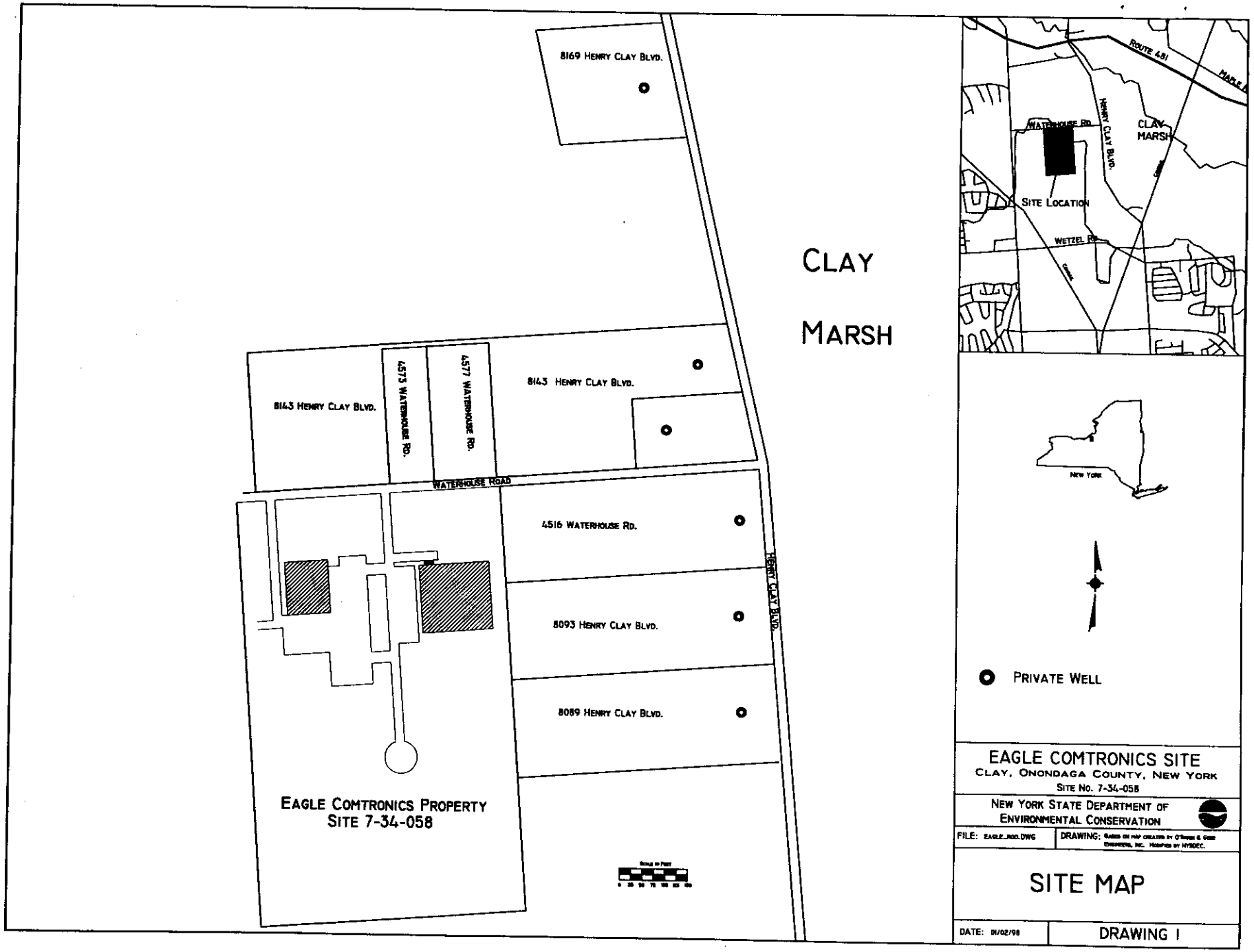
- A repository for documents pertaining to the site was established.
- A site mailing list was established which included nearby property owners, local political officials local media and other interested parties.
- A Citizen Participation Plan was prepared.
- In February 1998 a Fact Sheet was sent to all parties on the mailing list, summarizing information found in the Proposed Remedial Action Plan.

