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To: Mr. Gerald J. Rider, P.E.
Division of Environmental Remediation NYSDEC
50 Wolf Road – Room 260A
Albany, NY 12233-7010

Date:	June	8.2000
Date.	June	0,2000

- File: 2665/25888 #2
- Re: Eagle Comtronics, Inc. Clay, NY Site No. 7-34-058

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	2		Operation, Maintenance and Monitoring Manual	Ι
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R-reviewed N-S-resubmit J-

N-reviewed and noted J-rejected I-for your information Y-for your approval

Remarks: This document addresses the comments presented in the NYSDEC letter dated April 14, 2000 and follow-up clarifications provided by Mr. Mike Ryan. Copies of boring and well construction logs for MW-2 and 3 are included in this document.

cc: P. Kopiel – Eagle Comtronics K. Lynch – NYSDEC Region 7 H. Hamel – NYSDOH Director, Bureau of Env. Exposure Inv. Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Mar & C E Marc Dent, P.E. Managing Engineer 2000 12 JUN Bureau Of Hazardous Site Control DER



O'Brien & Gere Engineers, Inc., an O'Brien & Gere company 5000 Brittonfield Parkway / PO. Box 4873, Syracuse, New York 13221-4873 (315) 437-6100 / FAX (315) 463-7554 • http:// www.obg.com ... and offices in major U.S. cities

OPERATION, MAINTENANCE AND MONITORING MANUAL

Eagle Comtronics, Inc. Clay, New York

May 2000



Operation, Maintenance and Monitoring Manual

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Eagle Comtronics, Inc. Clay, New York



M. Ed Æ

Terrance P. Madden, P.E. Vice President

May 2000



5000 Brittonfield Parkway E. Syracuse, New York 13057 Contents

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1. Introduction

1.1. Project background

The Eagle Comtronics (Eagle) facility is located at 4562 Waterhouse Road, Town of Clay, Onondaga County, New York. A site location map is included as Figure 1. As a result of a 1981 solvent spill that impacted the soil and groundwater, the site was assigned Site No. 7-34-058 by New York State Department of Environmental Conservation (NYSDEC). Following several soil and ground water investigations, a remedial remedy was selected for the site, as outlined in the Record of Decision (ROD) and issued by NYSDEC on March 1998. The selected remedy was to sample and analyze ground water from selected residential wells and monitoring wells. A copy of the ROD is included in Appendix A.

Based on the ROD, Eagle retained O'Brien & Gere Engineers, Inc. (O'Brien & Gere) to develop this Operation, Maintenance and Monitoring (O&M) Manual for the selected remedial remedy.

1.2. Purpose of the Operation, Maintenance and Monitoring (O&M) Manual

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This O&M Manual has been prepared in accordance the guidelines of the ROD issued by NYSDEC in March 1998. The purpose of this document is to provide a manual that can be used to properly monitor the ground water quality in the vicinity of the site.

2. Site description

2.1. General site description

The Eagle facility is located at 4562 Waterhouse Road in Clay, New York. Liverpool, New York, 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 approximately 18 acres, with half of the property being actively used by Eagle. The site is located in a rural area used for both agricultural and residential purposes.

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

The site consists of an office building, engineering facility, and parking facilities. The office building is approximately 24,000 ft^2 and the engineering building is approximately 12,000 ft^2 . Eagle assembles electronic components for the cable television industry.

2.2. History

The property now occupied by Eagle was originally developed in 1978 by Niagara Mohawk. 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 at a different location. Eagle 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).

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Eagle operates this facility as a product development and management facility for components for the cable television industry. Product assembly, which occurred in the engineering facility prior to 1997, now takes place at a separate Eagle facility located near the intersection of Henry Clay Boulevard and Buckley Road.

Eagle used 1,1,1-trichloroethane (TCA) at the Waterhouse Road facility 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.

Since June 1989, several soil and ground water investigations have been conducted. As a result of these investigations ten monitoring wells were installed at the site. However, at this time, only eight wells exist. Two wells were damaged during the soil excavation and treatment activities initiated at the site in December 1993. The soil excavation and treatment program, approved by NYSDEC as an Interim Remedial Measure (IRM), was completed in May 1996.

In October 1993, NYSDEC listed the site as a Class 2 site on the New York State List of Inactive Hazardous Waste Disposal Sites. A Class 2 site, as defined by NYSDEC, represents a significant threat to public health or the environment with action required.

Two Order on Consent agreements (Index #A7-0306-93-10 and D7-0001-97-02) were signed by Eagle on December 1993 and February 1997 respectively, to perform various investigative and remedial activities.

In March 1998 a ROD was issued by NYSDEC which outlines the remedial remedy selected for the site. Refer to Appendix A.

On May 4, 1999, NYSDEC changed the classification of the site from a Class 2 to a 4 on the NYS List of Inactive Hazardous Waste Disposal Sites. A Class 4 site, as defined by NYSDEC, is a site that is properly closed but still requires continued management.

2.3. Hydrogeology/geology

The project area lies within the Erie-Ontario Lowlands Physiographic Province of New York State. This area is characterized by relatively low relief topography and lies between Lake Ontario to the north and the

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Appalachian Uplands to the south of Syracuse. The site is located on an upland area approximately 1200 feet west of the Clay Marsh which acts as a local surface water drainage point. Surface water drainage from the site is to the northeast toward Waterhouse Road.

As a part of the various site investigations, soil borings were completed and ground water elevations measured. As a result of that data collection effort, the following conclusions were made:

- Geologic conditions at the site indicate that the shallow subsurface materials encountered within 15 feet of the ground surface consists of 5 to 10 feet of fine to medium sand which overlies a dense reddish brown glacial till. Bedrock was found at 42 feet.
- On-site ground water occurs in the overburden materials at a depth between 2 and 10 feet below ground level.
- Localized ground water flow across the site is to the northeast, generally toward Mud Creek at a velocity estimated to be 0.03 ft/day or 11 ft/year.

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3. Site remedial action

3.1. Description of remedial action

Based on the results of the site investigations and the IRM (soil excavation and treatment) that has been performed at the site, NYSDEC selected "No Further Action with Monitoring" as the preferred remedial alternative for the site.

Post-IRM sampling has shown that the source of the ground water contamination has been successfully remediated. Therefore, the only remaining medium of concern at the Eagle site is ground water. The solvent spill that caused contamination of groundwater at the Eagle facility occurred in 1981; approximately 19 years ago. Data collected during the site investigations has shown that ground water flows slowly to the northeast. Analytical data has shown that volatile organic compound (VOCs) concentrations in the ground water are greatest near the former source area, and decrease downgradient of the source area. This pattern has not changed over the 10 years that ground water has been monitored. Ground water flow rate calculations and the pattern of ground water contamination indicate that the VOC plume has not migrated significantly now that the source has been removed. In addition, a recent round of groundwater samples only detected degradation products of TCA. This includes 1,1-Dichloroethylene (DCE), 1,1-Dichloroethane (DCA) and 1,2-Dichloroethylene (1,2-DCE). Since only TCA degradation products remain and VOC concentrations have been slowly decreasing, it appears that contaminants are attenuating naturally.

Based on the apparent lack of migration of the VOC plume and the attenuation of VOCs in ground water, NYSDEC believes that neither the residential wells or Clay Marsh should be impacted by contaminated groundwater from the Eagle site. To confirm that there is no impact, NYSDEC recommended the following remedial actions:

• Install one "sentinel" monitoring well on the Eagle property.

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• Semi-annually sample and analyze the following four residential drinking water wells and the "sentinel" well (MW-8) on the Eagle property for VOCs.

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- -8093 Henry Clay Boulevard (Paula Hughson)
- -8143 Henry Clay Boulevard (John Dukat)

-8169 Henry Clay Boulevard (John Dukat)

If the VOCs are detected in drinking water wells or the "sentinel" well, further action will be required.

- During only the first round of residential well sampling, sample and analyze one residential water well (not used as a drinking water source) located at 4573 Waterhouse Road (John Cerami) for VOCs.
- Annually sample and analyze monitoring wells MW-2, 3, 3D, 5, 5D, 6 and 7 (located on the Eagle property) for VOCs.

Refer to Figures 2 and 3 for monitoring and residential well locations, respectively.

In addition to the above remedial actions NYSDEC also proposed the following:

- The site will be reclassified from a Class 2 to a Class 4 on the New York State List of Inactive Hazardous Waste Disposal Sites, indicating that the site is property closed, but requires continued management.
- If concentrations of VOCs 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 Disposal Sites.

3.2. Goals of remedial action

It is the objective of NYSDEC that the selected remedy for any site should, at a minimum, eliminate or mitigate significant threats to the public health or the environment presented by the hazardous waste present at the site. NYSDEC believes that the remedial activity presented above will accomplished this objective.

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4. Monitoring and analytical methods

4.1. Environmental monitoring

To address the requirements of the remedial action selected by NYSDEC, five residential wells located at 8089, 8093, 8143 and 8169 Henry Clay Boulevard and 4573 Waterhouse Road were sampled on January 27, 1999. Refer to Figure 3. In addition, "sentinel" well MW-8 was installed on the Eagle property on February 1, 1999. Following installation of MW-8, MW-2, 3, 3D, 5, 5D, 6, 7 and 8 were sampled on February 10, 1999. Refer to Figure 2 for locations and Appendix B for Monitoring Well Log Sheets. As required by the ROD, only the four residential wells on Henry Clay Boulevard were sampled again on June 24 and 25, 1999 and on February 16, 2000. MW-8 was sampled along with the residual wells on June 25, 1999 and February 16, 2000.

A summary of ground water quality data for the monitoring wells and the residential wells is provided in Tables 1 and 2, respectively. The analytical results from the sampling events for the monitoring wells and residential wells are submitted to NYSDEC and NYS Department of Health (NYSDOH). A summary of the potential health effects is provided in Table 3.

4.2. Sampling procedures

4.2.1. Monitoring wells

Prior to commencing ground water sampling activities, ground water elevations shall be measured. Ground water elevation measurements shall be taken as follows:

1. Identify the well and record the locations and depth of well on the Standard Ground Water Sampling Log. Refer to Appendix C for a copy of the Standard Ground Water Sampling Log.

- 2. Put on a new pair of disposable gloves.
- 3. Using an electric well probe, measure the depth to water table and record on the Standard Ground Water Sampling Log.
- 4. Calculate the volume of water to be removed from the well
- 5. Clean the well probe and rinse it with distilled water after used.

Ground water samples shall be collected as follows:

- 1. Identify the well and record the location on the Standard Ground Water Sampling Log. Review well depth, depth to water, and screened interval data.
- 2. Put on a new pair of disposable gloves.
- 3. Cut a slit in the center of a plastic sheet, and slip it over the well creating a clean surface onto which the sampling equipment can be positioned.
- 4. Clean all meters, tools, and equipment before placing these devices on the plastic sheet.
- 5. To bail the well, lower the bailer to the bottom of the well. Move the bailer up and down to resuspend any material that may have settled to the bottom of the well.
- 6. Initiate bailing of the well from the bottom. Keep the polypropylene rope on the plastic sheet. Pour the ground water from the bailer into a container of known volume to measure the volume withdrawn from the well.
- 7. Continue bailing the well through the water column and from the bottom until a sufficient volume (at least three well volumes) has been removed or until the well is dry. If the well is dry, allow sufficient time for the well to recover before proceeding.
- 8. During the removal of successive well volumes, measure the water temperature, pH, and conductivity with calibrated meters. Record the data on the Standard Ground Water Sampling Log.
- 9. Remove the 40 ml vials from their transport containers, and prepare the bottles for receiving samples. Inspect all labels to insure proper sample identification. Sample bottles should be kept cool with their caps on until they are ready to receive samples. Arrange the sampling containers to allow for convenient filling.

4. Monitoring and analytical methods

- 10. Place samples in the cooler and transfer to a laboratory. The samples shall be accompanied by a completed Chain of Custody form.
- 11. Replace and lock the well cap, and replace the flush mounted cover (if present) before leaving the well location.

4.2.2. Residential wells

Each of the homeowners shall be contacted via telephone prior to sampling to schedule a site visit. The date and time shall be agreed to and a letter shall be sent to each residence to serve as written confirmation of the scheduled sampling program.

At the homeowners sites, the water from a sink faucet shall be allowed to run for approximately five minutes prior to collecting a sample in a 40 ml vial. Label the sample vials to provide proper identification and place the vials in a cooler for transfer to a laboratory. The samples shall be accompanied by a completed Chain of Custody form.

4.3. Analytical methods

All monitoring well samples, including "sentinel" well MW-8, shall be analyzed for volatile organic compounds (VOCs) using EPA Method 8021. A trip blank shall be included with the samples. Residential well samples shall be analyzed for VOCs using EPA Method 601/602. A trip blank shall be included with the samples.

4.4. Laboratory quality assurance/quality control (QA/QC)

A Level 1 laboratory Quality Assurance/Quality Control (QA/QC) shall be provided for all samples. The laboratory shall perform matrix spikes, matrix spike duplicates, laboratory control samples (LCS) and surrogate recoveries to monitor the accuracy of the analyses by comparing recoveries to QA/QC criteria. Only the surrogate recoveries shall be reported with the individual sample results. The laboratory shall maintain the results of the other QA/QC samples.

4.5. Potential Health Hazards

Potential health hazards in the ground water that may be encountered during sampling activities are volatile organic compounds (VOCs). As shown in Table 1 the VOC concentrations for the individual parameters are typically in the part per billion (ppb) range. Health hazard information for the site specific chemical hazards is summarized in Table 3

5. Monitoring well maintenance activities

5.1. General

Each ground water monitoring well shall be inspected annually. The inspection shall include the condition of the concrete pad, protective casing, locks and locking cap. Damaged locks or caps shall be replaced, as required.

Results of the annual inspection shall be reported in the annual report. Refer to Section 6.

6. Reports

6.1. Semi-annual reports

Semi-annual reports shall be developed for residential and sentinel well (MW-8) sampling and analyses activities. The data collected will be arranged and presented in a clear, concise and logical format.

A summary of the field activities, analytical data results, laboratory sheets, and chain of custody form shall be included in the report. The reports shall be submitted to the individuals listed in Section 6.3.

6.2. Annual reports

Annual reports shall be developed for monitoring well sampling and analyses activities. The data collected will be arranged and presented in a clear, concise and logical format. A summary of field activities, analytical data results, tables, laboratory sheets, chain of custody form and site plan shall be included in the report. The reports shall be submitted to the individuals listed in Section 6.3.

6.3. Submittals

Copies of the Semi-annual and Annual reports will be submitted to the following individuals:

Mr. Gerald J. Rider, Jr., P.E. Div. Env. Remediation NYSDEC 50 Wolf Road – Rm. 260A Albany, NY 12233-7010 Mr. Kenneth Lynch Regional Director NYSDEC Region 7 615 Erie Blvd. West Syracuse, NY 13204-2400

Ms. Henriette M. Hamel, R.S. Regional Toxics Coordinator NYSDOH 217 S. Salina Street Syracuse, NY 13202-7627

Director, Bureau of Environmental Exposure Investigation NYSDOH Center of Environmental Health 547 River Street Troy, NY 12180

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7. Emergency Response and Contingency Plan

This emergency response section details actions to be taken in the event of a site emergency. Eagle is responsible for implementation of emergency response procedures.

7.1. Emergency phone numbers

Eagle personnel will be notified by an O'Brien & Gere representative if a site emergency is encountered during monitoring activities. Eagle personnel shall notify the following agencies, as required.

Person or Agency	Phone Number
LOCAL:	
FIRE	911
POLICE	911
AMBULANCE	911
HOSPITAL – North Medical Urgent Care	452-2333
OTHER:	
Pam Kopiel – Eagle	622-3402 x244

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7.2. Emergency route

The directions for the Emergency route to North Medical Urgent Care are described below. For a map of the emergency route, refer to Figure 4

- 1. Turn RIGHT out of the facility onto Waterhouse Rd.
- 2. Turn RIGHT onto Henry Clay Blvd.

Marc Dent - O'Brien & Gere

3. Turn LEFT onto W. Taft Rd.

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4. North Medical Urgent Care is on the RIGHT at 5100 W. Taft Rd.

O'Brien & Gere Engineers, Inc.

437-6100 x2258

Table 1

Eagle Comtronics, Inc. Ground Water Quality Data (All values reported as ug/L)

Location	Sampling Date	Vinyl Chloride	Chloroethane	Methylene Chloride	1,1-DCE	1,1-DCA	1,2-DCE	1.2-DCA	1.J.1-TCA	TCE	Toluene	Total VOCs
MW-5D	4/12/90	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	2
	11/6/92	. <1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
·	10/28/94	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	1/31/96	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	1/12/98	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	2/10/99	<1	<1	<1	<1	<1	<1	<1	<]	<1	<]	<1
	4/25/00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
·						,						
MW-6	8/18/89	18	590	27	270	3300	530	150	66	<10	<10	4951
	9/1/89	<10	. 450	14	210	2400	370	100	35	<10	<10	3579
	4/12/90	·<1	32	<1	8	57	10	2	1	<1	<1	110
	11/6/92	<50	730	<50	140	2000	560	91	<50	<50	<50	3521
	10/28/94	<50	500	<50	140	1700	570	80	<50	<50	<50	2990
	1/31/96	<50	170	<50	180	1900	750	100	<50	<50	<50	3100
	1/12/98	<10	<10	<10	62	440	300	17	<10	<10	<10	819
	2/10/99	<50	<50	<50	120	620	460	<50	<50	<50	<50	1200
~	4/25/00	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	1
·									T			
MW-7	8/18/89	_<1	2	<1	<1	23	<1	<1	<1	<1	<]	25
	9/1/89	<1	<1	<1	<1	17	<1	<1	<1	<1	<1	17
	4/12/90	1>	2	<1	<1	40	<1	<1	<1	<1	<1	. 42
	11/6/92	<1	<1	<1	2	56	12	3	<1	<1	<1	73
	10/28/94	<1	<1	<1	1	19	6	<1	<1	<1	<1	26
	1/31/96	<1	<1	<1	1	41	- 19	<1	1	<1	<1	62
	1/12/98	<1	<1	<1	3	27	19	1	<1	<1	<1	50
	2/10/99	<1	<1	<1	3	17	18	. <1	<1	<1	<1	38
	4/25/00	<1	<1	<1	3	12	18	<1	<1	<1	<]	33
	<u> </u>	r		I	1	T	<u> </u>		<u> </u>		· · · · · · · · · · · · · · · · · · ·	
MW-8	2/10/99	<1	<1	<1	<1	<1	<]	<1	· <1	<1	<1	<1
	6/25/99	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	2/16/00	<1	<1	<1	<1	<]	<1	<1	<1	<1	<1	<1
	а. [<u> </u>						<u> </u>	<u> </u>	<u> </u>	<u>,</u> 1	
NYS Class Ground Wa (ug/L)	GA [ter Standards	2			5		5(2)				5	·

Notes:

(1) Bromodichlormethane and Chloroform were also detected in MW-5D on 4/12/90.

(2) NYS Class GA Standard applies to both the cis and trans isomer of 1,2-DCE.

Abbreviations: NS: Not sampled 1,1-DCE: 1,1-Dichloroethylene 1,1-DCA: 1,1-Dichloroethane 1,2-DCE: 1,2-Dichloroethylene (total)

1,2-DCA: 1,2 -Dichloroethane

1,1,1-TCA: 1,1,1-Trichloroethane

TCE: Trichloroethylene

Table 2

Eagle Comtronics, Inc. Residential Well Data

Sample Location/Property Owner	Sample Date	Total VOCs (ppb)
8089 Henry Clay Blvd. (Gordon Wright)	۶ ۱	·
	1/27/99	ND
	6/24-25/99 2/16/00	ND ND
8093 Henry Clay Blvd. (Paula Hughson)		
	3/31/94	ND
	1/27/99	ND
	6/24-25/99	ND
	2/16/00	ND
8143 Henry Clay Blvd. (John Dukat)		
、	3/31/94	ND
	6/5/97	ND
	1/27/99	ND
	6/24-25/99	ND
	2/16/00	ND
8169 Henry Clay Blvd. (John Dukat)		
	3/31/94	' ND
	1/27/99	ND
	6/24-25/99	ND
	2/16/00	ND
4573 Waterhouse Road (John Cerami) (2)		
	1/27/99	14

Notes:

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1. ND – Non-detect

2. The well at 4573 Waterhouse Road is not used as a drinking water source and the existing pump in the well is not operable. The residence is connected to the municipal water system.

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Table 3Eagle Comtronics, Inc.Summary of Potential Health Effects

Chemical	PEL	IDLH	<u>Characteristics</u>	Routes of Exposure	Symptoms of Exposure and Health Effects
Chloroethane	TWA 1000 ppm (2600 mg/m ³)	3800 ppm	Colorless gas or liquid (below 54°F) with	Inhalation, skin	Incoordination, inebriation; abdominal cramps; cardiac arrhythmias,
		[10% LEL]	a pungent, ether-like odor	absorption (liquid),	cardiac arrest; liver, kidney damage
				ingestion (liquid),	
				skin and/or eye	
	· · · · · · · · · · · · · · · · · · ·			contact	
1,1-DCE	None	Ca [N.D.]	Colorless liquid or gas (above 89°F) with	Inhalation, skin	Irritation eyes, skin, throat; dizziness, headache, nausea, dyspnea
			a mild, sweet, chloroform-like odor	absorption, ingestion,	(breathing difficulty); liver, kidney dysfunction; pneumonitis; [Potential
				skin and/or eye	occupational carcinogen]
			·	contact	
1,1-DCA	TWA 100 ppm (400 mg/m ³)	3000 ppm	Colorless, oily liquid with a chloroform-	Inhalation, ingestion,	Irritation skin; central nervous system depressant/depression; liver,
			like odor	skin and/or eye	kidney, lung damage
				contact	
1,2-DCE	TWA 200 ppm (790 mg/m ³)	1000 ppm	Colorless liquid (usually a mix of cis and	Inhalation, ingestion,	Irritation eyes, respiratory system; central nervous system
			trans isomers) with a slightly acrid,	skin and/or eye	depressant/depression
			chloroform-like odor	contact	
1,2-DCA	TWA 50 ppm C 100 ppm 200 ppm (5-	Ca [50 ppm]	Colorless liquid with a pleasant,	Inhalation, ingestion,	Irritation eyes, corneal opacity; central nervous system
	minute maximum peak in any 3		chloroform-like odor [Note:	skin absorption, skin	depressant/depression; nausea, vomiting; dermatitis; liver, kidney,
	hours)		Decomposes slowly, becomes acidic &	and/or eye contact	cardiovascular system damage; [Potential occupational carcinogen]
			darkens in color]		
1,1,1-TCA	TWA 350 ppm (1900 mg/m ³)	700 ppm	Colorless liquid with a mild chloroform-	Inhalation, ingestion,	Irritation eyes, skin; headache, lassitude (weakness, exhaustion), central
			like odor.	skin and/or eye	nervous system depressant/depression, poor equilibrium; dermatitis;
				contact	cardiac arrhythmias; liver damage

Note: All values here are time-weighted averages (TWA) unless otherwise indicated. Definitions: PEL = Permissible Exposure Limit, the concentration that an employee may be exposed to for an 8-hour work day for a 40 hour work week for which all employees may be repeatedly exposed without adverse health effects; $mg/m^3 = milligrams$ per cubic meter of air; IDLH = Immediately Dangerous to Life and Health, contaminant concentration which present the possibility for severe health consequences if exposed to the IDLH concentration without the appropriate personal protective equipment (PPE); LEL = Lower Explosive Limit; Ca = potential human carcinogens, protective respirators recommended; <math>C = Ceiling, maximum concentration; N.D. = Not Determined.



ENGINEERS INC. Syracute, New York



8169 🕂 HENRY CLAY BLVD.

DATE:6/

6



NOTES:

- 1. LOCATIONS OF HOMEOWNER WELLS ARE APPROXIMATE (BASED ON OBSERVATIONS DURING 3/94 SAMPLING EVENT)
- 2. PROPERTY BOUNDARY INFORMATION ADAPTED FROM ONONDAGA COUNTY REAL PROPERTY TAX MAPS, 1995

	FIGURE 3
	LEGEND
	PROPERTY LINE
former	TREE LINE
4	RESIDENTIAL WELL (TO BE MONITORED SEMI—ANNUALLY)
MW-8 . ▲	SENTINEL WELL MW-8 (TO BE MONITORED SEMI-ANNUALLY)
EAG	LE COMTRONICS INC. CLAY, NEW YORK

RESIDENTIAL/SENTINEL WELL LOCATIONS

DATE: JUNE 2000 FILE NO.: 2665.23109-003



OBRIENS SERE



Appendix A

A BOOK

Record of Decision

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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Eagle Comtronics Inactive Hazardous Waste Site RECORD OF DECISION
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: <u>SITE HISTORY</u>

2.1: <u>Operational/Disposal History</u>

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: <u>Remedial History</u>

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: <u>Summary of the Site Investigation</u>

Included in the investigation were the following activities:

Eagle Comtronics Inactive Hazardous Waste Site RECORD OF DECISION

- 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.

<u>Soil</u>

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/ft² to 6.5 gpd/ft². 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.

Nature	e and Ex	TABLE 1 tent of Contamination a	l at the Eagle Co	mtronic	s Site
Media .	Class	Contaminant of Concern	Concentration Range in PPB	SCG	Frequency Exceeded
Subsurface Soil	VOCs	1,1-dichloroethene 1,1,1-trichloroethane trichloroethene	ND to 1,700 ND to 42,000 ND to 5,400	400 800 700	2 of 20 9 of 20 1 of 20
Ground water (08/18/89)	VOCs SVOCs	vinyl chloride chloroethane methylene chloride 1,1-dichloroethene 1,1-dichloroethane trans 1,2-dichloroethene 1,2-dichloroethane 1,1,1-trichloroethane toluene None > SCGs	ND to 18 ND to 2,800 ND to 27 ND to 270 ND to 3,300 ND to 1,300 ND to 150 ND to 150 ND to 66 ND to 170	2 5 5 5 5 5 5 5 5	1 of 7 3 of 7 1 of 7 2 of 7 6 of 7 3 of 7 2 of 7 2 of 7 1 of 7
	PCBs/Pe	esticides None > SCGs			
	Metais	None > SCGs			
Ground water (1/98)	VOCs	vinyl chloride 1,1-dichloroethene 1,1-dichloroethane cis 1,2-dichloroethene 1,2-dichloroethane	ND to 13 ND to 64 ND to 490 ND to 280 ND to 23	2 5 5 5 5	1 of 7 1 of 7 4 of 7 3 of 7 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 Remed ial 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 <u>Summary of Human Exposure Pathways</u>:

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 <u>Summary of Environmental Exposure Pathways</u>:

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.



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Eagle Componies Inactive Hazardous Waste Site RECORD OF DECISION

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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:

<u>COMMENT 1</u>: 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)

<u>RESPONSE 1</u>: 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.

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

<u>RESPONSE 2</u>: 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.

<u>COMMENT 3</u>: 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:

<u>COMMENT 4:</u> 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.

Monitoring Well Log Sheets





0 E	'BRIE NGINE	N I ERS	GERE INC.	·····			TEST BO	RING LOG	Repor	rt of Boring Sheet 1	No. Mi of 2	H-3D		_
Pr	oject	: Lo Ea	cation: gle Com	Clay, New tronics	York		SAM Type: Split Spoon Hammer: 140 lbs.	PLER Fall: 30"	Ground Wate File No.: 2	er Depth Depth 2665.003.131	Dat Dat	;e ;e		
10 II 3 CO III	ring remar 6 6ec	Co. n: B plog	: Parra arney W ist: T.	tt Wolff, aters Eddy	Inc.			Boring Location: Bround Elevation: Dates: Started: 4/9/	90	End	ed: 4/	10/90		
	oth			Sample Blows	Depetr/	=N=	Sam Descri	Sample			Fiel	d Tes So	ting	R
	0	No	Depth	/6"	Recovry	Value			Descript	113581160	рН	Cond	HNU	5
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■ 														
.	5	1	5-7'	5-4-3-6	2.5'/1'	7	Brown, moist, loose, grading to reddish br silt. trace fine to c	fine SAND, little silt own, moist, clay, some parse gravel.	L. L.					
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								,						
ľ	10	2	10-12'	6-13-	1.9/1.5	30	As above, grading to SILT. trace clay and	red, dry, very stiff fine gravel at 11.5°.						
				17-50/.4				-						
			•					· .						
,	15	3	15-17'	20-50/.3	0.8/0.8'		Hard, moist, red, SIL	T, trace clay.						ľ
			<u></u>											
┛┝	~		00.021	50/ 43	0.4/0.41		0- chain							
	20	4	20-22	507.4	0.4/0.4		HS above.					1		
	ස	5	25-27'	50/.11	0. 1/0. 5'		As above.							
5														
E	30	6	30-32'	34-50/.21	0.2/0.2	—	Highly weathered, gra ded SHALE.	yish red, thinly bed-				_		
												1Mi 4/3	13D. K. 30/90	JF

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O'BRI ENGIN	ENR	, GERE				TEST BORING LOG	Repo	rt of Boring Sheet 2	No. Mi of 2	+-3D			
Projec Stient	t Lo : Ei	cation: ngle Com	Clay, New tronics	r York		SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30*	Bround Wat File No.:	er Depth Depth 2665.003.131	Dat Dat	;e . ;e		-	
Soring Foresa 1986 Ge	Co. n: I olog	: Parra Narney W pist: T.	tt Wolff, aters Eddy	Inc.		Boring Location: Ground Elevation: Dates: Started: 4/9/	90	End	ed: 4/	10/90			
			Sample	••••••••••••••••••••••••••••••••••••••			Stratum		Field Testing				
Depth	No	Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Change General Descript	Equipment Installed	рН	Sp Cond	HNU		
								1					
		·									1		
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											·	I	
35	7	35-37'	50/.4	0.4/0.41		Red, dry, clayey SILT, little fine to ang-						l	
					·	ula: Male yravel.							
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			1	1			•						
	\square			<u> </u>									
40	8	40-42'	50/.1	0.1/0.1		Hard, reddish gray, dry, weathered, thinly					•		
	$\left \right $					bedded SHALE.							
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		45 01	50/ 11	0.1/0.11	<u> </u>	to sumple recovery:							
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	\square					Bottom of boring 45.9 ft.	-J. J.						
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										4/30	/90		