- In February 1998 the Proposed Remedial Action Plan was released to the public, beginning the 30 day comment period.

- In March 1998 a public meeting was held in the Town of Clay to present the material in the Proposed Remedial Action Plan and to solicit comments from the public.

- In March 1998 a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.

Concerns of the community regarding the site assessment reports and the Proposed Remedial Action Plan have been evaluated. The "Responsiveness Summary" included as Appendix A presents the public comments received and the Department's response to the concerns raised. In general the public comments received were supportive of the selected remedy. Comments were received, however, pertaining to two residential drinking water wells located up gradient of the former spill area. Two property owners were not comfortable with the protection offered in the Proposed Remedial Action Plan, and requested that their wells be added to the list of wells sampled as part of the remedy. These two residential drinking water wells have been added to the monitoring program contained in the chosen remedy, satisfying the concerns of the two residents.


8169 HENRY CLAY BLVD.
CLAY
MARSH
8143 HENRY CLAY BLVD.
4573 WATERHOUSE RD.
4577 WATERHOUSE RD.
8143 HENRY CLAY BLVD.
WATERHOUSE ROAD
4516 WATERHOUSE RD.
8093 HENRY CLAY BLVD.
8089 HENRY CLAY BLVD.
HENRY CLAY BLVD.
EAGLE COMTRONICS PROPERTY
SITE 7-34-058
ROUTE 481
WATERHOUSE RD.
HENRY CLAY BLVD.
CLAY MARSH
SITE LOCATION
WETZEL RD.
NEW YORK
PRIVATE WELL
EAGLE COMTRONICS SITE
CLAY, ONONDAGA COUNTY, NEW YORK
SITE No. 7-34-058
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
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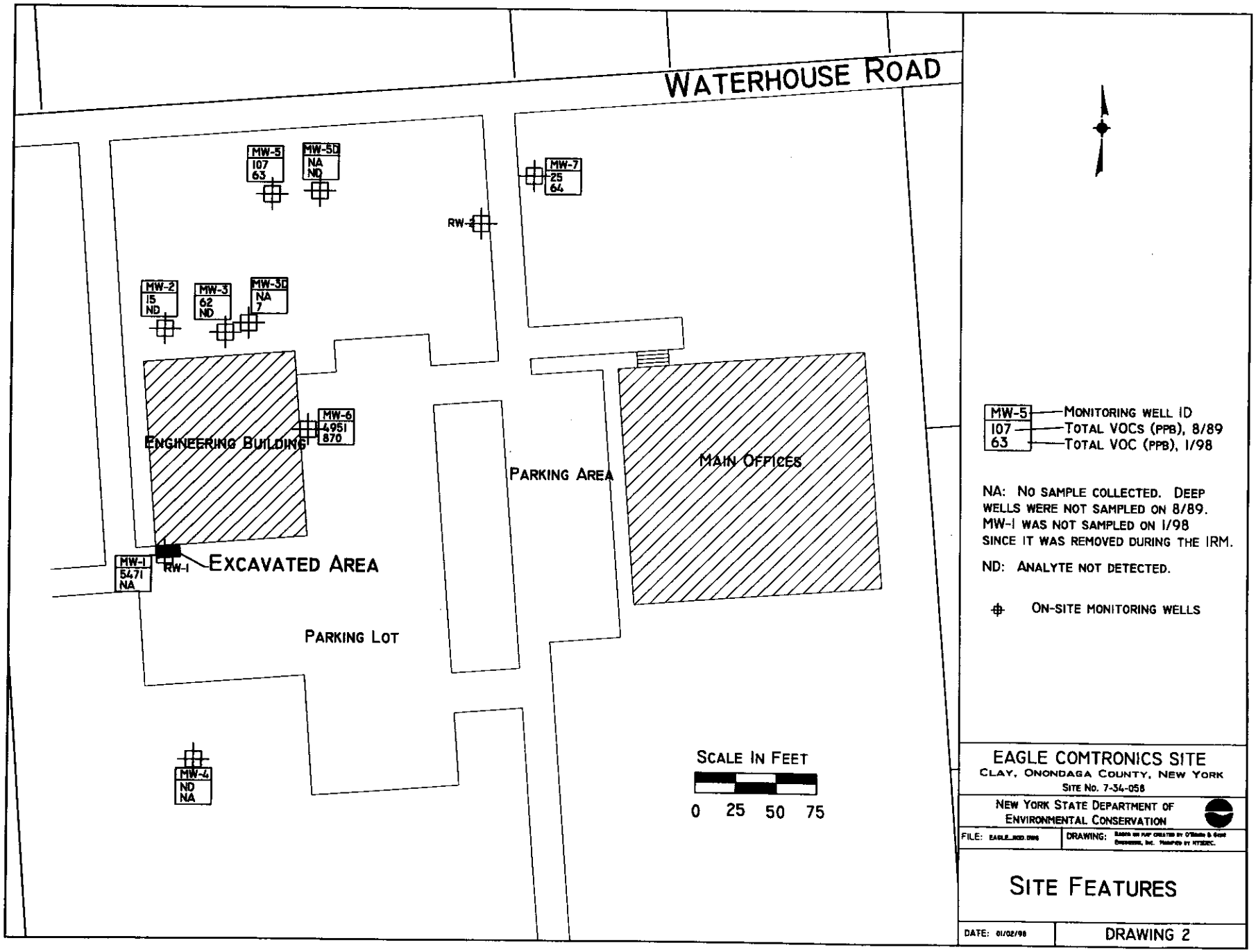
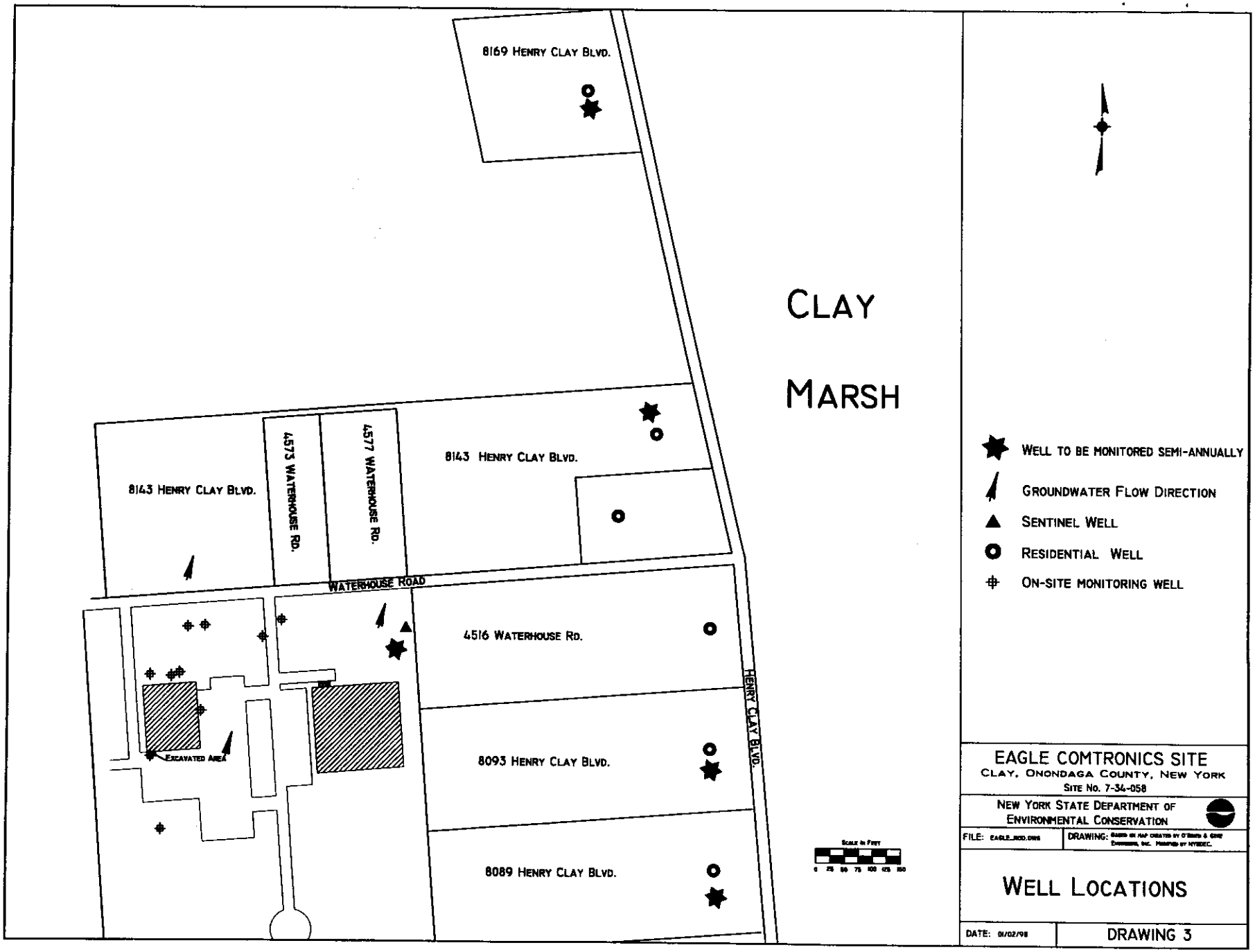
DRAWING:
SITE MAP
DATE: 01/02/98
DRAWING 1


WATERHOUSE ROAD
MW-5
107
63
MW-5D
NA
ND
MW-7
25
64
RW-2
MW-2
15
ND
MW-3
62
ND
MW-3D
NA
7
MW-6
4951
870
ENGINEERING BUILDING
PARKING AREA
MAIN OFFICES
MW-1
5471
NA
RW-1
EXCAVATED AREA
PARKING LOT
MW-4
ND
NA
SCALE IN FEET
0 25 50 75
MW-5 — MONITORING WELL ID
107 — TOTAL VOCs (PPB), 8/89
63 — TOTAL VOC (PPB), 1/98
NA: NO SAMPLE COLLECTED. DEEP WELLS WERE NOT SAMPLED ON 8/89. MW-1 WAS NOT SAMPLED ON 1/98 SINCE IT WAS REMOVED DURING THE IRM.
ND: ANALYTE NOT DETECTED.
ON-SITE MONITORING WELLS
EAGLE COMTRONICS SITE
CLAY, ONONDAGA COUNTY, NEW YORK
SITE No. 7-34-058
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FILE: EAGLE_RCD.DWG
DRAWING:
SITE FEATURES
DATE: 01/02/98
DRAWING 2


8169 HENRY CLAY BLVD.
CLAY
MARSH
8143 HENRY CLAY BLVD.
4573 WATERHOUSE RD.
4577 WATERHOUSE RD.
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WATERHOUSE ROAD
4516 WATERHOUSE RD.
HENRY CLAY BLVD.
EXCAVATED AREA
8093 HENRY CLAY BLVD.
8089 HENRY CLAY BLVD.
WELL TO BE MONITORED SEMI-ANNUALLY
GROUNDWATER FLOW DIRECTION
SENTINEL WELL
RESIDENTIAL WELL
ON-SITE MONITORING WELL
EAGLE COMTRONICS SITE
CLAY, ONONDAGA COUNTY, NEW YORK
SITE No. 7-34-058
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FILE: EAGLE_WOD.DWG
DRAWING:
WELL LOCATIONS
DATE: 01/02/98
DRAWING 3

Appendix A

RESPONSIVENESS SUMMARY

Eagle Comtronics Site
Proposed Remedial Action Plan
Clay (T), Onondaga County
Site No. 7-34-058

The Proposed Remedial Action Plan (PRAP) for the Eagle Comtronics Site was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on February 6, 1998. This plan outlined the preferred remedial measure proposed for the Eagle Comtronics site. The preferred remedy calls for no further action with continued monitoring to address chlorinated solvent contamination of groundwater.