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ENGIN	EER	s, INC.				TEST BORING LOG		Sheet I	of 1	- J			
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Boring Forema OBG Ge	Co. n: l oloi	: Parra Barney W gist: Ti	tt-Wolff aters e Eddy			Boring Location: Ground Elevation: 95. Dates: Started: 8/15/	67' 89			Ended	:		
	Γ		Sample			Samle	Stratum	Fouiment	Field Test				
Depth	No	Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Description	General Descript	Installed	рH	Sp Cond			
0				GRAB		0-2' Damp, reddish-brown, fine/medium SAND, little fine/medium gravel, little silt.							
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			· · · ·	[- <u>-</u>									
	Π												
5		5-7 ¹	3-3-4-9	2/1.5	7	Red, wet, clayey SILT, some fine/medium gravel, poorly sorted, unstratified,							
						apparent till.							
	H												
·													
10	2	10-12'	14-5-	1.7/1.2		Reddish-brown, saturated, stiff, clayey SILT, some fine/medium gravel, poorly sort-				-			
	H	_	24-JU/.2			eu, unstratitieu, apparent till.							
						•							
							15.0'						
15	3	15-15.7	20-50/.2			Net, red-gray, fine/medium angular GRAVEL, some silt, some clay, little fine sand, metastified populy contor band							
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						Bottom of boring at 15 ft.							
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ENGIN	EER	GERE				TEST BORING LOG	Repo	rt of Boring Sheet 1	No. 1 of 2	na. mw-op of 2					
Projec Client	t Lo : Ea	cation: ngle Com	Clay, New tronics	York		SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Wat File No.:	er Depth Depth 2665.003.131	Dai Dai	te te					
Forema DBG Ge	Co. n: I olog	: Parra Jarney W jist: M.	tt Holff, aters J. Roma	Inc.		Boring Location: Ground Elevation: Dates: Started: 4/1	1/90	End	ied: 4	¥/11/90)				
			Sample	1	r	Sample	Stratum Change	Equipment	Fiel	ld Tes	ting				
Depth	No	Depth	Blows /6"	Penetr/ Recovry	"N" Value	Description	General Descript	Installed	pН	Sp Cond	HNU				
0		0-5'		-		Cuttings from auger from hard grab sample Dark brown, very fine SAND, trace silt, w no odor.	; et								
										1					
5	1	י7-5	5-4-4-12	2' /1'	8	Medium dense, fine SAND to 5.2', then red brown SILT, little yellow clay, moist.	/								
			· · · · · · · · · · · · · · · · · · ·												
10	2	10-12'	22-21-	1.4/1.4'		At 10.5' encounter rock debris (prob from		1							
			50/.41			cobble), red/brown SILT, blue/green weath ered material interspersed throughout sample.		1							
15	3	15-17'	50/.5'	0.5/0.5'		Red/gray SILT, apparent weathered rock. Hard, angular, blue/green fragments.	15, 21								
20		20, 201	50/ 21	0.040.03											
20	4	20-221	307.2	0.2/0.2		clay, wet, hard.									
ස	5	25-271	50/.1	0.1/0.1'		As above.									
	\square														
		70, 701	EQ (2)												

O'BRI ENGIN	en 1 Eers	GERE				TEST BORING LOG	Report of Boring NG. MH-5D Sheet 2 of 2					
Projec Client	t Lo : Ea	cation: ngle Comt	Clay, New cronics	York		SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Wat	er Depth Depth 2665.003.131	Dat Dat	te te	_	
Boring Forewar OBG Ge	Co. n: E olog	: Parrat Jarney Wa Jist: M.J	t Wolff, aters I. Roma	lnc.		Boring Location: Bround Elevation: Dates: Started: 4/11	/90	End	2d: 4/	/11/90		
		,	Sample	· · · · ·		Sample	Stratum Change	Equipment	Fiel	ld Tes	51	
Depth	No	Depth	Blows /6"	Penetr/ Recovry	"N" Value	Description	General Descript	Installed	рН	Sp Cond		
· ·		-								:		
35	7	35 - 37'	50/.11	0. 1/0. 1'		Reddish brown, weathered SILTSTONE, trace						
								•				
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40	8	40-42'	50 /0'	0' /0'		ko sample recovered.						
		41.5'			I	llue/green bedrock encountered at 41.5 ft.						
						Bottom of Boring 42.0'						
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O' BRI Engin	en (L GERE S, INC.				TEST BORING LOG	Repo	rt of Boring Sheet 1	No. 1 of 1	₩-6				
Projec Client	: Lo	ocation: agle Com	Clay, NY tronics			SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30 inches	Ground Hat File No.:	er Depth Depth 2665.002.130	Dai Dai	e				
Boring Foreman OB6 Gen	Co. n: 1 ploi	: Parra Barney W gist: Ti	tt-Wolff aters Eddy			Boring Location: Ground Elevation: 100 Dates: Started: 8/15/	. 42' 89		Ended: 8/1					
			Sample	}		Samle	Stratum	Fouiment	Fiel	ld Tes	ting			
Depth	No	Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Description	General Descript	Installed	рH	Sp Cond	HNL			
0				GRAB		Reddish-brown, fine/medium SAND, some fine/ medium gravel, trace silt, damp, apparent fill.								
						Grayish brown, moist, fine SAND, little silt, apparent fill.	2.0'							
								-						
5	1	5 - 7'	2-4-7-5	2'/1.8'	11	Soft, gray-brown, fine SAND, grading to clayey SILT with some fine/medium gravel								
						poorly sorted, unstratitied, apparent till.								
10	2	10-12'	12 -8-	2'/1.8'	18	Reddish-brown, saturated wet, medium stiff clayey SILT, ends in yellowish, weathered								
			10-16			rock.								
15	3	15-15.8	45-50/.3	1.8/1.5		Reddish-brown, clayey SILT, little fine/ medium pravel. saturated. prading to hard.	15.0'							
	+					reddish till, ending in reddish gray, fis- sle shale, apparent till.								
						Bottom of boring at 15.0 ft.								
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ENGIN Projec	t La	ocation:	Clay, NY	<u></u>		SAMPLER	Ground Hat	or 1 Dat	:2					
Client	: Ei	igle Com	ronics	_		Hammer: 140 lbs. Fall: 30 inch	s File No.:	2665.002.130	Dar	E				
Boring Forema DBG Ge	Co. n: 1 olog	: Parral Barney Wa Jist: Tim	tt-Wolff aters Eddy			Boring Location: Ground Elevation: 90 Dates: Started: 8/10	1. 61' 5/89			Ended:	8/16			
			Sample			Gamle	Stratum	Fauimant	Fiel	d Testing				
Depth	No	Depth	Blows /6*	Penetr/ Recovry	"N" Valve	Description	General Descript	Installed	рН	Sp Cond	HNU			
0				GRAB		Reddish brown, fine SAND, damp, apparent fill.								
								-						
5	1	י7-5	4-3-4-5	2' /1.5'	7	Brown, damp, fine SAND, trace silt, appar- ent fill (soft).								
									1					
10	2	10-11.4	24-41-	2'/1.8'		Red, wet, hard, clayey SILT, some coarse								
			50/.41			sand, fine gravel, trace coarse gravel, poorly sorted, unstratified, apparent till	.							
											i .			
i5						Bottom of boring at 15.1 ft.	- 15. 1'							
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Proj. Lo File No. Boring Forema Drill Rig OBG G	oc: Ci .: 231 Com in: Re g: Ing eolog	ay, NY 09 pany: on Busl jersoli l jist: Ch	Parrati h Rand A awn O'	- Wolff, Inc -200 Dell		Sampler: 2-inch split spoon Hammer: Hydraulic Fall: NA	Location: Northeast prop corner Start Date: 02/01/99 End Date: 02/01/99 Screen = \ Grout Riser Sand Steel // Bento						
Depth Below Grade 0	No. NA	Depth (feet) NA	Blows /6" NA	Penetr/ Recovery NA	"N" Value NA	Sample Description Auger to 5 feet below grade	Stratum Change General Descript	Equip. Installed	Field Testin PID (ppm)				
5	1	5-7	NA	2.0/1.6	NA	Dark yellowish brown 10YR 4/2, damp, fine SAND, some silt, little medium sand			0.0				
10	2	10-12	NĂ	2.0/1.5	NA	Dark yellowish brown 10YR 4/2, damp to saturated, fine SAND, some silt, becoming fine		= = = = =	0.0				
14	3	14-16	NA	2.0/1.5	NA	Gravish brown 5YR 3/2, saturated, medium to fine SAND, trace sitt			0.0				
			taile: 2 in	b x 0.010 inch	slatted P	VC screen: 18.0 . 8.0.6 by cond							

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Standard Ground Water Sampling Log
C DITETI & GELE ELIGIN		<u> </u>		uara Grou	nu water sam					
Date	·					· ·				
Site Name		•	Weath	ier _						
Location	<u> </u>		Well #	-	·					
Project No	<u> </u>		Evacu	ation Method	· .	-				
Personnel	·		Sampl	ing Method						
Well Information:										
Depth of Well *	<u></u>	_ft.	Water Volume	ft. for:						
Depth to Water *		ft.	2" Dia	meter Well = 0.	163 X LWC					
Length of Water Column		ft.	4" Dia	meter Well = 0	653 X LWC					
Volume of Water in Well		 gal.(s)	6" Dia	6" Diameter Well = 1.469 X LM/C						
3X Volume of Water in Well		gal.(s)				· ·				
			Volume remove Did well go dry	d before sampli ?	ng .	gal.(s)				
						(Other Specific)				
Measurements taken from		Well Casing		Protective C	asing					
Instrument Calibration:				ı						
	pH Buffer Readings	1	Condu	ctivity Standard	Readings					
	4.0 Standard 7.0 Standard		. 84	S Standard						
	10.0 Standard	· · · ·	. 14150	- Standard						
			•							
Water parameters:										
Gailons	Temperature	ר		r	Conductivity					
Removed	Readings		Readings		Readings uS/cm					
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nitial	initial	initial	<u></u>	initial						
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Water Sample:										
Time Collected										
Physical Appearance at Start]			Physical Ap	pearance at Samplin	g				
			·							
Color				Color		<u> </u>				
Odor				Odor		· · · · · · · · · · · · · · · · · · ·				
Turbidity (> 100 NTU)				Turbidity (>	100 NTU)					
Sheen/Free Product				Sheen/Free	Product					
Samples collected:										
Container Size	Container Type	# Colle	cted Field	Filtered	Preservative	Container pH				
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Notes:	1									
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New York State Department of Environmental Conservation Division of Environmental Remediation

Bureau of Hazardous Site Control, Room 260A 50 Wolf Road, Albany, New York 12233-7010 Phone: (518) 457-0927 • FAX: (518) 457-8989



MEMORANDUM

To:	Michael J. Ryan, P.E., Remedial Section A, BWRA
From:	John R. Strang, P.E., O&M Section, BHSC
Subject:	Eagle Comtronics, Site No. 7-34-058, Onondaga County 0

Date: April 4, 2000

I have reviewed the Draft Operation, Maintenance and Monitoring Manual for the above referenced site. The O&M for this site is strictly groundwater monitoring and inspections. A full comprehensive Health & Safety Plan is not justified. Some Health & Safety information is needed, however. My comments are as follows:

- 4. Monitoring and analytical methods Include in the Manual a summary of potential health effects for the contaminants of concern (1,1-Dichloroethane, 1,2-Dichloroethylene (total), 1,1,1-Trichloroethane). An example summary table is attached.
- 2. 4.2. Sampling procedures Include a copy of the Ground Water Field Sampling Log in the Manual.
- 3. Include a Site Emergency Contact List in the Manual. The list is to include the phone numbers of emergency personnel (Police, Fire Department, Ambulance) as well as the site contacts from Eagle Comtronics and O'Brien & Gere. Also, include a map showing the route to the nearest Hospital or Health Facility. Samples are attached.
- 4. 6. REPORTS The reports are to be sent to the following addresses. Please include them in the Manual.

Public Health Specialist NYSDOH Capital Region, Office of Public Health Syracuse Field Office 217 South Salina Street, 3rd Floor Syracuse, NY 13202-1323 Region 7 Hazardous Waste Engineer NYSDEC 615 Erie Blvd. West Syracuse, NY 13204-2400

5. Appendix B MONITORING WELL LOG SHEETS Include in Appendix B the Boring and Well Construction Logs for MW 2 and MW 3 as they are wells that are part of the monitoring program.

Contact me at 457-0927 if you have any questions.

Attachments

cc: H. Hamel, NYSDOH Carry C. Branagh, Reg. 7 W Ref G. Rider wr/o all.

C. Whitfield



c:734058om.wpd



Health & Safety Plan

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• TABLE 3.1.1 - Summary of Potential Health Effects

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Chemical	Location	PEL	IDLH	Charactefistics	Routes of Exposure	Symptoms of Exposure and Health Effects
Nuisance Dust	All areas	l 5 mg/m² 5 mg/m² (respirable)	Not Applicable	Airborne dust kicked up during sludge transportation or tailings area excavation activities.	Inhalation	Eye, nose, and throat irritation at concentrations approaching the OSIIA PEL. If soil are highly alkaline or acidic, there is an increased potential for irritation at lower concentrations.
Volatile Organic Compound (VOCs)	groundwater	Varies: 100 ppm TWA for perchloroethylene, trichloroethylene, & dichloroethane to 200 ppm TWA ² for dichloroethylene	Varies: 100 ppm for 1,1,2-trichloroethane to 3,000 ppm for dichloroethane	Soil / dust, colorless vapor released from contaminated soil or water that may have a strong, irritating, or otherwise characteristic odor.	Inhalation Contact Absorption	Irritation to the eyes, nose, and throat; dizziness; dermatitis. Many VOC's can cause liver and / or kidney damage. Several VOC's, including per, trichloroethane, and dichloroethane, are possible human carcinogens. Trichloroethane can be absorbed through the skin.
Benzene	groundwater	l ppm TWA 5 ppnı STEL	500 ppm	Soil / dust, colorless vapor released from contaminated soil or water that may have a strong, irritating, or otherwise characteristic odor generally detectable at 4-5 ppm.	Inhalation Absorption Contact	Irritation to the eyes, nose, and throat; dizziness; dermatitis. Prolonged exposure to hazardous levels may damage blood-forming systems. Benzene is also a suspected human carcinogen (ACGIII 1996 Class A2).
Vinył Chloride	groundwater	l ppm TWA 5 ppm STEL	Not Av.	Soil / dust, colorless vapor released from contaminated soil or water that may have a strong, irritating, or otherwise characteristic odor.	Inhalation, Contact	Short-term exposure to high concentrations may cause eye and respiratory tract irritation. Prolonged exposure to levels above OSIIA limits may damage the liver, nervous system, and skin. Known to cause liver cancer

* An appeals court decision forced OSHA to revert the PELs published in 1989 to the PELs listed in 1971. The PELs listed here reflect the 1971 PELs with 1989 PELs listed in parentheses. All values are 8-hour time-weighted averages (TWAs) unless otherwise indicated. Definitions PEL: Permissible Exposure Limit, the concentration an employee may be exposed to for an 8-hour work day for a 40 hour work week for which nearly all employees may be repeatedly exposed without adverse health effects. STEL - Short-Term Exposure Limit as a 15 minute average. Celling - maximum concentration; m() # m² = milligrams per cubic meter of air; I/ ee = fibers per cubic centimeter of air; IDLH IMMEDIATELY Dangerous to Life and Health, contaminant concentration which present the possibility for severe health consequences if exposed to the 1911 concentration without the appropriate personal protective equipment (PPE), LEL = Lower Explosive Limit

* Substance for which the Threshold Limit value (TLV) is higher than the OSHA PEL and / or the National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Linuit (REL)

O'Brien & Gere Technical Services, Inc.