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 March 4, 1998 which included a presentation of site investigations that have occurred at the site as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. One letter was received during the public comment period.

Written comments received have become part of the Administrative Record for this site.

This Responsiveness Summary responds to all questions and comments raised at the March 4, 1998 public meeting, and the comment letter received.

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

COMMENT 1: What was done as part of the hydrogeologic investigation? How do I know that a component of groundwater doesn't flow south east, towards my drinking water well? (Commentor's well located at 8093 Henry Clay Boulevard)

RESPONSE 1: As part of the investigations at the site the following information was gathered to characterize the local hydrogeology:

Seven monitoring wells were installed to an approximate depth of 15 feet below ground surface. Two monitoring wells were installed to an approximate depth of 45 feet below ground surface. The elevations of these wells were surveyed, so that the precise elevation of groundwater at each monitoring point could be recorded. A geologist was present during the well installation to

determine soil types beneath the site. Using groundwater elevation data collected from each monitoring well, groundwater flow direction was consistently found to be to the northeast. This is as expected, since the local drainage is into Clay Marsh. Hydraulic gradients were calculated using groundwater elevation data, and using data collected during an in-situ permeability test, the hydraulic conductivity (or groundwater flow velocity) was calculated. These tests estimated that the on site hydraulic conductivity (the speed at which groundwater moves) is approximately 11 feet per year. This slow rate of flow is consistent with the nature of the till material ground water is flowing through, and the relatively flat nature of the local topography.

There is no well directly in between your drinking water well and the former source of contamination. For this reason, no absolute answer can be given with regard to contamination reaching the drinking water well(s) in question. However, all hydrogeologic information collected to date indicates that your drinking water well is up gradient from the former contamination source, and therefore is not in danger of becoming contaminated. The PRP has agreed to include the drinking water wells at 8093 and 8089 Henry Clay Boulevard in the groundwater monitoring program required by the selected remedy. Samples will be collected from those drinking water wells and analyzed for the contaminants of concern on a semi-annual basis.

COMMENT 2: Can the velocity of groundwater change if the medium in which it travels changes?

RESPONSE 2: Groundwater flow velocity, or seepage velocity, is dependent on the *coefficient of permeability* (k) and *effective porosity* for the soil (n_e), as well as the *hydraulic gradient* (*i*). Hydraulic gradient is an expression of the change in groundwater elevation divided by the distance that change occurs over ($\Delta h/L$). This can be calculated since monitoring wells have been surveyed and groundwater elevations can be measured. The coefficient of permeability (k) is dependent on many factors. These factors can include: fluid viscosity, pore-size distribution, grain-size distribution, void ratio, roughness of mineral particles, and the degree of soil saturation. Many of these factors are determined by the type of material the groundwater flows through.

Based on the above discussion, it can be seen that the type of material groundwater flows through can affect the groundwater flow velocity. Investigations at the Eagle Comtronics site, however, have shown a very consistent stratigraphy comprised of fill, followed by glacial till (comprised of a very tight clayey silt), followed by a silt stone bedrock. While local variations in stratigraphy are possible, on site wells have shown that stratigraphy in the area of the spill is very consistent. In addition, the flat topography of the area is partially responsible for the low hydraulic gradient. Even in a very porous sand, if the hydraulic gradient is low, there is no driving force to rapidly move groundwater. So, in this case, groundwater would likely move very slowly.