General Electric / Bristol-Myers Squibb Co. - Site Remediation

SECTION 7 - EMERGENCY RESPONSE & CONTINGENCY PLAN

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This emergency response section details actions to be taken in the event of site emergencies. The SSHC is responsible for implementation of emergency response procedures.

7.1 Emergency Phone Numbers (to be posted on site)

Emergencies encountered on this site will be responded to via off-site emergency services and O'Brien & Gere personnel. The following master phone list will be prominently posted at the site command post.

PERSON OR AGENCY	PHONE NUMBER
PRIMARY POINT OF CONTACT:	
General Electric Company - Michael Ianniello	(518) 458-6612
ALTERNATE POINT OF CONTACT:	
de maximis (BMS Representative) - John Alonzo	(908) 735-9315
Bristol-Myers Squibb Co J. R. Rao	(315) 432-9653
LOCAL EMERGENCY SERVICES:	
FIRE - Pompey Hill	911 or (315) 677-3212
AMBULANCE	911
POLICE - Onondaga County Sheriff	911 or (315) 425-2111
HOSPITAL - Crouse Irving Memorial Hospital	911 or (315) 470-7111
Occupational Physician - Industrial Medical Associates	(315) 475-2909
Town of Pompey Highway Garage	(315) 682-9544
NYS Department of Transportation - Traffic Engineering	(315) 428-4380
CIVIL DEFENSE:	
National Response Center (USEPA and U.S.C.G.)	(800) 424-8002
USEPA Environmental Response Team	(908) 321-6660
CHEMTREC	(800) 424-9390
New York State Emergency Response	(518) 457-7362
CONTRACTORS:	
O'Brien & Gere O'Brien & Gere, Inc. (Syracuse office)	315-437-6400
Corporate Safety Coordinator (office)	315-437-6400 x-2832
Corporate Safety Coordinator (pager)	800-950-9479

O'Brien & Gere Technical Services, Inc.



State Route

Geo Feature

Town, Small City

Large City

Hospital

Park

Interstate, Turnpike

- Street, Road
- Hwy Ramps
- Trails
- Major Street/Road
- State Route
- -
- Interstate Highway
- 👝 US Highway

- Railroad River Open Water IIIIII Contour

Mag 13.00 Mon Jun 02 15:06:53 1997

Scale 1:50.000 (at center)

5000 Feet

1000 Meters

Same inter

Site Remediation - General Electric / Bristol-Myers Squibb Co.

7.2 Emergency Route To Hospital

(To be posted on site - Refer to Figure 1.)

1. Exit the site to the North onto RT 20 - Turn LEFT (West) to Pompey.

2. In Pompey, turn RIGHT onto RT 91.

3. Turn LEFT onto RT 173.

4. In Jamesville, turn RIGHT onto JAMESVILLE RD

5. Then take RT 481 SOUTH to RT 81 NORTH.

6. Take the ADAMS ST EXIT and turn RIGHT onto ADAMS ST.

7. Take a RIGHT onto IRVING AVE.

8. CROUSE IRVING MEMORIAL HOSPITAL is located at 736 Irving Ave.

7.3 Emergency Inventory

In addition to those items specified elsewhere, the SSHC or designee will maintain the following equipment and protective clothing in the event of emergencies:

A. Emergency eye-wash bottles;

B. First aid / Bloodborne pathogens kit;

C. Fire extinguishers (in mobile equipment, near hot work, etc.);

NOTE: The location of some emergency equipment (fire extinguisher, air horns, etc.) may change due to changing site characteristics. In general, equipment and supplies designated for emergency response will be located in the Support Zone.

New York State Department of Environmental Conservation 50 Wolf Road, Albany, New York 12233-7010



TRANSMITTAL MEMORANDUM

То:	Jerry Rider, P.E., Chief, O&M Section, BHSC	
From:	Michael J. Ryan, P.E., Rem. Section A, BWRA	
RE:	Eagle Comptronics, Site ID No. 7-34-058	

Attached for your review, please find a copy of the DRAFT Operation, Maintenance and

Monitoring Manual for the subject site. Please advise me of any comments or concerns.

If you have any questions regarding this matter, please contact at 457-4343.

If you have any questions or need additional information, please contact ⊠ myself or □ _______at (518) 457-4343.

CommentsSignature

□ File

FOR ACTION AS INDICATED:

- Please Handle
- Prepare Reply
- Prepare Reply for ______
 Signature
- Return to Me
- Information
- □ Approval
- Prepare final/draft in _____ Copies

DISTRIBUTION:

OPERATION, MAINTENANCE AND MONITORING MANUAL

Eagle Comtronics, Inc. Clay, New York



March 2000



Operation, Maintenance and Monitoring Manual

Eagle Comtronics, Inc. Clay, New York



Mul

Terrance P. Madden, P.E. Vice President

March 2000



5000 Brittonfield Parkway E. Syracuse, New York 13057

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O&M Manual

1. Introduction

1.1. Project background

The Eagle Comtronics (Eagle) facility is located at 4562 Waterhouse Road, Town of Clay, Onondaga County, New York. A site location map is included as Figure 1. As a result of a 1981 solvent spill that impacted the soil and groundwater, the site was assigned Site No. 7-34-058 by New York State Department of Environmental Conservation (NYSDEC). Following several soil and ground water investigations, a remedial remedy was selected for the site, as outlined in the Record of Decision (ROD) and issued by NYSDEC on March 1998. The selected remedy was to sample and analyze ground water from selected residential wells and monitoring wells. A copy of the ROD is included in Appendix A.

Based on he ROD, Eagle retained O'Brien & Gere Engineers, Inc. (O'Brien & Gere) to develop this Operation, Maintenance and Monitoring (O&M) Manual for the selected remedial remedy.

1.2. Purpose of the Operation, Maintenance and Monitoring (O&M) Manual

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This O&M Manual has been prepared in accordance the guidelines of the ROD issued by NYSDEC in March 1998. The purpose of this document is to provide a manual that can be used to properly monitor the ground water quality in the vicinity of the site.

O&M Manual

2. Site description

2.1. General site description

The Eagle facility is located at 4562 Waterhouse Road in Clay, New York. Liverpool, New York, 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 approximately 18 acres, with half of the property being actively used by Eagle. The site is located in a rural area used for both agricultural and residential purposes.

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

The site consists of an office building, engineering facility, and parking facilities. The office building is approximately 24,000 ft² and the engineering building is approximately 12,000 ft². Eagle assembles electronic components for the cable television industry.

2.2. History

The property now occupied by Eagle was originally developed in 1978 by Niagara Mohawk. 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 at a different location. Eagle 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 operates this facility as a product development and management facility for components for the cable television industry. Product

assembly, which occurred in the engineering facility prior to 1997, now takes place at a separate Eagle facility located near the intersection of Henry Clay Boulevard and Buckley Road.

Eagle used 1,1,1-trichloroethane (TCA) at the Waterhouse Road facility 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.

Since June 1989, several soil and ground water investigations have been conducted. As a result of these investigations ten monitoring wells were installed at the site. However, at this time, only eight wells exist. Two wells were damaged during the soil excavation and treatment activities initiated at the site in December 1993. The soil excavation and treatment program, approved by NYSDEC as an Interim Remedial Measure (IRM), was completed in May 1996.

In October 1993, NYSDEC listed the site as a Class 2 site on the New York State List of Inactive Hazardous Waste Disposal Sites. A Class 2 site, as defined by NYSDEC, represents a significant threat to public health or the environment with action required.

Two Order on Consent agreements (Index #A7-0306-93-10 and D7-0001-97-02) were signed by Eagle on December 1993 and February 1997 respectively, to perform various investigative and remedial activities.

In March 1998 a ROD was issued by NYSDEC which outlines the remedial remedy selected for the site. Refer to Appendix A.

On May 4, 1999, NYSDEC changed the classification of the site from a Class 2 to a 4 on the NYS List of Inactive Hazardous Waste Disposal Sites. A Class 4 site, as defined by NYSDEC, is a site that is properly closed but still requires continued management.

2.3. Hydrogeology/geology

The project area lies within the Erie-Ontario Lowlands Physiographic Province of New York State. This area is characterized by relatively low relief topography and lies between Lake Ontario to the north and the Appalachian Uplands to the south of Syracuse. The site is located on an upland area approximately 1200 feet west of the Clay Marsh which acts as

a local surface water drainage point. Surface water drainage from the site is to the northeast toward Waterhouse Road.

As a part of the various site investigations, soil borings were completed and ground water elevations measured. As a result of that data collection effort, the following conclusions were made:

- Geologic conditions at the site indicate that the shallow subsurface materials encountered within 15 feet of the ground surface consists of 5 to 10 feet of fine to medium sand which overlies a dense reddish brown glacial till. Bedrock was found at 42 feet.
- On-site ground water occurs in the overburden materials at a depth between 2 and 10 feet below ground level.
- Localized ground water flow across the site is to the northeast, generally toward Mud Creek at a velocity estimated to be 0.03 ft/day or 11 ft/year.

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3. Site remedial action

3.1. Description of remedial action

Based on the results of the site investigations and the IRM (soil excavation and treatment) that has been performed at the site, NYSDEC selected "No Further Action with Monitoring" as the preferred remedial alternative for the site.

Post-IRM sampling has shown that the source of the ground water contamination has been successfully remediated. Therefore, the only remaining medium of concern at the Eagle site is ground water. The solvent spill that caused contamination of groundwater at the Eagle facility occurred in 1981; approximately 19 years ago. Data collected during the site investigations has shown that ground water flows slowly to the northeast. Analytical data has shown that volatile organic compound (VOCs) concentrations in the ground water are greatest near the former source area, and decrease downgradient of the source area. This pattern has not changed over the 10 years that ground water has been monitored. Ground water flow rate calculations and the pattern of ground water contamination indicate that the VOC plume has not migrated significantly now that the source has been removed. In addition, a recent round of groundwater samples only detected degradation products of TCA. This includes 1,1-Dichloroethylene (DCE), 1,1-Dichloroethane (DCA) and 1,2-Dichloroethylene (1,2-DCE). Since only TCA degradation products remain and VOC concentrations have been slowly decreasing, it appears that contaminants are attenuating naturally.

Based on the apparent lack of migration of the VOC plume and the attenuation of VOCs in ground water, NYSDEC believes that neither the residential wells or Clay Marsh should be impacted by contaminated groundwater from the Eagle site. To confirm that there is no impact, NYSDEC recommended the following remedial actions:

- Install one "sentinel" monitoring well on the Eagle property.
- Semi-annually sample and analyze the following four residential drinking water wells and the "sentinel" well (MW-8) on the Eagle property for VOCs.

-8089 Henry Clay Boulevard (Gordon Wright) -8093 Henry Clay Boulevard (Paula Hughson)

O'Brien & Gere Engineers, Inc.

-8143 Henry Clay Boulevard (John Dukat)

-8169 Henry Clay Boulevard (John Dukat)

If the VOCs are detected in drinking water wells or the "sentinel" well, further action will be required.

- During only the first round of residential well sampling, sample and analyze one residential water well (not used as a drinking water source) located at 4573 Waterhouse Road (John Cerami) for VOCs.
- Annually sample and analyze monitoring wells MW-2, 3, 3D, 5, 5D, 6 and 7 (located on the Eagle property) for VOCs.

Refer to Figures 2 and 3 for monitoring and residential well locations, respectively.

In addition to the above remedial actions NYSDEC also proposed the following:

- The site will be reclassified from a Class 2 to a Class 4 on the New York State List of Inactive Hazardous Waste Disposal Sites, indicating that the site is property closed, but requires continued management.
- If concentrations of VOCs 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 Disposal Sites.

3.2. Goals of remedial action

It is the objective of NYSDEC that the selected remedy for any site should, at a minimum, eliminate or mitigate significant threats to the public health or the environment presented by the hazardous waste present at the site. NYSDEC believes that the remedial activity presented above will accomplished this objective.

4. Monitoring and analytical methods

4.1. Environmental monitoring

To address the requirements of the remedial action selected by NYSDEC, five residential wells located at 8089, 8093, 8143 and 8169 Henry Clay Boulevard and 4573 Waterhouse Road were sampled on January 27, 1999. Refer to Figure 3. In addition, "sentinel" well MW-8 was installed on the Eagle property on February 1, 1999. Following installation of MW-8, MW-2, 3, 3D, 5, 5D, 6, 7 and 8 were sampled on February 10, 1999. Refer to Figure 2 for locations and Appendix B for monitoring well log sheets. As required by the ROD, only the four residential wells on Henry Clay Boulevard were sampled again on June 24 and 25, 1999 and on February 16, 2000. MW-8 was sampled along with the residual wells on June 25, 1999 and February 16, 2000.

A summary of ground water quality data for the monitoring wells and the residential wells is provided in Tables 1 and 2, respectively. The analytical results from the sampling events for the monitoring wells and residential wells are submitted to NYSDEC and NYS Department of Health (NYSDOH).

4.2. Sampling procedures

4.2.1. Monitoring wells

Prior to commencing ground water sampling activities, ground water elevations shall be measured. Ground water elevation measurements shall be taken as follows:

- 1. Identify the well and record the locations and depth of well on the Ground Water Field Sampling Log.
- 2. Put on a new pair of disposable gloves.

- 3. Using an electric well probe, measure the depth to water table and record on the Ground Water Field Sampling Log.
- 4. Calculate the volume of water to be removed from the well
- 5. Clean the well probe and rinse it with distilled water after used.

Ground water samples shall be collected as follows:

- 1. Identify the well and record the location on the Ground Water Field Sampling Log. Review well depth, depth to water, and screened interval data.
- 2. Put on a new pair of disposable gloves.
- 3. Cut a slit in the center of a plastic sheet, and slip it over the well creating a clean surface onto which the sampling equipment can be positioned.
- 4. Clean all meters, tools, and equipment before placing these devices on the plastic sheet.
- 5. To bail the well, lower the bailer to the bottom of the well. Move the bailer up and down to resuspend any material that may have settled to the bottom of the well.
- 6. Initiate bailing of the well from the bottom. Keep the polypropylene rope on the plastic sheet. Pour the ground water from the bailer into a container of known volume to measure the volume withdrawn from the well.
- 7. Continue bailing the well through the water column and from the bottom until a sufficient volume (at least three well volumes) has been removed or until the well is dry. If the well is dry, allow sufficient time for the well to recover before proceeding.
- 8. During the removal of successive well volumes, measure the water temperature, pH, and conductivity with calibrated meters. Record the data on the Ground Water Field Sampling Log.
- 9. Remove the 40 ml vials from their transport containers, and prepare the bottles for receiving samples. Inspect all labels to insure proper sample identification. Sample bottles should be kept cool with their caps on until they are ready to receive samples. Arrange the sampling containers to allow for convenient filling.
- 10. Place samples in the cooler and transfer to a laboratory. The samples shall be accompanied by a completed Chain of Custody form.

11. Replace and lock the well cap, and replace the flush mounted cover (if present) before leaving the well location.

4.2.2. Residential wells

Each of the homeowners shall be contacted via telephone prior to sampling to schedule a site visit. The date and time shall be agreed to and a letter shall be sent to each residence to serve as written confirmation of the scheduled sampling program.

At the homeowners sites, the water from a sink faucet shall be allowed to run for approximately five minutes prior to collecting a sample in a 40 ml vial. Label the sample vials to provide proper identification and place the vials in a cooler for transfer to a laboratory. The samples shall be accompanied by a completed Chain of Custody form.

4.3. Analytical methods

All monitoring well samples, including "sentinel" well MW-8, shall be analyzed for volatile organic compounds (VOCs) using EPA Method 8021. A trip blank shall be included with the samples. Residential well samples shall be analyzed for VOCs using EPA Method 601/602. A trip blank shall be included with the samples.

4.4. Laboratory quality assurance/quality control (QA/QC)

A Level 1 laboratory Quality Assurance/Quality Control (QA/QC) shall be provided for all samples. The laboratory shall perform matrix spikes, matrix spike duplicates, laboratory control samples (LCS) and surrogate recoveries to monitor the accuracy of the analyses by comparing recoveries to QA/QC criteria. Only the surrogate recoveries shall be reported with the individual sample results. The laboratory shall maintain the results of the other QA/QC samples.

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5. Monitoring well maintenance activities

5.1. General .

Each ground water monitoring well shall be inspected annually. The inspection shall include the condition of the concrete pad, protective casing, locks and locking cap. Damaged locks or caps shall be replaced, as required.

Results of the annual inspection shall be reported in the annual report. Refer to Section 6.2.

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6. Reports

6.1. Semi-annual reports

Semi-annual reports shall be developed for residential and sentinel well (MW-8) sampling and analyses activities. The data collected will be arranged and presented in a clear, concise and logical format.

A summary of the field activities, analytical data results, laboratory sheets, and chain of custody form shall be included in the report. The reports shall be submitted to NYSDEC and NYSDOH.

6.2. Annual reports

Annual reports shall be developed for monitoring well sampling and analyses activities. The data collected will be arranged and presented in a clear, concise and logical format. A summary of field activities, analytical data results, tables, laboratory sheets, chain of custody form and site plan shall be included in the report. The reports shall be submitted to NYSDEC and NYSDOH.

Table 1

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Eagle Comtronics, Inc. Ground Water Quality Data (All values reported as ug/L)

	(All values reported as ug/L)											
Location	Sampling Date	Vinyl Chloride	Chloroethane	Methylene Chloride	1,1-DCE	1,1-DCA	1,2-DCE	1,2-DCA	1,1,1-TCA	TCE	Toluene	Total VOC
MW-2	7/18/89	<1	<1		<1	6.8		<1	1.8		<1	9
	8/18/89	<1	<1	<1	<1	9	5	<1	<1	1	<1	15
	9/1/89	<1	<1	<1	<1	9	5	<1	<1	1	<1	15
	4/12/90	<1	<1	<1	<1	3	<1	<1	<1	<1	<1	3
	11/6/92	<]	2	<1	<1	<1	<1	<1	<1	<1	<1	2
	10/28/94	<1	1	<1	<1	7	3	<1	<1	<1	<1	11
,	1/31/96	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	1/12/98	<1	<1	<1	<1	<1	<1	<1	<1	<1	· <1	<1
	2/10/99	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-3	7/18/89	12.1	137		19.1	833		36.2	<10		<10	1037
	8/18/89	<1	4	<1	<1	56	1	1	<1	<1	<1	62
	9/1/89	<1	4	<1	<1	52	2	<1	<1	<1	<1	58
	4/12/90	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	11/6/92	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	10/28/94	<1	2	<1	<1	2	<1	<1	<1	<1	<1	4
	1/31/96	<1	3	<1	<1	1	<1	<1	<1	<1	<1	4
	1/12/98	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	1
	2/10/99	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	1
MW-3D	4/12/90	<1	1	<1	<1	12	<1	<1	<1	<1	<1	13
	11/6/92	<1	1	<1	<1	12	<1	<1	<1	<1	<1	13
	10/28/94	<]	31	<1	4	110	24	8	<1	<1	<1	177
	1/31/96	<1	<1	<1	<1	5	<1	<1	<1	<1	<1	5
	1/12/98	<1	<1	<1	<1	4	<1	<1	<1	<1	<1	. 4
	2/10/99	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	2
												- <u>-</u>
MW-5	8/18/89	<1	10	<1	2	90	. 3	2	<1	<1	<1	107
	9/1/89	<1	4	<1	1	93	5	2	<1	<1	<1	105
	4/12/90	<1	2	<1	<1	31	3	<1	<1	<1	<1	36
	11/6/92	<1	19	<1	1	47	14	4	<1	<1	<1	85
	10/28/94	<1 .	2	<1	4	41	20	2	<1	<1	<1	69
	1/31/96	<1	<1	<1	3	37	23	2	<1	<1	<1	65
	1/12/98	<1	<1	<1	2	30	11	<1	<1	<1	<1	43
	2/10/99	<1	<1	<1	3	32	16	<1	<1	<1	<1	. 51

Table 1

Eagle Comtronics, Inc. Ground Water Quality Data (All values reported as ug/L)

Location	Sampling Date	Vinyl Chloride	Chloroethane	Methylene Chloride	1,1-DCE	1,1-DCA	1,2-DCE	1,2-DCA	1,1,1-TCA	TCE	Toluene	Total VOCs
MW-5D	4/12/90	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	2
	11/6/92	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	10/28/94	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	1/31/96	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	1/12/98	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	2/10/99	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-6	8/18/89	18	590	27	270	3300	530	150	66	<10	<10	4951
	9/1/89	<10	450	14	210	2400	370	100	35	<10	<10	3579
	4/12/90	<1	32	<1	8	57	10	2	1	<1	<1	110
	11/6/92	<50	730	<50	140	2000	560	91	<50	<50	<50	3521
	10/28/94	<50	500	<50	140	1700	570	80	<50	<50	<50	2990
	1/31/96	<50	170	<50	180	1900	750	100	<50	<50	<50	3100
	1/12/98	<10	<10	<10	62	440	300	17	<10 ·	<10	<10	819
	2/10/99	<50	<50	<50	120	620	460	<50	<50	<50	<50	1200
MW-7	8/18/89	<1	2	<1	<1	23	<1	<1	<1	<1	<1	25
	9/1/89	<1	<1	<1	<1	17	<1	<1	<1	<1	<1	17
	4/12/90	<1	2	<1	<1	40	<1	<1	<1	<1	<1	42
	11/6/92	<1	<1	<1	2	56	12	3	<1	<1	<1	73
	10/28/94	<1	<1	<1	1	19	6	<1	<1	<1	<1	26
	1/31/96	<1	<1	<1	1	41	19	<1	1	<1	<1	62
	1/12/98	<1	<1	<1	3	27	19	1	<1	<1	<1	50
	2/10/99	<1	<1	<1	3	17	18	<1	<1	<1	<1	38
<u> </u>	r	<u> </u>			·		i		i			
MW-8	2/10/99	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	6/25/99	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	2/16/00	<1	<]	<1	<1	<1	<1	<1	<1	<1	<1	<1
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Notes:

Bromodichlormethane and Chloroform were also detected in MW-5D on 4/12/90.
 NYS Class GA Standard applies to both the cis and trans isomer of 1,2-DCE.

Abbreviations: NS: Not sampled 1,1-DCE: 1,1-Dichloroethylene 1,1-DCA: 1,1-Dichloroethane 1,2-DCE: 1,2-Dichloroethylene (total) 1,2-DCA: 1,2 -Dichloroethane 1,1,1-TCA: 1,1,1-Trichloroethane TCE: Trichloroethylene

Table 2

Eagle Comtronics, Inc. Residential Well Data

Sample Location/Property Owner	Sample Date	<u>Total VOCs (ppb)</u>
8089 Henry Clay Blvd. (Gordon Wright)		
	1/27/99	ND
	6/24-25/99	ND
	2/16/00	ND
8093 Henry Clay Blvd. (Paula Hughson)		
	3/31/94	ND
	1/27/99	ND
	6/24-25/99	ND
·	2/16/00	ND
8143 Henry Clay Blvd. (John Dukat)		
	3/31/94	ND
	6/5/97	ND
· · · · · ·	1/27/99	ND
·	6/24-25/99	ND
	2/16/00	ND
8169 Henry Clay Blvd. (John Dukat)		
· · · · · · · · · · · · · · · · · · ·	3/31/94	ND
•	1/27/99	ND
	6/24-25/99	ND
	2/16/00	ND
4573 Waterhouse Road (John Cerami) (2)		
	1/27/99	14

Notes:

1. ND – Non-detect

2. The well at 4573 Waterhouse Road is not used as a drinking water source and the existing pump in the well is not operable. The residence is connected to the municipal water system.

I:\DIV58\PROJECTS\2665\23109\5_RPTS\Table 2.doc



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NOTES:

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- 1. LOCATIONS OF HOMEOWNER WELLS ARE APPROXIMATE (BASED ON OBSERVATIONS DURING 3/94 SAMPLING EVENT)
- 2. PROPERTY BOUNDARY INFORMATION ADAPTED FROM ONONDAGA COUNTY REAL PROPERTY TAX MAPS, 1995



Appendix A

Record of Decision



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.

3/73/98

Date

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

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Eagle Comtronics Inactive Hazardous Waste Site RECORD OF DECISION

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: <u>Remedial History</u>

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: <u>CURRENT STATUS</u>

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: <u>Summary of the Site Investigation</u>

Included in the investigation were the following activities:

Eagle Comtronics Inactive Hazardous Waste Site RECORD OF DECISION

- 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.

<u>Soil</u>

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.

<u>Groundwater</u>

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.

		TARIE			
Nature	e and Ex	tent of Contamination a	at the Eagle Co	mtronic	s Site
Media .	Class	Contaminant of Concern	Concentration Range in PPB	SCG	Frequency Exceeded
Subsurface Soil	VOCs	1,1-dichloroethene 1,1,1-trichloroethane trichloroethene	ND to 1,700 ND to 42,000 ND to 5,400	400 800 700	2 of 20 9 of 20 1 of 20
Ground water (08/18/89)	VOCs SVOCs	vinyl chloride chloroethane methylene chloride 1,1-dichloroethene 1,1-dichloroethane trans 1,2-dichloroethene 1,2-dichloroethane 1,1,1-trichloroethane toluene None > SCGs	ND to 18 ND to 2,800 ND to 27 ND to 270 ND to 3,300 ND to 1,300 ND to 150 ND to 66 ND to 170	2 5 5 5 5 5 5 5 5 5	1 of 7 3 of 7 1 of 7 2 of 7 6 of 7 3 of 7 2 of 7 2 of 7 1 of 7
	PCBs/Pe	esticides None > SCGs			
	Metais	None > SCGs			
Ground water (1/98)	VOCs	vinyl chloride 1,1-dichloroethene 1,1-dichloroethane cis 1,2-dichloroethene 1,2-dichloroethane	ND to 13 ND to 64 ND to 490 ND to 280 ND to 23	2 5 5 5 5	1 of 7 1 of 7 4 of 7 3 of 7 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.

Eagle Comtronics Inactive Hazardous Waste Site RECORD OF DECISION 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 Remed ial 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 <u>Summary of Human Exposure Pathways</u>:

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 <u>Summary of Environmental Exposure Pathways</u>:

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.

Eagle Comtronics Inactive Hazardous Waste Site RECORD OF DECISION

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.

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- 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.





DATE: 01/02/98

DRAWING 2



Eagle Compronics Inactive Hazardous Waste Site RECORD OF DECISION

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:

<u>COMMENT 1</u>: 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)

<u>RESPONSE 1</u>: 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.

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

<u>RESPONSE 2</u>: 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.

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

Eagle Comtronics Inactive Hazardous Waste Site RECORD OF DECISION <u>**RESPONSE 3**</u>: 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:

<u>COMMENT 4</u>: 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).

Eagle Comtronics Inactive Hazardous Waste Site RECORD OF DECISION

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.