COMMENT 3: You said one way to treat groundwater was by pumping it. Please explain this.

RESPONSE 3: At some sites with groundwater contamination, a remedy known as groundwater pumping and treating is employed. In this remedial approach, groundwater is pumped from wells, run through a treatment system which removes the contaminants and discharged back into the ground or to surface water. In the case of Eagle Comtronics, this technology was considered, but rejected based on the nature of the overburden soils. The soils consist of a very tight glacial till, making the long term pumping of groundwater impractical. During the investigation, wells were often bailed dry using a hand bailer, indicating very slow movement of groundwateer to fill up the well casing again.

The following comment is based upon a comment letter received by the NYSDEC during the comment period. The person commenting is identified and the summarized comments, along with the State's response, are presented below. The complete letter has been included in the Administrative Record for the ROD.

A letter was received from John Cerami, on March 12, 1998 which included the following comment:

COMMENT 4: I live diagonally across the street from Eagle Comtronics. I have several questions. Why are we just being informed of this project? Why was my well not identified in the project? Why was my well not tested? Why was my residential property not identified in the project? Why were we not informed when the DEC learned of this? When did the DEC learn of this spill? Why, living across the street from Eagle, were we not informed of the IRM soil venting between 1993 and 1996?

RESPONSE 4: The NYSDEC first became aware of the site in late 1989. When a potential site is first discovered by the NYSDEC, we do not typically contact local residents until we have some information on the problem. This is because not all sites that are brought to our attention end up being environmental or health threats. When it was determined that the site was a potential threat to human health and the environment, and the site was listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites, there was a newspaper article on the site. The article, published in the March 24, 1993 Post Standard, described the site and the treatment system (soil venting) operating on the Eagle property. No formal public notification of the treatment system was issued because there was no threat to human health or the environment posed by the treatment system. Typically, a public meeting is held after the completion of a Remedial Investigation (RI) and upon issuance of a Proposed Remedial Action Plan (PRAP). At the Eagle site, the source of contamination was identified during preliminary investigation and removed. Data collected did not warrant a full scale RI, so therefore, no public meeting was held. Residents were sent a Fact Sheet in the mail on February 6, 1998 which announced the public meeting which was held on March 4, 1998, attended by several local residents.

Your well was not tested or identified as part of the project to date because it was not your source of potable water. Your house was accurately identified as being served by public water. Since

the ingestion of contaminated groundwater is the exposure pathway of concern, supplementary sources of non-potable water were not included in the sampling program. Eagle Comtronics has, however, agreed to sample your well during the first round of residential well monitoring. Sample results will be provided to you, along with an interpretation of their significance, by the New York State Department of Health (NYSDOH).

Appendix B

ADMINISTRATIVE RECORD

for the Record of Decision

Eagle Comtronics Site
Clay (T), Onondaga County
Site No. 7-34-058

The following documents constitute the Administrative Record for the Eagle Comtronics Inactive Hazardous Waste Disposal Site Record of Decision.

Documents

Preliminary Hydrogeologic Site Assessment, O'Brien & Gere Engineers, October 1989.

Site Assessment, O'Brien & Gere Engineers, June 1993.

Interim Remedial Measure Work Plan, O'Brien & Gere Engineers, October 1993.

Order on Consent (Index #A7-0306-93-10), October 1993.

Interim Remedial Measure Program, 1993 and 1994 Activities, O'Brien & Gere Engineers, February 1995.

Letter summarizing IRM closure, from O'Brien & Gere Engineers to NYSDEC, May 17, 1997.

Letter summarizing the supplemental investigations, from O'Brien & Gere Engineers to NYSDEC, March, 1997.

Order on Consent (Index #D7-0001-97-02), February 1997.

Record of Decision, Eagle Comtronics Site, March 1998.

Citizen Participation Plan

Residential Well Monitoring Data

Letter from Mr. John Cerami, commenting on the PRAP, updated but received on March 12, 1998.