Eagle Comtronics Inactive Hazardous Waste Site RECORD OF DECISION

Monitoring Well Log Sheets

have logs fr

45.9' MW3D

14.8' (not part of monitoring program) mw4

MW5 -15.0

42.0 MW SD

15.0 MW 6

- 15,1 MW7

14. O (sentirel Well) MW8

missing

NW2

MW 3

0 9	BRIE	N &	GERE				TEST B	Dring Log	Repor	t of Boring Sheet I	No. Mi of 2	H-3D		
Pro	oject	; Lo	cation:	Clay, New	York		SA Type: Split Spoon	PLER	Ground Wate	er Depth Depth	Dat Dat	;e ;e		
	ient:	: Ea	gle Com	tronics	1		Hammer: 140 lbs.	Fall: 30"	File No.: a	2665.003.131				
iBi 1Bi	ring remar 6 6ec	to. n: B plog	: Parra arney W ist: T.	aters Eddy	inc.			Boring Location: Bround Elevation: Dates: Started: 4/9/	90	End	ed: 4/	/10/90		
				Sample			Sar	iole	Stratum Change	Equipment	Fiel	d Tes	ting	R
)e	pth	No	Depth	Blows /6"	Penetr/ Recovry	"N" Value	Desci	-iption	General Descript	Installed	рH	Sp Cond	HINU	k s€
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	5		5-7'	5-4-3-6	2.5 /1	7	grading to reddish br	time SAND, little silt own, moist, clay, some						
							silt, trace time to t	coarse gravel.						
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[-	10	2	10-121	6-13-	1 9/1 51	70	As above, mading to) red. dry. very stiff						
	10	-		17-50/.4			SILT, trace clay and	fine gravel at 11.5'.						
		$\left - \right $						\sim		1				
-				l										
		$\left \right $										1		
■ 	15	3	15-17'	20-50/.3	0.8/0.8		Hard, moist, red, SIL	I, trace clay.						
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J —			<u></u>											
	20	4	20-221	50/.41	0.4/0.41		As above.							
₋∟		\square					- -							
	25	5	25-27'	50/.1'	0.1/0.5'		As above.							
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F	70		70-791	24-50/ 21	0 2/0 21		Highly weathered, gra	yish red, thinly bed-						
┛		P	30-35	J-JU/.2'	0.2/0.2									_
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1MW3D.KJF 4/30/90

ī	O'BRI ENGIN	EN EER	s, ^{gere} .				TEST BO	RING LOG	Repo	rt of Boring Sheet 2	No. Mi of 2	₩-3D		
	Projec ¹ ient	t L : E	ocation: agle Com	Clay, New	w York		SAM Type: Split Spoon Hammer: 140 lbs.	PLER Fall: 30°	Ground Wat File No.:	er Depth Depth 2665.003.131	Dat Dat	te . te		
	oring Forema DBG Ge	Co n: olo	: Parra Barney W gist: T.	tt Wolff, aters Eddy	Inc.			Boring Location: Ground Elevation: Dates: Started: 4/9/9	0	End	ed: 4/	/10/90		
	Depth	\vdash		Sample Blows	e Penetr/	•N•	San Descr	ple iption	Stratum Change General	Equipment Installed	Fiel	ld Tes So	ting	R m k
		No	Depth	/6*	Recovry	Value		· · · · · · · · · · · · · · · · · · ·	Descript		рН	Cond	HNU	S#
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-	ক্র	7	35-37'	50/.41	0.4/0.4	-	Red, dry, clayey SILT,	, little fine to ang-		i				
						·	ular snale gravel.							
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	40	8	40-421	50/.11	0. 1/0. 1'		Hard, reddish gray, dr bedded SHALE.	y, weathered, thinly						
	i			 										
	45	9	45'	50/01	0/0		No sample recovery.							
- 🗖		10	45. 9'	50/.1'	0. 1/0. 1'	_	Thinly bedded red and SILTSTONE.	greenish competent						
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271430. KJI 4/30/90



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Projec	t L	cation:	Clay, NY			SAMPLER	Ground Wat	er Depth	Da	te				
Client	:: E	agle Com	tronics			Type: Split Spoon Hammer: 140 lbs. Fall: 30 inche	s File No.:	Depth 2665.002.130	Da	te				
Boring Forema	Co.	: Parra Barney W	tt-Wolff aters Eddy			Boring Location: Ground Elevation: 10 Dates: Started: 8/16	2. 931 /89 Ended:					1: 8/16/89		
	1		Sample				Stratum	1	Fie	ld Tes	ting	T		
Depth	NO	Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Change General Descript	Equipment Installed	рH	Sp Cond	HNU			
0				GRAB		Brown, damp, fine/medium SAND, some fine/ medium gravel, trace silt, apparent fill.						T		
					<u> </u>									
									ł	1				
<u> </u>	\square					· · ·			1		1	l		
5	1	5-7'	5-22-	2'/1.8'	45	Brown with reddish tinge, wet, fine SAND,								
	\Box	ć	23-27			stiff, apparent fill.		•						
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									× 1					
10	2	10-10.9	16-50/41	.91/.91		Red, wet, hard, clayey SILT, some fine		[
						gravel, trace fine sand, poorly sorted, unstratified, apparent till.								
			<u> </u>				14.8'							
[]	3	15-15.9	21-60/4'	.9'7.9'	_	- Same as above. Rottom of boring at 14.81.								
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Projec	t Lo	cation:	Clay, NY			SAMPLER	Ground Wat	er Depth	Dat	te		•
Client	: Ei	agle Com	tronics		•	Hammer: 140 lbs. Fall: 30 inch	es File No.:	Depth 2665.002.130	Dat	;e		
Boring Forema OBG Ge	Co. n: 1 olog	: Parrat Barney Wa pist: Tin	tt-Wolff aters m Eddy			Boring Location: Ground Elevation: S Dates: Started: 8/1	15.67' 5/89			Ended:	8/1	1
	Γ		Sample	1		Same la	Stratus	Faultanet	Fiel	d Tes	ting	ļ
Depth	No	Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Description	General Descript	Installed	рH	Sp Cond	HN	Ĺ
0				GRAB		0-2' Damp, reddish-brown, fine/medium SAN little fine/medium gravel, little silt.	D,					
<u></u>												
5	1	5-7'	3-3-4-9	2/1.5	7	Red, wet, clayey SILT, some fine/medium gravel, poorly sorted, unstratified, apparent till.				•		
· .			· · · · · · · · · · · · · · · · · · ·					• •				
10	2	10-12'	14-5-	1.7/1.2		Reddish-brown. saturated. stiff. clayev						
			24-50/.2			SILT, some fine/medium gravel, poorly sor ed, unstratified, apparent till.	:-					
			· · · ·			•						
15	3	1,5-15. 7	20-50/.2			Het, red-gray, fine/medium angular GRAVEL,	- 15. 0'				1	
						instratified, poorly sorted, hard, apparential.	rt					
						Bottom of boring at 15 ft.						
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Projec Client	t Lo : Ea	cation: ngle Com	Clay, New tronics	York		SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30°	Ground Wat File No.:	er Depth Depth 2665.003.131	Da Da	te te		
bring Forema OBG Ge	Co. n: H olog	: Parra Darney W Jist: M.	tt Wolff, aters J. Roma	Inc.		Boring Location: Ground Elevation: Dates: Started: 4/11	/90	Enc	led: 4	4/11/90)	
			Sample			Sample	Stratum Change	Fauiment	Fie	ld Tes	ting	1
Depth	No	Depth	Blows /6"	Penetr/ Recovry	"N" Value	Description	6eneral Descript	Installed	pН	Sp Cond	HNU	5
0		0-5'				Cuttings from auger from hard grab sample; Dark brown, very fine SAND, trace silt, we no odor.	ŧ					
5	1	5-71	5-4-4-12	2'/1'	8	Medium dense, fine SAND to 5.2', then red/ brown SILT, little yellow clay, moist.						
		;										
10	2	10-12'	22-21-	1.4/1.4'		At 10.5' encounter rock debris (prob from cobble), red/brown SILT, blue/green weath- ered material interspersed throughout						
						sample.						
15	3	י15-17	50/.51	. 5/0. 5'		Red/gray SILT, apparent weathered rock. Hard, angular, blue/green fragments.	15.2'					
20	4	20-22'	50/.2'	0.2/0.2י		Reddish gray weathered SILTSTONE, some clay, wet, hard.						
3	5	25-27'	507.1	0.1/0.1		As above.						
30	6	30-32'	50/.3'	0. 3/0. 3'	-	As above with trace silt, trace clay.						
y										1MW5D. 4/30/9	KJF 30	

ENGIN Projec Client	t Lo : Ea	cation:	Clay, New	ı York		SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30"	Ground Wat	er Depth Depth 2665.003.131	Dat Dat	;e ;e	
Boring Forema OB6 Ge	Co. n: E olog	: Parrat Jarney Wa jist: M.	t Wolff, aters 1. Roma	lnc.		Boring Location: Ground Elevation: Dates: Started: 4/11	/90	Endr	ed: 4/	/11/90	
	Γ		Sample				Stratum		Fiel	d Tes	sti
Depth	No	Depth	Blows /6"	Penetr/ Recovry	"N" Value	Sample Description	Change General Descript	Equipment Installed	рН	Sp Cond	
					· .						
35	7	35-37'	50/.11	0. 1/0. 1'		Reddish brown, weathered SILTSTONE, trace					
						С18у.		•			
<u></u>											
40	8	40-421	50/0'	0' /0'		No sample recovered.					
		41.5'				Blue/green bedrock encountered at 41.5 ft.					
<u> </u>						Bottom of Boring 42.0'					
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ENGIN	ÉÉR	S, INC.				TEST BORING LOG		Sheet 1	of 1		
Projec Client	t L ; E	ocation: agle Com	Clay, NY tronics			SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30 inches	Ground Wat	er Depth Depth 2665.002.130	Dat Dat	te te	
Boring Forema OBS Ge	Co n: olo	: Parra Barney W gist: Ti	tt-Wolff aters ∎ Eddy			Boring Location: Ground Elevation: 100 Dates: Started: 8/15/	. 42' 89			Ended:	8/1
			Sample			Samle	Stratum	Fouinment	Fie	ld Tes	ting
Depth	No	Depth	Blows /6*	Penetr/ Recovry	"N" Valve	Description	General Descript	Installed	рH	Sp Cond	HNU
0				GRAB		Reddish-brown, fine/medium SAND, some fine/ medium gravel, trace silt, damp, apparent fill.					
						Grayish brown, moist, fine SAND, little silt, apparent fill.	2.0'				
5	1	5-7'	2-4-7-5	21/1.81	11	Soft, gray-brown, fine SAND, grading to clayey SILT with some fine/medium gravel poorly sorted, unstratified, apparent till.					
						· · · · · · · · · · · · · · · · · · ·					
10	2	10-12'	12 -8-	2'/1.8'	18	Reddish-brown, saturated wet, medium stiff clayey SILT, ends in yellowish, weathered	×.				
			10-16			rock.					
15	7	15-15 A	45-50/ 3	1.8/1.51		Raddish-brown, clavery SILT little fire/	15.0'				
			45 507.5			medium gravel, saturated, grading to hard, reddish till, ending in reddish gray, fis- sle shale. apparent till.					
						,					
						Bottom of boring at 15.0 ft.					•
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ENGIN	EER	s, inc.		•		TEST BORING LOG		Sheet 1	of 1	• •		_
Projec Client	: L	ocation: agle Com	Clay, NY tronics			SAMPLER Type: Split Spoon Hammer: 140 lbs. Fall: 30 inches	Ground Wate File No.: :	er Depth Depth 2665.002.130	Dat Dat	:e :e		
Boring Foreman OBG Geo	Co. n: 1 010	: Parrat Barney Wa gist: Tin	tt-Wolff aters Eddy			Boring Location: Ground Elevation: 98. Dates: Started: 8/16/	61' 89			Endeds	8/16	5/
			Sample		_	Samla	Stratus	Fauiment	Fiel	d Tes	ting	I
Depth	No	Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Description	General Descript	Installed	рH	Sp Cond	HNU	
0				GRAB	 	Reddish brown, fine SAND, damp, apparent fill.						
5	1	5-7'	4-3-4-5	2" /1.5"	7	Brown, damp, fine SAND, trace silt, appar- ent fill (soft).						
10	2	10-11.4	24-41-	2'/1.8'	-	Red, wet, hard, clayey SILT, some coarse sand, fine gravel, trace coarse gravel.						, i I
	-		50/.4			poorly sorted, unstratified, apparent till.						
							18 11					
15						Bottom of boring at 15.1 ft.	13.1					
	-											
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			I	B.		<u> </u>				MW7.8	UK	


O'BRIEN & GERE ENGINEERS, INC. Client: Eagle Comtronics Proj. Loc: Clay, NY File No.: 23109 Boring Company: Parratt- Wolff, Inc. Foreman: Ron Bush Drill Rig: Ingersoll Rand A-200 OBG Geologist: Chawn O'Dell					Drill Method: 4.25 inch HSA Sampler: 2-inch split spoon Hammer: Hydraulic Fall: NA	MW-8 Page 1 of 1 Location: Northeast propert corner Start Date: 02/01/99 End Date: 02/01/99 Screen = \ Grout Riser Steel 7/ Bentoni		
Depth Below Grade N	Depth o. (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Field Change Testin General Equip. PID Descript Installed (ppm)		
					Auger to 5 feet below grade			
5	5-7	NA	2.0/1.6	NA	Dark yellowish brown 10YR 4/2, damp, fine SAND, some silt, little medium sand	0.0 = =		
2	10-12	NA	2.0/1.5	NA	Dark yellowish brown 10YR 4/2, damp to saturated, fine SAND, some silt, becoming fine to medium SAND at approximately 11.5 - 12.0 ft			
14 3			2.0/1.5	NA	Grayish brown 5YR 3/2, saturated, medium to fine SAND, trace silt	- 0.0 = = = = = = = = = = = = =		
					· · ·			



John P. Cahill Commissioner

TRANSMITTAL MEMORANDUM

То:	John Strang, P.E., O&M Section, BHSC
From:	Michael J. Ryan, P.E., Rem. Section A, BWRA
RE:	Eagle Comptronics Site, ID No. 7-34-058

Attached for your records please find copies of the two Orders on Consent for the

subject site. The first Order (12/93) was issued for the implementation of an IRM. The

second Order (2/97) was issued as a Modification to the initial Order to permit additional

investigatory work and assess the effectiveness of the IRM.

Please call with any questions.

If you have any questions or need additional information, please contact is myself or □ _______ at (518) 457-4343.

FOR ACTION AS INDICATED:

- Please Handle
- Prepare Reply
- Prepare Reply for ______
 Signature
- □ Return to Me
- Information
- □ Approval
- Depare final/draft in _____ Copies

DISTRIBUTION:

□ Comments

Signature

⊠ File

STATE OF NEW YORK: DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of the Development and Implementation of an Interim Remedial Measure Program for an Inactive Hazardous Waste Disposal Site, Under Article 27, Title 13, and Article 71, Title 27 of the Environmental Conservation Law of the State of New York by by

ORDER ON CONSENT

INDEX # A7-0306-93-10

EAGLE COMTRONICS, INC.,

Respondent.

Site Code #734058

WHEREAS,

1. The New York State Department of Environmental Conservation (the "Department") is responsible for enforcement of Article 27, Title 13 of the Environmental Conservation Law of the State of New York ("ECL"), entitled "Inactive Hazardous Waste Disposal Sites." This Order is entered into pursuant to the Department's authority under ECL Article 27, Title 13 and ECL 3-0301.

2. Eagle Comtronics, Inc. ("Respondent" or "Eagle Comtronics"), is a manufacturer of electronic components at a facility on Waterhouse Road in the Town of Clay, County of Onondaga, New York. Release of Hazardous Wastes occurred during an incident in 1981 from punctured drums situated behind the assembly building. Analyses of the soils and groundwater at the site indicate that contaminants from this release include the following hazardous wastes: 1,1,1 Trichloroethane, Methylene Chloride, Toluene. Later sampling confirmed the presence of these contaminants, as well as other, associated VOCs: 1,1 Dichloroethane, 1,1 Dichloroethane, trans-1,2-Dichloroethene, 1,2 Dichloroethane and Trichloroethene.

These substances have had a significant impact on groundwater quality from volatile organic compounds ("VOCs") as high as 5471 part per billion (ppb) in the vicinity of the aforesaid disposal. The Site is situated approximately 1300 feet upgradient of Clay Marsh, a NYS Wildlife management Area which contains a Class 1 Freshwater Wetland and a Class D stream (Mud Creek). VOC contamination has been documented at least 300 feet from the spill area (70 ppb) to date. A site location map is annexed as Appendix A to this Order.

3. The Department has determined that the Site appears to qualify as an inactive hazardous waste disposal site, as that term is defined at ECL 27-1301.2. If the Department concludes that the Site is, in fact, an inactive hazardous waste disposal site, Respondent will be so advised in writing. That notification will state whether the Site presents a significant threat to the public health or environment and whether the Site has been listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

4. A. In the event that this Site is determined to be an inactive hazardous waste site, note that, pursuant to ECL 27-1313.3.a, whenever the Commissioner of Environmental Conservation (the "Commissioner") "finds that hazardous wastes at an inactive hazardous waste disposal site constitute a significant threat to the environment, he may order the owner of such site and/or any person responsible for the disposal of hazardous wastes at such site (i) to develop an inactive hazardous waste disposal site remedial program, subject to the approval of the department, at such site, and (ii) to implement such program within reasonable time limits specified in the order."

B. Note also that any person under order pursuant to ECL 27-1313.3.a has a duty imposed by ECL Article 27, Title 13 to carry out the remedial program committed to under order. ECL 71-2705 provides that any person who fails to perform any duty imposed by ECL Article 27, Title 13 shall be liable for civil, administrative and/or criminal sanctions.

C. The Department also has the power, <u>inter alia</u>, to provide for the prevention and abatement of all water, land, and air pollution. ECL 3-0301.1.i.

5. The Department and Respondent agree that the goals of this Order are for Respondent to (i) develop and implement an Interim Remedial Measure Program ("IRM Program") for the Site that will excavate and treat contaminated soils at the site in an area approximately 15 ft. x 30 ft. x 4 ft. or as necessary based on confirmatory sampling; and (ii) reimburse the State's reasonable administrative costs.

6. The parties agree that, subsequent to the execution of this Order, they will reexamine the physical conditions at the Site and the data generated as a result of the IRM being implemented, and to the extent necessary, will enter into good faith negotiations with the goal of producing a second Order whereunder Eagle Comtronics will develop and implement a remedial investigation and feasibility study intended to determine the extent of contamination of the site and assess and evaluate the various appropriate remedial alternatives for the site.

7. Respondent, having waived its right to a hearing herein as provided by law, and having consented to the issuance and entry of this Order, agrees to be

bound by its terms. Respondent consents to and agrees not to contest the authority or jurisdiction of the Department to issue or enforce this Order, and agrees not to contest the validity of this Order or its terms. Respondent, by executing this Consent Order, does not admit to any fact or conclusion of law herein and hereby reserves to itself all rights it may have in any action or proceeding brought to review this Order.

NOW, having considered this matter and being duly advised, IT IS ORDERED THAT:

I. <u>Site Information</u>

Unless already submitted and accepted by the Department, within 30 days after the effective date of this Order, Respondent shall submit the following to the Department, or Respondent shall submit complete updates of new material pertaining to previously accepted submittals:

A. A brief history and description of the Site, including the types, quantities, physical state, location, and dates of disposal or release of hazardous waste including methods of disposal or release and spillage of such wastes;

B. A concise summary of information held by Respondent and its attorneys and consultants with respect to all persons responsible for such disposal or release of hazardous wastes, including but not limited to names, addresses, dates of disposal or release, and any proof linking each such person responsible with hazardous wastes identified pursuant to subparagraph I.A; and

C. A comprehensive list and copies of all existing relevant reports with titles, authors, and subject matter, as well as a description of the results of all previous investigations of the Site and areas in the vicinity of the Site, including copies of all available topographic and property surveys, engineering studies and aerial photographs.

II. IRM Work Plan Contents and Submittals

A. Within 30 days after the effective date of this Order, Respondent shall submit to the Department a detailed work plan describing the methods and procedures to be implemented in performing an IRM Program at the Site that will use <u>ex situ</u> soil venting to address volatile organic compound contamination within source area soils to mitigate impacts to the environment from identified contaminants, and to monitor ground water quality for the continued presence of contaminants ("IRM Work Plan").

B. The IRM Work Plan must describe the remedial objectives of the IRM Program and the methods and procedures to be implemented to achieve the objectives. Accordingly, it must include, but not be limited to, the following:

(1) To the best of Respondent's current understanding, a brief history and description of the Site, including the types, quantities, physical state, location, and dates of disposal or release of hazardous waste, including methods of disposal or release and spillage of such wastes, Site physiology, geology, and ground and surface water hydrology;

(2) Identification of the initial data quality objectives. If sufficient information does not presently exist to identify those objectives, the IRM Work Plan must define the technical data needed and the timetable to be followed to gather the necessary information to identify those objectives;

(3) A chronological description of the anticipated IRM activities together with a schedule for the performance of those activities. The activities described must include, at a minimum:

a. Site preparation (including clearing and grubbing, and development of access roads, office trailer[s], a field laboratory, utilities, consolidation tank[s], decontamination pad[s], drum staging area[s], and equipment);

b. detailed flow, construction and equipment diagrams and specifications;

c. excavation (including descriptions of how it will be undertaken);

d. waste handling (including inventorying of the waste by quantity, physical state, labeling, and contents; and management of the soil);

e. preparing waste for transportation and disposal or release (including proper manifesting);

f. waste characterization and consolidation (including sampling methodology, chain of custody, classification, consolidation, and compatibility of hazardous waste groups);

g. disposal or release method and identification of the permitted treatment, storage, and disposal or release facilities proposed to receive the waste;

contamination;

h. a sampling program to define residual

i. decontamination of personnel and equipment; and

j. Site restoration; and

(4) A Sampling and Analysis Plan that must include:

a. A quality assurance project plan that describes the quality assurance and quality control protocols necessary to achieve the initial data quality objectives. This plan must designate a data validation expert and must describe such individual's qualifications and experience;

b. A field sampling plan that defines all sampling and data gathering methods in a manner consistent with the "Compendium of Superfund Field Operations Methods" (EPA/540/P-87/001, OSWER Directive 9355.0-14, December 1987), as supplemented by the Department;

c. Identification of the laboratory to be used for the analysis of the samples to be collected and the quality, assurance and quality control protocols the laboratory will use in analyzing those samples; and

d. Identification of the laboratory or individual to conduct data validation on all analytical results prepared by the laboratory conducting the analysis of samples collected at the Site;

(5) A health and safety plan to protect persons at and in the vicinity of the Site during the performance of the IRM Program prepared by a certified health and safety professional in accordance with 29 CFR 1910 and all other applicable standards; and

(6) A contingency plan to be implemented in the event that any element of the IRM Program fails to operate in accordance with the Department-approved IRM Work Plan.

III. <u>Performance and Reporting of IRM Program</u>

A. Within 15 days after the Department's approval of the IRM Work Plan, Respondent shall commence the IRM Program.

B. Respondent shall perform the Department-approved IRM Work Plan.

C. During the performance of the IRM Program, Respondent must have on-Site a full-time representative who is qualified to supervise the work done.

D. Within the time frame set forth in the IRM Work Plan, Respondent must prepare an IRM report ("IRM Report") that includes all data generated and all other information obtained during the IRM Program and identifies any additional data that must be collected. The IRM Report shall be prepared by and have the signature and seal of a professional engineer who shall certify that the IRM Report prepared in accordance with this Order.

IV. Progress Reports

If the IRM field work requires more than two months for completion, Respondent shall submit to the parties identified in subparagraph XII, B, 2, in the numbers specified therein copies of written monthly progress reports that:

(i) describe the actions which have been taken toward achieving compliance with this Order during the previous month;

(ii) include all results of sampling and tests and all other data received or generated by Respondent or Respondent's contractors or agents in the previous month, including quality assurance/quality control information, whether conducted pursuant to this Order or conducted independently by Respondent;

(iii) identify all work plans, reports, and other deliverables required by this Order that were completed and submitted during the previous month;

(iv) describe all actions, including, but not limited to, data collection and implementation of work plans, that are scheduled for the next month and provide other information relating to the progress at the Site;

(v) include information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of the Respondent's obligations under the Order, and efforts made to mitigate those delays or anticipated delays; and

(vi) include any modifications to any work plans that Respondent has proposed to the Department or that the Department has approved.

Respondent shall submit these progress reports to the Department by the tenth day of every month following the effective date of this Order.

Respondent also shall allow the Department to attend, and shall provide the Department at least seven days advance notice of, any of the following: prebid

meetings, job progress meetings, substantial completion meeting and inspection, and final inspection and meeting.

V. <u>Review of Submittals</u>

A. (1) The Department shall review each of the submittals Respondent makes pursuant to this Order to determine whether it was prepared, and whether the work done to generate the data and other information in the submittal was done, in accordance with this Order and generally accepted technical and scientific principles. The Department shall notify Respondent in writing of its approval or disapproval of the submittal, except for the submittal discussed in Paragraph II, B, 5. All Department-approved submittals shall be incorporated into and become an enforceable part of this Order.

(2) (a) If the Department disapproves a submittal, it shall so notify Respondent in writing and shall specify the reasons for its disapproval. Within 15 days after receiving written notice that Respondent's submittal has been disapproved, Respondent shall make a revised submittal to the Department that addresses and attempts to resolve all of the Department's stated reasons for disapproving the first submittal.

(b) After receipt of the revised submittal, the Department shall notify Respondent in writing of its approval or disapproval. If the Department disapproves the revised submittal, Respondent shall be in violation of this Order, unless Respondent, within 10 business days of receipt of notification of disapproval, or such longer period of time as may be agreed to in writing by the Department, invokes the dispute resolution provision set forth below. If Respondent does not invoke the dispute resolution provision within 10 business days of receipt of the Department's written disapproval, the Department may take any action or pursue whatever rights it has pursuant to any provision of statutory or common law. If the Department approves the revised submittal, it shall be incorporated into and become an enforceable part of this Order.

B. If the Department disapproves a revised submittal the written notification shall set forth the basis of the Department's objections. Respondent may seek to discuss with the Department's Division of Hazardous Waste Remediation ("the Division") Staff its disapproval of that submittal but such discussions shall not extend the time period Respondent is allowed to invoke the dispute resolution provision set forth below, unless such time period is specifically agreed to in writing by the parties.

To invoke the dispute resolution provision, Respondent shall, within 10 days after receipt of the Department's written notification of disapproval, serve on the Division Director, Michael J. O'Toole, P.E. ("the Director"), a written statement of

the issue in dispute, the relevant facts upon which the dispute is based, and factual data, supporting documentation, analysis or opinion supporting Respondent's position (hereinafter called the "Statement of Position"). The Department shall serve its Statement of Position, including supporting documentation, no later than 10 business days after receipt of Respondent's Statement of Position. In the event that these 10-day time periods for exchange of Statements of Position may delay any work being performed under this Order, the time periods for submitting Statements of Position may be shortened upon and in accordance with notice by the Department as agreed to by Respondent.

The Director shall review the respective Statement of Position and may request that Respondent respond in writing to the Department's Statement of Position, in accordance with a schedule determined by the Director, or may request that Respondent and the Department appear before him for negotiation, mediation or oral argument.

Unless the dispute is earlier resolved by negotiation or mediation, the Director shall decide the dispute in writing and shall set forth the reason(s) for his decision. The Director's decision shall be final and binding upon Respondent and the Department, respectively, unless Respondent seeks judicial review thereof. The decision of the Director may be judicially reviewed by Respondent pursuant to Article 78 of the CPLR within 30 days after Respondent's receipt of the Director's decision.

The Department shall maintain an administrative record of any dispute under this paragraph. The record shall include the Statements of Position of each party pursuant to this subparagraph, and any relevant information referenced in the Director's written decision. This record shall be available for review by all parties and the public.

C. The Department may require Respondent to modify and/or amplify and expand a submittal if the Department determines, as a result of reviewing data generated by an activity required under this Order or as a result of reviewing any other data or facts, that further work is necessary.

VI. <u>Compliance</u>.

A. Respondent's failure to comply with any term of this Order constitutes a violation of this Order and the ECL.

B. Respondent shall not suffer any sanction or penalty under this Order or be subject to any proceeding or action if it cannot comply with any requirement hereof because of war, riot, or an unforeseeable disaster arising exclusively from third party causes which the exercise of ordinary human prudence

could not have prevented. Respondent shall, within five business days of when it obtains knowledge of any such condition, notify the Department in writing. Respondent shall include in such notice the measures taken and to be taken by Respondent to prevent or minimize any delays and shall request an appropriate extension or modification of this Order. Failure to give such notice within such five-day period constitutes a waiver of any claim that a delay is not subject to penalties. Respondent shall have the burden of proving that an event is a defense to compliance with this Order pursuant to this paragraph.

VII. Entry upon Site

Respondent hereby consents to the entry upon the Site or areas in the vicinity of the Site which may be under the control of the Respondent by any duly designated employee, consultant, contractor, or agent of the Department or any State agency for purposes of inspection, sampling, and testing and to ensure Respondent's compliance with this Order. Respondent shall provide the Department with access to a telephone, and shall permit the Department full access to all records relating to matters addressed by this Order and job meetings.

VIII. Payment of State Costs

Within 30 days after receipt of an itemized invoice from the Department, Respondent shall pay to the Department a sum of money which shall represent reimbursement for the State's expenses including, but not limited to, direct labor, fringe benefits, indirect costs, travel, analytical costs, and contractor costs incurred by the State of New York for work performed at the Site to date, as well as for negotiating this Order, reviewing and revising submittals made pursuant to this Order, overseeing activities conducted pursuant to this Order, collecting and analyzing samples, and administrative costs associated with this Order.

Such payment shall be made by certified check payable to the Department of Environmental Conservation. Payment shall be sent to the Bureau of Program Management, Division of Hazardous Waste Remediation, N.Y.S.D.E.C., 50 Wolf Road, Albany, NY 12233-7010. Itemization of the costs shall include an accounting of personal services indicating the employee name, title, biweekly salary, and time spent (in hours) on the project during the billing period, as identified by an assigned time and activity code. This information shall be documented by quarterly reports of Direct Personal Service. Approved agency fringe benefit and indirect cost rates shall be applied. Non-personal service costs shall be summarized by category of expense (e.g., supplies, materials, travel, contractual) and shall be documented by the New York State Office of the State Comptroller's guarterly expenditure reports. If Respondent determines that it wishes to contest or take issue with any invoice or expense listed thereon, it shall do so by invoking the dispute resolution provision set forth in paragraph V, B, of this Order within 10 business days after receipt of the Department's invoice.

IX. Department Reservation of Rights

A. Nothing contained in this Order shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's rights including, but not limited to nor exemplified by, the following:

1. the Department's right to bring any action or proceeding against anyone other than Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns;

2. the Department's right to enforce this Order against Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns if Respondent fails to satisfy any of the terms of this Order;

3. the Department's right to bring any action or proceeding against Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns with respect to claims for natural resources damages as a result of the release or threatened release of hazardous substances or constituents at or from the Site or areas in the vicinity of the Site;

4. the Department's right to bring any action or proceeding against Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns with respect to hazardous substances that are present at the Site or that have migrated from the Site;

5. the Department's right to bring any criminal action against the Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns; and

6. the Department's right to gather information and enter and inspect property and premises.

B. Nothing contained in this Order shall be construed to prohibit the Commissioner or his duly authorized representative from exercising any summary abatement powers.

X. Indemnification

Respondent shall indemnify and hold the Department, the State of New York, and their representatives and employees harmless for all claims, suits, actions, damages, and costs of every name and description arising out of or resulting from the fulfillment or attempted fulfillment of this Order by Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns.

XI. <u>Public Notice</u>

If Respondent proposes to convey the whole or any part of Respondent's ownership interest in the Site, Respondent shall, not fewer than 60 days before the date of conveyance, notify the Department in writing of the identity of the transferee and of the nature and proposed date of the conveyance and shall notify the transferee in writing, with a copy to the Department, of the applicability of this Order.

XII. <u>Communications</u>

A. All written communications required by this Order shall be transmitted by United States Postal Service, by private courier service, or hand delivered. Communication from Respondent shall be sent to:

- Robert Schick, P.E., Division of Hazardous Waste Remediation New York State Department of Environmental Conservation
 50 Wolf Road Albany, New York 12233-7010
- Director, Bureau of Environmental Exposure Investigation New York State Department of Health 2 University Place Albany, New York 12203
- Henriette Hamel NYS Department of Health Office of Public Health
 677 South Salina Street Syracuse, New York 13202

4. Ralph Manna Regional Director NYSDEC Region 7 615 Erie Blvd. Syracuse, New York 13204-2400

 William G. Little NYSDEC Central Field Unit Room 415 50 Wolf Road Albany, New York 12233-5501

B. Copies of work plans and reports shall be submitted as follows:

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1. Four copies (one unbound) to Robert Schick, Division of Hazardous Waste Remediation.

- 2. One copy to the Director, Bureau of Environmental Exposure Investigation.
- 3. One copy to the Office of Public Health, Syracuse, NY.

4. One copy to Ralph Manna, Regional Director.

5. One copy to William G. Little.

C. Within 30 days of the Department's approval of any report submitted pursuant to this Order, Respondent shall submit to Robert Schick a computer readable magnetic media copy of the approved report in American Standard Code for Information Interchange (ASCII) format.

D. Communication to be made from the Department to the Respondent shall be sent to:

1. Pamela J. Kopiel Director of Administration Eagle Comtronics, Inc. P.O. Box 2457 Syracuse, NY 13220

2. Neil M. Gingold, Esq. Hancock & Estabrook

P.O. Box 4976 Syracuse, NY 13221-4976

E. The Department and Respondent reserve the right to designate additional or different addressees for communication or written notice to the other.

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XIII. <u>Miscellaneous</u>

A. All activities and submittals required by this Order shall address both on-Site and off-Site contamination resulting from the disposal or release of hazardous waste at the Site.

B. Respondent shall retain professional consultants, contractors, laboratories, quality assurance/quality control personnel, and data validators acceptable to the Department to perform the technical, engineering, and analytical obligations required by this Order. The experience, capabilities, and qualifications of the firms or individuals selected by Respondent shall be submitted to the Department within 15 days after the effective date of this Order. The Department's approval of these firms or individuals shall be obtained before the start of any activities for which the Respondent and such firms or individuals will be responsible. The responsibility for the performance of the professionals retained by Respondent shall rest solely with Respondent. Notwithstanding the provisions of this paragraph, OBG Technical Services, Inc. and Engineers is approved by the Department as the consultant for the performance of the IRM activities under this Order.

C. The Parties shall have the right to obtain split samples, duplicate samples, or both, of all substances and materials sampled by each other, and the Parties also shall have the right to take their own samples. Each Party shall make available to the other the results of all sampling and/or tests or other data generated with respect to implementation of this Order. Respondent shall submit the results of its sampling in the progress reports required by this Order.

D. Respondent shall notify the Department at least 5 working days in advance of any field activities to be conducted pursuant to this Order.

E. Respondent shall obtain all permits, easements, rights-of-way, rights-of-entry, approvals, or authorizations necessary to perform Respondent's obligations under this Order.

F. Respondent and Respondent's officers, directors, agents, servants, employees, successors, and assigns shall be bound by this Order. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall in no way alter

Respondent's responsibilities under this Order. Respondent's officers, directors, employees, servants, and agents shall be obliged to comply with the relevant provisions of this Order in the performance of their designated duties on behalf of Respondent.

G. Respondent shall provide a copy of this Order to each contractor hired to perform work required by this Order and to each person representing Respondent with respect to the Site and shall condition all contracts entered into in order to carry out the obligations identified in this Order upon performance in conformity with the terms of this Order. Respondent or Respondent's contractors shall provide written notice of this Order to all subcontractors hired to perform any portion of the work required by this Order. Respondent shall nonetheless be responsible for ensuring that Respondent's contractors and subcontractors perform the work in satisfaction of the requirements of this Order.

H. "Interim Remedial Measure" shall have the meaning set forth in 6 NYCRR Part 375.

I. All references to "professional engineer" in this Order are to an individual registered as a professional engineer in accordance with Article 145 of the New York State Education Law.

J. All references to "days" in this Order are to calendar days unless otherwise specified.

K. The section headings set forth in this Order are included for convenience of reference only and shall be disregarded in the construction and interpretation of any of the provisions of this Order.

L. (1) The terms of this Order shall constitute the complete and entire Order between Respondent and the Department concerning the Site. No term, condition, understanding, or agreement purporting to modify or vary any term of this Order shall be binding unless made in writing and subscribed by the party to be bound. No informal advice, guidance, suggestion, or comment by the Department regarding any report, proposal, plan, specification, schedule, or any other submittal shall be construed as relieving Respondent of Respondent's obligation to obtain such formal approvals as may be required by this Order.

(2) If Respondent desires that any provision of this Order be changed, Respondent shall make timely written application, signed by the Respondent, to the Commissioner setting forth reasonable grounds for the relief sought. Copies of such written application shall be delivered or mailed to: William G. Little and Robert Schick.

M. The effective date of this Order shall be the date it is signed by the Commissioner or his designee.

DATED: Alberry , New York prember 2-1993

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THOMAS C. JORLING Commissioner New York State Department of Environmental Conservation

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Ann Hill DeBarbieri Deputy Commissioner

CONSENT BY RESPONDENT

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Respondent, Eagle Comtronics, Inc., hereby consents to the issuing and entering of this Order, waives its right to a hearing herein as provided by law, and agrees to be bound by this Order.

By: 00 (TYPE NAME OF SIGNER) WILLIAM A. DEVENDORF

PRESIDENT Title:

11/4/93

Date:____

STATE OF NEW YORK)) s.s.: COUNTY OF OMONDMEN

On this	47h	_day of _	NOVEMBE	R	, 19 <u>93</u> , before me personally
came <u>w</u>	LLIAM A	DEVENI	DORF .	to me	e known, who being duly sworn,
did_depose	e and say	that hg/sł	ne-resides in		
TOWN O	P PALEX	IMD USI	DEGD COUL	<u>ny</u> ;	
that he/sh	e-is the _	PRESI.	DENT		of
EAGLE CO	MERONICS	INC.	, the corp	oratior	n described in and which executed
the forego	ing instru	ment; that	t he/ she knev	w the s	seal of said corporation; that the
seal affixe	d to said	instrumen	t was such c	orpora	ate seal; that it was so affixed by
the order of	of∂the Boa	rd of Dire	ctors of said	corpo	pration and that he/she signed

his/her-name thereto by like order.

Notary Public

RICKEY A. TRAVER Notary Public in the State of New York Qualified in Onendaga County No. 1013425 My Commission Expires

STATE OF NEW YORK: DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the matter of the Modification of an Interim Remedial Measure Order for an Inactive Hazardous Waste Site, under Article 27, Title 13 and Article 71, Title 27 of the Environmental Conservation Law of the State of New York by:

ORDER ON CONSENT

Index # D7-0001-97-0

Eagle Comtronics, Inc., Respondent.

Site Code # 734058

WHEREAS,

1. The New York State Department of Environment Conservation ("DEC" or "the Department") is responsible for enforcement of Article 27, Title 13 and Article 71, Title 27 of the Environmental Conservation Law ("ECL"), and the regulations promulgated pursuant thereto, regarding inactive hazardous waste disposal sites. This Order is entered into pursuant to DEC's authority provided for in ECL Article 27, Title 13 and ECL §3-0301.

2. Eagle Comtronics, Inc. ("Respondent") is a manufacturer of electronic components at a facility on Waterhouse Road in the Town of Clay, Onondaga County, New York (hereinafter, the "Site"). A Site location map is attached hereto as Appendix A of this Order.

3. Groundwater sampling at the site detected the presence of certain volatile organic compound ("VOC") contaminants in the soils, namely: 1,1,1 Trichloroethane, Methylene Chloride, Toluene, 1,1, Dichloroethene, 1,1 Dichloroethane, trans-1,2-Dichloroethene, 1,2 Dichloroethane, and Trichloroethene. In response to such contamination, Respondent and DEC executed an enforcement order on consent, dated December 2, 1993, whereby Respondent committed to: (a) perform an Interim Remedial Measure ("IRM") to excavate and treat (by <u>in situ</u> vacuum extraction) contaminated soils at the Site in an area approximately 15 ft. X 30 ft. X 4 ft., based on confirmatory sampling, and (b) reimburse the State's reasonable administrative costs.

4. Subsequent to implementation of the IRM sampling and analyses of the Site revealed that contamination may remain underneath the building on the Site and that there remains a concern for potential future impact to groundwater and, specifically, nearby homeowner wells.

5. The parties agree that a modification of the December 2, 1993 IRM Order is necessary and appropriate in order to provide for additional investigatory soil and groundwater sampling and monitoring to (a) determine the effectiveness of the IRM and (b) the need for further

remedial investigation to characterize the nature and extent of contamination, in anticipation of determining the appropriate remedy for the Site.

6. Respondent, having waived its right to a hearing herein as provided by law, and having consented to the issuance and entry of this Order, agrees to be bound by its terms. Respondent consents to and agrees not to contest the authority or jurisdiction of the Department to issue or enforce this Order, and agrees not to contest the validity of this Order or its terms. By executing this Order, Respondent does not admit to any fact or conclusion of law herein and hereby reserves to itself all rights it may have in any action or proceeding brought to review this Order.

NOW, having considered this matter and being duly advised, IT IS HEREBY ORDERED THAT:

The December 2, 1993, IRM Consent Order is hereby Modified to provide as follows:

I. Work Plan and Submittals.

A. Within 10 days after Respondent advises the Department in writing that it has gained access to all portions of the site necessary to complete and comply with this Order, Respondent shall submit to the Department a detailed final work plan describing the methods and procedures to be implemented in performing the additional investigatory soil and groundwater sampling and monitoring program required by this Order.

B. The work plan must describe the objectives of the investigatory program and the methods and procedures to be implemented to achieve those objectives. Accordingly, it must include, but is not limited to, the following:

1. Identification of the initial data quality objectives. If sufficient data does not presently exist to identify those objectives, the work plan must define the technical data needed and the timetable to be followed to gather the information necessary to identify those objectives;

2. A chronological description of the anticipated investigatory activities together with a schedule for the performance of those activities.

3. A Sampling and Analysis Plan that must include:

a. A quality assurance project plan that describes the quality assurance and quality control protocols necessary to achieve the initial data objectives. The plan must designate a data validation expert and must describe each such individual's qualifications and experience;

b. A sampling plan that defines all sampling and data gathering methods in a method consistent with the "Compendium of Superfund Field Operations Methods" (EPA/540/p-

87/001, OSWER Directive 9355.0-14, December 1987), as supplemented by the Department;

c. Identification of the laboratory to be used for the analysis of the samples to be collected and the quality assurance and quality control protocols the laboratory will use in analyzing those samples; and

d. Identification of the laboratory or individual to conduct data validation on all analytical results prepared by the laboratory conducting the analysis of samples conducted at the Site.

4. A health and safety plan to protect persons at and in the vicinity of the Site during the performance of the investigatory sampling and monitoring program, prepared by a certified health and safety professional in accordance with 29 CFR 1910 and all other applicable standards.

II. <u>Performance and Reporting of Program.</u>

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A. Respondent shall commence the aforesaid investigatory program within 15 days after the Department's approval of the work plan.

B. Respondent shall perform the investigatory program in accordance with the approved work plan and this Order.

C. During the performance of the investigatory program, Respondent must have on Site a full time representative who is qualified to supervise the work done.

D. Within the time frame set forth in the approved work plan, Respondent must prepare an investigatory report that includes all data generated and other information obtained during the investigatory program and identifies any additional data that must be collected or obtained. The investigatory report shall be prepared and have the signature and seal of a professional engineer who shall certify that the investigatory report is prepared in accordance with the approved work plan and this Order.

III. Entry Upon The Site. Respondent shall use its best efforts to obtain all permits, easements, rights of way, rights of entry, approvals or authorizations necessary to perform its obligations under this Order. For purposes of this paragraph, "best efforts" includes, if requested as a condition of an access easement or other agreement, Respondent's willingness to investigate environmental conditions on the property to which access is sought for purposes of performing its obligations under this Order. If any access required to perform this Order is not obtained despite Respondent's best efforts within 45 days of the effective date of this Order, or within 45 days after the date the Department notifies Respondent in writing that additional access beyond that previously secured is necessary, Respondent shall promptly notify the Department, and shall

include in that notification a summary of the steps taken to attempt to obtain access. The Department may, as it deems appropriate, assist Respondent in obtaining access pursuant to authority available to it under the Environmental Conservation Law and other authorities.

If at any future time access for Respondent's completion of or compliance with this Order is denied, it shall immediately advise the Department in writing and shall have a similar 45 day period to use its best efforts to gain access, after which period, if access is denied, upon promptly notifying the Department in writing of such denial of access and the best efforts employed to attempt to gain access, the Department may assist Respondent in obtaining access pursuant to the authorities set forth above. Upon gaining access to such property, Respondent shall immediately recommence the work provided for in the Work Plan.

IV. Except for the modifications contained herein, the December 2, 1993 IRM Consent Order shall remain in full force and effect; the terms thereof and obligations therein are incorporated herein and shall apply with equal force and effect to the provisions of this Modification; and the terms thereof are not otherwise modified, amplified or expanded. The provisions of this Modification shall not affect Respondent's obligation to perform the IRM Consent Order.

V. The terms hereof shall constitute the complete and entire Modification of the IRM Consent Order between the Department and Respondent concerning the Site. No term, condition, understanding or agreement purporting to modify the terms hereof shall be binding unless subscribed to by both parties in accordance with the terms of the December 2, 1993 IRM Consent Order.

VI. The effective date of this Modification shall be the date it is executed by the Commissioner of Environmental conservation or his designee.

Dated: 2/28 (1997)

Albany, New York

John P. Cahill Acting Commissioner, New York State Department of Environmental Conservation

Michael J. O'460le, Jr., P.E

Director, Division of Environmental Remediation

CONSENT BY RESPONDENT

Respondent, Eagle Comtronics, Inc., hereby consents to the issuing and entering of this Order, waives its right to a hearing as provided for by law, and agrees to be bound by this Order.

Iliam By; (Type Name): William A. Devendorf Title: President 2 13 97 Date: STATE OF NEW YORK) S.S.: COUNTY OF (Mindaya) On this 13th day of February, 1997, before me personally appeared , to me known, who being duly sworn did depose and say William 1. NOWNOVL the he/she resides at Drpwerton \mathcal{N}, \mathcal{V} , that President of Eagle Comtronics, Inc., the he/she is the corporation described in and which executed the foregoing instrument; that he/she knew the seal of said corporation; that it was so affixed by the order of the Board of Directors of said corporation and that he/she signed his/her name thereto by like order. NOTARY PUBLIC justified in One